McHenry County College

ENGAGEMENT HALL

8900 NORTHWEST HWY #14
CRYSTAL LAKE, IL 60012

ISSUED FOR BID - NOT FOR CONSTRUCTION

05/16/2025

DKA PROJECT NO: 24-027
MCC BID NO: IFB#06052025

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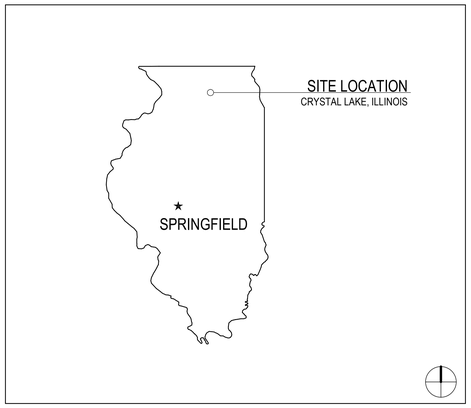
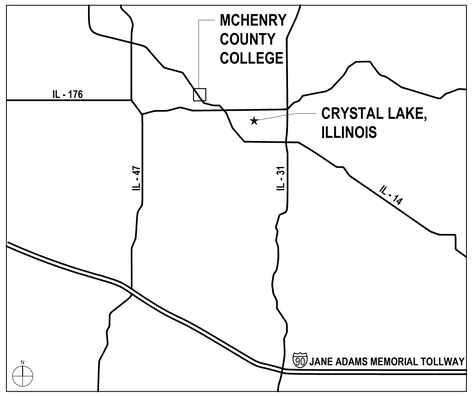
ABBREVIATIONS

AP	ACCESS PANEL
ACOUST	ACOUSTICAL
ACT	ACOUSTICAL CEILING TILE
ADJ	ADJACENT
A.F.F.	ABOVE FINISH FLOOR
AGGR	AGGREGATE
A/C	AIR CONDITIONING
ALT	ALTERNATE
ALUM	ALUMINUM
L	ANGLE
APPD	APPROVED
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL OR ARCHITECT
AD	AREA DRAIN
ASB	ASBESTOS
ASPH	ASPHALT
A/V	AUDIO VISUAL
BSMT	BASEMENT
BRG	BEARING
BM	BEAM
BTW	BETWEEN
BITUM	BITUMINOUS
BLK	BLOCK
BLKG	BLOCKING
BD	BOARD
BRK	BRICK
BLDG	BUILDING
CAB	CABINET
CIP	CAST IN PLACE
CIPC	CAST IN PLACE CONCRETE
CI	CURB INLET
CB	CATCH BASIN
CLG	CEILING
CTR	CENTER
CJ	CONTROL JOINT
CL	CENTER LINE
CPT	CARPET
CT	CERAMIC TILE
CLR	CLEAR
CLO	CLOSET
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CM	CONSTRUCTION MANAGER
CONT	CONTINUOUS OR CONTINUE
CONTR	CONTRACTOR
CK	CORK
CORR	CORRIDOR
CNSK	COUNTERSUNK
CRS	COURSE
DEMO	DEMOLISH OR DEMOLITION
DEPT	DEPARTMENT
DL	DEAD LOAD
DIA	DIAMETER
DIM	DIMENSION
DISP	DISPENSER
DIV	DIVISION
DR	DOOR
DO	DOOR OPENING
DBL	DOUBLE
DS	DOWNSPOUT
DRW	DRAWER
DWG	DRAWING
DF	DRINKING FOUNTAIN
DS	DRY STANDPIPE
DWT	DETECTABLE WARNING TILE
E	EAST
EA	EACH
EIFS	EXTERIOR INSULATION FINISH SYSTEM
ELEC	ELECTRICAL
ETC	ELECTRICAL TRADES CONTRACTOR
EWC	ELECTRICAL WATER COOLER
EP	ELECTRICAL PANEL BOARD
EL	ELEVATION
ELEV	ELEVATION
ELVTR	ELEVATOR
ENCL	ENCLOSURE
EMER	EMERGENCY
EP PT	EPOXY PAINT
EPF	EPOXY FLOORING
EQ	EQUAL
EQPMT	EQUIPMENT
EXSTG	EXISTING
EXP	EXPANSION
EXP JT	EXPANSION JOINT
EXPD	EXPOSED
EXTR	EXTERIOR
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOS	FACE OF STUD
FR	FIBERGLASS REINFORCED PANEL
FIN	FINISH OR FINISHED
FA	FIRE ALARM
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FHC	FIRE HOSE CABINET
FPRF	FIREPROOF
FB	FLAT BAR STOCK
FL	FLOOR
FD	FLOOR DRAIN
FLUOR	FLUORESCENT
FT	FOOT OR FEET
FTG	FOOTING
FDN	FOUNDATION
FRM	FRAME
FRMG	FRAMING
FS	FULL SIZE
FURR	FURRING
FUTR	FUTURE
FW	FABRIC WALLCOVERING
GA	GAUGE
GALV	GALVANIZED
GEN	GENERAL
GC	GENERAL CONTRACTOR
GTC	GENERAL TRADES CONTRACTOR
GL	GLASS OR GLAZING
GD	GRADE
GND	GROUND
GYP BD	GYPSUM BOARD
HDW	HARDWARE
HDWD	HARDWOOD
HDR	HEADER
HTG	HEATING
HVAC	HEATING, VENTILATING, AIR CONDITIONING
HT	HEIGHT
HC	HOLLOW CORE
HM	HOLLOW METAL
HMF	HOLLOW METAL FRAME
HORZ	HORIZONTAL
HB	HOSE BIB
HR	HOUR
INC	INCLUDE
I.D.	INSIDE DIAMETER
INSUL	INSULATION
INTR	INTERIOR
INV	INVERT
JAN	JANITOR
JT	JOINT
KIT	KITCHEN
LAM	LAMINATE
LAV	LAVATORY
LH	LEFT HAND
LGTH	LENGTH
LT	LIGHT
LWC	LIGHT WEIGHT CONCRETE
LTL	LINTEL
LN	LINOLEUM
LL	LIVE LOAD
MH	MANHOLE
MFR	MANUFACTURER
MAS	MASONRY
MO	MASONRY OPENING
MTL	METAL
MAX	MAXIMUM
MECH	MECHANICAL
MTC	MECHANICAL TRADES CONTRACTOR
MEMB	MEMBRANE
MT	MARBLE TILE
MIN	MINIMUM
MISC	MISCELLANEOUS
MTD	MOUNDED
MTG	MOUNTING
MUL	MULLION
NOM	NOMINAL
N	NORTH
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
NO OR #	NUMBER
OBS	OBSCURE
OFF	OFFICE
O.C.	ON CENTER
OPNG	OPENING
OPP	OPPOSITE
OSB	ORIENTED STRAND BOARD
O.D.	OUTSIDE DIAMETER
OA	OVERALL
OFD	OVERFLOW DRAIN
PT	PAINT
PTD	PAINTED
PR	PAIR
PNL	PANEL
PBD	PARTICLE BOARD
PTN	PARTITION
PLAS	PLASTIC
P-LAM	PLASTIC LAMINATE
PL	PLATE
PTC	PLUMBING TRADES CONTRACTOR
PLYWD	PLYWOOD
PSI	POUNDS PER SQUARE INCH
PC	PRECAST
PCC	PRECAST CONCRETE
QT	QUARRY TILE
R	RADIUS
RWL	RAIN WATER LEADER
RFRG	REFRIGERATOR
RGTR	REGISTER
REINF	REINFORCED
RQD	REQUIRED
RES	RESILIENT
RA	RETURN AIR
RAG	RETURN AIR GRILLE
RH	RIGHT HAND
ROW	RIGHT OF WAY
R	RISER
RD	ROOF DRAIN
RM	ROOM
R.O.	ROUGH OPENING
RB	RUBBER BASE
SECT	SECTION
SK	SINK
SCHED	SCHEDULE
SHTG	SHEATHING
SHT	SHEET
SV	SHEET VINYL
SHWR	SHOWER
SIM	SIMILAR
SC	SEALED CONCRETE
SPM	SINGLE PLY MEMBRANE
S	SOUTH
SFRM	SPRAY APPLIED FIRE RESISTIVE MATERIAL
SPEC	SPECIFICATION
SQ	SQUARE
S.S.	STAINLESS STEEL
STD	STANDARD
STA	STATION
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURE OR STRUCTURAL
SUSP	SUSPENDED
SAT	SUSPENDED ACOUSTICAL TILE
SYM	SYMMETRICAL
TEL	TELEPHONE
TV	TELEVISION
TRZ	TERRAZZO
TB	TILE BASE
THK	THICK
T.O.C.	TOP OF CURB
TOP	TOP OF PAVEMENT
TOW	TOP OF WALL
T&G	TONGUE AND GROOVE
TYP	TYPICAL
UNF	UNFINISHED
U.N.O.	UNLESS NOTED OTHERWISE
UR	URINAL
VB	VINYL BASE
VERT	VERTICAL
VEST	VESTIBULE
VCT	VINYL COMPOSITION TILE
VW	VINYL WALLCOVERING
WSCT	WAINSCOT
WC	WATER CLOSET
WLK	WALK-OFF MAT
WR	WATER RESISTANT
WT	WALL TILE OR WEIGHT
W	WEST
W	WIDE FLANGE "W16x21"
W	WIDTH
W/	WITH
W/O	WITHOUT
WD	WOOD
WDP	WOOD PANEL
X	EXISTING

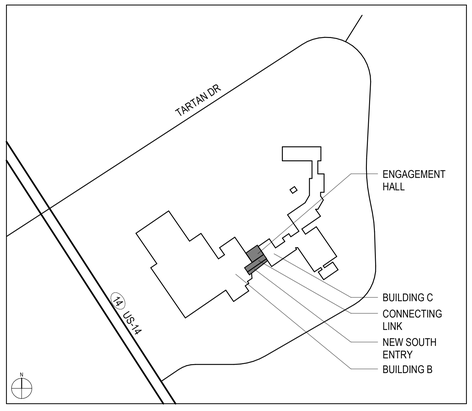
STATE LOCATION MAP



AREA MAP



CAMPUS MAP



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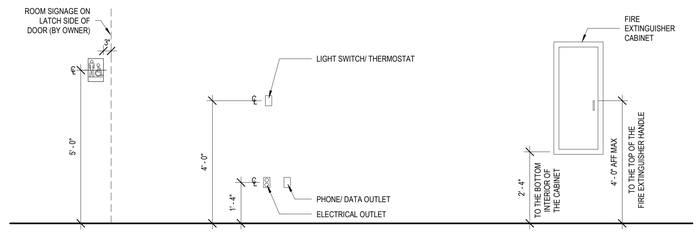

NOTE: IN THE EVENT OF A CONFLICT BETWEEN DIMENSIONS SHOWN ON THIS DRAWING AND ANY OTHER ARCHITECTURAL, ELECTRICAL, OR MECHANICAL SHEETS OR SPECIFICATIONS, NOTIFY ARCHITECT OF DISCREPANCY.

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McHenry County College
ENGAGEMENT HALL

8900 NORTHWEST HWY #14
CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:

SHEET INDEX, ABBREVIATIONS, SYMBOLS & NOTES

SHEET NUMBER:

G1.01

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MCHENRY COUNTY COLLEGE
ENGAGEMENT HALL
8900 US-14
CRYSTAL LAKE, ILLINOIS 60012

PARCEL # 13-25-300-021

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L-102	LANDSCAPE SPECIFICATIONS

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P. 847.381.2760

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8900 U.S. HIGHWAY 14
CRYSTAL LAKE, ILLINOIS 60012

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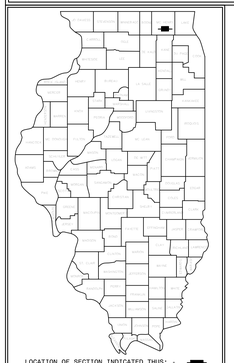


LOCATION OF SECTION INDICATED THUS: -

Dial 811 or 1-800-892-0123

811

Know what's **below.**
Call before you dig.

CALL JULIE 1-800-892-0123

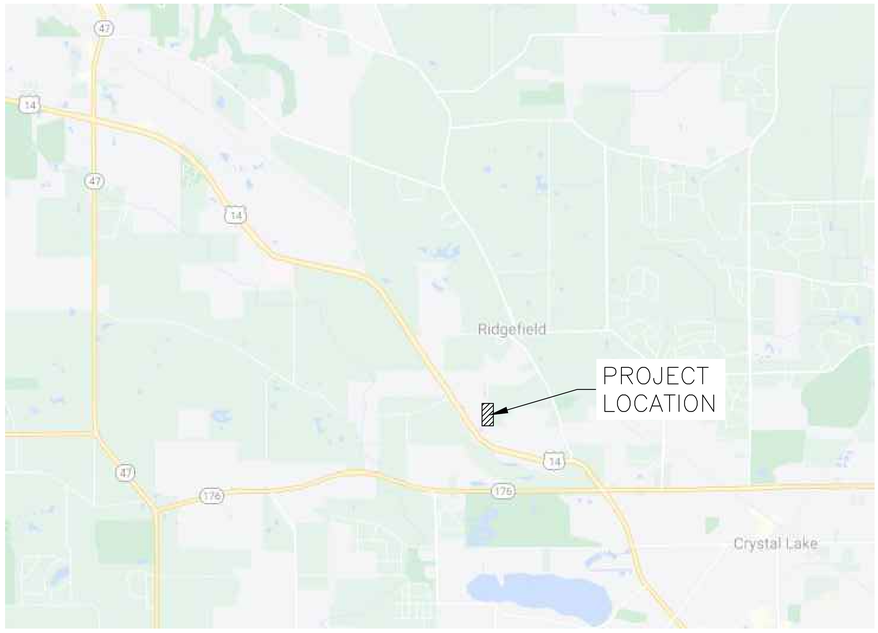
WITH THE FOLLOWING:
COUNTY McHenry
CITY-TOWNSHIP Crystal Lake - Dorr
SEC. & 1/4 SEC. NO.# SW 1/4 OF SEC-25-T-44N-7E

48 hours before you dig
(Excluding Sat., Sun. & Holidays)

NOTE:

- HR GREEN, INC. IS TO BE NOTIFIED 3 DAYS PRIOR TO CONSTRUCTION START.
- HR GREEN, INC. SHALL BE INCLUDED IN ALL PRE-CONSTRUCTION MEETINGS.
- ANY KNOWN DISCREPANCIES ON THIS PLAN SET MUST BE BROUGHT TO THE ATTENTION OF HR GREEN, INC. PRIOR TO THE START OF CONSTRUCTION.

LOCATION MAP



NORTH
(N.T.S.)

SITE BENCHMARK NOTES:

- SOURCE BENCHMARK: BENCHMARK #4" PER AS SHOWN ON THE PLANS FOR "MCHENRY COUNTY COLLEGE NEW SCIENCE CENTER " DATED AUGUST 11, 2017, BEING A CUT SQUARE ON NORTH FACE OF LIGHT POLE BASE LOCATED IN THE MIDDLE CURB ISLAND LOCATED EAST OF PARKING LOT D, NORTH OF THE RING ROAD AND SOUTH OF BUILDING D.
  - ELEV = 921.24 (NAVD 88)
- SITE BENCHMARK (BM#1): NORTHWEST ARROW BOLT ON THE FIRE HYDRANT LOCATED APPROXIMATELY 90 FEET WESTERLY OF THE ENTRANCE TO BUILDING E.
  - ELEV = 921.49 (NAVD 88)
- SITE BENCHMARK (BM#2): NORTHEAST ARROW BOLT ON THE FIRE HYDRANT LOCATED APPROXIMATELY 70 FEET NORTHEASTERLY OF THE ENTRANCE TO BUILDING B.
  - ELEV = 919.44 (NAVD 88)
- HR GREEN, INC. CONTROL DISCLAIMER: THE ATTACHED BENCHMARKS ARE FOR CONSTRUCTION PURPOSES ONLY. BY USING THE DATA PROVIDED HEREON, USERS ARE RESPONSIBLE FOR VERIFYING THE ACTUAL HORIZONTAL AND VERTICAL LOCATIONS OF PROPOSED IMPROVEMENTS BASED ON THE EXISTING EXTERIOR PROPERTY CORNERS AND SITE BENCHMARKS. HR GREEN, INC. ASSUMES NO RESPONSIBILITY FOR THE IMPROPER USE OF THE INFORMATION HEREIN PROVIDED.

McHenry County College
ENGAGEMENT HALL
8900 NORTHWEST HWY #14
CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24 - 027

KEY PLAN:

LICENSED PROFESSIONAL ENGINEER
TODD M. RICHARDS
062-058779
STATE OF ILLINOIS

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
COVER SHEET

SHEET NUMBER:
C-00

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Phone: 815.385.1778 | Toll Free: 800.728.7805 | Fax: 815.385.1781 | HRGreen.com

ISSUED FOR BID – NOT FOR CONSTRUCTION

SPECIFICATIONS & GENERAL NOTES

All items of this project shall be governed by specifications included in the documents listed below:

A. *"Standard Specifications for Road and Bridge Construction" prepared by the Department of Transportation of the State of Illinois and adopted by said department (latest revision).*

B. *"Supplemental Specifications and Recurring Special Provisions" adopted by the Illinois Department of Transportation (latest revision date).*

C. *"Standards and Specifications for Soil Erosion and Sediment Control" (latest revision).*

D. *"Standard Specifications for Water and Sewer Main Construction in Illinois" (latest revision).*

In addition the following special provisions supplement the said specifications, and in case of conflict with any part or parts of said specifications, these special provisions shall take precedence and shall govern.

1. *SCOPE OF WORK. The proposed improvement consists of supplying all the necessary labor, material and equipment to satisfactorily construct and install all improvements according to the plans designated as "McHENRY COUNTY COLLEGE ENGAGEMENT HALL."*

2. *CONSTRUCTION OF UNDERGROUND UTILITIES*

   A. *Excavation: Where working conditions and right-of-way permit, pipe line trenches with sloping sides may be used.*

      The slopes shall not extend below the top of the pipe, and trench excavations below this point shall be made with vertical sides with widths not exceeding those specified herein for the various sizes of pipe.

      Open-cut trenches shall be sheeted and braced as required by the governing State and Federal laws and municipal ordinances, and as may be necessary to protect life, property, or the work.

      Where firm foundation is not encountered at the grade established due to unsuitable soil, all such unsuitable material shall be removed and replaced with approved compacted granular material.

   B. *Width of trench: See trench detail.*

   C. *Removal of water: Contractors shall, at all times during construction, provide and maintain ample means and devices with which to remove and properly dispose of all water entering the excavations. No sanitary sewer shall be used for disposal of trench water, unless specifically approved by the Engineer and then only if the trench water does not ultimately arrive at existing pumping or sewage treatment facilities.*

   D. *Bedding of pipe: All pipe shall be installed on a bed of approved, compacted granular material unless otherwise approved by the City Engineer. The bedding and backfilling of excavated materials shall be cleared with City first and be installed as per typical trench backfill detail.*

   E. *Special backfill: Whenever the excavation is in existing or proposed street, parking areas, driveways, or other paved areas, the trench shall be backfilled with approved selected granular material, compacted in place. The top 12" of the backfill shall be filled with road gravel or crushed stone and maintained as a temporary surface for the normal use of the area. Special backfill shall meet the requirements of the detail UG-03 found on Sheet C-11. Note: Excavated materials may be used if approved by the City Engineer.*

   F. *Restoration of drainage: As soon as possible after backfilling the trench, all ditching, grading and shaping necessary to restore the original drainage in the area of work shall be performed. Culverts removed during the course of the work shall be replaced as soon as practicable.*

      Adequate temporary drainage facilities shall be provided during construction.

   G. *Utilities: The Contractor shall notify all utilities prior to the installation of any pipe lines. Where conflict exists between underground utilities and the proposed underground piping requiring a revision to the plans, such construction shall not be undertaken until such changes are approved by the City Engineer in writing.*

3. *The subgrade shall be free of unsuitable material and shall be prepared in accordance with the recommendations noted in the geotechnical report prepared by Midland Standard dated April 23, 2013 for this project. Testing for compaction shall be the responsibility of the contractor. The City of Crystal Lake will require a proof-roll test if warranted by final soil compaction. This also applies to the parking lot and aisle subgrade and also upon gravel placement. All topsoil and any organic materials must be removed.*

4. *Easements for the existing utilities, both public and private, and utilities within public rights-of-way are shown on the plans according to available records. The Contractor shall be responsible for determining the exact location in the field of these utility lines and their protection from damage due to construction operations. If existing utility lines of any nature are encountered which conflict in location with new construction, the Contractor shall notify the Engineer so that the conflict may be resolved.*

5. *Contractor shall be responsible for securing all Permits including municipal permits.*

6. *INSPECTION. All improvements shall be subject to inspection by a duly authorized and qualified City inspector both during the course of construction and after construction is complete. The inspector shall have authority over materials of construction, methods of construction and workmanship to insure compliance with working drawings and specifications. The Contractor shall provide for reasonable tests and proof of quality of materials as requested by the inspector. Inspector shall have forty-eight (48) hours notice prior to construction.*

7. *Wherever a sewer crosses under a water main, the minimum vertical distance from the top of the sewer to the bottom of the water main shall be 18". Furthermore, a minimum horizontal distance of 10' between sanitary sewers and water mains shall be maintained. If either the vertical or horizontal distances described above cannot be maintained, or the sewer crosses above the water main, the sewer pipe shall be pipe of water main type quality and water main quality joints, or the water main shall be encased in a steel sleeve for a perpendicular distance of 10' on each side of the sewer.*

8. *SAN. MH TA, 48" DIA. Manholes shall be constructed of prefabricated concrete sections meeting the requirements of ASTM C-478. Sections shall be joined using either flexible rubber gaskets or preformed bituminous plastic gaskets. The manhole bottom shall be precast with the first riser section. Manholes shall have the pipe cast in place through the manhole or a water tight joint cast in the manhole wall to receive the pipe. Manhole frames and lids shall be of self-sealing type Neenah 1712 or equal with approval by the municipality, with Type B lid and concealed pickhole with the word "Sanitary" cast in the lid. (See City detail). Testing: Vacuum testing of sanitary manholes shall be completed by the contractor meeting the requirements of ASTM C-244.*

9. *All manholes to be concentric, lids to have utility name.*

10. *All manholes and valve vaults shall be equipped with steps.*

11. *STORM SEWER FRAMES AND LIDS. All frames not falling in the flow line of the curb and gutter shall be Neenah 1713 or as noted on the plans with a 1" pickhole and the word "Storm" cast in the lid. All curb inlets, and catch basins in gutter lines shall be Neenah R-3281 Frame and Grate, or as noted on plans, with ENVIRO logo where Type B-6.12 curb and gutter is specified. All storm sewer grates shall have the ENVIRO Logo on them. All bituminous joining compound for manholes and catch basins shall be RAM-NEK or E-Z STICK.*

12. *PROTECTION OF WATER MAIN AND WATER SERVICE LINES. Water mains and water service lines shall be protected from sanitary sewers, storm sewers, combined sewers, house sewer service connections and drains as follows;*

   A. *Water Service Lines*
      1. *Horizontal Separation*
         a. *Water mains shall be laid at least 10' horizontally from any existing or proposed drain, storm sewer, sanitary sewer, combined sewer or sewer service connection.*
         b. *Water mains may be laid closer than 10' to a sewer line when:*

            (1) Local conditions present a lateral separation of 10';

            (2) The water main invert is at least 18" above the crown of the sewer; and

            (3) The water main is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer with a minimum vertical separation of 18".

         c. *Both the water main and drain or sewer shall be constructed of slip-on or mechanical joint cast or ductile iron pipe, or PVC pipe meeting the requirements of Section 653.111 when it is impossible to meet (a) or (b) above. The drain or sewer shall be pressure tested to the maximum expected surcharge head before backfilling.*

      2. *Vertical Separation.*

         a. *A water main shall be laid so that its invert is 18" above the crown of the drain or sewer whenever water mains cross storm sewers, sanitary sewers or sewer service connections. The vertical separation shall be maintained for that portion of the water main located within 10' horizontally of any sewer or drain crossed. A length of water main pipe shall be centered over the sewer to be crossed with joints equidistant from the sewer or drain.*

         b. *Both the water main and sewer shall be constructed of slip-on or mechanical joint cast or ductile iron pipe, or PVC pipe meeting requirements of Section 653.111 when:*

            (1) It is impossible to obtain the proper vertical separation as described in (a) above; and

            (2) The water main passes under a sewer or drain.

         c. *A vertical separation of 18" between the invert of the sewer or drain and the crown of the water main shall be maintained where a water main crosses under a sewer. Support the sewer or drain lines to prevent settling and breaking the water main.*

         d. *Construction shall extend on each side of the crossing until the normal distance from the water main to the sewer or drain line is at least 10'.*

   B. *Special Conditions. Alternate solutions shall be presented to the Agency when extreme topographical, geological or existing structural conditions make strict compliance with (A) and (B) above technically and economically impractical. Alternate solutions will be approved provided water-tight construction structurally equivalent to approved water main material is proposed.*

17. *The Contractor may not remove any material from the site except as directed by the Owner or Engineer in the case of excess material.*

18. *TOPSOIL PLACEMENT.*

    See Hitchcock Design Group plans and specifications for topsoil depths and composition for landscaping (seeding, sod, etc.).

19. *The Engineer and City of Crystal Lake Engineering Department shall be notified if, during construction, any buried field tiles are exposed or disturbed. The Contractor shall reconnect said field tiles if deemed necessary.*

20. *Contractor shall provide insurance coverage as per Article 107.27 of the Standard Specifications. The "Department" shall be taken to mean HR Green, Inc. The policy of insurance shall include HR Green, Inc., the City of Crystal Lake and it's Agents as an additional insured or provide separate coverage with an Owner's Protective Policy, as per the amounts stated in the Standard Specifications. No work shall begin until the certificate of insurance is on file with the Engineer. All costs for insurance shall be considered incidental to the contract.*

21. *All handicapped parking signs must have a $250.00 fine sign attached.*

22. *Lighting shall be constructed as per the electrical plan, done under separate contract by Electrical Consultant. All conduit shall be placed outside of any municipal easements except for authorized 90° crossings.*

23. *The Contractor shall be responsible for the installation and maintenance of adequate signs, traffic control devices, and warning devices to inform and protect the public during all phases of construction. See City Standard Traffic Control detail for lane closures of public roads.*

24. *The Engineer shall be responsible for the following:*

   A. *To visit the construction site in order to better carry out the duties and responsibilities assigned by the Owner and undertaken by the Engineer; and*

   B. *The Engineer shall not, during such visits or as a result of such observations of the Contractor's work in progress, supervise, direct, have control over the Contractor's work, nor shall the Engineer have the authority over the responsibility for the means, methods, techniques, sequences, or procedures of construction selected by the Contractor, for safety precautions and programs incidental to the work of the Contractor, or for any failure of the Contractor to comply with laws, rules, regulations, ordinances, codes or orders applicable to the Contractor furnishing and performing his work. Accordingly, the Engineer can neither guarantee the performance of the construction contracts by the Contractor nor assume responsibility for the Contractor's failure to furnish and perform his work in accordance with the Contract Documents.*

27. *No construction plans shall be used for construction unless specifically marked "For Construction." Prior to commencement of construction, the Contractor shall verify all dimensions and conditions affecting their work with the actual conditions at the job site. In addition, the Contractor must verify the Engineer's line and grade stakes. If there are any discrepancies from what is shown on the construction plans, he must immediately report same to the Engineer before doing any work, otherwise the Contractor assumes full responsibility. In the event of disagreement between the construction plans, standard specifications and/or special details, the Contractor shall secure written instructions from the Engineer prior to proceeding with any part of the work affected by omissions or discrepancies. Failing to secure such instructions, the Contractor will be considered to have proceeded at his own risk and expense.*

    In the event of any doubt or question arising with respect to the true meaning of the construction plans or specifications, the decision of the Engineer shall be final and conclusive.

28. *The Contractor shall indemnify and hold harmless the City ,City's Engineers their agents and it's employees, HR Green, Inc. and McHenry County College, from and against all claims, damages, losses and expenses, including attorney's fees arising out of or resulting from the performance of the Contractor's work. In any and all claims against the City or its employees, by any employee of the Contractor, or anyone directly or indirectly employed by the Contractor, or anyone for whose acts the Contractor may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount of damages, waiver of subrogation compensation or benefits payable by or for the Contractor under Workmen's Compensation acts, disability benefit acts or other employee benefit acts.*

29. *Sawing of removal items as noted on the plans, specified in Section 440 of the Standard Specifications, or as required by the engineer, shall be considered incidental to the cost of the item being removed, and no extra compensation will be allowed, unless otherwise specified.*

30. *SIGN PANEL – TYPE 1, METAL POST – TYPE B. This work shall consist of furnishing and installing Type 1 sign panels on U-channel, and break away sign supports as indicated on the plans. Sign assemblies shall meet the requirements of Standard Specifications for Traffic Control Items.*

    Installation of sign assemblies shall be as specified on the plans, in accordance with the Illinois Manual on Uniform Traffic Control Devices and as directed by the Engineer.

    Furnishing, fabricating and installing sign assemblies will be paid for at the contract unit price per square foot for Sign Panel – Type 1 which price will be payment in full for all labor and material necessary to fabricate and install each sign assembly specified on the plans. The posts, including the break away assembly, shall be paid for at the unit price per foot for Metal Post – Type B.

31. *PROTECTIVE COAT. This work shall be in accordance with Section 420 of the Standard Specifications insofar as applicable with the following revision.*

    The protective coat shall be applied to all exposed surfaces of Combination Concrete Curb and Gutter, Concrete Median and Concrete Corrugated Median.

    This work will be paid for at the contract unit price per square yard for Protective Coat.

32. *COMBINATION CONCRETE CURB AND GUTTER. Concrete curb, concrete gutter and combination concrete curb and gutter shall be constructed, measured and paid for in accordance with Section 606 of the Standard Specifications except as follows:*

    Revise the last sentence of the second paragraph of Article 606.07 to read as follows: "The traverse joints shall be contraction joints spaced on 12-foot centers."

Any City requirements regarding expansion & contraction joints shall govern construction.

33. *A performance guarantee shall be required (letter of credit) for all public utilities. Also, a two year maintenance bond shall be established upon completion of work.*

34. *All pavement markings on main access drives, approaches and parking lot shall be painted with two (2) coats of WHITE SHERWIN WILLIAMS "PROMAR TRAFFIC MARKING."*

    Pavement Striping: All proposed pavement striping to be painted.

    All Handicap striping shall be yellow.

35. *All curb & gutter crossings over trench locations shall be reinforced with 2-#4 rebar extended 2' beyond each side of trench.*

36. *Where storm sewer is located above the water main, the reinforced concrete pipe shall have O-rings to provide a water tight seal and to create a water quality pipe.*

37. *CURB RAMPS*
    All sidewalks shall be installed to accommodate the handicapped. A Type "A" Ramp shall be installed in accordance with I.D.O.T. Standard Detail 424001-001, or the detail shown on the plan. Color of truncated domes shall be contrasting with the adjacent surface. Contractor to coordinate color with owner prior to ordering truncated dome panels.

38. *SIDEWALKS. Unless otherwise shown on the plans, the proposed sidewalks in front of the site shall be constructed when the site work is substantially complete.*

    ALL PUBLIC AND PRIVATE SIDEWALKS SHALL BE CONSTRUCTED WITH A MAXIMUM RUNNING SLOPE OF NO GREATER THAN 1:20 (1'/F'T) – 5% GRADIENT.

    All materials shall meet the requirements of the "Standard Specifications for Road and Bridge Construction" of the Illinois Department of Transportation. Concrete shall be at least a six (6) bag mix, 4% to 6% air entrained, and shall have a slump of no less than two (2") inches nor more than four (4") inches. Fiberglass reinforced additives shall be used on all sidewalks extending through driveways. Sidewalks shall be placed on a minimum of four (4") inches of CA-6 crushed stone or Grade 9 compactable crushed stone. Driveway crossings for sidewalks shall be 6" P.C.C. with (4") inches of CA-6 crushed stone or Grade 9 compactable crushed stone.

    Pre-molded bituminous expansion joints one-half (1/2") inch thick shall be placed every 50 feet minimum and one-half (1/2") inch thick between the sidewalk and all structures, which extend through the sidewalk. Control joints shall be on five (5') foot centers.

    The side edges of the sidewalk shall have rounded edges and the surface shall be "broom" finished.

    Protection and Curing: All exposed surfaces of concrete shall be protected against rain. The concrete shall be cured for a minimum period of three days after placing by one of the following methods:

    Wet burlap

    Impervious paper

    Membrane curing compound

    When the temperature of the air is expected to drop below 40 degrees F. within 24 hours placing the concrete shall be protected with nine inches of loose, dry straw and a layer of burlap other acceptable material, for a period of at least five days.

39. *The concrete sealer, in addition to conforming with the referenced Standard Specification section, shall be selected from the current IDOT approved product list for Plural Component Concrete Sealers, or equal. The concrete sealer must dry to a clear finish. All exterior concrete surfaces as well as the segmental block retaining wall shall be sealed. The contractor shall provide documentation from the sealant provider, segmental block wall supplier and concrete pavement supplier stating the sealer is compatible with all exterior concrete surfaces that it is to be applied to. Contractor to also provide cut sheets of the desired sealer to the engineer for approval prior to ordering.*

40. *All surplus soil that will need to be hauled and disposed of offsite will need to be certified that it is not contaminated as defined under 415 ILCS 5/3.160 and any fees, taxes, surcharges charged by or through the operator(s) of clean construction or demolition debris (CCDD) or uncontaminated soil fill operations for the acceptance of uncontaminated soil shall be paid for by the contractor and those fees included in their bid price.*

41. *It is the intent to recycle the bituminous grindings and existing parking lot aggregate base for re-use as structural fill and/or aggregate base course. Contractor to coordinate with on-site geo-technical engineer to verify usability of re-use material as aggregate base course.*

MCHENRY COUNTY COLLEGE - EVENT CENTER INFILTRATION BASIN		
NATIVE SEED MIX		
PLS OZ.	BOTANICAL NAME/ITEM	COMMON NAME
1	ASCLEPIAS SYRIACA	COMMON MILKWEED
0.9	ASTER LAEVIS	SMOOTH BLUE ASTER
0.7	ASTER OOLENTANGIENSIS	SKY-BLUE ASTER
0.8	BAPTISIA BRACTEATA	CREAM WILD INDIGO
0.9	BAPTISIA LACTEA	WHITE WILD INDIGO
45.3	BOUTELOUA CURTIPENDULA	SIDE-OATS GRAMA
4.2	CAREX BICKNELLII	COPPER-SHOULDERED OVAL SEDGE
7.5	CHAMAECRISTA FASCICULATA	PARTRIDGE PEA
4.5	COREOPSIS LANCEOLATA	SAND COREOPSIS
2.2	DALEA CANDIDA	WHITE PRAIRIE CLOVER
2.8	DALEA PURPUREA	PURPLE PRAIRIE CLOVER
10	ECHINACEA PURPUREA	BROAD-LEAVED PURPLE CONEFLOWER
66.5	ELYMUS CANADENSIS	CANADA WILD RYE
3.5	ERYNGIUM YUCCIFOLIUM	RATTLESNAKE MASTER
1.4	LESPEDEZA CAPITATA	ROUND-HEADED BUSH CLOVER
0.9	LIATRIS ASPERA	ROUGH BLAZING STAR
1.3	LIATRIS PYCNOSTACHYA	PRAIRIE BLAZING STAR
0.7	MONARDA FISTULOSA	WILD BERGAMOT
1.3	PARTHENIUM INTEGRIFOLIUM	WILD QUININE
0.3	POTENTILLA ARGUTA	PRAIRIE CINQUEFOIL
1	PYCNANTHEMUM VIRGINIANUM	COMMON MOUNTAIN MINT
4.9	RATIBIDA PINNATA	YELLOW CONEFLOWER
1.3	RUDBECKIA HIRTA	BLACK-EYED SUSAN
64	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM
1.4	SILPHIUM INTEGRIFOLIUM	ROSIN WEED
1.2	SOLIDAGO RIGIDA	STIFF GOLDENROD
0.5	SOLIDAGO SPECIOSA	SHOWY GOLDENROD
1.4	TRADESCANTIA OHIENSIS	COMMON SPIDERWORT
2	ZIZIA AUREA	GOLDEN ALEXANDERS
360	AVENA SATIVA	COMMON OAT
100	LOLIUM MULTIFLORUM	ANNUAL RYE

TAG EXPLANATION LEGEND:

EXAMPLE 1 (SANITARY & STORM MANHOLES):
SAN MAN TA 4' DIA TIF CL =
PROPOSED SANITARY MANHOLE, 4' DIAMETER, TYPE 1 FRAME, CLOSED LID

EXAMPLE 2 (STORM SEWER, SANITARY SEWER, WATERMAIN):
120 LIN FT SAN SEWER MAIN 6" =
PROPOSED 120 LINEAL FEET SANITARY SEWER 6"
CB TA 4' DIA T11 F&G =

EXAMPLE 3 (STORM CATCH BASINS):
PROPOSED CATCH BASIN, TYPE A, 4' DIAMETER, TYPE 11 FRAME & GRATE
PRC CONC FES 15 =

EXAMPLE 4 (STORM FLARED END SECTIONS):
PROPOSED PRECAST CONCRETE FLARED END SECTION 15"

SYMBOL LEGEND

	EXISTING	PROPOSED
SANITARY MANHOLE	◎	✳
STORM MANHOLE	◍	✳
STORM CATCH BASIN/INLET	○	●
INLET	▭	▬
FLARED END SECTION	▷	▶
DRY WELL	◍	◉
VALVE VAULT	⊗	⧓
FIRE HYDRANT	▽	▼
LIGHT POLE	✳	✳▯
STREET SIGN	┼	
REGULATORY SIGN	⊸	⊸
UTILITY POLE	○	
UTILITY BOX	▯ ▯ ▯ ▯	
MAILBOX	▯	
WELL	◎	
STORM SEWER	——▷——	——▶——
SANITARY SEWER	——▷——	——▶——
CULVERT	═══▷═══	═══▶═══
WATER MAIN	——W——	
WATER MAIN ENCASEMENT		
SANITARY FORCE MAIN	——◜——	——◜——
STORM UNDERDRAIN	——◟——	——◟——
ELECTRIC LINE	——E——	
TELEPHONE LINE	——T——	
GAS LINE	——G——	
CABLE TV LINE	——C——	
TREE LINE		
TREE		
CONTOURS		
FENCE	——x——	
STONE RIP RAP		
EROSION CONTROL FENCE (QUANTITY SPECIFIED PER PLANS)		
DRAINAGE DIRECTION ARROW		
10-100 YEAR OVERFLOW DIRECTION ARROW		

THE SPECIFICATIONS ON THIS SHEET ARE IN CONJUNCTION WITH THE SPECIFICATIONS OUTLINED IN THE PROJECT MANUAL. THE INTENT IS FOR THE SPECIFICATIONS TO WORK TOGETHER AND IF AN DISCREPANCIES ARISE BETWEEN SPECIFICATION THE CONTRACTOR SHALL BRING IT TO THE ATTENTION OF THE ENGINEER. FINAL DETERMINATION AS TO WHICH SPECIFICATION WILL PREVAIL WILL BE DETERMINED BY THE ENGINEER.

Topsoil-Compost Layer	
The surface layer shall be a minimum of an 8-inch thick layer that conforms with the following:	
Partical Size	98% passing 0.75 inch sieve
Physical Comtamants	No glass, metal or plastic
Mixture	50% Compost 40% Sand 10% Topsoil
pH	6-8
Moisture Content	No more than 40% by weight
Compost	Resistant to further degredation
Fecal Coliform	<1000 Most Probable number/gram of total solids
Metals	As<40ppm Cd<40ppm Pb<1000ppm Hg<100ppm Zn<2800ppm Fe<20,000-40,000ppm

FILTER FABRIC MATERIAL REQUIREMENTS		
Geotextile Property	Value	Test Method
Grab Tensile Strength, N	800 min.	ASTM D4632
Puncture Strength, N	300 min.	ASTM D4833
Apparent Breaking Elongation, Percent	30 min.	ASTM D4632
Apparent Opening Size, µm	300 max.	ASTM D4751
Permittivity, S-1	1.35 min.	ASTM D4491

MCHENRY COUNTY STORMWATER ORDINANCE APPENDIX NOTES

Appendix 2: Standard Soil Erosion and Sediment Control Notes 108

Appendix 2

§17.60.160 Standard Soil Erosion and Sediment Control Notes

1. Control measures shall meet the minimum standards and specifications of the *Illinois Urban Manual* unless stated otherwise.
2. Soil disturbance shall be conducted in such a manner as to minimize erosion. Areas of the development site that are not to be disturbed shall be protected from construction traffic or other disturbance until final stabilization is achieved.
3. Soil stabilization measures shall consider the time of year, development site conditions and the use of temporary or permanent measures.
4. Stabilization by seeding shall include topsoil placement and fertilization, as necessary.
5. Native seed mixtures shall include rapid-growing annual grasses or small grains to provide initial, temporary soil stabilization.
6. Offsite property shall be protected from erosion and sedimentation. Velocity dissipation devices shall be placed at concentrated discharge locations and along the length of any outfall channel, as necessary to prevent erosion.
7. Sediment control measures shall be installed prior to the disturbance of tributary areas.
8. Stabilization of disturbed areas shall be initiated immediately whenever any clearing, grading, excavating or other earth disturbing activities have permanently ceased on any portion of the development site, or temporarily ceased on any portion of the development site and will not resume for a period exceeding 14 calendar days. Stabilization of disturbed areas shall be initiated within 1 working day of permanent or temporary cessation of earth disturbing activities and shall be completed as soon as possible, but not later than 14 calendar days from the initiation of stabilization work in an area. Exceptions to these time frames are specified below:
   a. Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable; and
   b. In areas where construction activity has temporarily ceased and will resume after 14 days, a temporary stabilization method may be used.
9. Disturbance of steep slopes shall be minimized. Areas or embankments having slopes steeper than 3:1 shall be stabilized with staked in place sod, erosion control blanket in combination with seeding, or an equivalent control measure.
10. Perimeter control measures shall be provided downslope and perpendicular to the flow of runoff from disturbed areas, where the tributary area is greater than 5,000 square feet, and where runoff will flow in a sheet flow manner. Perimeter erosion control shall also be provided at the base of soil stockpiles.
11. The stormwater management system shall be protected from erosion and sedimentation downslope from disturbed areas. Inlet protection that reduces sediment loading, while allowing runoff to enter the inlet shall be required for all storm sewers. Check dams, or an equivalent control measure, shall be required for all channels. Filter fabric inlet protection and straw bale ditch checks are not acceptable control measures.
12. If dewatering services are used, discharges shall be routed through an effective sediment control measure (e.g., sediment trap or an equivalent control measure). The

Refer to Appendix 12 for the definition of underlined terms or to Appendix 13 for a list of acronyms.
Refer to Appendix 1 for permitting flowcharts.

Appendix 2: Standard Soil Erosion and Sediment Control Notes 109

Enforcement Officer shall be notified prior to the commencement of dewatering activities.

13. All temporary soil erosion and sediment control measures shall be removed within 30 days after final stabilization of the development site is achieved or after the temporary measures are no longer necessary. Trapped sediment shall be removed and disturbed areas shall be permanently stabilized.
14. Stockpiled soil and materials shall be removed from flood hazard areas at the end of each work day. Soil and materials stockpiled in IWMC or buffer areas shall be placed on timber mats, or an equivalent control measure.
15. Effective control measures shall be utilized to minimize the discharge of pollutants from the development site. At a minimum, control measures shall be implemented in order to:
   a. Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash water; and
   b. Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, vehicle fluids, sanitary waste, and other materials present on the development site to precipitation and to stormwater.
16. Adequate receptacles shall be provided for the depositing of all construction material debris generated during the development process. The applicant shall not cause or permit the dumping, depositing, dropping, throwing, discarding or leaving of construction material debris upon or into any development site, channel, or IWMC. The development site shall be maintained free of construction material debris.
17. The Enforcement Officer may require additional or alternate soil erosion and sediment control measures, based on development site specific considerations and the effectiveness of the installed control measures.

Refer to Appendix 12 for the definition of underlined terms or to Appendix 13 for a list of acronyms.
Refer to Appendix 1 for permitting flowcharts.

Appendix 3: Standard Drain Tile Notes 110

Appendix 3

§17.60.170 Standard Drain Tile Notes

1. Drain tiles disturbed during regulated development shall be reconnected by those responsible for their disturbance, unless the development plans specify abandonment of the drain tiles.
2. All abandoned drain tiles within disturbed areas shall be removed in their entirety.
3. Drain tiles within the disturbed area of a development site shall be replaced, bypassed around the development site or intercepted and connected to the stormwater management system for the development site. The size of the replaced or bypassed drain tile shall be equivalent to the existing drain tile.

Refer to Appendix 12 for the definition of underlined terms or to Appendix 13 for a list of acronyms.
Refer to Appendix 1 for permitting flowcharts.

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McHenry County College
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CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24 - 027

KEY PLAN:

LICENSED PROFESSIONAL ENGINEER
TODD M. RICHARDS
062-058779
STATE OF ILLINOIS

SHEET STATUS: 05/16/2025

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
GENERAL NOTES, SPECIFICATION, & LEGEND

SHEET NUMBER:
C-01

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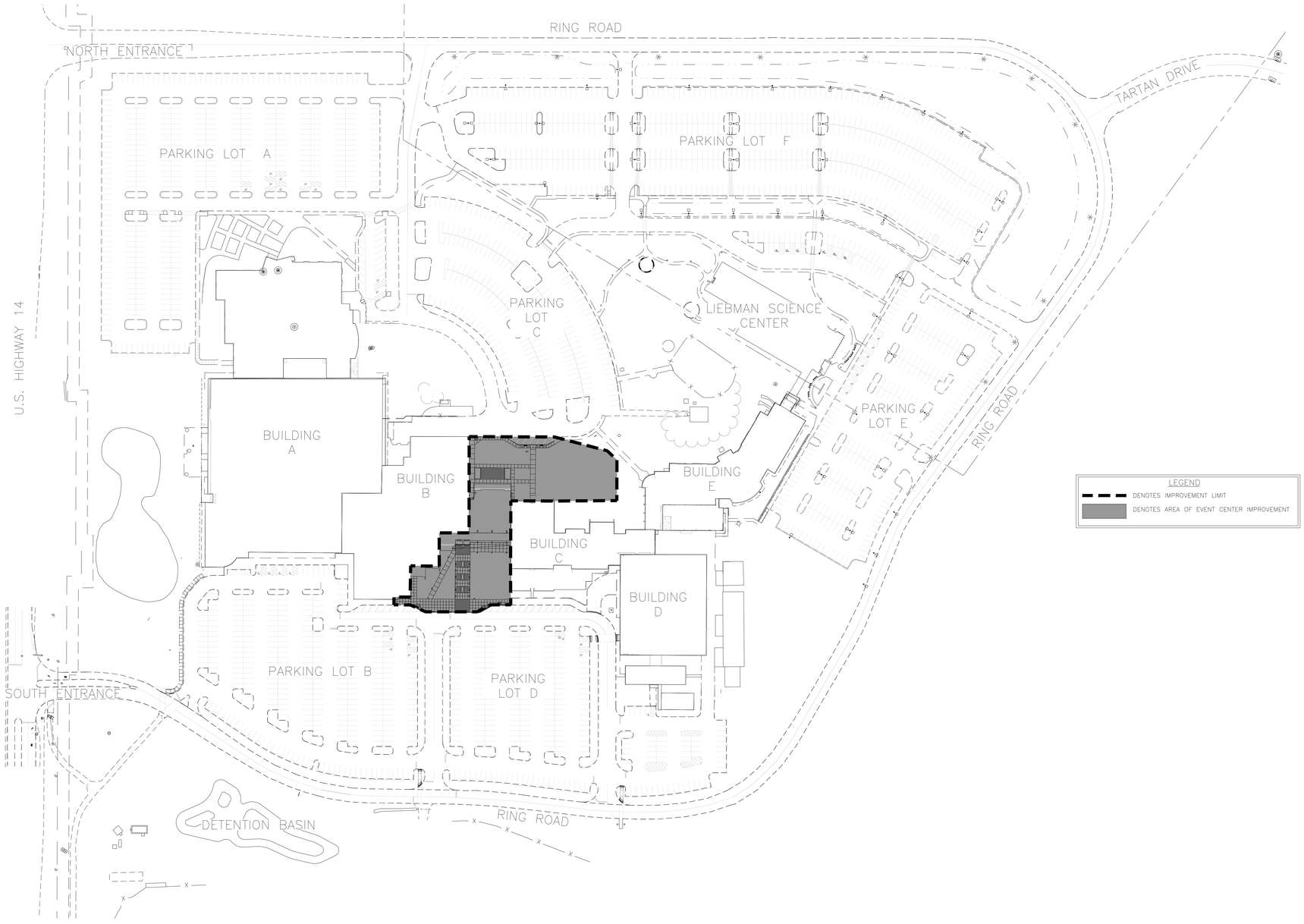
ISSUED FOR BID – NOT FOR CONSTRUCTION



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TODD M. RICHARDS
062-058779
STATE OF ILLINOIS

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
OVERALL SITE PLAN

SHEET NUMBER:
C-02

NORTH
0 80'
1" = 80'

ISSUED FOR BID – NOT FOR CONSTRUCTION

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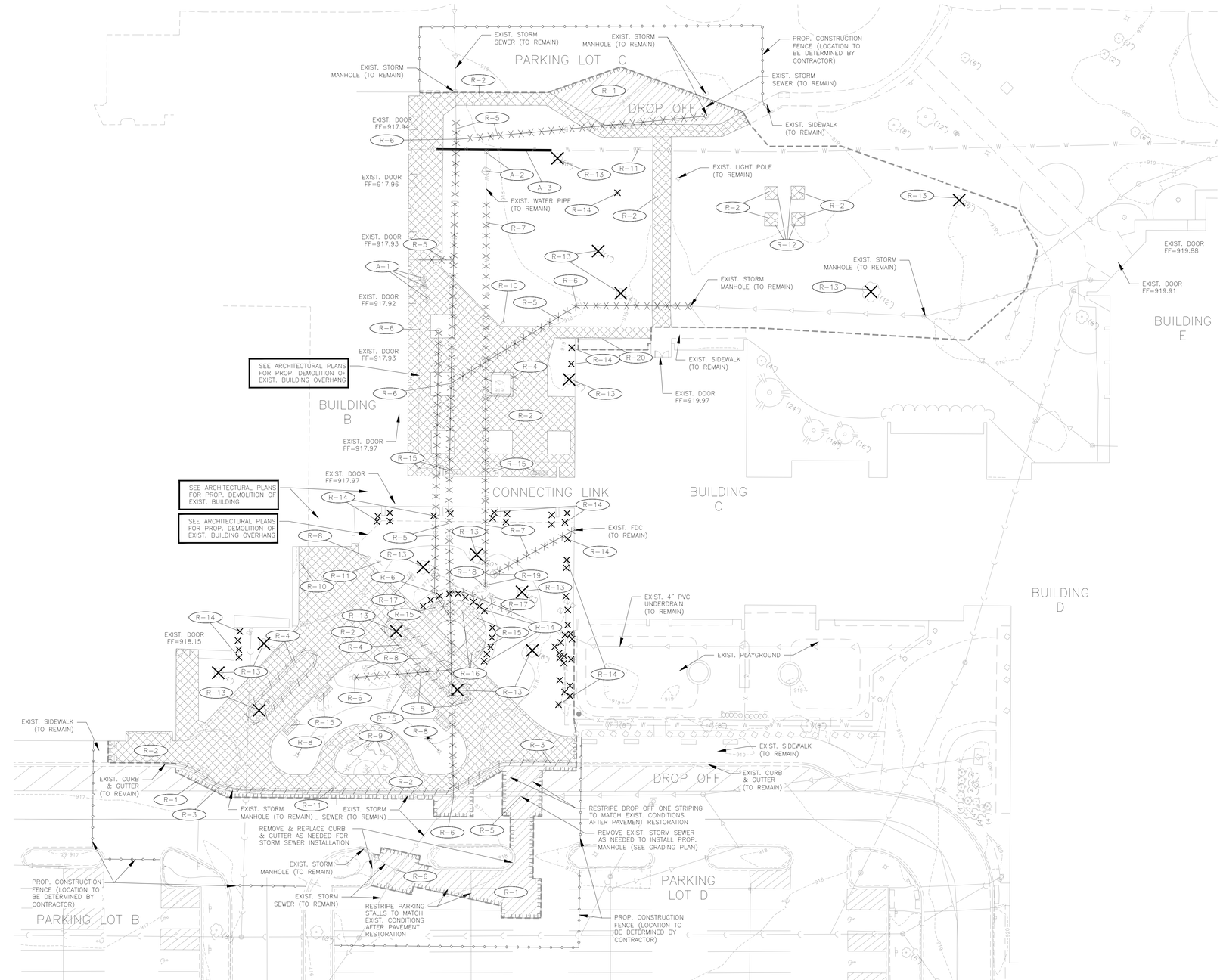

NOTES:

- MCHENRY COUNTY COLLEGE (MCC) SHALL BE NOTIFIED OF ALL NON IDENTIFIED UNDERGROUND UTILITIES OR CONDUITS DISCOVERED DURING CONSTRUCTION. IF ANY OF THE UTILITY OR CONDUITS NEED TO BE REPAIRED, PLUGGED, REROUTED AND OR ABANDONED IN PLACE, IT SHALL TAKE PLACE PER THE DIRECTION OF THE MCC.
- ALL AREAS NOT WITHIN THE PROPOSED GRASSED AREAS OR STORMWATER MANAGEMENT FACILITY SHALL BE RESTORED WITH 4" TOPSOIL AND IDOT CLASS 1A SEED.

REMOVAL NOTES:

* ALL REMOVALS IN NON-PAVED AREAS DENOTED TO REQUIRE CLEARING AND GRUBBING SHALL INCLUDE TOPSOIL STRIP AND STOCKPILE AS PART OF THE REMOVAL UNLESS OTHERWISE NOTED.

LEGEND

- INDICATES HMA PAVEMENT REMOVAL (FULL DEPTH) (SEE TAGS FOR INFORMATION)
- INDICATES CONCRETE REMOVAL (FULL DEPTH) (SEE TAGS FOR INFORMATION)
- INDICATES UTILITY REMOVAL
- R-# INDICATES MISC. REMOVAL ITEMS
- INDICATES EXIST. CONCRETE CURB & GUTTER OR WALL TO BE REMOVED
- INDICATES TREE AND BRUSH REMOVAL (SEE LANDSCAPE PLANS)
- INDICATES TREE AND BRUSH PROTECTION (SEE LANDSCAPE PLANS)
- INDICATES PAVEMENT SAWCUT
- INDICATES CONSTRUCTION FENCE 6 FOOT HIGH CHAIN LINK WITH DRIVEN POSTS 8 TO 10 FEET ON CENTER.

PROJECT NOTES:

* LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY GOVERNING AUTHORITIES. IN ADDITION TO, NO LAND CLEARING OR GRADING SHALL BEGIN UNTIL ALL PERIMETER EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED. (INCLUDING STORM WATER POLLUTION PREVENTION PLAN PER THE DEVELOPMENT CRITERIA.) SEE SHEET C-05 & C-06 FOR EROSION CONTROL MEASURES)
* ALL EXISTING UTILITIES TO BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
* CONTRACTOR SHALL COORDINATE AND COMPLY WITH ALL UTILITY COMPANIES INVOLVED IN PROJECT AND PAY ALL REQUIRED FEES AND COSTS.
* ALL STRUCTURES & DEBRIS SHALL BE REMOVED PRIOR TO CONSTRUCTION & DISPOSED OF OFFSITE.
* ANY EXISTING FIELD DRAIN TILES ENCOUNTERED SHALL BE RECONNECTED OR CONNECTED TO THE NEAREST STORM SEWER.
* ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
* CONTRACTOR TO KEEP RING ROAD OPEN AT ALL TIMES.
* THE CONTRACTOR IS CAUTIONED NEITHER TO OBSTRUCT NOR REMOVE ANY EXISTING PAVEMENT, NOR TO DISTURB THE EXISTING TRAFFIC PATTERNS MORE THAN IS NECESSARY FOR THE PROPER EXECUTION OF THE WORK.

STAGING NOTE:

(STAGING SUBJECT TO CHANGES PER SITE CONTRACTORS SCHEDULE AND METHODS OF OPERATION)

1. EROSION CONTROL MEASURES
2. PLAN REMOVALS
3. PROPOSED UNDERGROUND
4. GRADING
5. BUILDING CONSTRUCTION
6. PAVING
7. TOPSOIL RESPREAD/SEED

REMOVAL TAGS:

NUMBER	DESCRIPTION	REMARKS
A-1	SANITARY SEWER STRUCTURE	ADJUST RIM TO FINISHED GRADE
A-2	WATER STRUCTURE	ADJUST RIM TO FINISHED GRADE
A-3	WATER MAIN	LOWER WATERMAIN (SEE UTILITY PLAN)
R-1	ASPHALT PAVEMENT	REMOVE (FULL DEPTH)
R-2	CONCRETE PAVEMENT/SIDEWALK	REMOVE (FULL DEPTH)
R-3	CONCRETE CURB & GUTTER	REMOVE
R-4	CONCRETE PLANTER WALL	REMOVE
R-5	STORM SEWER PIPE	REMOVE
R-6	STORM SEWER STRUCTURE	REMOVE
R-7	WATER PIPE	REMOVE
R-8	LIGHT POLE	REMOVE
R-9	FLAG POLE	REMOVE & RELOCATE (BY OWNER)
R-10	SIGN	REMOVE
R-11	SIGN	REMOVE & RELOCATE (SEE SITE PLAN)
R-12	SCULPTURE	REMOVE & RELOCATE (BY OWNER)
R-13	TREE	REMOVE
R-14	BUSH	REMOVE
R-15	BENCH	REMOVE
R-16	PERGOLA & FENCE POST	REMOVE
R-17	IRRIGATION HANDHOLE	REMOVE
R-18	FIRE HYDRANT	REMOVE
R-19	WATER VALVE OR B-BOX	REMOVE
R-20	RETAINING WALL	REMOVE

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McHenry County College ENGAGEMENT HALL

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DKA PROJECT NO: 24 - 027

KEY PLAN:

LICENSED PROFESSIONAL ENGINEER
TODD M. RICHARDS
062-058779
STATE OF ILLINOIS

SHEET STATUS: 05/16/2025

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:

SITE DEMOLITION PLAN

SHEET NUMBER:

C-03

NORTH
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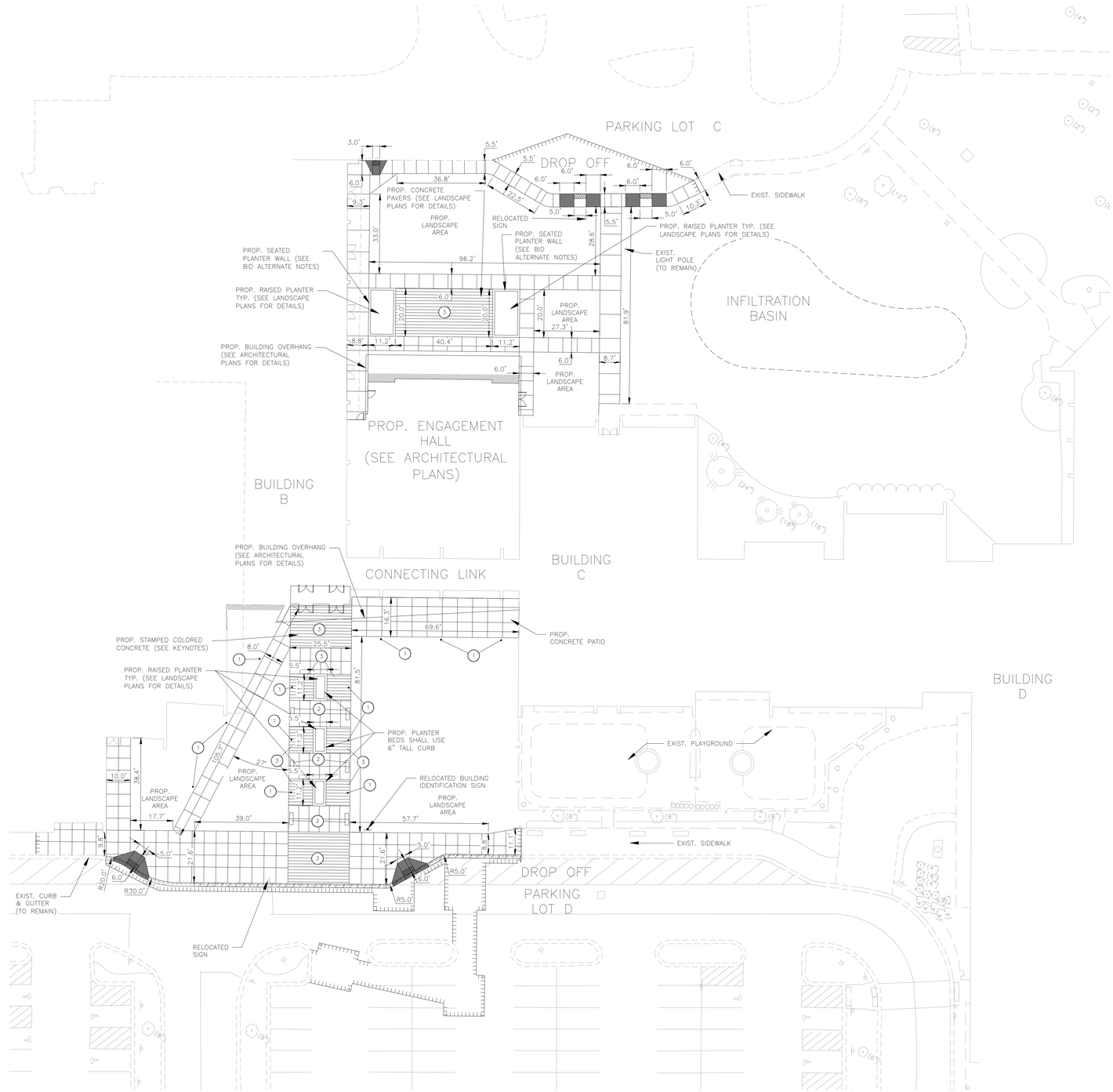

KEYNOTES:

1. LIGHTED BOLLARDS (SEE ELECTRICAL PLANS FOR LOCATION AND QUANTITY)
2. BENCHES (SEE ARCHITECTURAL PLANS)
3. STAMPED COLORED CONCRETE (SEE STAMPED COLORED CONCRETE NOTES, THIS SHEET)

HATCH LEGEND

- DENOTES PAVEMENT SAWCUT
- DENOTES REVERSE (SPILLING) CURB & GUTTER
- DENOTES CONCRETE CURB & GUTTER (CATCHING)
- DENOTES AREA OF DEPRESSED CURB AND GUTTER.
- DENOTES PROP. SIDEWALK
- DENOTES PROP. STAMPED COLORED CONCRETE
- DENOTES AREA OF DEPRESSED SIDEWALK
- DENOTES AREA TO UTILIZE TRUNCATED DOMES

PROJECT NOTES:

* CONTRACTOR TO COORDINATE W/ COLLEGE PRIOR TO CLOSING ANY PORTIONS OF THE EXISTING BUILDING OR PARKING LOT.
* ALL CONSTRUCTION FOR UTILITIES AND PAVEMENT SHOULD BE DONE IN ACCORDANCE WITH CITY OF CRYSTAL LAKE STANDARD SPECIFICATIONS.
* ALL PAVEMENT DIMENSIONS ARE MEASURED TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
* ALL PAVEMENT RADII ARE 5.0' RADIUS MEASURED TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
* ALL CURB ADJOINING SIDEWALKS SHALL BE DOWELED INTO THE CURB.

CONTRACTOR NOTES:

* CONTRACTOR TO COORDINATE THE SHUT DOWN OF THE EXISTING WATER MAIN WITH McHENRY COUNTY COLLEGE, THE CITY OF CRYSTAL LAKE AND THE CRYSTAL LAKE FIRE PROTECTION DISTRICT.
* ONCE THE EXISTING WATER MAIN IS ISOLATED/SHUT DOWN THE EXISTING WATER MAIN REMOVALS CAN BE MADE AND CONTRACTOR SHALL INSTALL THE NEW WATER MAIN LINE WITH CARRIER PIPE PER PLAN. ONCE THE PROPOSED WATER MAIN IS COMPLETE CONTRACTOR SHALL CONNECT IT THE EXISTING WATER MAIN AND RE-ENERGIZE THE ISOLATED LINE.

SITE DATA:

* PIN: 13-25-300-021
* PROPOSED PROJECT AREA: 50,348± SQ. FT. (1.16 ACRES)
* EXISTING IMPERVIOUS WITHIN PROJECT AREA: 21,481± SQ. FT. (42.67%)
  ** PAVED SURFACE: 17,318± SQ. FT. (34.40%)
  ** BUILDING AREA: 4,163± SQ. FT. (8.27%)
* PROPOSED IMPERVIOUS WITHIN PROJECT AREA: 24,495± SQ. FT. (48.56%)
  ** PAVED SURFACE: 15,196± SQ. FT. (30.18%)
  ** BUILDING AREA: 9,299± SQ. FT. (18.47%)
* NET CHANGE IN IMPERVIOUS AREA: 3,014± SQ. FT. INCREASE
  ** PROPOSED EVENT CENTER ROOF AREA: 6,347± SQ. FT.
  ** IMPERVIOUS TO EXIST. BASIN REDUCTION: 3,333± SQ. FT., SEE NOTE BELOW.
* NOTE:
  ** BUILDING AREA REFERS TO BUILDING ROOF AREA. PAVED SURFACE REFERS TO IMPERVIOUS AREA AT GROUND LEVEL. THE PROPOSED DEVELOPMENT RESULTS IN AN OVERALL INCREASE IN IMPERVIOUS AREA. HOWEVER, THE STORMWATER RUNOFF FROM THE PROPOSED EVENT CENTER BUILDING WILL BE ROUTED TO A PROPOSED INFILTRATION BASIN SEPARATE FROM THE EXISTING DETENTION BASIN. BECAUSE THIS BUILDING AREA WILL NO LONGER TRIBUTARY TO THE EXISTING DETENTION BASIN IT HAS BEEN CONSIDERED AS A HARDSCAPE AREA REDUCTION FOR PURPOSES OF STORMWATER CALCULATIONS, SEE STORMWATER MANAGEMENT REPORT FOR FURTHER DETAILS.

BUILDING AREA:

* PROPOSED BUILDING TO BE CONSTRUCTED PER ARCHITECTURAL PLANS.

PARKING DATA:

* NO CHANGES PROPOSED TO EXISTING PARKING.

STAMPED COLORED CONCRETE NOTES:

* CONCRETE SHALL UTILIZE RUNNING BOND PATTERN PERPENDICULAR TO THE LONG AXIS OF THE SIDEWALK.
* CONTRACTOR TO PROVIDE MOCK-UP OF STAMPED COLORED CONCRETE FOR REVIEW AND APPROVAL BY OWNER.
* CONCRETE SHALL HAVE MEDIUM BROOM FINISH.

BID ALTERNATE NOTES:

* REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR DETAILS OF RAISED PLANTER BEDS.
* BID ALTERNATE 3: PLANTER BEDS NORTH OF THE ENGAGEMENT HALL SHALL BE RAISED CONCRETE CURB.

NORTH

0 20'
1" = 20'

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DKA PROJECT NO: 24 - 027

KEY PLAN:

REGISTERED PROFESSIONAL ENGINEER
TODD M. RICHARDS
062-058779
STATE OF ILLINOIS

SHEET STATUS: 05/16/2025
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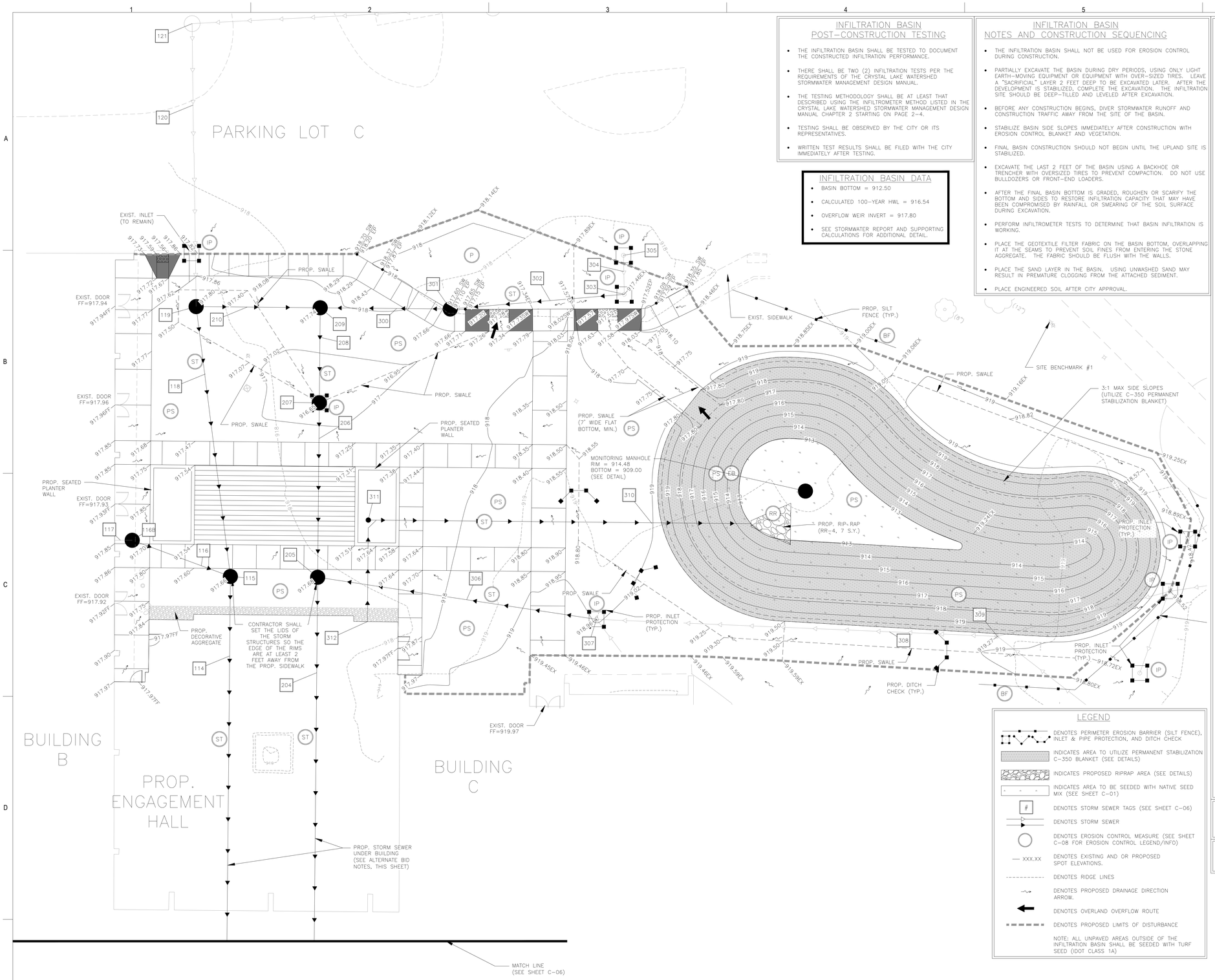
NO:	DESCRIPTION:	DATE:

SHEET TITLE:
SITE PLAN

SHEET NUMBER:
C-04



INFILTRATION BASIN POST-CONSTRUCTION TESTING

- THE INFILTRATION BASIN SHALL BE TESTED TO DOCUMENT THE CONSTRUCTED INFILTRATION PERFORMANCE.
- THERE SHALL BE TWO (2) INFILTRATION TESTS PER THE REQUIREMENTS OF THE CRYSTAL LAKE WATERSHED STORMWATER MANAGEMENT DESIGN MANUAL.
- THE TESTING METHODOLOGY SHALL BE AT LEAST THAT DESCRIBED USING THE INFILTROMETER METHOD LISTED IN THE CRYSTAL LAKE WATERSHED STORMWATER MANAGEMENT DESIGN MANUAL CHAPTER 2 STARTING ON PAGE 2-4.
- TESTING SHALL BE OBSERVED BY THE CITY OR ITS REPRESENTATIVES.
- WRITTEN TEST RESULTS SHALL BE FILED WITH THE CITY IMMEDIATELY AFTER TESTING.

INFILTRATION BASIN DATA

- BASIN BOTTOM = 912.50
- CALCULATED 100-YEAR HWL = 916.54
- OVERFLOW WEIR INVERT = 917.80
- SEE STORMWATER REPORT AND SUPPORTING CALCULATIONS FOR ADDITIONAL DETAIL.

INFILTRATION BASIN NOTES AND CONSTRUCTION SEQUENCING

- THE INFILTRATION BASIN SHALL NOT BE USED FOR EROSION CONTROL DURING CONSTRUCTION.
- PARTIALLY EXCAVATE THE BASIN DURING DRY PERIODS, USING ONLY LIGHT EARTH-MOVING EQUIPMENT OR EQUIPMENT WITH OVER-SIZED TIRES. LEAVE A "SACRIFICIAL" LAYER 2 FEET DEEP TO BE EXCAVATED LATER. AFTER THE DEVELOPMENT IS STABILIZED, COMPLETE THE EXCAVATION. THE INFILTRATION SITE SHOULD BE DEEP-TILLED AND LEVELED AFTER EXCAVATION.
- BEFORE ANY CONSTRUCTION BEGINS, DIVER STORMWATER RUNOFF AND CONSTRUCTION TRAFFIC AWAY FROM THE SITE OF THE BASIN.
- STABILIZE BASIN SIDE SLOPES IMMEDIATELY AFTER CONSTRUCTION WITH EROSION CONTROL BLANKET AND VEGETATION.
- FINAL BASIN CONSTRUCTION SHOULD NOT BEGIN UNTIL THE UPLAND SITE IS STABILIZED.
- EXCAVATE THE LAST 2 FEET OF THE BASIN USING A BACKHOE OR TRENCHER WITH OVERSIZED TIRES TO PREVENT COMPACTION. DO NOT USE BULLDOZERS OR FRONT-END LOADERS.
- AFTER THE FINAL BASIN BOTTOM IS GRADED, ROUGHEN OR SCARIFY THE BOTTOM AND SIDES TO RESTORE INFILTRATION CAPACITY THAT MAY HAVE BEEN COMPROMISED BY RAINFALL OR SMEARING OF THE SOIL SURFACE DURING EXCAVATION.
- PERFORM INFILTROMETER TESTS TO DETERMINE THAT BASIN INFILTRATION IS WORKING.
- PLACE THE GEOTEXTILE FILTER FABRIC ON THE BASIN BOTTOM, OVERLAPPING IT AT THE SEAMS TO PREVENT SOIL FINES FROM ENTERING THE STONE AGGREGATE. THE FABRIC SHOULD BE FLUSH WITH THE WALLS.
- PLACE THE SAND LAYER IN THE BASIN. USING UNWASHED SAND MAY RESULT IN PREMATURE CLOGGING FROM THE ATTACHED SEDIMENT.
- PLACE ENGINEERED SOIL AFTER CITY APPROVAL.

GRADING & DRAINAGE NOTES

1. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF SITE PLAN DOCUMENTS AND ARCHITECTURAL DESIGN FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS, DOOR ACCESS, AND EXTERIOR GRADING. THE UTILITY SERVICE SIZES ARE TO BE DETERMINED BY THE ARCHITECT. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES/SERVICES WITH THE INDIVIDUAL COMPANIES, TO AVOID CONFLICTS AND ENSURE PROPER DEPTHS ARE ACHIEVED. THE JURISDICTION UTILITY REQUIREMENTS SHALL ALSO BE MET, AS WELL AS COORDINATING THE UTILITY TIE-INS/CONNECTIONS PRIOR TO CONNECTING TO THE EXISTING UTILITY/SERVICE. WHERE CONFLICTS EXIST WITH THESE SITE PLANS, ENGINEER IS TO BE NOTIFIED PRIOR TO CONSTRUCTION TO RESOLVE SAME.
2. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING WITH SUITABLE MATERIALS AS SPECIFIED IN THE GEOTECHNICAL REPORT, ALL EXCAVATED OR FILLED AREAS SHALL BE COMPACTED AS OUTLINED IN THE GEOTECHNICAL REPORT. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL BE SUBMITTED IN COMPACTION REPORT PREPARED BY A QUALIFIED GEOTECHNICAL ENGINEER, REGISTERED WITH THE STATE WHERE THE WORK IS PERFORMED, VERIFYING THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT.
3. ALL FILL, COMPACTION, AND BACKFILL MATERIALS REQUIRED FOR UTILITY INSTALLATION SHALL BE AS PER THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT AND SHALL BE COORDINATED WITH THE APPLICABLE UTILITY COMPANY SPECIFICATIONS.
4. THE CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST OSHA STANDARDS AND REGULATIONS, OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE "MEANS AND METHODS" REQUIRED TO MEET THE INTENT AND PERFORMANCE CRITERIA OF OSHA, AS WELL AS ANY OTHER ENTITY THAT HAS JURISDICTION FOR EXCAVATION AND/OR TRENCHING PROCEDURES.
5. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR TO ENSURE 0.75% MINIMUM SLOPE ALONG ALL ISLANDS, GUTTERS, AND CURBS; 1.0% ON ALL CONCRETE SURFACES; AND 1.5% MINIMUM ON ASPHALT, TO PREVENT PONDING. ANY DISCREPANCIES THAT MAY AFFECT THE PUBLIC SAFETY OR PROJECT COST MUST BE IDENTIFIED TO THE ENGINEER IN WRITING IMMEDIATELY. PROCEEDING WITH CONSTRUCTION WITHOUT NOTIFICATION IS DONE SO AT THE CONTRACTOR'S OWN RISK.
6. IN CASE OF DISCREPANCIES BETWEEN PLANS OR RELATIVE TO OTHER PLANS, THE SITE PLAN WILL TAKE PRECEDENCE. IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICTS.
7. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
8. ALL DRAINAGE STRUCTURES SHALL BE PRE-CAST.
9. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING AND BE INSTALLED ACCORDINGLY.
10. GENERAL CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES HAVING UNDERGROUND UTILITIES ON SITE OR IN RIGHT-OF-WAY PRIOR TO EXCAVATION. CONTRACTOR SHALL CONTACT UTILITY LOCATING COMPANY AND LOCATE ALL UTILITIES PRIOR TO GRADING START.
11. NO PART OF THE PROPOSED PROJECT IS LOCATED WITHIN A FLOOD HAZARD AREA.
12. SPOT ELEVATIONS SHOWN ARE @ EDGE OF PAVEMENT UNLESS OTHERWISE NOTED ON PLAN.
13. ALL STORM SEWER JOINTS SHALL HAVE O-RING GASKETS.
14. ALL STORM SEWER PIPE CONNECTIONS TO MANHOLES OR OTHER STRUCTURES SHALL BE CONNECTED THROUGH THE USE OF RUBBER BOOTS.
15. MATCH EXISTING GRADES AT PROPERTY LINES AND/OR CONSTRUCTION LIMITS.
16. SITE SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS
17. ALL SIDEWALK CROSS SLOPES SHALL BE A MAXIMUM OF 2%. CROSS SLOPE
18. SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING OF PAVEMENT.
19. THE CONTRACTOR SHALL CONFINE HIS GRADING OPERATIONS TO WITHIN CONSTRUCTION LIMITS AND EASEMENTS SHOWN ON THE PLANS. ANY DAMAGE TO PROPERTIES OUTSIDE THE SITE BOUNDARY SHALL BE AT THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
20. THE CONTRACTOR SHALL APPLY NECESSARY MOISTURE CONTROL TO THE CONSTRUCTION AREA AND HAUL ROADS TO PREVENT THE SPREAD OF DUST.
21. ALL FIELD TILES ENCOUNTERED SHALL BE REPLACED AND/OR CONNECTED TO THE STORM SEWER SYSTEM AND LOCATED AND IDENTIFIED ON THE RECORD PLANS BY THE CONTRACTOR.
22. ALL STORM DRAINAGE CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF CRYSTAL LAKE.
23. ELEVATIONS AND CONTOURS ARE TO STATE PLANE COORDINATES PER NAVD DATUM 88.
24. 1 WEEK PRIOR TO CONSTRUCTION WITHIN CITY ROW OR ANY CONNECTION TO PUBLIC SEWERS, CONTRACTOR SHALL NOTIFY THE APPROPRIATE CITY ENGINEERING DIVISIONS.
25. THE CONTRACTOR SHALL NOT DISTURB DESIRABLE GRASS AREAS AND DESIRABLE TREES OUTSIDE THE CONSTRUCTION UNITS. THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK OR SERVICE VEHICLES AND EQUIPMENT OR USE THESE AREAS FOR STORAGE OR MATERIALS. STORAGE, PARKING AND SERVICE AREAS WILL BE SUBJECT TO THE APPROVAL OF THE OWNER.
26. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY AREAS OF PAVEMENT OR SIDEWALK NOT TO BE REMOVED THAT IS DAMAGED DUE TO OPERATING EQUIPMENT ON THE PAVEMENT OR SIDEWALK.
27. ALL EXISTING UTILITY TRENCHES THAT ARE PROPOSED TO BE WITHIN PAVEMENT AREAS SHALL BE EXPOSED AND BACKFILLED WITH CA-6 CRUSHED AGGREGATE.
28. ALL SUBGRADE, SUBBASE AND BINDER COURSE SHALL BE PROOFROLLED PER THE CITY OF CRYSTAL LAKE DEVELOPMENT ORDINANCES ENGINEERING SPECIFICATIONS.

SITE DISTURBANCE NOTE

- THE PROPOSED DEVELOPMENT IS ANTICIPATED TO DISTURB APPROXIMATELY 1.16 ACRES.

SITE BENCHMARK NOTE

- SEE SHEET C-00 FOR SITE BENCHMARK INFORMATION.

LEGEND

- DENOTES PERIMETER EROSION BARRIER (SILT FENCE), INLET & PIPE PROTECTION, AND DITCH CHECK
- INDICATES AREA TO UTILIZE PERMANENT STABILIZATION C-350 BLANKET (SEE DETAILS)
- INDICATES PROPOSED RIPRAP AREA (SEE DETAILS)
- INDICATES AREA TO BE SEEDED WITH NATIVE SEED MIX (SEE SHEET C-01)
- DENOTES STORM SEWER TAGS (SEE SHEET C-06)
- DENOTES STORM SEWER
- DENOTES EROSION CONTROL MEASURE (SEE SHEET C-08 FOR EROSION CONTROL LEGEND/INFO)
- XXX.XX DENOTES EXISTING AND OR PROPOSED SPOT ELEVATIONS.
- DENOTES RIDGE LINES
- DENOTES PROPOSED DRAINAGE DIRECTION ARROW.
- DENOTES OVERLAND OVERFLOW ROUTE
- DENOTES PROPOSED LIMITS OF DISTURBANCE

NOTE: ALL UNPAVED AREAS OUTSIDE OF THE INFILTRATION BASIN SHALL BE SEEDED WITH TURF SEED (IDOT CLASS 1A)

ALTERNATE BID NOTES

- THE BASE BID FOR THE STORM SEWER PIPING PROPOSED TO BE ROUTED UNDERNEATH THE BUILDING SHALL BE RCP. SEE NOTES BELOW FOR ALTERNATE BID OPTIONS.
- ALTERNATE BID 1A: PIPE SHALL BE RCP WITH CURED-IN-PLACE SLIP LINER.
- ALTERNATE BID 1B: PIPE SHALL ADS N-12 WT ENCASED IN CLSM CONCRETE. PIPE SHALL BE ANCHORED DURING BACKFILLING WITH CLSM.
- ALTERNATE BID 1C: PIPE SHALL BE ADS N-12 WT INSIDE OF HOBAS FIBERGLASS PIPE WITH CASING SPACERS. 48" AND 60" DIAMETER CASING PIPES SHALL BE UTILIZED, 120 LIN. FT. EACH.

NORTH

0 10'

1" = 10'

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SHEET STATUS: 05/16/2025
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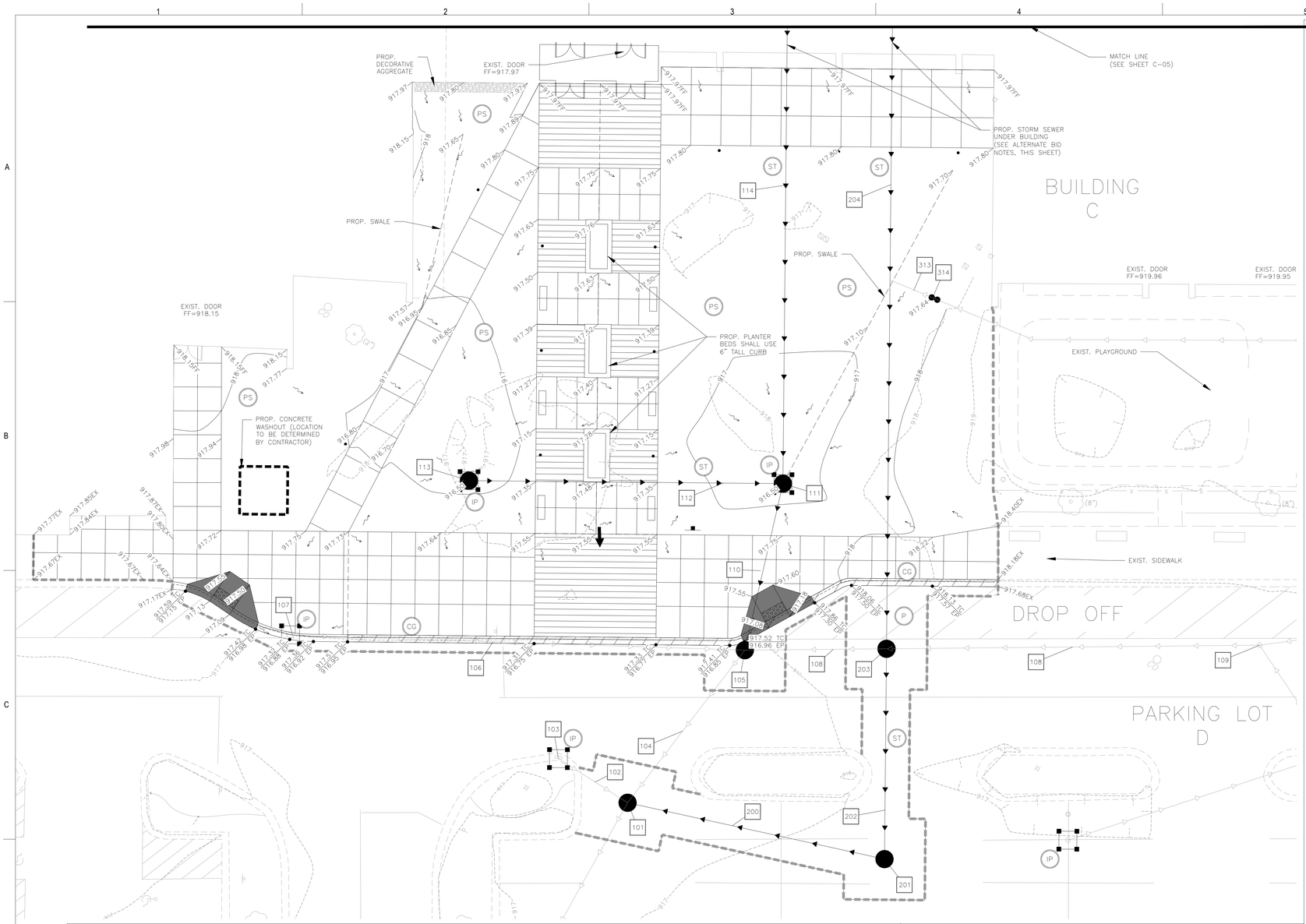
NO:	DESCRIPTION:	DATE:

SHEET TITLE:
GRADING & EROSION CONTROL PLAN - NORTH

SHEET NUMBER:
C-05



GRADING & DRAINAGE NOTES

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2. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING WITH SUITABLE MATERIALS AS SPECIFIED IN THE GEOTECHNICAL REPORT. ALL EXCAVATED OR FILLED AREAS SHALL BE COMPACTED AS OUTLINED IN THE GEOTECHNICAL REPORT. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL BE SUBMITTED IN COMPACTION REPORT PREPARED BY A QUALIFIED GEOTECHNICAL ENGINEER, REGISTERED WITH THE STATE WHERE THE WORK IS PERFORMED, VERIFYING THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT.
3. ALL FILL, COMPACTION, AND BACKFILL MATERIALS REQUIRED FOR UTILITY INSTALLATION SHALL BE AS PER THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT AND SHALL BE COORDINATED WITH THE APPLICABLE UTILITY COMPANY SPECIFICATIONS.
4. THE CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST OSHA STANDARDS AND REGULATIONS, OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE "MEANS AND METHODS" REQUIRED TO MEET THE INTENT AND PERFORMANCE CRITERIA OF OSHA, AS WELL AS ANY OTHER ENTITY THAT HAS JURISDICTION FOR EXCAVATION AND/OR TRENCHING PROCEDURES.
5. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR TO ENSURE 0.75% MINIMUM SLOPE ALONG ALL ISLANDS, GUTTERS, AND CURBS; 1.0% ON ALL CONCRETE SURFACES; AND 1.5% MINIMUM ON ASPHALT, TO PREVENT PONDING. ANY DISCREPANCIES THAT MAY AFFECT THE PUBLIC SAFETY OR PROJECT COST MUST BE IDENTIFIED TO THE ENGINEER IN WRITING IMMEDIATELY. PROCEEDING WITH CONSTRUCTION WITHOUT NOTIFICATION IS DONE SO AT THE CONTRACTOR'S OWN RISK.
6. IN CASE OF DISCREPANCIES BETWEEN PLANS OR RELATIVE TO OTHER PLANS, THE SITE PLAN WILL TAKE PRECEDENCE. IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICTS.
7. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
8. ALL DRAINAGE STRUCTURES SHALL BE PRE-CAST.
9. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING AND BE INSTALLED ACCORDINGLY.
10. GENERAL CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES HAVING UNDERGROUND UTILITIES ON SITE OR IN RIGHT-OF-WAY PRIOR TO EXCAVATION. CONTRACTOR SHALL CONTACT UTILITY LOCATING COMPANY AND LOCATE ALL UTILITIES PRIOR TO GRADING START.
11. NO PART OF THE PROPOSED PROJECT IS LOCATED WITHIN A FLOOD HAZARD AREA.
12. SPOT ELEVATIONS SHOWN ARE @ EDGE OF PAVEMENT UNLESS OTHERWISE NOTED ON PLAN.
13. ALL STORM SEWER JOINTS SHALL HAVE O-RING GASKETS.
14. ALL STORM SEWER PIPE CONNECTIONS TO MANHOLES OR OTHER STRUCTURES SHALL BE CONNECTED THROUGH THE USE OF RUBBER BOOTS.
15. MATCH EXISTING GRADES AT PROPERTY LINES AND/OR CONSTRUCTION LIMITS.
16. SITE SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS
17. ALL SIDEWALK CROSS SLOPES SHALL BE A MAXIMUM OF 2% CROSS SLOPE
18. SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING OF PAVEMENT.
19. THE CONTRACTOR SHALL CONFINE HIS GRADING OPERATIONS TO WITHIN CONSTRUCTION LIMITS AND EASEMENTS SHOWN ON THE PLANS. ANY DAMAGE TO PROPERTIES OUTSIDE THE SITE BOUNDARY SHALL BE AT THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
20. THE CONTRACTOR SHALL APPLY NECESSARY MOISTURE CONTROL TO THE CONSTRUCTION AREA AND HAUL ROADS TO PREVENT THE SPREAD OF DUST.
21. ALL FIELD TILES ENCOUNTERED SHALL BE REPLACED AND/OR CONNECTED TO THE STORM SEWER SYSTEM AND LOCATED AND IDENTIFIED ON THE RECORD PLANS BY THE CONTRACTOR.
22. ALL STORM DRAINAGE CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF CRYSTAL LAKE.
23. ELEVATIONS AND CONTOURS ARE TO STATE PLANE COORDINATES PER NAVD DATUM 88.
24. 1 WEEK PRIOR TO CONSTRUCTION WITHIN CITY ROW OR ANY CONNECTION TO PUBLIC SEWERS, CONTRACTOR SHALL NOTIFY THE APPROPRIATE CITY ENGINEERING DIVISIONS.
25. THE CONTRACTOR SHALL NOT DISTURB DESIRABLE GRASS AREAS AND DESIRABLE TREES OUTSIDE THE CONSTRUCTION UNITS. THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK OR SERVICE VEHICLES AND EQUIPMENT OR USE THESE AREAS FOR STORAGE OR MATERIALS. STORAGE, PARKING AND SERVICE AREAS WILL BE SUBJECT TO THE APPROVAL OF THE OWNER.
26. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY AREAS OF PAVEMENT OR SIDEWALK NOT TO BE REMOVED THAT IS DAMAGED DUE TO OPERATING EQUIPMENT ON THE PAVEMENT OR SIDEWALK.
27. ALL EXISTING UTILITY TRENCHES THAT ARE PROPOSED TO BE WITHIN PAVEMENT AREAS SHALL BE EXPOSED AND BACKFILLED WITH CA-6 CRUSHED AGGREGATE.
28. ALL SUBGRADE, SUBBASE AND BINDER COURSE SHALL BE PROOFROLLED PER THE CITY OF CRYSTAL LAKE DEVELOPMENT ORDINANCES ENGINEERING SPECIFICATIONS.

LEGEND

- DENOTES PERIMETER EROSION BARRIER (SILT FENCE), INLET & PIPE PROTECTION, AND DITCH CHECK
- INDICATES AREA TO UTILIZE PERMANENT STABILIZATION C-350 BLANKET (SEE DETAILS)
- INDICATES PROPOSED RIPRAP AREA (SEE DETAILS)
- INDICATES AREA TO BE SEEDED WITH NATIVE SEED MIX (SEE SHEET C-01)
- # DENOTES STORM SEWER TAGS (SEE THIS SHEET)
- DENOTES STORM SEWER
- DENOTES EROSION CONTROL MEASURE (SEE SHEET C-08 FOR EROSION CONTROL LEGEND/INFO)
- XXX.XX DENOTES EXISTING AND OR PROPOSED SPOT ELEVATIONS.
- DENOTES RIDGE LINES
- DENOTES PROPOSED DRAINAGE DIRECTION ARROW.
- DENOTES OVERLAND OVERFLOW ROUTE
- DENOTES PROPOSED LIMITS OF DISTURBANCE

NOTE: ALL UNPAVED AREAS OUTSIDE OF THE INFILTRATION BASIN SHALL BE SEEDED WITH TURF SEED (IDOT CLASS 1A)

STORM TAGS (100 SERIES)

ST-101 STM SWR MH 7' DIA., R-1713, CL
RIM = 916.30
INV = 910.37 N/S 36" RCP
INV = 911.50 W 12" RCP
INV = 910.37 E 24" RCP (CORED)
CONTRACTOR TO FIELD VERIFY EXIST. PIPE INVERTS PRIOR TO ORDERING MATERIALS AND NOTIFY ENGINEER

ST-102 EX SS RCP, 12"

ST-103 EXIST. CURB INLET
RIM = 916.11
INV = 911.50 E 12" RCP

ST-104 EX SS RCP, 36"

ST-105 STM SWR MH 7' DIA., R-1713, CL
RIM = 916.90
INV = 911.63 NW/S 36" RCP
INV = 911.87 SW 12" RCP
INV = 911.57 NE 18" RCP

ST-106 EX SS RCP, 12"

ST-107 EXIST. CURB INLET
RIM = 916.88
INV = 912.55 NE 12" RCP

ST-108 EX SS RCP, 18"
PIPE CUT TO INSERT MH
SEE TAG 203

ST-109 EXIST. MH
TOP = 917.72
INV = 912.52 SW 18" RCP
INV = 912.62 NE 12" RCP
INV = UNKNOWN SE 12" RCP

ST-110 29 LIN FT SS RCP, 36"
@ 0.45%

ST-111 STM SWR MH 7' DIA., R-2504 TY A GRATE
RIM = 916.50
INV = 911.76 NW/SE 36" RCP
INV = 912.76 W 12" RCP

ST-112 61 LIN FT SS RCP, 12"
@ 0.48%

ST-113 STM SWR CB 2' DIA., R-2504 TY D GRATE
RIM = 916.50
INV = 913.05 E 12" RCP

ST-114 182 LIN FT SS RCP, 36"
@ 0.30%

ST-115 STM SWR MH 5' DIA., R-1713, CL
RIM = 917.66
INV = 912.31 NW/S 36" RCP
INV = 912.45 W 12" RCP

ST-116 21 LIN FT SS RCP, 12"
@ 1.00%
CONTRACTOR TO FIELD VERIFY TAG 117 PIPE SIZE, MATERIAL, INVERT, AND LOCATION PRIOR TO ORDERING MATERIALS AND NOTIFY ENGINEER

ST-116B STM SWR MH 4' DIA., R-1713, CL
RIM = 917.66
INV = 912.66 W/SE 12" RCP
CONNECT TO TAG 117
CONTRACTOR TO FIELD VERIFY TAG 117
SEE TAG 116 NOTES

ST-117 EX SS, 12" (MATERIAL UNKNOWN)
SEE TAG 116 NOTES ABOVE

ST-118 63 LIN FT SS RCP, 36"
@ 0.30%

ST-119 STM SWR MH 6' DIA., R-1713, CL
RIM = 917.80
INV = 912.50 SE 36" RCP
INV = 912.50 NW 24" RCP (FIELD VERIFY)
INV = 912.50 NE 24" RCP

ST-120 EX SS RCP, 24"

ST-121 EXIST. MH
TOP = 918.47
INV = 912.77 SE 18" RCP
INV = 913.37 SW 12" RCP
INV = 913.12 NE 18" RCP
INV = 914.27 NW 18" RCP

STORM TAGS (200 SERIES)

ST-200 48 LIN FT SS RCP, 24"
@ 0.63%

ST-201 STM SWR MH 7' DIA., R-1713, CL
RIM = 917.22
INV = 910.67 SW 24" RCP
INV = 910.67 NW 48" RCP

ST-202 37 LIN FT SS RCP, 48"
@ 0.30%

ST-203 STM SWR MH 7' DIA., R-1713, CL
RIM = 917.27
INV = 910.78 SW/NW 48" RCP
INV = 911.81 SW 18" RCP (EXISTING)
INV = 911.87 NE 18" RCP (EXISTING)
CONTRACTOR TO FIELD VERFIY PIPE INVERTS PRIOR TO ORDERING MATERIALS AND NOTIFY ENGINEER (SEE TAG 108)

ST-204 215 LIN FT SS RCP, 48"
@ 0.30%

ST-205 STM SWR MH 7' DIA., R-1713, CL
RIM = 917.68
INV = 911.42 NW/SE 48" RCP
INV = 911.42 E 15" RCP

ST-206 37 LIN FT SS RCP, 48"
@ 0.30%

ST-207 STM SWR MH 7' DIA.
WITH FOUR (4) R-4341-A GRATES (SEE DETAIL)
RIM = 916.65
INV = 911.53 NW/SE 48" RCP

ST-208 17 LIN FT SS RCP, 48"
@ 0.35%

ST-209 STM SWR MH 7' DIA., R-1713, CL
RIM = 917.98
INV = 911.59 SE 48" RCP
INV = 911.85 SW/NE 24" RCP

ST-210 25 LIN FT SS RCP, 24"
@ 2.60%

STORM TAGS (300 SERIES)

ST-300 27 LIN FT SS RCP, 24"
@ 1.11%

ST-301 STM SWR CB 4' DIA., R-3281 TY A GRATE
RIM = 917.10
INV = 912.15 SW/NE 24" RCP

ST-302 40 LIN FT SS RCP, 24"
@ 4.15%

ST-303 EXIST. INLET
RIM = 917.46
INV = 913.81 SW 24" RCP (CORED)
INV = 914.16 NW 12" RCP

ST-304 EX SS RCP, 12"

ST-305 EXIST. INLET
RIM = 917.64
INV = 914.23 SE 12" RCP

ST-306 66 LIN FT SS RCP, 15"
@ 1.35%

ST-307 EXIST. MH
RIM = 918.96
INV = 912.31 SW 15" RCP (CORED)
INV = 912.31 NE 15" RCP
INV = 914.56 SE 10" RCP

ST-308 EX SS RCP, 15"

ST-309 EXIST. MH (RAISE RIM TO FG)
EX RIM = 919.09
PR RIM = 919.27
INV = 913.06 W/SE 15" RCP
INV = 913.06 E 12" RCP

ST-310 96 LIN FT SS PVC, ROOF DRAIN 10" SDR 26
@ 0.65%
INV @ BASIN= 913.00

ST-311 CLEANOUT
RIM = 917.95
INV = 913.62

ST-312 26 LIN FT SS PVC, ROOF DRAIN 10" SDR 26
@ 0.62%
INV @ SR-310= 913.61
INV @ BLDG= 913.77
INSTALL 6" TO 10" ADAPTER TO CONNECT TO 6" PIPE WITHIN BUILDING

ST-313 EX 4" PVC UNDERDRAIN
@ 0.30% (ESTIMATED)
CORE CONNECTION INTO TAG 204 WITH 2 LIN FT RISER @ 1:1 SLOPE
INV @ 204 = 913.48
CONTRACTOR TO FIELD VERIFY EXIST. PIPE SIZE, DEPTH, AND LOCATION PRIOR TO ORDERING MATERIALS

ST-314 DOUBLE CLEANOUT
RIM = 917.64
INV = 915.51
INSERT CLEANOUT ONTO TAG 313
CONTRACTOR TO FIELD VERIFY EXIST. PIPE SIZE, DEPTH, AND LOCATION PRIOR TO ORDERING MATERIALS

ALTERNATE BID NOTES

- THE BASE BID FOR THE STORM SEWER PIPING PROPOSED TO BE ROUTED UNDERNEATH THE BUILDING SHALL BE RCP. SEE NOTES BELOW FOR ALTERNATE BID OPTIONS.
- ALTERNATE BID 1A: PIPE SHALL BE RCP WITH CURED-IN-PLACE SLIP LINER.
- ALTERNATE BID 1B: PIPE SHALL ADS N-12 WT ENCASED IN CLSM CONCRETE. PIPE SHALL BE ANCHORED DURING BACKFILLING WITH CLSM.
- ALTERNATE BID 1C: PIPE SHALL BE ADS N-12 WT INSIDE OF HOBAS FIBERGLASS PIPE WITH CASING SPACERS. 48" AND 60" DIAMETER CASING PIPES SHALL BE UTILIZED, 120 LIN. FT. EACH.

SITE BENCHMARK NOTE

- SEE SHEET C-00 FOR SITE BENCHMARK INFORMATION.

SITE DISTURBANCE NOTE

- THE PROPOSED DEVELOPMENT IS ANTICIPATED TO DISTURB APPROXIMATELY 1.16 ACRES.

ISSUED FOR BID – NOT FOR CONSTRUCTION

NORTH
0 10'
1" = 10'

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DKA PROJECT NO: 24 - 027

KEY PLAN:

LICENSED PROFESSIONAL ENGINEER
TODD M. RICHARDS
062-058779
STATE OF ILLINOIS

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
GRADING & EROSION CONTROL PLAN - SOUTH

SHEET NUMBER:
C-06

ONSITE WATERLINE NOTES:

- THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS, TEES, AND FIRE HYDRANTS.
- ALL FIRE HYDRANTS SHALL BE PROVIDED WITH AN APPROVED AUXILIARY GATE VALVE.
- ALL WATER MAINS SHALL BE HYDROSTATICALLY TESTED AND DISINFECTED BEFORE ACCEPTANCE. SEE SITE WORK SPECIFICATIONS.
- ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
- GENERAL CONTRACTOR SHALL HAVE APPROVAL OF ALL GOVERNING AGENCIES HAVING JURISDICTION OVER THIS SYSTEM PRIOR TO INSTALLATION.
- CONTRACTOR SHALL COORDINATE WITH CITY PUBLIC WORKS TO SCHEDULE WATER SERVICE SHUTOFF FOR PROPOSED WATER MAIN WORK.

PROJECT LEGEND:

- DENOTES MAINTAIN 18" VERTICAL SEPARATION PER TO IEPA'S REQUIREMENTS
- S-# DENOTES SANITARY SEWER TAG
- W-# DENOTES WATER MAIN TAG
- A DENOTES CONFLICT TAG
- DENOTES WATER MAIN CASING PIPE
- DENOTES ESTIMATED LENGTH OF PIPE LOWERING
- DENOTES ESTIMATED LENGTH OF PIPE INSULATION

NOTE: THE REQUIRED LENGTHS OF PIPE LOWERING AND PIPE INSULATION ARE DEPENDENT UPON THE SIZE/LOCATION/DEPTH OF THE EXISTING UTILITIES. CONTRACTOR SHALL FIELD VERIFY EXIST. UTILITY INFORMATION AND NOTIFY ENGINEER PRIOR TO ORDERING MATERIALS.

A CONFLICT TAGS

A — STORM SEWER TAG ST-208
BOP = 911.15
EXIST. 8" WATER MAIN
TOP = 909.65
VERT SEP = 1.50' MIN.
CONTRACTOR TO FIELD VERIFY WATER MAIN SIZE AND DEPTH LOWERING REQ'D

B — STORM SEWER TAG ST-118
BOP = 912.14
EXIST. 8" WATER MAIN
TOP = 910.64
VERT SEP = 1.50' MIN.
CONTRACTOR TO FIELD VERIFY WATER MAIN SIZE AND DEPTH LOWERING REQ'D

C — STORM SEWER TAG ST-118
BOP = 912.02
WATER TAG 8
TOP = 910.52
VERT SEP = 1.50' MIN.
WATER MAIN SIZE AND DEPTH LOWERING REQ'D

D — STORM SEWER TAG ST-116
BOP = 912.34
WATER TAG 8
TOP = 910.84
VERT SEP = 1.50' MIN.
WATER MAIN SIZE AND DEPTH LOWERING REQ'D

E — STORM SEWER TAG ST-114
BOP = 911.64
WATER TAG 8
TOP = 910.14
VERT SEP = 1.50' MIN.
WATER MAIN SIZE AND DEPTH LOWERING REQ'D

F — OMITTED

G — STORM SEWER TAG ST-204
BOP = 910.68
WATER TAG 8
TOP = 909.18
VERT SEP = 1.50' MIN.
WATER MAIN SIZE AND DEPTH LOWERING REQ'D

H — STORM SEWER TAG ST-313
BOP = 915.52
WATER TAG 9
TOP = 911.89
VERT SEP = 3.63'

I — STORM SEWER TAG ST-313
BOP = 915.53
WATER TAG 9
TOP = 911.28
VERT SEP = 4.25'

J — OMITTED

K — OMITTED

L — STORM SEWER TAG ST-312
BOP = 913.71
STORM SEWER TAG ST-306
TOP = 912.98
VERT SEP = 0.73'

UTILITY NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF SITE PLAN DOCUMENTS AND ARCHITECTURAL DESIGN FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS, DOOR ACCESS, AND EXTERIOR GRADING. THE UTILITY SERVICE SIZES ARE TO BE DETERMINED BY THE ARCHITECT. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES/SERVICES WITH THE INDIVIDUAL COMPANIES, TO AVOID CONFLICTS AND ENSURE PROPER DEPTHS ARE ACHIEVED. THE JURISDICTION UTILITY REQUIREMENTS SHALL ALSO BE MET, AS WELL AS COORDINATING THE UTILITY TIE-INS/CONNECTIONS PRIOR TO CONNECTING TO THE EXISTING UTILITY/SERVICE. WHERE CONFLICTS EXIST WITH THESE SITE PLANS, ENGINEER IS TO BE NOTIFIED PRIOR TO CONSTRUCTION TO RESOLVE SAME.
2. FIELD VERIFY ELEVATIONS AND LOCATIONS OF ALL CONNECTIONS TO EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION.
3. PROVIDE TEMPORARY SUPPORT FOR EXISTING UTILITY LINES THAT ARE ENCOUNTERED DURING CONSTRUCTION UNTIL BACKFILLING IS COMPLETE.
4. MAINTAIN A MINIMUM OF 6.0' COVER OVER ALL WATER MAINS & SERVICES.
5. MAINTAIN A MINIMUM OF 3.5' COVER OVER ALL SANITARY SERVICES.
6. ADJUST ALL MANHOLES AND FRAMES TO FINISHED GRADES.
7. ALL SANITARY SEWER AND WATER SERVICES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE IEPA STANDARDS.
8. 18" MINIMUM VERTICAL CLEARANCE BETWEEN SANITARY/STORM SEWER AND WATER MAIN. (PER IEPA STANDARDS)
9. MAINTAIN A MINIMUM OF 10' HORIZONTAL SEPARATION BETWEEN SANITARY SEWER LINES AND PUBLIC WATER MAINS. (PER IEPA STANDARDS)
10. WHERE PUBLIC UTILITY FIXTURES ARE SHOWN AS EXISTING ON THE PLANS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREA, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNERS OF THOSE UTILITIES PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL AFFORD ACCESS TO THESE FACILITIES FOR NECESSARY MODIFICATION OF SERVICES. UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS AND THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATIONS AND TO AVOID DAMAGE THERETO. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OR DELAY CAUSED BY SUCH WORK. THE CONTRACTOR IS REQUIRED TO UTILIZE THE UTILITY CALL JULIE AT 1-800-892-0123 AT LEAST 48 HOURS PRIOR TO EXCAVATING ANYWHERE ON THE PROJECT.
11. LOCATION OF SITE UTILITIES SHALL BE VERIFIED WITH PROPER UTILITY COMPANY PROVIDING SERVICE.
12. MATERIAL PERMITTED FOR USE AS SANITARY SEWER PIPES IS PVC SDR 26 FOR 4" AND 6".
13. ALL SANITARY SEWER CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE CITY OF CRYSTAL LAKE.
14. ALL CONNECTIONS TO PUBLIC SANITARY MANHOLES SHALL BE CORE DRILLED.
15. ALL STORM DRAINAGE CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF CRYSTAL LAKE.
16. ALL FIELD TILES ENCOUNTERED SHALL BE REPLACED AND/OR CONNECTED TO THE STORM SEWER SYSTEM AND LOCATED AND IDENTIFIED ON THE RECORD PLANS BY THE CONTRACTOR.
17. ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.
18. PROVIDE UNDERDRAINS FROM SEEPS OR SPRINGS ENCOUNTERED. EXTEND TO STORM SEWER SYSTEM OR DAYLIGHT AT THE BOTTOM OF THE THE FILL SLOPE.
19. ALL PROPOSED PIPE CONNECTIONS TO EXISTING OR PROPOSED MANHOLES SHALL CONFORM TO ASTM-C923.
20. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
21. GENERAL CONTRACTOR SHALL HAVE APPROVAL FROM ALL GOVERNING AGENCIES HAVING JURISDICTION OVER THIS SYSTEM PRIOR TO INSTALLATION.
22. ALL BUILDING UTILITY SERVICE LOCATIONS TO BE VERIFIED PRIOR TO CONSTRUCTION.
23. ALL EXISTING UTILITIES TO BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
24. CONTRACTOR TO COORDINATE W/ COLLEGE PRIOR TO CLOSING ANY PORTIONS OF ANY ADJACENT ACCESS DRIVES OR PARKING LOT.
25. MATERIAL FOR WATER SERVICES SHALL BE PVC C-900.

W-# WATER TAGS

W-1 EXIST. 8" WATER MAIN
CONTRACTOR TO FIELD VERIFY PIPE LOCATION, DEPTH, AND MATERIAL AND NOTIFY ENGINEER

W-2 LOWER 8" WATER MAIN BELOW PROPOSED STORM SEWER AND PROVIDE PROTECTION PER IEPA STANDARDS

W-3 CONTRACTOR TO FIELD VERIFY LOCATION/DEPTH OF EXIST. WATER MAIN. INSULATE PIPE IF FINISHED GRADE ELEVATION WILL RESULT IN LESS THAN 6.0 FEET OF COVER OVER TOP OF PIPE

W-4 RECONNECT TAG W-5 TO LOWERED SECTION OF PIPE AT TEE (SEE TAG W-2)

W-5 EXIST. 8" WATER MAIN
CONTRACTOR TO FIELD VERIFY PIPE LOCATION, DEPTH, AND MATERIAL AND NOTIFY ENGINEER

W-6 EXIST. WATER VALVE (ADJUST RIM)
EX RIM = 917.78
PR RIM = 917.10

W-7 EXIST. B-BOX (ADJUST RIM)
EX RIM = 917.75
PR RIM = 917.12

W-8 199 LIN FT WATER MAIN, 8" PVC C-900 W/ 22.5° and 45° BENDS
CONNECT TO TAG W-5
PIPE SHALL BE ENCASED BY 15" PVC SDR-26 PIPE USING CCS-JR CASING SPACERS
109 LIN FT CASING PIPE

W-9 PROP. MUELLER CENTURION 250 FIRE HYDRANT & AUX. VALVE WITH 169 LIN FT PVC C-900 LEAD PIPE, CONNECT TO TAG W-8 WITH 8X6X8
RIM = 918.55

W-10 OMITTED

W-11 OMITTED

W-12 OMITTED

W-13 127 LIN FT IRRIGATION LINE
1.5" TYPE K COPPER WATER SERVICE
CONNECT TO EXIST. RPZ

W-14 1.5" B-BOX
RIM = 917.95

W-15 EXIST. IRRIGATION LINE (TO REMAIN)

W-16 EXIST. IRRIGATION BLOWOUT PORT (TO REMAIN)

S-# SANITARY SEWER TAGS

S-1 EXIST. GREASE TRAP (TO REMAIN)
RIM = 917.77
INV = 915.48 (TOP OF 4" PVC)

S-2 EXIST. CLEAN OUT (TO REMAIN)
RIM = 917.80

S-3 EXIST. CLEAN OUT (TO REMAIN)
RIM = 917.75

NORTH
0 20'
1" = 20'

ISSUED FOR BID – NOT FOR CONSTRUCTION

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DKA PROJECT NO: 24 - 027

KEY PLAN:

LICENSED PROFESSIONAL ENGINEER
TODD M. RICHARDS
062-058779
STATE OF ILLINOIS

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
UTILITY PLAN

SHEET NUMBER:
C-07

CONTROL MEASURE GROUP	CONTROL MEASURE	APPL.	KEY	CONTROL MEASURE CHARACTERISTICS	TEMP.	PERMNT
VEGETATIVE SOIL COVER	TEMPORARY SEEDING	X	TS	PROVIDES QUICK TEMPORARY COVER TO CONTROL EROSION WHEN PERMANENT SEEDING IS NOT DESIRED OR TIME OF YEAR IS INAPPROPRIATE.	X	
	PERMANENT SEEDING	X	PS	PROVIDES PERMANENT VEGETATIVE COVER TO CONTROL EROSION, FILTERS SEDIMENT FROM WATER. MAY BE PART OF FINAL LANDSCAPE PLAN.		X
	DORMANT SEEDING		DS	SAME AS PERMANENT SEEDING EXCEPT IS DONE DURING DORMANT SEASON. HIGHER RATES OF SEED APPLICATION ARE REQUIRED.		
	SODDING		SO	QUICK PERMANENT COVER TO CONTROL EROSION. QUICK WAY TO ESTABLISH VEGETATION FILTER STRIP. CAN BE USED ON STEEP SLOPES OR IN DRAINAGEWAYS WHERE SEEDING MAY BE DIFFICULT.		
	GROUND COVER		GC	PROVIDES GROUND COVER, SHRUBS AND TREES IN ADDITION TO PERMANENT VEGETATION. MAY BE USED AS PART OF A FINAL LANDSCAPE PLAN ALONG WITH SHRUBS AND TREES.		
NON VEGETATIVE SOIL COVER	MULCHING		M	ADDED INSURANCE OF A SUCCESSFUL TEMPORARY OR PERMANENT SEEDING. CONTROLS UNWANTED VEGETATION AND PRESERVES MOISTURE. PROVIDES COVER WHERE VEGETATION CANNOT BE ESTABLISHED.		
	AGGREGATE COVER		AG	PROVIDES SOIL COVER ON ROADS AND PARKING LOTS AND AREAS WHERE VEGETATION CANNOT BE ESTABLISHED. PREVENTS MUD FROM BEING PICKED UP AND TRANSPORTED OFF-SITE.		
	PAVING	X	P	PROVIDES PERMANENT COVER ON PARKING LOTS AND ROADS OR OTHER AREAS WHERE VEGETATION CANNOT BE ESTABLISHED.		X
	EROSION BLANKET	X	EB	PROVIDES QUICK TEMPORARY COVER TO CONTROL EROSION WHEN PERMANENT SEEDING TIME OF YEAR IS INAPPROPRIATE AND IN SLOPED AREAS.	X	
DIVERSIONS	RIDGE DIVERSION		RD	TYPICALLY USED ABOVE SLOPES. USED WHERE AN EXCESS OF SOIL IS AVAILABLE.		
	CHANNEL DIVERSION		CD	TYPICALLY USED AT TOP OR BASE OF SLOPES. USED WHEN EXCESS SOIL IS NOT AVAILABLE.		
	COMBINATION DIVERSION		DC	TYPICALLY USED ANYWHERE ON A SLOPE. SOIL TAKEN OUT OF CHANNEL IS USED TO BUILD THE RIDGE.		
	CURB AND GUTTER	X	CG	SPECIAL CASE OF DIVERSION USED IN CONJUNCTION WITH A STREET TO DIVERT WATER FROM AN AREA NEEDING PROTECTION.		X
	BENCHES		B	SPECIAL CASE OF DIVERSION CONSTRUCTED WHEN WORKING ON CUT SLOPES TO SHORTEN LENGTH OF SLOPE AND ADD SLOPE STABILITY.		
WATERWAYS	BARE CHANNEL		BC	PROVIDES MEANS OF CONVEYING RUNOFF TO DESIRED LOCATION. MAY BE USED TO DRAIN DEPRESSIONAL AREAS. ONLY APPLICABLE WHEN VELOCITY OF FLOW IS VERY LOW.		
	VEGETATIVE CHANNEL		VC	PROVIDED ADDED STABILITY TO CHANNEL. USED WHEN VELOCITY OF FLOW IS NOT EXTREMELY FAST.		
	LINED CHANNEL		LC	USED WHEN VEGETATION WILL NOT PROTECT THE CHANNEL AGAINST HIGH VELOCITIES OF FLOW OR WHERE VEGETATION CANNOT BE ESTABLISHED.		
	ROCK CHECKS		RC	PROVIDES AN ENERGY DISSIPATER ALONG A LENGTHY CHANNEL TO REDUCE VELOCITY OF STORMWATER		
ENCLOSED DRAINAGE	STORM SEWER	X	ST	CAN BE USED TO CONVEY SEDIMENT LADEN WATER TO SEDIMENT BASIN OR IN CONJUNCTION WITH A WATERWAY.		X
	UNDERDRAIN		UD	USED TO LOWER WATER TABLE AND INTERCEPT GROUNDWATER FOR BETTER VEGETATION GROWTH AND SLOPE STABILITY. USED TO CARRY BASE FLOW IN WATERWAYS AND TO DEWATER SEDIMENT BASINS.		
SPILLWAYS	STRAIGHT PIPE SPILLWAY		SS	USED FOR RELATIVELY SMALL VERTICAL DROPS AND SMALL FLOWS OF WATER		
	DROP INLET PIPE SPILLWAY		DIS	SAME AS PIPE SPILLWAY EXCEPT LARGER FLOWS AND LARGE VERTICAL DROPS CAN BE ACCOMMODATED.		
	WEIR SPILLWAY		W	USED FOR RELATIVELY SMALL VERTICAL DROPS AND FLOWS MUCH GREATER THAN PIPE STRUCTURES.		
	BOX INLET WEIR SPILLWAY		BS	SAME AS WEIR SPILLWAY EXCEPT LARGER FLOWS CAN BE ACCOMMODATED BECAUSE OF LOWER WEIR LENGTH.		
OUTLETS	LINED APRON		LA	PROTECTS DOWNSTREAM CHANNEL FROM HIGH VELOCITY OF FLOW DISCHARGING FROM STRUCTURES.		
	STONE RIP RAP	X	RR	USED AS AN ENERGY DISSIPATER AT OUTLET STRUCTURES TO REDUCE VELOCITIES		X
SEDIMENT BASINS	EMBANKMENT SEDIMENT BASIN		ES	USED WHERE TOPOGRAPHY LENDS ITSELF TO CONSTRUCTING A DAM AND EARTH FILL IS AVAILABLE.		
	EXCAVATED SEDIMENT BASIN		XS	USED WHERE EMBANKMENT COULD CAUSE A HAZARD DOWNSTREAM IN CASE OF FAILURE AND WHEN EXCESS EARTH FILL IS NOT AVAILABLE.		
	COMBINATION SEDIMENT BASIN		CS	USED WHEN TOPOGRAPHY IS SUITABLE BUT ADDITIONAL CAPACITY IS NEEDED.		
SEDIMENT FILTERS	BARRIER FILTER	X	BF	USED FOR SINGLE LOTS OR DRAINAGE AREAS LESS THAN 1/2 ACRE TO FILTER SEDIMENT FROM RUNOFF.	X	
	VEGETATIVE FILTER		VF	USED ALONG DRAINAGE WAYS OR PROPERTY LINES TO FILTER SEDIMENT FROM RUNOFF. SIZE MUST BE INCREASED IN PROPORTION TO DRAINAGE AREA.		
	FILTER BASKET		FB	USED FOR FILTERING SEDIMENT WITHIN THE ROADWAY BEFORE ENTERING THE STORM SEWER		
	INLET PROTECTION	X	IP	USED FOR FILTERING SEDIMENT WITHIN GRASS AREAS BEFORE WATER ENTERS THE STORM SEWER	X	
MUD AND DUST CONTROL	STABILIZED CONST. ENTRANCE		SE	PREVENT MUD FROM BEING PICKED UP AND CARRIED OFF-SITE.		
	DUST AND TRAFFIC CONTROL	X	DT	PREVENTS DUST FROM LEAVING CONSTRUCTION SITE.	X	

STABILIZATION TYPE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG	SEPT.	OCT.	NOV.	DEC.
PERMANENT SEEDING			A,B,C, D			*	*					
SODDING			G**									
TEMPORARY SEEDING			E				F					

A (1) KENTUCKY BLUEGRASS 50 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 30 LBS/ACRE AND CREEPING RED FESCUE 20 LBS/ACRE

B (1A) BLUE GRASS 30 LBS/ACRE, PERENNIAL RYEGRASS 10 LBS/ACRE, DAWSONS RED FESCUE 10 LBS ACRE, SCALDIS HARD FESCUE 10 LBS/ACRE, FULTS SALT GRASS 30 LBS/ACRE

C (4) ANDROPOGON GERNADI (BIG BLUE STEM) 4 LBS/ACRE, ANDROPOGON SCOPARIUS (LITTLE BLUE STEM) 5 LBS/ACRE, BOUTELOVA CURTIPENDULA (SIDE OATS GRAMA) 5 LBS/ACRE, ELYMUS CANADENENSIS (WILD RYE) 1 LBS/ACRE, PANCIUM VIRGATUM (SWITCH GRASS) 1 LBS/ACRE, SORGHASTRUM NUTONS (INDIAN GRASS) 2 LBS/ACRE, ANNUAL RYE GRASS 25 LBS/ACRE, OATS, SPRING 25 LBS/ACRE, PERENNAL RYE GRASS 15 LBS/ACRE

D (4B) ANNUAL RYE GRASS 250 LBS/ACRE, OATS, SPRING 250 LBS/ACRE, WETLAND GRASSES 6 LBS/ACRE

E SPRING OATS 100 LBS/ACRE

F WHEAT OR CEREAL RYE 150 LBS/ACRE.

G SOD

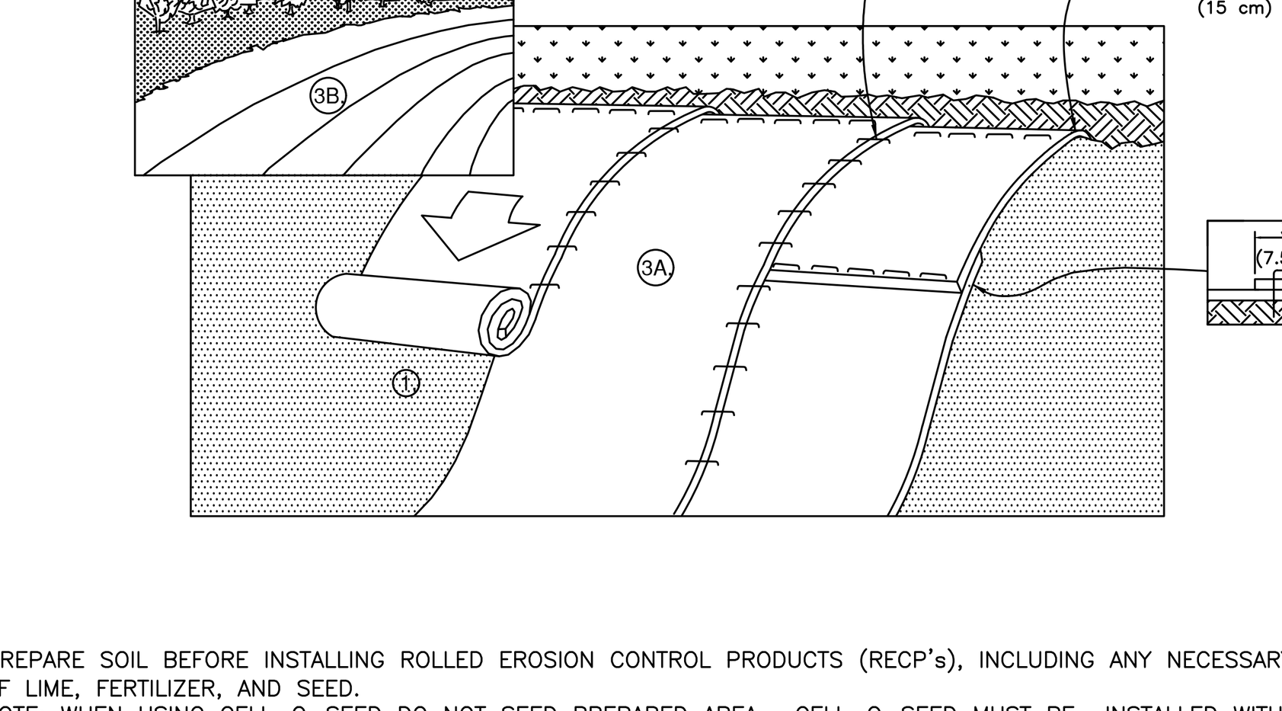
H ALFALFA/SOYBEANS 100–250 LBS/ACRE (VERIFY WITH TCR)

* IRRIGATION NEEDED DURING JUNE AND JULY

** IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD.

( ) IDOT STANDARD

SLOPE INSTALLATION



1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
   NOTE: WHEN USING CELL–O–SEED DO NOT SEED PREPARED AREA. CELL–O–SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF RECP's EXTENDED BEYOND THE UP–SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP's.
3. ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM , STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" – 5" (5 CM – 12.5 CM) OVERLAP DEPENDING ON RECP's TYPE.
5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP's WIDTH.
   NOTE:
   *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

EROSION CONTROL NOTES

- All sedimentation and erosion control regulations shall be adhered to per City of Crystal Lake requirements
- All erosion control measures shall be installed prior to the start of construction.
- No land disturbing activities shall not commence until approval to do so has been received by governing authorities, in addition to, no land clearing or grading shall begin until all perimeter erosion and sediment control measures have been installed. (Including storm water pollution prevention plan per the development criteria.)
- If any additional soil erosion measures are deemed necessary by the City Engineer or his representative. These measures must be immediately implemented by the contractor.
- The general contractor shall strictly adhere to the storm water pollution prevention plan (swppp) during construction operations.
- All topsoil shall be stripped prior to filling
- All exposed areas shall be seeded as specified within 14 days of final grading.
- Should construction stop for longer than 14 days, the site shall be seeded as specified.
- Sediment and erosion control measures shall be inspected at least once every seven (7) days and within 24 hours of a rainfall exceeding 0.5 inches during a 24–hour period or more frequently if required by governing NPDES general permit. All maintenance required by inspection shall commence within 24 hours and be completed within 48 hours of report.
- This plan shall not be considered all inclusive as the general contractor shall take all necessary precautions to prevent soil sediment from leaving the site.
- General contractor shall comply with all state and local ordinances that apply.
- Additional erosion and sediment control measures will be installed if deemed necessary by on site inspection.
- If installation of storm drainage system should be interrupted by weather or nightfall, the pipe ends shall be covered with filter fabric.
- General contractor shall be responsible to take whatever means necessary to establish permanent soil stabilization.
- All erosion and sediment control practices shall be maintained and repaired as needed to ensure effective performance of the required erosion control measures.
- All erosion and sediment control work shall conform to the I.D.O.T. Manual for, standards and procedures for erosion control.
- All construction will adhere to the requirements set forth in the IEPA's new construction site activities national pollutant discharge elimination system (NPDES) storm water permit.
- All roadways and driveways shall be cleaned at the end of each construction day.
- All disturbed areas shall be stabilized within 7 days of active disturbance.
- All erosion control measures shall be disposed of within 30 days of final stabilization of the site.
- Ground cover for 5:1 slopes or greater shall be established as soon as possible.
- All disturbed areas to to restored w/ 6" topsoil respread & seeding/sodding unless otherwise noted on plans
- Filter Baskets or Silt filter fabric shall be placed between frame and grate until vegetation is established. (see detail)
- Utilize excelsior blanket on all slopes of 5:1 or greater.
  *Seeding per I.D.O.T. Manual, section 251,standard specifications for road and bridge construction, (latest edition
  *Class 3 type – slope mixture
  *Mulch/hydroseed per I.D.O.T. Manual, section 251, standard specifications for road and bridge construction, (latest edition
  *Mulch/hydroseed method 2, procedure 3
- No dimensions shall be assumed by scaling.
- No known drain tiles are present on the proposed development, if tiles are encountered during construction please notify the engineer immediately.
- No part of the proposed project is located within a flood hazard 10–100yr area a flood hazard area
- Excess material shall be placed at specified location unless otherwise specified by owner and approved by engineer for use of lot grading. Stockpiles shall be surrounded with filter fence and shall be seeded per I.D.O.T. Manual (latest addition) (temporary) if left more than 14 working days.
- General contractor shall notify all utility companies having underground utilities on site or in right–of–way prior to excavation. Contractor shall contact utility locating company and locate all utilities prior to grading start.

PHASING NOTES:

SEQUENCE OF MAJOR ACTIVITIES

The Contractor will be responsible for implementing the following erosion control and storm water management control measures. The Contractor may designate these tasks to certain subcontractors as he sees fit, but the ultimate responsibility for implementing these controls and ensuring their proper functioning remains with the Contractor. The order of activities will be as follows (refer to the Erosion and Sediment Control Plan Sheet contained in this SWPPP for details and refer to the Suggested Phasing Plan in the design drawings for construction sequencing):

A. A pre–construction meeting shall be held by the Site Project Manager and the Operator's Engineer prior to land disturbing activities.
B. Install perimeter silt fences and inlet protection in the locations shown on the Erosion Control plan sheets.
C. Implement erosion control measures around the existing storm sewer to prevent sedimentation from infiltrating into the storm sewer system as shown on the Erosion Control plan sheets.
D. Construct temporary construction exits at locations shown on the Erosion Control plan sheets.
E. Begin clearing and grubbing operations if applicable. Clearing and grubbing shall be done only in areas where earthwork will be performed and only in areas where building is planned to commence within 7 days after clearing and grubbing.
F. Disturbed areas of the site where Construction Activity has ceased for more than 7 days shall be temporarily seeded and watered.
G. Commence site grading.
H. Construct gutter inlets, area inlets, storm sewer manholes and proposed storm sewer.
I. Install inlet / outlet protection around the constructed storm sewer to prevent sedimentation from infiltrating into the storm sewer system as shown on the Erosion Control plan sheets.
J. Construct utilities
K. Finalize pavement subgrade preparation.
L. Construct all curb and gutter. Inlet protection may be removed temporarily for this construction.
M. Remove inlet protection around inlets and manholes no more than 48 hours prior to placing stabilized base course.
N. Install base material as required for pavement.
O. Carry out final grading and seeding, sodding and planting, including rolled erosion control products where shown on the Erosion Control plan sheets.
P. Remove silt fencing only after all paving is complete and exposed surfaces are stabilized.
Q. Remove temporary construction exits

A schedule for implementation for the activities identified above is included as Form C–3 of the SWPPP.

SPECIFICATIONS & GENERAL NOTES

NOTES:

This plan has been prepared to comply with the provisions of the NPDES Permit Number issued by the Illinois Environmental Protection Agency for Stormwater Discharges from Construction Site Activities.

1. Site Description.

   a. The following is a description of the construction activity which is the subject of this plan:
   The proposed development consists of construction of MCC Event Center, sidewalks, storm sewer and infiltration basin. The construction activities for site improvements will include: site clearing, grubbing, mass grading, pavement construction, building construction, installation of utilities including storm sewers, soil erosion and sedimentation control measures, as a minimum.

   b. The following is a description of the intended sequence of major activities which will disturb soils for major portions of the construction site such as grubbing, excavation, and grading:
   The sequence of the construction activities may be as follows:
   See Sequence of major activities on this sheet.

   c. The total area of the construction site is estimated to be 1.16 ± acres.
   The total area if the site that is estimated to be disturbed by excavation, grading, or other activities, is 1.14 ± acres.

2. Controls.

   This section of the plan addresses the various controls that will be implemented for each of the major construction activities described in 1.b above. For each measure discussed, the contractors will be responsible for its implementation as indicated. Each such contractor has signed the required certification on forms which are attached to, and are a part of, this plan.

   a. Erosion and Sediment Controls.

   (i) STABILIZATION PRACTICES. Provided below is a description of interim and permanent stabilization practices, including site–specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Except as provided in 2.a. (i) (A) and 2.b. stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portions of the site where construction activity will not occur for a period of 21 or more calendar days.

   (A) Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable thereafter.

   The following interim and permanent stabilization practices, as a minimum will be implemented to stabilize the disturbed area of the site:

   1 Temporary Seeding
   2 Permanent seeding
   3 Erosion Blanket
   4 Stone Riprap
   5 Barrier filter
   6 Dust & Traffic Control

   (ii)STRUCTURAL PRACTICES. Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. The installation of these devices may be subject to Section 404 of the Clean Water Act.

   1. Infiltration basins
   2. Storm sewer system
   3. Vegetated drainage swales
   4. Permanent seeding
   5. Stone Riprap
   6. Filter fabric

   b. Erosion Control. It shall be the Contractor's responsibility to provide adequate erosion control on the job site. The following erosion control sequence shall be adhered to:

   A. A pre–construction meeting shall be held by the Site Project Manager and the Operator's Engineer prior to land disturbing activities.
   B. Install perimeter silt fences and inlet protection in the locations shown on the Erosion Control plan sheets.
   C. Implement erosion control measures around the existing storm sewer to prevent sedimentation from infiltrating into the storm sewer system as shown on the Erosion Control plan sheets.
   D. Construct temporary construction exits at locations shown on the Erosion Control plan sheets.
   E. Begin clearing and grubbing operations if applicable. Clearing and grubbing shall be done only in areas where earthwork will be performed and only in areas where building is planned to commence within 7 days after clearing and grubbing.
   F. Disturbed areas of the site where Construction Activity has ceased for more than 7 days shall be temporarily seeded and watered.
   G. Commence site grading.
   H. Construct gutter inlets, area inlets, storm sewer manholes and proposed storm sewer.
   I. Install inlet / outlet protection around the constructed storm sewer to prevent sedimentation from infiltrating into the storm sewer system as shown on the Erosion Control plan sheets.
   J. Construct utilities
   K. Finalize pavement subgrade preparation.
   L. Construct all curb and gutter. Inlet protection may be removed temporarily for this construction.
   M. Remove inlet protection around inlets and manholes no more than 48 hours prior to placing stabilized base course.
   N. Install base material as required for pavement.
   O. Carry out final grading and seeding, sodding and planting, including rolled erosion control products where shown on the Erosion Control plan sheets.
   P. Remove silt fencing only after all paving is complete and exposed surfaces are stabilized.
   Q. Remove temporary construction exits

   Any siltation of conduits, structures, or ditches shall be cleaned and maintained by the Contractor, on a weekly basis, until the seeding has taken hold. All washouts, gullies, etc. will be regraded and reseeded by the Contractor, at the Contractor's expense.

   The Contractor's responsibility for erosion control shall extend throughout the construction process. The Contractor shall be responsible for cleanup of paved surfaces within and adjacent to the project.

   All erosion control practices shall be in compliance with the latest revision of the "Standard Specifications for Road and Bridge Construction," by the Illinois Department of Transportation and with "Standards and Specifications for Soil Erosion and Sedimentation Control" as published by the Illinois Environmental Protection Agency.

   If a topsoil stockpile location is provided and approved by the City, Contractor shall establish erosion control measures for the stockpile if it is to remain in place for more than three days. In addition, barrier filter fence shall enclose topsoil stockpile location with exception of truck access during construction hours.

   c. Stormwater Management.

   (i) Provided below is a description of measures that will be installed during the construction process to control pollutants in stormwater discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

   The practices selected for implantation were determined on the basis of the technical guidance contained in IEPA's Standard Specifications for Soil Erosion and Sedimentation Control, and other ordinances listed in the Specifications.

   The stormwater pollutant control measures shall include:

   1. Silt filter fence
   2. Drainage swales
   3. Storm sewers
   4. Rip–rap outlet protection

   (ii)Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non–erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., maintenance of hydrologic conditions, such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

   Stormwater Management Control includes
   1 Stone Riprap
   2 Filter Fabric

3. Other Controls.

   (i) Waste Disposal. The solid waste materials including trash, construction debris, excess construction materials, machinery, tools and other items will be collected and disposed off–site by the contractor. The contractor is responsible to acquire any permit required for such disposal. Burning on the site will not be permitted. No solid materials, including building materials, shall be discharged into Waters of the State, except as authorized by a Section 404 permit.

   (ii) The provisions of this plan shall ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.

   The sanitary sewage will be discharged to the proposed sanitary sewer constructed per IEPA and local standards.

   a. Approved State or Local Plans.

   The management practices, controls and other provisions contained in this plan are at least as protective as the requirements contained in the latest amendment of the Illinois Environmental Protection Agency's Standards and Specifications for Soil Erosion and Sediment Control dated October 1987, Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Plan, and the Municipal Subdivision Ordinance. Requirements specified in sediment and erosion control site plans or site permits or stormwater management or site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI to be authorized to discharge under this permit, incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

   b. Maintenance.

   The following is a description of procedures that will be used to maintain, in good and effective operating conditions, vegetation, erosion and sediment control measures and other protective measures identified in this plan and Standard Specifications.

   Vegetative erosion control measures: The vegetative growth of temporary and permanent seeding, sodding, vegetative channels, vegetative filter, etc. shall be maintained periodically and supply adequate watering and fertilizer. The vegetative cover shall be removed and reseeded as necessary.

   Silt filter fence: The damaged silt filter fence shall be restored to meet the standards or removed and replaced as needed.

   Rip–rap outlet protection: It shall be inspected after high flows for any scour beneath the Rip–rap or for stones that have been dislodged. It shall be repaired immediately. Inlet Protection: Shall be inspected and emptied of silt if filled as required.

   Disturbed areas shall be stabilized with temporary or permanent measures within 7 calendar days following the end of active disturbance, or redisturbance, consistent with the following criteria:

   (i) Appropriate temporary or permanent stabilization measures shall include seeding, mulching, sodding, and/or non–vegetative measures.
   (ii) Areas having slopes greater than 12 percent shall be stabilized with sod, mat, or blanket in combination with seeding or equivalent.

   Soil storage piles containing more than 10 cu. yds. of material shall not be located with a downslope drainage length less than 25 feet to a roadway or drainage channel. Filter barriers, including straw bales, filter fence, or equivalent, shall be installed immediately on the down slope of the piles.

4. Inspections.

   The Owner, or Owner's representative shall provide qualified personnel to inspect disturbed areas of the construction site which have not been finally stabilized, structural control measures and location where vehicles enter or exit the site. Such inspections shall be conducted at least once every seven (7) calendar days within 24 hours of the end of a storm that is 0.5 inches or greater or equivalent snowfall.

   a. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off–site sediment tracking.

   b. Based on the results of the inspection, the description of potential pollutant sources identified in section 1 above and pollution prevention measures identified in section 2 above shall be revised as appropriate as soon as practicable after such inspection. Any changes to this plan resulting from the required inspections shall be implemented within 7 calendar days following the inspection.

   c. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of this stormwater pollution prevention plan and actions taken in accordance with section 4.b. shall be made and retained as part of the plan for at least three (3) years after the date of the inspection. The report shall be signed in accordance with Part VI.G of the general permit.

   d. If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer or Resident Technician shall complete and file an "Incidence of Noncompliance" (ION) report for the identified violation. The Resident Engineer or Resident Technician shall use forms provided by the Illinois Environmental Protection Agency and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of noncompliance shall be signed by a responsible authority in accordance with Part VI. G of the general permit. The report of noncompliance shall be mailed to the following address:

   Illinois Environmental Protection Agency
   Division of Water Pollution Control
   Attn: Permit Section
   P.O. Box 19276
   Springfield, Illinois 62794–9276

5. Non–Stormwater Discharges.
   Except for flows from fire fighting activities, sources of non–stormwater that may be combined with stormwater discharges associated with the industrial activity addressed in this plan, are described below:

   a. Water main flushing
   b. Fire hydrant flushing
   c. Watering for dust control
   d. Irrigation drainage for vegetative growth for seeding, etc..

   The pollution prevention measures, as described below, will be implemented for non–stormwater components of the discharge:

   The fire hydrant and water main shall not be flushed directly on the exposed area of sub grade of the pavement. Hoses shall be used to direct the flow into the storm sewer system, if available.

   The erosion due to irrigation of seeding shall be considered minor.

   Contractor to provide the above non–stormwater discharged control to the standard specification required by the City or the approved equal.

6. Monitoring and Management Plan
   A three–year maintenance and monitoring plan is required after installation of native landscaping.
   See Project Specifications for details.

CONSTRUCTION SEQUENCE

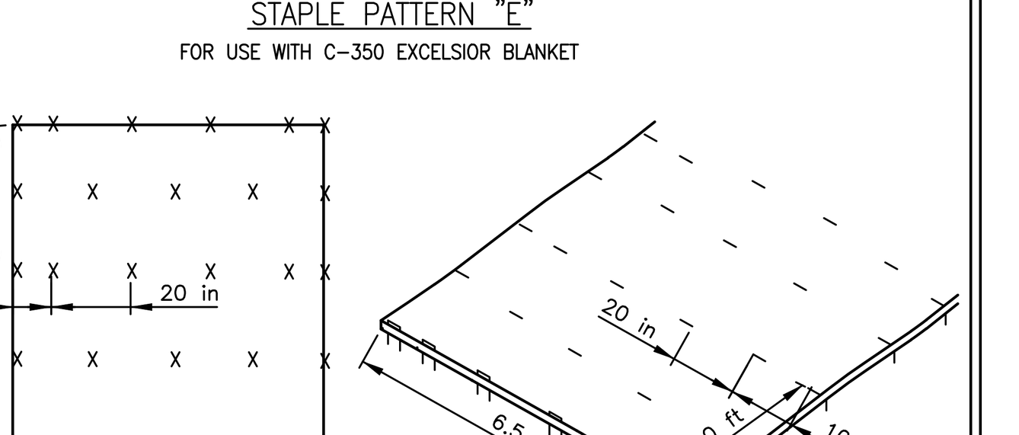
1. File stormwater NPDES permit with the IEPA at least 30 days prior to beginning work.
2. Install all permanent and temporary erosion control practices, i.e. diversions, vegetated swales, stabilized construction entrances, temporary silt basins, polymer systems, and silt fences.
3. City inspection and signoff.
4. Strip topsoil.
5. Stabilize stockpiles with vegetative cover and additional erosion control measures.
6. City inspection and signoff.
7. Begin mass grading.
8. Add additional soil erosion and sediment control as needed. In particular the CLSO requirement for stabilization within 14 days of temporary or permanent cessation of grading must be met and will be vigorously enforced by the City.
9. Disk disturbed pervious areas to restore infiltration prior to topsoil placement and vegetation.
10. Partially excavate infiltration basin and add fabric and sand cover.
11. City inspection of infiltration basin.
12. Permanent site stabilization.
13. City inspection.
14. Finish infiltration basin construction.
15. City inspection.

PERMANENT EXCELSIOR BLANKET INSTALLATION DETAIL

FOR USE WITH C–350 EXCELSIOR BLANKET

STAPLE PATTERN "E"

FOR USE WITH C–350 EXCELSIOR BLANKET

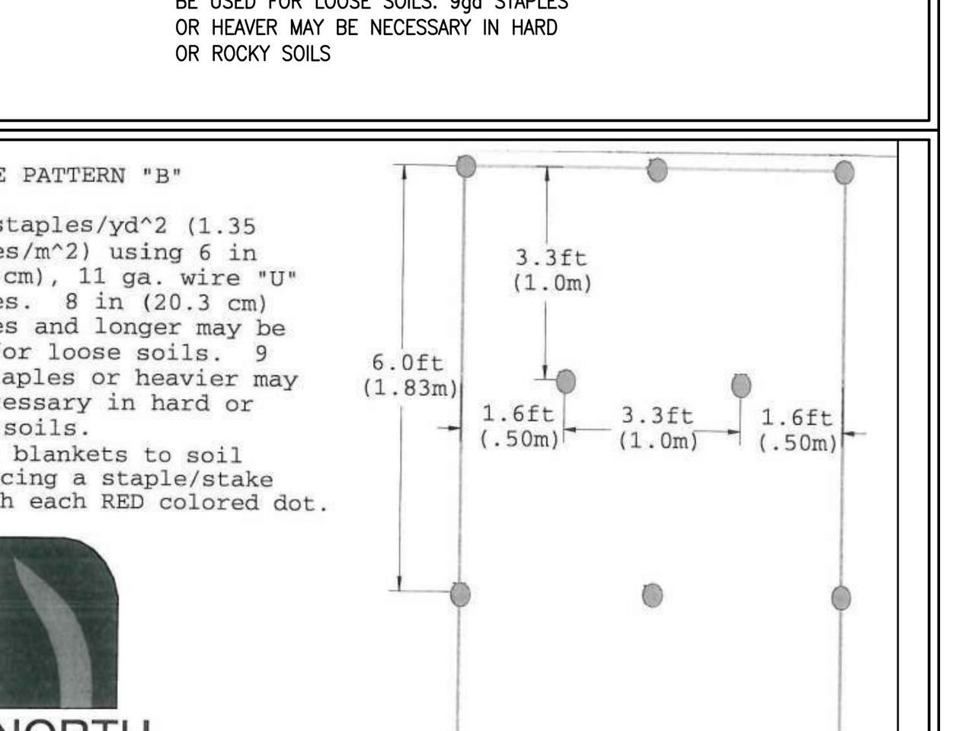


3.8 STAPLES/YD2 USING 6in 11ga WIRE "U" STAPLES. 8in STAPLES AND LONGER MAY BE USED FOR LOOSE SOILS. 9ga STAPLES OR HEAVER MAY BE NECESSARY IN HARD OR ROCKY SOILS

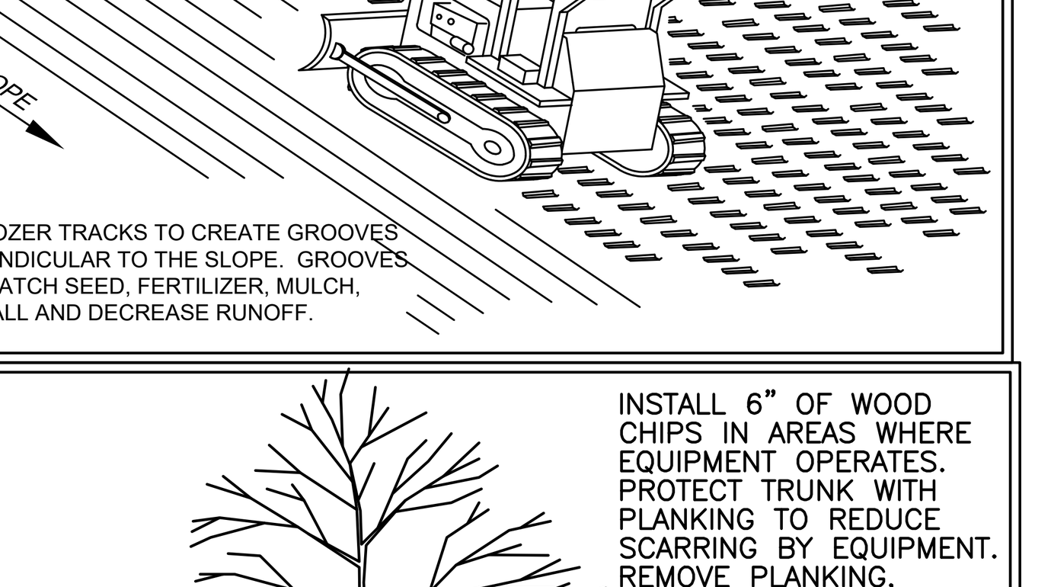
STAPLE PATTERN "B"

1.15 staples/yd^2 (1.35 staples/m^2) using 6 in (15.2 cm), 11 ga. wire "U" staples. 8 in (20.3 cm) staples and longer may be used for loose soils. 9 ga. staples or heavier may be necessary in hard or rocky soils.
Secure blankets to soil by placing a staple/stake through each RED colored dot.

NORTH AMERICAN GREEN

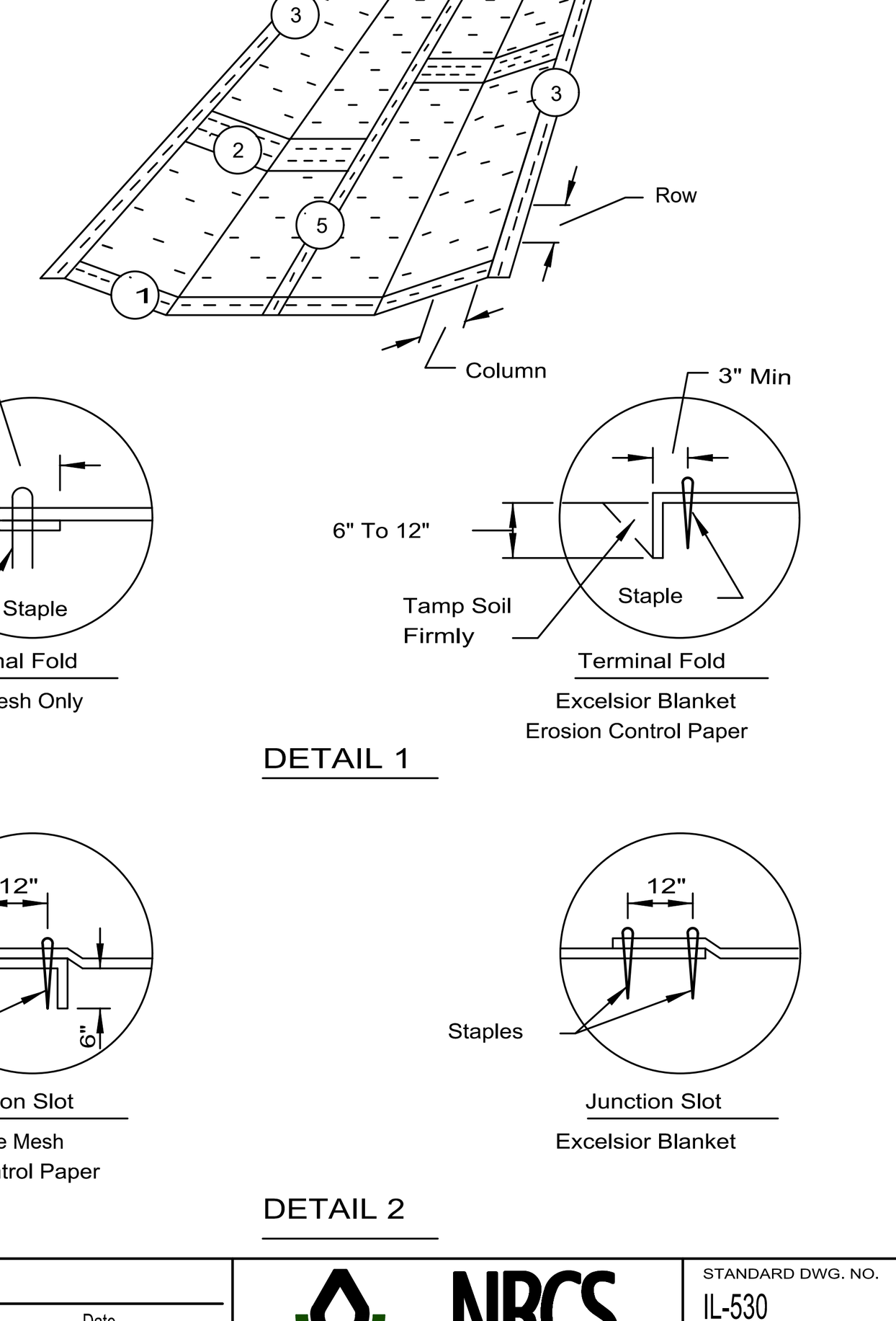


TRACKING DETAIL



USE DOZER TRACKS TO CREATE GROOVES PERPENDICULAR TO THE SLOPE. GROOVES WILL CATCH SEED, FERTILIZER, MULCH, RAINFALL AND DECREASE RUNOFF.

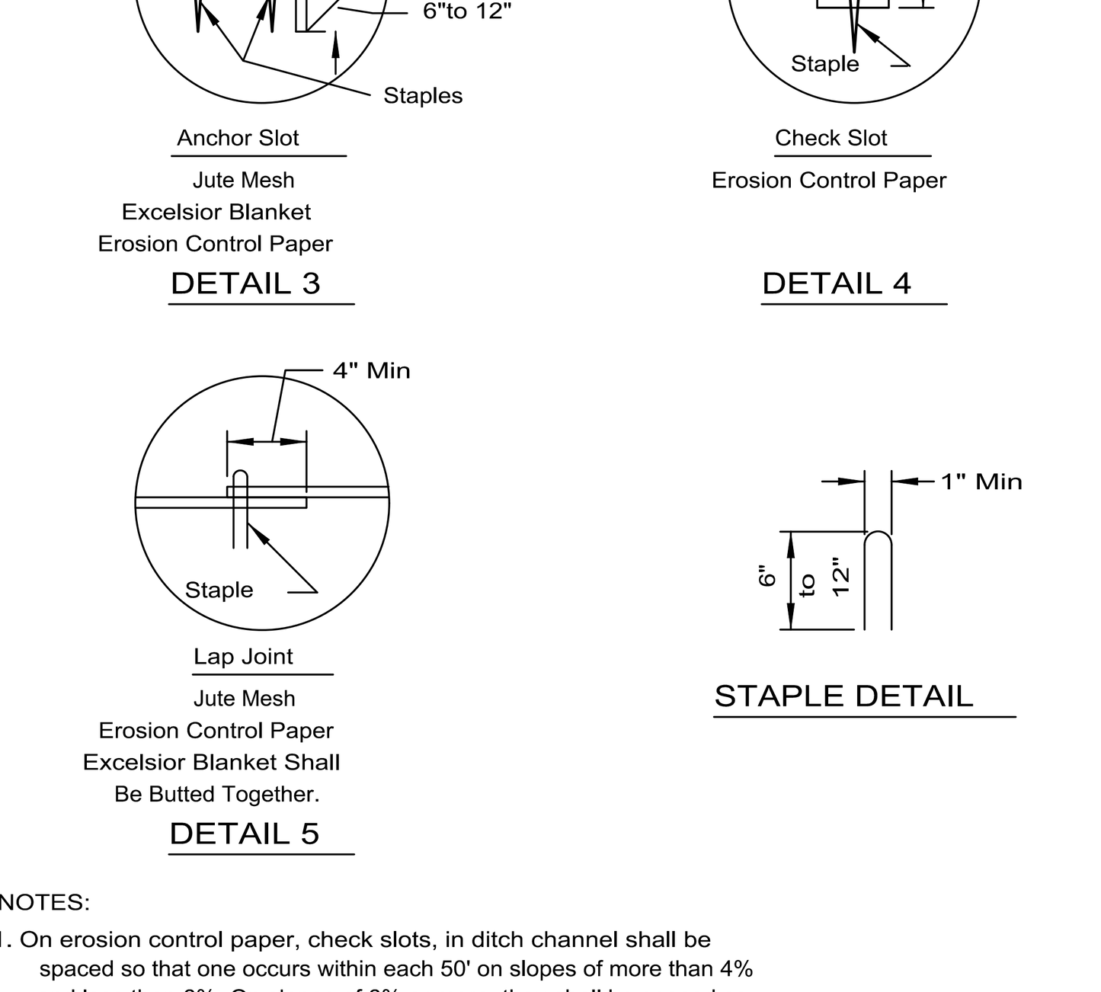
EB EROSION BLANKET PLAN



REFERENCE		
Project		
Designed	Date	
Checked	Date	
Approved	Date	

NRCS Natural Resources Conservation Service — STANDARD DWG. NO. IL-530, SHEET 1 OF 2, DATE 5-24-94

EB EROSION BLANKET PLAN

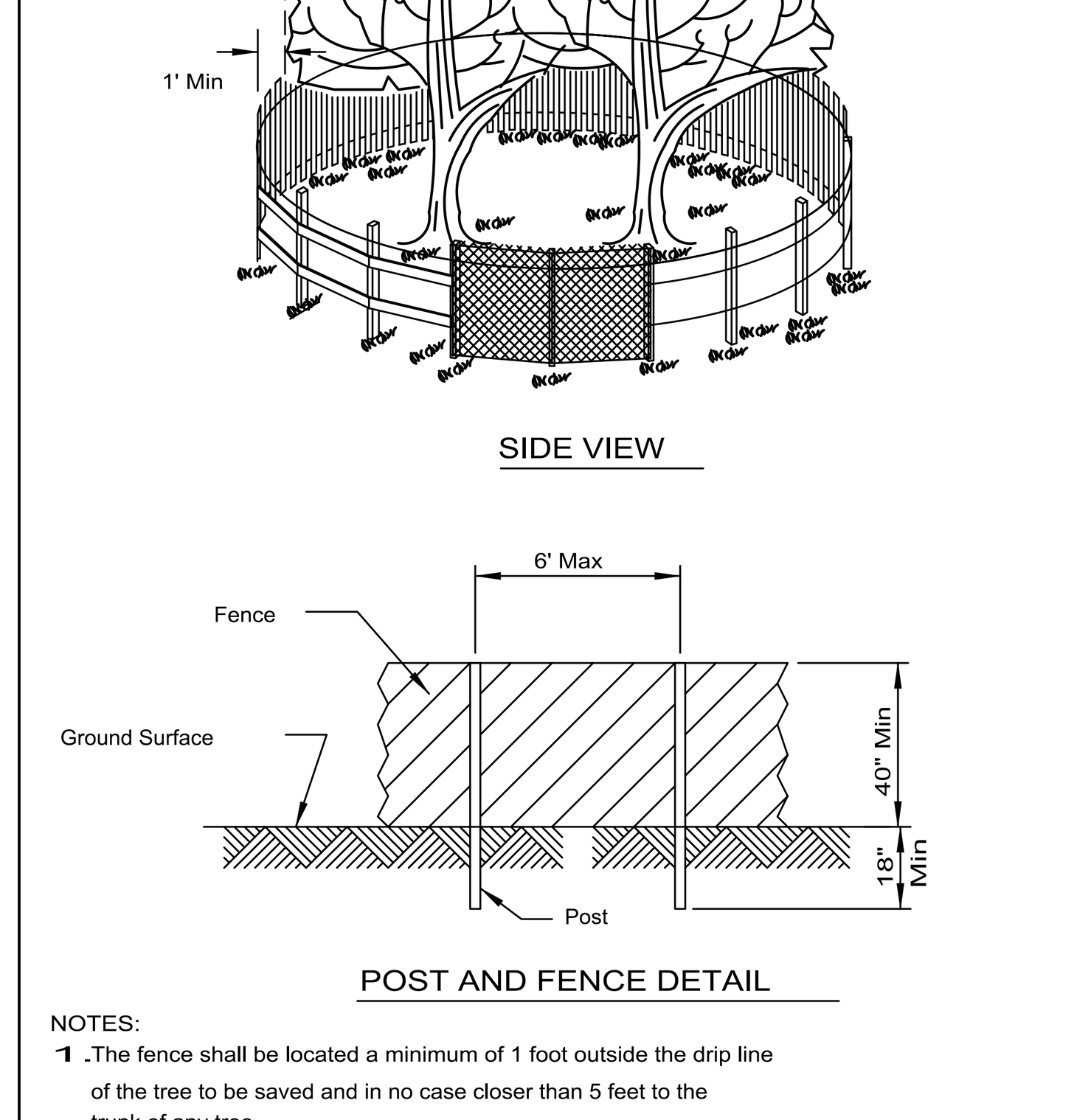


NOTES:
1. On erosion control paper, check slots, in ditch channel shall be spaced so that one occurs within each 50' on slopes of more than 4% and less than 6%. On slopes of 6% or more, they shall be spaced so that one occurs within each 25'.
2. Staples are to be placed alternately, in columns approximately 2' apart and in rows approximately 3' apart. Approximately 175 staples are required per 4'x 225' roll of material and 125 staples are required per 4'x 150' roll of material.
3. Erosion control material shall be placed loosely over ground surface. Do not stretch.
4. All terminal ends and transverse laps shall be stapled at approximately 12" intervals.

REFERENCE		
Project		
Designed	Date	
Checked	Date	
Approved	Date	

NRCS Natural Resources Conservation Service — STANDARD DWG. NO. IL-530, SHEET 2 OF 2, DATE 3-1-95

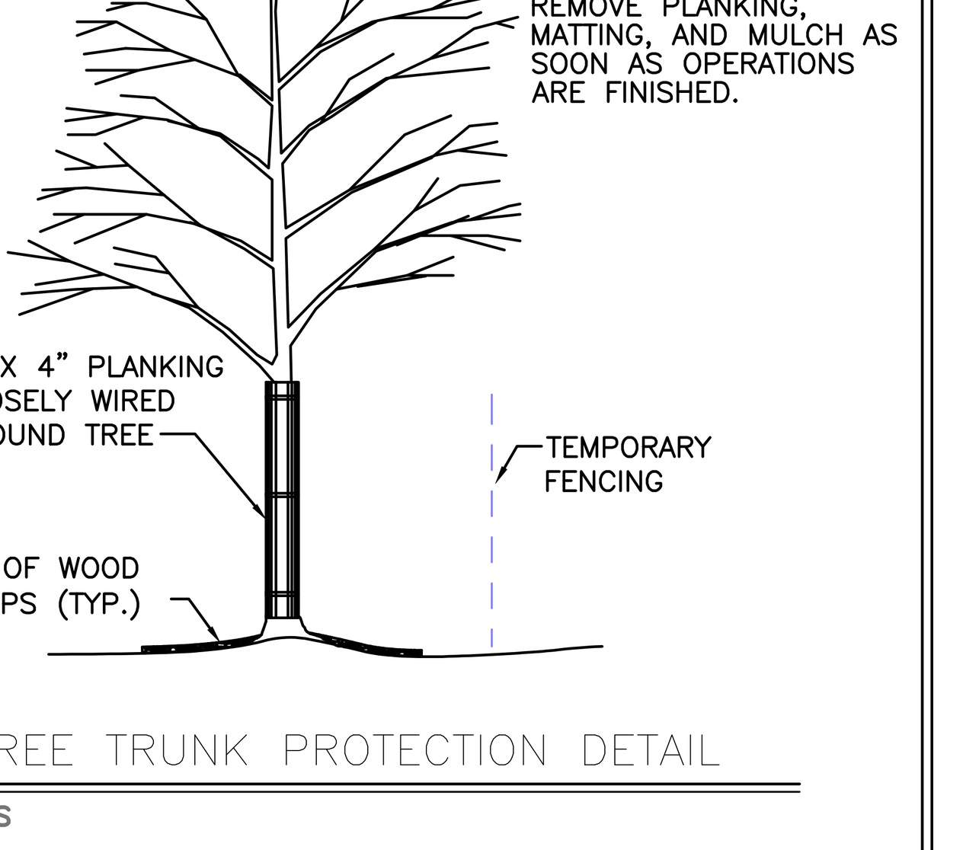
TREE PROTECTION - FENCING



NOTES:
1. The fence shall be located a minimum of 1 foot outside the drip line of the tree to be saved and in no case closer than 5 feet to the trunk of any tree.
2. Fence posts shall be either standard steel posts or wood posts with a minimum cross sectional area of 3.0 sq. in.
3. The fence may be either 40" high snow fence, 40" plastic web fencing or any other material as approved by the engineer/inspector.

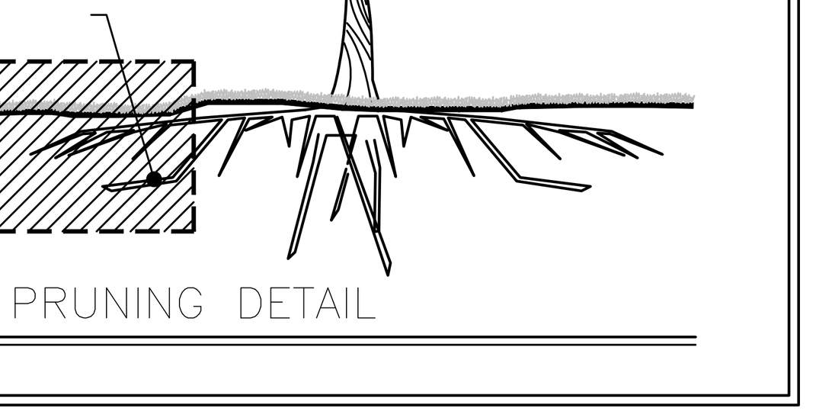
REFERENCE		
Project		
Designed	Date	
Checked	Date	
Approved	Date	

NRCS Natural Resources Conservation Service — STANDARD DWG. NO. IL-690, SHEET 1 OF 1, DATE 4-7-94



TYP. TREE TRUNK PROTECTION DETAIL

SCALE: NTS



TYP. ROOT PRUNING DETAIL

SCALE: NTS

ISSUED FOR BID – NOT FOR CONSTRUCTION

dkA

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8900 NORTHWEST HWY #14
CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24 - 027

KEY PLAN:

LICENSED PROFESSIONAL ENGINEER — TODD M. RICHARDS 062-058779 — STATE OF ILLINOIS

SHEET STATUS: 05/16/2025

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:

EROSION CONTROL DETAILS

SHEET NUMBER:

C-08

Xrefs: TITLE BLOCK – DKA

5/9/2025 2:50:05 PM
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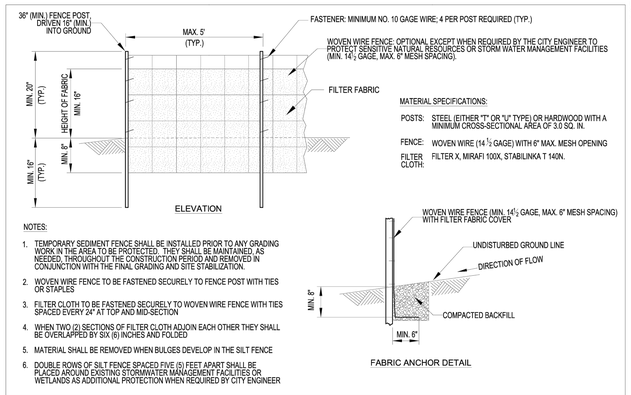
EC-01



NOTES:

1. TEMPORARY SEDIMENT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED. THEY SHALL BE MAINTAINED, AS NEEDED, THROUGHOUT THE CONSTRUCTION PERIOD AND REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.
2. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POST WITH TIES OR STAPLES
3. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID-SECTION
4. WHEN TWO (2) SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX (6) INCHES AND FOLDED
5. MATERIAL SHALL BE REMOVED WHEN BULGES DEVELOP IN THE SILT FENCE
6. DOUBLE ROWS OF SILT FENCE SPACED FIVE (5) FEET APART SHALL BE PLACED AROUND EXISTING STORMWATER MANAGEMENT FACILITIES OR WETLANDS AS ADDITIONAL PROTECTION WHEN REQUIRED BY CITY ENGINEER

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	(BF) SILT FENCE	EC-01	City of Crystal Lake Illinois
2.		Date: 12/4/2012	
3.		Drawn DD / Checked AW	
4.			

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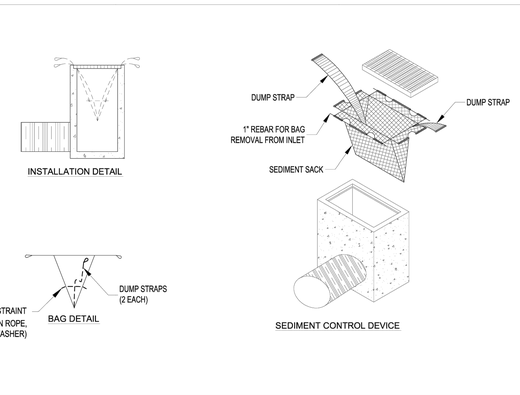
EC-04



Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	(IP) INLET SEDIMENT CONTROL DEVICE	EC-04	City of Crystal Lake Illinois
2.		Date: 11/2/2007	
3.		Drawn EM / Checked AW	
4.			

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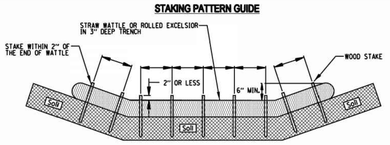
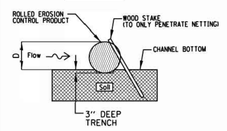
ROLLED EROSION CONTROL PRODUCTS

STAKING PATTERN GUIDE



NOTES:
1. OVERLAP MINIMUM IS THE DIAMETER OF THE ROLL.
2. 4' SPACING FOR WATTLES.
3. 2' SPACING FOR ROLLED EXCELSIOR.
4. OR SPACE ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

STAKE DETAIL



STANDARD DITCH CHECK DETAIL

NOTES:
1. DRAWINGS ARE NOT TO SCALE.
2. ENDS OF WATTLES OR ROLLED EXCELSIOR SHALL BE TURNED AT LEAST 6" UPSLOPE.
3. RECOMMENDED STAKES ARE 1 1/8" WIDE x 1 1/8" THICK x 30" LONG.
4. STAKES SHALL NOT EXTEND ABOVE THE STRAW WATTLE MORE THAN 2".
5. SPACING: THE TOE OF THE UPSTREAM DITCH CHECK SHALL CREATE A HORIZONTAL LINE WITH THE TOP OF THE DOWNSTREAM DITCH CHECK.

REFERENCE		STANDARD DWG. NO.
Project		IUM-514
Designed ____ Date ____		SHEET 1 OF 1
Checked ____ Date ____		DATE 08-2-2019
Approved ____ Date ____		

GE-02a

GENERAL SITE-WORK:

1. Pre-Construction meeting shall be conducted with City Staff and all Contractors prior to commencing any grading or underground utility construction activities (schedule meeting with the Community Development Department at 815-356-3605).
2. 24-hour Emergency contact numbers shall be provided to City Staff at the Pre-Construction meeting.
3. Working hours shall be limited to the hours of 7:00 a.m. and 7:00 p.m. on weekdays only (except in cases of emergency). Non-emergency work on weekends or holidays is not permitted per City Code except under written permission from the City Engineer. The owner is responsible for the City Inspector cost of overtime inspection beyond the normal eight (8) hour day, including weekends and holidays.
4. Public/private streets shall be kept free of dirt and debris with regular cleaning, sweeping, and scraping conducted by the Contractor. Junk and debris shall not be allowed to accumulate, blow, or scatter onto streets or adjacent properties.
5. J.U.L.I.E. shall be contacted for utility locations on-site and in the adjacent rights-of-way.
6. Contractor shall provide and maintain fencing, barricades, traffic control signs, and other safeguarding measures during the course of all work to protect the public from the construction operations.
7. Maintain access to adjacent streets during construction. No closing of streets unless approval is first obtained from the agency with jurisdiction (City of Crystal Lake, McHenry County Department of Transportation, Illinois Department of Transportation, etc).
8. Any damage to public right-of-way, public utilities, streets, curb, etc. shall be repaired/replaced as soon as possible and as directed by the City Engineer.
9. The contractor shall give the City of Crystal Lake, Illinois Department of Transportation, and any other governmental agency having jurisdiction, at least two (2) working days notice excluding Saturday and Sunday prior to the initiation of any phase of construction. Contractor shall immediately notify if construction has ceased and renew the two (2) working day notification thereafter.
10. The Contractor shall be responsible for obtaining all required permits for construction prior to commencement along or across existing streets or highways. The Contractor shall make arrangements for the proper bracing, shoring and other protection of all roadways before construction begins.

GRADING:

1. The grading and construction of the site improvements shall not cause ponding of storm sewer water. All areas adjacent to these improvements shall be graded to allow positive drainage.
2. The proposed grading elevations shown on the plans are finished grade. A minimum of six (6) inches of topsoil is to be placed before finished grade elevations are achieved.
3. Embankment material within parkway and open space areas shall be compacted to a minimum of ninety percent (90%) of maximum density in accordance with ASTM Specification D-1557 (modified proctor method), or to such other density as may be determined appropriate by the soils engineer.
4. All subgrade material shall have a minimum CBR (California Bearing Ratio) of 3.0 as determined by the soils engineer, or base replacement and pavement design revisions shall be provided which are adequate to obtain equivalent pavement strength.
5. Proposed pavement areas, building pads, driveways and sidewalks and yard/open space areas shall be excavated or filled to plus or minus 0.1 foot of design subgrade elevations by the Contractor.
6. Any borrow pit locations shall be identified by the Contractor on a copy of the approved site plans and forwarded to the Engineering Division at least 24-hours prior to excavation. Provide backfill compaction reports from a geotechnical engineer and as-built plans to the Engineering Division for any borrow pit area.
7. Backfill shall be monitored by a geotechnical engineer on-site with compaction reports forwarded to the Engineering Division for review.
8. Water truck shall be on-site at all times during mass-grading operations and be available as needed for the purposes of dust control or at the request of City Staff.
9. Use of City fire hydrants is not allowed unless approved (separate from this permit) by the Public Works Department and a hydrant meter and RPZ is obtained from the City of Crystal Lake Water Division (815-356-3614). Only the City of Crystal Lake Water Division may operate valves and hydrants.

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	STANDARD NOTES AND SPECIFICATIONS	GE-02a	City of Crystal Lake Illinois
2.		Date: 01/30/15	
3.		Drawn DD / Checked AW	
4.			

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GE-02b

TOPSOIL STOCKPILING:

1. Location of any on-site topsoil stockpiles shall be identified on the approved plans with silt fence installed around the perimeter of the stockpile.
2. Topsoil stockpiled for future use shall be relatively free from large roots, sticks, weeds, brush, stones larger than one (1) inch diameter, or other litter and waste products including other extraneous materials not conducive to plant growth.
3. Topsoil shall be stockpiled in sequence to eliminate any re-handling or double movements by the Contractor. Failure to properly sequence the stockpiling operations shall not constitute a claim for additional compensation. No material shall be stockpiled in front yards, in utility easements, or in the right-of-way lines.
4. If a stockpile is to remain in place for more than (14) calendar days, it is required that the stockpile meet the requirements as outlined in section 595 of the City Code.

UNDERGROUND UTILITY:

1. The Contractor shall coordinate water main, water service, sanitary and storm sewer inspections and testing with the Community Development at least 24 hours in advance.
2. All main line sanitary shall be cleaned and televised (provide DVD to the City's Engineering Division).
3. All manhole or valve covers shall be imprinted "City of Crystal Lake Sanitary", or "City of Crystal Lake Storm", or "City of Crystal Lake Water" as directed by the City.
4. Reference the latest edition of the Standard Specifications for Water and Sewer Main Construction in Illinois.
5. Existing manholes to be circular cored and booted.

EROSION CONTROL:

1. All specified erosion control measures shall be installed and maintained per the requirements of the Crystal Lake Stormwater Ordinance in accordance with the active NPDES permit.
2. All slopes 4:1 or steeper shall be sodded or blanketed immediately after mass earthwork.
3. All overland flow routes to be stabilized by sod or blanket.
4. Erosion control measures to be inspected and approved by City Engineering Division prior to additional work on site.
5. Continuous monitoring of erosion control measures is required. Maintain records of weekly reports per the City of Crystal Lake Stormwater Ordinance.
6. The Contractor shall implement any additional erosion control measures deemed necessary by the City per the standards of the City Of Crystal Lake Stormwater Ordinance.
7. All storm sewer catch basins, sumps and/or retention basins provided are to be cleaned at the end of construction of the project prior to final acceptance. Cleaning may also be required during the course of the construction of the project if it is determined that the silt and debris traps are not properly functioning and their performance is impaired.
8. Rip-rap material RR 2 (6") - RR4 (16") shall be in accordance with Article 281
9. Projects of 1 Acre or greater must obtain an NPDES permit prior to commencement of any construction activity.

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	STANDARD NOTES AND SPECIFICATIONS	GE-02b	City of Crystal Lake Illinois
2. 02/25/2020		Date: 01/30/15	
3.		Drawn DD / Checked AW	
4.			

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GE-02c

SANITARY SEWER:

1. Non-shear stainless steel couplings shall be used when connecting sewer pipes of dissimilar materials and pipes with no hub joints. When connecting to an existing sanitary sewer by means other than an existing wye or manhole, contractor shall use a Sewer-Tap and hub-wye or hub-tee saddle.
2. Unless an alternate method is approved, water stop gaskets shall be provided at all sanitary sewer manhole connections. Type and manufacturer to be approved by the City.
3. PVC plastic sewer pipe and fittings of sizes 4-inch through 15-inch shall conform to the latest revised specification requirements of ASTM D3034 for type PSM polyvinyl chloride (PVC) sewer pipe and fittings of minimum wall thickness SDR 26.
4. Joints shall be either the solvent weld type conforming to the latest revised specification requirements of ASTM D2564 and ASTM D2855, or elastomeric gasket type conforming to the latest revised specification requirements of ASTM D1869 and ASTM D3212.
5. A thicker walled pipe such as SDR 18 may be specified by the engineer depending on design and/or field conditions.
6. PVC plastic sewer pipe and fittings of sizes 18-inch through 36-inch shall conform to the latest revised specification requirements of ASTM F679 or polyvinyl chloride (PVC) large diameter ribbed gravity sewer pipe and fittings, with integral bell gasketed joints and elastomeric gaskets to form a watertight seal conforming to the latest revised specification requirements of ASTM F477 or ASTM D3212.
7. Pipe and fittings shall be the products of one approved manufacturer only, and there shall not be any mixing of pipe and fittings of different manufacturers between manholes.
8. The handling and installation of pipe, assembly or joints, and manhole connections shall be in accordance with the manufacturer's recommendations.
9. Gasket-type watertop collars consist of a neoprene collar and a stainless steel band or other approved manhole watertop shall be installed wherever the pipe passes through the manhole walls to provide a watertight joint to prohibit infiltration into the sewer system.
10. PVC pipe shall be installed in accordance with the latest revised specification requirements of ASTM D2321 using either compacted class I or class II granular embedment materials for bedding, haunching and initial backfill of 12 inches over the top of pipe to provide the necessary support for the pipe so that the maximum deflection does not exceed five percent of the pipe's original internal diameter.
11. The Contractor shall provide the necessary tools and equipment and perform the work necessary to test the deflection in the initial 1,200 feet of installed sewer and not less than ten percent (10%) of the remainder of the sewer project at random locations selected by the engineers no sooner than 30 days after backfilling has been completed. In the event that deflection exceeds the maximum limit of five percent (5%), the Contractor shall test all other new flexible pipe for deflection. Deflection shall be tested by use of either a mandrel or rigid ball having a diameter equal to ninety-five percent (95%) of the inside diameter of the pipe, and the test shall be performed without using mechanical pulling devices. Wherever the deflection limitation is exceeded, the contractor shall uncover the pipe, carefully replace compacted embedment and backfill material, and retest for deflection.
12. The Contractor shall subject all sanitary sewers, including service lines, to an air test. Air testing shall be performed in accordance with the latest Standard Specifications for Water and Sewer.
13. The Contractor shall subject all newly constructed sanitary manholes to the Negative Pressure (Vacuum) Test in accordance with ASTM C 1244 The Contractor shall also televise all public sanitary sewers. Televising of sanitary sewer, cost for televising, and testing shall be the responsibility of the Contractor.
14. Cast Iron Soil Pipe: service weight cast iron soil pipe and fittings conforming C.I.S.P.I. Specification HS-67 with compression type rubber gasket joints conforming to ASTM specification C564, or other suitable materials approved by the City Engineer.

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	STANDARD NOTES AND SPECIFICATIONS	GE-02c	City of Crystal Lake Illinois
2. 01/25/2021 KL Vacuum Test Note 13		Date: 01/30/15	
3.		Drawn DD / Checked AW	
4.			

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GE-02d

WATER MAIN:

1. Water main shall be Ductile Iron.
   a) Ductile Iron water main shall be Class 52 conforming to ANSI/AWWA C151/A21.51-09.
   b) Ductile iron fittings shall conform to ANSI/AWWA C153/A21.53 with mechanical joint gaskets.
2. All bolted connections shall be torqued to the manufacturer's specification. The Contractor shall verify the manufacturer's specification with an approved torque wrench.
3. Thrust blocking or Mega-Lugs with Mega-Bond coating or pre-approved equal shall be installed on water mains at all bends, tees, elbows, etc. except as noted below.
4. Thrust blocks not permitted with 45 degree vertical bends in water main (these shall be restrained with Mega-Lug or pre-approved equal.
5. Ductile iron pipe shall be encased in polyethylene and shall conform with ANSI/AWWA C105/A21.10 - 10 and ASTM A674-10.
6. Minimum cover from finished grade to top of water main shall be six (6) feet; Maximum cover shall be eight (8) feet.
7. Water Main Taps: An Illinois licensed plumber is required for any water main tap.
8. All water mains shall be subjected to a 2 hour pressure and leakage test by the Contractor in accordance with City Detail UW-09A and UW-09B. Water mains shall be chlorinated in accordance with City Detail UW-09A.
9. The Underground Contractor shall consider incidental to the contract any chlorination and testing of existing water main where connections to and conclusion of such mains is indicated on the drawing.
10. For repairs to existing PVC watermains, see details UW-12 and UW-13

PAVING:

1. All subgrades and bases shall be proof-rolled and approved by the Engineering Division prior to base or binder installation.
2. Subgrade and proposed pavements shall be finished by the Excavation Contractor to within 0.1 foot plus or minus, of plan elevation.
3. The Paving Contractor shall ensure that the subgrade has been properly prepared and that the finished top of subgrade elevation has been graded within the tolerances allowed in these specifications. Unless the Paving Contractor advises the owner and engineer in writing prior to fine grading for base course construction, it is understood that the Contractor has approved and accepts responsibility for the subgrade.
4. For the purpose of providing handicap accessibility and complying with the American Disability Act and City Standards, curbs shall be depressed at locations where public walks or pedestrian paths intersect curb lines at street intersections and other locations as directed.
5. ¾ inch thick premolded fiber expansion joints with two (2) No. 4 plain round steel dowel bars shall be installed at designated intervals and at all P.C., P.T., curb returns and at the end of each pour. Alternate ends of the dowel bars shall be greased and fitted with metal expansion tubes.
6. ½ inch thick fiber expansion joints shall be used in every case where the sidewalk coincides with the curb and gutter. Contraction joints shall be saw cut at designated intervals in the curb. The cost of these joints shall be considered as incidental to the cost of the contract.
7. All poured in place concrete curb and gutter shall incorporate two (2) No. 4 reinforcing bars installed wherever the curb and gutter crosses utility service lines, the cost of which shall be considered incidental to the cost of concrete curb and gutter.
8. Sidewalks (where required) shall be of the thickness and dimensions as shown in the construction plans. All sidewalk concrete shall be a minimum of 6.1 bag mix (or IDOT class SI concrete) and shall develop a minimum of 3,500 psi compressive strength at fourteen (14) days. Contraction joints shall be set at five (5) foot centers, and one-half inch (½ inch) premolded fiber expansion joints at fifty (50) foot centers and where the sidewalk meets the curb or another sidewalk, or at the end of each pour. All sidewalks constructed over utility trenches and/or abutting driveway aprons shall be reinforced with three (3) No. 4 reinforcing bars (10 foot minimum length).

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	STANDARD NOTES AND SPECIFICATIONS	GE-02d	City of Crystal Lake Illinois
2. KL 01/25/2021 Torque Specification		Date: 01/30/15	
3. 02/06/2023 JRG - Update Water Main Note 8		Drawn DD / Checked AW	
4. 07/14/2023 JRG - Update Water Main Notes 1, 5, 10			

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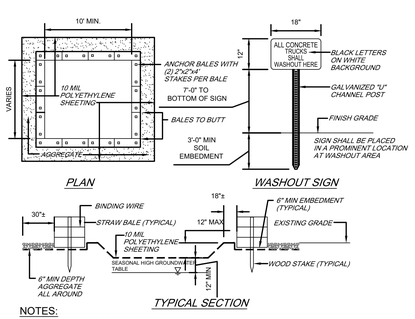
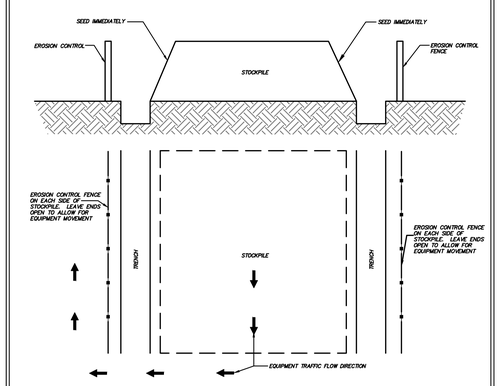
CONCRETE WASHOUT AREA



NOTES:
1. CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
2. CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
3. WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75% FULL.
4. WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
5. ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
6. AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.

STOCKPILE DETAIL



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DKA PROJECT NO: 24 - 027

KEY PLAN:

LICENSED PROFESSIONAL ENGINEER
TODD M. RICHARDS
062-058779
STATE OF ILLINOIS

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
EROSION CONTROL DETAILS

SHEET NUMBER:
C-09

ISSUED FOR BID – NOT FOR CONSTRUCTION

Xrefs: TITLE BLOCK – DKA

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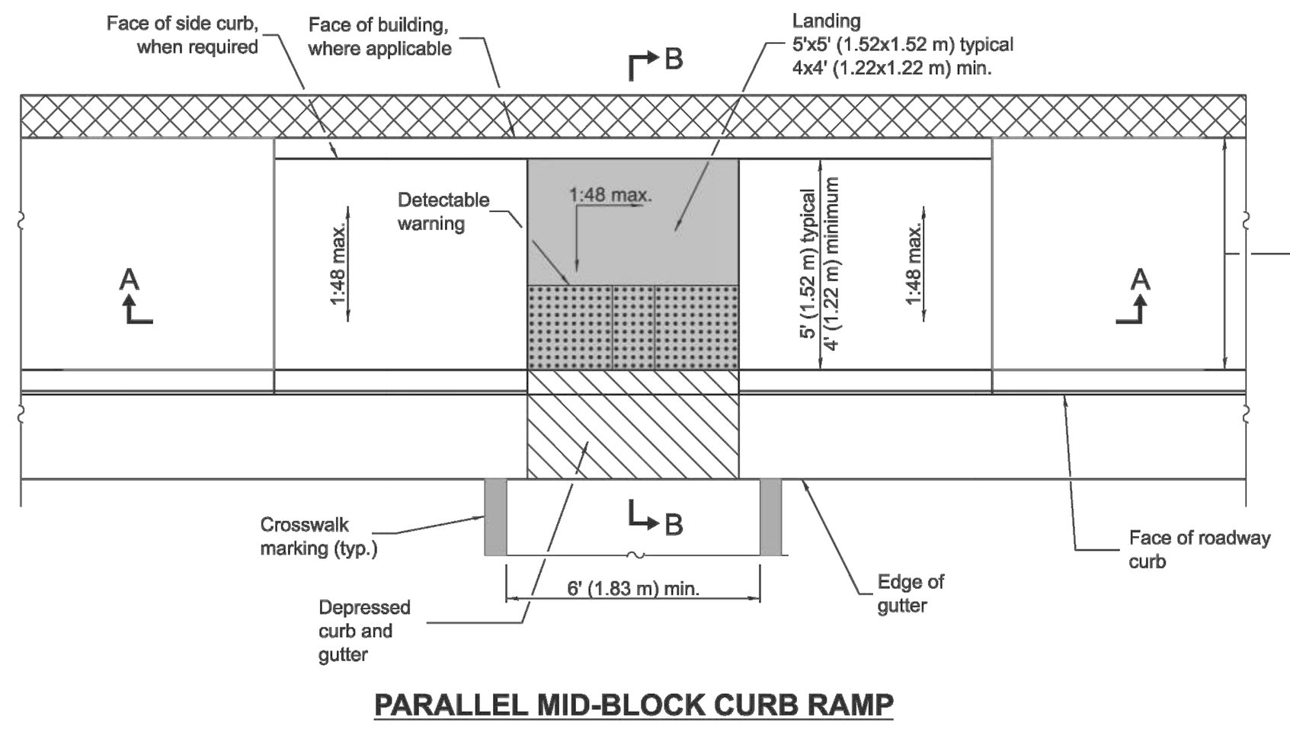
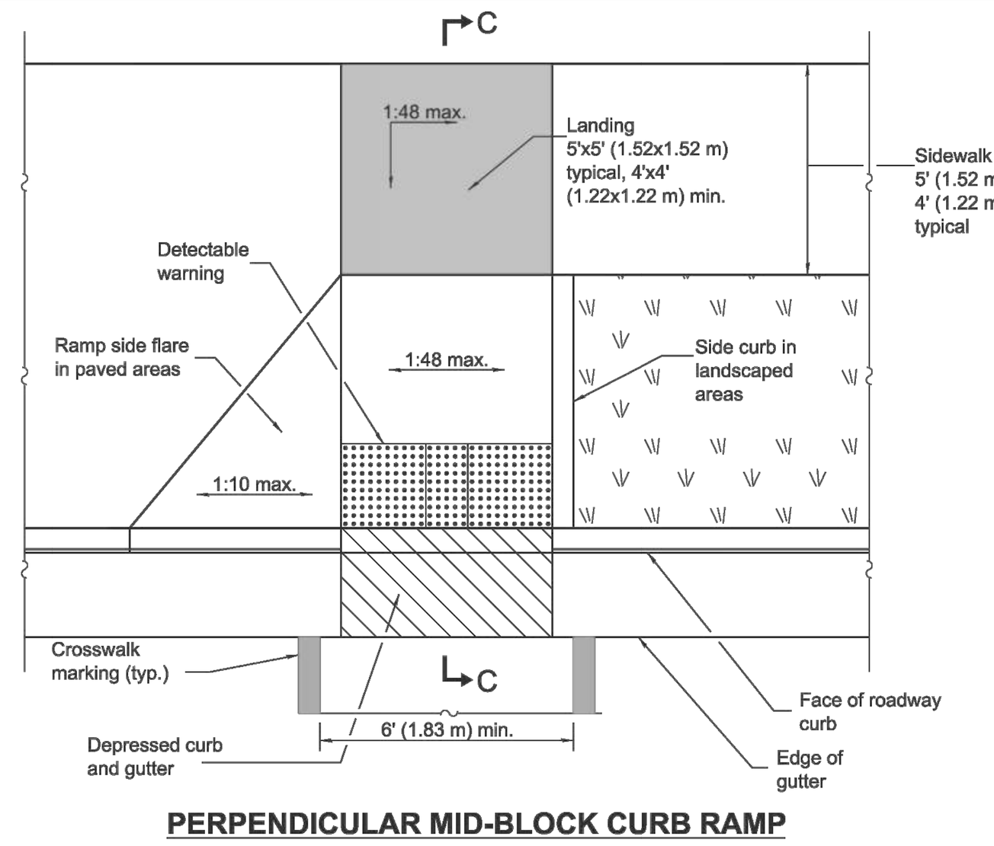
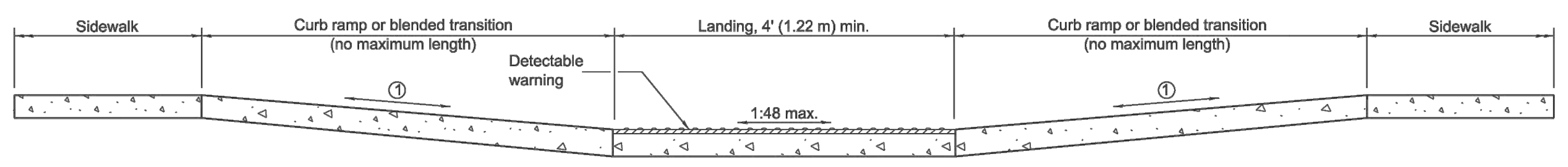


PARALLEL MID-BLOCK CURB RAMP

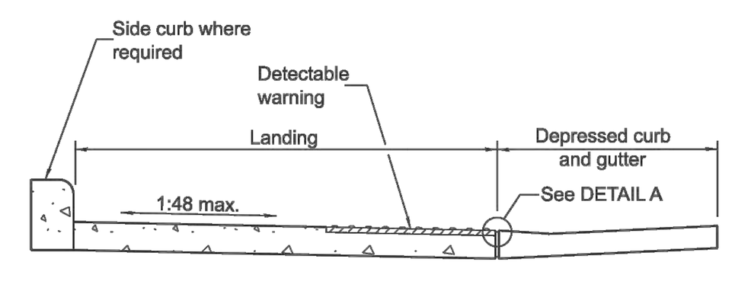


PERPENDICULAR MID-BLOCK CURB RAMP

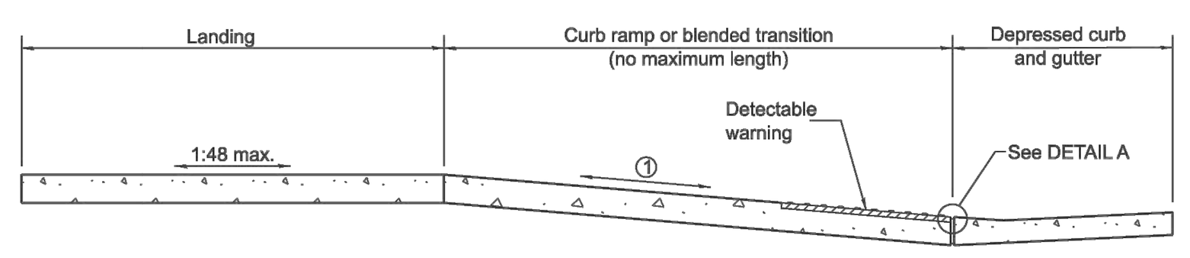


SECTION A-A

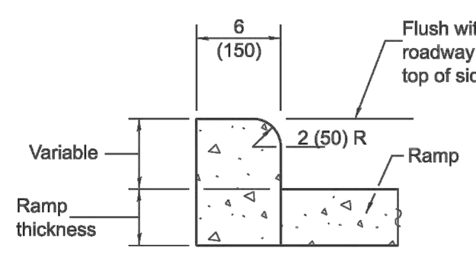
① The running slope of a curb ramp shall be 1:12 max. The running slope of a blended transition shall be 1:20 max.



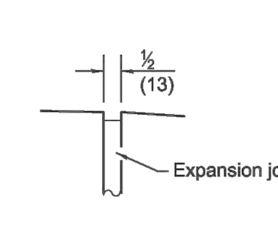
SECTION B-B



SECTION C-C



SIDE CURB DETAIL



DETAIL A

GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

Where 1:48 maximum slope is shown, 1:64 is preferred.

Detectable warnings are shown in their ideal locations but the following placement tolerances are allowed.

Side Border - Detectable warnings should extend the full width of the walking surface (excluding flared sides) but a border along each side up to 2 in. (50 mm) in. width is allowed.

Curb Set-Back - Detectable warnings located at the back of curb should closely align with the curb but a gap up to 6 in. (150 mm) behind the curb is allowed.

See Standard 606001 for details of depressed curb adjacent to curb ramp.

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation

APPROVED January 1, 2025
[illegible]
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2025
[illegible]
ENGINEER OF DESIGN AND ENVIRONMENT

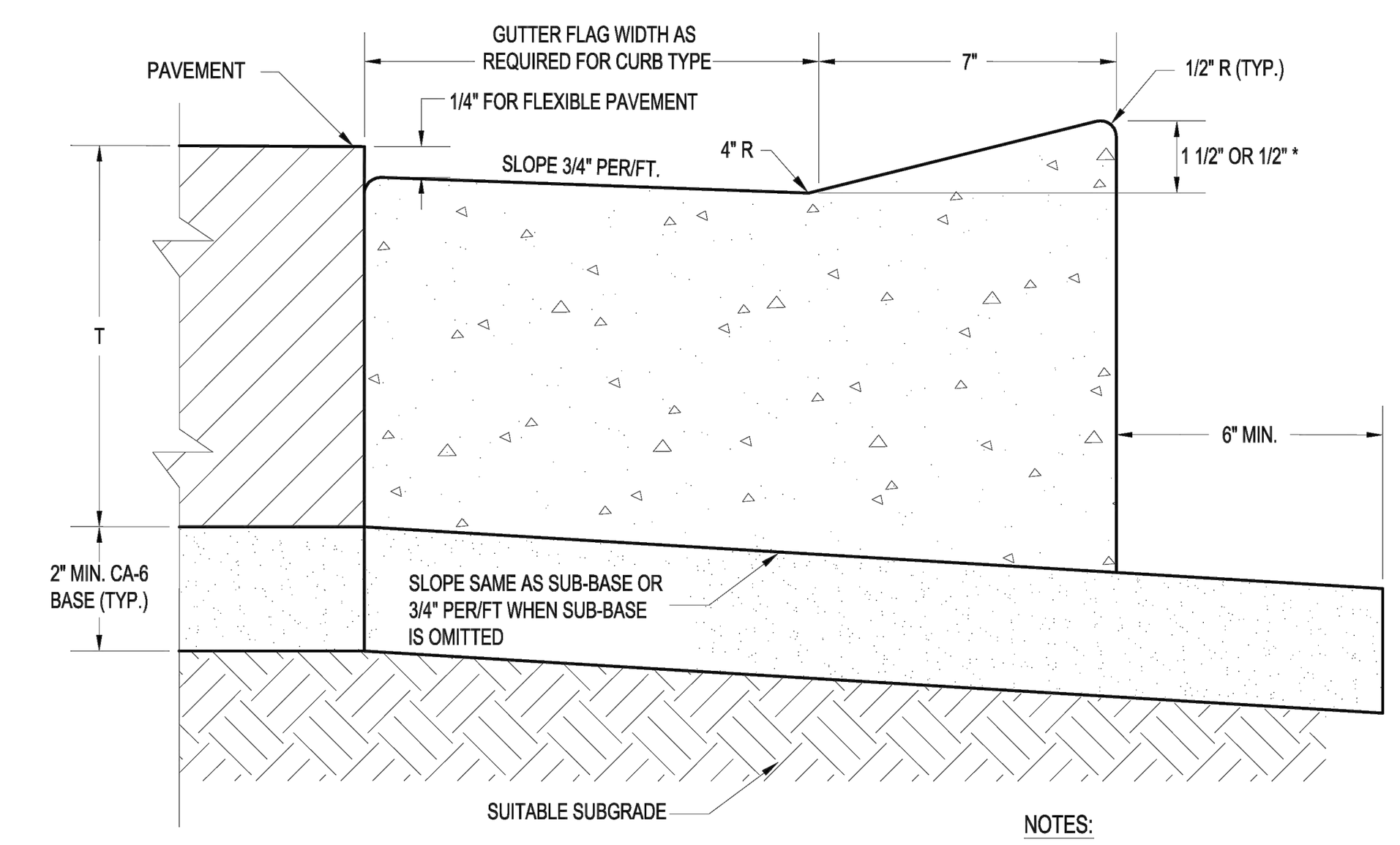
ISSUED 1-1-12

DATE	REVISIONS
1-1-25	Revised turning space with landing and updated cross-slope.
1-1-19	Removed upper landing, added blended transitions and detectable warning tolerances.

MID-BLOCK CURB RAMPS FOR SIDEWALKS

STANDARD 424016-06

RD-04b



* ADJACENT TO CURB RAMP ACCESSIBLE TO THE DISABLED

NOTES:

1. THE TOP OF CURB SHALL BE DEPRESSED WHERE THE CURB AND GUTTER IS CONSTRUCTED ACROSS ALLEYS AND FOR PRIVATE DRIVES OR WHERE DIRECTED BY THE ENGINEER.
2. THICKNESS OF PAVEMENT "T". WHEN CURB AND GUTTER IS CONSTRUCTED ADJACENT TO FLEXIBLE PAVEMENT, THE VERTICAL THICKNESS OF THE GUTTER FLAG SHALL BE 9 INCHES. FOR BAM PAVEMENT SECTIONS THE FLAG SHALL BE THE SAME THICKNESS AS THE PAVEMENT.

Revised:
1. 06/12/2015
2.
3.
4.

Drawing Name: DEPRESSED CURB: DETAIL

Drawing Number: RD-04b
Date: 01/30/15
Drawn: DD Checked: AW

City of Crystal Lake Illinois

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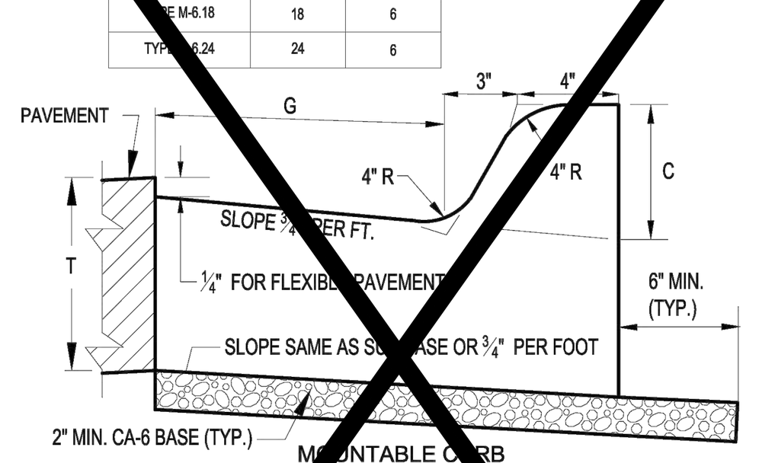
RD-05a

MOUNTABLE CURB DIMENSIONS FOR "G" AND "C"

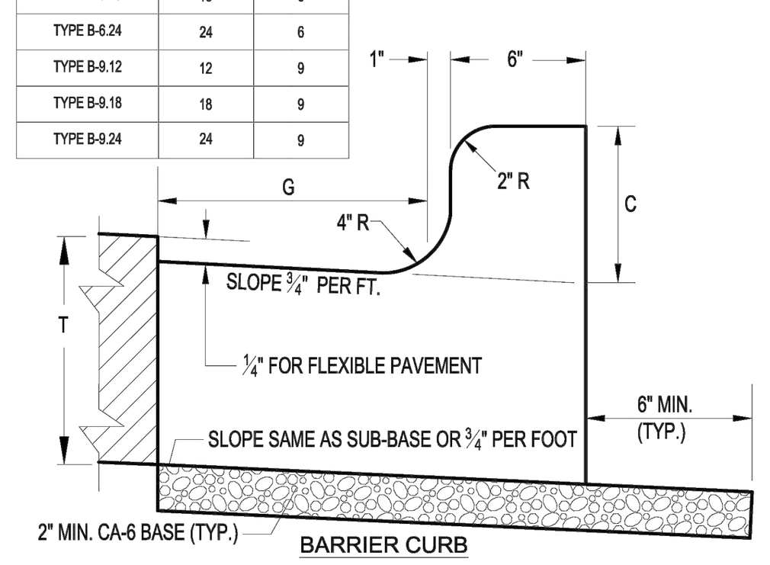
CURB TYPE	"G" (INCHES)	"C" (INCHES)
TYPE M-3.24	24	3
TYPE M-4.12	12	4
TYPE M-6.06	6	6
TYPE M-6.12	12	6
TYPE M-6.18	18	6
TYPE M-6.24	24	6

BARRIER CURB DIMENSIONS FOR "G" AND "C"

CURB TYPE	"G" (INCHES)	"C" (INCHES)
TYPE B-6.12	12	6
TYPE B-6.18	18	6
TYPE B-6.24	24	6
TYPE B-9.12	12	9
TYPE B-9.18	18	9
TYPE B-9.24	24	9



MOUNTABLE CURB



BARRIER CURB

NOTES:

THICKNESS - T - THICKNESS OF PAVEMENT WHEN CURB AND GUTTER IS CONSTRUCTED ADJACENT TO FLEXIBLE OR RIGID PAVEMENT, THE VERTICAL THICKNESS OF THE GUTTER FLAG SHALL BE 9". ALSO, TIE BARS SHALL BE OMITTED.

DRAINAGE OPENINGS - AT ALL LOCATIONS WHERE METAL CASTINGS ARE TO BE INCORPORATED IN THE CURB AND GUTTER, A 1" THICK PRE FORMED EXPANSION JOINT FILLER, CONFORMING TO THE CROSS SECTIONS OF THE CURB AND GUTTER, SHALL BE INSTALLED IN THE CURB AND GUTTER A DISTANCE OF 1 FT. FROM EACH SIDE OF THE METAL CASTING. WHEN THE WIDTH OF THE METAL CASTING IS LESS THAN THE WIDTH OF THE CURB AND GUTTER, 2 - NO. 4 REBARS (L = 2 + CASTING LENGTH + 2') SHALL BE INCORPORATED IN THE CONTINUOUS OF CONCRETE GUTTER IN FRONT OF THE CASTING.

TRANSITIONS - THE TRANSITION FROM FULL HEIGHT CURB TO DEPRESSED CURB SHALL BE MADE AT THE RATE OF 3" PER FOOT OF LENGTH OR FLATTER.

(*) - NO. 4 STEEL REINFORCING BARS SHALL BE INCORPORATED OVER TRENCH CROSSINGS IF REQUIRED BY THE CITY ENGINEER.

JOINTS - IN ADDITION TO THE REQUIREMENTS OF ARTICLE 606.06 OF THE STANDARD SPECIFICATIONS, JOINTS SHALL BE CONSTRUCTED AS FOLLOWS:

CONTRACTION JOINTS AND EXPANSION JOINTS SHALL BE INSTALLED IN THE CURB OR CURB AND GUTTER IN PROLONGATION WITH JOINTS IN ADJACENT P.C.C. PAVEMENT OR BASE COURSE.

WHEN CURB AND GUTTER IS CONSTRUCTED ADJACENT TO FLEXIBLE PAVEMENT, A 1" THICK PRE FORMED EXPANSION JOINT FILLER, CONFORMING TO THE CROSS SECTION OF THE CURB AND GUTTER, SHALL BE INSTALLED AT POINTS OF CURVATURE FOR SHORT RADIUS CURVES AND AT CONSTRUCTION JOINTS. CONTRACTION JOINTS SHALL BE PLACED BETWEEN EXPANSION JOINTS AT DISTANCES NOT TO EXCEED 15 FEET.

ALL EXPANSION JOINTS SHALL BE PROVIDED WITH A 1 ¼" DIA. X 18" COATED SMOOTH DOWEL BAR CONFORMING TO ARTICLE 1006.10 OF THE STANDARD SPECIFICATIONS. THE DOWEL BAR SHALL BE FITTED WITH A CAP HAVING A PINCHED STOP THAT WILL PROVIDE 1" OF EXPANSION.

ALL CONSTRUCTION JOINTS SHALL BE PROVIDED WITH ½" DIA. DEFORMED STEEL TIE BARS 30" LONG CONFORMING TO AASHTO M-31 OR M-53. TIE BARS SHALL BE PLACED ON 9"" CENTERS (MINIMUM 2 PER JOINT).

EXPANSION JOINTS SHALL BE PLACED AT INTERVALS NOT TO EXCEED 100 FEET.

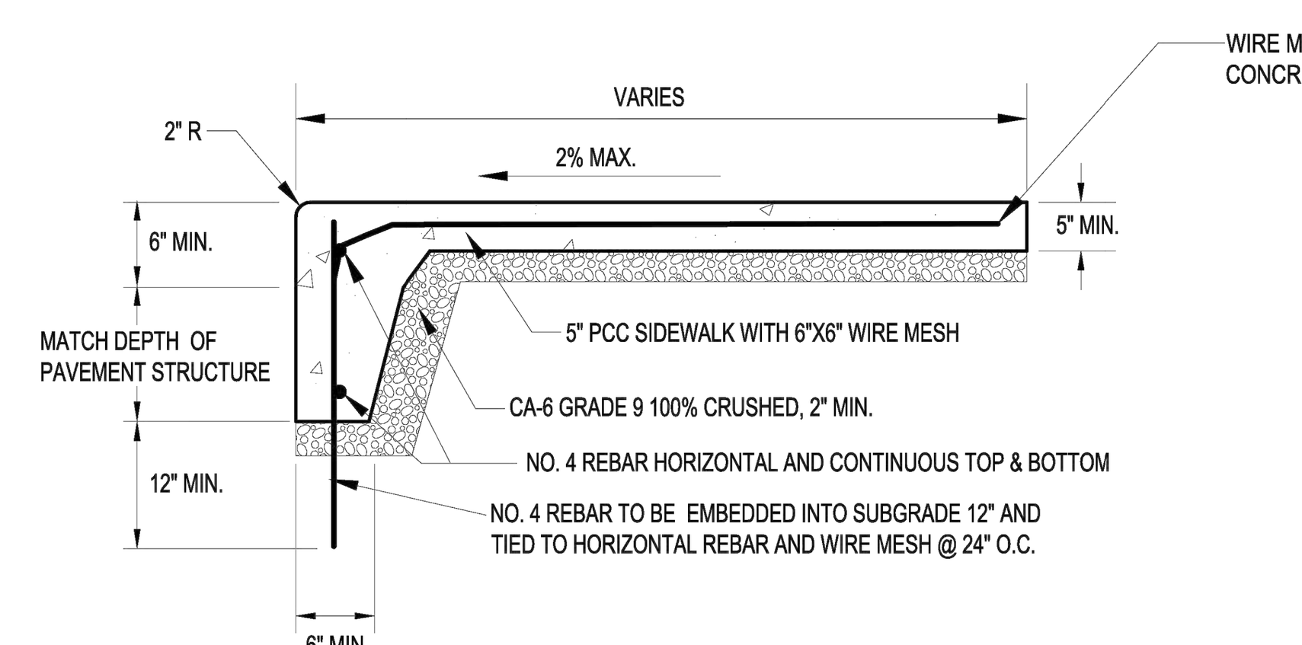
Revised:
1. 06/12/2015
2. KL 1/25/2021 M-4.12 ADDED
3.
4.

Drawing Name: CURB: CONCRETE CURB AND GUTTER

Drawing Number: RD-05a
Date: 06/11/2015
Drawn: DD Checked: AW

City of Crystal Lake Illinois

RD-05c



NOTES:

1. CLASS SI CONCRETE SHALL BE USED THROUGHOUT (UNLESS OTHERWISE NOTED)
2. ALL REBAR AND WIRE MESH SHALL BE SURROUNDED BY 2" MINIMUM THICKNESS OF CONCRETE
3. REBAR AND WIRE MESH TO BE INSPECTED PRIOR TO CONCRETE POUR

Revised:
1. 06/12/2015
2. 8/18/2023 JRG 5" PCC THICKNESS
3.
4.

Drawing Name: CURB: SIDEWALK WITH INTEGRAL CURB

Drawing Number: RD-05c
Date: 05/19/2015
Drawn: JH Checked: AW

City of Crystal Lake Illinois

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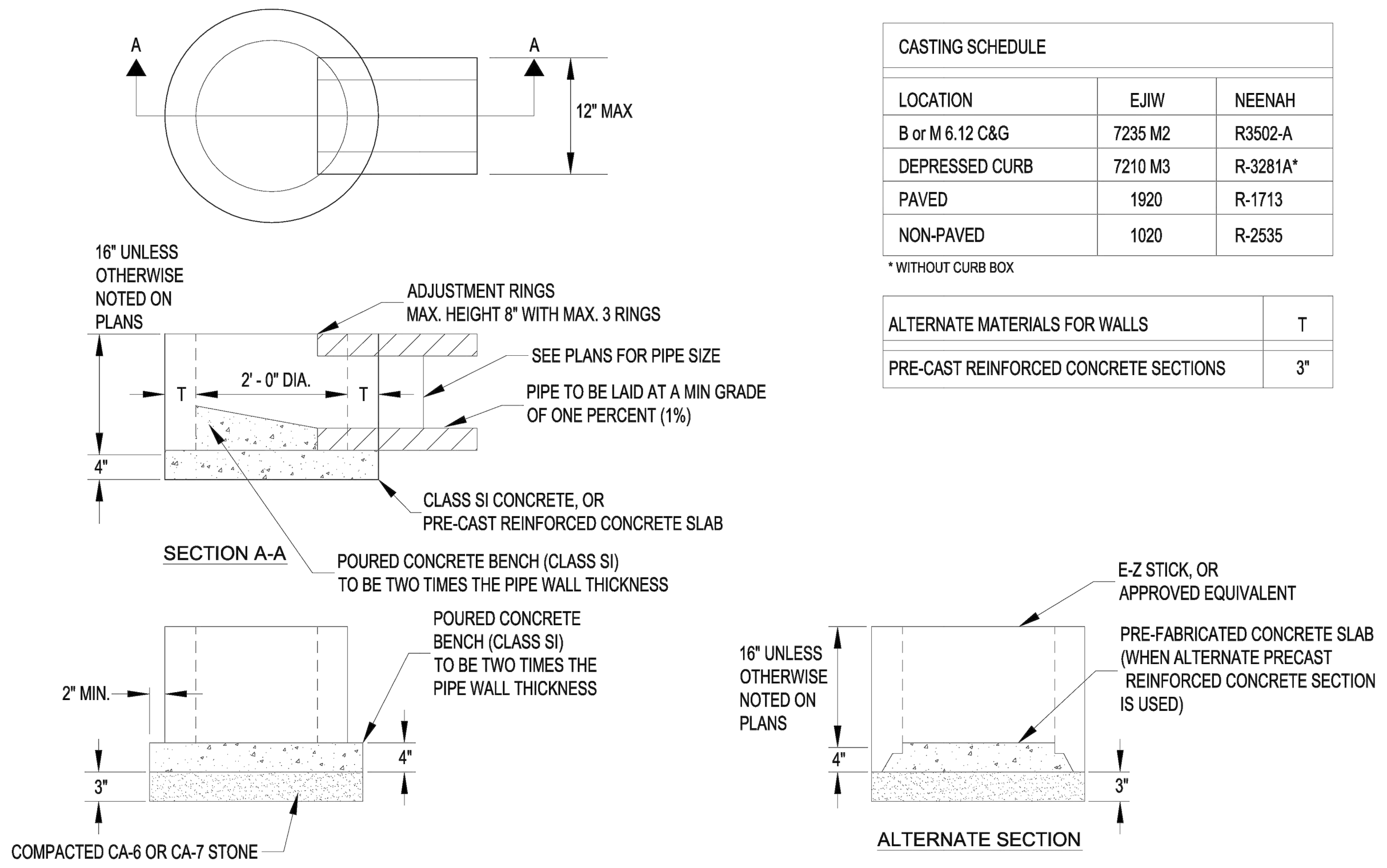
UD-01a



CASTING SCHEDULE		
LOCATION	EJIW	NEENAH
B or M 6.12 C&G	7235 M2	R3502-A
DEPRESSED CURB	7210 M3	R-3281A*
PAVED	1920	R-1713
NON-PAVED	1020	R-2535

* WITHOUT CURB BOX

ALTERNATE MATERIALS FOR WALLS	T
PRE-CAST REINFORCED CONCRETE SECTIONS	3"

Revised:
1. 06/12/2015
2.
3.
4.

Drawing Name: DRAINAGE STRUCTURES: INLET, TYPE A

Drawing Number: UD-01a
Date: 05/28/2015
Drawn: JH Checked: AW

City of Crystal Lake Illinois

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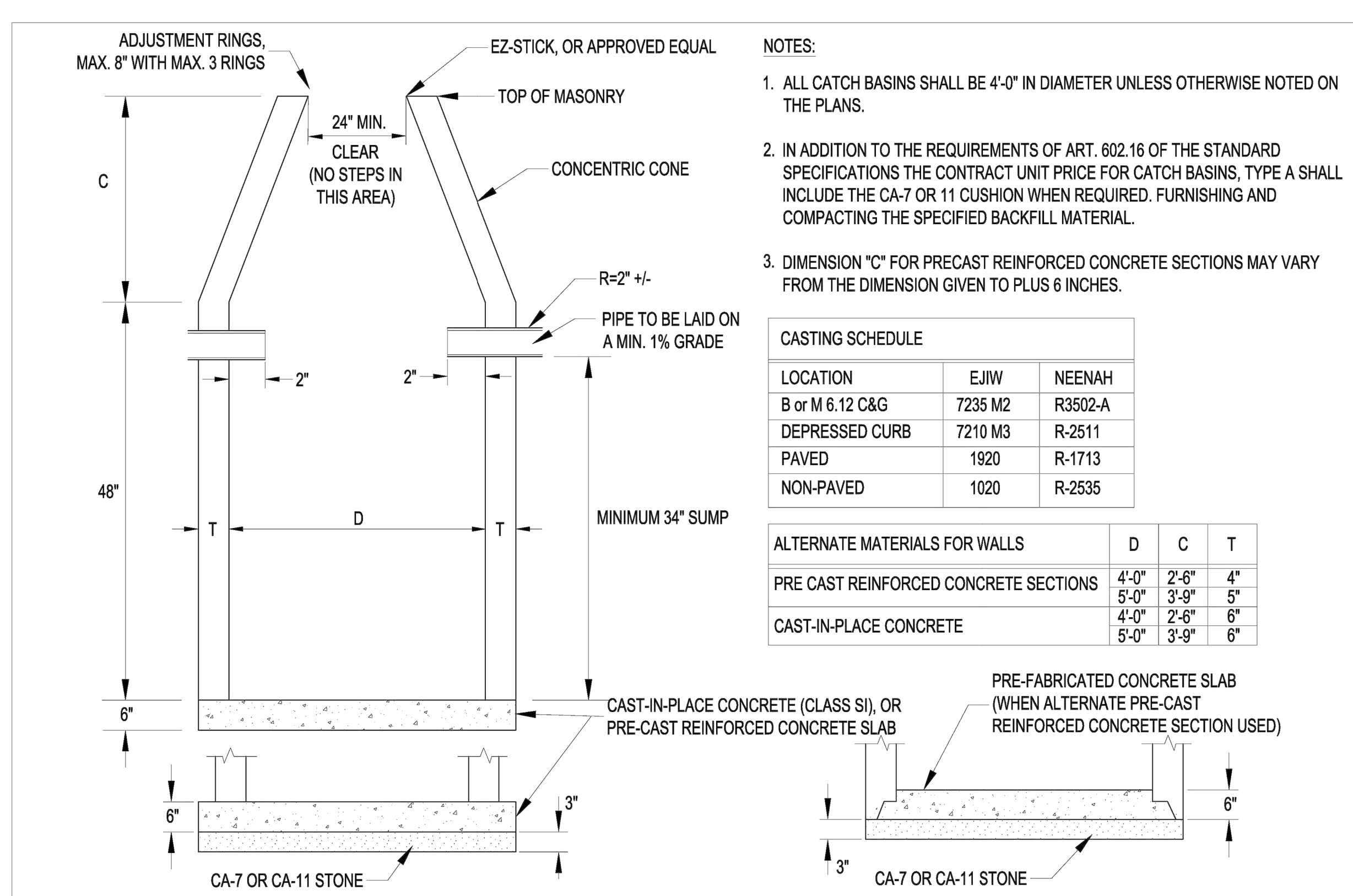
UD-01b



NOTES:

1. ALL CATCH BASINS SHALL BE 4'-0" IN DIAMETER UNLESS OTHERWISE NOTED ON THE PLANS.
2. IN ADDITION TO THE REQUIREMENTS OF ART. 602.16 OF THE STANDARD SPECIFICATIONS THE CONTRACT UNIT PRICE FOR CATCH BASINS, TYPE A SHALL INCLUDE THE CA-7 OR 11 CUSHION WHEN REQUIRED. FURNISHING AND COMPACTING THE SPECIFIED BACKFILL MATERIAL.
3. DIMENSION "C" FOR PRECAST REINFORCED CONCRETE SECTIONS MAY VARY FROM THE DIMENSION GIVEN TO PLUS 6 INCHES.

CASTING SCHEDULE		
LOCATION	EJIW	NEENAH
B or M 6.12 C&G	7235 M2	R3502-A
DEPRESSED CURB	7210 M3	R-2511
PAVED	1920	R-1713
NON-PAVED	1020	R-2535

ALTERNATE MATERIALS FOR WALLS	D	C	T
PRE CAST REINFORCED CONCRETE SECTIONS	4'-0" 5'-0"	2'-6" 3'-9"	4" 5"
CAST-IN-PLACE CONCRETE	4'-0" 5'-0"	2'-6" 3'-9"	6" 6"

Revised:
1. 06/12/2015
2. 08/18/2023
3.
4.

Drawing Name: CATCH BASIN TYPE A

Drawing Number: UD-01b
Date: 09/18/2012
Drawn: DD Checked: AW

City of Crystal Lake Illinois

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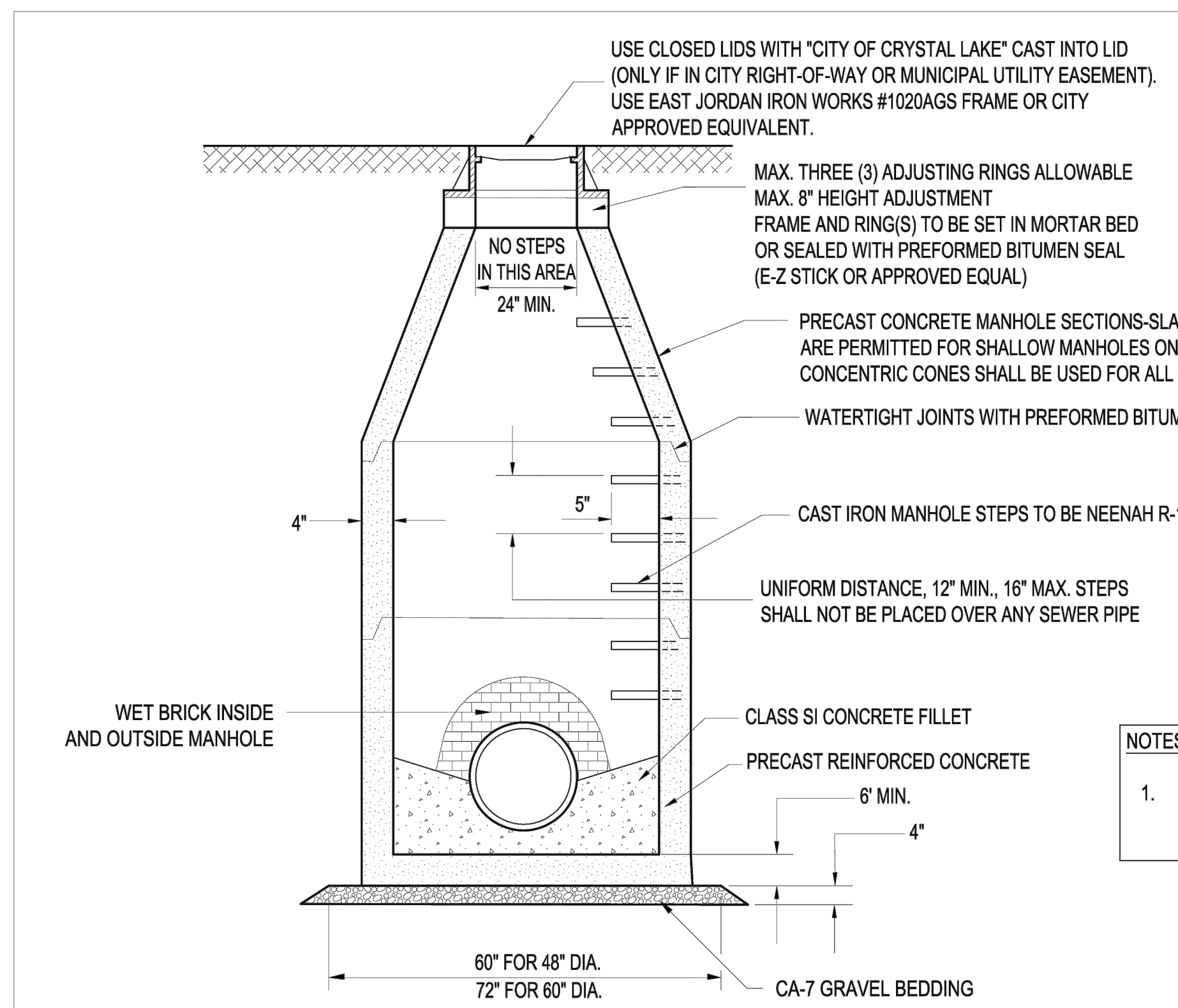
UD-01d



CASTING SCHEDULE		
LOCATION	EJIW	NEENAH
B or M-6.12	7235 M2	R3502-A
DEPR. CURB	7210 M3	R-2511
PAVED	1920	R-1713
NON-PAVED	1020	R-2535

PIPE SIZE	d
10" - 24"	48"
27"- 48"	60"
54"- 72"	SPECIAL

NOTES:

1. IF STRUCTURE IS TO BE MAINTAINED BY THE CITY, ALL STEPS SHALL BE REMOVED PRIOR TO FINAL ACCEPTANCE.

Revised:
1. 06/12/2015
2. 08/18/2023 JRG NOTE 1
3.
4.

Drawing Name: STORM MANHOLE TYPE A

Drawing Number: UD-01d
Date: 05/19/2015
Drawn: JH Checked: AW

City of Crystal Lake Illinois

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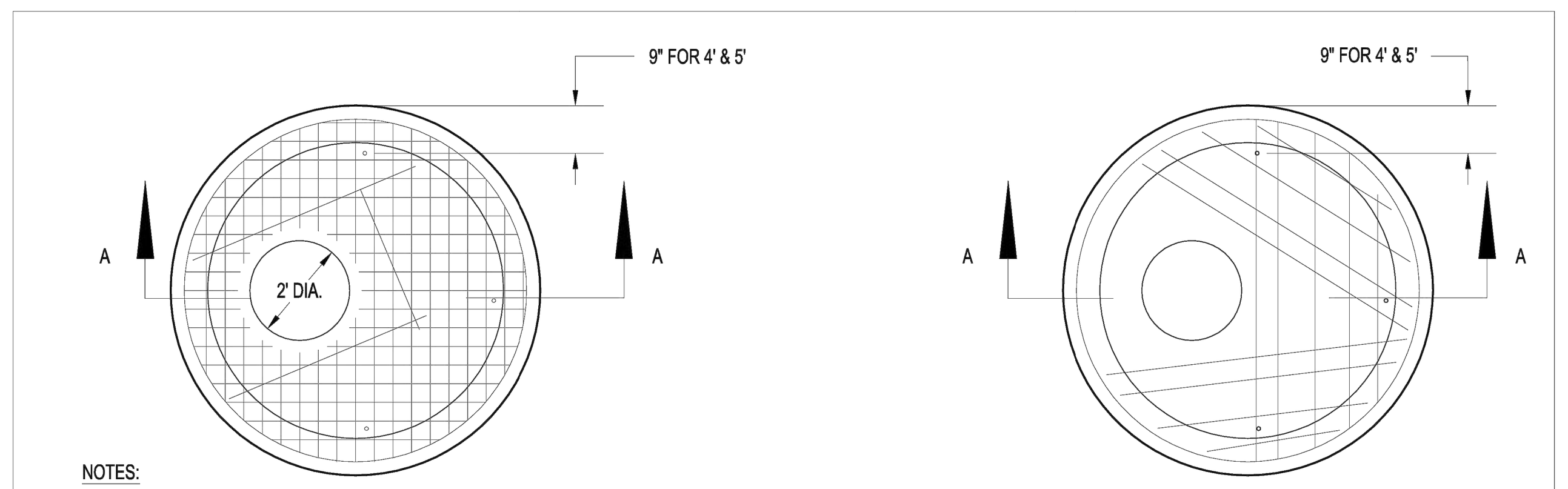
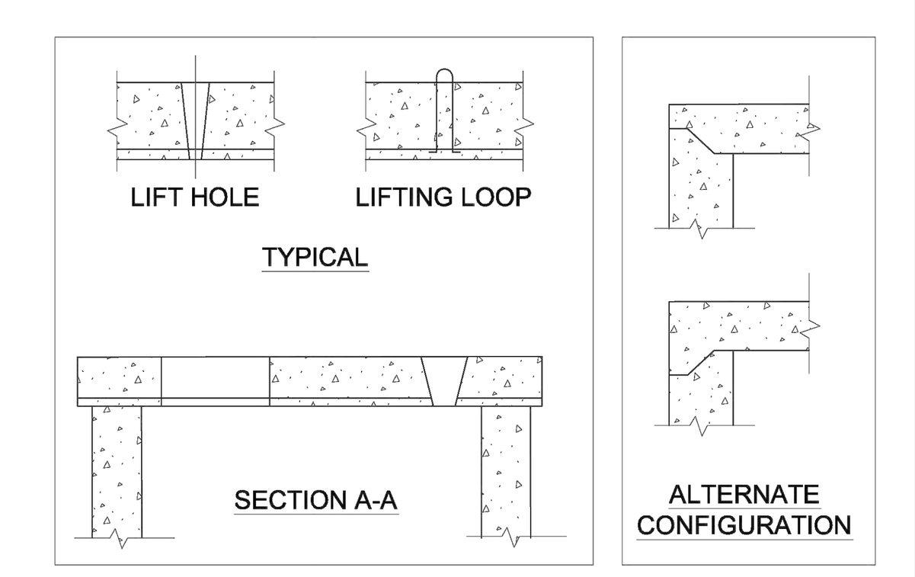
UD-02b



NOTES:

1. PRECAST FLAT TOPS SHALL SHALL CONFORM TO SECTION 1042 OF THE STANDARD SPECIFICATIONS.
2. REINFORCEMENT BARS OR WELDED WIRE FABRIC SHALL BE IN ACCORDANCE WITH ARTICLE 1006.10 OF THE STANDARD SPECIFICATIONS.
3. JOINT CONFIGURATION AND DIMENSIONS SHALL MATCH AND FIT THE RISER JOINT DETAIL.
4. LIFTING DEVICES OTHER THAN THAT SHOWN MAY BE USED SUBJECT TO APPROVAL BY THE ENGINEER.
5. THE FLAT SLAB TOP MAY BE USED IN LIEU OF THE TAPERED TOPS SHOWN ON STANDARD 1514, 1526, 1527, OR 1886, AT THE OPTION OF THE CONTRACTOR OR WHEN FIELD CONDITIONS PROHIBIT THE USE OF TAPERED TOPS.
6. THE COST OF FURNISHING AND INSTALLING THE FLAT SLAB TOP SHALL BE INCLUDED IN THE UNIT PRICE FOR CATCH BASIN OR MANHOLE.



Revised:
1. 06/12/2015
2.
3.
4.

Drawing Name: ECCENTRIC FLAT TOPS FOR CURB INLET STORM MANHOLES

Drawing Number: UD-02b
Date: 01/30/15
Drawn: DD Checked: AW

City of Crystal Lake Illinois

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ISSUED FOR BID - NOT FOR CONSTRUCTION

ARCHITECT OF RECORD
DEMONICA KEMPER ARCHITECTS
125 N. HALSTED STREET, SUITE 301
CHICAGO, IL 60661
P: 312.496.0000

MEP-FP-T-ENGINEERS
IMEG CORP.
263 SHUMAN BLVD, SUITE 550
NAPERVILLE, IL, 60563
P: 630.527.2320

CIVIL-LANDSCAPE ENGINEER
HR GREEN
1391 CORPORATE DRIVE, SUITE 203 MCHENRY, IL, 60050
P. 815.385.1778

CONSTRUCTION MANAGER
PEPPER CONSTRUCTION
411 LAKE ZURICH RD.
BARRINGTON, IL 60010
P. 847.381.2760

McHenry County College
ENGAGEMENT HALL
8900 NORTHWEST HWY #14
CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24 - 027

KEY PLAN:

LICENSED PROFESSIONAL ENGINEER
TODD M. RICHARDS
062-058779
STATE OF ILLINOIS

[illegible]

SHEET STATUS: 05/16/2025

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
STANDARD CONSTRUCTION DETAILS

SHEET NUMBER:
C-10

UD-02e

ROCK RIPRAP SPECIFICATIONS AND BEDDING

IDOT GRADATION	MAXIMUM ROCK SIZE (lb)*	EQUIVALENT DIAMETER (SPHERICAL)(in)*	MINIMUM BEDDING THICKNESS (in)	MINIMUM THICKNESS (in)
RR-3	50	10	-	8
RR-4	150	15	6	16
RR-5	400	21	8	22
RR-6	600	24	10	26
RR-7	1000	28	12	30

*ASSUMES A MINIMUM SPECIFIC GRAVITY OF 2.450 AND A MINIMUM UNIT WEIGHT OF 153 lb/cf

NOTES:

1. RIPRAP SHALL CONFORM TO SECT. 281 OF THE STANDARD SPECIFICATIONS.

2. INSTALL FILTER FABRIC UNDER ALL RIPRAP AND BEDDING. FILTER FABRIC SHALL CONFORM TO SECT. 282 OF THE STANDARD SPECIFICATIONS.

ROCK RIPRAP SIZE REQUIREMENTS AND THICKNESS

CULVERT DIAMETER (in)	MINIMUM TAILWATER				MAXIMUM TAILWATER			
	MAX CONDUIT VELOCITY = 5 fps		MAX CONDUIT VELOCITY = 10 fps		MAX CONDUIT VELOCITY = 5 fps		MAX CONDUIT VELOCITY = 10 fps	
	IDOT GRADATION	APRON LENGTH (ft)	IDOT GRADATION	APRON LENGTH (ft)	IDOT GRADATION	APRON LENGTH (ft)	IDOT GRADATION	APRON LENGTH (ft)
12	RR-3	10	RR-3	12	RR-3	12	RR-3	15
18	RR-3	14	RR-4	16	RR-3	12	RR-3	16
24	RR-3	16	RR-4	20	RR-3	14	RR-4	17
30	RR-3	18	RR-4	22	RR-3	16	RR-4	20
36	RR-4	20	RR-5	24	RR-3	16	RR-4	22
48	RR-4	24	RR-6	28	RR-4	20	RR-4	24
60	RR-5	32	RR-6	36	RR-4	22	RR-5	26
72	RR-6	40	RR-6	44	RR-5	24	RR-5	29
96	RR-7	50	RR-7	54	RR-5	26	RR-5	32

NOTES:

1. IF TAILWATER DEPTH FROM THE PIPE INVERT IS LESS THAN HALF THE DIAMETER OF THE PIPE, THEN MINIMUM TAILWATER CONDITIONS EXIST.

2. ADAPTED FROM THE ILLINOIS URBAN MANUAL

Revised:	Drawing Name	Drawing Number	
1. 2. 3. 4.	RIPRAP DETAILS	UD-02e Date: 08/27/2015 Drawn DD Checked AW	City of Crystal Lake Illinois

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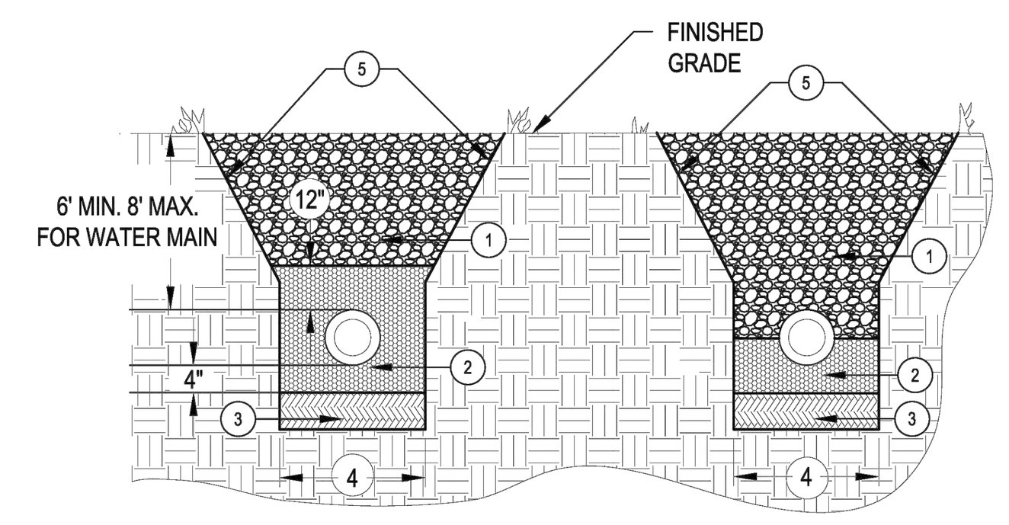
UG-03

LEGEND:

1. TRENCH BACKFILL TO SUBGRADE AND WITHIN 2 FEET OF PROPOSED PAVEMENT, DRIVEWAY, CURB AND GUTTER OR SIDEWALK. TRENCH BACKFILL MATERIALS SHALL BE IDOT APPROVED GRADATION CA-6, GRADE 7, 8, OR 9 COMPACTED TO 90% OF MODIFIED PROCTOR DENSITY. IN NON-STRUCTURAL AREAS BACKFILL WITH APPROVED EXCAVATED MATERIALS.
2. PIPE BEDDING SHALL BE WASHED MATERIAL IDOT GRADATION CA-7 OR CA-11 FROM 4 INCHES BELOW BOTTOM OF PIPE TO HEIGHT SHOWN ON EACH SECTION
3. UNSUITABLE MATERIAL TO BE REMOVED WHERE DIRECTED BY THE ENGINEER AND REPLACED WITH COMPACTED SUITABLE MATERIAL.
4. TRENCH WIDTH:
   PIPE O.D. + 12 INCHES MINIMUM
   PIPE I.D. + 18 INCHES MAXIMUM
5. CONTRACTORS SHALL COMPLY WITH ALL CURRENT OSHA STANDARDS.



SECTION A:
WATER MAIN / FORCE MAIN (DIP)(PVC) (HDPE)**
SANITARY SEWER MAIN & SERVICES (DIP)(PVC)
STORM SEWER (PVC)

SECTION B:
STORM SEWER (RCP)

* NOTE: ALL DUCTILE IRON SHALL BE WRAPPED WITH APPROVED POLYETHYLENE PIPE WRAP
** NOTE: PVC WATERMAIN ONLY ALLOWED FOR REPAIRS TO EXISTING PVC WATERMAIN

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015 2. 02/04/2021 KL CA-7 WASHED STONE 3. 07/14/2023 JRG PVC ALLOWED ONLY AS STATED 4. 03/14/2024 JRG UPDATED CROSS SECTIONS	TYPICAL TRENCH CROSS SECTION	UG-03 Date: 05/29/2015 Drawn JH Checked AW	City of Crystal Lake Illinois

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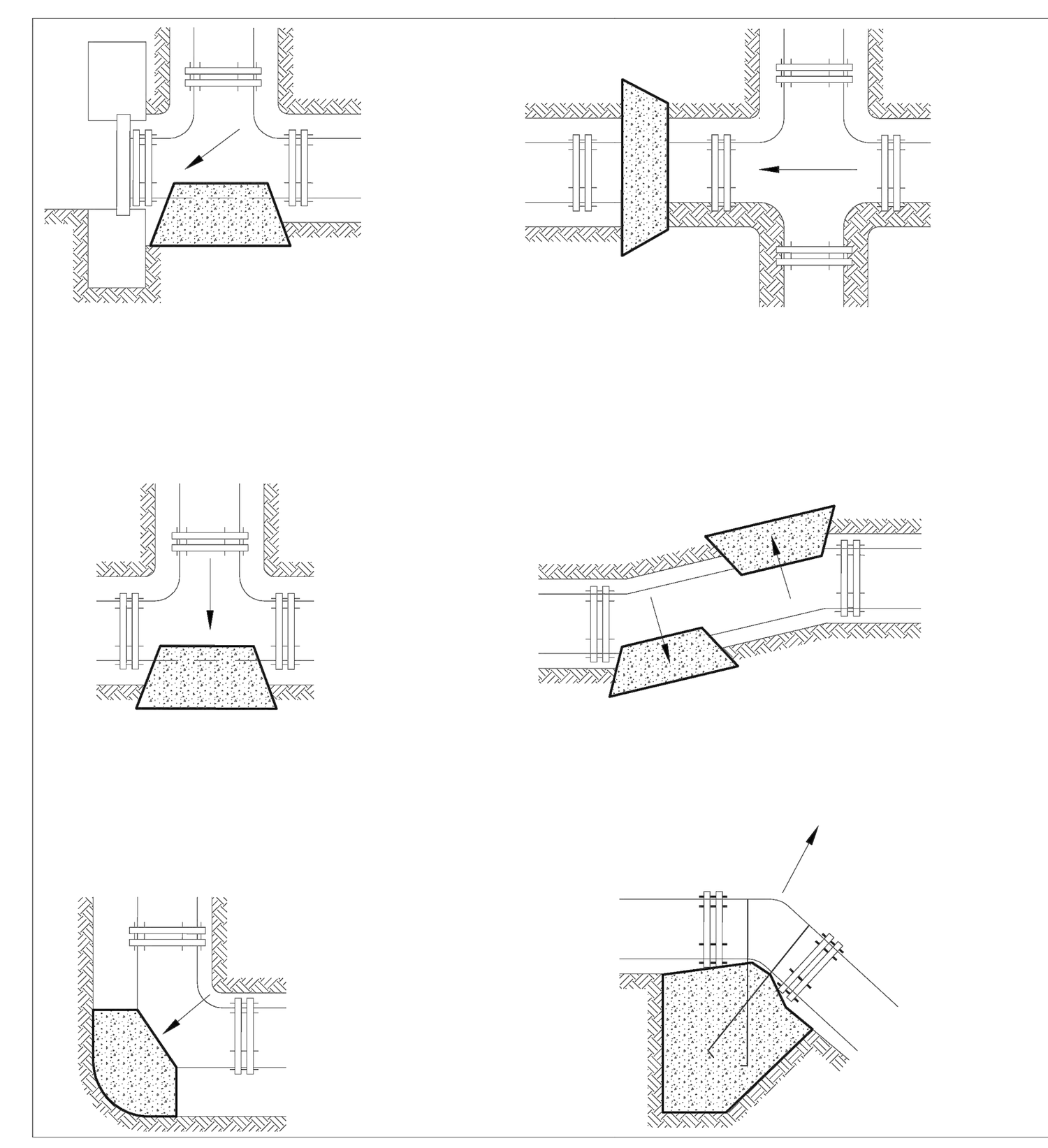
UW-03



BEARING AREA (SQ. FT.)

PIPE SIZE	TEE/PLUG	90°	45°	21 1/2°	11 1/4°
6	4	2	1	1	1
8	6	4	3	1	1
10	7	5	3	1	1
12	8	6	4	2	2
14	12	9	6	3	3
16	15	12	7	3	3
18	18	15	9	4	4
24	40	30	15	5	5

NOTES:

ALL BLOCKING SHALL BE POURED CLASS SI CONCRETE AGAINST UNDISTURBED EARTH.

ALL BENDS OR ELBOWS GREATER THAN OR EQUAL TO 11 1/4° SHALL HAVE THRUST BLOCKING. FORM AS TO NOT COVER BOLTS.

IN LIEU OF THRUST BLOCKING, "MEGA LUG" (EBAA) JOINT RESTRAINTS OR APPROVED EQUAL CAN BE USED AS APPROVED BY THE ENGINEER.

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015 2. 3. 4.	THRUST BLOCK INSTALLATION	UW-03 Date: 05/29/2015 Drawn JH Checked VR	City of Crystal Lake Illinois

L:\ENGINEERING AND BUILDING\ENGINEERING\DETAILS AND STANDARDS\

UW-08

CITY OF CRYSTAL LAKE WATER MAIN CHLORINATION SPECIFICATIONS:

1. DISINFECTION OF WATER MAINS SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION, CURRENT EDITION
2. THE CITY ENGINEERING DIVISION AND WATER DIVISION SHALL BE NOTIFIED 48 HOURS IN ADVANCE FOR SCHEDULING OF ANY TESTING, CHLORINATING, FLUSHING, OR SAMPLING.
3. ONLY CITY WATER DIVISION PERSONNEL MAY OPERATE WATER VALVES ON LIVE MAINS.
4. A WATER VALVE JUMPER IS REQUIRED TO MAINTAIN PRESSURE ON THE CHLORINATED LINES DURING THE SAMPLING PROCEDURE. FOR PROPER INSTALLATION AND REQUIREMENTS SEE THE STANDARD WATER VALVE JUMPER DETAIL UW-05.
5. WATER MAINS SHALL BE FLUSHED WITH A MINIMUM VELOCITY OF 2.5 FPS.
6. THE INITIAL CHLORINE CONCENTRATION SHALL BE 50 mg/L WITH A MINIMUM 24 HOUR RESIDUAL OF 25 mg/L.
7. THE METHOD OF CHLORINE APPLICATION SHALL BE APPROVED BY THE CITY:
   a. LIQUID CHLORINE W/CHLORINATING DEVICE WITH BACKFLOW PREVENTER.
   b. CHLORINE BEARING COMPOUNDS IN WATER.
   c. TABLET DISINFECTION.
8. ALL NEW VALVES AND HYDRANTS SHALL BE OPERATED WHILE LINE IS BEING CHLORINATED.
9. THE CITY ENGINEERING DIVISION SHALL DETERMINE LOCATION AND QUANTITY OF CORPORATION STOPS FOR FLUSHING AND CHLORINATING. MAXIMUM SPACING BETWEEN SAMPLES SHALL BE 1,200 FEET. THE CHLORINE SOURCE AND ALL DEAD ENDS SHALL BE SAMPLED.
10. THE FINAL FLUSHING RESIDUAL IN THE NEW CHLORINATED LINES SHALL BE BETWEEN 0.2 AND 2.0 mg/L.
11. ALL WATER SAMPLES SHALL BE COLLECTED ON TWO (2) CONSECUTIVE DAYS AND PASS BACTERIOLOGICAL TEST RESULTS. IN THE EVENT THAT THE FIRST SET OF SAMPLES TAKEN TWO (2) CONSECUTIVE DAYS APART FAIL TO PASS, ANOTHER SET OF SAMPLES MAY BE TAKEN TWO (2) DAYS APART (PER STATE SPECS). IF THE SECOND SET FAILS TO PASS TESTING, THEN THE PROCEDURE MUST BE REPEATED WITH THE MAIN BEING RECHLORINATED, REFLUSHED, AND RESAMPLED.
12. IF THE WATER MAIN FALLS BELOW 20 PSI AFTER CHLORINATION, THE LINE SHALL BE RESAMPLED ON TWO (2) CONSECUTIVE DAYS AND PASS BACTERIOLOGICAL TEST RESULTS.
13. STATE CERTIFIED LAB MUST BE USED FOR SAMPLES.

CHLORINE REQUIREMENTS TO PRODUCE 50 mg/L CONCENTRATION IN 100 FEET OF PIPE-BY DIAMETER

PIPE SIZE IN INCHES	100% CHLORINE, LB.	1% CHLORINE SOLUTION, GALS.
4	0.027	0.33
6	0.061	0.73
8	0.108	1.30
10	0.170	2.04
12	0.240	2.88

NUMBER OF 5-GRAIN HYPOCHLORITE TABLETS REQUIRED FOR A DOSAGE OF 50mg/L PER LENGTH OF PIPE SECTION

PIPE SIZE IN INCHES	LENGTH OF PIPE SECTION IN FEET				
	UP TO 13	18	20	30	40
2	1	1	1	1	1
4	1	1	2	2	2
6	2	2	3	3	4
8	2	3	5	5	6
10	3	5	7	7	9
12	5	6	10	10	14

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015 2. 4/30/2021 KL 20 PSI RESAMPLE, SAMPLING FREQUENCY 3. 4.	CHLORINATION SPECIFICATIONS	UW-08 Date: 09/20/2012 Drawn DD Checked VR	City of Crystal Lake Illinois

L:\ENGINEERING AND BUILDING\ENGINEERING\DETAILS AND STANDARDS\

UW-09A

WATERMAIN TESTING AND CHLORINATION PROCEDURE

STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS (LATEST EDITION) AND AWWA STANDARD C600-17 SHALL APPLY ALONG WITH THE FOLLOWING:

2 HOUR PRESSURE AND LEAKAGE TEST

1. PRETEST: THE CONTRACTOR SHALL PROVIDE A MAP OF THE FACILITIES (WATER MAINS, HYDRANTS, VALVES, ETC.) TO BE INCLUDED DURING THE TEST TO THE ENGINEER. SEE UW-09B WORKSHEET. ALL FIRE HYDRANT AUXILIARY VALVES SHALL BE OPENED SO TESTING IS PERFORMED AGAINST FIRE HYDRANTS. THE ENGINEER WILL COORDINATE WITH THE WATER DEPARTMENT TO SCHEDULE OPENING OF CITY VALVES AND FILLING OF NEW WATER MAIN A MINIMUM OF 48 HOURS IN ADVANCE OF THE TEST. THE CONTRACTOR SHALL NOT OPERATE ANY VALVES ON EXISTING CITY WATER MAIN WITHOUT WRITTEN PERMISSION.
2. HYDROSTATIC PRESSURE TESTING: ALL TESTING EQUIPMENT AND LABOR NECESSARY TO SETUP AND RUN THE TEST SHALL BE PROVIDED BY THE CONTRACTOR AND SHALL INCLUDE:
   A) PRESSURE GAUGE LOCATED AT HIGHEST POINT OF ELEVATION OF THE WATER MAIN
   B) PUMP
   C) TANK
   D) FITTINGS FOR TESTING EQUIPMENT TO BE CONNECTED TO WATER MAIN
   E) ACCURATE WATER VOLUME MEASURING DEVICE (CALIBRATED VOLUMETRIC METER OR 1 GALLON GRADUATED CYLINDER IN OUNCES)
3. AIR REMOVAL: AFTER FILLING THE WATERMAIN, AIR SHALL BE EXPELLED BY FLUSHING WATER OUT OF THE MAIN AT FIRE HYDRANTS OR CORPORATION STOPS LOCATED AT HIGH POINTS ALONG THE WATER MAIN.
4. PRESSURIZATION: AFTER ALL AIR HAS BEEN REMOVED, THE MAIN SHOULD BE PRESSURIZED TO MINIMUM 150 PSI BY PUMPING ADDITIONAL WATER INTO THE WATER MAIN.
5. TWO HOUR TEST: ONCE TESTING PRESSURE IS OBTAINED, THE PUMP SHOULD BE SHUT OFF AND TIMING STARTED. THE PRESSURE GAUGE SHOULD BE CHECKED INTERMITTENTLY AND THE PRESSURE READING RECORDED AFTER TWO HOURS. IF THE PRESSURE READING VARIES MORE THAN +/- 5 PSI FROM THE INITIAL PRESSURE, THE TEST FAILS. THE LEAK SHALL BE FOUND AND ADDRESSED PRIOR TO RETESTING.
6. MAKE UP VOLUME: IF THE PRESSURE IS MAINTAINED WITHIN +/- 5 PSI FOR THE TWO HOUR TEST, THE MAKE-UP VOLUME SHALL BE DETERMINED BY PUMPING WATER BACK INTO THE WATER MAIN TO REACH THE INITIAL TEST PRESSURE. THIS WILL NORMALLY BE DONE BY EXCEEDING THE TEST PRESSURE, AND USING THE BLEED OFF VALVE TO DROP THE PRESSURE TO THE INITIAL TEST PRESSURE. ONCE THE INITIAL TEST PRESSURE HAS BEEN REACHED, THE BLEED OFF VALVE SHALL BE OPENED AND WATER THAT LEAVES THE SYSTEM SHALL BE COLLECTED IN THE VOLUME MEASURING DEVICE. ONCE THE GAUGE REACHES THE FINAL TWO HOUR TEST PRESSURE, THE VOLUME OF WATER COLLECTED SHALL BE MEASURED.
7. ALLOWABLE MAKE-UP VOLUME: THE MEASURED VOLUME OF "MAKE UP" WATER SHALL BE COMPARED TO THE ALLOWABLE LEAKAGE. THE ALLOWABLE LEAKAGE SHALL BE CALCULATED BY THE ENGINEER USING THE FORMULA ABOVE. IF THE WATER COLLECTED IS LESS THAN THE ALLOWABLE MAKE UP VOLUME, THE TEST PASSES. IF THE WATER COLLECTED IS MORE THAN THE ALLOWABLE MAKE UP VOLUME, THE TEST FAILS. THE LEAK SHALL BE FOUND AND ADDRESSED PRIOR TO RETESTING.
8. FINAL VALVE CHECK: PRIOR TO BLEEDING OFF THE PRESSURE, ALL HYDRANTS ON THE TESTING MAP SHALL BE SLOWLY OPENED TO ENSURE THAT THEY HAD PRESSURE AGAINST THEM DURING TESTING. THE PRESSURE GAUGE SHOULD DROP AS THE HYDRANTS ARE OPENED ENSURING THAT ALL VALVES IN THE SYSTEM WERE PROPERLY OPENED/CLOSED DURING TESTING.
9. IF THE WATER MAIN HAS PASSED THE PRESSURE TEST, THE PRESSURE SHALL BE REDUCED TO THE CITY'S SYSTEM PRESSURE.

CHLORINATION

1. PRE-CHLORINATION: THE ENGINEER WILL COORDINATE WITH THE WATER DEPARTMENT TO SCHEDULE OPENING OF CITY VALVES FOR CHLORINATION A MINIMUM OF 48 HOURS IN ADVANCE OF THE CHLORINATION. THE FOLLOWING METHODS OF CHLORINE APPLICATION ARE APPROVED BY THE CITY
   A) LIQUID CHLORINE WITH CHLORINATION DEVICE AND BACKFLOW PREVENTER
   B) CHLORINE BEARING COMPOUNDS IN WATER
   C) TABLET DISINFECTION
2. SAMPLING LOCATIONS: THE ENGINEER SHALL DETERMINE THE LOCATION AND QUANTITY OF SAMPLING LOCATIONS. MAXIMUM SPACING BETWEEN SAMPLES SHALL BE 1,200 FEET. THE CHLORINE SOURCE AND ALL DEAD ENDS SHALL BE SAMPLED. SEE UW-09B WORKSHEET.
3. CHLORINATION: THE INITIAL CHLORINE CONCENTRATION SHALL BE 50 mg/L WITH A MINIMUM 24 HOUR RESIDUAL OF 25 mg/L. ALL NEW VALVES AND HYDRANTS SHALL BE OPERATED WHILE THE LINE IS BEING CHLORINATED. THE FINAL FLUSHING RESIDUAL IN THE NEW CHLORINATED LINES SHALL BE BETWEEN 0.2-2.0 mg/L.
4. TESTING: ALL WATER SAMPLES SHALL BE COLLECTED ON TWO CONSECUTIVE DAYS AND PASS BACTERIOLOGICAL TEST RESULTS FROM A CERTIFIED LABORATORY. TEST RESULTS SHALL BE EMAILED TO THE CITY OF CRYSTAL LAKE SO THE IEPA PERMIT APPLICATION CAN BE SUBMITTED. IN THE EVENT THAT THE FIRST SET OF SAMPLES TAKEN TWO CONSECUTIVE DAYS APART FAIL TO PASS, ANOTHER SET OF SAMPLES ME BE TAKEN TWO DAYS APART. IF THE SECONDS SET FAILS TO PASS TESTING, THE PROCEDURE MUST BE REPEATED WITH THE WATER MAIN BEING RECHLORINATED, REFLUSHED AND RESAMPLED.
5. MAINTAIN PRESSURE: IMMEDIATELY AFTER THE SECOND DAY SAMPLE HAS BEEN TAKEN, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSTALL A CERTIFIED WATER VALVE JUMPER (SEE UW-05) TO MAINTAIN PRESSURE ON THE NEW WATER MAIN UNTIL THE IEPA PERMIT IS RECEIVED. AFTER RECEIVING THE IEPA OPERATING PERMIT, THE CITY OF CRYSTAL LAKE SHALL OPEN THE VALVE BETWEEN THE NEW AND EXISTING WATERMAIN AND THE WATER VALVE JUMPER MAY BE REMOVED. WATER VALVE JUMPERS ARE AVAILABLE FOR RENT AT THE CITY OF CRYSTAL LAKE WATER DEPARTMENT. IF WATER IN EXCESS OF THE ALLOWABLE LEAKAGE ENTERS THE NEW WATER MAIN THROUGH THE WATER VALVE JUMPER ,THE CONTRACTOR SHALL LOCATE THE LEAK. IF THE NEW WATER MAIN MUST BE DEPRESSURIZED TO FIX A LEAK, THE SYSTEM SHALL BE RETESTED, RECHLORINATED, REFLUSHED, AND RESAMPLED.

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015 2. 8/18/2023 - JRG Leakage formula, procedure, delete 24 hour test 3. 4.	WATER MAIN PRESSURE TEST AND CHLORINATION PROCEDURE	UW-09A Date: 09/20/2012 Drawn DD Checked VR	City of Crystal Lake Illinois

L:\ENGINEERING AND BUILDING\ENGINEERING\DETAILS AND STANDARDS\

UW-09B

PROJECT NAME: ______
CONTRACTOR: ______
WITNESS: ______
LINE PRESSURIZED: DATE: ______ TIME: ______ am / pm
LINE TESTED: DATE: ______ TIME: ______ am / pm

LEAKAGE FORMULA

$$L = \frac{SD\sqrt{P}}{148,000}$$

L = Testing (leakage) allowance (makeup water), in gallons per hour = ______GPH
S = Length of pipe tested in feet = ______FEET
D = Nominal diameter of the pipe, in inches = ______INCHES
P = Average test pressure during the hydrostatic test, in pounds per square inch (gauge)______PSI
*If multiple diameters of water main are being tested, separate leakage (L) calcaulation shall be added together.

NOTES AND CALCULATIONS

2-HOUR TEST

TOTAL ALLOWABLE LEAKAGE = L X 2 HOURS	______GALLONS	A
INITIAL TEST PRESSURE (MINIMUM 150 PSI)	______PSI	B
FINAL TEST PRESSURE	______PSI	C
PASS (B-C<5 PSI) OR FAIL (B-C>5 PSI)		
MAKE UP VOLUME	______GALLONS	D
PASS (A > D) OR FAIL (A < D)		E

LOCATION DIAGRAM AND SAMPLING MAP

INDICATE NORTH

Revised:	Drawing Name	Drawing Number	
1. 2. 3. 4.	WATER MAIN PRESSURE TEST AND CHLORINATION WORKSHEET	UW-09B Date: 08/18/2023 Drawn JRG Checked PW	City of Crystal Lake Illinois

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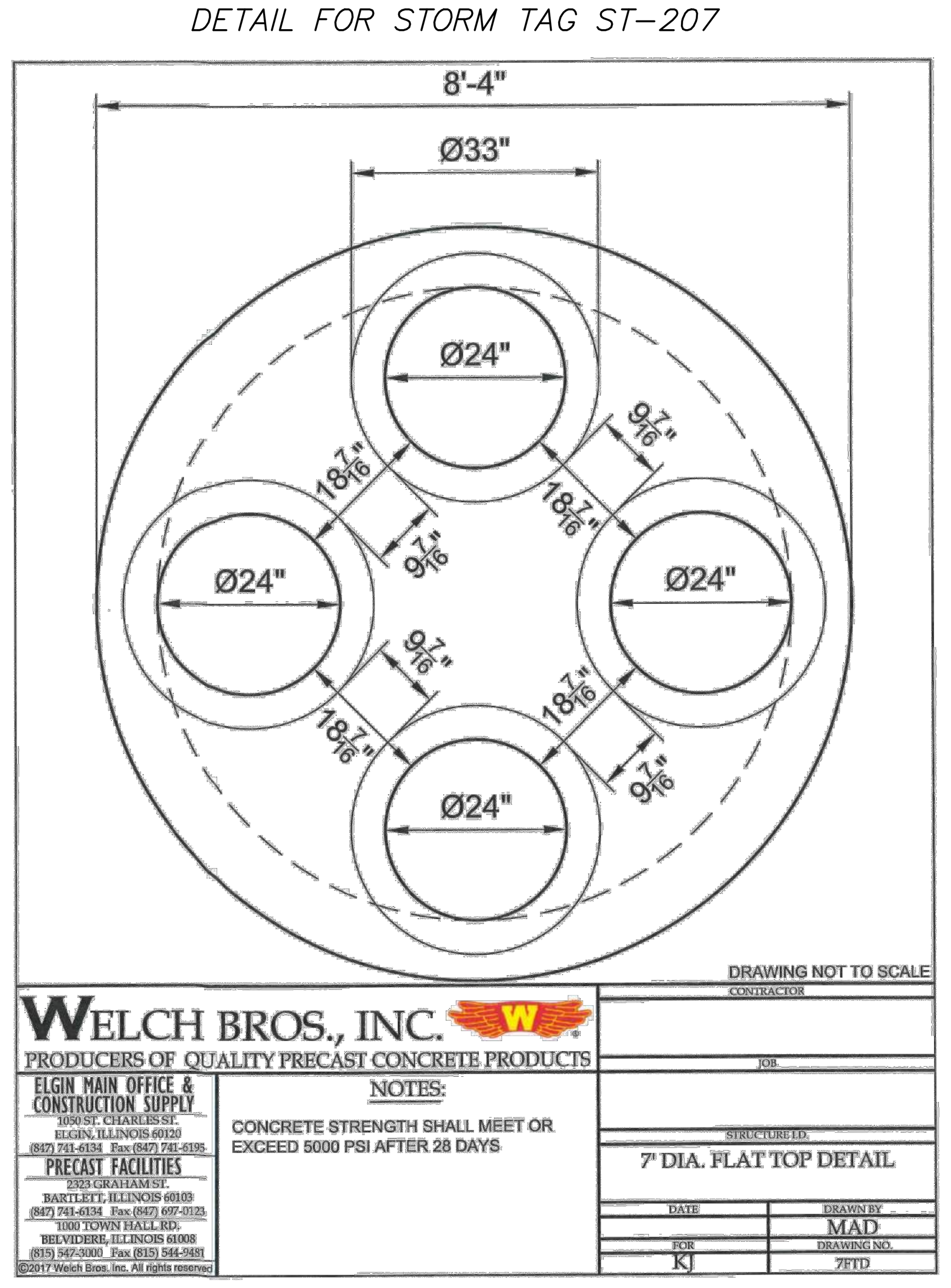
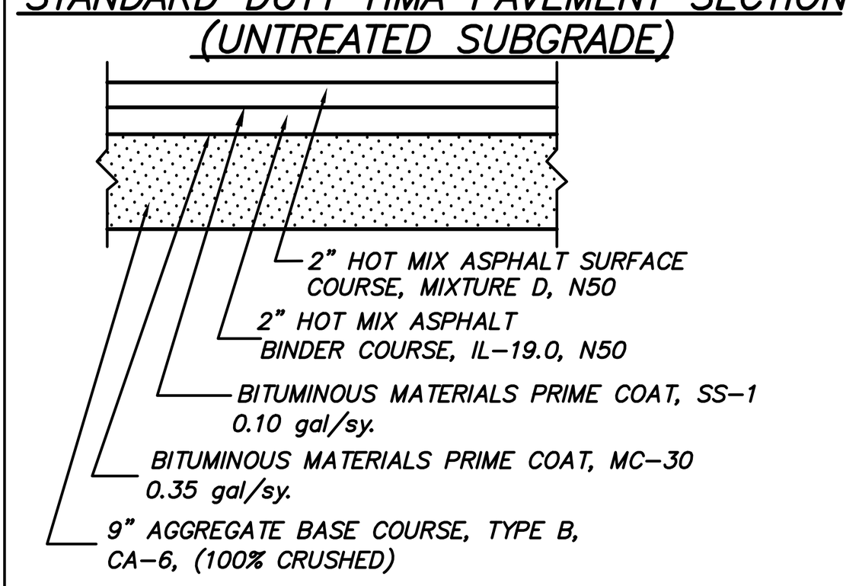
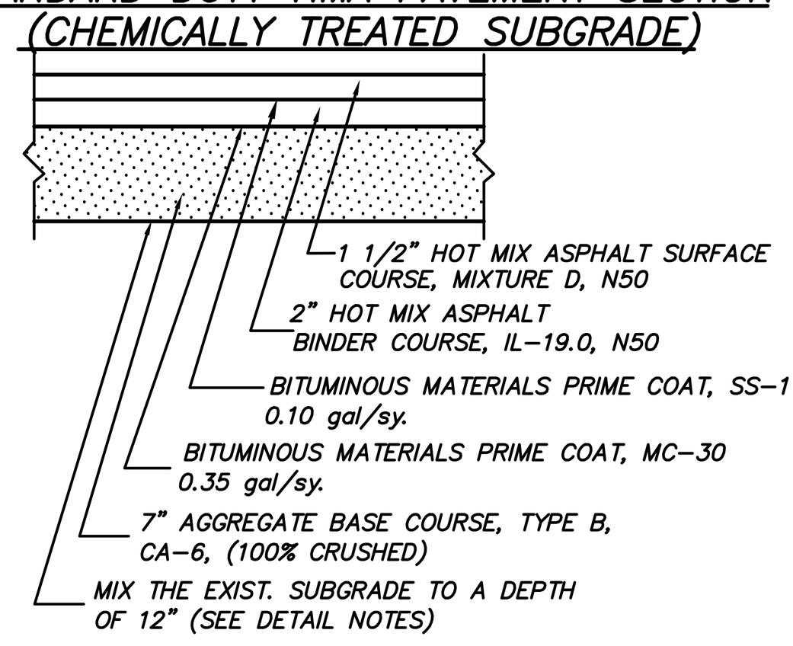
DETAIL FOR STORM TAG ST-207



STANDARD DUTY HMA PAVEMENT SECTION (UNTREATED SUBGRADE)



STANDARD DUTY HMA PAVEMENT SECTION (CHEMICALLY TREATED SUBGRADE)

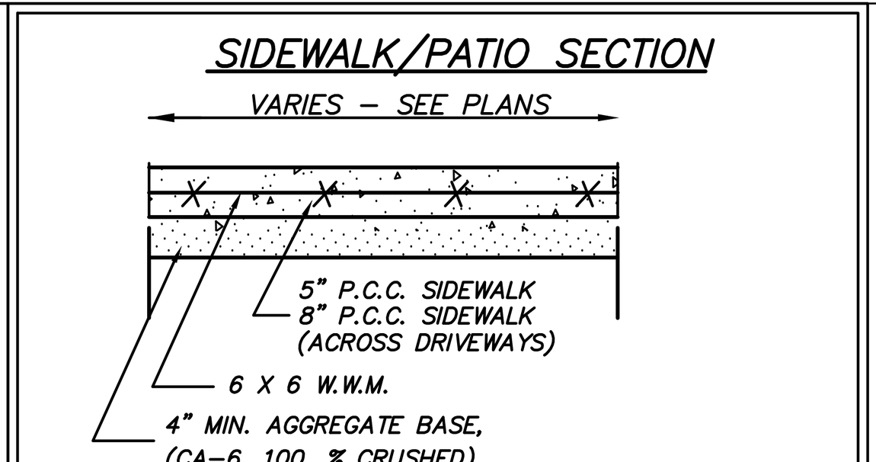


EXCERPT OF NOTES REGARDING SUBGRADE FROM GEOTECHNICAL REPORT (DATED APRIL 1, 2021) PREPARED BY MIDLAND ENGINEERING & TESTING, INC.:

Pavement Subgrade Discussion
The shallow depth soil just below the Topsoil in the borings is a stiff CLAY with a high moisture content. This material is expected to rut and become unstable with repeated construction traffic. Therefore, the pavement subgrades for this project should plan for treatment by drying during the site grading or by perform a subgrade stabilization.

Options for Subgrade Treatment
1. *Subgrade Soil Drying – This treatment consists of discing and drying during the site grading phase of the project. To have success with this method, the subgrade must be deeply plowed with a motor grader or bull dozer once per day to a depth of eighteen inches, followed by discing and turning over to aerate several times on a good drying day.*
2. *Chemical Stabilization – This method consists of using a chemical stabilizer such as Quicklime, Lime Kiln Dust, or Cement to increase strength and stability of the subgrade soils. The process includes spreading the chemical stabilizer at a design application rate across the subgrade. A reclaimer is used to mix the subgrade to a depth of 12 inches. Additional water may be required during mixing to activate the stabilizer. The subgrade would then be compacted with a padfoot roller and graded with a motor grader. This method is effective and economical when a larger section of the subgrade requires treatment.*

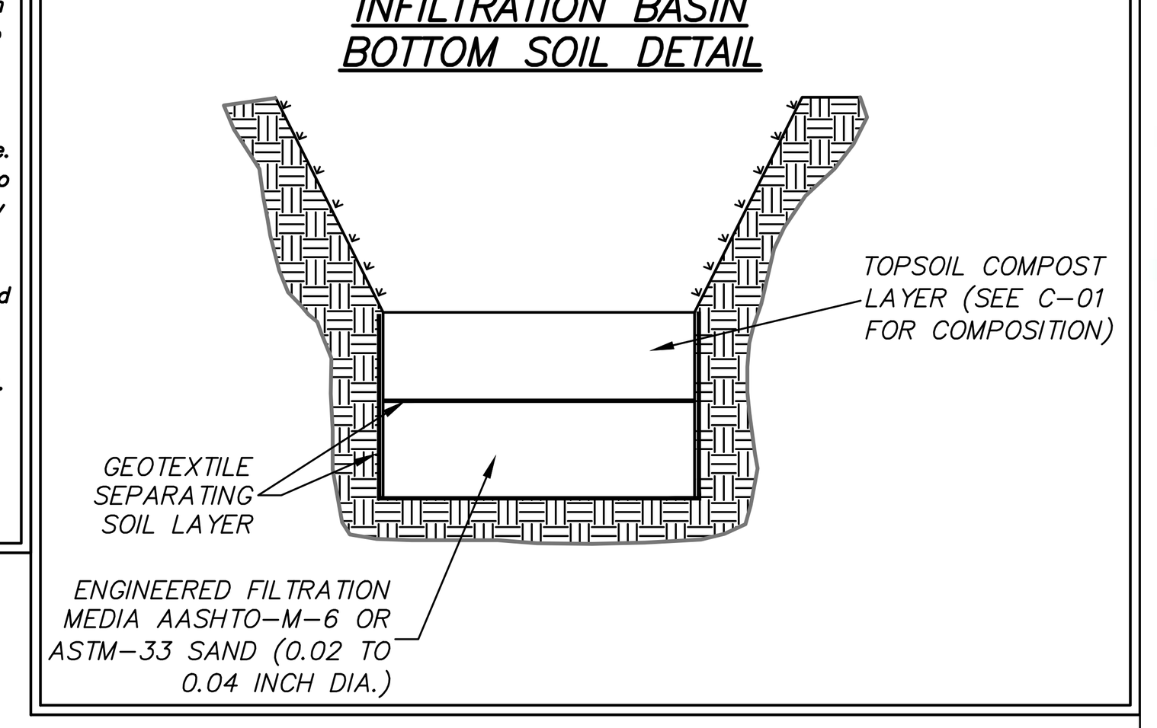
SIDEWALK/PATIO SECTION



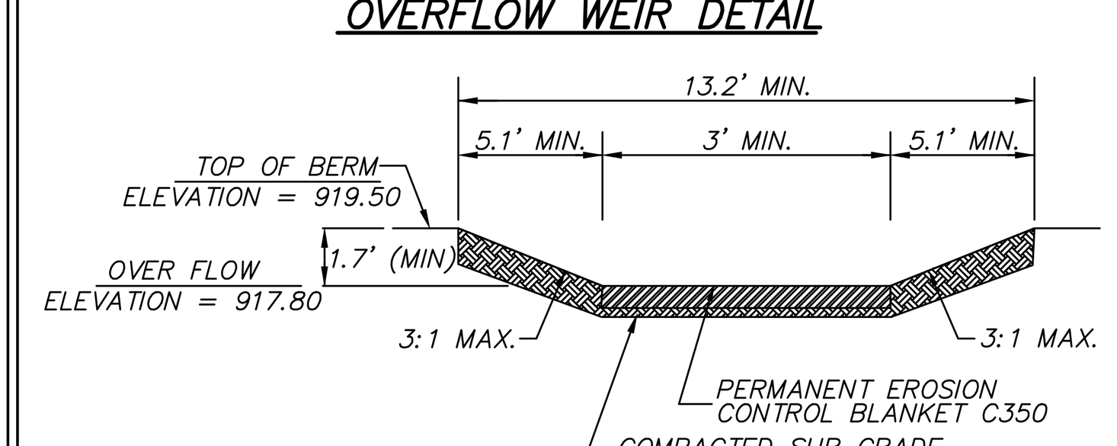
TYPICAL ALL EXTERIOR CONCRETE:
- CLASS SI CONCRETE
- 4000# CONCRETE
- CONTROL JOINTS CUT @ 5' O.C.

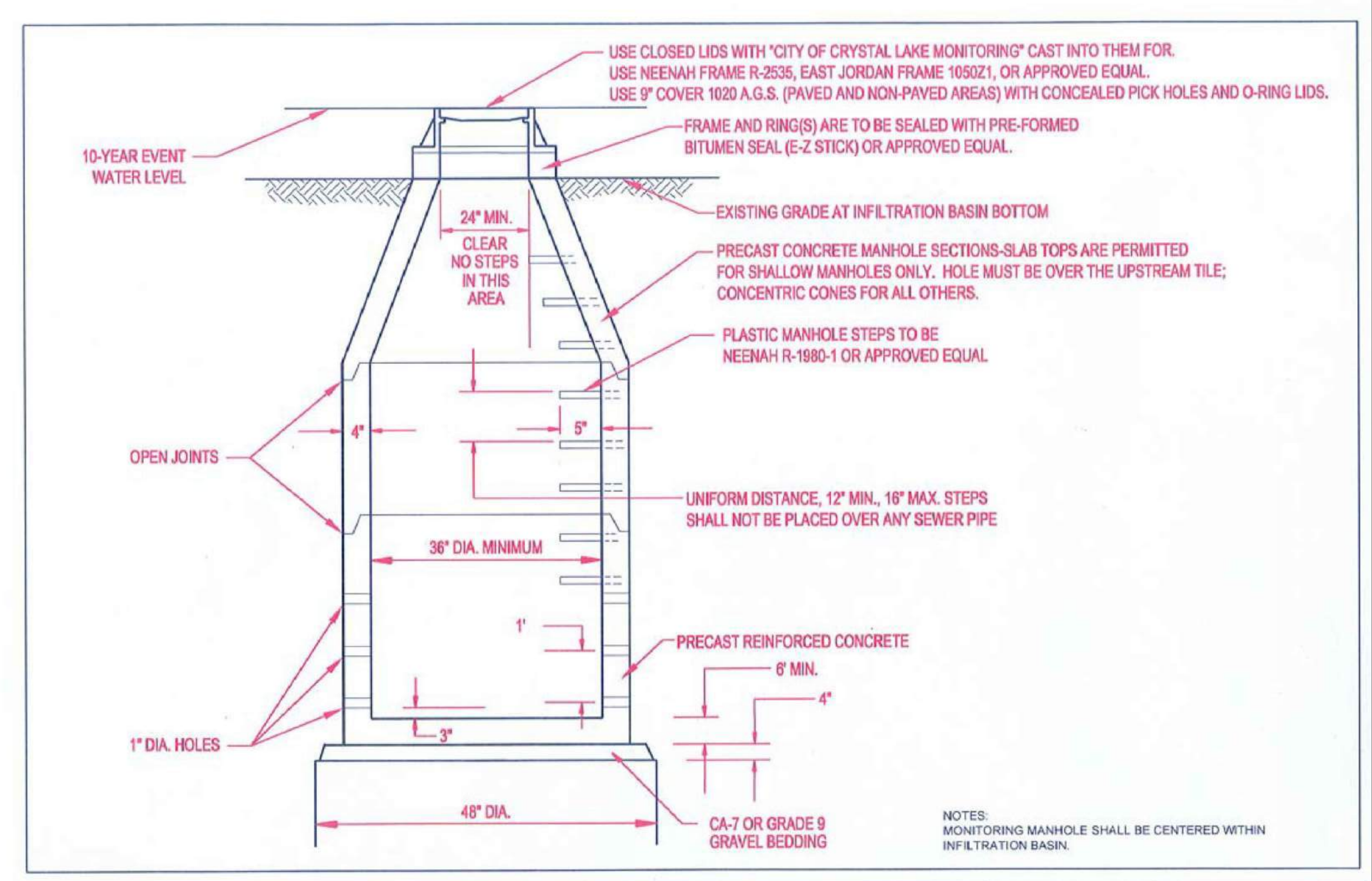
INCLUDES STAMPED COLORED CONCRETE (SEE ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION)

INFILTRATION BASIN BOTTOM SOIL DETAIL



INFILTRATION BASIN OVERFLOW WEIR DETAIL





Approved: City Engineer	Drawing Name	Drawing Number	
	INFILTRATION BASIN MONITORING MANHOLE	IB - 03 Date: 10/17/2007 Drawn TC Checked GS	CRYSTAL LAKE ILLINOIS Engineering Division

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McHenry County College
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8900 NORTHWEST HWY #14
CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24 - 027

KEY PLAN:

LICENSED PROFESSIONAL ENGINEER
TODD M. RICHARDS
062-058779
STATE OF ILLINOIS

[illegible]

SHEET STATUS: 05/16/2025
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NO:	DESCRIPTION:	DATE:

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STANDARD CONSTRUCTION DETAILS

SHEET NUMBER:
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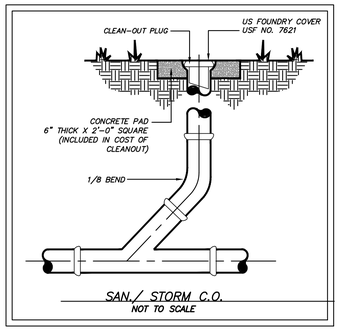

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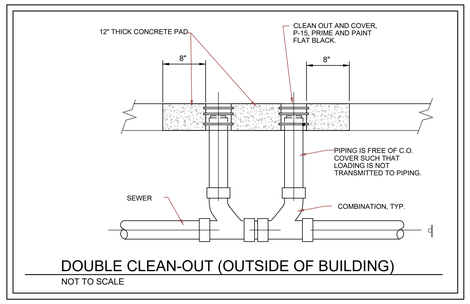
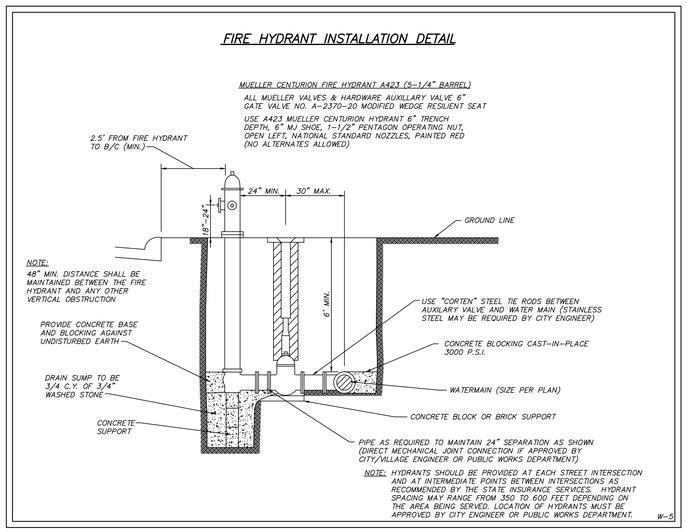
NOT TO SCALE



DOUBLE CLEAN-OUT (OUTSIDE OF BUILDING)
NOT TO SCALE

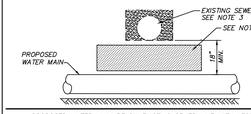
FIRE HYDRANT INSTALLATION DETAIL



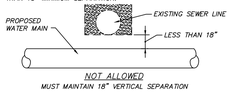
WATER AND SEWER SEPARATION REQUIREMENTS DETAIL

PROPOSED WATER MAIN BELOW EXISTING SEWER LINE WITH 18" MINIMUM SEPARATION.

NOTES:
1. PROVIDE ADEQUATE SUPPORT FOR EXISTING SEWER LINE AND PROPOSED WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT.
2. A LOW PERMEABILITY SOIL SHALL BE USED FOR BACKFILL MATERIAL WITHIN 10 OF THE POINT OF CROSSING.
3. PROVIDE ONE FULL LENGTH OF SEWER PIPE OF WATER MAIN MATERIAL SO THAT BOTH JOINTS ARE AS FAR AS POSSIBLE FROM THE WATER MAIN AND HAVE WATER TIGHT JOINTS.



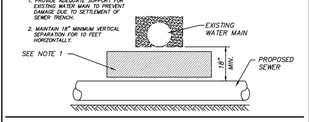
PROPOSED WATER MAIN BELOW EXISTING SEWER LINE WITH LESS THAN 18" MINIMUM SEPARATION.



NOT ALLOWED
MUST MAINTAIN 18" VERTICAL SEPARATION

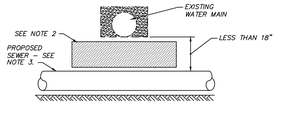
PROPOSED SEWER LINE BELOW EXISTING WATER MAIN WITH 18" MINIMUM SEPARATION.

NOTES:
1. PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH.
2. MAINTAIN 18" MINIMUM VERTICAL SEPARATION FOR 10 FEET HORIZONTALLY.



PROPOSED SEWER LINE BELOW EXISTING WATER MAIN WITH LESS THAN 18" SEPARATION.

NOTES:
1. PROVIDE ADEQUATE SUPPORT FOR EXISTING SEWER LINE AND PROPOSED WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT.
2. A LOW PERMEABILITY SOIL SHALL BE USED FOR BACKFILL MATERIAL WITHIN 10 OF THE POINT OF CROSSING.
3. PROVIDE ONE FULL LENGTH OF SEWER PIPE OF WATER MAIN MATERIAL SO THAT BOTH JOINTS ARE AS FAR AS POSSIBLE FROM THE WATER MAIN AND HAVE WATER TIGHT JOINTS.



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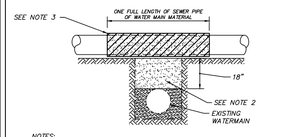
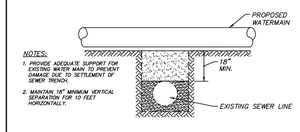
WATER AND SEWER SEPARATION REQUIREMENTS DETAIL

EXISTING WATERMAIN BELOW PROPOSED SEWER LINE WITH 18" MINIMUM SEPARATION.

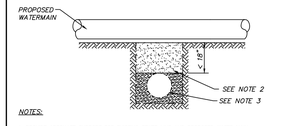


NOTES:
1. PROVIDE ADEQUATE SUPPORT FOR EXISTING SEWER LINE AND PROPOSED WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT.
2. A LOW PERMEABILITY SOIL SHALL BE USED FOR BACKFILL MATERIAL WITHIN 10 OF THE POINT OF CROSSING.
3. PROVIDE ONE FULL LENGTH OF SEWER PIPE OF WATER MAIN MATERIAL SO THAT BOTH JOINTS ARE AS FAR AS POSSIBLE FROM THE WATER MAIN AND HAVE WATER TIGHT JOINTS.

PROPOSED WATERMAIN ABOVE EXISTING SEWER LINE WITH 18" MINIMUM SEPARATION.



PROPOSED WATER MAIN ABOVE EXISTING SEWER LINE WITH LESS THAN 18" SEPARATION.



NOTES:
1. PROVIDE ADEQUATE SUPPORT FOR EXISTING SEWER LINE AND PROPOSED WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT.
2. A LOW PERMEABILITY SOIL SHALL BE USED FOR BACKFILL MATERIAL WITHIN 10 FEET OF THE POINT OF CROSSING.
3. PROVIDE ONE FULL LENGTH OF SEWER PIPE OF WATER MAIN MATERIAL SO THAT BOTH JOINTS ARE AS FAR AS POSSIBLE FROM THE WATER MAIN AND HAVE WATER TIGHT JOINTS.

U-5

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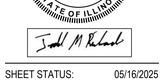
ENGAGEMENT HALL
8900 NORTHWEST HWY #14
CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24 - 027

KEY PLAN:



SHEET STATUS: 05/16/2025
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SHEET TITLE:
STANDARD CONSTRUCTION DETAILS

SHEET NUMBER:
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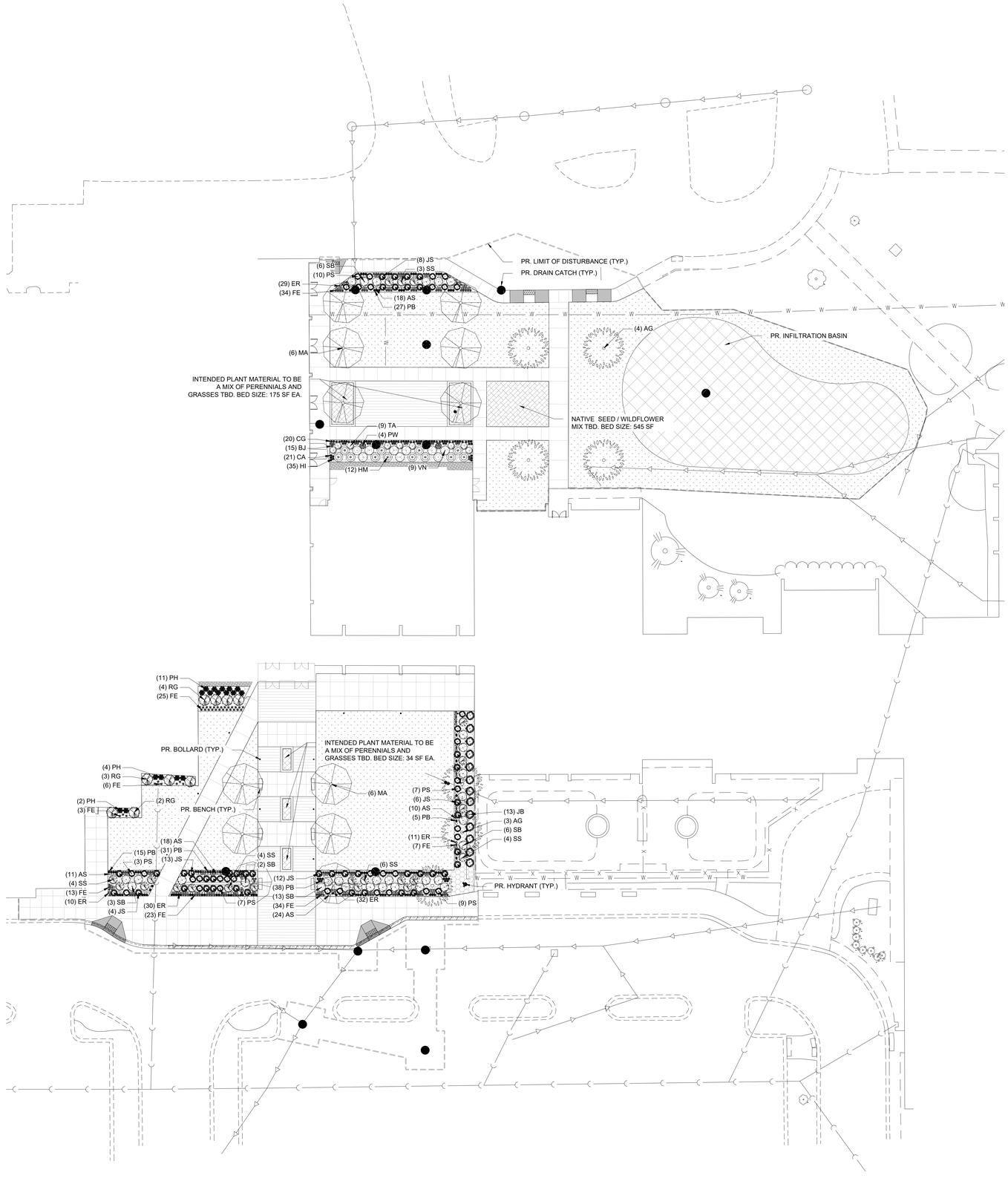

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	PLANTING SIZE
DECIDUOUS TREES				
	AG	7	ACER GINNALA AMUR MAPLE	2.5" CAL.
ORNAMENTAL TREES				
	MA	12	MALUS SIEBOLDII JAPANESE CRABAPPLE	2.5" CAL.
SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	SIZE
DECIDUOUS SHRUBS				
	HM	12	HYDRANGEA QUERCIFOLIA 'MUNCHKIN' MUNCHKIN OAKLEAF HYDRANGEA	5 GAL.
	RG	9	RHUS AROMATICA 'GRO-LOW' GRO-LOW FRAGRANT SUMAC	5 GAL.
	SS	21	SPIRAEA JAPONICA 'LITTLE PRINCESS' LITTLE PRINCESS JAPANESE SPIREA	5 GAL.
	SB	30	SYRINGA X 'BAILBELLE' TINKERBELLE® LILAC	5 GAL.
	VN	9	VIBURNUM OPULUS 'NANUM' DWARF EUROPEAN CRANBERRYBUSH	5 GAL.
EVERGREEN SHRUBS				
	JB	13	JUNIPERUS SCOPULORUM 'BLUE ARROW' BLUE ARROW JUNIPER	5 GAL.
	JS	43	JUNIPERUS SQUAMATA 'BLUE STAR' BLUE STAR JUNIPER	5 GAL.
	PS	36	PINUS MUGO 'SLOWMOUND' SLOWMOUND MUGO PINE	5 GAL.
	PW	4	PINUS STROBUS 'BLUE SHAG' BLUE SHAG WHITE PINE	5 GAL.
	TA	9	THUJA OCCIDENTALIS 'ANNA VAN VLOTEN' ANNA'S MAGIC BALL® ARBORVITAE	5 GAL.
GRASSES				
	CA	21	CAREX COMANS 'AMAZON MIST' AMAZON MIST COLORGRASS® HAIR SEDGE	1 GAL.
	CG	20	CAREX GLAUCA BLUE SEDGE	1 GAL.
	FE	145	FESTUCA GLAUCA 'ELIJAH BLUE' ELIJAH BLUE FESCUE	1 GAL.
	PH	17	PENNISETUM ALOPECUROIDES 'HAMELN' HAMELN FOUNTAIN GRASS	1 GAL.
	PB	116	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY' LITTLE BUNNY FOUNTAIN GRASS	1 GAL.
PERENNIALS				
	AS	81	ARTEMISIA SCHMIDTIANA 'SILVER MOUND' SILVER MOUND ARTEMISIA	1 GAL.
	BJ	15	BRUNNERA MACROPHYLLA 'JACK FROST' JACK FROST SIBERIAN BUGLOSS	1 GAL.
	ER	112	ECHINACEA X 'BALEVOEEN' EVOLUTION™ COLORIFIC™ CONEFLOWER	1 GAL.
	HI	35	HELLEBORUS X GLANDORFENSIS 'COSEH 4200' ICE N' ROSES® ROSE HELLEBORE	1 GAL.

GROUND COVERS		
	3,493 SF	1-1/2" ROCK MULCH
	6,028 SF	DETENTION SEEDING
	15,817 SF	TURF SOD
	999 SF	WOOD MULCH

NORTH

0 20'

1" = 20'

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DKA PROJECT NO: 24 - 027

KEY PLAN:

SHEET STATUS: 05/16/2025

ISSUED FOR BID - NOT FOR CONSTRUCTION

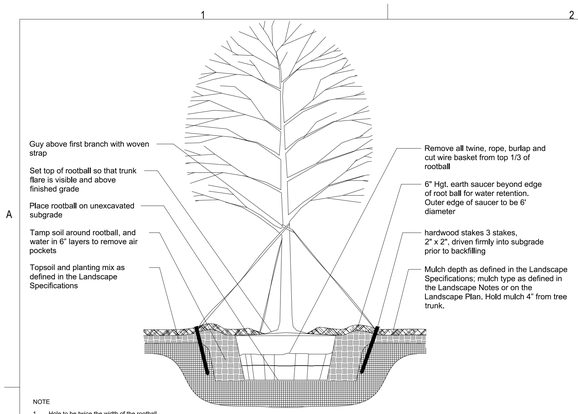
NO:	DESCRIPTION:	DATE:

SHEET TITLE:

OVERALL LANDSCAPE PLAN

SHEET NUMBER:

L-100

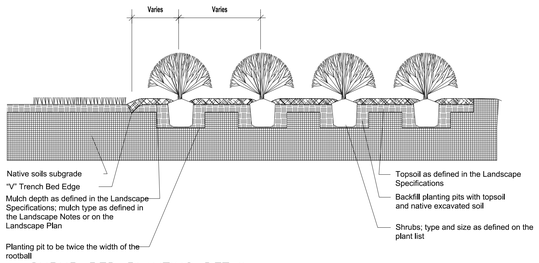


NOTE

1. Hole to be twice the width of the rootball.
2. Do not heavily prune tree at planting. Prune only crossover limbs, broken or dead branches; Do not remove the terminal buds of branches that extend to the edge of the crown.
3. Each tree must be planted such that the trunk flare is visible at the top of the rootball. Trees where the trunk flare is not visible shall be rejected. Do not cover the top of the rootball with soil. Mulch to be held back 4" away from trunk.
4. Remove Guy Wires and Staking when warranty period has expired (after one year).

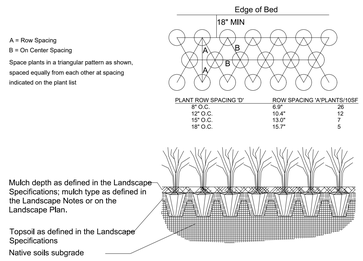
1 TREE PLANTING AND STAKING DETAIL

SCALE: NTS



2 SHRUB BED PLANTING DETAIL

SCALE: NTS



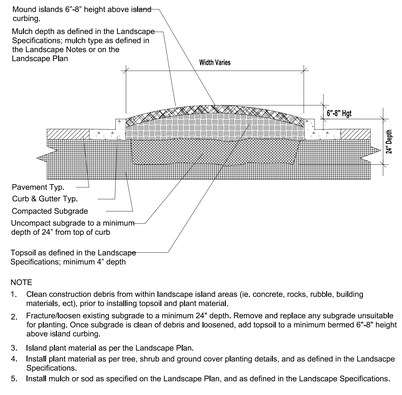
PLANT ROW SPACING 'D'	ROW SPACING W/PLANTS/100SF	
8" O.C.	6.9"	26
12" O.C.	10.4"	12
15" O.C.	13.0"	7
18" O.C.	15.7"	5

NOTE

1. Space groundcover plants in accordance with indicated spacing listed on the plant list, or as shown on the landscape plan.
2. Adjust spacing as necessary to evenly fill planting bed with indicated quantity of plants.
3. Plant to within 24" of the trunks of trees and shrubs within planting bed and to within 18" of edge of bed.

3 GROUNDCOVER PLANTING DETAIL

SCALE: NTS

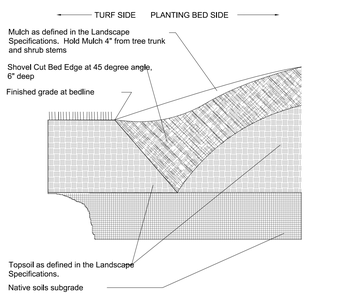


NOTE

1. Clean construction debris from within landscape island areas (ie. concrete, rocks, rubble, building materials, ect), prior to installing topsoil and plant material.
2. Fracture/loosen existing subgrade to a minimum 24" depth. Remove and replace any subgrade unsuitable for planting. Once subgrade is clean of debris and loosened, add topsoil to a minimum bermed 6"-8" height above island curbing.
3. Island plant material as per the Landscape Plan.
4. Install plant material as per tree, shrub and ground cover planting details, and as defined in the Landsacpe Specifications.
5. Install mulch or sod as specified on the Landscape Plan, and as defined in the Landscape Specifications.

4 PARKING ISLAND BERMING DETAIL

SCALE: NTS



5 "V" TRENCH BED EDGING

SCALE: NTS

GENERAL NOTES

1. BASE MAP INFORMATION IS ACCURATE AS OF THE DATE PRINTED ON THIS PACKAGE.
2. THE LANDSCAPE PLANS CONTAINED HEREIN ILLUSTRATE APPROXIMATE LOCATIONS OF ALL SITE CONDITIONS. REFER TO SURVEY, ARCHITECTURAL, CIVIL ENGINEERING, STRUCTURAL, ELECTRICAL, IRRIGATION AND ALL OTHER DRAWINGS, IF AVAILABLE, FOR ADDITIONAL DETAILED INFORMATION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BECOMING AWARE OF AND FIELD VERIFYING ALL RELATED EXISTING AND PROPOSED CONDITIONS, UTILITIES, PIPES AND STRUCTURES, ETC. PRIOR TO BIDDING AND CONSTRUCTION. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR CONTACTING JULIE, THE COUNTY PUBLIC WORKS DEPARTMENT, THE MUNICIPALITY AND ANY OTHER PUBLIC OR PRIVATE AGENCIES NECESSARY FOR UTILITY LOCATION PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE OF APPARENT CONFLICTS WITH CONSTRUCTION AND UTILITIES SO THAT ADJUSTMENTS CAN BE PLANNED PRIOR TO INSTALLATION. IF FIELD ADJUSTMENTS ARE NECESSARY DUE TO EXISTING UTILITY LOCATIONS THEY MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY AND ALL COSTS OR OTHER LIABILITIES INCURRED DUE TO DAMAGE OF SAID UTILITIES/STRUCTURES/ETC.
4. THE CONTRACTOR SHALL COMPLY WITH ALL CODES APPLICABLE TO THIS WORK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH SUBCONTRACTORS AND OTHER CONTRACTORS OF RELATED TRADES, AS REQUIRED, TO ACCOMPLISH THE PLANTING AND RELATED OPERATIONS.
6. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF ALL PLANT MATERIAL WITH THE INSTALLATION OF OTHER IMPROVEMENTS SUCH AS HARDSCAPE ELEMENTS AND RELATED STRUCTURES. ANY DAMAGE TO EXISTING IMPROVEMENTS IS THE RESPONSIBILITY OF THE CONTRACTOR.
7. THE CONTRACTOR IS RESPONSIBLE TO RESTORE ALL AREAS OF THE SITE, OR ADJACENT AREAS, WHERE DISTURBED BY OPERATIONS OF OR RELATED TO THE CONTRACTOR'S WORK.
8. ALL SURFACE DRAINAGE SHALL BE DIVERTED AWAY FROM STRUCTURES AND NOTED SITE FEATURES IN ALL AREAS AT A MINIMUM OF 2% SLOPE OR AS SHOWN ON THE CIVIL ENGINEERING PLANS. ALL AREAS SHALL POSITIVELY DRAIN AND ALL ISLANDS SHALL BE CROWNED 1" IN HEIGHT PER 1' IN ISLAND WIDTH.
9. THE CONTRACTOR SHALL STAKE ALL TREE LOCATIONS AND THE PERIMETER OF SHRUB/PERENNIAL BEDS PRIOR TO INSTALLATION AND CONTACT THE OWNER'S REPRESENTATIVE FOR APPROVAL. FINAL LOCATION AND STAKING OF ALL PLANT MATERIALS SHALL BE ACCEPTED BY THE OWNER'S REPRESENTATIVE IN ADVANCE OF PLANTING.
10. IF CONFLICTS ARISE BETWEEN THE SIZE OF AREAS AND PLANS, THE CONTRACTOR IS REQUIRED TO CONTACT THE OWNER'S REPRESENTATIVE FOR RESOLUTION PRIOR TO INSTALLATION.
11. WHERE PROVIDED, AREA TAKEOFFS AND PLANT QUANTITY ESTIMATES IN THE PLANT LIST ARE FOR INFORMATION ONLY. THE CONTRACTOR IS RESPONSIBLE TO DO THEIR OWN QUANTITY TAKE-OFFS FOR ALL PLANT MATERIALS AND SIZES SHOWN ON PLANS. IN CASE OF ANY DISCREPANCIES, PLANS TAKE PRECEDENCE OVER CALL-OUTS AND/OR THE PLANT LIST(S).
12. PLANTS ARE TO BE TYPICAL IN SHAPE AND SIZE FOR SPECIES. PLANTS PLANTED IN ROWS OR GROUPS SHALL BE MATCHED IN FORM. PLANTS SHALL NOT BE ROOT-BOUND OR LOOSE IN THEIR CONTAINERS. HANDLE ALL PLANTS WITH CARE IN TRANSPORTING, PLANTING AND MAINTENANCE UNTIL INSPECTION AND FINAL ACCEPTANCE. FIELD COLLECTED MATERIAL SHALL NOT BE USED UNLESS APPROVED BY THE OWNER'S REPRESENTATIVE.
13. SHREDDED HARDWOOD MULCH, FERTILIZING, AS SPECIFIED, STAKING, WATERING AND ONE (1) YEAR PLANT WARRANTY FOR INSTALLED PLANT MATERIAL, SHALL BE CONSIDERED INCIDENTAL TO THE PLANT ITEMS.
14. MUSHROOM COMPOST SHALL BE FINELY SCREENED, HOMOGENOUS, DECOMPOSED ORGANIC MATERIAL SUITABLE FOR HORTICULTURAL USE. MIX THOROUGHLY IN PLANT BED BEFORE INSTALLING PLANTS.

LANDSCAPE NOTES

1. LANDSCAPE CONTRACTOR TO READ AND UNDERSTAND THE LANDSCAPE SPECIFICATIONS (SHEET L-102) PRIOR TO FINALIZING BIDS. THE LANDSCAPE SPECIFICATIONS SHALL BE ADHERED TO THROUGHOUT THE CONSTRUCTION PROCESS.
2. CONTRACTOR RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
3. CONTRACTOR RESPONSIBLE FOR PROTECTING EXISTING TREES FROM DAMAGE DURING CONSTRUCTION.
4. ALL PLANTING AREAS SHALL BE CLEANED OF CONSTRUCTION DEBRIS (IE. CONCRETE, ROCK, RUBBLE, BUILDING MATERIALS, ETC.) PRIOR TO ADDING AND SPREADING OF THE TOPSOIL.
5. ALL SHRUBS BEDS (EXISTING AND NEW) TO BE MULCHED WITH A 3 INCH MINIMUM LAYER OF DOUBLE SHREDDED HARDWOOD MULCH.
6. ALL ANNUAL AND PERENNIAL BEDS TO BE TILLED TO A MINIMUM DEPTH OF 12 INCHES AND AMENDED WITH 4 INCHES OF ORGANIC MATERIAL. MULCH PLANTED ANNUAL AND PERENNIAL BEDS WITH 2 INCH DEPTH OF MINI NUGGETS.
7. PLANTING HOLES TO BE DUG A MINIMUM OF TWICE THE WIDTH OF THE SIZE OF THE ROOT BALL OF BOTH SHRUB AND TREE. BACK TO BE A MIX OF 4 PARTS TOPSOIL AND 1 PART ORGANIC SOIL CONDITIONER (IE. NATURE'S HELPER OR PRO MIX). BACKFILL AND TAMP BOTTOM OF HOLE PRIOR TO PLANTING SO TOP OF ROOT BALL DOES NOT SETTLE BELOW SURROUNDING GRADE.
8. EXISTING GRASS IN PROPOSED PLANTING AREAS TO BE KILLED AND REMOVED AND AREA TO BE HAND RAKED TO REMOVE ALL ROCKS AND DEBRIS LARGER THAN 1 INCH IN DIAMETER PRIOR TO PLANTING SHRUBS.
9. ANY EXISTING GRASS DISTURBED DURING CONSTRUCTION TO BE FULLY REMOVED, REGRADED AND REPLACED. ALL TIRE MARKS AND INDENTIONS TO BE REPAIRED.
10. SOIL TO BE TESTED TO DETERMINE FERTILIZER AND LIME REQUIREMENTS AND DISTRIBUTED PRIOR TO LAYING SOD.
11. SOD TO BE DELIVERED FRESH (CUT LESS THAN 24 HOURS PRIOR TO ARRIVING ON SITE), LAID IMMEDIATELY, ROLLED, AND WATERED THOROUGHLY IMMEDIATELY AFTER PLANTING. EDGE OF SOD IS TO BE "V" TRENCHED.
12. ALL CHANGES TO DESIGN OR PLANT SUBSTITUTIONS ARE TO BE AUTHORIZED BY THE LANDSCAPE ARCHITECT.
13. ALL LANDSCAPING SHALL BE INSTALLED IN CONFORMANCE WITH ANSI Z60.1 THE "AMERICAN STANDARD FOR NURSERY STOCK" AND THE ACCEPTED STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN.
14. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANTS INSTALLED FOR ONE FULL YEAR FROM DATE OF ACCEPTANCE BY THE OWNER. ALL PLANTS SHALL BE ALIVE AND AT A VIGOROUS RATE OF GROWTH AT THE END OF THE GUARANTEE PERIOD. THE LANDSCAPE CONTRACTOR SHALL NOT BE RESPONSIBLE FOR ACTS OF GOD OR VANDALISM.
15. ANY PLANT THAT IS DETERMINED DEAD, IN AN UNHEALTHY OR UNSIGHTLY CONDITION, LOST ITS SHAPE DUE TO DEAD BRANCHES OR OTHER SYMPTOMS OF POOR, NON-VIGOROUS GROWTH SHALL BE REPLACED BY THE LANDSCAPE CONTRACTOR.
16. GENERAL CONTRACTOR IS RESPONSIBLE FOR ADDING A MIN OF 4" OF CLEAN FRIABLE TOPSOIL IN ALL PLANTING BEDS AND ALL GRASSED AREAS. GRADED AREAS TO BE HELD DOWN THE APPROPRIATE ELEVATION TO ACCOUNT FOR TOPSOIL. SEE SPECIFICATIONS FOR REQUIRED TOPSOIL CHARACTERISTICS.
17. IN ALL PARKING LOT ISLANDS, THE GENERAL CONTRACTOR IS RESPONSIBLE TO REMOVE ALL DEBRIS, FRACTURE/LOOSEN SUBGRADE TO A MIN. 24" DEPTH. ADD TOPSOIL TO A 6"-8" BERM HEIGHT ABOVE ISLAND CURBING; REFER TO LANDSCAPE SPECIFICATIONS AND LANDSCAPE ISLAND DETAIL.
18. PRIOR TO BEGINNING WORK, THE LANDSCAPE CONTRACTOR SHALL INSPECT THE SUBGRADE, GENERAL SITE CONDITIONS, VERIFY ELEVATIONS, UTILITY LOCATIONS, IRRIGATION, APPROVE TOPSOIL PROVIDED BY GENERAL CONTRACTOR AND OBSERVE THE SITE CONDITIONS UNDER WHICH THE WORK IS TO BE DONE. NOTIFY GENERAL CONTRACTOR OF ANY UNSATISFACTORY CONDITIONS, AND WORK SHALL NOT PROCEED UNTIL SUCH CONDITIONS HAVE BEEN CORRECTED AND ARE ACCEPTABLE TO THE LANDSCAPE CONTRACTOR.
19. STAKE ALL EVERGREEN AND DECIDUOUS TREES AS SHOWN IN THE DETAILS THIS SHEET.
20. REMOVE ALL STAKES AND GUYING FROM ALL TREES AFTER ONE YEAR FROM PLANTING.
21. WATER THOROUGHLY TWICE IN FIRST 24 HOURS AND APPLY MULCH IMMEDIATELY.
22. SITE TO BE 100% IRRIGATED IN ALL PLANTING BEDS AND GRASS AREA BY AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM. SEE IRRIGATION PLAN FOR DESIGN.
23. ALL TREE PROTECTION DEVICES TO BE INSTALLED PRIOR TO THE START OF LAND DISTURBANCE, AND MAINTAINED UNTIL FINAL LANDSCAPING.
24. ALL TREE PROTECTION AREAS TO BE PROTECTED FROM SEDIMENTATION.
25. ALL TREE PROTECTION FENCING TO BE INSPECTED DAILY, AND REPAIRED OR REPLACED AS NEEDED.
26. NO PARKING, STORAGE OR OTHER CONSTRUCTION ACTIVITIES ARE TO OCCUR WITHIN TREE PROTECTION AREAS.
27. CONTRACTOR SHALL USE CAUTION WHEN DIGGING TREE PITS IN THE VICINITY OF UNDERGROUND UTILITY LINES AND MAY NEED TO HAND DIG THE PITS IN MANY OF THESE INSTANCES.

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DKA PROJECT NO: 24 - 027

KEY PLAN:

SHEET STATUS: 05/16/2025

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
LANDSCAPE NOTES & DETAILS

SHEET NUMBER:
L-101

LANDSCAPE SPECIFICATIONS

PART 1 - GENERAL

DESCRIPTION
PROVIDE TREES, SHRUBS, GROUND COVERS, SOD, AND ANNUALS/PERENNIALS AS SHOWN AND SPECIFIED ON THE LANDSCAPE PLAN. THE WORK INCLUDES:
1. SOIL PREPARATION.
2. TREES, SHRUBS, GROUND COVERS, AND ANNUALS/PERENNIALS.
3. PLANTING MIXES.
4. TOP SOIL, MULCH AND PLANTING ACCESSORIES.
5. MAINTENANCE.
6. DECORATIVE STONE.

RELATED WORK:
1. IRRIGATION SYSTEM; SEE IRRIGATION SPECIFICATIONS (NOT INCLUDED IN PACKAGE).

QUALITY ASSURANCE
PLANT NAMES INDICATED; COMPLY WITH “STANDARDIZED PLANT NAMES” AS ADOPTED BY THE LATEST EDITION OF THE AMERICAN JOINT COMMITTEE OF HORTICULTURAL NOMENCLATURE. NAMES OF VARIETIES NOT LISTED CONFORM GENERALLY WITH NAMES ACCEPTED BY THE NURSERY TRADE. PROVIDE STOCK TRUE TO BOTANICAL NAME AND LEGIBLY TAGGED.

COMPLY WITH SIZING AND GRADING STANDARDS OF THE LATEST EDITION OF “AMERICAN STANDARD FOR NURSERY STOCK”. A PLANT SHALL BE DIMENSIONED AS IT STANDS IN ITS NATURAL POSITION.

ALL PLANTS SHALL BE NURSERY GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR A MINIMUM OF 2 YEARS.

NURSERY STOCK FURNISHED SHALL BE AT LEAST THE MINIMUM SIZE INDICATED. LARGER STOCK IS ACCEPTABLE, AT NO ADDITIONAL COST, AND PROVIDING THAT THE LARGER PLANTS WILL NOT BE CUT BACK TO SIZE INDICATED. PROVIDE PLANTS INDICATED BY TWO MEASUREMENTS SO THAT ONLY A MAXIMUM OF 25% ARE OF THE MINIMUM SIZE INDICATED AND 75% ARE OF THE MAXIMUM SIZE INDICATED.

BEFORE SUBMITTING A BID, THE CONTRACTOR SHALL HAVE INVESTIGATED THE SOURCES OF SUPPLY AND BE SATISFIED THAT THEY CAN SUPPLY THE LISTED PLANTS IN THE SIZE, VARIETY AND QUALITY AS SPECIFIED. FAILURE TO TAKE THIS PRECAUTION WILL NOT RELIEVE THE CONTRACTOR FROM THEIR RESPONSIBILITY FOR FURNISHING AND INSTALLING ALL PLANT MATERIALS IN STRICT ACCORDANCE WITH THE CONTRACT DOCUMENTS WITHOUT ADDITIONAL COST TO THE OWNER. THE LANDSCAPE ARCHITECT SHALL APPROVE ANY SUBSTITUTES OF PLANT MATERIAL, OR CHANGES IN PLANT MATERIAL SIZE, PRIOR TO THE LANDSCAPE CONTRACTOR SUBMITTING A BID.

DELIVER, STORAGE AND HANDLING
TAKE ALL PRECAUTIONS CUSTOMARY IN GOOD TRADE PRACTICE IN PREPARING PLANTS FOR MOVING. WORKMANSHIP THAT FAILS TO MEET THE HIGHEST STANDARDS WILL BE REJECTED. SPRAY DECIDUOUS PLANTS IN FOLIAGE WITH AN APPROVED
“ANTI-DESICCANT” IMMEDIATELY AFTER DIGGING TO PREVENT DEHYDRATION. DIG, PACK, TRANSPORT, AND HANDLE PLANTS WITH CARE TO ENSURE PROTECTION AGAINST INJURY. INSPECTION CERTIFICATES REQUIRED BY LAW SHALL ACCOMPANY EACH SHIPMENT INVOICE OR ORDER TO STOCK. PROTECT ALL PLANTS FROM DRYING OUT. IF PLANTS CANNOT BE PLANTED IMMEDIATELY UPON DELIVERY, PROPERLY PROTECT THEM WITH SOIL, WET PEAT MOSS, OR IN A MANNER ACCEPTABLE TO THE LANDSCAPE ARCHITECT. WATER HEELED-IN PLANTINGS DAILY. NO PLANT SHALL BE BOUND WITH ROPE OR WIRE IN A MANNER THAT COULD DAMAGE OR BREAK THE BRANCHES. COVER PLANTS TRANSPORTED ON OPEN VEHICLES WITH A PROTECTIVE COVERING TO PREVENT WIND BURN.

PROJECT CONDITIONS
PROTECT EXISTING UTILITIES, PAVING, AND OTHER FACILITIES FROM DAMAGE CAUSED BY LANDSCAPE OPERATIONS.

A COMPLETE LIST OF PLANTS, INCLUDING A SCHEDULE OF SIZES, QUANTITIES, AND OTHER REQUIREMENTS ARE SHOWN ON THE DRAWINGS. IN THE EVENT THAT QUANTITY DISCREPANCIES OR MATERIAL OMISSIONS OCCUR IN THE PLANT MATERIALS LIST, THE PLANTING PLANS SHALL GOVERN.

THE IRRIGATION SYSTEM WILL BE INSTALLED PRIOR TO PLANTING. LOCATE, PROTECT AND MAINTAIN THE IRRIGATION SYSTEM DURING PLANTING OPERATIONS. REPAIR IRRIGATION SYSTEM COMPONENTS DAMAGED DURING PLANTING OPERATIONS; AT THE CONTRACTOR’S EXPENSE. REFER TO THE IRRIGATION SPECIFICATIONS, IRRIGATION PLAN AND IRRIGATION DETAILS.

DO NOT BEGIN LANDSCAPE ACCESSORY WORK BEFORE COMPLETION OF FINAL GRADING OR SURFACING.

WARRANTY
WARRANT PLANT MATERIAL TO REMAIN ALIVE, BE HEALTHY AND IN A VIGOROUS CONDITION FOR A PERIOD OF 1 YEAR AFTER COMPLETION AND FINAL ACCEPTANCE OF ENTIRE PROJECT.

REPLACE, IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS, ALL PLANTS THAT ARE DEAD OR, ARE IN AN UNHEALTHY, OR UNSIGHTLY CONDITION, AND HAVE LOST THEIR NATURAL SHAPE DUE TO DEAD BRANCHES, OR OTHER CAUSES DUE TO THE CONTRACTOR’S NEGLIGENCE. THE COST OF SUCH REPLACEMENT(S) IS AT THE CONTRACTOR’S EXPENSE. WARRANT ALL REPLACEMENT PLANTS FOR 1 YEAR AFTER INSTALLATION.

WARRANTY SHALL NOT INCLUDE DAMAGE, LOSS OF TREES, PLANTS, OR GROUND COVERS CAUSED BY FIRES, FLOODS, FREEZING RAINS, LIGHTNING STORMS, WINDS OVER 75 MILES PER HOUR, WINTER KILL CAUSED BY EXTREME COLD, SEVERE WINTER CONDITIONS NOT TYPICAL OF PLANTING AREA, AND/OR ACTS OF VANDALISM OR NEGLIGENCE ON A PART OF THE OWNER.

REMOVE AND IMMEDIATELY REPLACE ALL PLANTS, FOUND TO BE UNSATISFACTORY DURING THE INITIAL PLANTING INSTALLATION.
MAINTAIN AND PROTECT PLANT MATERIAL, LAWNS, AND IRRIGATION UNTIL FINAL ACCEPTANCE IS MADE.

ACCEPTANCE
INSPECTION OF PLANTED AREAS WILL BE MADE BY THE OWNER’S REPRESENTATIVE.
1. PLANTED AREAS WILL BE ACCEPTED PROVIDED ALL REQUIREMENTS, INCLUDING MAINTENANCE, HAVE BEEN COMPLIED WITH AND PLANT MATERIALS ARE ALIVE AND IN A HEALTHY, VIGOROUS CONDITION.

UPON ACCEPTANCE, THE CONTRACTOR SHALL COMMENCE THE SPECIFIED PLANT MAINTENANCE.

CODES, PERMITS AND FEES
OBTAIN ANY NECESSARY PERMITS FOR THIS SECTION OF WORK AND PAY ANY FEES REQUIRED FOR PERMITS.

THE ENTIRE INSTALLATION SHALL FULLY COMPLY WITH ALL LOCAL AND STATE LAWS AND ORDINANCES, AND WITH ALL ESTABLISHED CODES APPLICABLE THERETO; ALSO AS DEPICTED ON THE LANDSCAPE AND IRRIGATION CONSTRUCTION SET.

PART 2 - PRODUCTS

MATERIALS
PLANTS: PROVIDE TYPICAL OF THEIR SPECIES OR VARIETY; WITH NORMAL, DENSELY DEVELOPED BRANCHES AND VIGOROUS, FIBROUS ROOT SYSTEMS. PROVIDE ONLY SOUND, HEALTHY, VIGOROUS PLANTS FREE FROM DEFECTS, DISFIGURING KNOTS, SUN SCALD INJURIES, FROST CRACKS, ABRASIONS OF THE BARK, PLANT DISEASES, INSECT EGGS, BORERS, AND ALL FORMS OF INFESTATION. ALL PLANTS SHALL HAVE A FULLY DEVELOPED FORM WITHOUT VOIDS AND OPEN SPACES. PLANTS HELD ON STORAGE WILL BE REJECTED IF THEY SHOW SIGNS OF GROWTH DURING THE STORAGE PERIOD.

1. BALLED AND PLANTS WRAPPED WITH BURLAP, TO HAVE FIRM, NATURAL BALLS OF EARTH OF SUFFICIENT DIAMETER AND DEPTH TO ENCOMPASS THE FIBROUS AND FEEDING ROOT SYSTEM NECESSARY FOR FULL RECOVERY OF THE PLANT. PROVIDE BALL SIZES COMPLYING WITH THE LATEST EDITION OF THE “AMERICAN STANDARD FOR NURSERY STOCK”. CRACKED OR MUSHROOMED BALLS, OR SIGNS OF CIRCLING ROOTS ARE NOT ACCEPTABLE.
2. CONTAINER- GROWN STOCK: GROWN IN A CONTAINER FOR SUFFICIENT LENGTH OF TIME FOR THE ROOT SYSTEM TO HAVE DEVELOPED TO HOLD ITS SOIL TOGETHER, FIRM AND WHOLE.
   2.1. NO PLANTS SHALL BE LOOSE IN THE CONTAINER.
   2.2. CONTAINER STOCK SHALL NOT BE POT BOUND.
3. PLANTS PLANTED IN ROWS SHALL BE MATCHED IN FORM.
4. PLANTS LARGER THAN THOSE SPECIFIED IN THE PLANT LIST MAY BE USED WHEN ACCEPTABLE TO THE LANDSCAPE ARCHITECT.
   4.1. IF THE USE OF LARGER PLANTS IS ACCEPTABLE, INCREASE THE SPREAD OF ROOTS OR ROOT BALL IN PROPORTION TO THE SIZE OF THE PLANT.
5. THE HEIGHT OF THE TREES, MEASURED FROM THE CROWN OF THE ROOTS TO THE TOP OF THE TOP BRANCH, SHALL NOT BE LESS THAN THE MINIMUM SIZE DESIGNATED IN THE PLANT LIST.
6. NO PRUNING WOUNDS SHALL BE PRESENT WITH A DIAMETER OF MORE THAN 1” AND SUCH WOUNDS MUST SHOW VIGOROUS BARK ON ALL EDGES.
7. EVERGREEN TREES SHALL BE BRANCHED TO THE GROUND OR AS SPECIFIED IN PLANT LIST.
8. SHRUBS AND SMALL PLANTS SHALL MEET THE REQUIREMENTS FOR SPREAD AND HEIGHT INDICATED IN THE PLANT LIST
   8.1. THE MEASUREMENTS FOR HEIGHT SHALL BE TAKEN FROM THE GROUND LEVEL TO THE HEIGHT OF THE TOP OF THE PLANT AND NOT THE LONGEST BRANCH.
   8.2. SINGLE STEMMED OR THIN PLANTS WILL NOT BE ACCEPTED.
   8.3. SIDE BRANCHES SHALL BE GENEROUS, WELL-TWIGGED, AND THE PLANT AS A WHOLE WELL-BUSHED TO THE GROUND
   8.4. PLANTS SHALL BE IN A MOIST, VIGOROUS CONDITION, FREE FROM DEAD WOOD, BRUISES, OR OTHER ROOT OR BRANCH INJURIES.

ACCESSORIES
TOPSOIL: SHALL BE FERTILE, FRIABLE, NATURAL TOPSOIL OF LOAMY CHARACTER, WITHOUT ADMIXTURE OF SUBSOIL MATERIAL, OBTAINED FROM A WELL-DRAINED ARABLE SITE, REASONABLY FREE FROM CLAY, LUMPS, COARSE SANDS, STONES, ROOTS, STICKS, AND OTHER FOREIGN MATERIALS, WITH ACIDITY RANGE OF BETWEEN PH 6.0 AND 6.8.

NOTE: ALL PLANTING AREAS SHALL BE CLEANED OF CONSTRUCTION DEBRIS (IE. CONCRETE, RUBBLE, STONES, BUILDING MATERIAL, ETC.) PRIOR TO ADDING AND SPREADING OF THE TOP SOIL.
1. SOD AREAS: SPREAD A MINIMUM 4” LAYER OF TOP SOIL AND RAKE SMOOTH.
2. PLANTING BED AREAS: SPREAD A MINIMUM 4” LAYER OF TOP SOIL AND RAKE SMOOTH.
3. LANDSCAPE ISLANDS/MEDIANS: FRACTURE/LOOSEN EXISTING SUBGRADE TO A MINIMUM 24" DEPTH. REMOVE AND REPLACE ANY SUBGRADE UNSUITABLE FOR PLANTING. ONCE SUBGRADE IS CLEAN OF DEBRIS AND LOOSENED, ADD TOPSOIL TO A MINIMUM BERM 6"-8" HEIGHT ABOVE ISLAND CURBING.
4. ANNUAL/PERENNIAL BED AREAS: ADD A MINIMUM OF 4” ORGANIC MATTER AND TILL TO A MINIMUM 12” DEPTH.

MULCH: TYPE SELECTED DEPENDENT ON REGION AND AVAILABILITY; SEE LANDSCAPE PLANS FOR TYPE OF MUCH TO BE USED. HOLD MULCH 4” FROM TREE TRUNKS AND SHRUB STEMS.
1. HARDWOOD: 6 MONTH OLD WELL ROTTED DOUBLE SHREDDED NATIVE HARDWOOD BARK MULCH NOT LARGER THAN 4” IN LENGTH AND ½” IN WIDTH, FREE OF WOOD CHIPS AND SAWDUST. INSTALL MINIMUM DEPTH OF 3”.
2. PINE STRAW: PINE STRAW TO BE FRESH HARVEST, FREE OF DEBRIS, BRIGHT IN COLOR. BALES TO BE WIRED AND TIGHTLY BOUND. NEEDLES TO BE DRY. INSTALL MINIMUM DEPTH OF 3”.
3. RIVER ROCK: (COLOR) LIGHT GRAY TO BUFF TO DARK BROWN, WASHED RIVER ROCK, 1” – 3” IN SIZE. INSTALL IN SHRUB BEDS TO AN EVEN DEPTH OF 3”. WEED CONTROL BARRIER TO BE INSTALLED UNDER ALL ROCK MULCH AREAS. USE CAUTION DURING INSTALLATION NOT TO DAMAGE PLANT MATERIAL.
4. MINI NUGGETS: INSTALL TO A MINIMUM DEPTH OF 2”-3” AT ALL LOCATIONS OF ANNUAL AND PERENNIAL BEDS. LIFT THE STEMS AND LEAVES OF THE ANNUALS AND CAREFULLY SPREAD THE MULCH TO AVOID INJURING THE PLANTS. GENTLY BRUSH THE MULCH OFF THE PLANTS.

GUYING/STAKING:
1. ARBORTIE: GREEN (OR WHITE) STAKING AND GUYING MATERIAL TO BE FLAT, WOVEN, POLYPROPYLENE MATERIAL, ¾” WIDE 900 LB. BREAK STRENGTH. ARBORTIE SHALL BE FASTENED TO STAKES IN A MANNER WHICH PERMITS TREE MOVEMENT AND SUPPORTS THE TREE.
2. REMOVE GUYING/STAKING AFTER ONE YEAR FROM PLANTING.

TREE WRAP: TREE WRAPS SHOULD BE USED ON YOUNG, NEWLY PLANTED THIN-BARKED TREES (CHERRY, CRABAPPLE, HONEY LOCUST, LINDEN, MAPLE, MOUNTAIN ASH, PLUM) THAT ARE MOST SUSCEPTIBLE TO SUN SCALD/SUNBURN. STANDARD WATERPROOFED TREE WRAPPING PAPER, 2-1/2" WIDE, MADE OF 2 LAYERS OF CREPE DRAFT PAPER WEIGHING NOT LESS THAN 30 LBS. PER REAM, CEMENTED TOGETHER WITH ASPHALT. WRAP THE TREE IN THE FALL AND LEAVE THE WRAP IN PLACE THROUGHOUT THE WINTER AND EARLY SPRING. TREE WRAPS ARE TEMPORARY AND NO LONGER NEEDED ONCE TREES DEVELOP CORKY BARK.

PART 3 – EXECUTION

INSPECTION
PRIOR TO BEGINNING WORK, THE LANDSCAPE CONTRACTOR SHALL INSPECT THE SUBGRADE, GENERAL SITE CONDITIONS, VERIFY ELEVATIONS, UTILITY LOCATIONS, IRRIGATION, APPROVE TOP SOIL PROVIDED BY THE GENERAL CONTRACTOR AND OBSERVE THE SITE CONDITIONS UNDER WHICH THE WORK IS TO BE DONE. NOTIFY THE GENERAL CONTRACTOR OF ANY UNSATISFACTORY CONDITIONS, AND WORK SHALL NOT PROCEED UNTIL SUCH CONDITIONS HAVE BEEN CORRECTED AND ARE ACCEPTABLE TO THE LANDSCAPE CONTRACTOR.

PREPARATION
PLANTING SHALL BE PERFORMED ONLY BY EXPERIENCED WORKMEN FAMILIAR WITH PLANTING PROCEDURES UNDER THE SUPERVISION OF A QUALIFIED SUPERVISOR.

LOCATE PLANTS AS INDICATED ON THE PLANS OR AS APPROVED IN THE FIELD AFTER STAKING BY THE LANDSCAPE CONTRACTOR. IF OBSTRUCTIONS ARE ENCOUNTERED THAT ARE NOT SHOWN ON THE DRAWINGS, DO NOT PROCEED WITH PLANTING OPERATIONS UNTIL ALTERNATE PLANT LOCATIONS HAVE BEEN SELECTED AND APPROVED BY THE LANDSCAPE ARCHITECT; SPACING OF PLANT MATERIAL SHALL BE AS SHOWN ON THE LANDSCAPE PLAN.

EXCAVATE CIRCULAR PLANT PITS WITH VERTICAL SIDES, EXCEPT FOR PLANTS SPECIFICALLY INDICATED TO BE PLANTED IN BEDS. PROVIDE SHRUB PITS AT LEAST 12” GREATER THAN THE DIAMETER OF THE ROOT SYSTEM AND 24” GREATER FOR TREES. DEPTH OF PIT SHALL ACCOMMODATE THE ROOT SYSTEM. PROVIDE UNDISTURBED SUB GRADE TO HOLD ROOT BALL AT NURSERY GRADE AS SHOWN ON THE DRAWINGS.

INSTALLATION
SET PLANT MATERIAL IN THE PLANTING PIT TO PROPER GRADE AND ALIGNMENT. SET PLANTS UPRIGHT, PLUMB, AND FACED TO GIVE THE BEST APPEARANCE OR RELATIONSHIP TO EACH OTHER OR ADJACENT STRUCTURE. SET PLANT MATERIAL 2” – 3” ABOVE THE FINISH GRADE. NO FILLING WILL BE PERMITTED AROUND TRUNKS OR STEMS. BACKFILL THE PIT WITH TOPSOIL MIX AND EXCAVATED MATERIAL. DO NOT USE FROZEN OR MUDDY MIXTURES FOR BACKFILLING. FORM A RING OF SOIL AROUND THE EDGE OF EACH PLANTING PIT TO RETAIN WATER.

AFTER BALLED AND WRAPPED IN BURLAP PLANTS ARE SET, MUDDLE PLANTING SOIL MIXTURE AROUND BASES OF BALLS AND FILL ALL VOIDS.
1. REMOVE ALL BURLAP, ROPES, AND WIRES FROM THE TOP 1/3 OF THE ROOT BALL

SPACE GROUND COVER PLANTS IN ACCORDANCE WITH INDICATED DIMENSIONS. ADJUST SPACING AS NECESSARY TO EVENLY FILL PLANTING BED WITH INDICATED QUANTITY OF PLANTS. PLANT TO WITHIN 24” OF THE TRUNKS OF TREES AND SHRUBS WITHIN PLANTING BED AND TO WITHIN 18” OF EDGE OF BED.

MULCHING:
1. MULCH TREE AND SHRUB PLANTING PITS AND SHRUB BEDS WITH REQUIRED MULCHING MATERIAL (SEE LANDSCAPE PLAN FOR MULCH TYPE); DEPTH OF MULCH AS NOTED ABOVE. HOLD MULCH BACK 4” AWAY FROM TREE TRUNKS AND SHRUB STEMS. THOROUGHLY WATER MULCHED AREAS. AFTER WATERING, RAKE MULCH TO PROVIDE A UNIFORM FINISHED SURFACE.

DECORATIVE STONE: (WHERE INDICATED ON LANDSCAPE PLAN)
1. INSTALL WEED CONTROL BARRIER OVER SUB-GRADE PRIOR TO INSTALLING STONE. LAP 6” ON ALL SIDES.
2. PLACE STONE WITHOUT DAMAGING WEED BARRIER.
3. ARRANGE STONES FOR BEST APPEARANCE AND TO COVER ALL WEED BARRIER FABRIC.

WRAPPING, GUYING, STAKING:
1. INSPECT TREES FOR INJURY TO TRUNKS, EVIDENCE OF INSECT INFESTATION, AND IMPROPER PRUNING BEFORE WRAPPING.
2. WRAPPING:
   2.1. WRAP TRUNKS OF ALL YOUNG NEWLY PLANTED TREES KNOWN TO HAVE THIN BARK. WRAP SPIRALLY FROM BOTTOM TO TOP WITH SPECIFIED TREE WRAP AND SECURE IN PLACE.
   2.2. OVERLAP ½ THE WIDTH OF THE TREE WRAP STRIP AND COVER THE TRUNK FROM THE GROUND TO THE HEIGHT OF THE SECOND BRANCH.
   2.3. SECURE TREE WRAP IN PLACE WITH TWINE WOUND SPIRALLY DOWNWARD IN THE OPPOSITE DIRECTION, TIED AROUND THE TREE IN AT LEAST 3 PLACES IN ADDITION TO THE TOP AND BOTTOM.
   2.4. WRAP THE TREES IN THE FALL AND LEAVE THE WRAP IN PLACE THROUGHOUT THE WINTER AND EARLY SPRING.
   2.5. TREE WRAPS ARE TEMPORARY AND NO LONGER NEEDED ONCE THE TREES DEVELOP CORKY BARK.
3. STAKING/GUYING:
   3.1. STAKE/GUY ALL TREES IMMEDIATELY AFTER LAWN SODDING OPERATIONS AND PRIOR TO ACCEPTANCE.
   3.2. STAKE DECIDUOUS TREES 2” CALIPER AND LESS. STAKE EVERGREEN TREES UNDER 7’-0” TALL.
      3.2.1. STAKES ARE PLACED IN LINE WITH PREVAILING WIND DIRECTION AND DRIVEN INTO UNDISTURBED SOIL.
      3.2.2. TIES ARE ATTACHED TO THE TREE, USUALLY AT THE LOWEST BRANCH.
   3.3. GUY DECIDUOUS TREES OVER 2” CALIPER. GUY EVERGREEN TREES 7’-0” TALL AND OVER.
      3.3.1. GUY WIRES TO BE ATTACHED TO THREE STAKES DRIVEN INTO UNDISTURBED SOIL, WITH ONE STAKE PLACED IN THE DIRECTION OF THE PREVAILING WIND.
      3.3.2. TIES ARE ATTACHED TO THE TREE AS HIGH AS PRACTICAL.
      3.3.3. THE AXIS OF THE STAKE SHOULD BE AT 90 DEGREE ANGLE TO THE AXIS ON THE PULL OF THE GUY WIRE.
4. **REMOVE ALL GUYING AND STAKING AFTER ONE YEAR FROM PLANTING.**

PRUNING:
1. PRUNE DECIDUOUS TREES AND EVERGREENS ONLY TO REMOVE BROKEN OR DAMAGED BRANCHES.

WORKMANSHIP
DURING LANDSCAPE/IRRIGATION INSTALLATION OPERATIONS, ALL AREAS SHALL BE KEPT NEAT AND CLEAN. PRECAUTIONS SHALL BE TAKEN TO AVOID DAMAGE TO EXISTING STRUCTURES. ALL WORK SHALL BE PERFORMED IN A SAFE MANNER TO THE OPERATORS, THE OCCUPANTS AND ANY PEDESTRIANS.

UPON COMPLETION OF INSTALLATION OPERATIONS, ALL EXCESS MATERIALS, EQUIPMENT, DEBRIS AND WASTE MATERIAL SHALL BE CLEANED UP AND REMOVED FROM THE SITE; UNLESS PROVISIONS HAVE BEEN GRANTED BY THE OWNER TO USE ON-SITE TRASH RECEPTACLES. SWEEP PARKING AND WALKS CLEAN OF DIRT AND DEBRIS. REMOVE ALL PLANT TAGS AND OTHER DEBRIS FROM LAWNS AND PLANTING AREAS.

ANY DAMAGE TO THE LANDSCAPE, THE STRUCTURE, OR THE IRRIGATION SYSTEM CAUSED BY THE LANDSCAPE CONTRACTOR SHALL BE REPAIRED BY THE LANDSCAPE CONTRACTOR WITHOUT CHARGE TO THE OWNER.

MAINTENANCE
CONTRACTOR SHALL PROVIDE MAINTENANCE UNTIL WORK HAS BEEN ACCEPTED BY THE OWNER'S REPRESENTATIVE.

MAINTENANCE SHALL INCLUDE MOWING, FERTILIZING, MULCHING, PRUNING, CULTIVATION, WEEDING, WATERING, AND APPLICATION OF APPROPRIATE INSECTICIDES AND FUNGICIDES NECESSARY TO MAINTAIN PLANTS AND LAWNS FREE OF INSECTS AND DISEASE.
1. RE-SET SETTLED PLANTS TO PROPER GRADE AND POSITION. RESTORE PLANTING SAUCER AND ADJACENT MATERIAL AND REMOVE DEAD MATERIAL.
2. REPAIR GUY WIRES AND STAKES AS REQUIRED. REMOVE ALL STAKES AND GUY WIRES AFTER 1 YEAR.
3. CORRECT DEFECTIVE WORK AS SOON AS POSSIBLE AFTER DEFICIENCIES BECOME APPARENT AND WEATHER AND SEASON PERMIT.
4. WATER TREES, PLANTS AND GROUND COVER BEDS WITHIN THE FIRST 24 HOURS OF INITIAL PLANTING, AND NOT LESS THAN TWICE PER WEEK UNTIL FINAL ACCEPTANCE.

LANDSCAPE MAINTENANCE SPECIFICATIONS

THE CONTRACTOR SHALL PROVIDE AS A SEPARATE BID, MAINTENANCE FOR A PERIOD OF 1 YEAR AFTER FINAL ACCEPTANCE OF THE PROJECT LANDSCAPING. THE CONTRACTOR MUST BE ABLE TO PROVIDE CONTINUED MAINTENANCE IF REQUESTED BY THE OWNER OR PROVIDE THE NAME OF A REPUTABLE LANDSCAPE CONTRACTOR WHO CAN PROVIDE MAINTENANCE.

STANDARDS
ALL LANDSCAPE MAINTENANCE SERVICES SHALL BE PERFORMED BY TRAINED PERSONNEL USING CURRENT, ACCEPTABLE HORTICULTURAL PRACTICES.

ALL WORK SHALL BE PERFORMED IN A MANNER THAT MAINTAINS THE ORIGINAL INTENT OF THE LANDSCAPE DESIGN.

ALL CHEMICAL APPLICATIONS SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT COUNTY, STATE AND FEDERAL LAWS, USING EPA REGISTERED MATERIALS AND METHODS OF APPLICATION. THESE APPLICATIONS SHALL BE PERFORMED UNDER THE SUPERVISION OF A LICENSED CERTIFIED APPLICATOR.

APPROVALS
ANY WORK PERFORMED IN ADDITION TO THAT WHICH IS OUTLINED IN THE CONTRACT SHALL ONLY BE DONE UPON WRITTEN APPROVAL BY THE OWNER’S REPRESENTATIVE (GENERAL MANAGER OF THE RESTAURANT).

ALL SEASONAL COLOR SELECTIONS SHALL BE APPROVED BY THE GENERAL MANAGER PRIOR TO ORDERING AND INSTALLATION.

SOIL TESTING
THE MAINTENANCE CONTRACTOR SHALL PERFORM SOIL TESTS AS NEEDED TO IDENTIFY IMBALANCES OR DEFICIENCIES CAUSING PLANT MATERIAL DECLINE. THE OWNER SHALL BE NOTIFIED OF THE RECOMMENDATION FOR APPROVAL, AND THE NECESSARY CORRECTIONS MADE AT AN ADDITIONAL COST TO THE OWNER.

ACCEPTABLE SOIL TEST RESULTS

	LANDSCAPE TREES AND SHRUBS	TURF
pH RANGE	5.0 - 7.0	6.0 - 7.0
ORGANIC MATTER	> 1.5%	> 2.5%
MAGNESIUM (Mg)	100+ LBS/ACRE	100+ LBS/ACRE
PHOSPHORUS (P205)	150+ LBS/ACRE	150+ LBS/ACRE
POTASSIUM (K2O)	120+ LBS/ACRE	120+ LBS/ACRE
SOLUBLE SALTS/ CONDUCTIVITY	NOT TO EXCEED 900PPM/1.9MMHOS/CM IN SOIL; NOT TO EXCEED 1400 PPM/2.5 MMHOS/CM IN HIGH ORGANIC MIX.	NOT TO EXCEED 900PPM/1.9MMHOS/CM IN SOIL; NOT TO EXCEED 1400 PPM/2.5 MMHOS/CM IN HIGH ORGANIC MIX.

WORKMANSHIP
DURING LANDSCAPE MAINTENANCE OPERATIONS, ALL AREAS SHALL BE KEPT NEAT AND CLEAN. PRECAUTIONS SHALL BE TAKEN TO AVOID DAMAGE TO EXISTING STRUCTURES. ALL WORK SHALL BE PERFORMED IN A SAFE MANNER TO THE OPERATORS, THE OCCUPANTS AND ANY PEDESTRIANS.

UPON COMPLETION OF MAINTENANCE OPERATIONS, ALL DEBRIS AND WASTE MATERIAL SHALL BE CLEANED UP AND REMOVED FROM THE SITE, UNLESS PROVISIONS HAVE BEEN GRANTED BY THE OWNER TO USE ON-SITE TRASH RECEPTACLES.

ANY DAMAGE TO THE LANDSCAPE, THE STRUCTURE, OR THE IRRIGATION SYSTEM CAUSED BY THE MAINTENANCE CONTRACTOR, SHALL BE REPAIRED BY THE MAINTENANCE CONTRACTOR WITHOUT CHARGE TO THE OWNER.

TURF

GENERAL CLEAN UP
PRIOR TO MOWING, ALL TRASH, STICKS, AND OTHER UNWANTED DEBRIS SHALL BE REMOVED FROM LAWNS, PLANT BEDS, AND PAVED AREAS.

MOWING
WARM SEASON GRASSES (I.E. BERMUDA GRASS) SHALL BE MAINTAINED AT A HEIGHT OF 1” TO 2” DURING THE GROWING SEASON.

COOL SEASON GRASSES, INCLUDING BLUE GRASS, TALL FESCUE, PERENNIAL RYEGRASS, ETC., SHALL BE MAINTAINED AT A HEIGHT OF 2” TO 3” IN SPRING AND FALL. FROM JUNE THROUGH SEPTEMBER, MOWING HEIGHT SHALL BE MAINTAINED AT NO LESS THAN 3”.

THE MOWING OPERATION INCLUDES TRIMMING AROUND ALL OBSTACLES, RAKING EXCESSIVE GRASS CLIPPINGS AND REMOVING DEBRIS FROM WALKS, CURBS, AND PARKING AREAS. CAUTION: WEED EATERS SHOULD NOT BE USED AROUND TREES BECAUSE OF POTENTIAL DAMAGE TO THE BARK.

EDGING
EDGING OF ALL SIDEWALKS, CURBS AND OTHER PAVED AREAS SHALL BE PERFORMED ONCE EVERY OTHER MOWING. DEBRIS FROM THE EDGING OPERATIONS SHALL BE REMOVED AND THE AREAS SWEPT CLEAN. CAUTION SHALL BE USED TO AVOID FLYING DEBRIS.

LIMING & FERTILIZING
A SOIL TEST SHALL BE TAKEN TO DETERMINE WHETHER AN APPLICATION OF LIMESTONE IN LATE FALL IS NECESSARY. IF LIMESTONE IS REQUIRED, THE LANDSCAPE CONTRACTOR SHALL SPECIFY THE RATE, OBTAIN APPROVAL FROM THE OWNER AND APPLY IT AT AN ADDITIONAL COST. A UNIT PRICE FOR LIMING OF TURF SHALL ACCOMPANY THE BID BASED ON A RATE OF 50 POUNDS PER 1000 SQUARE FEET.

FERTILIZER SHALL BE APPLIED IN AREAS BASED ON THE EXISTING TURF SPECIES.

LAWN WEED CONTROL: HERBICIDES
SELECTION AND PROPER USE OF HERBICIDES SHALL BE THE LANDSCAPE CONTRACTOR’S RESPONSIBILITY. ALL CHEMICAL APPLICATIONS SHALL BE PERFORMED UNDER THE SUPERVISION OF A LICENSED CERTIFIED APPLICATOR. **READ THE LABEL PRIOR TO APPLYING ANY CHEMICAL.**

INSECT & DISEASE CONTROL FOR TURF
THE CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING THE SITE CONDITIONS ON EACH VISIT TO DETERMINE IF ANY INSECT PEST OR DISEASE PROBLEMS EXIST. THE CONTRACTOR SHALL IDENTIFY THE INSECT PEST OR DISEASE, AS WELL AS THE HOST PLANT, AND THEN CONSULT THE MOST CURRENT EDITION OF THE COOPERATIVE EXTENSION SERVICE’S “COMMERCIAL INSECTICIDE RECOMMENDATION FOR TURF” FOR CONTROL. THE LICENSED APPLICATOR SHALL BE FAMILIAR WITH THE LABEL PROVIDED FOR THE SELECTED PRODUCT PRIOR TO APPLICATION.

INSPECTION AND TREATMENT TO CONTROL INSECT PESTS SHALL BE INCLUDED IN THE CONTRACT PRICE.

TREES, SHRUBS, & GROUND COVER

PRUNING
ALL ORNAMENTAL TREES, SHRUBS AND GROUND COVER SHALL BE PRUNED WHEN APPROPRIATE TO REMOVE DEAD OR DAMAGED BRANCHES, DEVELOP THE NATURAL SHAPES. **DO NOT SHEAR TREES OR SHRUBS.** IF PREVIOUS MAINTENANCE PRACTICE HAS BEEN TO SHEAR AND BALL, THEN A NATURAL SHAPE WILL BE RESTORED GRADUALLY.

PRUNING GUIDELINES:
1. PRUNE THOSE THAT FLOWER BEFORE THE END OF JUNE IMMEDIATELY AFTER FLOWERING. FLOWER BUDS DEVELOP DURING THE PREVIOUS GROWING SEASON. FALL, WINTER OR SPRING PRUNING WOULD REDUCE THE SPRING FLOWERING DISPLAY.
2. PRUNE THOSE THAT FLOWER IN SUMMER OR AUTUMN IN WINTER OR SPRING BEFORE NEW GROWTH BEGINS, SINCE THESE PLANTS DEVELOP FLOWERS ON NEW GROWTH.

3. DELAY PRUNING PLANTS GROWN FOR ORNAMENTAL FRUITS, SUCH AS COTONEASTERS, PYRACANTHAS AND VIBURNUMS.
4. HOLLIES AND OTHER EVERGREENS MAY BE PRUNED DURING WINTER IN ORDER TO USE THEIR BRANCHES FOR SEASONAL DECORATION. HOWEVER, SEVERE PRUNING OF EVERGREENS SHOULD BE DONE IN EARLY SPRING ONLY.
5. BROADLEAF EVERGREEN SHRUBS SHALL BE HAND-PRUNED TO MAINTAIN THEIR NATURAL APPEARANCE AFTER THE NEW GROWTH HARDENS OFF.
6. HEDGES OR SHRUBS THAT REQUIRE SHEARING TO MAINTAIN A FORMAL APPEARANCE SHALL BE PRUNED AS REQUIRED. DEAD WOOD SHALL BE REMOVED FROM SHEARED PLANTS BEFORE THE FIRST SHEARING OF THE SEASON.
7. CONIFERS SHALL BE PRUNED, IF REQUIRED, ACCORDING TO THEIR GENUS.
   7.1. YEWS, JUNIPERS, HEMLOCKS, ARBORVITAE, AND FALSE-CYPRESS MAY BE PRUNED AFTER NEW GROWTH HAS HARDENED OFF IN LATE SUMMER. IF SEVERE PRUNING IS NECESSARY, IT MUST BE DONE IN EARLY SPRING.
   7.2. FIRS AND SPRUCES MAY BE LIGHTLY PRUNED IN LATE SUMMER, FALL, OR WINTER AFTER COMPLETING GROWTH. LEAVE SIDE BUDS. NEVER CUT CENTRAL LEADER.
   7.3. PINES MAY BE LIGHTLY PRUNED IN EARLY JUNE BY REDUCING CANDLES.
8. GROUNDCOVER SHALL BE EDGED AND PRUNED AS NEEDED TO CONTAIN IT WITHIN ITS BORDERS.
9. THINNING: REMOVE BRANCHES AND WATER SPROUTS BY CUTTING THEM BACK TO THEIR POINT OF ORIGIN ON PARENT STEMS. THIS METHOD RESULTS IN A MORE OPEN PLANT, WITHOUT STIMULATING EXCESSIVE GROWTH. THINNING IS USED ON CREPE MYRTLES, LILACS, VIBURNUMS, SMOKE BUSH,ETC.
10. RENEWAL PRUNING: REMOVE OLDEST BRANCHES OF SHRUB AT GROUND, LEAVING THE YOUNGER, MORE VIGOROUS BRANCHES. ALSO REMOVE WEAK STEMS. ON OVERGROWN PLANTS, THIS METHOD MAY BE BEST DONE OVER A THREE-YEAR PERIOD. RENEWAL PRUNING MAY BE USED ON ABELIA, FORSYTHIA, DEUTZIA, SPIREA, ETC.

PLANTS OVERHANGING PASSAGEWAYS AND PARKING AREAS AND DAMAGED PLANTS SHALL BE PRUNED AS NEEDED.

SHADE TREES THAT CANNOT BE ADEQUATELY PRUNED FROM THE GROUND SHALL NOT BE INCLUDED IN THE MAINTENANCE CONTRACT. A CERTIFIED ARBORIST UNDER A SEPARATE CONTRACT SHALL PERFORM THIS TYPE OF WORK.

SPRING CLEANUP
PLANT BEDS SHALL RECEIVE A GENERAL CLEANUP BEFORE FERTILIZING AND MULCHING. CLEANUP INCLUDES REMOVING DEBRIS AND TRASH FROM BEDS AND CUTTING BACK HERBACEOUS PERENNIALS LEFT STANDING THROUGH WINTER, E.G. ORNAMENTAL GRASSES, SEDUM AUTUMN JOY.

FERTILIZING
FOR TREES, THE RATE OF FERTILIZATION DEPENDS ON THE TREE SPECIES, TREE VIGOR, AREA AVAILABLE FOR FERTILIZATION, AND GROWTH STAGE OF THE TREE. MATURE SPECIMENS BENEFIT FROM FERTILIZATION EVERY 3 TO 4 YEARS; YOUNGER TREES SHALL BE FERTILIZED MORE OFTEN DURING RAPID GROWTH STAGES.

THE CURRENT RECOMMENDATION IS BASED ON THE RATE OF 1000 SQUARE FEET OF AREA UNDER THE TREE TO BE FERTILIZED. FOR DECIDUOUS TREES, 2 TO 6 POUNDS OF NITROGEN PER 1000 SQUARE FEET; FOR
NARROW-LEAF EVERGREENS, 1 TO 4 POUNDS OF NITROGEN PER 1000 SQUARE FEET; FOR BROADLEAF EVERGREENS, 1 TO 3 POUNDS OF NITROGEN PER 1000 SQUARE FEET.

SHRUBS AND GROUNDCOVER SHALL BE TOP-DRESSED WITH COMPOST 1” DEEP, OR FERTILIZED ONCE IN MARCH WITH 10-6-4 ANALYSIS FERTILIZER AT THE RATE OF 3 POUNDS PER 100 SQUARE FEET OF BED AREA. ERICACEOUS MATERIAL SHALL BE FERTILIZED WITH AN ERICACEOUS FERTILIZER AT THE MANUFACTURER’S RECOMMENDATION RATE. IF PLANTS ARE GROWING POORLY, A SOIL SAMPLE SHOULD BE TAKEN.

MULCHING
ANNUALLY, ALL TREE AND SHRUB BEDS WILL BE PREPARED AND MULCHED, TO A MINIMUM DEPTH OF 3” WITH QUALITY MULCH TO MATCH EXISTING. BED PREPARATION SHALL INCLUDE REMOVING ALL WEEDS, CLEANING UP SAID BED, EDGING AND CULTIVATING DECAYED MULCH INTO THE SOIL. DEBRIS FROM EDGING IS TO BE REMOVED FROM BEDS WHERE APPLICABLE. IF DEEMED NECESSARY, A PRE-EMERGENT HERBICIDE MAY BE APPLIED TO THE SOIL TO INHIBIT THE GROWTH OF FUTURE WEEDS.

ORGANICALLY MAINTAINED GARDENS SHALL NOT RECEIVE ANY PRE-EMERGENT HERBICIDES. MULCH IN EXCESS OF 4” WILL BE REMOVED FROM THE BED AREAS. SPECIAL CARE SHALL BE TAKEN IN THE MULCHING OPERATION NOT TO OVER-MULCH OR COVER THE BASE OF TREES AND SHRUBS. THIS CAN BE DETRIMENTAL TO THE HEALTH OF THE PLANTS.

WEEDING
ALL BEDS SHALL BE WEEDED ON A CONTINUOUS BASIS THROUGHOUT THE GROWING SEASON TO MAINTAIN A NEAT APPEARANCE AT ALL TIMES.

PRE-EMERGENT (SOIL-APPLIED) AND POST-EMERGENT (FOLIAR-APPLIED) HERBICIDES SHALL BE USED WHERE AND WHEN APPLICABLE AND IN ACCORDANCE WITH THE PRODUCT’S LABEL.

INSECT & DISEASE CONTROL: TREES, SHRUBS & GROUNDCOVER
THE MAINTENANCE CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING THE LANDSCAPE SITE ON A REGULAR BASIS. THE MONITORING FREQUENCY SHALL BE MONTHLY EXCEPT FOR GROWING SEASON, WHICH WILL BE EVERY OTHER WEEK. TRAINED PERSONNEL SHALL MONITOR FOR PLANT DAMAGING INSECT ACTIVITY, PLANT PATHOGENIC DISEASES AND POTENTIAL CULTURAL PROBLEMS IN THE LANDSCAPE. THE PEST OR CULTURAL PROBLEM WILL BE IDENTIFIED UNDER THE SUPERVISION OF THE CONTRACTOR.

FOR PLANT DAMAGING INSECTS AND MITES IDENTIFIED IN THE LANDSCAPE, THE CONTRACTOR SHALL CONSULT AND FOLLOW THE RECOMMENDATIONS OF THE MOST CURRENT EDITION OF THE STATE COOPERATIVE SERVICE PUBLICATION ON INSECT CONTROL ON LANDSCAPE PLANT MATERIAL.

PLANT PATHOGENIC DISEASE PROBLEMS IDENTIFIED BY THE CONTRACTOR THAT CAN BE RESOLVED BY PRUNING OR PHYSICAL REMOVAL OF DAMAGED PLANT PARTS WILL BE PERFORMED AS PART OF THE CONTRACT. FOR AN ADDITIONAL CHARGE, PLANT PATHOGENIC DISEASES THAT CAN BE RESOLVED THROUGH PROPERLY TIMED APPLICATIONS OF FUNGICIDES SHALL BE MADE WHEN THE OWNER AUTHORIZES IT.

IF THE CONTRACTOR NOTES AN ESPECIALLY INSECT-OR DISEASE-PRONE PLANT SPECIES IN THE LANDSCAPE, HE/SHE WILL SUGGEST REPLACEMENT WITH A MORE PEST-RESISTANT CULTIVARS OR SPECIES THAT IS CONSISTENT WITH THE INTENT OF THE LANDSCAPE DESIGN.

NOTE: FOR IDENTIFICATION OF PLANT-DAMAGING INSECTS AND MITES, A REFERENCE TEXTBOOK THAT CAN BE USED IS INSECTS THAT FEED ON TREES AND SHRUBS BY JOHNSON AND LYON, COMSTOCK PUBLISHING ASSOCIATES. FOR PLAN PATHOGENIC DISEASES, TWO REFERENCES ARE SUGGESTED: SCOUTING AND CONTROLLING WOODY ORNAMENTAL DISEASES IN LANDSCAPES AND NURSERIES , AUTHORIZED BY GARY MOORMAN, PUBLISHED BY PENN STATE COLLEGE OF AGRICULTURAL SCIENCES, AND DISEASES OF TREES AND SHRUBS BY SINCLAIR AND LYON, PUBLISHED BY COMSTOCK PUBLISHING PRESS.

TRASH REMOVAL
THE MAINTENANCE CONTRACTOR SHALL REMOVE TRASH FROM ALL SHRUB AND GROUNDCOVER BEDS WITH EACH VISIT.

LEAF REMOVAL
ALL FALLEN LEAVES SHALL BE REMOVED FROM THE SITE IN NOVEMBER AND ONCE IN DECEMBER. IF REQUESTED BY THE OWNER, THE MAINTENANCE CONTRACTOR, AT AN ADDITIONAL COST TO THE OWNER SHALL PERFORM SUPPLEMENTAL LEAF REMOVALS.

WINTER CLEAN-UP
THE PROJECT SHALL RECEIVE A GENERAL CLEAN-UP ONCE DURING EACH OF THE WINTER MONTHS, I.E., JANUARY, FEBRUARY, AND MARCH.
CLEAN-UP INCLUDES:
- CLEANING CURBS AND PARKING AREAS
- REMOVING ALL TRASH AND UNWANTED DEBRIS
- TURNING MULCH WHERE NECESSARY
- INSPECTION OF GROUNDS

SEASONAL COLOR: PERENNIALS, ANNUALS, AND BULBS

THE INSTALLATION OF PERENNIALS, ANNUALS, AND BULBS, UNLESS SPECIFIED HEREIN, SHALL BE REVIEWED WITH THE OWNER, AND, IF ACCEPTED, INSTALLED AND BILLED TO THE OWNER.

SEASONAL COLOR MAINTENANCE

PERENNIALIZATION OF BULBS:
1. AFTER FLOWERING, CUT OFF SPENT FLOWER HEADS.
2. ALLOW LEAVES OF DAFFODILS AND HYACINTHS TO REMAIN FOR SIX WEEKS AFTER FLOWERS HAVE FADED. CUT OFF AT BASE.
3. ALLOW LEAVES OF OTHER BULBS TO YELLOW NATURALLY AND THEN CUT OFF AT BASE.
4. APPLY FERTILIZER AFTER FLOWERING IN SPRING, POSSIBLY AGAIN IN FALL. APPLY 10-10-10 AT THE RATE OF 2 POUNDS PER 1000 SQUARE FEET, OR TOP-DRESS WITH COMPOST 1” DEEP. FALL FERTILIZATION WITH A BULB FERTILIZER OR MULCHING WITH 1” OF COMPOST IS OPTIONAL.

FLOWER ROTATION
1. BULBS: REMOVE THE ENTIRE PLANT AND BULB AFTER FLOWERS HAVE FADED OR AT THE DIRECTION OF THE OWNER, AND INSTALL NEW PLANTS IF INCLUDED IN CONTRACT.
2. SUMMER ANNUALS OR FALL PLANTS:
   2.1. DEAD HEADING: PINCH AND REMOVE DEAD FLOWERS ON ANNUALS AS NECESSARY.
   2.2. FERTILIZING SUMMER ANNUALS: FERTILIZE USING ONE OR TWO METHODS: APPLY A SLOW-RELEASE FERTILIZER IN MAY FOLLOWING MANUFACTURER’S RECOMMENDATIONS. A BOOSTER SUCH AS 10-10-10 MAY BE NECESSARY IN LATE SUMMER. OR, APPLY LIQUID FERTILIZATIONS OF 20-20-20 WATER-SOLUBLE FERTILIZERS, NOT TO EXCEED 2 POUNDS OF 20-20-20 PER 100 GALLONS OF WATER, MONTHLY; OR MULCH WITH COMPOST 1” DEEP.
   2.3. REMOVAL: IF FALL PLANTS ARE TO BE INSTALLED, SUMMER ANNUALS SHALL BE LEFT IN THE GROUND UNTIL THE FIRST KILLING FROST AND THEN REMOVED, UNLESS OTHERWISE DIRECTED BY THE OWNER.

PERENNIALS
1. AFTER INITIAL INSTALLATION, IF A TIME-RELEASED FERTILIZER HAS BEEN INCORPORATED DURING PLANT INSTALLATION, NO MORE FERTILIZER NEED BE APPLIED THE FIRST GROWING SEASON.
2. THE FOLLOWING YEAR:
   2.1. FERTILIZE PERENNIALS WITH A SLOW-RELEASE FERTILIZER OR ANY 50% ORGANIC FERTILIZER, OR MULCH PERENNIALS WITH COMPOST 1” DEEP.
   2.2. CUT ALL DECIDUOUS PERENNIALS FLUSH TO THE GROUND BY MARCH 1, IF THIS WAS NOT DONE THE
   2.3. PREVIOUS FALL, TO ALLOW NEW GROWTH TO DEVELOP FREELY.
   2.4. MULCH THE PERENNIAL BED ONCE IN EARLY SPRING AT 1”-2” DEPTH. IF SOIL IS BARED IN LATE
   2.5. FALL, RE-MULCH LIGHTLY AFTER GROUND IS FROZEN TO PROTECT PERENNIALS.
   2.6. INSPECT FOR INSECT OR DISEASE PROBLEMS ON PERENNIALS. MONITOR AND CONTROL SLUGS ON HOSTAS AND LIGULARIAS. POWDERY MILDEW ON PHLOX, MONARDAS, AND ASTERS CAN BE PREVENTED WITH PROPERLY TIMED FUNGICIDES OR USE OF DISEASE-RESISTANT VARIETIES.
   2.7. WEED PERENNIAL BED AS SPECIFIED IN “WEEDING” ABOVE.
   2.8. PRUNE BRANCHING SPECIES TO INCREASE DENSITY. CUT ONLY THE FLOWERING STEMS AFTER BLOOMING. DO NOT REMOVE THE FOLIAGE.
3. THE FOLLOWING FALL CUT BACK DETERIORATING PLANT PARTS UNLESS INSTRUCTED TO RETAIN FOR WINTER INTEREST, E.G. SEDUM AUTUMN JOY AND ORNAMENTAL GRASSES.
4. LONG-TERM CARE:
   4.1. DIVIDE PLANTS THAT OVERCROWD THE SPACE PROVIDED. DIVIDE ACCORDING TO THE SPECIES. SOME NEED FREQUENT DIVIDING, E.G. ASTERS AND YARROW EVERY TWO YEARS; OTHER RARELY, IF EVER, E.G. PEONIES, HOSTAS, AND ASTILBE.
   4.2. FOR DETAILED INFORMATION REGARDING THE CARE OF SPECIFIC PERENNIALS, REFER TO ALL ABOUT PERENNIALS BY ORTHO; PERENNIALS: HOW TO SELECT, GROW AND ENJOY BY PAMELA HARPER AND FREDERICK MCGOUTY, HP BOOKS PUBLISHER; HERBACEOUS PERENNIAL PLANTS: A TREATISE ON THEIR IDENTIFICATION, CULTURE AND GARDEN ATTRIBUTES BY ALLAN ARMITAGE, STIPES PUB LLC.

SUMMARY OF MAINTENANCE

LAWN MAINTENANCE
1. SOIL ANALYSIS PERFORMED ANNUALLY TO DETERMINE PH. IF PH DOES NOT FALL WITHIN SPECIFIED RANGE, ADJUST ACCORDING TO SOIL TEST RECOMMENDATIONS .
2. MAINTAIN PROPER FERTILITY AND PH LEVELS OF THE SOIL TO PROVIDE AN ENVIRONMENT CONDUCIVE TO TURF VITALITY FOR COOL SEASON GRASSES
3. MOW WARM AND COOL SEASON ON A REGULAR BASIS AND AS SEASON AND WEATHER DICTATES. REMOVE NO MORE THAN THE TOP 1/3 OF LEAF BLADE. CLIPPINGS ON PAVED AND BED AREAS WILL BE REMOVED.
4. AERATE WARM SEASON TURF AREAS TO MAINTAIN HIGH STANDARDS OF TURF APPEARANCE.
5. APPLY PRE-EMERGENT TO TURF IN TWO APPLICATIONS IN EARLY FEBRUARY AND EARLY APRIL TO EXTEND BARRIER.
6. APPLY POST EMERGENT AS NEEDED TO CONTROL WEEDS.
7. MECHANICALLY EDGE CURBS AND WALKS.
8. APPLY NON-SELECTIVE HERBICIDE, TO MULCHED BED AREAS AND PAVEMENT AND REMOVE EXCESS RUNNERS TO MAINTAIN CLEAN DEFINED BEDS.

TREE, GROUNDCOVER, AND SHRUB BED MAINTENANCE
1. PRUNE SHRUBS, TREES AND GROUNDCOVER TO ENCOURAGE HEALTHY GROWTH AND CREATE A NATURAL APPEARANCE.
2. MULCH TO BE APPLIED IN FEBRUARY/MARCH WITH A HALF RATE IN LATE SUMMER TO TOP DRESS.
3. APPLY PRE-EMERGENT HERBICIDES IN FEBRUARY AND APRIL.
4. MANUAL WEED CONTROL TO MAINTAIN CLEAN BED APPEARANCE.
5. APPLY FUNGICIDES AND INSECTICIDES AS NEEDED TO CONTROL INSECTS AND DISEASE.
6. ORNAMENTAL SHRUBS, TREES AND GROUNDCOVERS TO BE FERTILIZED THREE (3) TIMES PER YEAR WITH A BALANCED MATERIAL (JANUARY/FEBRUARY, APRIL/MAY, AND OCTOBER/NOVEMBER)
7. EDGE ALL MULCHED BEDS.
8. REMOVE ALL LITTER AND DEBRIS.

GENERAL MAINTENANCE
1. REMOVE ALL MAN-MADE DEBRIS, BLOW EDGES.
2. INSPECT GROUNDS ON A MONTHLY BASIS AND SCHEDULE INSPECTION WITH UNIT OPERATOR.

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DKA PROJECT NO: 24 - 027

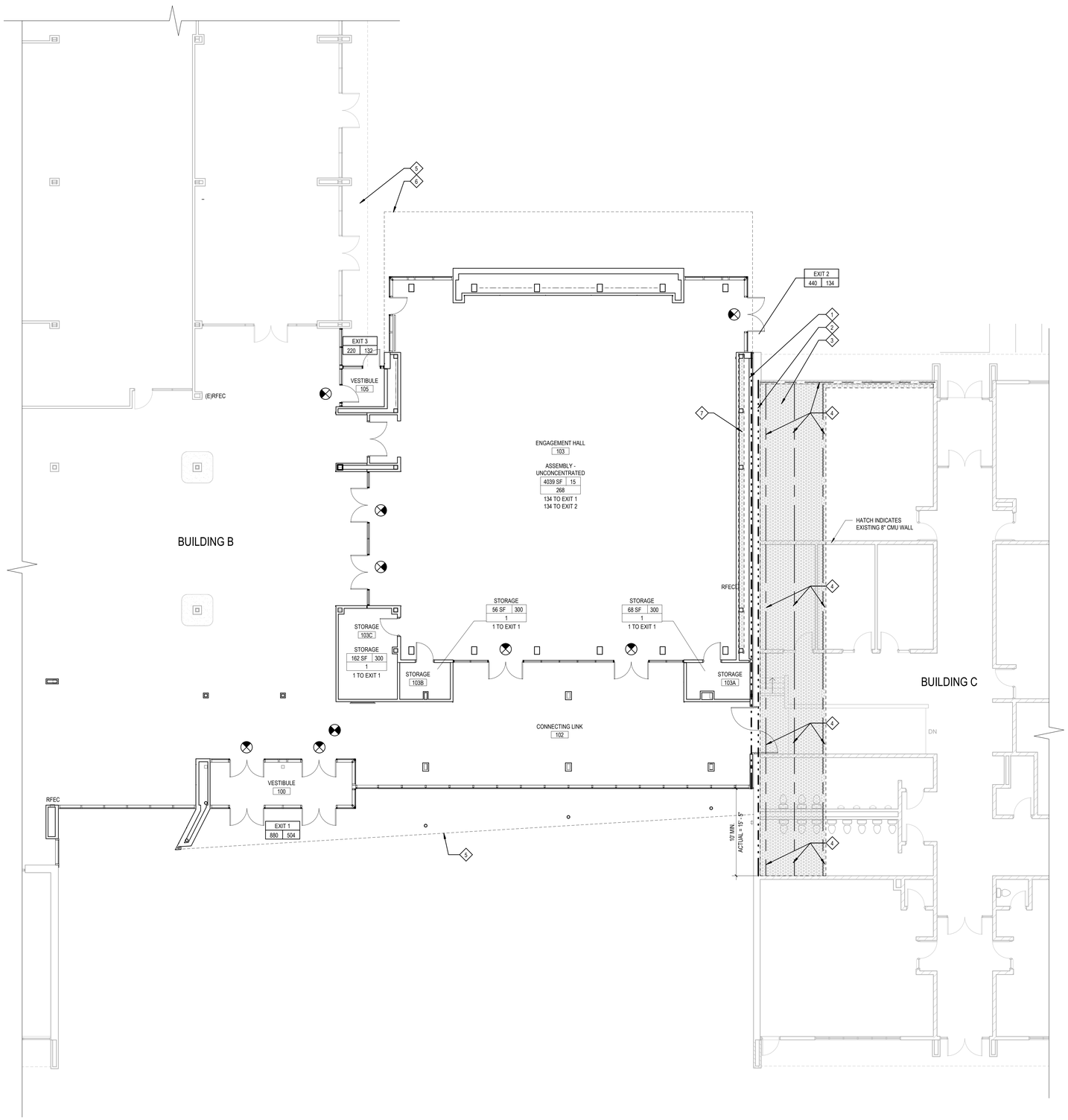
KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
LANDSCAPE SPECIFICATIONS

SHEET NUMBER:
L-102



1 LIFE SAFETY PLAN - LEVEL 1
1/8" = 1'-0"

CODE COMPLIANCE NOTES:

APPLICABLE CODES:

2021 INTERNATIONAL BUILDING CODE*
2018 INTERNATIONAL MECHANICAL CODE
2018 NATIONAL ELECTRICAL CODE
2018 NFPA 101 LIFE SAFETY CODE
CURRENT EDITION, FIRE PREVETNTION AND SAFETY CODE
CURRENT EDITION, ILLINOIS PLUMBING CODE
CURRENT EDITION (2018), ILLINOIS ACCESSIBILITY CODE
CURRENT EDITION (2021), ILLINOIS ENERGY CONSERVATION CODE

BUILDING AREA AND HEIGHT SUMMARY:

FIRST FLOOR - EXISTING (GROSS):	41,747 SF
FIRST FLOOR - ADDITION (GROSS):	5,263 SF
FIRST FLOOR - TOTAL (GROSS):	47,010 SF
SECOND FLOOR - TOTAL (GROSS):	20,437 SF
BUILDING HEIGHT:	24 FEET. 2 STORY

BUILDING CODE CLASSIFICATION:

*AS REVIEWED WITH LOCAL AHJ (THE CITY OF CRYSTAL LAKE), IT IS ACCEPTABLE FOR THE NEW ADDITION TO FOLLOW IBC 2021 FOR ALLOWABLE CONSTRUCTION MATERIALS UNDER TYPE II-B AND ALLOWABLE FLOOR AREA FRONTAGE INCREASE. REFER TO CODE REVIEW ITEMS FOR SPECIFIC VARIANCE ITEMS.

1. MIXED USE SEPARATE OCCUPANCY (SEE #3)
   USE: A-1, A-2, A-3, B, M
   RATIO (2021) 0.9802

2. CONSTRUCTION TYPE: TYPE IIB, FULLY SPRINKLERED

3. ALLOWABLE AREA AND HEIGHT, BASED ON USE GROUP A-1:

BASE FLOOR AREA:	(IBC 2021) 25,500 SF
FRONTAGE INCREASE, 64% ACCESS:	(IBC 2021) 16,381 SF
MAX. AREA PER FLOOR:	(IBC 2021) 41,881 SF
BASE BUILDING HEIGHT:	2 STORIES. 55 FEET
AUTOMATIC SPRINKLER INCREASE:	1 STORY. 20 FEET
MAX. BUILDING HEIGHT:	3 STORIES. 75 FEET

   ALLOWABLE AREA AND HEIGHT, BASED ON USE GROUP A-2/A-3:

BASE FLOOR AREA:	(IBC 2021) 28,500 SF
FRONTAGE INCREASE, 64% ACCESS:	(IBC 2021) 18,308 SF
MAX. AREA PER FLOOR:	(IBC 2021) 46,808 SF
BASE BUILDING HEIGHT:	2 STORIES. 55 FEET
AUTOMATIC SPRINKLER INCREASE:	1 STORY. 20 FEET
MAX BUILDING HEIGHT:	3 STORIES. 75 FEET

   ALLOWABLE AREA AND HEIGHT, BASED ON USE GROUP B:

BASE FLOOR AREA:	(IBC 2021) 69,000 SF
FRONTAGE INCREASE, 64% ACCESS:	(IBC 2021) 44,326 SF
MAX. AREA PER FLOOR:	(IBC 2021) 113,326 SF
BASE BUILDING HEIGHT:	3 STORIES. 55 FEET
AUTOMATIC SPRINKLER INCREASE:	1 STORY. 20 FEET
MAX BUILDING HEIGHT:	4 STORIES. 75 FEET

   ALLOWABLE AREA AND HEIGHT, BASED ON USE GROUP M:

BASE FLOOR AREA:	(IBC 2021) 37,500 SF
FRONTAGE INCREASE, 64% ACCESS:	(IBC 2021) 24,090 SF
MAX. AREA PER FLOOR:	(IBC 2021) 61,590 SF
BASE BUILDING HEIGHT:	2 STORIES. 55 FEET
AUTOMATIC SPRINKLER INCREASE:	1 STORY. 20 FEET
MAX BUILDING HEIGHT:	3 STORIES. 75 FEET

4. ACTUAL AREA, USE GROUP A-1: 5,060 SF
   ALLOWABLE AREA, USE GROUP A-1: (IBC 2021) 41,881 SF
   RATIO OF ACTUAL/ALLOWABLE: (IBC 2021) .1208

   ACTUAL AREA, USE GROUP A-2/A-3: 36,626 SF
   ALLOWABLE AREA, USE GROUP A-2/A-3: (IBC 2021) 46,808 SF
   RATIO OF ACTUAL/ALLOWABLE: (IBC 2021) .7825 SF

   ACTUAL AREA, USE GROUP B: 1286 SF
   ALLOWABLE AREA, USE B: (IBC 2021) 113,326 SF
   RATIO OF ACTUAL/ALLOWABLE: (IBC 2021) .0113

   ACTUAL AREA, USE GROUP M: 4038 SF
   ALLOWABLE AREA, USE GROUP M: (IBC 2021) 61,590 SF
   RATIO OF ACTUAL/ALLOWABLE: (IBC 2021) .0656

5. FIRE RESISTANCE RATINGS, TYPE IIB CONSTRUCTION:

STRUCTURAL FRAME	0 HRS
EXTERIOR BEARING WALLS	0 HRS
INTERIOR BEARING WALLS	0 HRS
EXTERIOR NON-BEARING WALLS	0 HRS
INTERIOR NON-BEARING WALLS	0 HRS
FLOOR CONSTRUCTION	0 HRS
ROOF CONSTRUCTION	0 HRS

6. FIRE-RESISTANCE-RATED SEPARATIONS:
   A. EXIT ACCESS COMPONENTS
      CORRIDORS 0 HR
   B. INCIDENTAL USE AREAS (PROVIDE RATINGS AS SHOWN ON PLAN)
      WALLS FIRE BARRIER
      FLOORS/CEILINGS (MATCH WALLS) HORIZ. ASSEMBLY

8. EXIT ACCESS TRAVEL DISTANCES, WITH SPRINKLER SYSTEM:
   USE A: ASSEMBLY 250 FT.

9. COMMON PATH OF EGRESS TRAVEL, WITH SPRINKLER SYSTEM:
   USE A-3: ASSEMBLY 75 FT.

10. DEAD END CORRIDOR LENGTH, WITH SPRINKLER SYSTEM:
    USE A-1: ASSEMBLY 20 FT.

CODE COMPLIANCE PLAN SYMBOLS LEGEND:

NOTE: REFER TO M.E.P.F.P. DRAWINGS FOR ADDITIONAL INFORMATION ON MECHANICAL, ELECTRICAL, AND FIRE PROTECTION SYSTEMS

ROOM-OCCUPANT LOAD

ASSEMBLY 1
150 SF 15
30
11 TO EXIT 1
10 TO EXIT 2
8 TO EXIT 3

- FUNCTION OF SPACE
- ASTERISK INDICATES REQUIREMENT TO POST A ROOM OCCUPANT LOAD PLACARD
- ROOM OR AREA SQUARE FOOTAGE
- SQUARE FOOTAGE PER OCCUPANT
- MAXIMUM OCCUPANT LOAD PER DESIGN
- OCCUPANT LOAD AND ASSIGNED EXIT DISCHARGE

EXIT ACCESS TRAVEL DISTANCE

128
39

- TRAVEL DISTANCE TO NEAREST EXIT ACCESS
- LINETYPE DENOTES COMMON PATH OF EGRESS TRAVEL
- TRAVEL DISTANCE ON COMMON PATH OF EGRESS
- DENOTES END OF COMMON PATH OF EGRESS TRAVEL
- DENOTES DIRECTION OF ALTERNATE PATH OF EGRESS
- EXIT DISCHARGE

EXIT OCCUPANT LOAD

EXIT 3
320 268

- EXIT DISCHARGE NUMBER
- ACTUAL OCCUPANT LOAD PER DESIGN
- MAXIMUM OCCUPANT LOAD PER DESIGN

EXIT SIGNS

- SOLID HATCH DENOTES EXIT SIGN FACE PLATE
- DIRECTION OF EGRESS
- EXIT SIGN, WALL MOUNTED

FIRE-RESISTANCE-RATED SEPARATION TYPES

*SEE WALL TYPES FOR CONSTRUCTION REQUIREMENTS

FW	FIRE WALL	HA	HORIZ. ASSEMBLY
FB	FIRE BARRIER	SH	SHAFT ENCLOSURE
FP	FIRE PARTITION	SB	SMOKE BARRIER

- SMOKE PARTITION
- 1 HR FIRE-RESISTANCE-RATED CONSTRUCTION
- 2 HR FIRE-RESISTANCE-RATED CONSTRUCTION
- 3 HR FIRE-RESISTANCE-RATED CONSTRUCTION
- 4 HR FIRE-RESISTANCE-RATED CONSTRUCTION

DEVICES

○	FE	WALL-MOUNTED FIRE EXTINGUISHER
□	SFEC	SEMI-RECESSED FIRE EXTINGUISHER CABINET
□	RFEC	RECESSED FIRE EXTINGUISHER CABINET
□	(E)RFEC	EXISTING RECESSED FIRE EXTINGUISHER CABINET

CODE PLAN REFERENCED NOTES:

1. 2 HR RATED FIRE WALL: NEW.
2. 2 HR RATED FIRE WALL: EXISTING.
3. HATCH INDICATES AREA OF ROOF DECK AND SUPPORTING STRUCTURE THAT IS TO BE PROVIDED WITH 1-HR RATED SPRAY APPLIED FIRE RESISTIVE MATERIAL.
4. PROVIDE 1-HR RATED SPRAY APPLIED FIRE PROOFING AT EXISTING SUPPORTING BEAMS AND JOISTS FOR THE ROOF STRUCTURE AS INDICATED.
5. EXTENT OF SOFFIT ABOVE.
6. EXTENT OF ROOF OVERHANG ABOVE.
7. HATCH INDICATES AREA 2-HR RATED SPRAY AND INTUMESCENT PAINTING APPLIED FIRE RESISTIVE MATERIAL APPLIED TO COLUMNS AND BRACING SUPPORTING NEW 2-HR RATED FIRE WALL. (REFER TO WALL SECTIONS FOR DETAILS)

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
CODE PLAN

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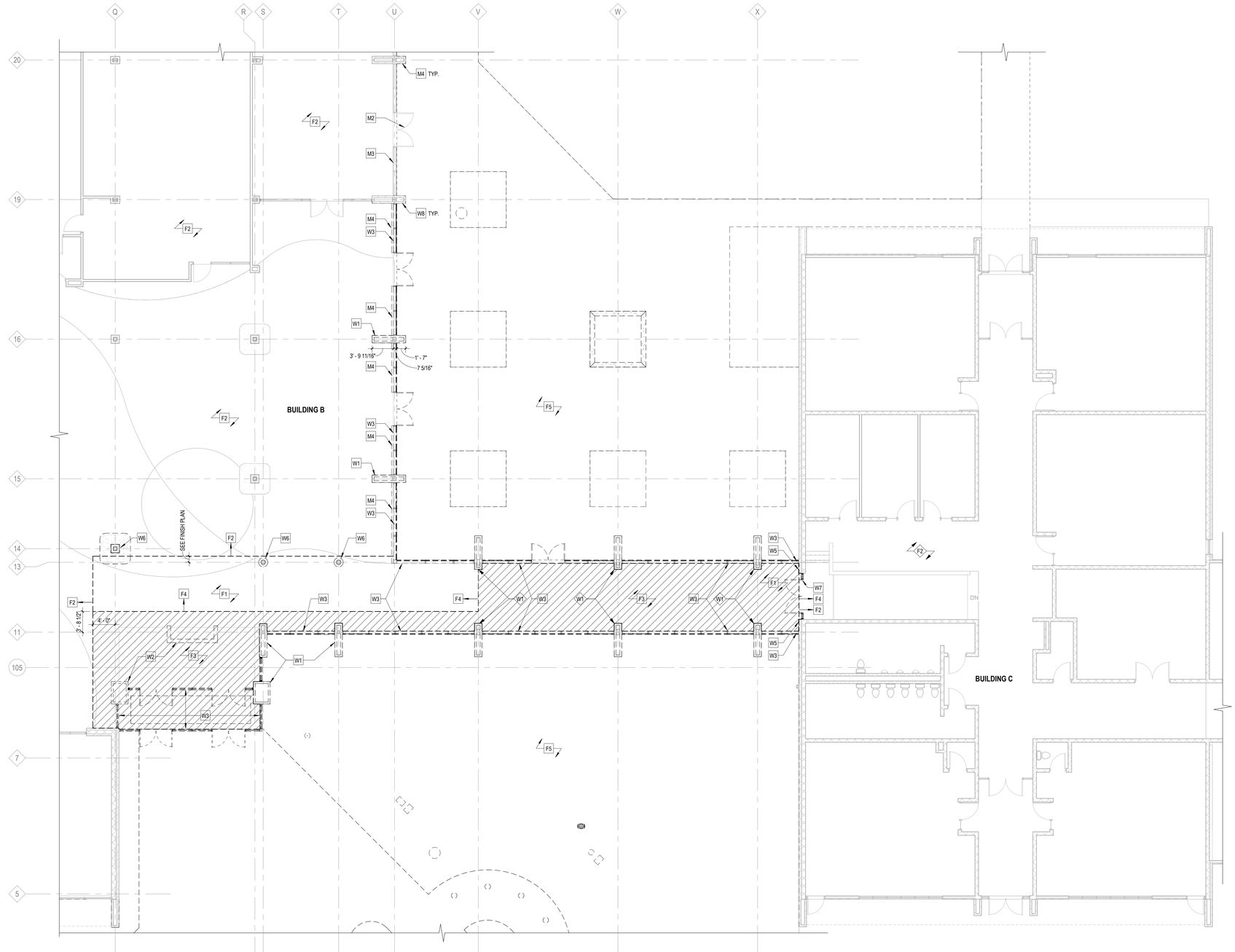

1 LEVEL 1 - DEMO PLAN
1/8" = 1'-0"

2 LEVEL 2 - BLDG B - DEMO PLAN
1/8" = 1'-0"

DEMO SYMBOLS LEGEND:

NOTE: REFER TO M.E.P.F.P. DRAWINGS FOR ADDITIONAL INFORMATION ON MECHANICAL, ELECTRICAL, AND FIRE PROTECTION SYSTEMS

- HATCH INDICATES AREA NOT IN SCOPE
- GYPSUM BOARD OR PLASTER PARTITION TO BE REMOVED
- CMU PARTITION TO BE REMOVED
- FRAME AND DOOR TO BE REMOVED, SALVAGE HARDWARE TO OWNER
- SUSPENDED ACOUSTICAL TILE CEILING TO BE REMOVED
- SUSPENDED ACOUSTICAL TILE CEILING TO REMAIN
- GYPSUM BOARD OR PLASTER CEILING TO BE REMOVED
- GYPSUM BOARD OR PLASTER CEILING TO REMAIN
- RECESSED 2'x4' LAY-IN LIGHT FIXTURE TO BE REMOVED
- RECESSED 2'x2' LAY-IN LIGHT FIXTURE TO BE REMOVED
- RECESSED 2'x4' LAY-IN LIGHT FIXTURE TO REMAIN
- RECESSED 2'x2' LAY-IN LIGHT FIXTURE TO REMAIN
- LINEAR LIGHT FIXTURE TO BE REMOVED
- REMOVE CEILING MOUNTED PROJECTOR - SALVAGE TO OWNER
- RETURN AIR GRILLE TO BE REMOVED
- SUPPLY AIR GRILLE TO BE REMOVED
- RETURN AIR GRILLE TO REMAIN
- SUPPLY AIR GRILLE TO REMAIN

DEMO GENERAL NOTES:

1. PRIOR TO AND DURING ANY DEMOLITION THE CONTRACTOR SHALL VERIFY AND MAINTAIN THE BUILDING'S STRUCTURAL INTEGRITY.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AS REQUIRED TO INSTALL ALL NEW WORK. REPAIR, PATCH AND FINISH EXISTING FLOORS, WALLS AND CEILINGS DESIGNATED TO REMAIN TO MATCH EXISTING CONDITIONS.
3. REMOVE ALL HANGERS, SUSPENSION SYSTEMS, SUPPORT FRAMING, EQUIPMENT PADS, ANCHORS, ATTACHMENT HARDWARE AND RELATED APPURTENANCES CONNECTED WITH THE WORK TO BE DEMOLISHED. IF COMPLETE REMOVAL IS NOT POSSIBLE, CUT DEVICES AS CLOSE AS POSSIBLE TO ADJOINING SURFACES OR ORIGIN OF SUPPORT.
4. DURING THE BIDDING PERIOD, EACH BIDDING CONTRACTOR SHALL VISIT THE SITE AND THE FACILITY TO DETERMINE EXISTING CONDITIONS. CONTRACTOR'S FAILURE TO REASONABLY DETERMINE AND/OR ANTICIPATE THE EFFECT OF EXISTING CONDITIONS AND THE WORK INVOLVED THEREBY SHALL NOT BE JUSTIFICATION FOR ADDITIONAL COMPENSATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
5. ALL MATERIALS, EQUIPMENT, FIXTURES, SYSTEMS, AND ACCESSORIES WHICH ARE TO REMAIN IN SERVICE SHALL BE CLEANED, REPAIRED, ADJUSTED AND PLACED INTO PROPER OPERATIONS IN ALL MODES WITH THE ORIGINAL SYSTEM.
6. WHEN TEMPORARY SHORING AND BRACING IS REQUIRED, CONTRACTOR SHALL RETAIN AND PAY FOR THE SERVICES OF A PROFESSIONAL ENGINEER- LICENSED TO PRACTICE IN THE STATE WHERE THE PROJECT IS LOCATED- TO DESIGN AND PREPARE DETAILED DRAWINGS.
7. CONTRACTOR SHALL COORDINATE SCHEDULE OF DEMOLITION WORK WITH THE OVERALL PHASING PLAN. ALL AREAS SURROUNDING EACH PHASE OF DEMOLITION/CONSTRUCTION WILL BE OCCUPIED BY THE OWNER DURING THE OWNER'S NORMAL BUSINESS HOURS. DEMOLITION WORK SHALL NOT ENCUMBER THE USE OF EXISTING ADJACENT SPACES.
8. EACH CONTRACTOR SHALL FOLLOW THE PROGRESS OF THE GENERAL DEMOLITION AND REMODELING WORK TO ASSURE THE ACCESSIBILITY AND SAFETY OF EQUIPMENT AND SYSTEMS IN SERVICE IN ORDER TO PROVIDE FOR THE TIMELY REMOVAL AND/OR RELOCATION OF EQUIPMENT, PIPING, ETC.
9. REMOVE ALL ABANDONED CONDUIT BOXES, CONDUCTORS, TELEPHONE LINES, ELECTRIC PANELS, AND ANY OTHER MISCELLANEOUS EQUIPMENT NOT REQUIRED FOR THE NEW FACILITY.
10. REMOVE ALL RECESSED FLOOR BOXES, WALKER DUCTS, FLOOR SINKS, HUB DRAINS, ELECTRICAL RECEPTACLES, ETC. AND FILL VOIDS AS REQUIRED.
11. REMOVE ALL DOOR STOPS AT ASSOCIATED DOORS TO BE DEMOLISHED.
12. NO TOXIC SUBSTANCES HAVE BEEN NOTED ON THE SITE. SHOULD THE CONTRACTOR ENCOUNTER ANY ASBESTOS, ASBESTOS PRODUCTS, PCBs OR OTHER TOXIC SUBSTANCES, THE CONTRACTOR SHOULD REPORT THIS IMMEDIATELY TO THE OWNER IN WRITING PRIOR TO CONTINUING WORK IN THIS AREA. WORK SHALL NOT BE RESUMED EXCEPT BY WRITTEN AUTHORIZATION OR AGREEMENT.
13. ALL CONSTRUCTION DEBRIS AND EXCESS MATERIAL IS TO BE REMOVED BY THE CONTRACTOR AT THE END OF EACH WORK DAY. THE JOB SITE IS TO BE LEFT SUFFICIENTLY CLEAN AS TO WARRANT OWNER'S APPROVAL.
14. REMOVE ALL CEILING SYSTEMS IN THEIR ENTIRETY, INCLUDING TILE, GRID, SUSPENSION WIRING, ANCHORS AND ALL ASSOCIATED APPURTENANCES.
15. PATCH EXISTING PARTITION TO MATCH ADJACENT SURFACES AT REMOVAL OF EXISTING ELECTRICAL DEVICES - REFER TO ELECTRICAL DRAWINGS.

DEMO REFERENCED NOTES:

FLOOR DEMOLITION KEYED NOTES

F1. REMOVE PORTION OF EXISTING FLOOR FINISH
F2. EXISTING FLOOR FINISH TO REMAIN.
F3. REMOVE PORTION OF EXISTING SLAB ON GRADE, SEE STRUCT.
F4. PORTION OF EXISTING SLAB ON GRADE TO REMAIN, SEE STRUCT.
F5. SEE CIVIL FOR EXTENT AND SCOPE OF SITE DEMOLITION.

WALL DEMOLITION KEYED NOTES

W1. CAREFULLY REMOVE EXISTING FACE BRICK AND SET ASIDE AND STORE FOR FUTURE REINSTALLATION. REMOVE EXISTING BRICK WALL COLUMN ENCLOSURES AND ALL ASSOCIATED HARDWARE. STEEL COLUMNS TO REMAIN AND PROTECT THROUGHOUT CONSTRUCTION.
W2. REMOVE GYP / MTL STUD PARTITION TO EXTENTS INDICATED. RELOCATE ANY PIPING OR WIRING FEEDING ANY EXISTING TO REMAIN DEVICES OR FIXTURES. PATCH AND PREP ADJACENT WALLS TO REMAIN FOR NEW WORK.
W3. REMOVE EXISTING STOREFRONT SYSTEM
W4. REMOVE OVERHANG, PATCH BRICK WALL AS NEEDED
W5. REMOVE EXISTING RIBBED WALL BASE
W6. REMOVE EXISTING COLUMN ENCLOSURES (INCLUDING ALL ASSOCIATED ELEMENTS)
W7. REMOVE EXISTING HOLLOW METAL DOOR, FRAME, AND SIDELITES
W8. REMOVE PORTION (2" INSULATED METAL PANEL, 7/8" HAT CHANNEL, AND BATT INSULATION) OF EXISTING EXTERIOR WALL. METAL STUD, GYP BD, AND COPING AT SOFFIT TO REMAIN.

CEILING DEMOLITION KEYED NOTES

C1. REMOVE EXISTING SUSPENDED CEILING SYSTEM COMPLETE, INCLUDING ALL ACCESSORIES, SUSPENSION WIRES, CLIPS, ETC. TO EXTENTS SHOWN (SAT TILES TO BE SALVAGED FOR POTENTIAL RE-USE)
C2. EXISTING CEILING TO REMAIN. PROTECT THROUGHOUT CONSTRUCTION AND TIE INTO NEW CEILING SYSTEM AS REQUIRED.
C3. REMOVE EXISTING STEEL STRUCTURE
C4. REMOVE EXISTING EXTERIOR SOFFIT ASSEMBLY, INCLUDING ALL MTL STUD FRAMING, MTL STUD BRACING, AND LIGHTING
C5. TILES TO BE REMOVED, SALVAGED, AND REPLACED AS REQUIRED FOR SPRAY APPLIED FIRE RESISTIVE MATERIAL AND MECHANICAL DUCTWORK. (REFER TO CODE PLAN AND MEP)
C6. TILES TO BE REMOVED, SALVAGE, AND REPLACED AS REQUIRED FOR MECHANICAL DUCTWORK. (REFER TO MECHANICAL)
C7. CEILING EDGE TRIM TO BE REMOVED AS REQUIRED FOR DEMO / NEW WORK.

MISCELLANEOUS DEMOLITION KEYED NOTES

M1. REMOVE MECHANICAL AND PLUMBING SYSTEM (INCLUDING ALL ASSOCIATED PIPING, DUCT, UTILITIES, AND ACCESSORIES) COMPLETE.
M2. EXISTING, DOOR & FRAME TO REMAIN. PROTECT THROUGHOUT CONSTRUCTION.
M3. EXISTING WINDOW SYSTEM TO REMAIN. PROTECT THROUGHOUT CONSTRUCTION.
M4. EXISTING BRICK COLUMN WRAP TO REMAIN. PROTECT THROUGHOUT CONSTRUCTION.

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8900 NORTHWEST HWY #14
CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:

DEMOLITION PLANS

SHEET NUMBER:

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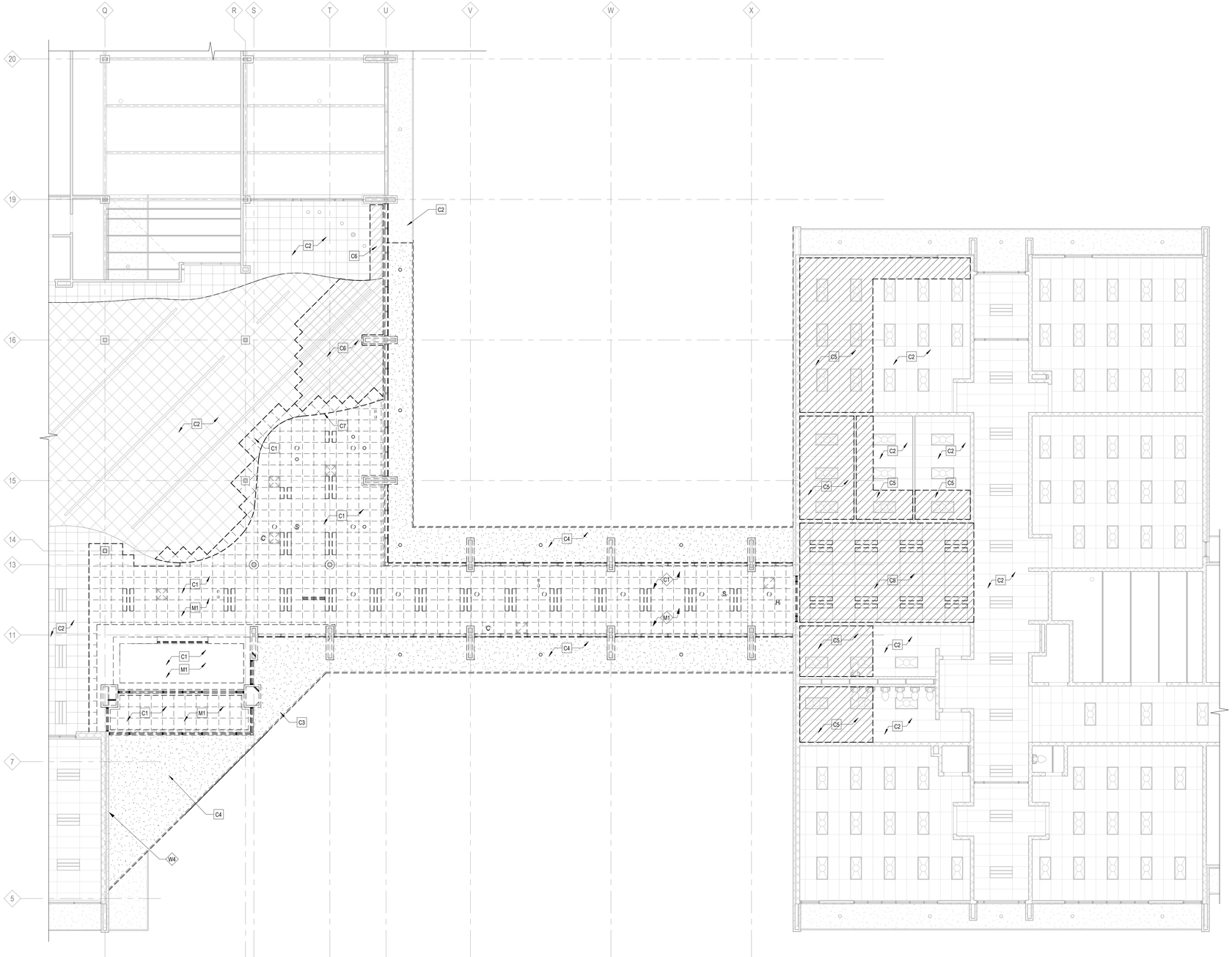
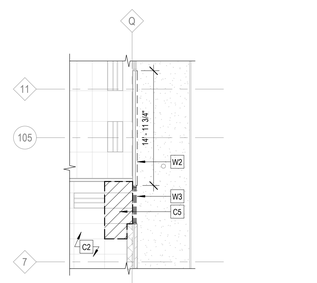


1 DEMO REFLECTED CEILING PLAN
1/8" = 1'-0"



2 DEMO REFLECTED CEILING PLAN - 2ND FL.
1/8" = 1'-0"

DEMO SYMBOLS LEGEND:

NOTE: REFER TO M.E.P.F.P. DRAWINGS FOR ADDITIONAL INFORMATION ON MECHANICAL, ELECTRICAL, AND FIRE PROTECTION SYSTEMS

- HATCH INDICATES AREA NOT IN SCOPE
- GYPSUM BOARD OR PLASTER PARTITION TO BE REMOVED
- CMU PARTITION TO BE REMOVED
- FRAME AND DOOR TO BE REMOVED, SALVAGE HARDWARE TO OWNER
- SUSPENDED ACOUSTICAL TILE CEILING TO BE REMOVED
- SUSPENDED ACOUSTICAL TILE CEILING TO REMAIN
- GYPSUM BOARD OR PLASTER CEILING TO BE REMOVED
- GYPSUM BOARD OR PLASTER CEILING TO REMAIN
- RECESSED 2'x4' LAY-IN LIGHT FIXTURE TO BE REMOVED
- RECESSED 2'x2' LAY-IN LIGHT FIXTURE TO BE REMOVED
- RECESSED 2'x4' LAY-IN LIGHT FIXTURE TO REMAIN
- RECESSED 2'x2' LAY-IN LIGHT FIXTURE TO REMAIN
- LINEAR LIGHT FIXTURE TO BE REMOVED
- REMOVE CEILING MOUNTED PROJECTOR - SALVAGE TO OWNER
- RETURN AIR GRILLE TO BE REMOVED
- SUPPLY AIR GRILLE TO BE REMOVED
- RETURN AIR GRILLE TO REMAIN
- SUPPLY AIR GRILLE TO REMAIN

DEMO GENERAL NOTES:

1. PRIOR TO AND DURING ANY DEMOLITION THE CONTRACTOR SHALL VERIFY AND MAINTAIN THE BUILDING'S STRUCTURAL INTEGRITY.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AS REQUIRED TO INSTALL ALL NEW WORK. REPAIR, PATCH AND FINISH EXISTING FLOORS, WALLS AND CEILINGS DESIGNATED TO REMAIN TO MATCH EXISTING CONDITIONS.
3. REMOVE ALL HANGERS, SUSPENSION SYSTEMS, SUPPORT FRAMING, EQUIPMENT PADS, ANCHORS, ATTACHMENT HARDWARE AND RELATED APPURTENANCES CONNECTED WITH THE WORK TO BE DEMOLISHED. IF COMPLETE REMOVAL IS NOT POSSIBLE, CUT DEVICES AS CLOSE AS POSSIBLE TO ADJOINING SURFACES OR ORIGIN OF SUPPORT.
4. DURING THE BIDDING PERIOD, EACH BIDDING CONTRACTOR SHALL VISIT THE SITE AND THE FACILITY TO DETERMINE EXISTING CONDITIONS. CONTRACTOR'S FAILURE TO REASONABLY DETERMINE AND/OR ANTICIPATE THE EFFECT OF EXISTING CONDITIONS AND THE WORK INVOLVED THEREBY SHALL NOT BE JUSTIFICATION FOR ADDITIONAL COMPENSATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
5. ALL MATERIALS, EQUIPMENT, FIXTURES, SYSTEMS, AND ACCESSORIES WHICH ARE TO REMAIN IN SERVICE SHALL BE CLEANED, REPAIRED, ADJUSTED AND PLACED INTO PROPER OPERATIONS IN ALL MODES WITH THE ORIGINAL SYSTEM.
6. WHEN TEMPORARY SHORING AND BRACING IS REQUIRED, CONTRACTOR SHALL RETAIN AND PAY FOR THE SERVICES OF A PROFESSIONAL ENGINEER- LICENSED TO PRACTICE IN THE STATE WHERE THE PROJECT IS LOCATED- TO DESIGN AND PREPARE DETAILED DRAWINGS.
7. CONTRACTOR SHALL COORDINATE SCHEDULE OF DEMOLITION WORK WITH THE OVERALL PHASING PLAN. ALL AREAS SURROUNDING EACH PHASE OF DEMOLITION/CONSTRUCTION WILL BE OCCUPIED BY THE OWNER DURING THE OWNER'S NORMAL BUSINESS HOURS. DEMOLITION WORK SHALL NOT ENCUMBER THE USE OF EXISTING ADJACENT SPACES.
8. EACH CONTRACTOR SHALL FOLLOW THE PROGRESS OF THE GENERAL DEMOLITION AND REMODELING WORK TO ASSURE THE ACCESSIBILITY AND SAFETY OF EQUIPMENT AND SYSTEMS IN SERVICE IN ORDER TO PROVIDE FOR THE TIMELY REMOVAL AND/OR RELOCATION OF EQUIPMENT, PIPING, ETC.
9. REMOVE ALL ABANDONED CONDUIT BOXES, CONDUCTORS, TELEPHONE LINES, ELECTRIC PANELS, AND ANY OTHER MISCELLANEOUS EQUIPMENT NOT REQUIRED FOR THE NEW FACILITY.
10. REMOVE ALL RECESSED FLOOR BOXES, WALKER DUCTS, FLOOR SINKS, HUB DRAINS, ELECTRICAL RECEPTACLES, ETC. AND FILL VOIDS AS REQUIRED.
11. REMOVE ALL DOOR STOPS AT ASSOCIATED DOORS TO BE DEMOLISHED.
12. NO TOXIC SUBSTANCES HAVE BEEN NOTED ON THE SITE. SHOULD THE CONTRACTOR ENCOUNTER ANY ASBESTOS, ASBESTOS PRODUCTS, PCBs OR OTHER TOXIC SUBSTANCES, THE CONTRACTOR SHOULD REPORT THIS IMMEDIATELY TO THE OWNER IN WRITING PRIOR TO CONTINUING WORK IN THIS AREA. WORK SHALL NOT BE RESUMED EXCEPT BY WRITTEN AUTHORIZATION OR AGREEMENT.
13. ALL CONSTRUCTION DEBRIS AND EXCESS MATERIAL IS TO BE REMOVED BY THE CONTRACTOR AT THE END OF EACH WORK DAY. THE JOB SITE IS TO BE LEFT SUFFICIENTLY CLEAN AS TO WARRANT OWNER'S APPROVAL.
14. REMOVE ALL CEILING SYSTEMS IN THEIR ENTIRETY, INCLUDING TILE, GRID, SUSPENSION WIRING, ANCHORS AND ALL ASSOCIATED APPURTENANCES.
15. PATCH EXISTING PARTITION TO MATCH ADJACENT SURFACES AT REMOVAL OF EXISTING ELECTRICAL DEVICES - REFER TO ELECTRICAL DRAWINGS.

DEMO REFERENCED NOTES:

X

FLOOR DEMOLITION KEYED NOTES

F1. REMOVE PORTION OF EXISTING FLOOR FINISH
F2. EXISTING FLOOR FINISH TO REMAIN.
F3. REMOVE PORTION OF EXISTING SLAB ON GRADE, SEE STRUCT.
F4. PORTION OF EXISTING SLAB ON GRADE TO REMAIN, SEE STRUCT.
F5. SEE CIVIL FOR EXTENT AND SCOPE OF SITE DEMOLITION.

WALL DEMOLITION KEYED NOTES

W1. CAREFULLY REMOVE EXISTING FACE BRICK AND SET ASIDE AND STORE FOR FUTURE REINSTALLATION. REMOVE EXISTING BRICK WALL COLUMN ENCLOSURES AND ALL ASSOCIATED HARDWARE. STEEL COLUMNS TO REMAIN AND PROTECT THROUGHOUT CONSTRUCTION.
W2. REMOVE GYP / MTL STUD PARTITION TO EXTENTS INDICATED. RELOCATE ANY PIPING OR WIRING FEEDING ANY EXISTING TO REMAIN DEVICES OR FIXTURES. PATCH AND PREP ADJACENT WALLS TO REMAIN FOR NEW WORK.
W3. REMOVE EXISTING STOREFRONT SYSTEM
W4. REMOVE OVERHANG, PATCH BRICK WALL AS NEEDED
W5. REMOVE EXISTING RIBBED WALL BASE
W6. REMOVE EXISTING COLUMN ENCLOSURES (INCLUDING ALL ASSOCIATED ELEMENTS)
W7. REMOVE EXISTING HOLLOW METAL DOOR, FRAME, AND SIDELITES
W8. REMOVE PORTION (2" INSULATED METAL PANEL, 7/8" HAT CHANNEL, AND BATT INSULATION) OF EXISTING EXTERIOR WALL. METAL STUD, GYP BD, AND COPING AT SOFFIT TO REMAIN.

CEILING DEMOLITION KEYED NOTES

C1. REMOVE EXISTING SUSPENDED CEILING SYSTEM COMPLETE, INCLUDING ALL ACCESSORIES, SUSPENSION WIRES, CLIPS, ETC. TO EXTENTS SHOWN (SAT TILES TO BE SALVAGED FOR POTENTIAL RE-USE)
C2. EXISTING CEILING TO REMAIN. PROTECT THROUGHOUT CONSTRUCTION AND TIE INTO NEW CEILING SYSTEM AS REQUIRED.
C3. REMOVE EXISTING STEEL STRUCTURE
C4. REMOVE EXISTING EXTERIOR SOFFIT ASSEMBLY, INCLUDING ALL MTL STUD FRAMING, MTL STUD BRACING, AND LIGHTING
C5. TILES TO BE REMOVED, SALVAGED, AND REPLACED AS REQUIRED FOR SPRAY APPLIED FIRE RESISTIVE MATERIAL AND MECHANICAL DUCTWORK. (REFER TO CODE PLAN AND MEP)
C6. TILES TO BE REMOVED, SALVAGE, AND REPLACED AS REQUIRED FOR MECHANICAL DUCTWORK. (REFER TO MECHANICAL)
C7. CEILING EDGE TRIM TO BE REMOVED AS REQUIRED FOR DEMO / NEW WORK.

MISCELLANEOUS DEMOLITION KEYED NOTES

M1. REMOVE MECHANICAL AND PLUMBING SYSTEM (INCLUDING ALL ASSOCIATED PIPING, DUCT, UTILITIES, AND ACCESSORIES) COMPLETE.
M2. EXISTING, DOOR & FRAME TO REMAIN. PROTECT THROUGHOUT CONSTRUCTION.
M3. EXISTING WINDOW SYSTEM TO REMAIN. PROTECT THROUGHOUT CONSTRUCTION.
M4. EXISTING BRICK COLUMN WRAP TO REMAIN. PROTECT THROUGHOUT CONSTRUCTION.

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DKA PROJECT NO: 24-027

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NO:	DESCRIPTION:	DATE:

SHEET TITLE:
DEMOLITION RCP

SHEET NUMBER:
AD2.01

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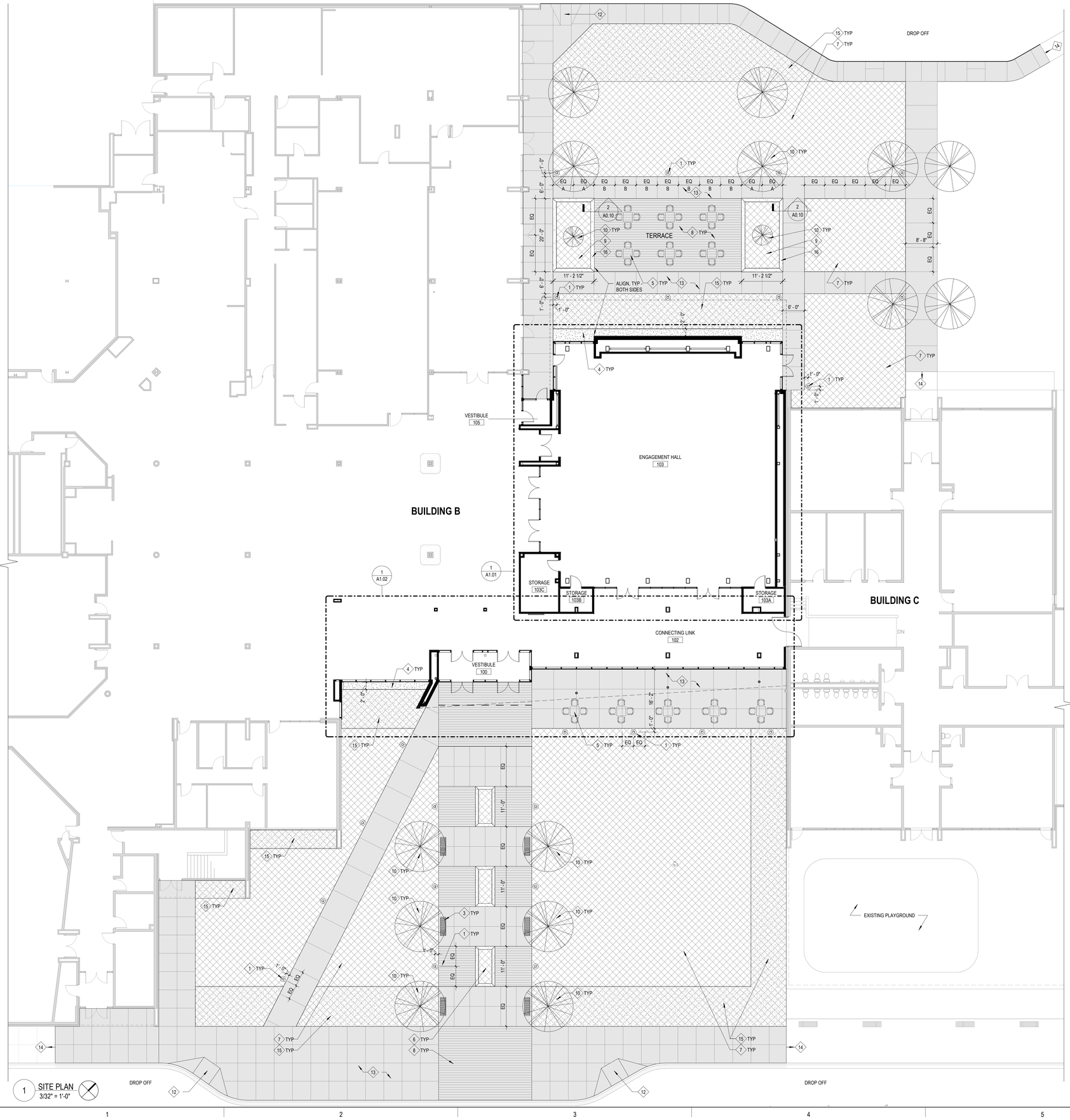


1 SITE PLAN
3/32" = 1'-0"

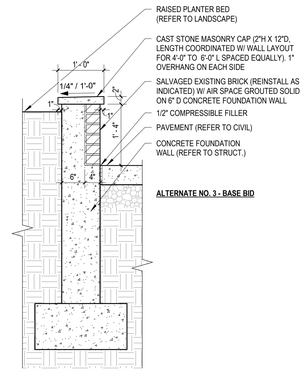
FLOOR PLAN & SECTION SYMBOLS LEGEND:

NOTE: REFER TO M.E.P.F.P. DRAWINGS FOR ADDITIONAL INFORMATION ON MECHANICAL, ELECTRICAL, AND FIRE PROTECTION SYSTEMS

- GREYTONE LINES DEPICT EXISTING CONSTRUCTION
- EXISTING DOOR
- NEW WALL CONSTRUCTION
- NEW DOOR
- ROOM NAME / 101 — ROOM TAG
- XXXX — DOOR / FRAME TAG
- XX — WINDOW TAG
- XX / 2HR — PARTITION TYPE / PARTITION MODIFIERS - REFER TO A10.01
- 1 / AXX.XX SIM — PLAN AND SECTION DETAIL CALLOUT
- 1 / AXX.XX SIM — SECTION CALLOUT
- 1 / A101 / 1 — ELEVATION CALLOUT
- DATUM ELEVATION — DATUM TAG
- 1 — NEW WORK REFERENCED NOTES
- FD — FLOOR DRAIN - REFER TO PLUMBING
- FEC — SURFACE-MOUNTED EXTINGUISHER CABINET
- SFEC — SEMI-RECESSED EXTINGUISHER CABINET
- RFEC — RECESSED EXTINGUISHER CABINET
- X' MB/T — LENGTH SPECIFIED MARKERBOARD

ARCHITECTURAL SITE PLAN REFERENCED NOTES:

1. LIGHT BOLLARDS (REFER TO ELEC). **ALTERNATE NO. 4 - BASE BID** (SEE SPEC FOR QUANTITY AND LOCATIONS)
2. CONCRETE STOOP (REFER TO STRUCTURE).
3. BENCH / PATIO FURNITURE (REFER TO LANDSCAPE).
4. GRAVEL EDGE MAINTENANCE STRIP (REFER TO LANDSCAPE).
5. SITE FURNITURE. (FOR REFERENCE ONLY, N.I.C.)
6. RAISED PLANTER BEDS. (REFER TO LANDSCAPE)
7. HATCHED AREA INDICATES AREA OF LANDSCAPING, TYP. (REFER TO LANDSCAPE)
8. HATCHED AREA INDICATES CONCRETE PAVERS, TYP. (REFER TO LANDSCAPE)
9. PLANTER BEDS. (REFER TO LANDSCAPE)
10. PROPOSED TREE. (REFER TO LANDSCAPE)
11. EXISTING TREE TO REMAIN. (REFER TO LANDSCAPE)
12. CURB CUT. (REFER TO CIVIL)
13. PROPOSED CONCRETE SIDEWALK. (REFER TO CIVIL)
14. EXISTING SIDEWALK TO REMAIN. (REFER TO CIVIL)
15. HATCHED AREA INDICATES PLANTED SHRUBS. (REFER TO LANDSCAPE)
16. SEATED PLANTER WALLS. **ALTERNATE NO. 3 - BASE BID**



2 WALL SECTION - RAISED PLANTER
3/4" = 1'-0"

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025

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NO:	DESCRIPTION:	DATE:

SHEET TITLE:
SITE PLAN

SHEET NUMBER:
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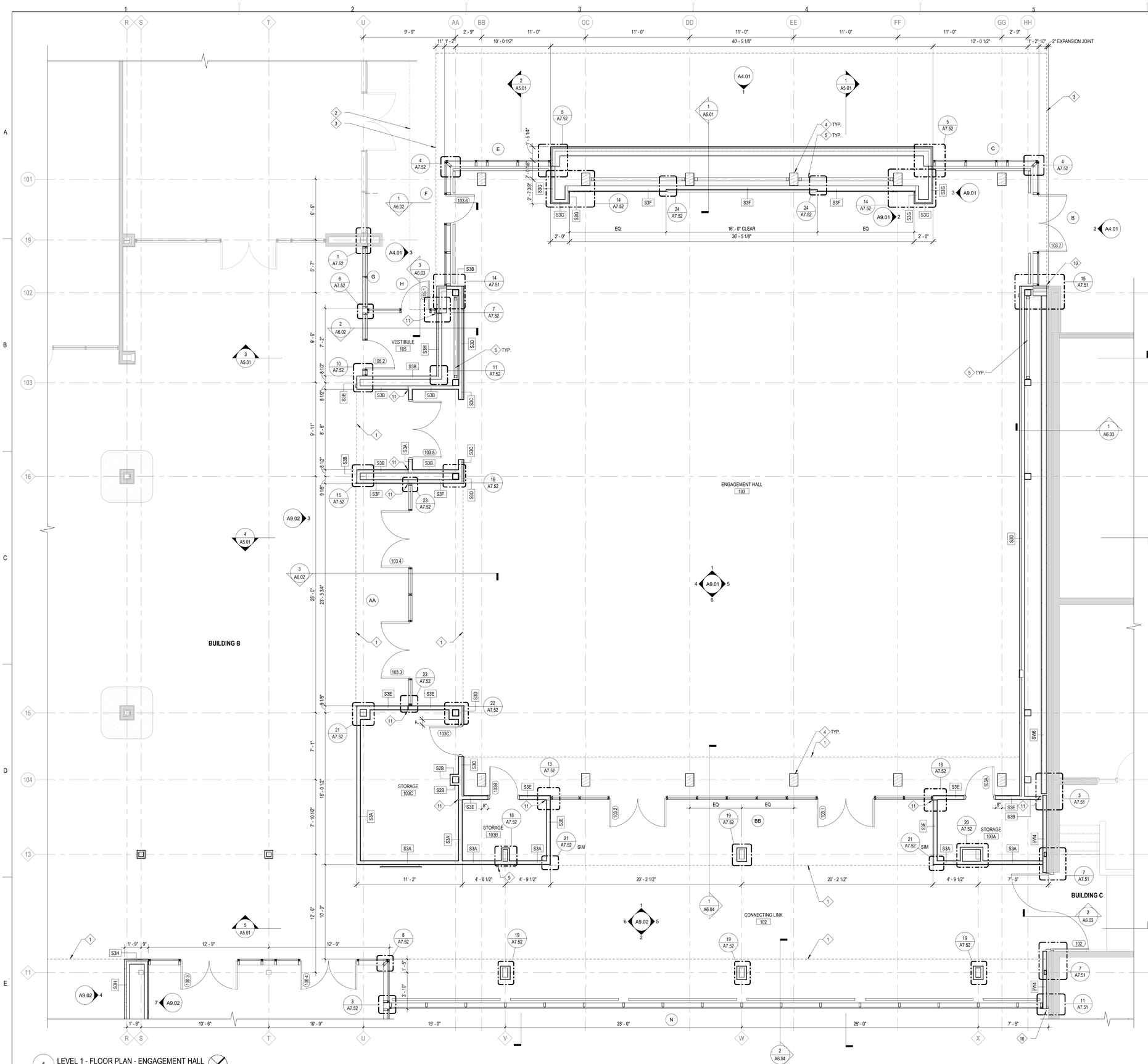

1 LEVEL 1 - FLOOR PLAN - ENGAGEMENT HALL
1/4" = 1'-0"

FLOOR PLAN & SECTION SYMBOLS LEGEND:

NOTE: REFER TO M.E.P.F.P. DRAWINGS FOR ADDITIONAL INFORMATION ON MECHANICAL, ELECTRICAL, AND FIRE PROTECTION SYSTEMS

- GREYTONE LINES DEPICT EXISTING CONSTRUCTION
- EXISTING DOOR
- NEW WALL CONSTRUCTION
- NEW DOOR
- ROOM NAME / 101 — ROOM TAG
- XXXX — DOOR / FRAME TAG
- XX — WINDOW TAG
- XX / 2HR — PARTITION TYPE / PARTITION MODIFIERS - REFER TO A10.01
- SIM / A XXX.XX — PLAN AND SECTION DETAIL CALLOUT
- SIM / A XXX.XX — SECTION CALLOUT
- A101 — ELEVATION CALLOUT
- DATUM ELEVATION — DATUM TAG
- 1 — NEW WORK REFERENCED NOTES
- FD — FLOOR DRAIN - REFER TO PLUMBING
- FEC — SURFACE-MOUNTED EXTINGUISHER CABINET
- SFEC — SEMI-RECESSED EXTINGUISHER CABINET
- RFEC — RECESSED EXTINGUISHER CABINET
- 'X' MB/T — LENGTH SPECIFIED MARKERBOARD

FLOOR PLAN GENERAL NOTES:

1. ELEVATIONS SHOWN ON ARCHITECTURAL DRAWINGS ARE RELATIVE TO FIRST FLOOR FINISH ELEVATION OF 0'-0".
2. DO NOT SCALE DRAWINGS.
3. NOTIFY ARCHITECT OF ANY DISCREPANCIES IN THE DOCUMENTS PRIOR TO WORK COMMENCING.
4. NOTES ON DRAWINGS SHALL APPLY TO ALL SIMILAR CONDITIONS WHETHER THEY ARE REPEATED OR NOT.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF EXISTING CONDITIONS AND IN-FIELD DIMENSIONS PRIOR TO COMMENCING WORK.
6. ALL INTERIOR DIMENSIONS ARE TO FACE OF FINISHED WALL UNLESS NOTED OTHERWISE.
7. PROVIDE ACCESS PANELS AT LOCATIONS INDICATED AND AS REQUIRED FOR ACCESS TO EQUIPMENT AND DEVICES INCLUDING, BUT NOT LIMITED TO, MECHANICAL, PLUMBING AND ELECTRICAL WORK. PAINT ACCESS PANELS TO MATCH ADJACENT WALL OR CEILING FINISH.
8. ALL FURNITURE SHOWN IS FOR GRAPHIC PURPOSES ONLY AND IS N.I.C. UNLESS NOTED OTHERWISE.

FLOOR PLAN REFERENCED NOTES:

1. EXTENT OF SOFFIT ABOVE.
2. EXTENT OF EXISTING SOFFIT ABOVE.
3. EXTENT OF ROOF OVERHANG ABOVE.
4. HEAVY TIMBER COLUMN. (REFER TO STRUCT. AND SPECS)
5. STEEL CROSS BRACING. (REFER TO STRUCT.)
6. STEEL COLUMN. (REFER TO STRUCT.)
7. ROOF BELOW. (REFER TO ROOF PLAN)
8. METAL COPING BELOW. (REFER TO ROOF PLAN)
9. MONITOR, OFOI. REFER TO ELEC FOR UTILITY REQUIREMENTS. REFER TO INTERIOR ELEVATIONS FOR INSTALLATION LOCATION.
10. 2" BUILDING EXPANSION JOINT. (REFER TO SPECS)
11. 1" WALL EXPANSION JOINT. (REFER TO SPECS)

dkA

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KEY PLAN:

SHEET STATUS: 05/16/2025
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NO:	DESCRIPTION:	DATE:

SHEET TITLE:
FLOOR PLAN - EVENT CENTER

SHEET NUMBER:
A1.01

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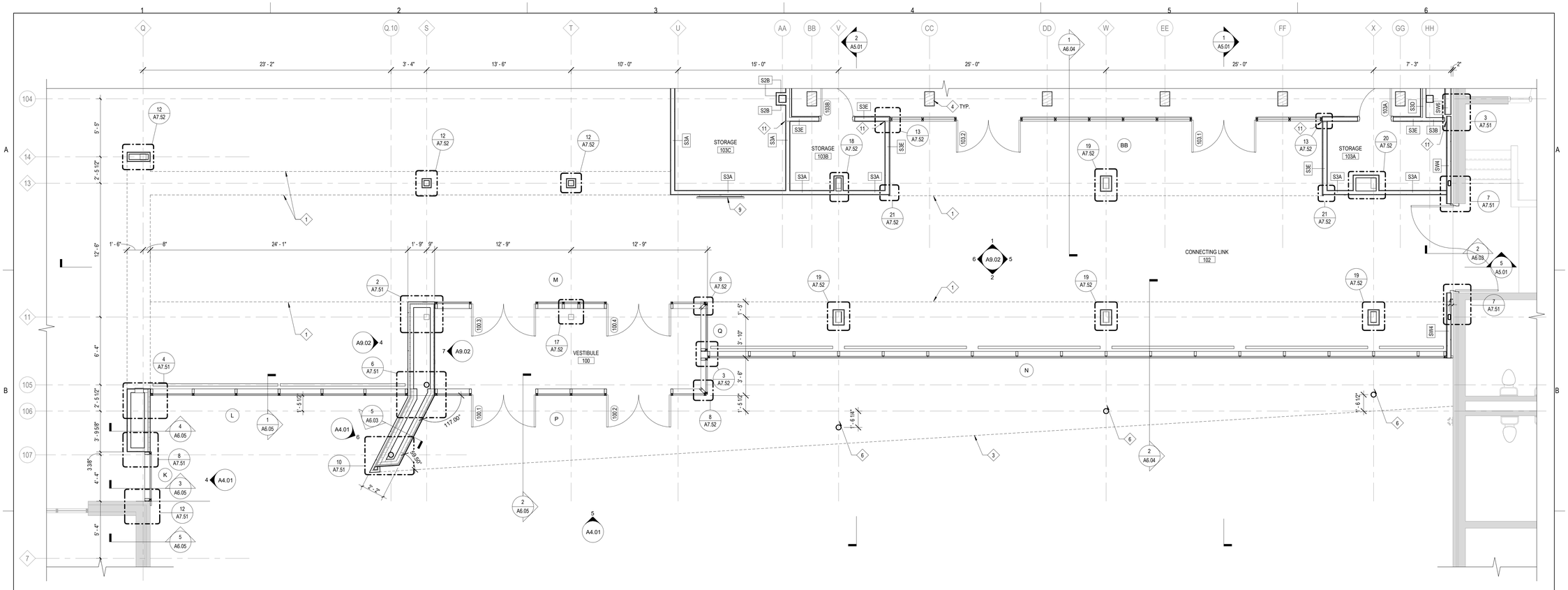
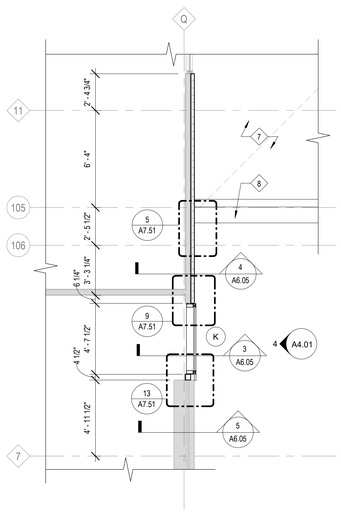


1 LEVEL 1 - FLOOR PLAN - ENTRY
1/4" = 1'-0"



2 LEVEL 2 - BLDG B - FLOOR PLAN
1/4" = 1'-0"

FLOOR PLAN REFERENCED NOTES:

1. EXTENT OF SOFFIT ABOVE.
2. EXTENT OF EXISTING SOFFIT ABOVE.
3. EXTENT OF ROOF OVERHANG ABOVE.
4. HEAVY TIMBER COLUMN. (REFER TO STRUCT. AND SPECS)
5. STEEL CROSS BRACING. (REFER TO STRUCT.)
6. STEEL COLUMN. (REFER TO STRUCT.)
7. ROOF BELOW. (REFER TO ROOF PLAN)
8. METAL COPING BELOW. (REFER TO ROOF PLAN)
9. MONITOR, OFOI. REFER TO ELEC FOR UTILITY REQUIREMENTS. REFER TO INTERIOR ELEVATIONS FOR INSTALLATION LOCATION.

FLOOR PLAN GENERAL NOTES:

1. ELEVATIONS SHOWN ON ARCHITECTURAL DRAWINGS ARE RELATIVE TO FIRST FLOOR FINISH ELEVATION OF 0'-0".
2. DO NOT SCALE DRAWINGS.
3. NOTIFY ARCHITECT OF ANY DISCREPANCIES IN THE DOCUMENTS PRIOR TO WORK COMMENCING.
4. NOTES ON DRAWINGS SHALL APPLY TO ALL SIMILAR CONDITIONS WHETHER THEY ARE REPEATED OR NOT.
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6. ALL INTERIOR DIMENSIONS ARE TO FACE OF FINISHED WALL UNLESS NOTED OTHERWISE.
7. PROVIDE ACCESS PANELS AT LOCATIONS INDICATED AND AS REQUIRED FOR ACCESS TO EQUIPMENT AND DEVICES INCLUDING, BUT NOT LIMITED TO, MECHANICAL, PLUMBING AND ELECTRICAL WORK. PAINT ACCESS PANELS TO MATCH ADJACENT WALL OR CEILING FINISH.
8. ALL FURNITURE SHOWN IS FOR GRAPHIC PURPOSES ONLY AND N.I.C. UNLESS NOTED OTHERWISE.

FLOOR PLAN & SECTION SYMBOLS LEGEND:

NOTE: REFER TO M.E.P.F.P. DRAWINGS FOR ADDITIONAL INFORMATION ON MECHANICAL, ELECTRICAL, AND FIRE PROTECTION SYSTEMS

- GREYTONE LINES DEPICT EXISTING CONSTRUCTION
- EXISTING DOOR
- NEW WALL CONSTRUCTION
- NEW DOOR
- ROOM NAME / 101 — ROOM TAG
- XXXX — DOOR / FRAME TAG
- XX — WINDOW TAG
- XX / 2HR — PARTITION TYPE / PARTITION MODIFIERS - REFER TO A10.01
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- 1 / AXX.XX SIM — SECTION CALLOUT
- 1 / A101 / 1 — ELEVATION CALLOUT
- DATUM ELEVATION — DATUM TAG
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- RFEC — RECESSED EXTINGUISHER CABINET
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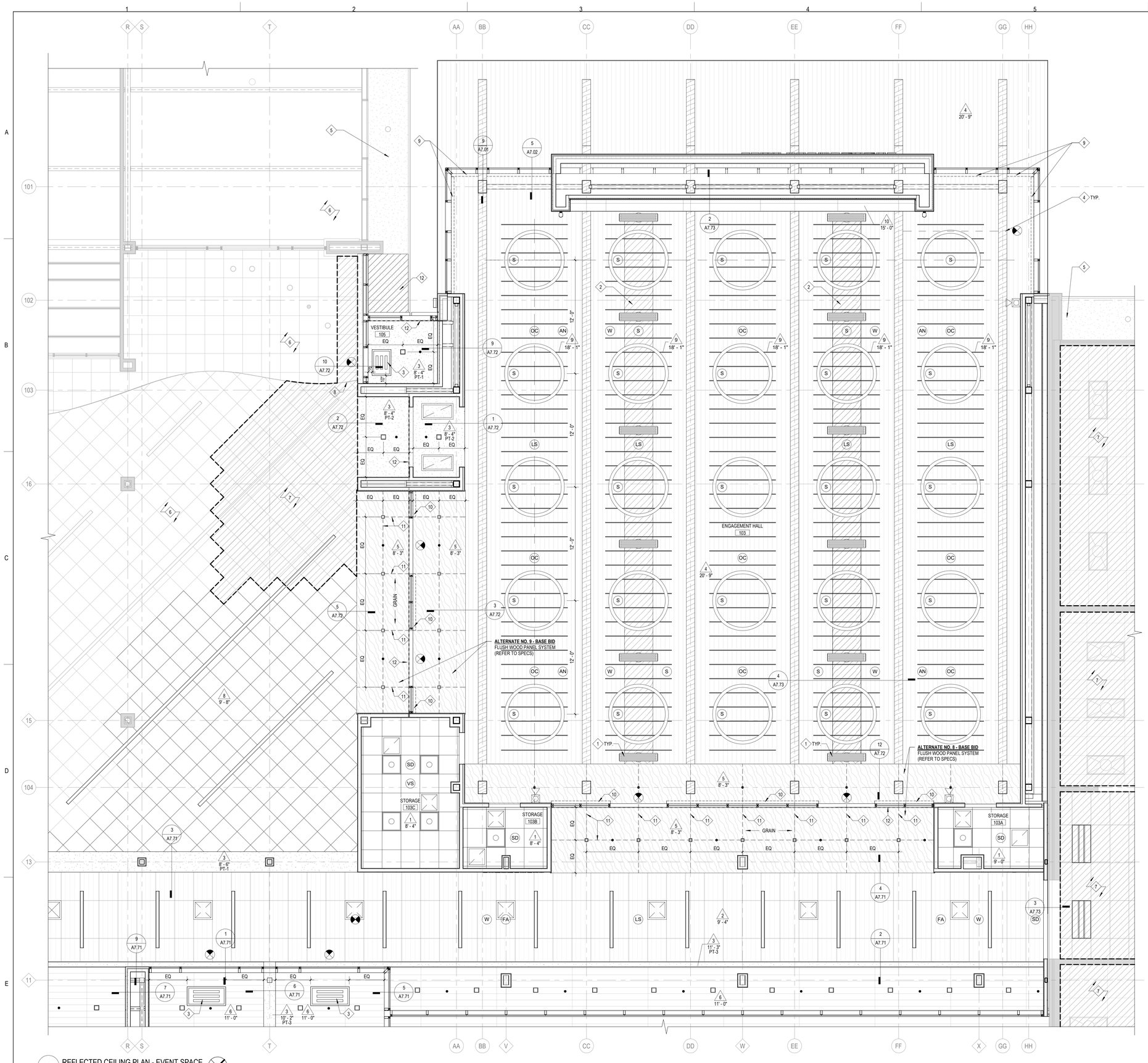
NO:	DESCRIPTION:	DATE:

SHEET TITLE:
FLOOR PLAN - ENTRY

SHEET NUMBER:
A1.02

5/16/2025 2:52:08 PM



1 REFLECTED CEILING PLAN - EVENT SPACE
1/4" = 1'-0"

RCP SYMBOLS LEGEND:

NOTE: REFER TO M.E.P.F.P. DRAWINGS FOR ADDITIONAL INFORMATION ON MECHANICAL, ELECTRICAL, AND FIRE PROTECTION SYSTEMS

- CEILING TYPE
- CEILING ELEVATION AFF
- SUSPENDED ACOUSTICAL TILE CEILING
- GYPSUM BOARD CEILING OR SOFFIT
- LINEAR WOOD SLAT CEILING SYSTEM
- WOOD PANEL CEILING
- ROLLER SHADE, ELECTRIC (TYP.)
- RECESSED 2'x4' LIGHT FIXTURE
- RECESSED 2'x2' FIXTURE
- RECESSED LINEAR FIXTURE
- LARGE PENDANT LIGHT MOUNT FIXTURE
- RECESSED DOWN LIGHT
- PENDANT LIGHT MOUNT LINEAR FIXTURE
- SPRINKLER HEAD
- MOTORIZED SCREEN
- CEILING MOUNTED PROJECTOR
- SOLID HATCH DENOTES EXIT SIGN FACE PLATE
- DIRECTION OF EGRESS
- EXIT SIGN, WALL MOUNTED
- (H) HEAT DETECTOR
- (SD) SMOKE DETECTOR
- (A) FIRE ALARM DEVICE
- (AN) MICROPHONE ANTENNA
- (S) SPEAKER
- (C) CLOSED CIRCUIT CAMERA
- (OC) OCCUPANCY / VANCANCY SENSOR
- (W) WIRELESS ACCESS POINT
- (LS) LIGHT SENSOR
- RETURN AIR GRILLE
- SUPPLY AIR GRILLE
- LINEAR DIFFUSER - SUPPLY/RETURN
- ACCESS PANEL
- CABINET UNIT HEATER

RCP GENERAL NOTES:

1. ALL HEATING, VENTILATION, ELECTRICAL, PLUMBING, AND FIRE PROTECTION ITEMS ARE SHOWN ON ARCHITECTURAL REFLECTED CEILING PLANS FOR REFERENCE AND COORDINATION ONLY. REFER TO HEATING, VENTILATION, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR ACTUAL QUANTITIES. IN CASE OF CONFLICT THE ARCHITECTURAL REFLECTED CEILING PLAN SHALL GOVERN LOCATION OF THESE ITEMS.
2. IN AREAS THAT DO NOT HAVE ARCHITECTURAL REFLECTED CEILING PLANS YET REQUIRE NEW ITEMS TO BE INSTALLED IN OR ABOVE THE CEILING PLANE, CONTRACTOR SHALL REMOVE AND REINSTALL, REPLACE OR MODIFY EXISTING CEILING CONSTRUCTION TO ACCOMMODATE NEW WORK. ANY NEW CEILING AREAS SHALL MATCH EXISTING ADJACENT FINISHES.
3. CENTER ALL FIXTURES IN CEILING TILES AND FIELD VERIFY GRID LAYOUT FOR PROPER FIXTURE LOCATION. ALIGN ALL FIXTURES IN BOTH DIRECTIONS OF CEILING TILE. (UNO)
4. CENTER ALL SPRINKLER HEADS IN CEILING TILES.
5. ALL GYP. BD. CEILINGS TO BE PAINTED PT-1 UNLESS OTHERWISE NOTED ON PLANS
6. EXTEND FACE OF ALL GYP. BD. SOFFITS AND HEADERS 6" MIN. BEYOND FINISHED CEILING ABOVE U.N.O.

RCP REFERENCED NOTES:

1. LINEAR DIFFUSER. (REFER TO MECH.)
2. DUCT - PAINT PT-6. (REFER TO MECH.)
3. RECESSED CABINET HEATER (REFER TO MECH.)
4. EXPOSED HEAVY TIMBER BEAMS. (REFER TO STRUCT.)
5. EXISTING EXTERIOR SOFFIT.
6. EXISTING CEILING TO REMAIN.
7. SALVAGED CEILING TILES AND ALL ASSOCIATED LIGHTING, DIFFUSERS, SPRINKLER HEADS, DEVICES, EQUIPMENT, ETC. TO BE REINSTALLED. SEE DEMO RCP FOR FULL EXTENT OF WORK. COORDINATE W/ MEPF.
8. CEILING EDGE TRIM TO BE REPLACED / REINSTALLED AS REQUIRED.
9. ROLLER SHADE, ELECTRIC. (REFER TO ELEC.) SEE GLAZING ELEVATIONS FOR CLERESTORY LOCATIONS.
10. RECESSED ROLLER SHADE, ELECTRIC. (REFER TO ELEC.) **ALTERNATE NO. 7 - BASE BID**
11. 1/8" OVERLAP JOINT BETWEEN FLUSH WOOD PANELS - TYP.
12. 1" CEILING EXPANSION JOINT. (REFER TO SPEC.)
13. REMOVE AND REPLACE EXISTING STUCCO SOFFIT STRUCTURE AS REQUIRED FOR NEW WORK.

CEILING TYPES:

TYPE	DESCRIPTION
0	EXPOSED STRUCTURE
1	2' X 2' ACOUSTICAL PANEL SYSTEM
2	2' X 4' ACOUSTICAL PANEL SYSTEM - SCORED TILES
3	PAINTED GYP BOARD ON METAL FRAMING
4	CROSS LAMINATED TIMBER, INTERIOR / EXTERIOR APPLICATIONS (REFER TO WALL SECTIONS)
5	FLUSH WOOD PANEL CEILING SYSTEM (WD-1)
6	WOOD PHENOLIC CEILING SYSTEM - INTERIOR
7	WOOD PHENOLIC CEILING - EXTERIOR
8	2' x 2' ACOUSTICAL PANEL SYSTEM - BLACK FINISH
9	SUSPENDED ACOUSTIC CEILING BAFFLES AT EXPOSED CLT DECKING
10	GLASS FIBER REINFORCED CONCRETE PANEL CEILING SYSTEM

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
REFLECTED CEILING PLANS - EVENT CENTER

SHEET NUMBER:
A2.01

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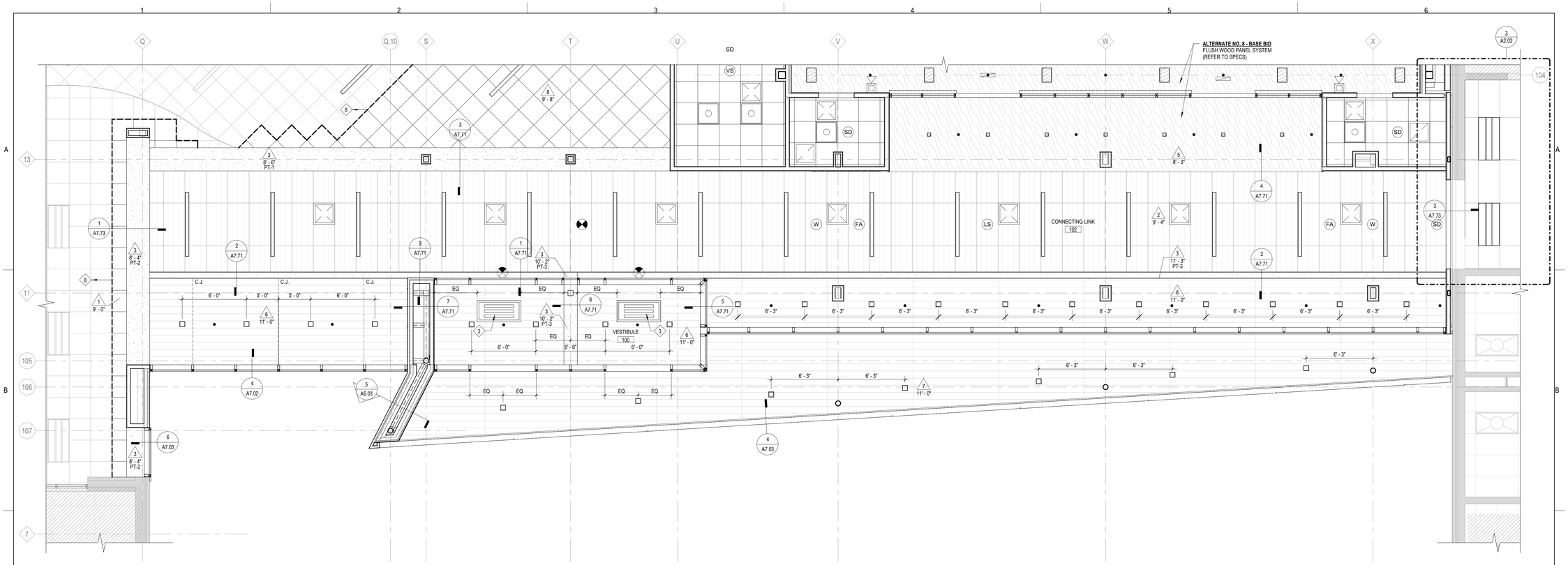
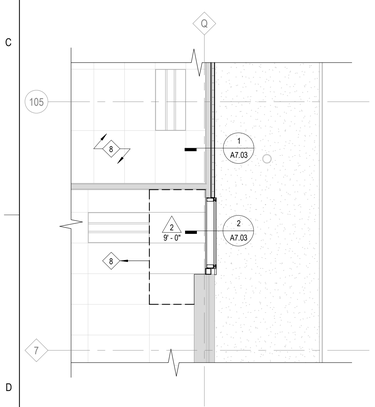
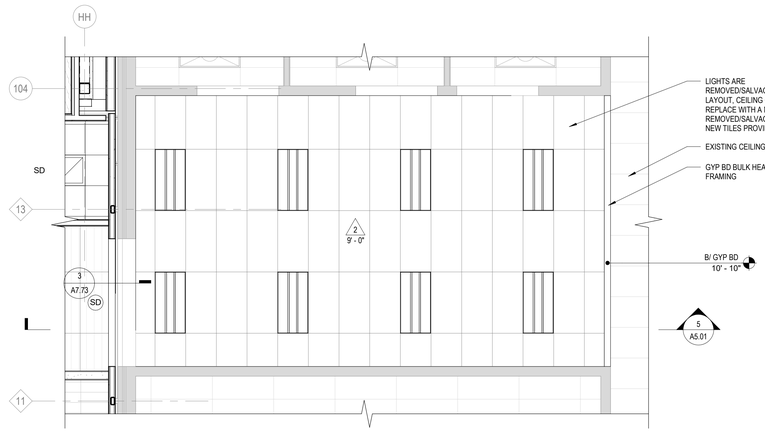


1 REFLECTED CEILING PLAN - ENTRY
1/4" = 1'-0"



2 REFLECTED CEILING PLAN - BLDG B - 2ND FL.
1/4" = 1'-0"



3 REFLECTED CEILING PLAN - BUILDING C
1/4" = 1'-0"

CEILING TYPES:

TYPE	DESCRIPTION
0	EXPOSED STRUCTURE
1	2' X 2' ACOUSTICAL PANEL SYSTEM
2	2' X 4' ACOUSTICAL PANEL SYSTEM - SCORED TILES
3	PAINTED GYP BOARD ON METAL FRAMING
4	CROSS LAMINATED TIMBER, INTERIOR / EXTERIOR APPLICATIONS (REFER TO WALL SECTIONS)
5	FLUSH WOOD PANEL CEILING SYSTEM (WD-1)
6	WOOD PHENOLIC CEILING SYSTEM - INTERIOR
7	WOOD PHENOLIC CEILING - EXTERIOR
8	2' x 2' ACOUSTICAL PANEL SYSTEM - BLACK FINISH
9	SUSPENDED ACOUSTIC CEILING BAFFLES AT EXPOSED CLT DECKING
10	GLASS FIBER REINFORCED CONCRETE PANEL CEILING SYSTEM

RCP GENERAL NOTES:

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3. CENTER ALL FIXTURES IN CEILING TILES AND FIELD VERIFY GRID LAYOUT FOR PROPER FIXTURE LOCATION. ALIGN ALL FIXTURES IN BOTH DIRECTIONS OF CEILING TILE. (UNO)
4. CENTER ALL SPRINKLER HEADS IN CEILING TILES.
5. ALL GYP. BD. CEILINGS TO BE PAINTED PT-1 UNLESS OTHERWISE NOTED ON PLANS
6. EXTEND FACE OF ALL GYP. BD. SOFFITS AND HEADERS 6" MIN. BEYOND FINISHED CEILING ABOVE U.N.O.

RCP REFERENCED NOTES:

1. LINEAR DIFFUSER. (REFER TO MECH.)
2. DUCT - PAINT PT-6. (REFER TO MECH.)
3. RECESSED CABINET HEATER (REFER TO MECH.)
4. EXPOSED HEAVY TIMBER BEAMS. (REFER TO STRUCT.)
5. EXISTING EXTERIOR SOFFIT.
6. EXISTING CEILING TO REMAIN.
7. SALVAGED CEILING TILES AND ALL ASSOCIATED LIGHTING, DIFFUSERS, SPRINKLER HEADS, DEVICES, EQUIPMENT, ETC. TO BE REINSTALLED. SEE DEMO RCP FOR FULL EXTENT OF WORK. COORDINATE W/ MEPF.
8. CEILING EDGE TRIM TO BE REPLACED / REINSTALLED AS REQUIRED.
9. ROLLER SHADE, ELECTRIC. (REFER TO ELEC.) SEE GLAZING ELEVATIONS FOR CLERESTORY LOCATIONS.
10. RECESSED ROLLER SHADE, ELECTRIC. (REFER TO ELEC.)
11. 1/8" OVERLAP JOINT BETWEEN FLUSH WOOD PANELS - TYP.
12. 1" CEILING EXPANSION JOINT. (REFER TO SPEC.)
13. REMOVE AND REPLACE EXISTING STUCCO SOFFIT AS REQUIRED FOR NEW WORK.

RCP SYMBOLS LEGEND:

NOTE: REFER TO M.E.P.F.P. DRAWINGS FOR ADDITIONAL INFORMATION ON MECHANICAL, ELECTRICAL, AND FIRE PROTECTION SYSTEMS

- CEILING TYPE
- CEILING ELEVATION AFF
- SUSPENDED ACOUSTICAL TILE CEILING
- GYPSUM BOARD CEILING OR SOFFIT
- LINEAR WOOD SLAT CEILING SYSTEM
- WOOD PANEL CEILING
- ROLLER SHADE (TYP.)
- WINDOW SHADE & POCKET
- RECESSED 2'x4' LIGHT FIXTURE
- RECESSED 1'x4' LIGHT FIXTURE
- SUPPLY AIR GRILLE
- LINEAR DIFFUSER - SUPPLY/RETURN
- RECESSED 2'x2' FIXTURE
- RECESSED LINEAR FIXTURE
- SMALL PENDANT LIGHT FIXTURE
- PENDANT LIGHT MOUNT FIXTURE
- RECESSED DOWN LIGHT
- PENDANT LIGHT MOUNT LINEAR FIXTURE
- SURFACE LIGHT MOUNT FIXTURE
- PENDANT LIGHT MOUNT FIXTURE
- SPRINKLER HEAD
- PENDANT LIGHT HUNG STRIP FIXTURE
- MOTORIZED SCREEN
- ACCESS PANEL
- CABINET UNIT HEATER
- CEILING MOUNTED PROJECTOR
- SOLID HATCH DENOTES EXIT SIGN FACE PLATE
- DIRECTION OF EGRESS
- EXIT SIGN, WALL MOUNTED
- (H) HEAT DETECTOR
- (SD) SMOKE DETECTOR
- (A) FIRE ALARM DEVICE
- (S) SPEAKER
- (C) CLOSED CIRCUIT CAMERA
- (OC) OCCUPANT SENSOR
- (W) WIRELESS ACCESS POINT
- (LS) LIGHT SENSOR
- RETURN AIR GRILLE

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NO:	DESCRIPTION:	DATE:

SHEET TITLE:

REFLECTED CEILING PLANS - ENTRY

SHEET NUMBER:

A2.02

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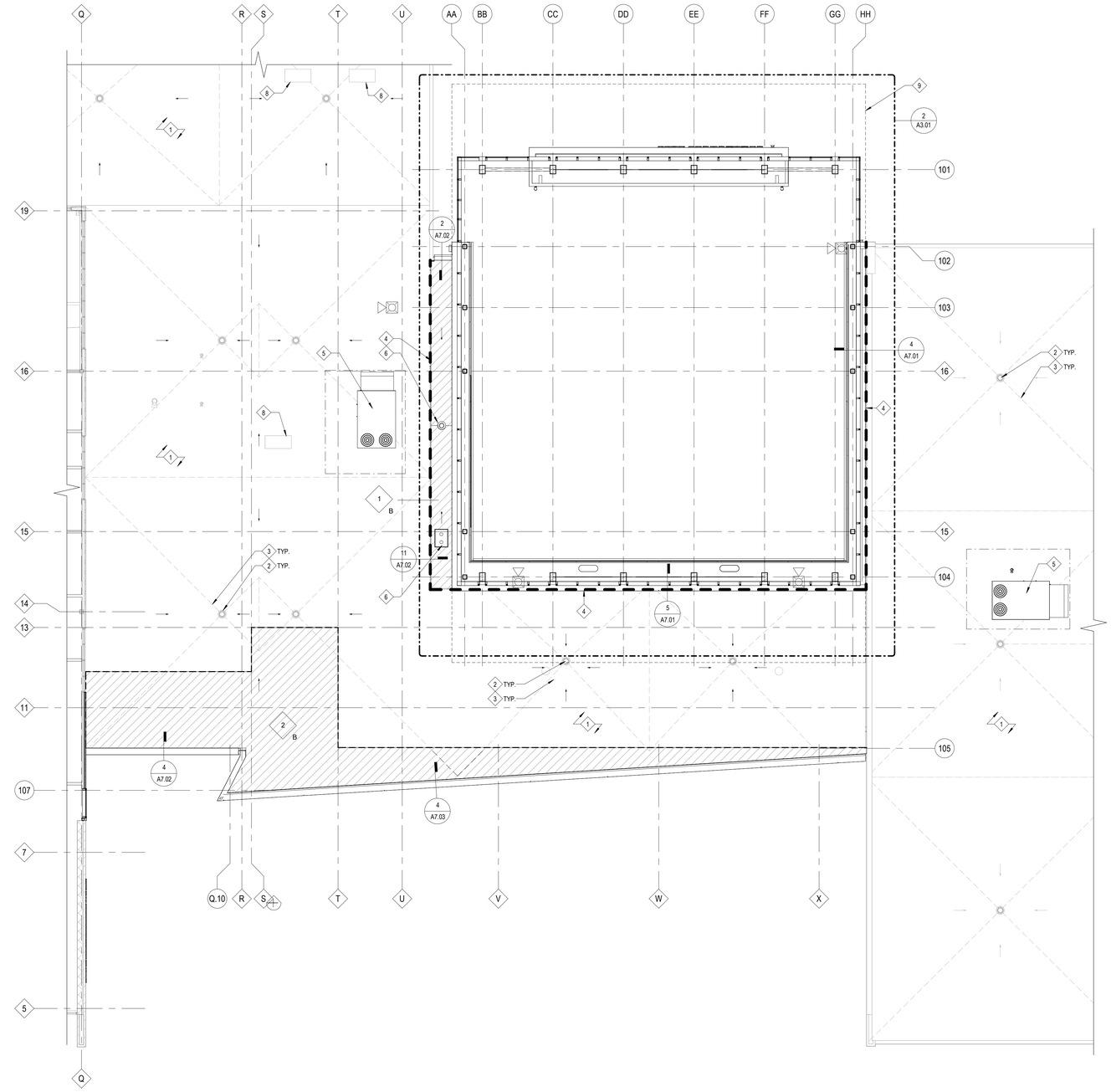
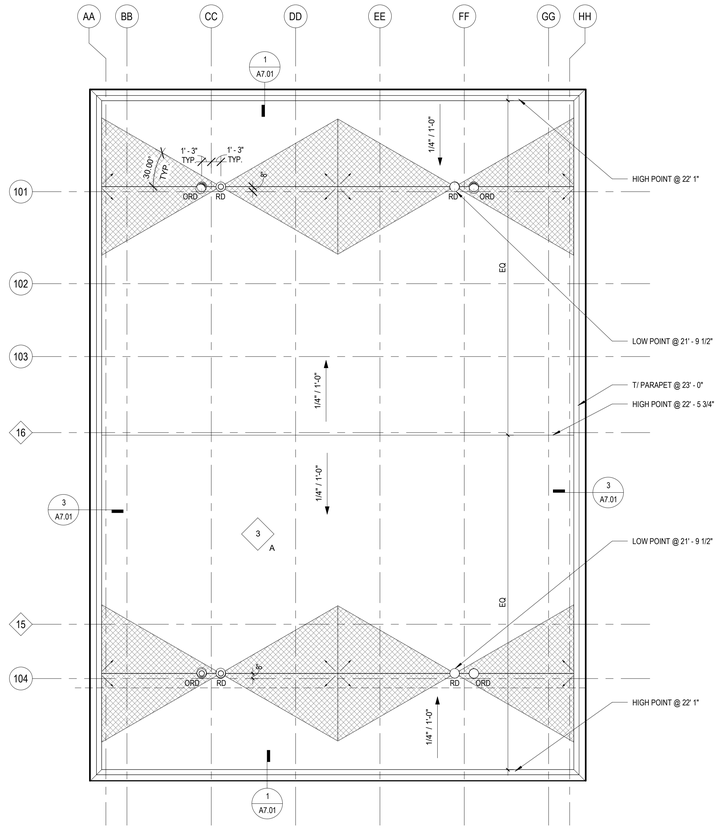


1 ROOF PLAN - LOWER ROOF
1/8" = 1'-0"



2 ROOF PLAN - EVENT SPACE
1/8" = 1'-0"

ROOF PLAN LEGEND:

NOTE: REFER TO M.E.P.F.P. DRAWINGS FOR ADDITIONAL INFORMATION ON MECHANICAL, ELECTRICAL, AND FIRE PROTECTION SYSTEMS

- ROOF AREA BOUNDARY LINE
- XX / X — ROOF AREA NUMBER / ROOF AREA TYPE
- RD — ROOF DRAIN
- ORD — OVERFLOW ROOF DRAIN
- VTR — PIPE PENETRATION
- ROOF DAVIT
- 24" x 24" x 2" RUBBER ROOF PAVER
- EF — EXHAUST FAN
- HB — HOSE BIB IN WALL
- HB — HOSE BIB PENETRATION THRU ROOF
- SPLASH PAD
- FLEXIBLE WALKWAY
- FLEXIBLE WALKWAY INDICATING EXTENTS OF 15' OSHA SAFETY DISTANCE FROM ROOF EDGE.
- SLOPE DIRECTION
- AREA OF NEW BALLASTED ROOF TO MATCH EXISTING, SEE ROOF SYSTEM TYPES
- TAPERED INSULATION SADDLE WITH A SURFACE SLOPE OF 1/4" PER 1'-0" (1/2" PER FOOT PANEL SLOPE)
- CU — CONDENSER UNIT
- GAS LINE

ROOF SYSTEM TYPES:

ROOF TYPE A: FLAT ROOF DECK ON CROSS-LAMINATED TIMBER.

1. VAPOR RETARDER.
2. 5" BASE LAYER OF ROOF INSULATION.
3. TOP LAYER OF TAPERED ROOF INSULATION (1/4") 1' SLOPE).
4. TAPERED ROOF INSULATION TO FORM CRICKETS WITH 1/4" PER FOOT SURFACE SLOPE.
5. 1/4" COVER BOARD.
6. EPDM MEMBRANE.
7. EPDM SHEET FLASHING.
8. PREFINISHED METAL COPINGS, END WALL FLASHING, COUNTERFLASHING, ETC.

ROOF TYPE B: FLAT BALLASTED ROOF ON STEEL DECKING

1. VAPOR RETARDER.
2. BASE LAYER OF ROOF INSULATION (MATCH THICKNESS OF EXISTING ADJACENT ROOFING INSULATION)
3. TOP LAYER OF TAPERED ROOF INSULATION (1/4") 1' SLOPE).
4. TAPERED ROOF INSULATION TO FORM CRICKETS WITH 1/4" PER FOOT SURFACE SLOPE.
5. EPDM MEMBRANE.
6. WASHED RIVER GRAVEL BALLAST TO MATCH EXISTING
7. EPDM SHEET FLASHING.
8. PREFINISHED METAL COPINGS, END WALL FLASHING, COUNTERFLASHING, ETC.

ROOF PLAN GENERAL NOTES:

1. SEE MEP DRAWINGS FOR PENETRATIONS AND EQUIPMENT CURB LOCATIONS.

ROOF PLAN REFERENCED NOTES:

1. EXISTING ROOF TO REMAIN.
2. EXISTING ROOF DRAIN.
3. EXISTING ROOF DRAIN SLOPE.
4. EXPANSION JOINT.
5. ROOFTOP MECHANICAL UNIT - REFER TO STRUCTURAL FOR REINFORCEMENT REQUIREMENTS AND MECHANICAL FOR EQUIPMENT INFORMATION AND UTILITY REQUIREMENTS.
6. ROOF DRAIN. (REFER TO PLUMB.)
7. ROOF OVERFLOW DRAIN. (REFER TO PLUMB.)
8. EXISTING MAKE-UP AIR UNIT. (REFER TO MECH.)
9. EXTENT OF ROOF OVERHANG ABOVE.
10. ROOF PIPE PENETRATION ENCLOSURE. (REFER TO ELEC. / SPECS)

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NO:	DESCRIPTION:	DATE:

SHEET TITLE:
ROOF PLAN

SHEET NUMBER:
A3.01

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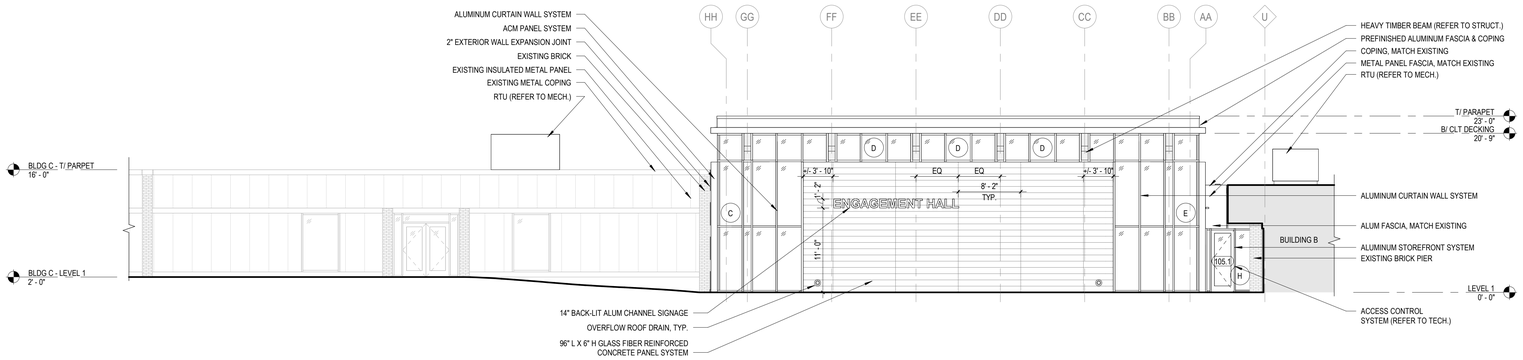
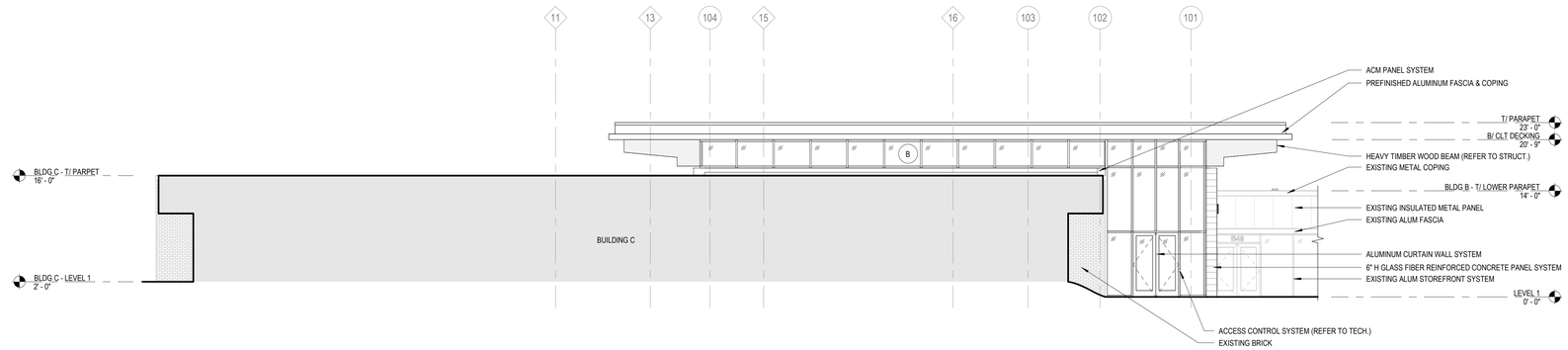
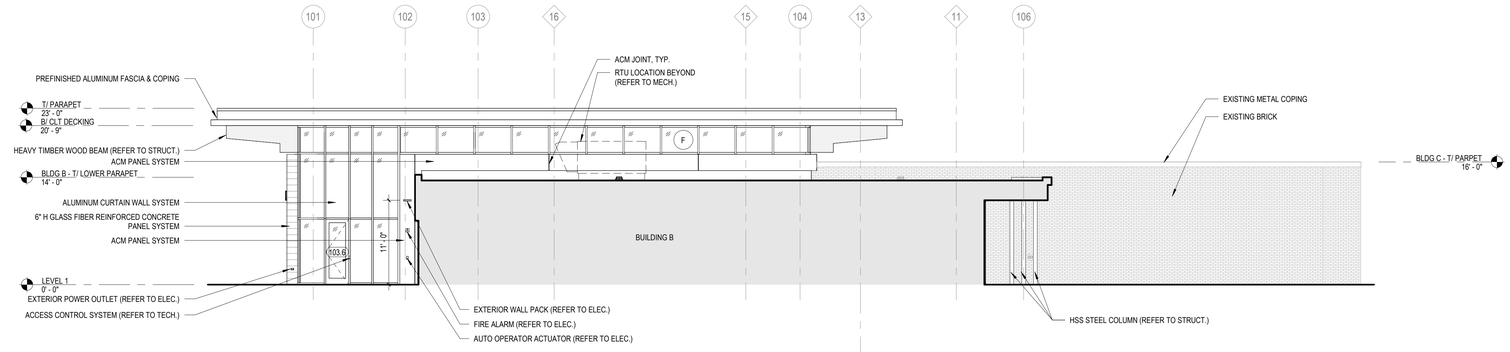


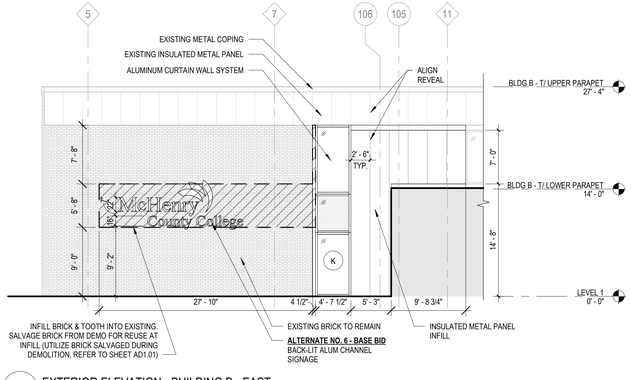
1 EXTERIOR ELEVATION - EVENT CENTER - NORTH
1/8" = 1'-0"



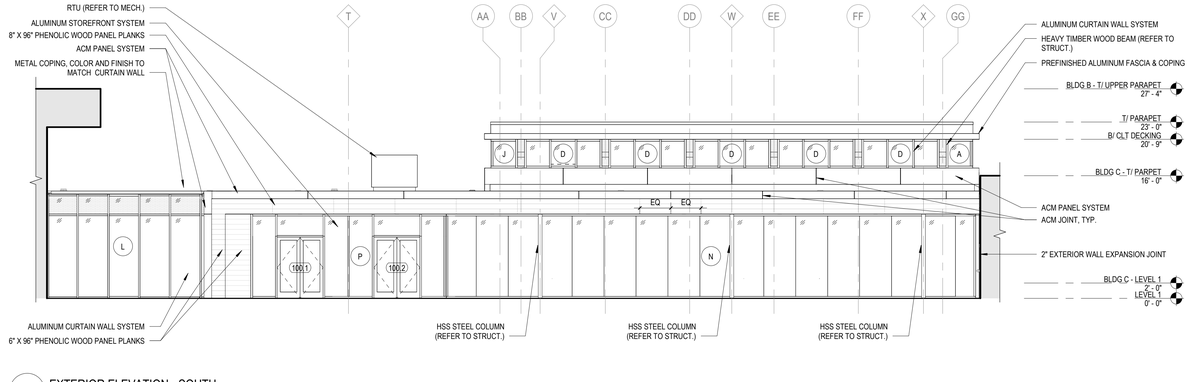
2 EXTERIOR ELEVATION - EVENT CENTER - EAST
1/8" = 1'-0"



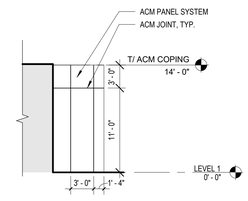
3 EXTERIOR ELEVATION - EVENT CENTER -WEST
1/8" = 1'-0"



4 EXTERIOR ELEVATION - BUILDING B - EAST
1/8" = 1'-0"



5 EXTERIOR ELEVATION - SOUTH
1/8" = 1'-0"



6 EXTERIOR ELEVATION - ENTRY - WEST
1/8" = 1'-0"

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NO:	DESCRIPTION:	DATE:

SHEET TITLE:
EXTERIOR ELEVATIONS

SHEET NUMBER:
A4.01

5/16/2025 2:52:20 PM

EVENT SPACE - NORTH VIEW

MAIN ENTRANCE - SOUTH VIEW

EVENT SPACE - NORTHEAST VIEW

MAIN ENTRANCE - SOUTHEAST VIEW

EVENT SPACE - NORTHWEST VIEW

MAIN ENTRANCE - SOUTHWEST VIEW

dkA

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NO:	DESCRIPTION:	DATE:

SHEET TITLE:
EXTERIOR RENDERINGS

SHEET NUMBER:
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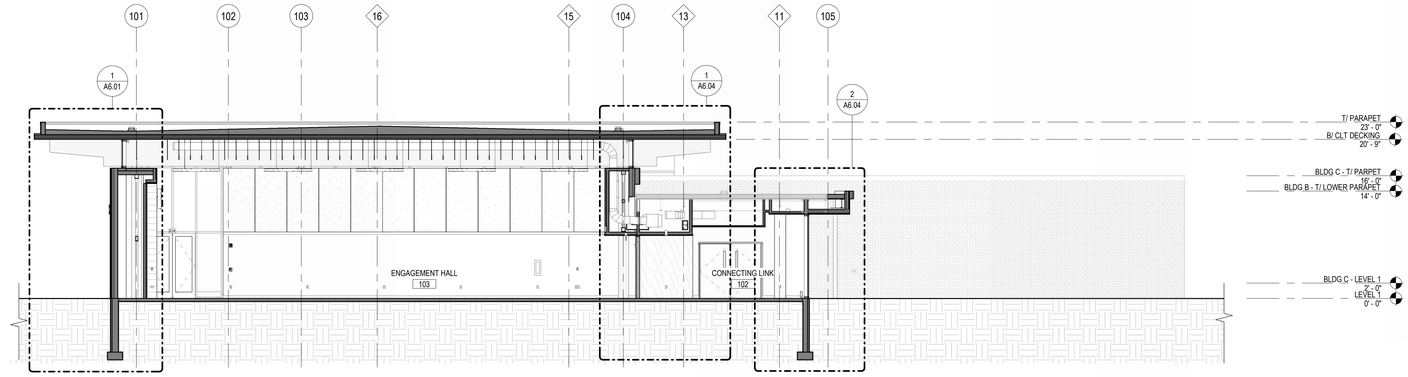
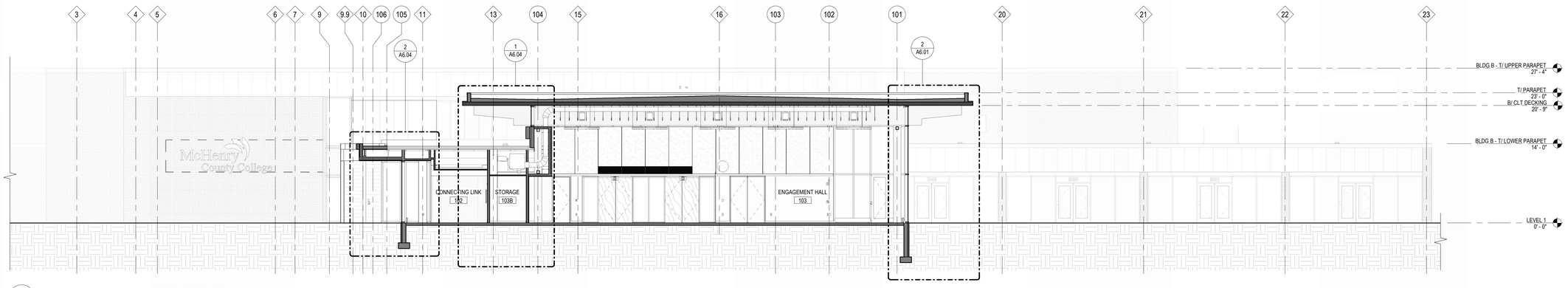
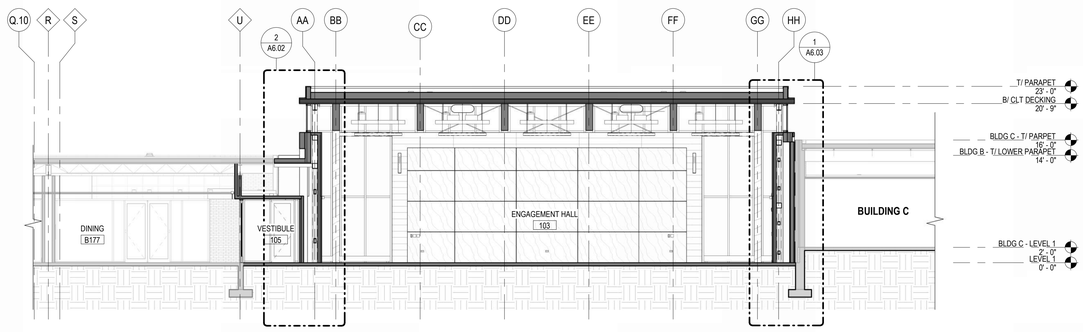


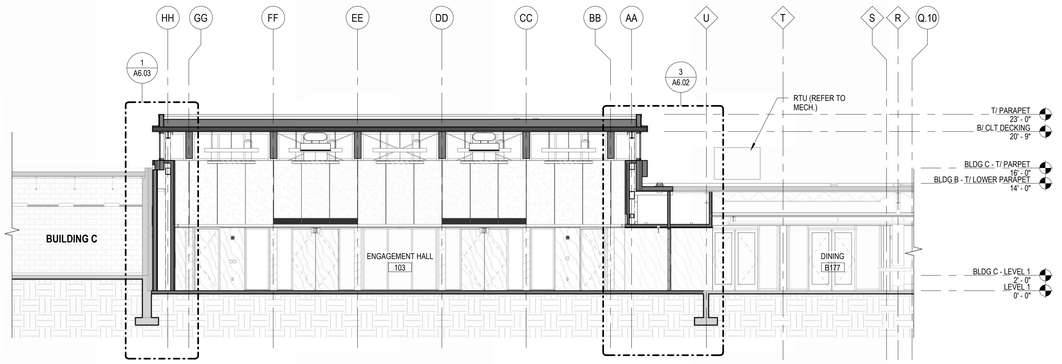
1 BUILDING SECTION - NORTH-SOUTH - THRU GFRC
1/8" = 1'-0"



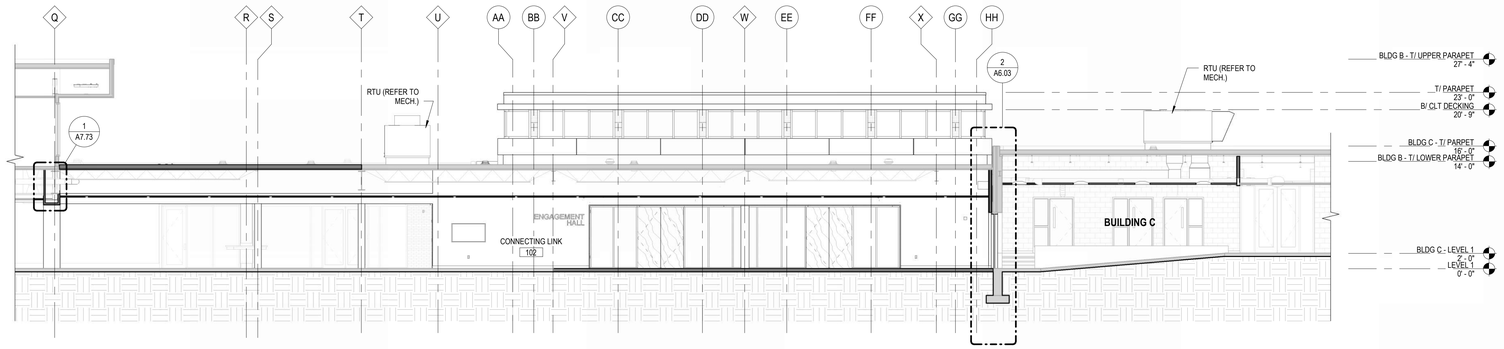
2 BUILDING SECTION - NORTH-SOUTH - THRU CW
1/8" = 1'-0"



3 BUILDING SECTION - EAST-WEST - EVENT CENTER 1
1/8" = 1'-0"



4 BUILDING SECTION - EAST-WEST - EVENT CENTER 2
1/8" = 1'-0"



5 BUILDING SECTION - EAST-WEST - CORRIDOR LINK
1/8" = 1'-0"

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BUILDING SECTIONS

SHEET NUMBER:
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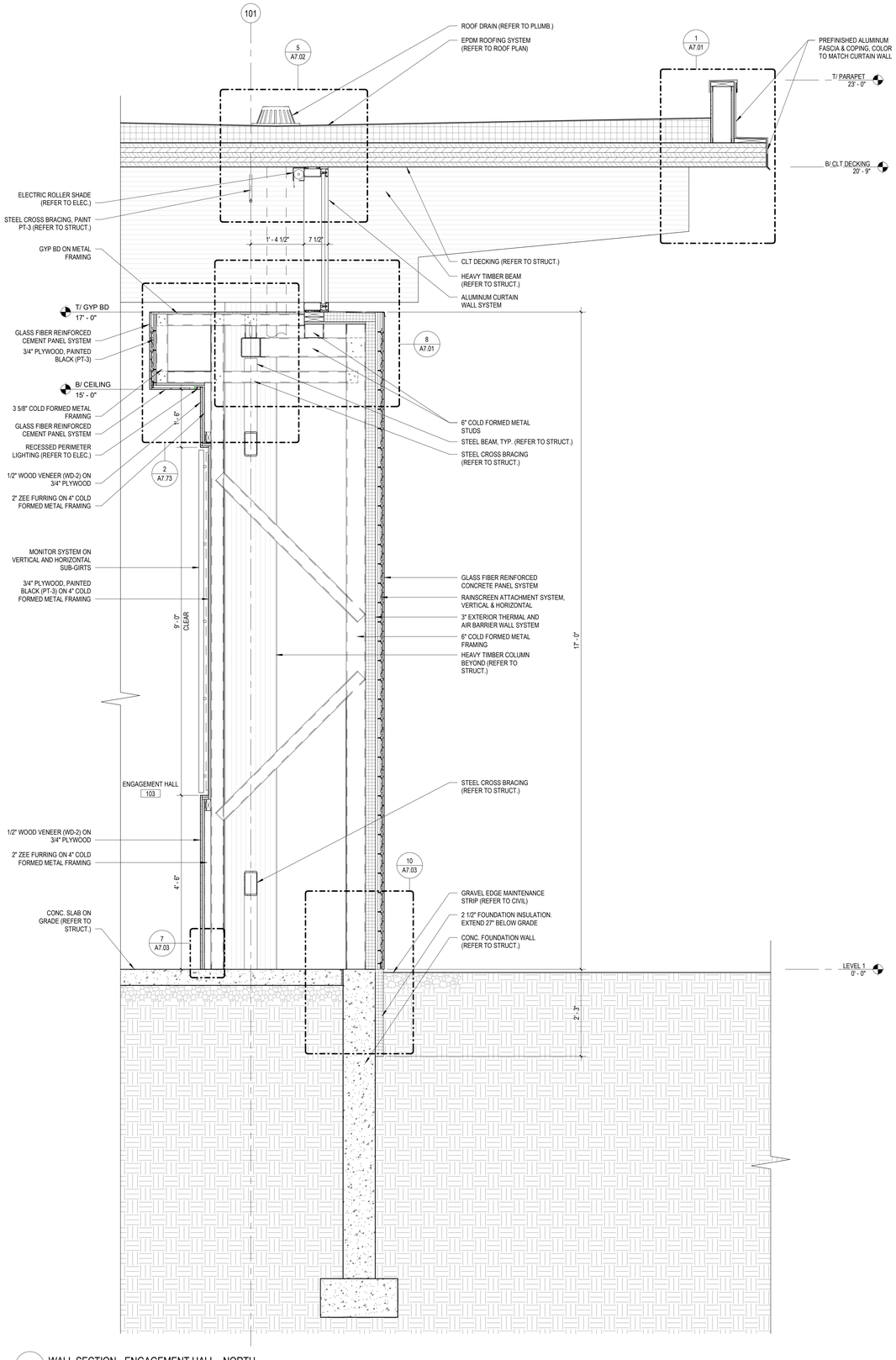
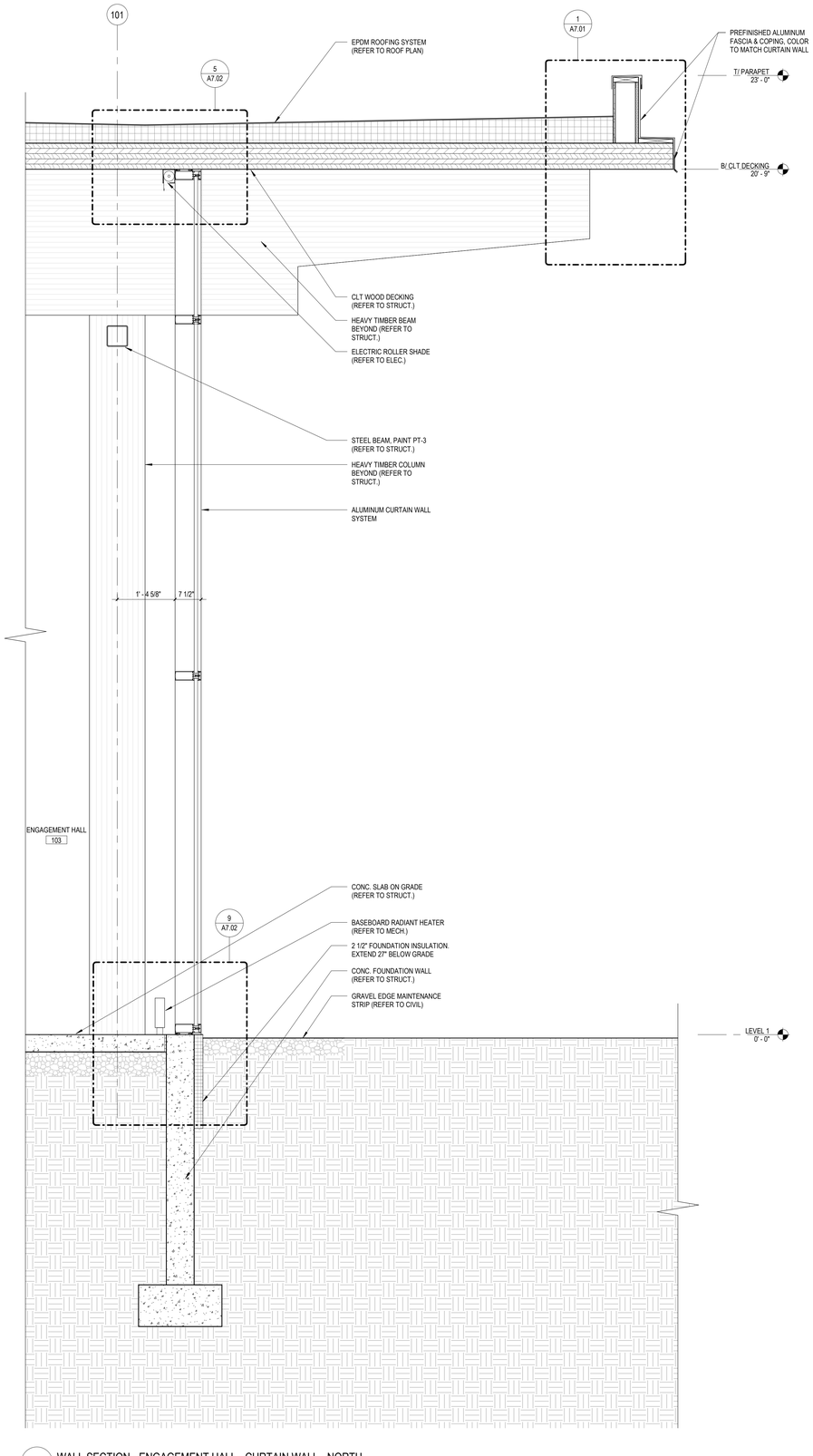


1 WALL SECTION - ENGAGEMENT HALL - NORTH
3/4" = 1'-0"



2 WALL SECTION - ENGAGEMENT HALL - CURTAIN WALL - NORTH
3/4" = 1'-0"

ARCHITECT OF RECORD
DEMONICA KEMPER ARCHITECTS
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CONSTRUCTION MANAGER
PEPPER CONSTRUCTION
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P. 847.381.2760

McHenry County College
ENGAGEMENT HALL

8900 NORTHWEST HWY #14
CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
WALL SECTIONS

SHEET NUMBER:
A6.01

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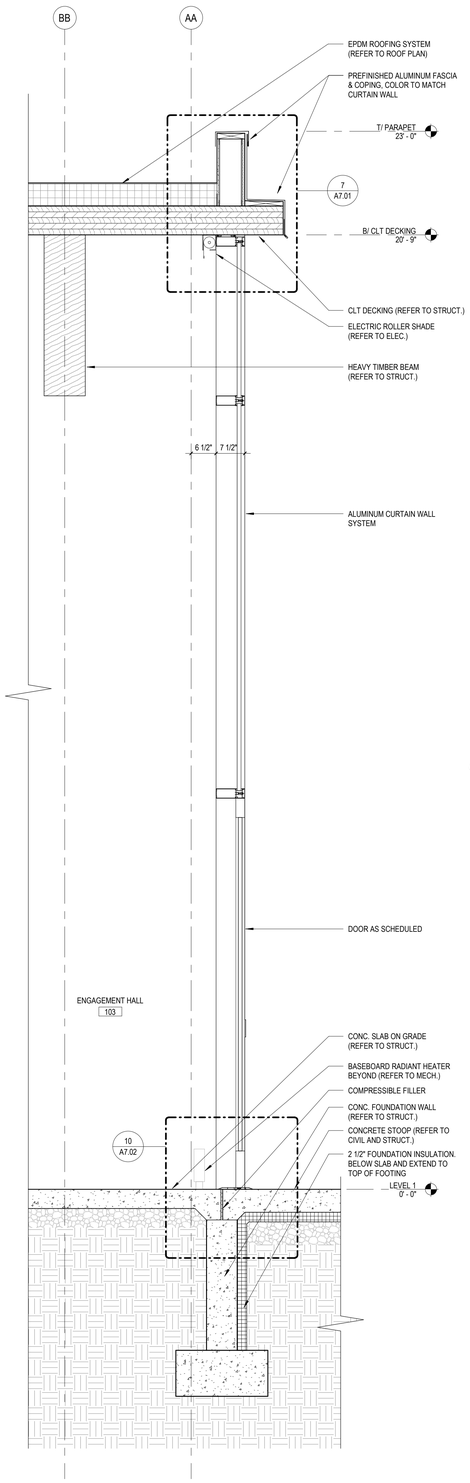
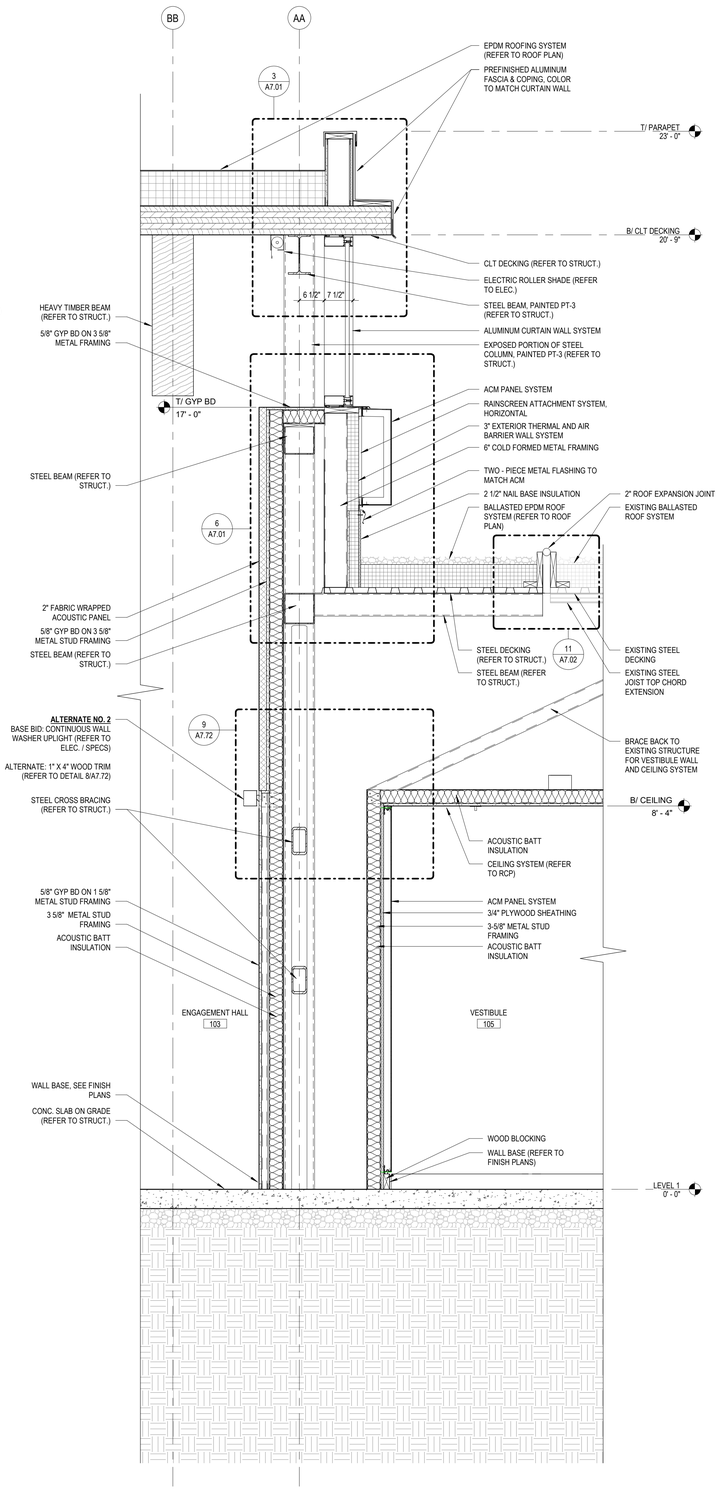
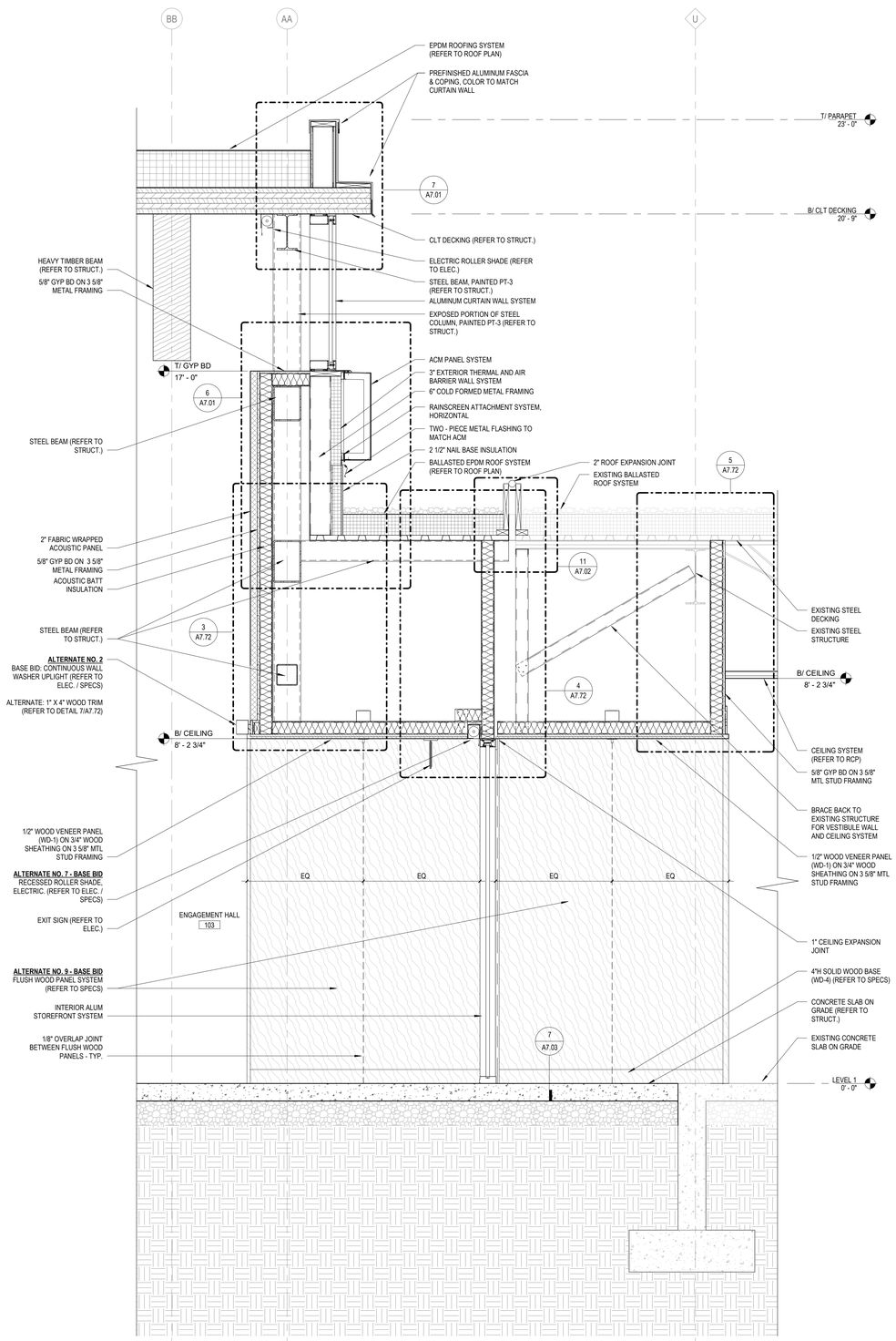


1 WALL SECTION - ENGAGEMENT HALL - CURTAIN WALL - WEST
3/4" = 1'-0"



2 WALL SECTION - ENGAGEMENT HALL - WEST 1
3/4" = 1'-0"



3 WALL SECTION - ENGAGEMENT HALL - WEST 2
3/4" = 1'-0"

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McHenry County College ENGAGEMENT HALL

8900 NORTHWEST HWY #14
CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24-027

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WALL SECTIONS

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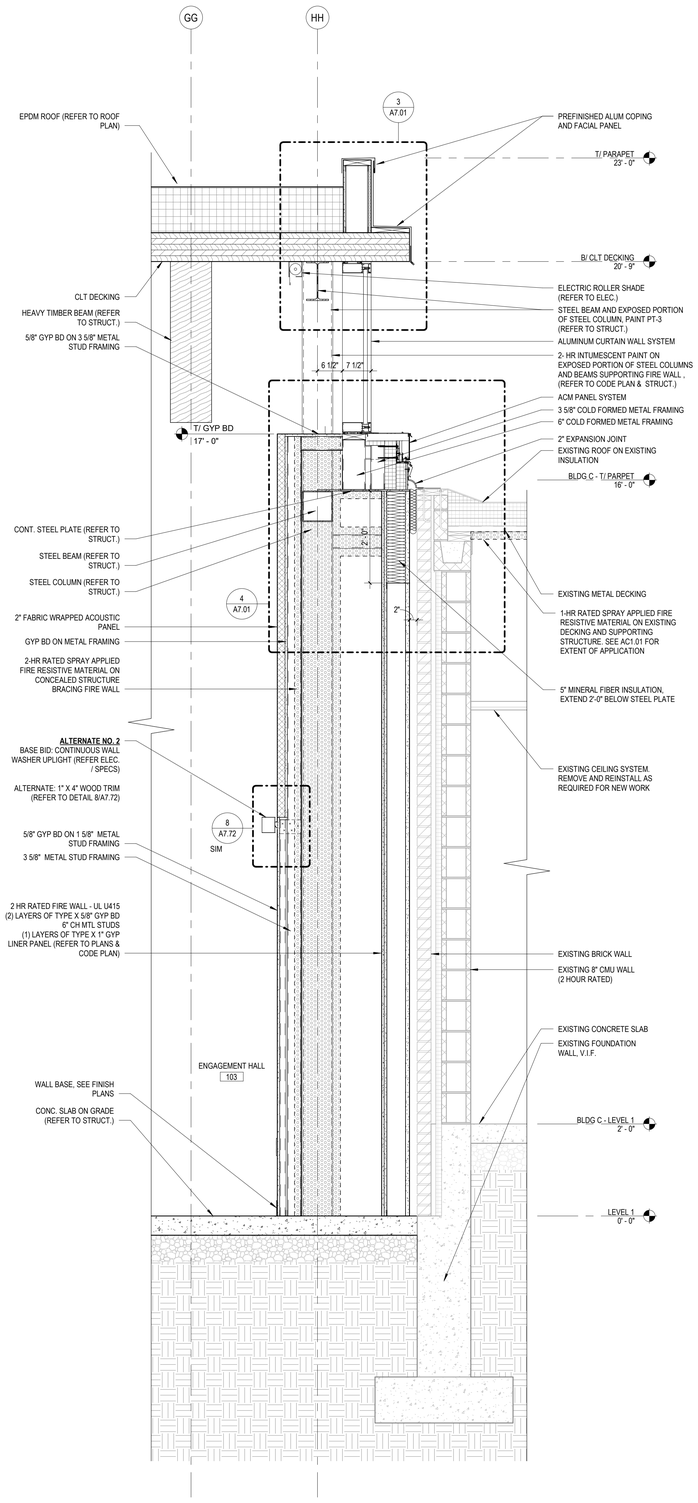
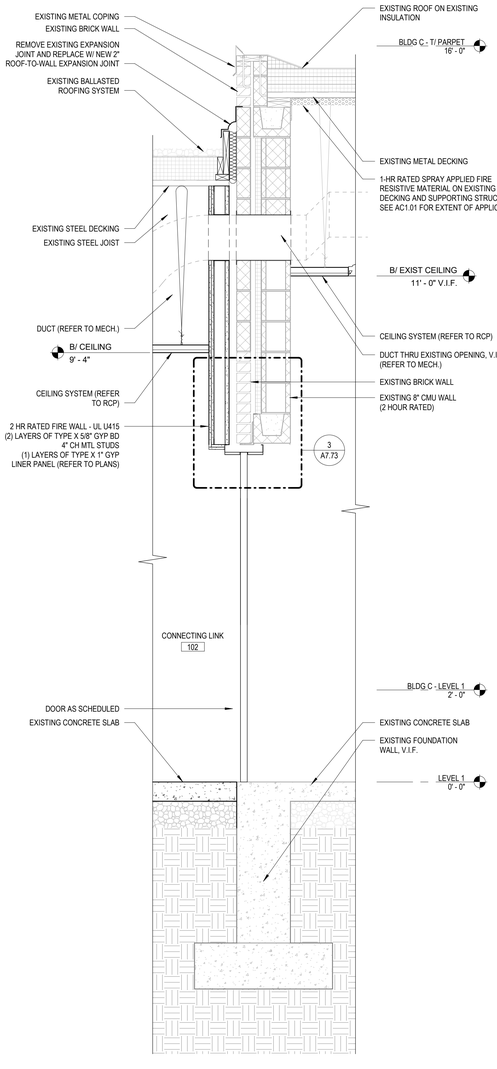
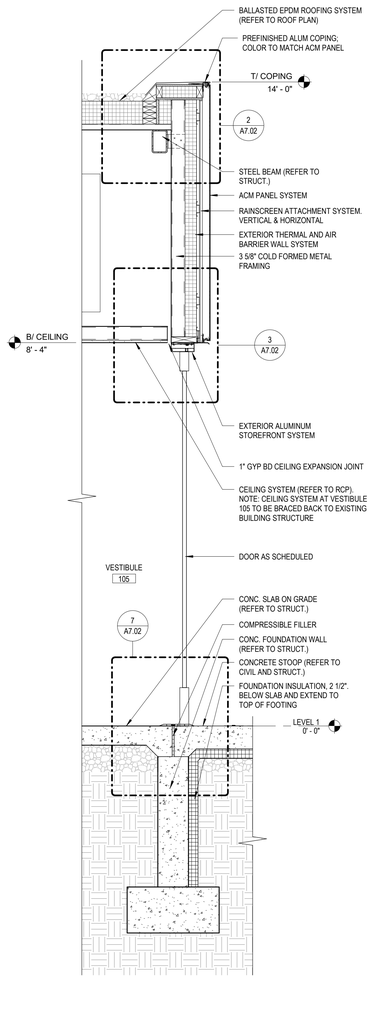


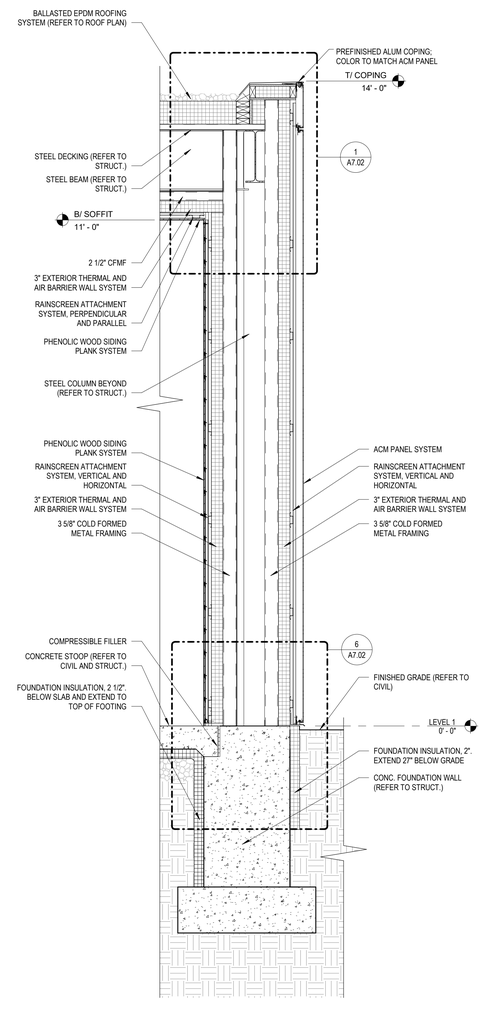
1 WALL SECTION - ENGAGEMENT HALL- EAST
3/4" = 1'-0"



2 WALL SECTION - CORRIDOR LINK CONNECTION
3/4" = 1'-0"



3 WALL SECTION - VESTIBULE 101 - NORTH
3/4" = 1'-0"



5 WALL SECTION - WING WALL
3/4" = 1'-0"

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A6.03

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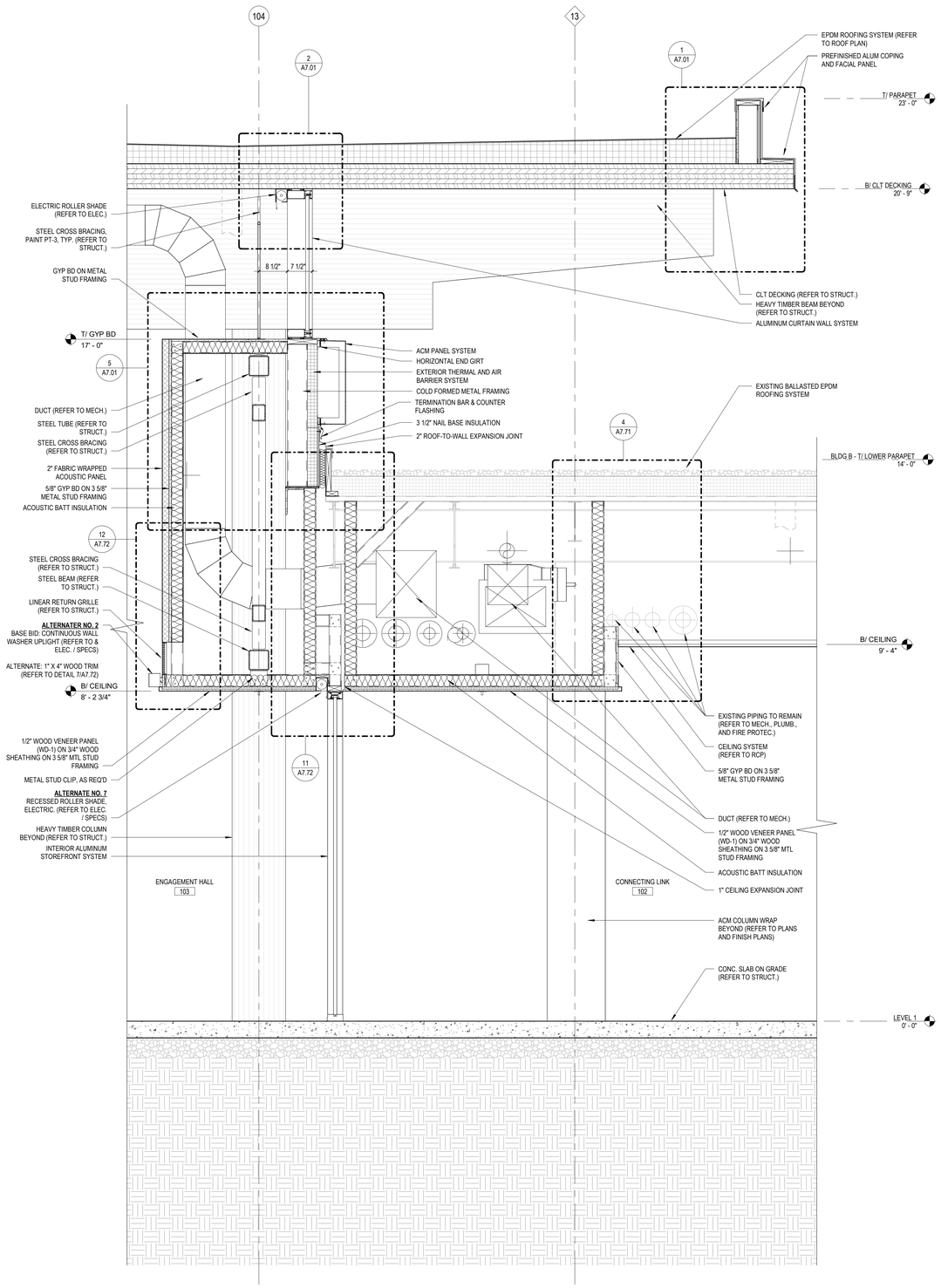
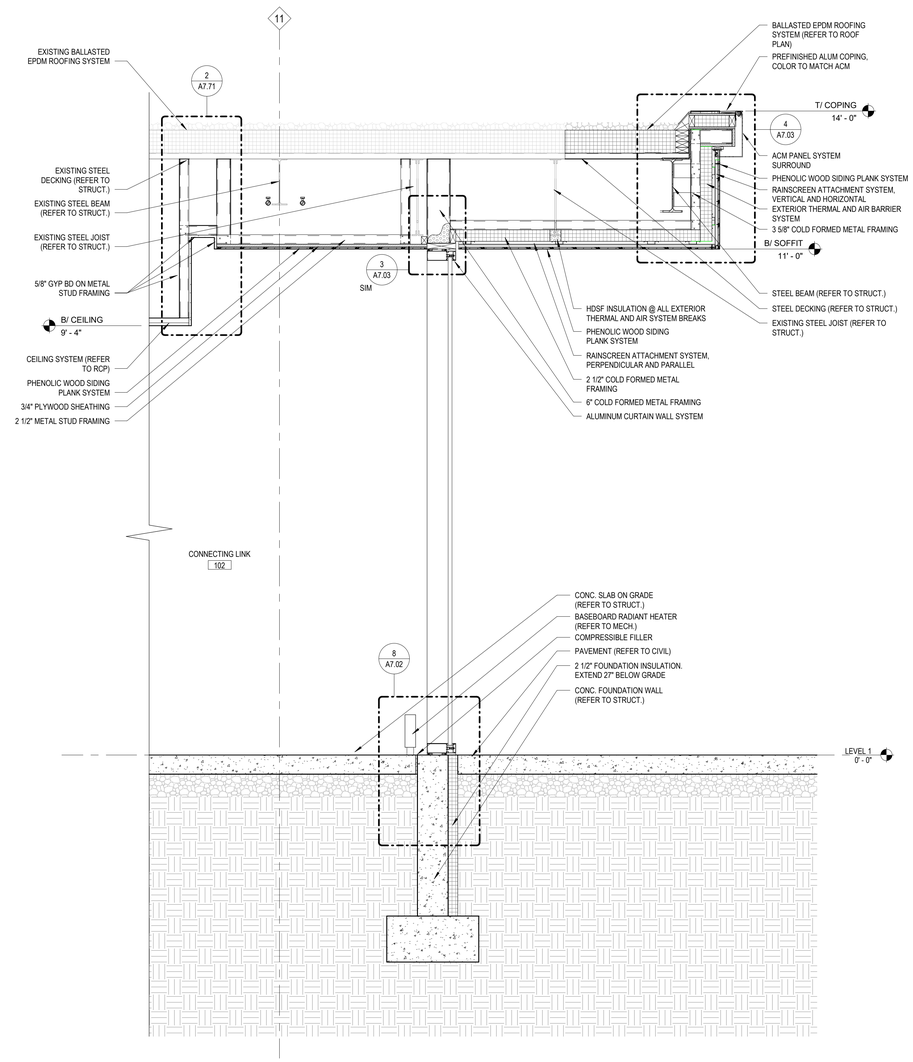


1 WALL SECTION - ENGAGEMENT HALL - SOUTH
3/4" = 1'-0"



2 WALL SECTION - CORRIDOR LINK - SOUTH
3/4" = 1'-0"

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WALL SECTIONS

SHEET NUMBER:
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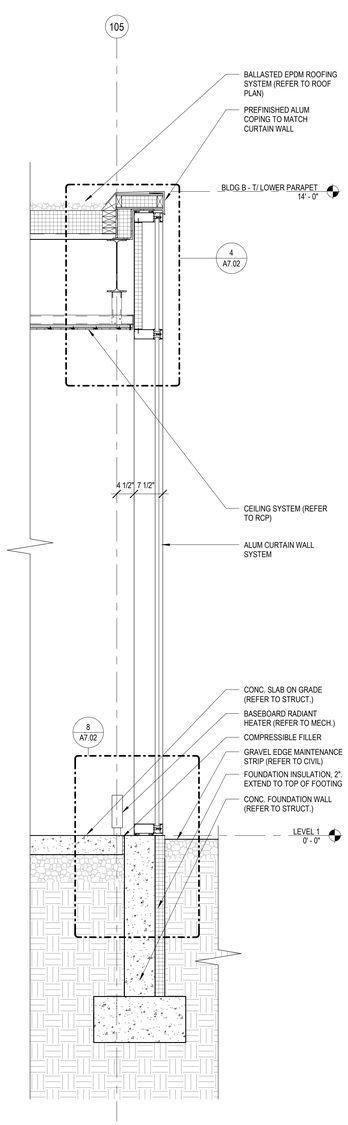
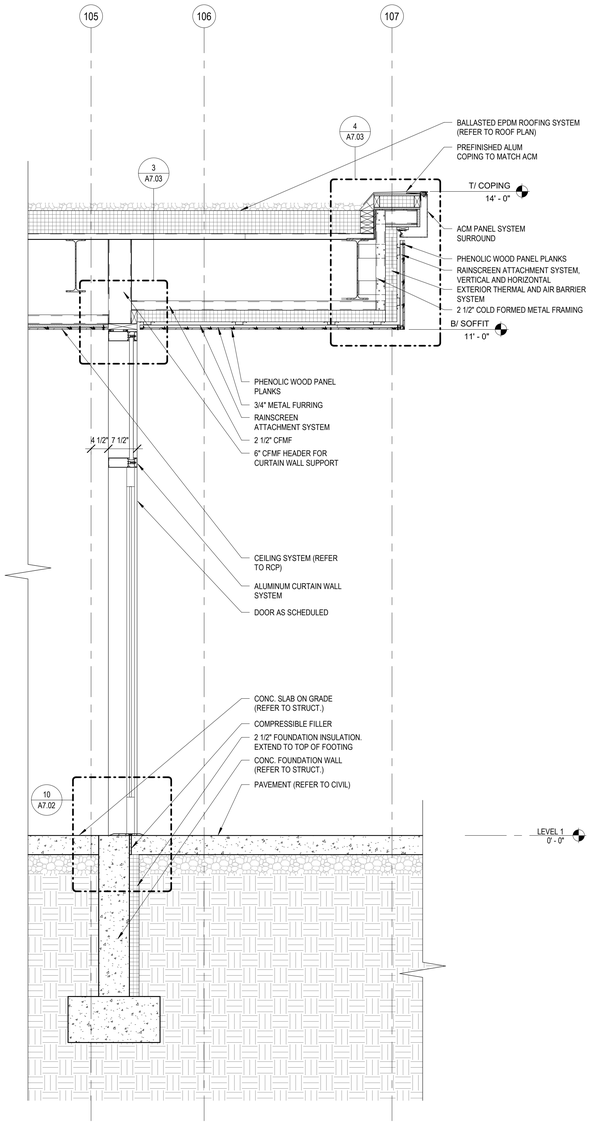
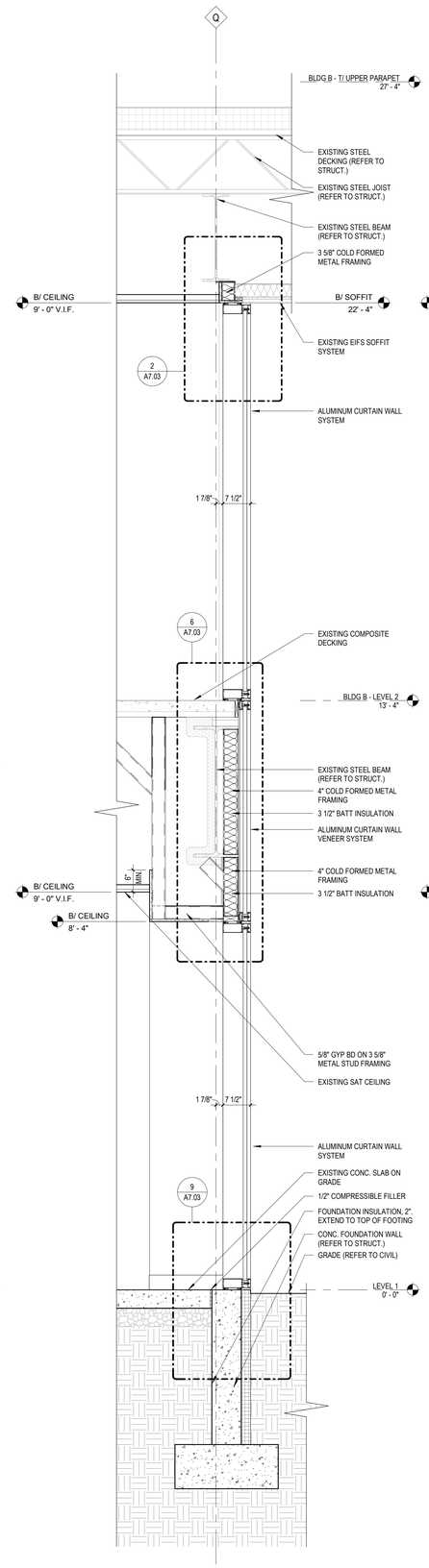


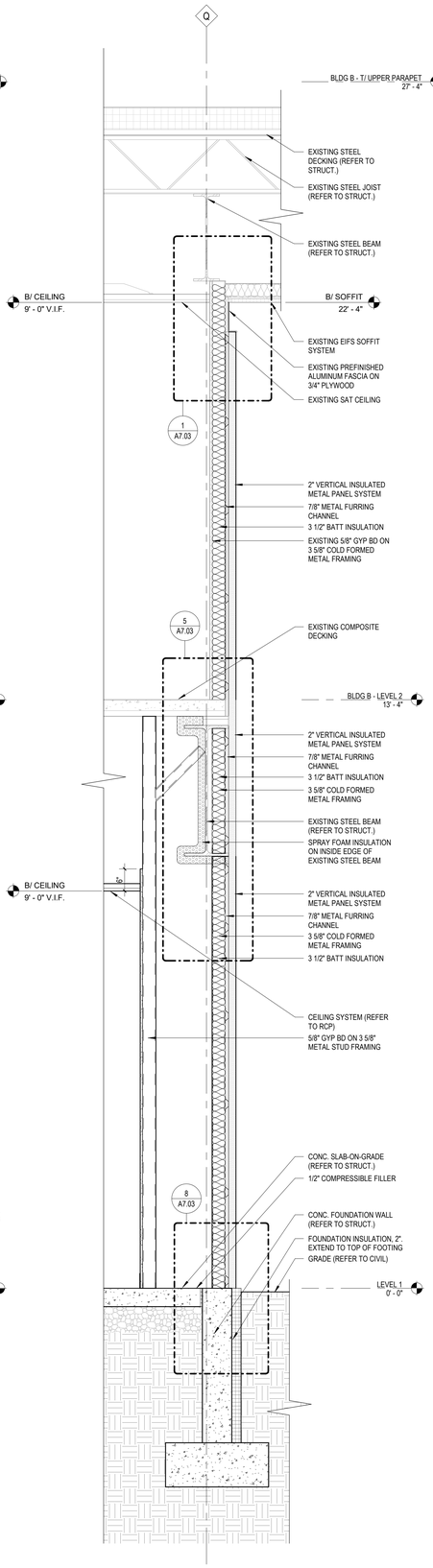
1 WALL SECTION - CURTAIN WALL AT ENTRY
3/4" = 1'-0"



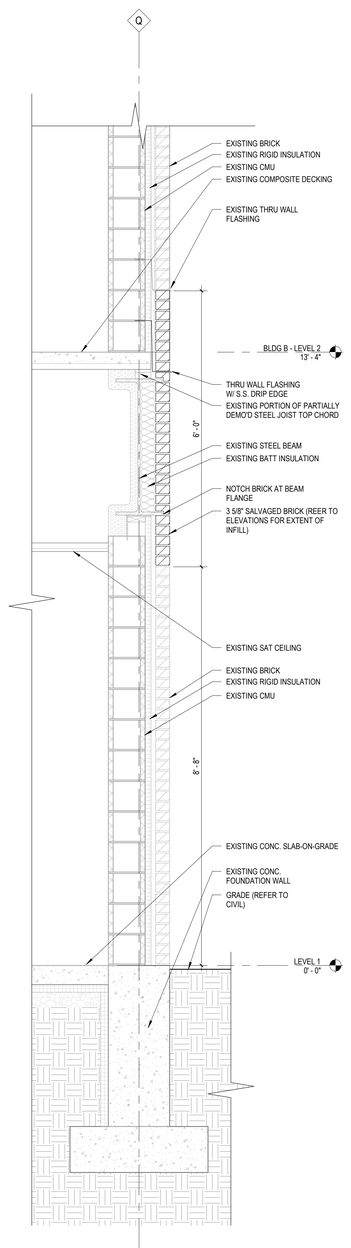
2 WALL SECTION - CURTAIN WALL AT VESTIBULE
3/4" = 1'-0"



3 WALL SECTION - CURTAIN WALL INFILL
3/4" = 1'-0"



4 WALL SECTION - WALL INFILL
3/4" = 1'-0"



5 WALL SECTION - BRICK INFILL AT EXISTING WALL
3/4" = 1'-0"

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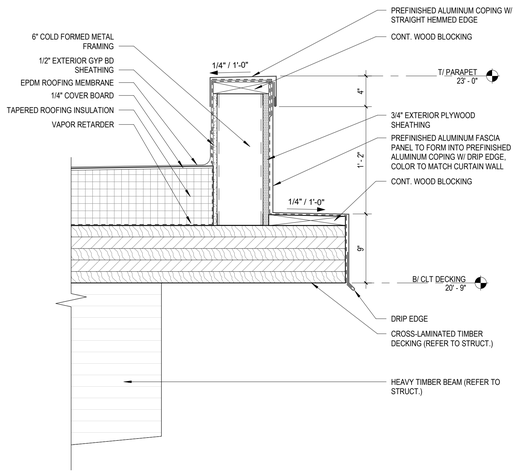
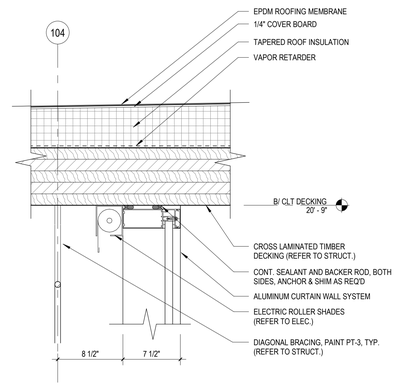
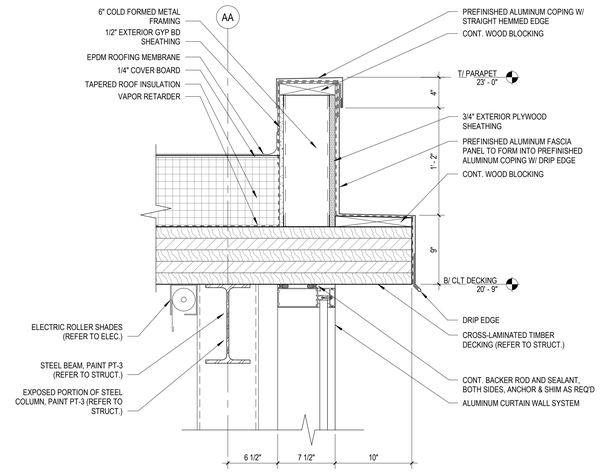


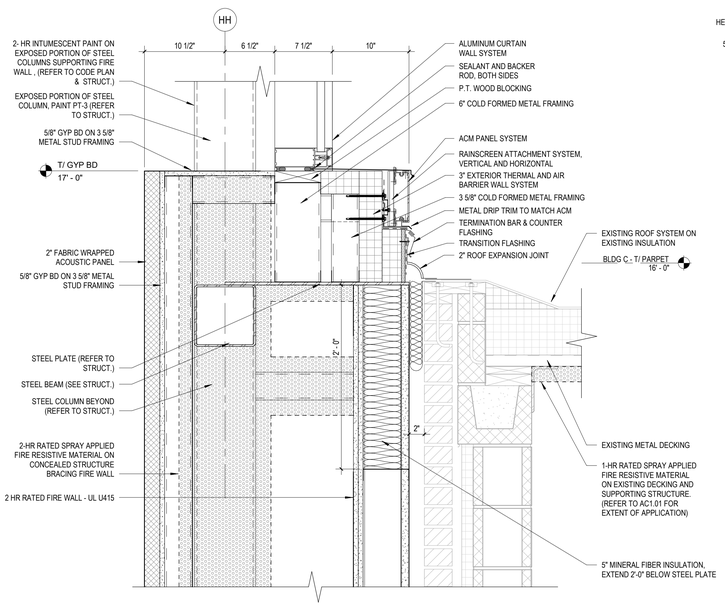
1 SECTION DETAIL - CLT PARAPET - NORTH/SOUTH
1 1/2" = 1'-0"



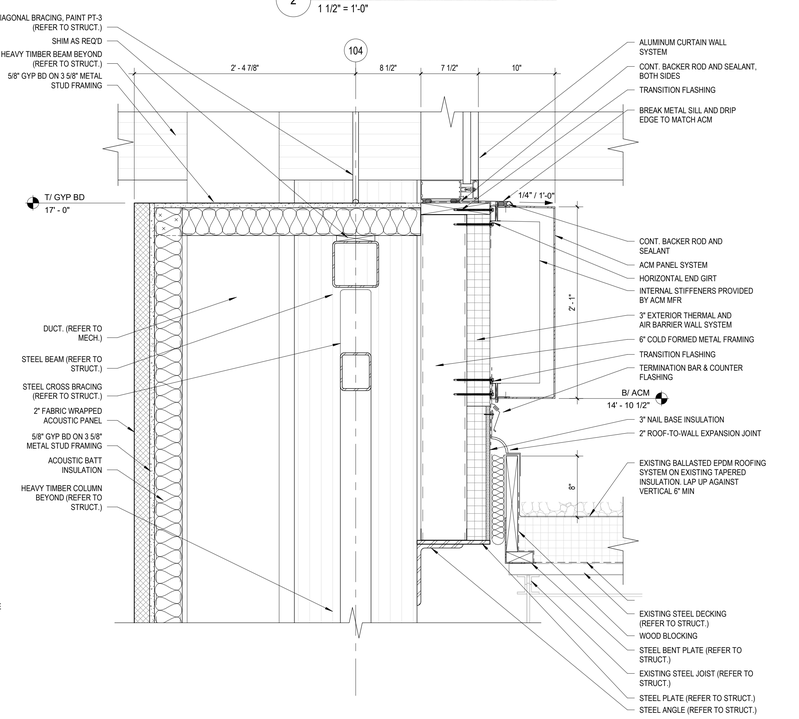
2 SECTION DETAIL - CW HEAD AT CLT - SOUTH
1 1/2" = 1'-0"



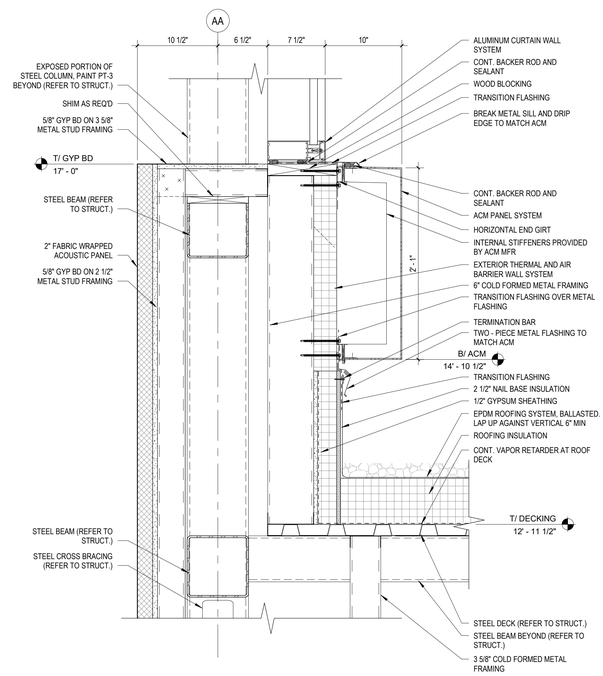
3 SECTION - CLT PARAPET - EAST/WEST 1
1 1/2" = 1'-0"



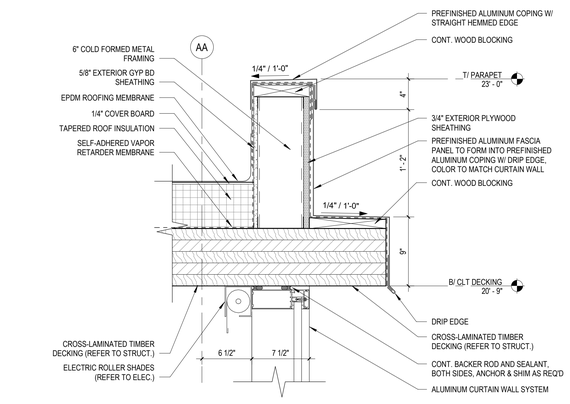
4 SECTION DETAIL - EXPANSION JOINT AT BLDG C ROOF
1 1/2" = 1'-0"



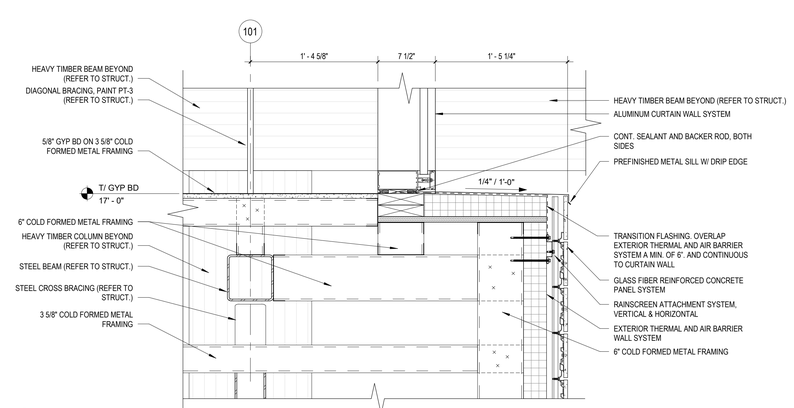
5 SECTION DETAIL - ACM AT LOW ROOF - SOUTH
1 1/2" = 1'-0"



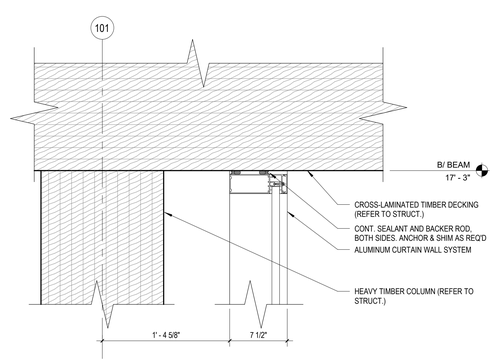
6 SECTION DETAIL - ACM AT LOW ROOF - WEST
1 1/2" = 1'-0"



7 SECTION DETAIL - CLT PARAPET - EAST/WEST 2
1 1/2" = 1'-0"



8 SECTION DETAIL - CW SILL @ GFRC WALL
1 1/2" = 1'-0"



9 SECTION DETAIL - CW UNDER HEAVY TIMBER BEAM
1 1/2" = 1'-0"

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NO:	DESCRIPTION:	DATE:

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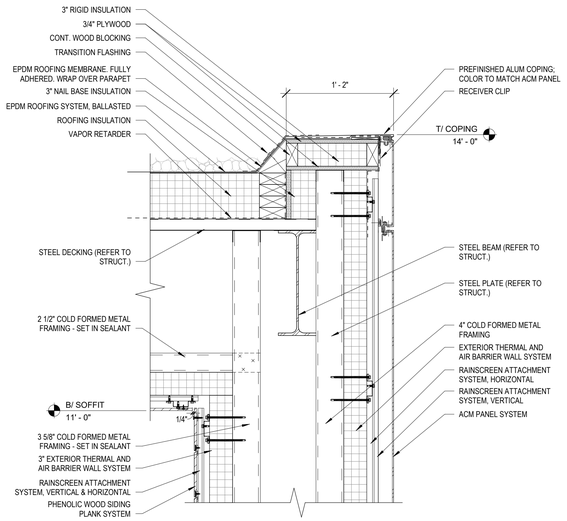
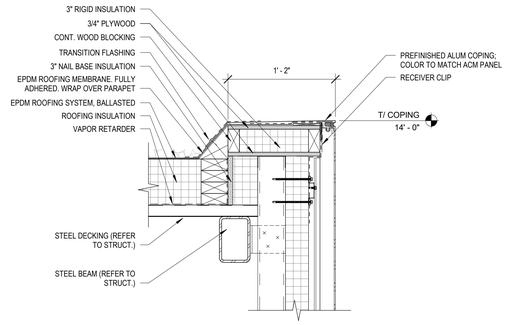
SHEET NUMBER:
A7.01

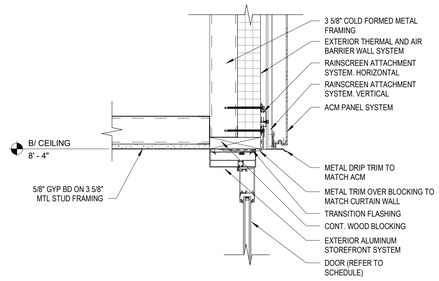
5/16/2025 2:53:41 PM



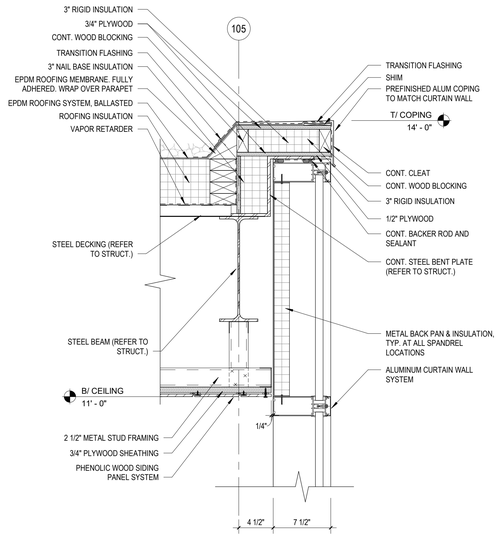
1 SECTION DETAIL - WING WALL PARAPET
1 1/2" = 1'-0"



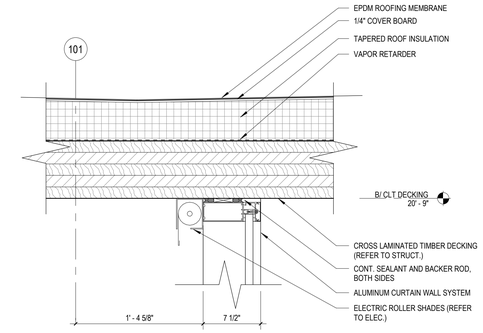
2 SECTION DETAIL - ACM GRAVEL STOP
1 1/2" = 1'-0"



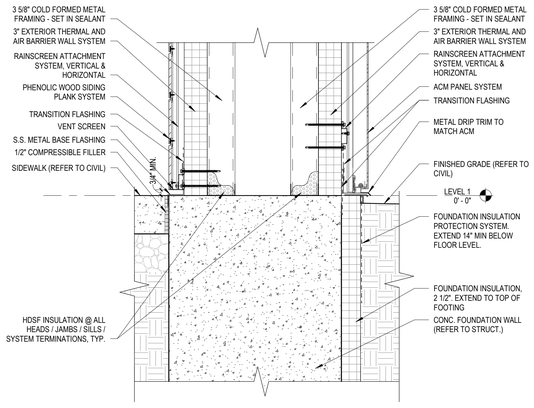
3 SECTION DETAIL - EXTERIOR SF HEAD AT ACM
1 1/2" = 1'-0"



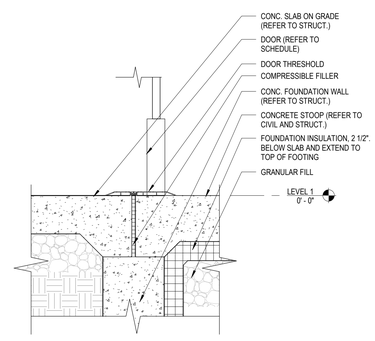
4 SECTION DETAIL - COPING AT SPANDREL GLASS
1 1/2" = 1'-0"



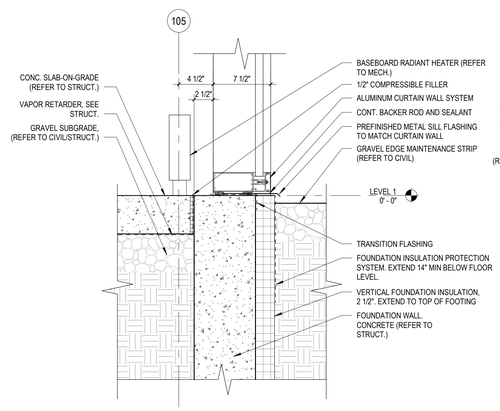
5 SECTION DETAIL - CW HEAD AT CLT - NORTH
1 1/2" = 1'-0"



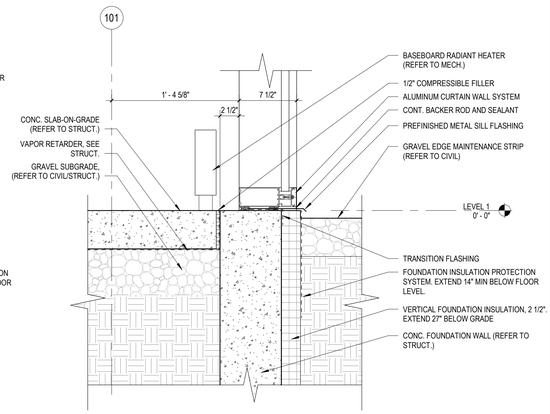
6 SECTION DETAIL - WING WALL SILL
1 1/2" = 1'-0"



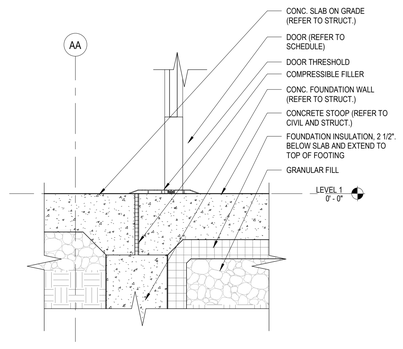
7 SECTION DETAIL - EXTERIOR SF SILL
1 1/2" = 1'-0"



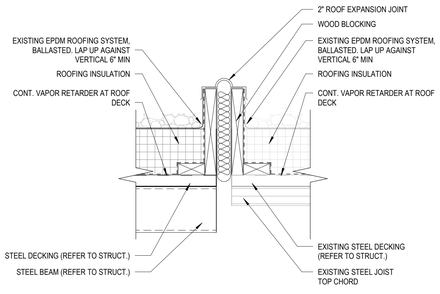
8 SECTION DETAIL - CW SILL 1
1 1/2" = 1'-0"



9 SECTION DETAIL CURTAIN WALL SILL
1 1/2" = 1'-0"



10 SECTION DETAIL - CURTAIN WALL DOOR SILL
1 1/2" = 1'-0"



11 ROOF DETAIL - ROOF TO EXISTING ROOF EXPANSION JOINT
1 1/2" = 1'-0"

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A7.02

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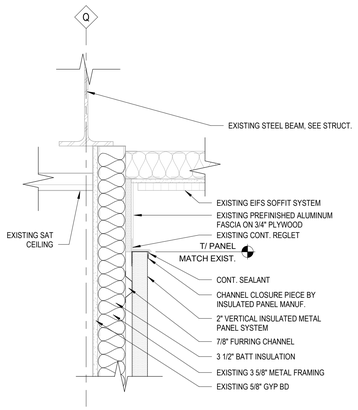
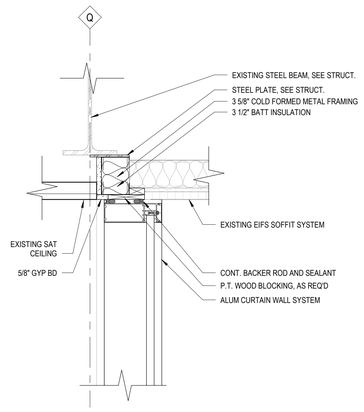
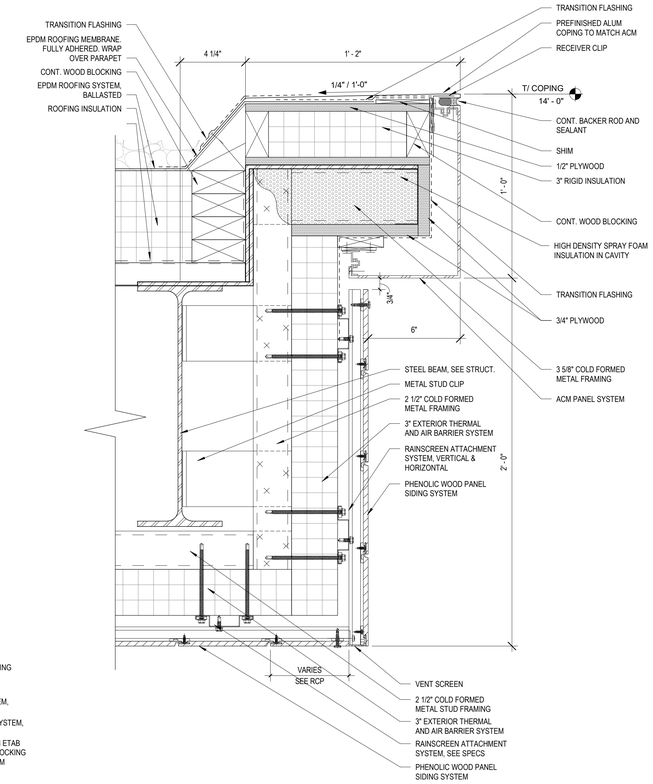


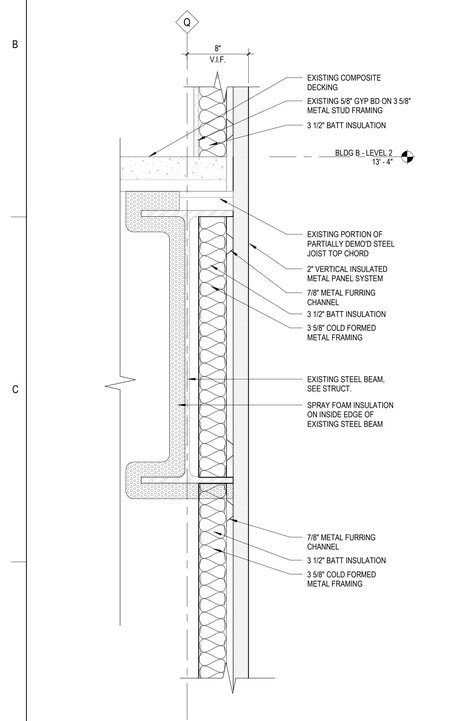
1 SECTION DETAIL - INSULATED METAL PANEL AT SOFFIT
1 1/2" = 1'-0"



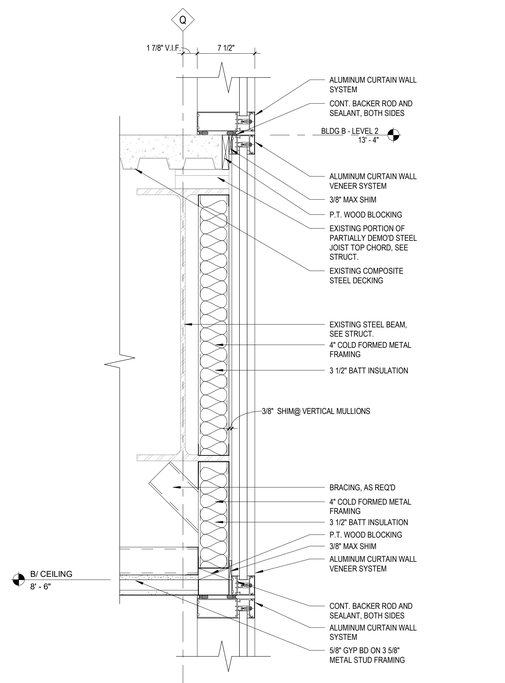
2 SECTION DETAIL - CURTAIN WALL AT EXIST SOFFIT
1 1/2" = 1'-0"



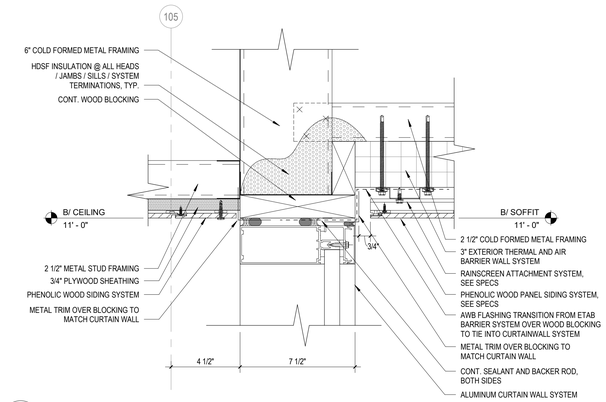
4 SECTION DETAIL - ACM SURROUND
3" = 1'-0"



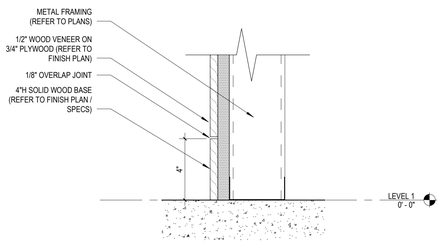
5 SECTION DETAIL - INSULATED METAL PANEL AT EXIST BEAM
1 1/2" = 1'-0"



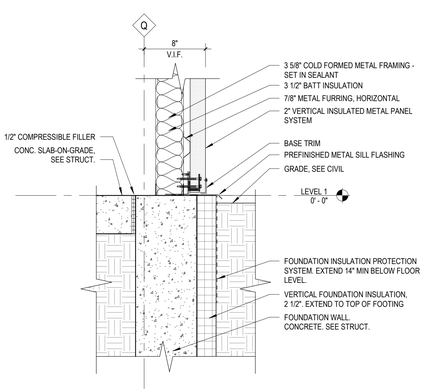
6 SECTION DETAIL - CURTAIN WALL AT EXIST BEAM
1 1/2" = 1'-0"



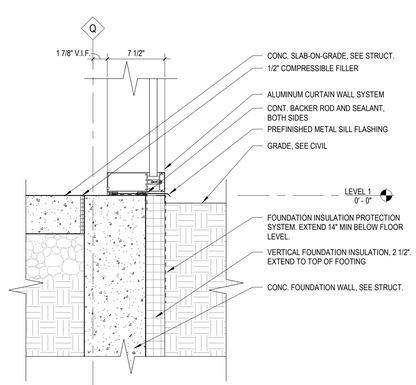
3 SECTION DETAIL - CW HEAD AT VESTIBULE
3" = 1'-0"



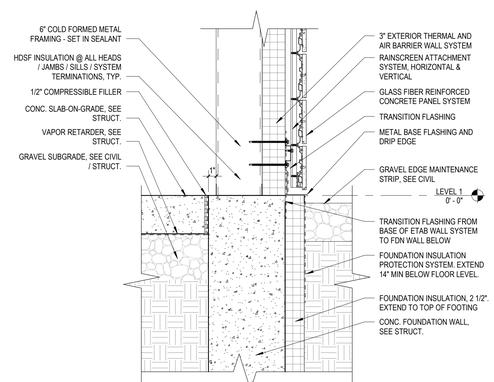
7 SECTION DETAIL - FLUSH WOOD PANEL SYSTEM BASE
3" = 1'-0"



8 SECTION DETAIL - INSULATED METAL PANEL SILL
1 1/2" = 1'-0"



9 SECTION DETAIL - CURTAIN WALL SILL AT INFILL
1 1/2" = 1'-0"



10 SECTION DETAIL - GFRC SILL
1 1/2" = 1'-0"

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
SECTION DETAILS

SHEET NUMBER:
A7.03

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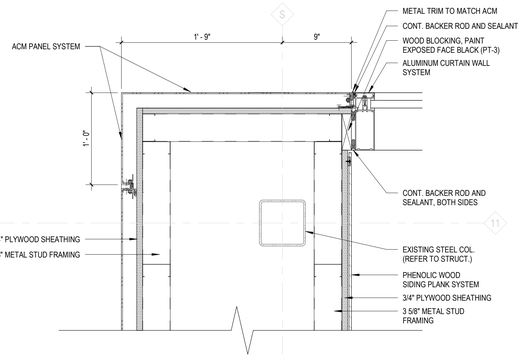
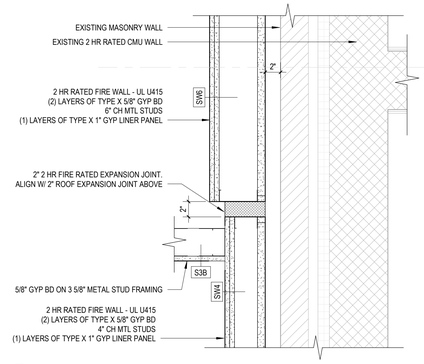
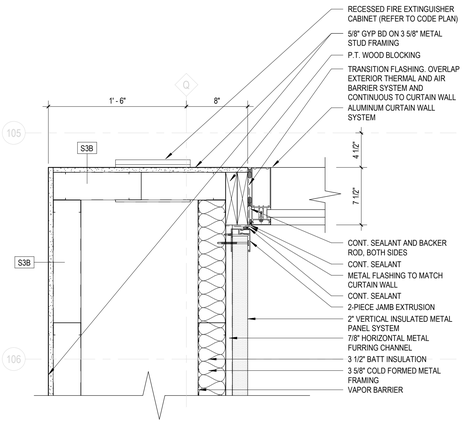


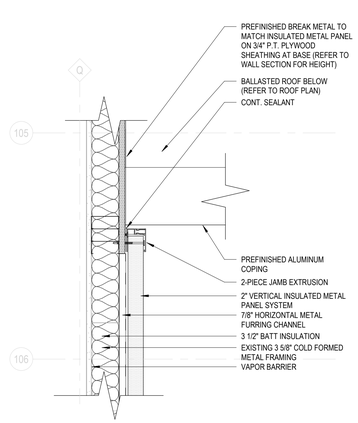
2 PLAN DETAIL - ENTRY WEST WALL
1 1/2" = 1'-0"



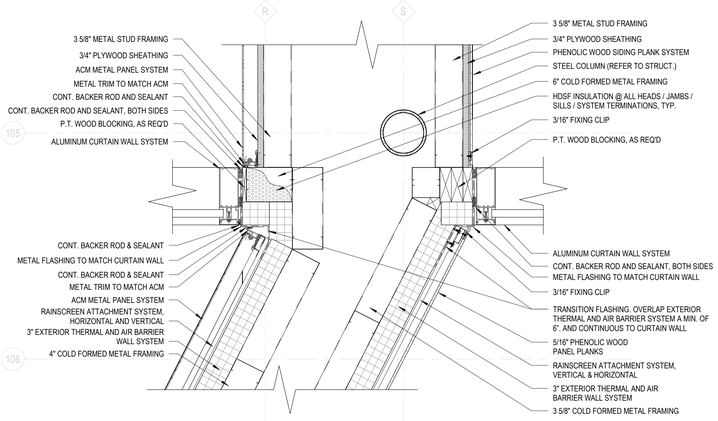
3 PLAN DETAIL - SHAFT WALL CONNECTION
1 1/2" = 1'-0"



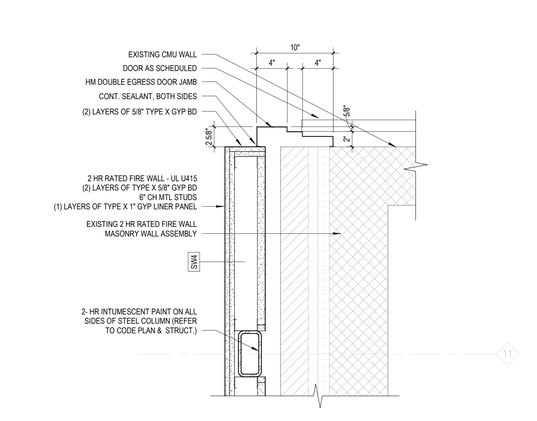
4 PLAN DETAIL - CW JAMB AT INFILL - 1ST FL. 1
1 1/2" = 1'-0"



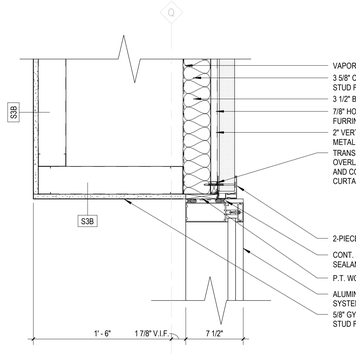
5 PLAN DETAIL CW JAMB AT INFILL - 2ND FL. 1
1 1/2" = 1'-0"



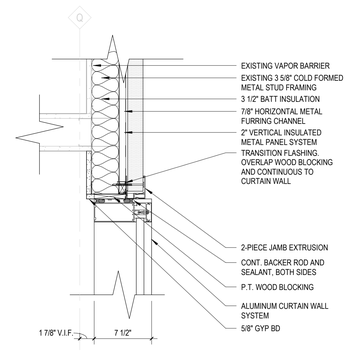
6 PLAN DETAIL - CW JAMB AT WING WALL
1 1/2" = 1'-0"



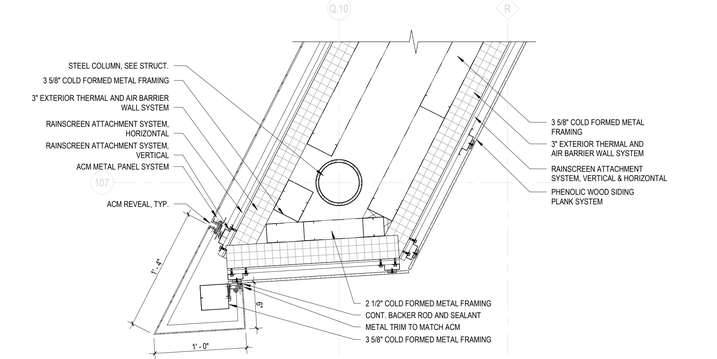
7 PLAN DETAIL - CONNECTING LINK TO BLDG C
1 1/2" = 1'-0"



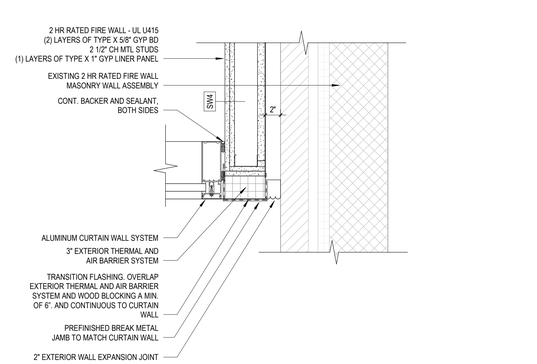
8 PLAN DETAIL - CW JAMB AT INFILL - 1ST FL. 2
1 1/2" = 1'-0"



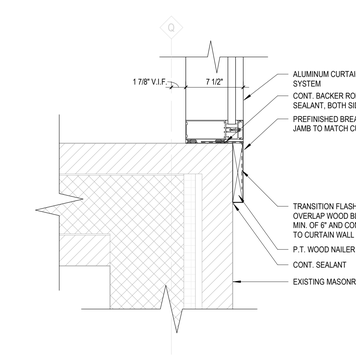
9 PLAN DETAIL - CW JAMB AT INFILL - 2ND FL. 2
1 1/2" = 1'-0"



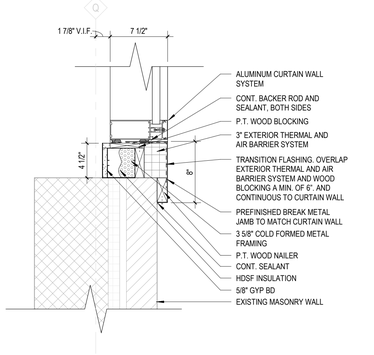
10 PLAN DETAIL - WING WALL
1 1/2" = 1'-0"



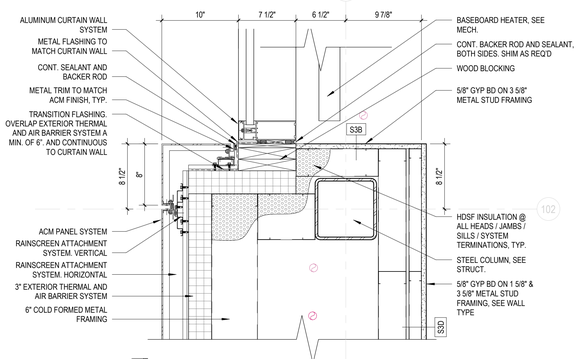
11 PLAN DETAIL - CW @ BLDG C
1 1/2" = 1'-0"



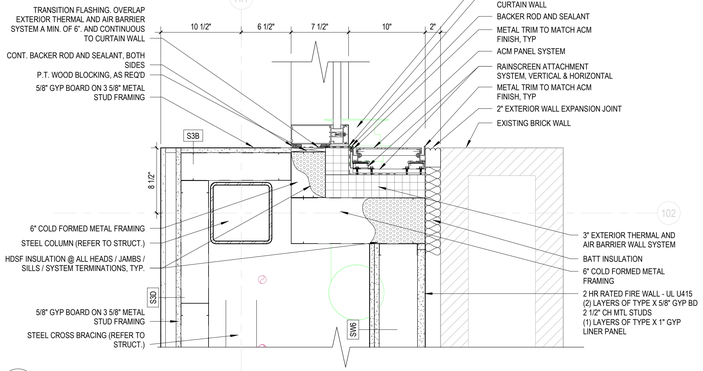
12 PLAN DETAIL - CW JAMB AT EXIST BRICK - 1ST FL.
1 1/2" = 1'-0"



13 PLAN DETAIL - CW JAMB AT EXIST BRICK 2ND FL.
1 1/2" = 1'-0"



14 PLAN DETAIL - COL AA-102
1 1/2" = 1'-0"



15 PLAN DETAIL - COL HH-102
1 1/2" = 1'-0"

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
PLAN DETAILS

SHEET NUMBER:
A7.51

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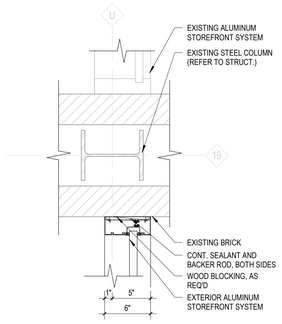
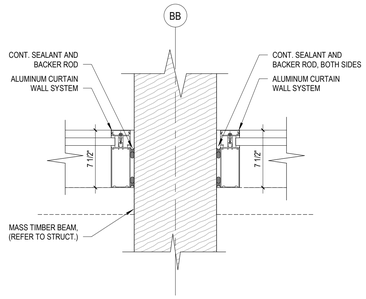
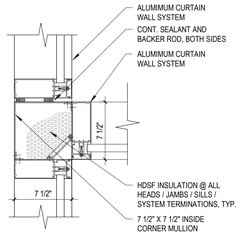


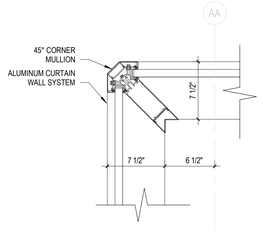
1 PLAN DETAIL - COL U-19
1 1/2" = 1'-0"



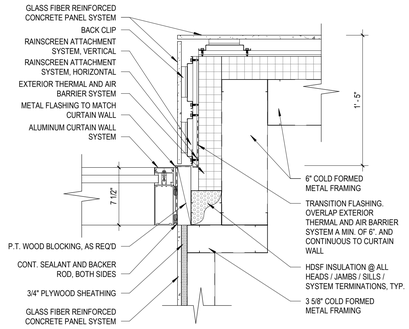
2 PLAN DETAIL - CW JAMB AT MASS TIMBER BEAM
1 1/2" = 1'-0"



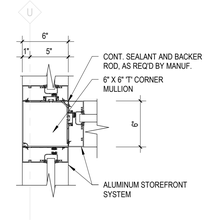
3 PLAN DETAIL - CURTAIN WALL T-CORNER
1 1/2" = 1'-0"



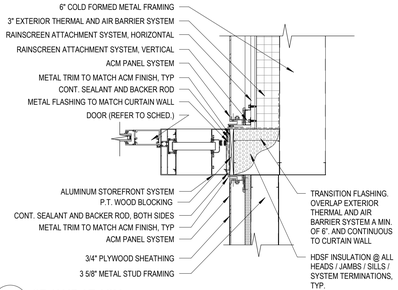
4 PLAN DETAIL - CW OUTSIDE CORNER MULLION
1 1/2" = 1'-0"



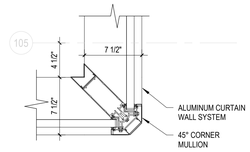
5 PLAN DETAIL - GFRC EXTERIOR CORNER
1 1/2" = 1'-0"



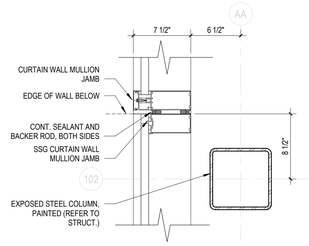
6 PLAN DETAIL - STOREFRONT T-CORNER
1 1/2" = 1'-0"



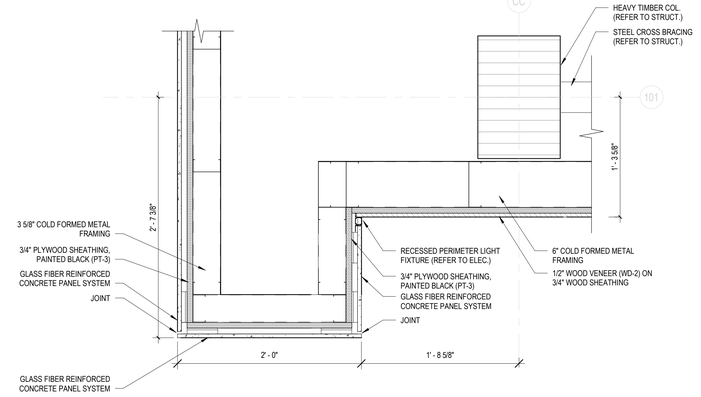
7 SF JAMB AT ACM
1 1/2" = 1'-0"



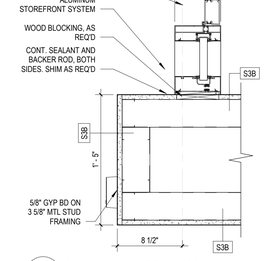
8 PLAN DETAIL - CURTAIN WALL OUTSIDE CORNER
1 1/2" = 1'-0"



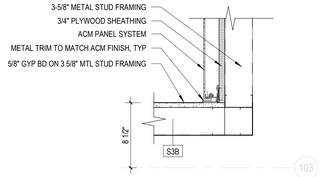
9 PLAN DETAIL - SSG AND CAPPED MULLION JAMB
1 1/2" = 1'-0"



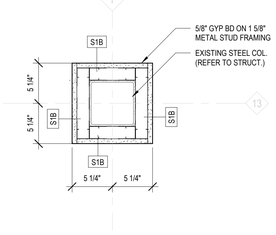
14 1PLAN DETAIL - GFRC INTERIOR CORNER
1 1/2" = 1'-0"



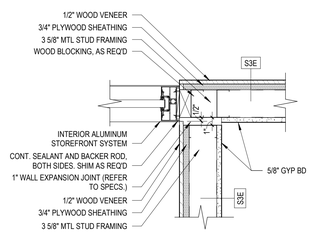
10 PLAN DETAIL - COL U-103
1 1/2" = 1'-0"



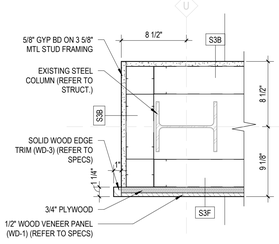
11 PLAN DETAIL - ACM - INSIDE CORNER
1 1/2" = 1'-0"



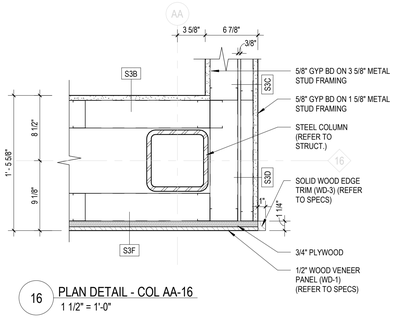
12 PLAN DETAIL - COL 13-T
1 1/2" = 1'-0"



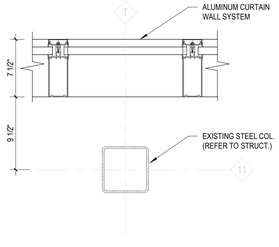
13 PLAN DETAIL - SF JAMB AT SOUTH EVENT CENTER
1 1/2" = 1'-0"



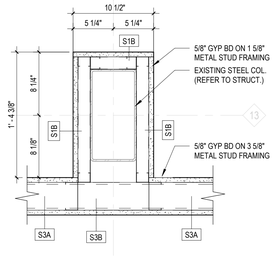
15 PLAN DETAIL - COL U-16
1 1/2" = 1'-0"



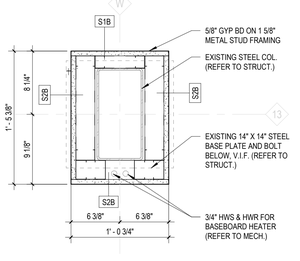
16 PLAN DETAIL - COL AA-16
1 1/2" = 1'-0"



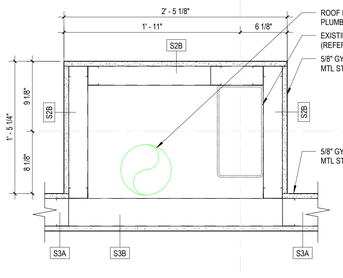
17 PLAN DETAIL - COL T-11
1 1/2" = 1'-0"



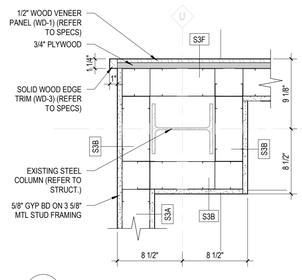
18 PLAN DETAIL - COL 13-V
1 1/2" = 1'-0"



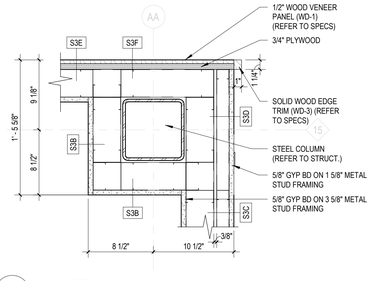
19 PLAN DETAIL - COL 13-W
1 1/2" = 1'-0"



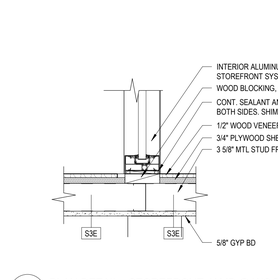
20 PLAN DETAIL - COL 13-X
1 1/2" = 1'-0"



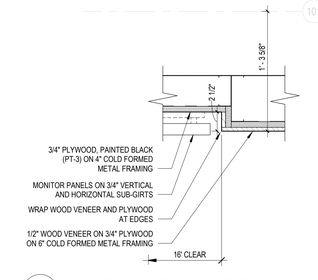
21 PLAN DETAIL - COL U-15
1 1/2" = 1'-0"



22 PLAN DETAIL - COL AA-15
1 1/2" = 1'-0"



23 PLAN DETAIL - STOREFRONT JAMB @ WOOD VENEER
1 1/2" = 1'-0"



24 PLAN DETAIL - DISPLAY WALL EDGE
1 1/2" = 1'-0"

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McHenry County College
ENGAGEMENT HALL

8900 NORTHWEST HWY #14
CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
PLAN DETAILS

SHEET NUMBER:
A7.52

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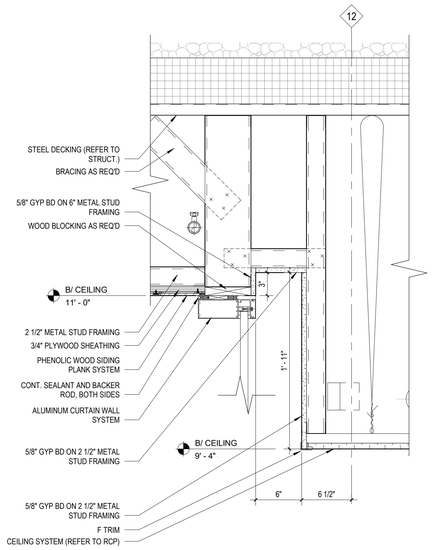
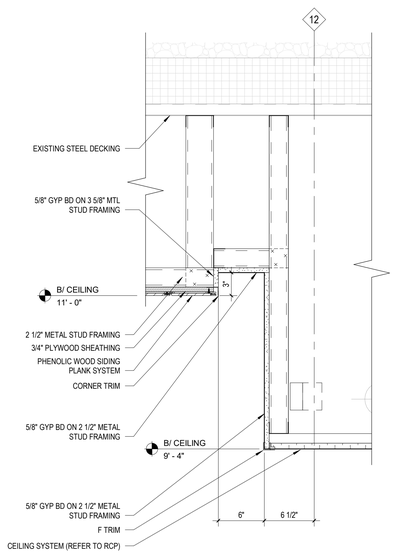
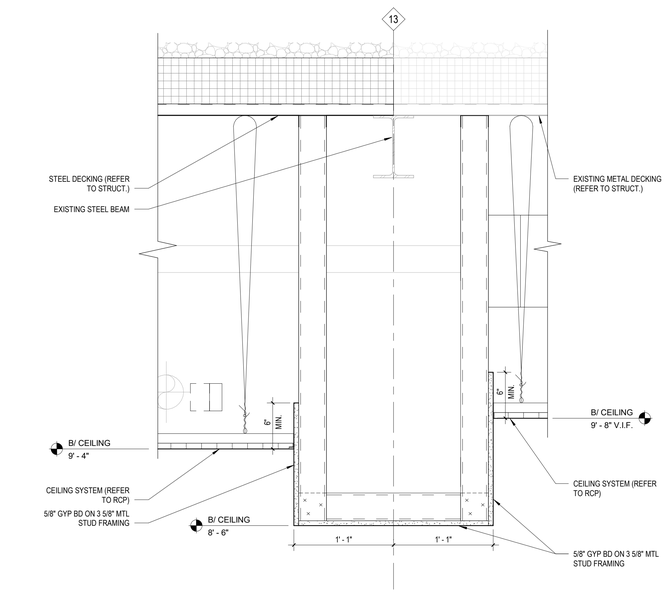


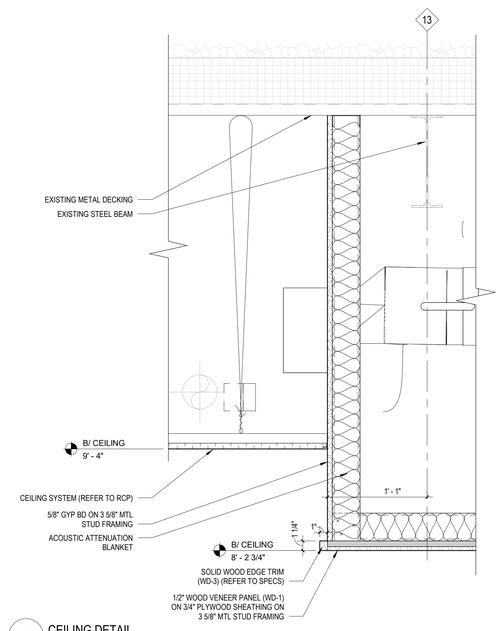
1 CEILING DETAIL
1 1/2" = 1'-0"



2 CEILING DETAIL
1 1/2" = 1'-0"



3 CEILING DETAIL
1 1/2" = 1'-0"



4 CEILING DETAIL
1 1/2" = 1'-0"

5 CEILING DETAIL
1 1/2" = 1'-0"

6 CEILING DETAIL
1 1/2" = 1'-0"

9 CEILING DETAIL
1 1/2" = 1'-0"

7 CEILING DETAIL
1 1/2" = 1'-0"

8 CEILING DETAIL
1 1/2" = 1'-0"

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DKA PROJECT NO: 24-027

KEY PLAN:

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SHEET TITLE:
CEILING DETAILS

SHEET NUMBER:
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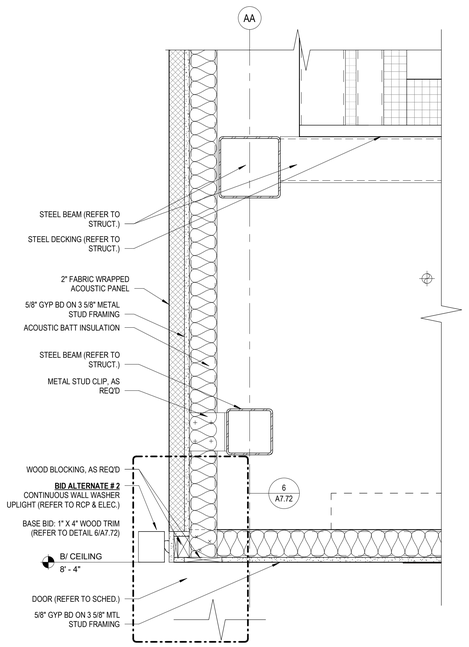
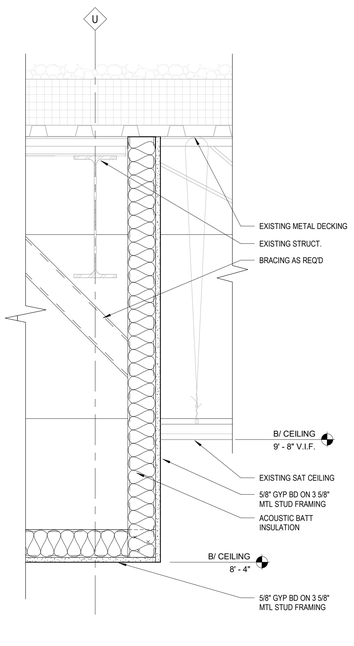
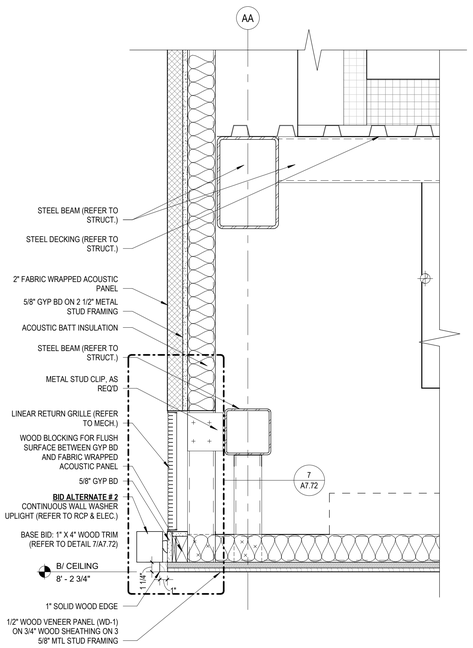


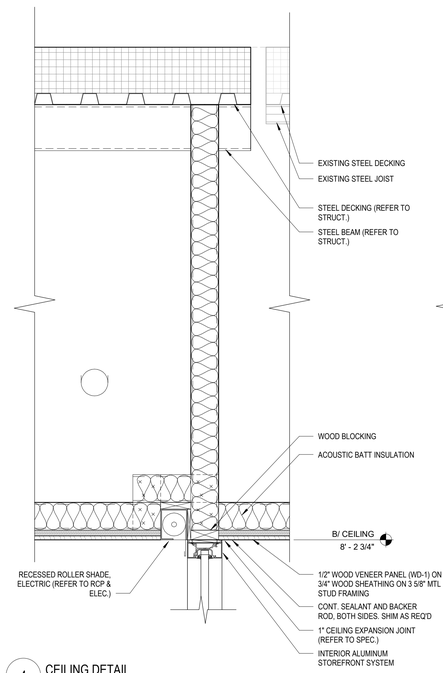
1 CEILING DETAIL
1 1/2" = 1'-0"



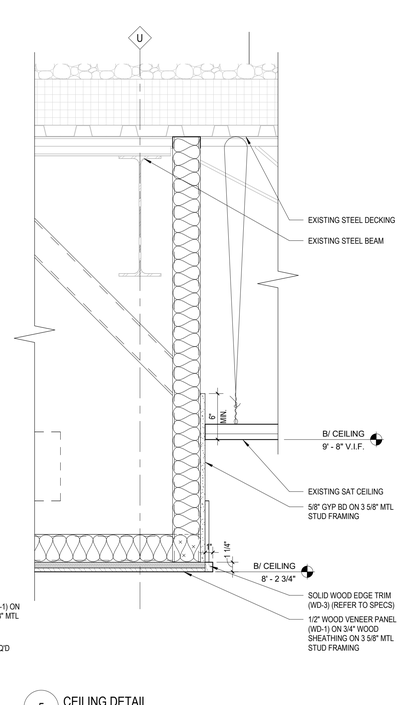
2 CEILING DETAIL
1 1/2" = 1'-0"



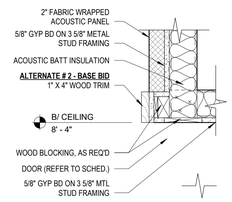
3 CEILING DETAIL
1 1/2" = 1'-0"



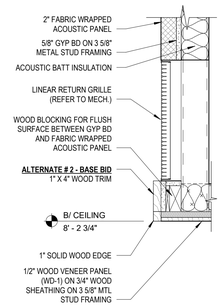
4 CEILING DETAIL
1 1/2" = 1'-0"



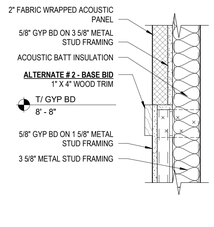
5 CEILING DETAIL
1 1/2" = 1'-0"



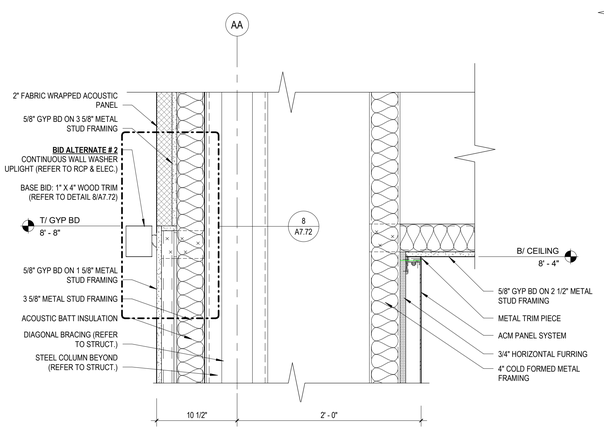
6 CEILING DETAIL - BASE BID
1 1/2" = 1'-0"



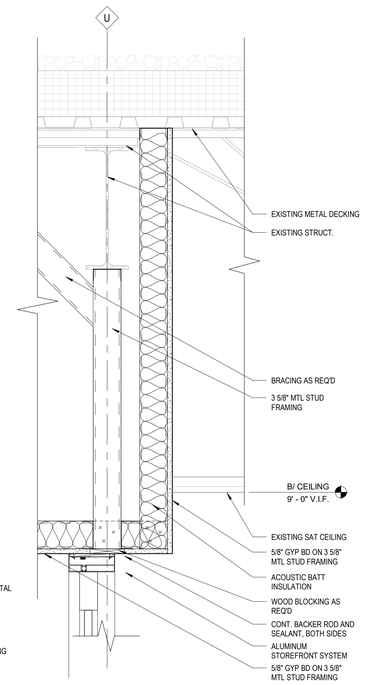
7 CEILING DETAIL - BASE BID
1 1/2" = 1'-0"



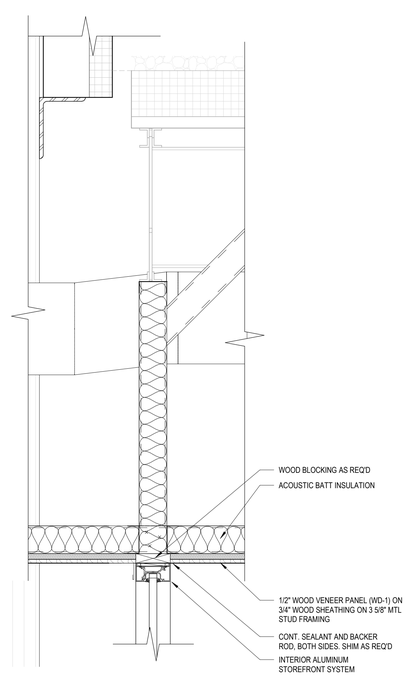
8 CEILING DETAIL - BASE BID
1 1/2" = 1'-0"



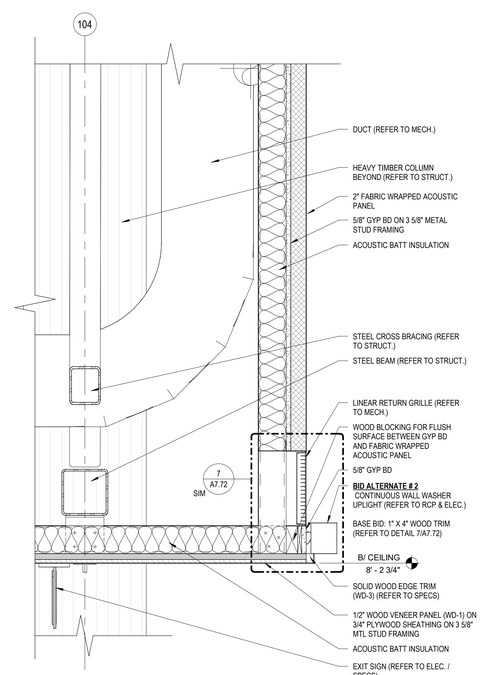
9 CEILING DETAIL
1 1/2" = 1'-0"



10 CEILING DETAIL
1 1/2" = 1'-0"



11 CEILING DETAIL
1 1/2" = 1'-0"



12 CEILING DETAIL
1 1/2" = 1'-0"

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McHenry County College
ENGAGEMENT HALL

8900 NORTHWEST HWY #14
CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:

CEILING DETAILS

SHEET NUMBER:

A7.72

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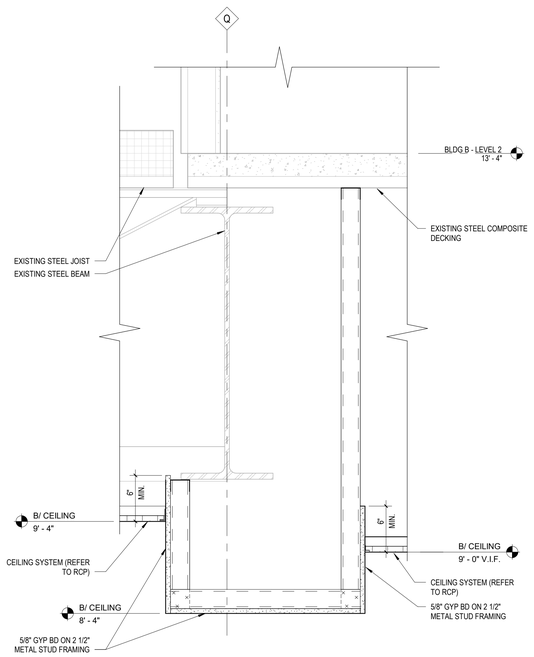
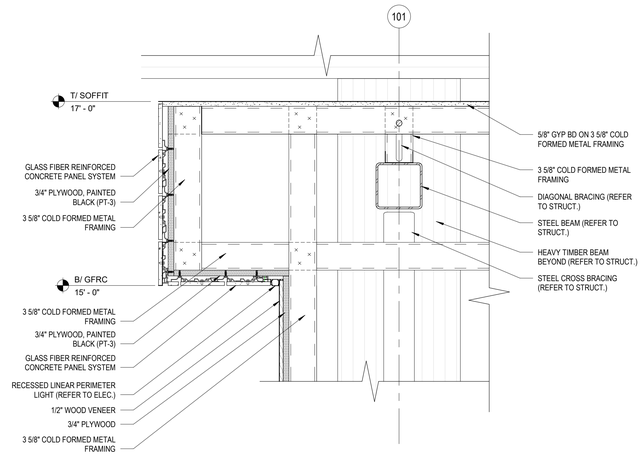
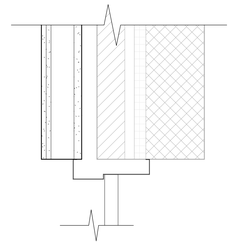


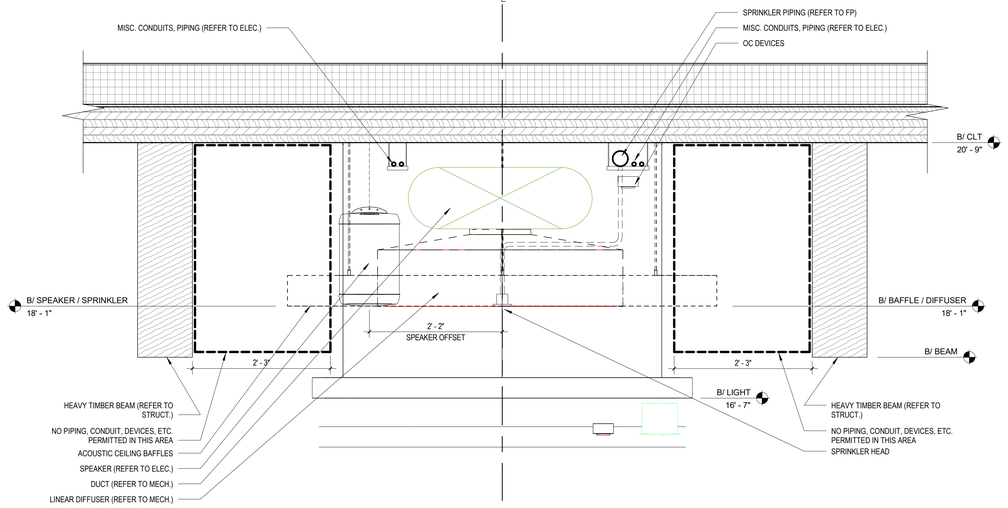
1 CEILING DETAIL
1 1/2" = 1'-0"



2 CEILING DETAIL - NORTH PROJECTOR WALL
1 1/2" = 1'-0"



3 CEILING DETAIL
1 1/2" = 1'-0"



4 CEILING DETAIL - TYPICAL MOUNTING HEIGHTS AT CLT
1" = 1'-0"

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McHenry County College
ENGAGEMENT HALL

8900 NORTHWEST HWY #14
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DKA PROJECT NO: 24-027

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NO:	DESCRIPTION:	DATE:

SHEET TITLE:
CEILING DETAILS

SHEET NUMBER:
A7.73

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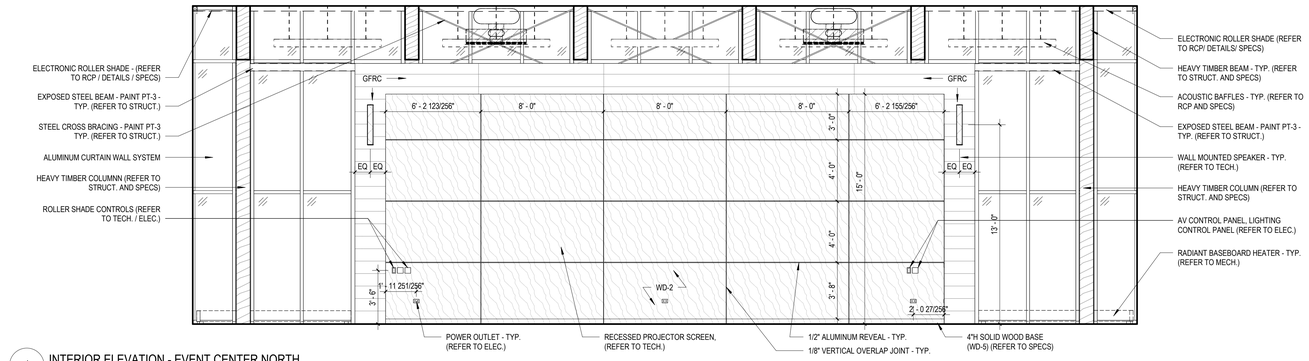
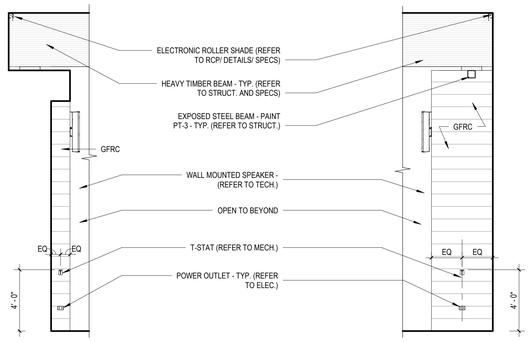
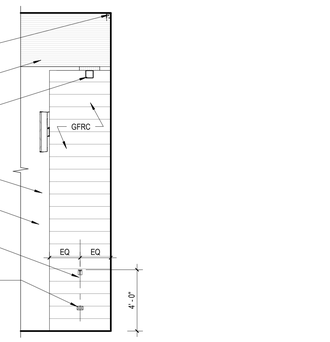


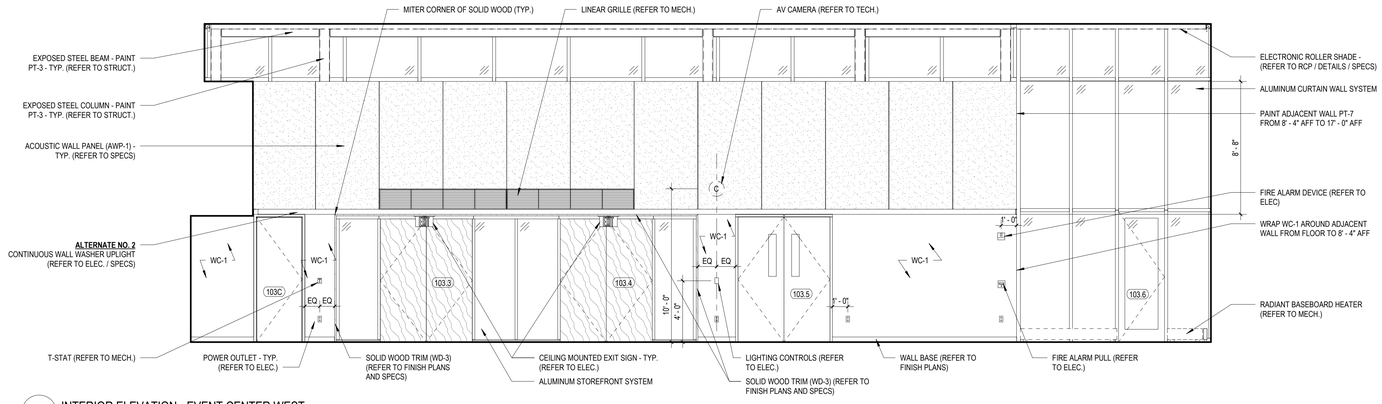
1 INTERIOR ELEVATION - EVENT CENTER NORTH
1/4" = 1'-0"



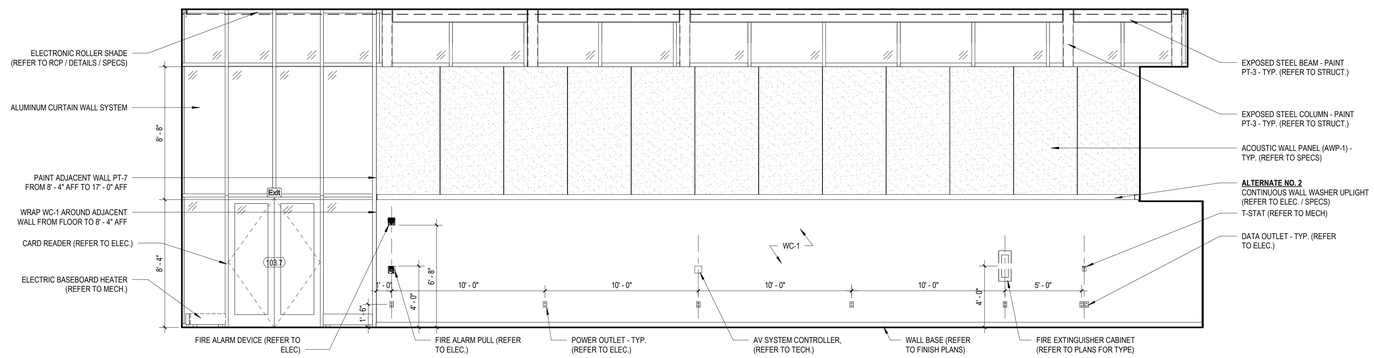
2 INTERIOR ELEVATION - EVENT CENTER NORTH - A
1/4" = 1'-0"



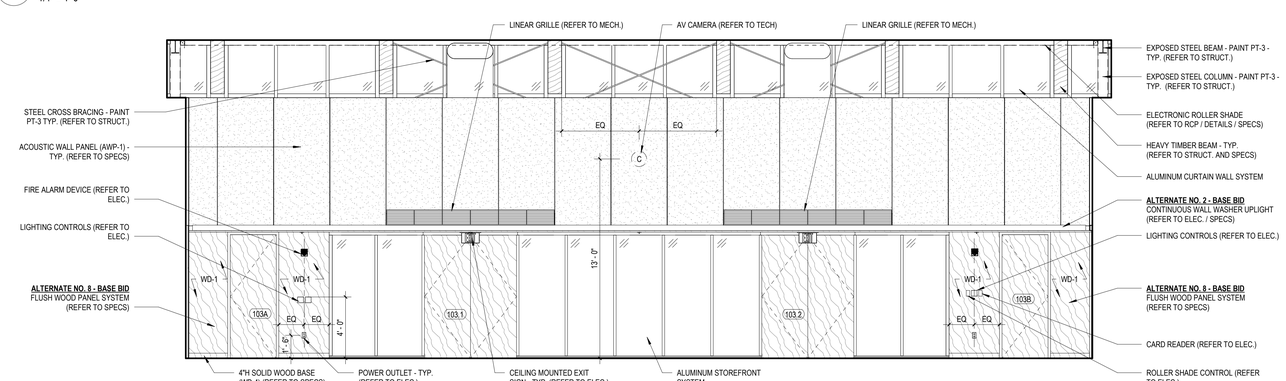
3 INTERIOR ELEVATION - EVENT CENTER NORTH - B
1/4" = 1'-0"



4 INTERIOR ELEVATION - EVENT CENTER WEST
1/4" = 1'-0"



5 INTERIOR ELEVATION - EVENT CENTER EAST
1/4" = 1'-0"



6 INTERIOR ELEVATION - EVENT CENTER SOUTH
1/4" = 1'-0"

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NO:	DESCRIPTION:	DATE:

SHEET TITLE:
INTERIOR ELEVATIONS - EVENT CENTER

SHEET NUMBER:
A9.01

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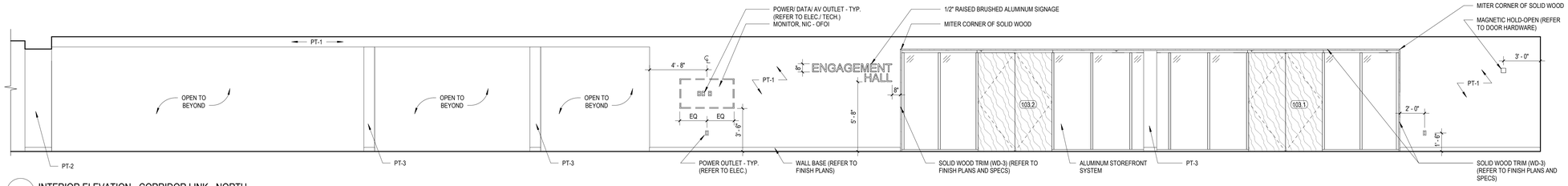
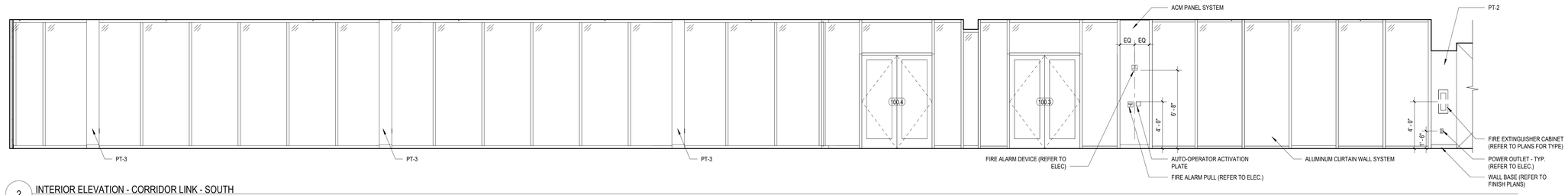
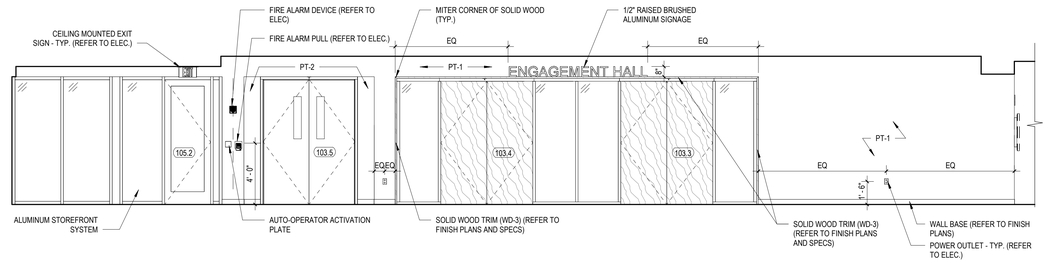


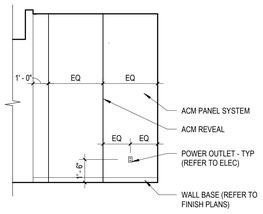
1 INTERIOR ELEVATION - CORRIDOR LINK - NORTH
1/4" = 1'-0"



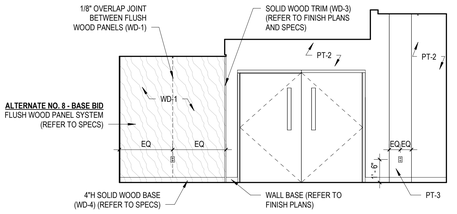
2 INTERIOR ELEVATION - CORRIDOR LINK - SOUTH
1/4" = 1'-0"



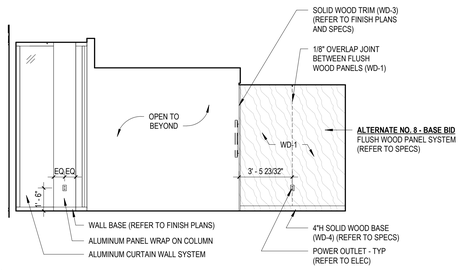
3 INTERIOR ELEVATION - DINING EAST
1/4" = 1'-0"



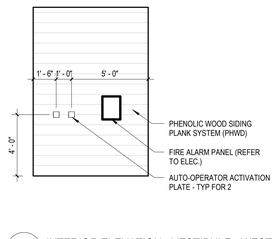
4 INTERIOR ELEVATION - CORRIDOR LINK - EAST 2
1/4" = 1'-0"



5 INTERIOR ELEVATION - CORRIDOR LINK - EAST
1/4" = 1'-0"



6 INTERIOR ELEVATION - CORRIDOR LINK - WEST
1/4" = 1'-0"



7 INTERIOR ELEVATION - VESTIBULE - WEST
1/4" = 1'-0"

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SHEET TITLE:
INTERIOR ELEVATIONS - ENTRY

SHEET NUMBER:
A9.02

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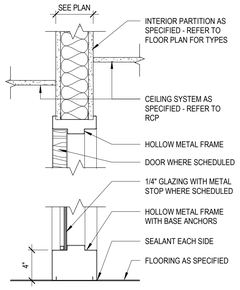
DOOR AND FRAME SCHEDULE

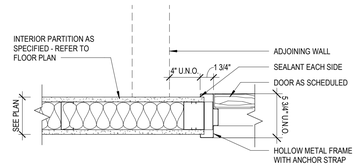
DOOR								FRAME			HARDWARE SET	REMARKS
NUMBER	ROOM NAME	WIDTH	HEIGHT	FIRE RATING	MATERIAL	ELEV	GLAZING TYPE	MATERIAL	ELEV	GLAZING TYPE		
100.1	VESTIBULE	6' - 0"	8' - 0"	-	AL	FG-AL	GL-10	AL	SEE 10.10	GL-10		(2) PANIC HARDWARE, (1) AUTO OPERATOR, ACCESS CONTROL
100.2	VESTIBULE	6' - 0"	8' - 0"	-	AL	FG-AL	GL-10	AL	SEE 10.10	GL-10		(2) PANIC HARDWARE
100.3	VESTIBULE	6' - 0"	8' - 0"	-	AL	FG-AL	GL-10	AL	SEE 10.10	GL-10		(2) PANIC HARDWARE, (1) AUTO OPERATOR
100.4	VESTIBULE	6' - 0"	8' - 0"	-	AL	FG-AL	GL-02	AL	SEE 10.10	GL-02		(2) PANIC HARDWARE
102	CONNECTING LINK	8' - 0"	7' - 2"	2-HR	HM	NHGR		HM	FDE	-		(2) ELECTRO-MAGNETIC HOLD OPENS
103.1	ENGAGEMENT HALL	6' - 0"	8' - 0 3/8"	-	WD	FL	-	AL	SEE 10.10	GL-04		ACOUSTICAL SEALS, (2) PANIC HARDWARE, OVERHEAD CLOSERS, OVERHEAD STOPS
103.2	ENGAGEMENT HALL	6' - 0"	8' - 0 3/8"	-	WD	FL	-	AL	SEE 10.10	GL-04		ACOUSTICAL SEALS, (2) PANIC HARDWARE, OVERHEAD CLOSERS, OVERHEAD STOPS
103.3	ENGAGEMENT HALL	6' - 0"	8' - 0 3/8"	-	WD	FL	-	AL	SEE 10.10	GL-04		ACOUSTICAL SEALS, (2) PANIC HARDWARE, OVERHEAD CLOSERS, OVERHEAD STOPS
103.4	ENGAGEMENT HALL	6' - 0"	8' - 0 3/8"	-	WD	FL	-	AL	SEE 10.10	GL-04		ACOUSTICAL SEALS, (2) PANIC HARDWARE, OVERHEAD CLOSERS, OVERHEAD STOPS
103.5		6' - 0"	8' - 2"	-	HM	FL	-	HM	A	-		ACOUSTICAL SEALS, ACCESS CONTROL, OVERHEAD CLOSERS, OVERHEAD STOPS
103.6	ENGAGEMENT HALL	3' - 0"	8' - 6"	-	AL	FG-AL	GL-10	AL	SEE 10.10	GL-10		ACCESS CONTROL
103.7	ENGAGEMENT HALL	6' - 0"	8' - 6"	-	AL	FG-AL	GL-10	AL	SEE 10.10	GL-10		(2) PANIC HARDWARE, ACCESS CONTROL
103A	STORAGE	3' - 0"	8' - 0 3/4"	-	WD	FL	-	HM	A	-		
103B	STORAGE	3' - 0"	8' - 0 3/4"	-	WD	FL	-	HM	A	-		ACCESS CONTROL
103C	STORAGE	3' - 0"	8' - 2"	-	HM	FL	-	HM	A	-		
105.1	VESTIBULE	3' - 0"	8' - 1 5/8"	-	AL	FG-AL	GL-10	AL	SEE 10.10	GL-10		PANIC HARDWARE, AUTO OPERATOR, ACCESS CONTROL
105.2	VESTIBULE	3' - 0"	8' - 1 5/8"	-	AL	FG-AL	GL-10	AL	SEE 10.10	GL-10		PANIC HARDWARE, AUTO OPERATOR

GLAZING SCHEDULE

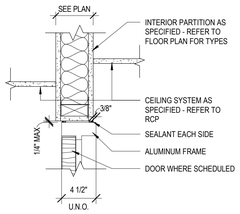
GL-04	9/16" CLEAR LAMINATED GLASS - STC 39
GL-10	1" INSULATED, TEMPERED CLEAR GLASS
GL-11	1" INSULATED, TEMPERED SPANDREL



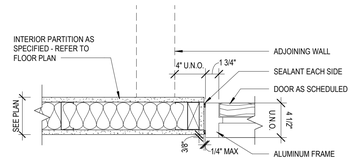
3 HOLLOW METAL FRAME - HEAD & SILL
1 1/2" = 1'-0"



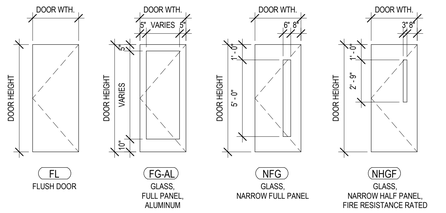
4 HOLLOW METAL FRAME - JAMB
1 1/2" = 1'-0"



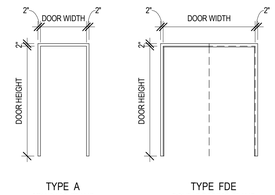
5 ALUMINUM FRAME - HEAD
1 1/2" = 1'-0"



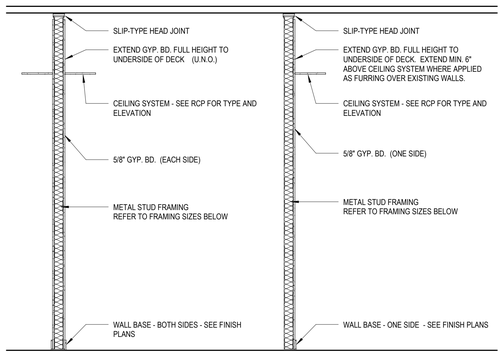
6 ALUMINUM FRAME - JAMB
1 1/2" = 1'-0"



1 DOOR ELEVATIONS
1/4" = 1'-0"



2. FRAME ELEVATIONS
1/4" = 1'-0"

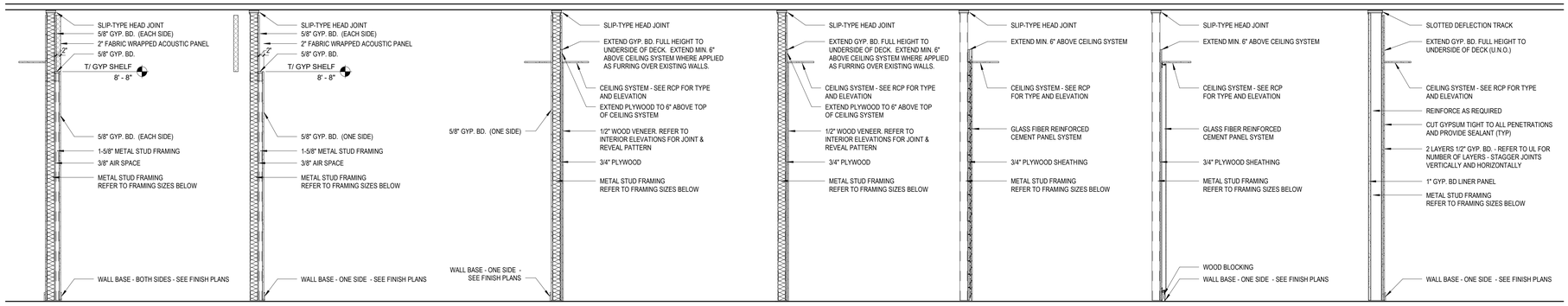


A - GYP BD EACH SIDE
CONSTRUCT PER UL: U419 AT SMOKE AND 1-HR FIRE RESISTANCE RATED PARTITIONS

- S1A — 1-5/8" METAL STUD FRAMING
- S2A — 2-1/2" METAL STUD FRAMING
- S3A — 3-5/8" METAL STUD FRAMING
- S6A — 6" METAL STUD FRAMING

B - GYP BD ONE SIDE

- S1B — 1-5/8" METAL STUD FRAMING
- S2B — 2-1/2" METAL STUD FRAMING
- S3B — 3-5/8" METAL STUD FRAMING
- S6B — 6" METAL STUD FRAMING



C - DOUBLE STUD, GYP BD EACH SIDE

- S3C — 3-5/8" METAL STUD FRAMING

D - DOUBLE STUD, GYP BD ONE SIDE

- S3D — 3-5/8" METAL STUD FRAMING

E - GYP BD ONE SIDE, WOOD VENEER ONE SIDE

- S3E — 3-5/8" METAL STUD FRAMING

F - WOOD VENEER ONE SIDE

- S3F — 3-5/8" METAL STUD FRAMING
- S6F — 6" METAL STUD FRAMING

G - GFRC PANELS ON SIDE

- S3G — 3-5/8" METAL STUD FRAMING

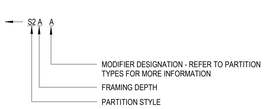
H - ACM PANELS ON SIDE

- S3H — 3-5/8" METAL STUD FRAMING

SHAFT WALL
CONSTRUCT PER UL: U415 AT SMOKE AND 2-HR FIRE RESISTANCE RATED PARTITIONS

- SW4 — 4" C-H STUD SHAFT WALL FRAMING
- SW6 — 6" C-H STUD SHAFT WALL FRAMING

PARTITION TYPE LEGEND



PARTITION TYPE GENERAL NOTES:

1. ALL INTERIOR PARTITIONS SHALL BE TYPE S1A (U.N.O.).
2. ALL GYP BD ENCLOSURES AROUND COLUMNS SHALL BE TYPE S2D (U.N.O.)
3. PROVIDE SOLID FIRE RETARDANT TREATED WOOD BLOCKING, FLAT METAL STRAPS, OR METAL BACKING PLATES AT ALL WALL MOUNTED FIXTURES AND ACCESSORIES, INCLUDING BUT NOT LIMITED TO, DOOR STOPS, MILLWORK, DIGITAL DISPLAYS, VISUAL DISPLAY BOARDS, TOILET PARTITIONS, AND SIMILAR CONDITIONS.
4. PROVIDE MOISTURE RESISTANT GYP BD AT ALL PLUMBING PARTITIONS NOT SCHEDULED TO RECEIVE TILE.
5. SEE SPECIFICATIONS FOR ORIENTATION OF GYP BD PANELS, SIZING, AND SPACING OF METAL STUD FRAMING.
6. SEE SPECIFICATIONS FOR TYPE AND SPACING OF CMU HORIZONTAL JOINT REINFORCEMENT.
7. SEE INTERIOR ELEVATIONS FOR ANY GYP BD REVEAL PATTERNS.
8. FIRE-RESISTANCE-RATED SEPARATIONS
   A. SEE CODE COMPLIANCE PLANS FOR LOCATIONS AND TYPES OF FIRE RESISTANCE-RATED SEPARATIONS.
   B. AT SMOKE PARTITIONS, FIRE PARTITIONS AND FIRE BARRIERS, WALL ASSEMBLY CONSTRUCTION SHALL EXTEND FROM TOP OF FLOOR TO THE UNDERSIDE OF THE FLOOR, ROOF SLAB, OR DECK ABOVE.
   C. ALL PARTITIONS SHALL HAVE THE FOLLOWING PERMANENTLY AFFIXED MARKINGS AND IDENTIFICATION:
      a. 1/2" HIGH LETTERING, INDICATING RATING AND FIRE RESISTANCE RATED PARTITION TYPE, I.E. "2-HR FIRE WALL" OR "1-HR FIRE BARRIER", AND SHALL ALSO INCLUDE THE FOLLOWING SUFFIX: "PROTECT ALL OPENINGS AND PENETRATIONS"
      b. LOCATE LETTERING ABOVE ACCESSIBLE CEILINGS AT INTERVALS NOT TO EXCEED 30'-0". THERE SHOULD BE A MINIMUM OF ONE MARKING PER WALL, PER ROOM.

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
DOOR SCHEDULE AND WALL TYPES

SHEET NUMBER:
A10.00

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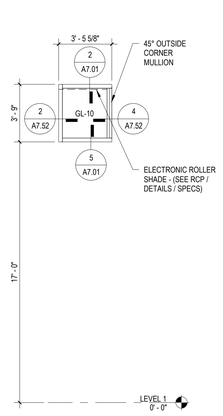
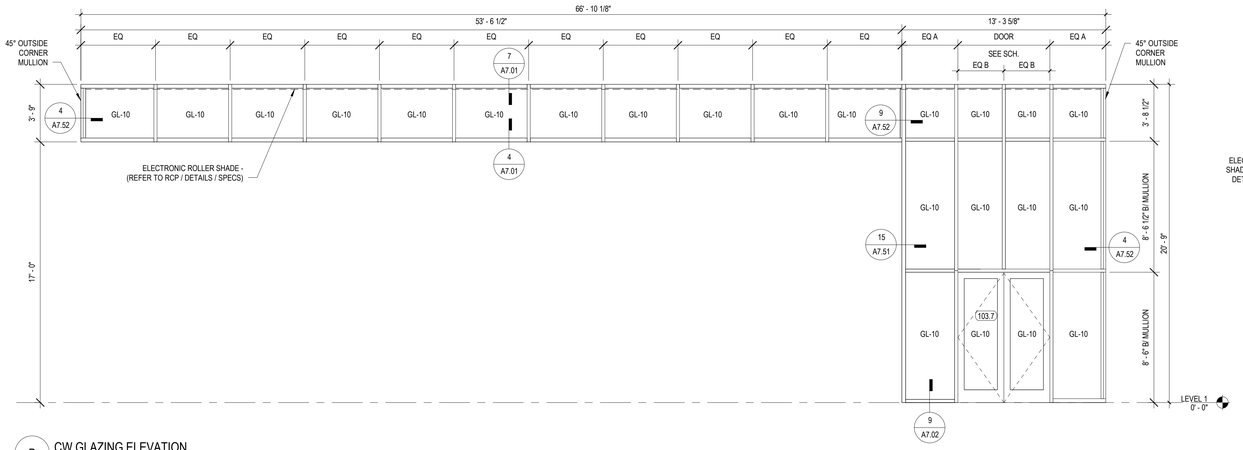
GLAZING SCHEDULE

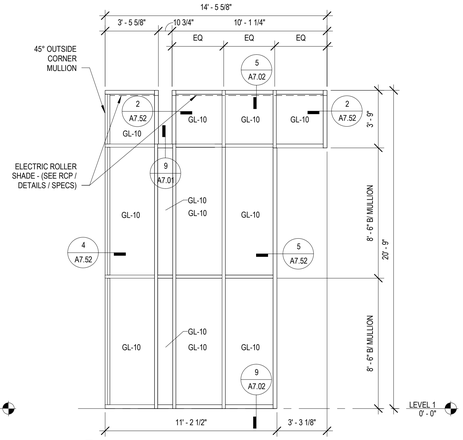
GL-04	9/16" CLEAR LAMINATED GLASS - STC 39
GL-10	1" INSULATED, TEMPERED CLEAR GLASS
GL-11	1" INSULATED, TEMPERED SPANDREL



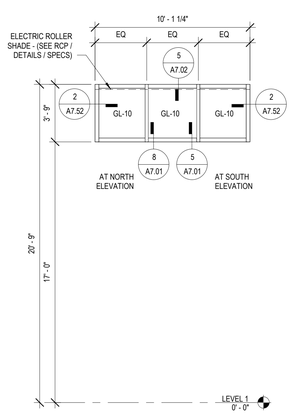
A CW GLAZING ELEVATION
1/4" = 1'-0"



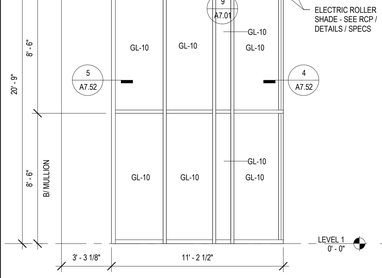
B CW GLAZING ELEVATION
1/4" = 1'-0"



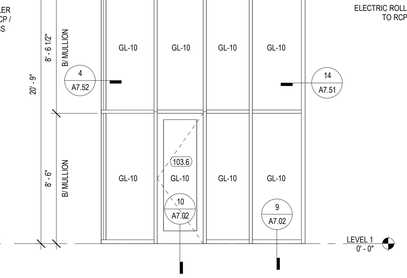
C CW GLAZING ELEVATION
1/4" = 1'-0"



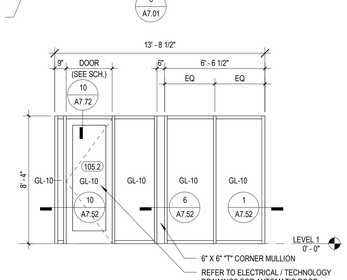
D CW GLAZING ELEVATION
1/4" = 1'-0"



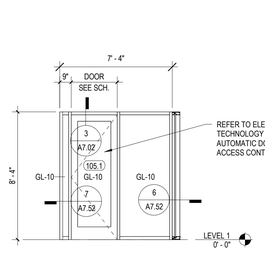
E CW GLAZING ELEVATION
1/4" = 1'-0"



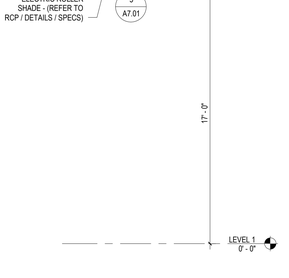
F CW GLAZING ELEVATION
1/4" = 1'-0"



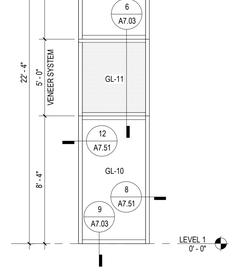
G SF GLAZING ELEVATION
1/4" = 1'-0"



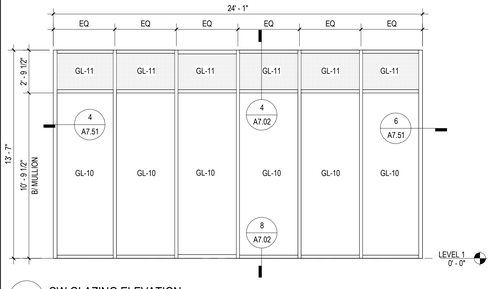
H SF GLAZING ELEVATION
1/4" = 1'-0"



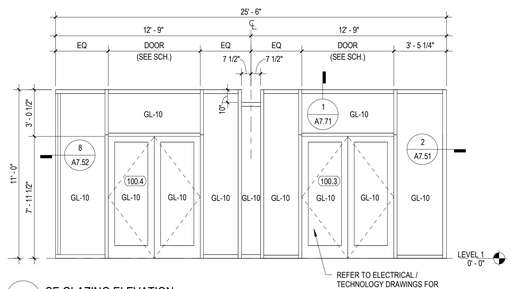
J CW GLAZING ELEVATION
1/4" = 1'-0"



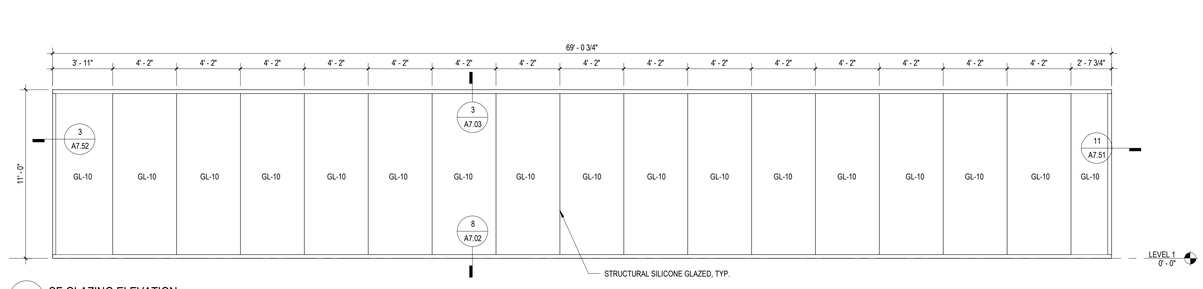
K CW GLAZING ELEVATION
1/4" = 1'-0"



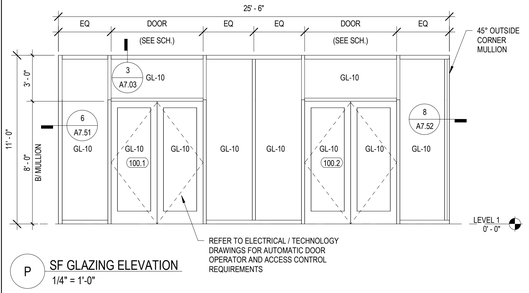
L CW GLAZING ELEVATION
1/4" = 1'-0"



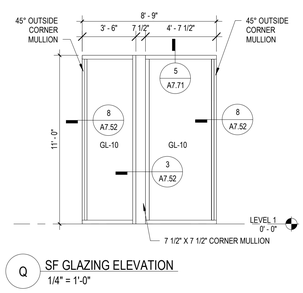
M SF GLAZING ELEVATION
1/4" = 1'-0"



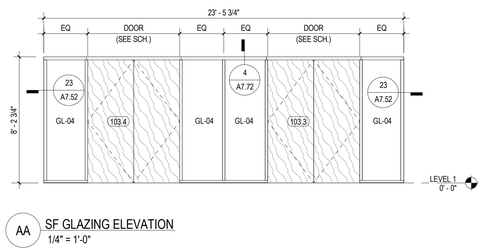
N SF GLAZING ELEVATION
1/4" = 1'-0"



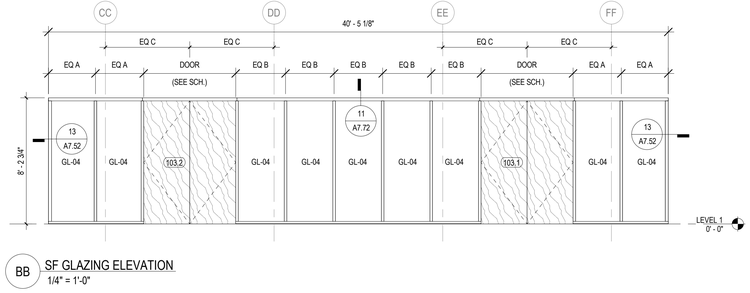
P SF GLAZING ELEVATION
1/4" = 1'-0"



Q SF GLAZING ELEVATION
1/4" = 1'-0"



AA SF GLAZING ELEVATION
1/4" = 1'-0"



BB SF GLAZING ELEVATION
1/4" = 1'-0"

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
GLAZING ELEVATIONS

SHEET NUMBER:
A10.10

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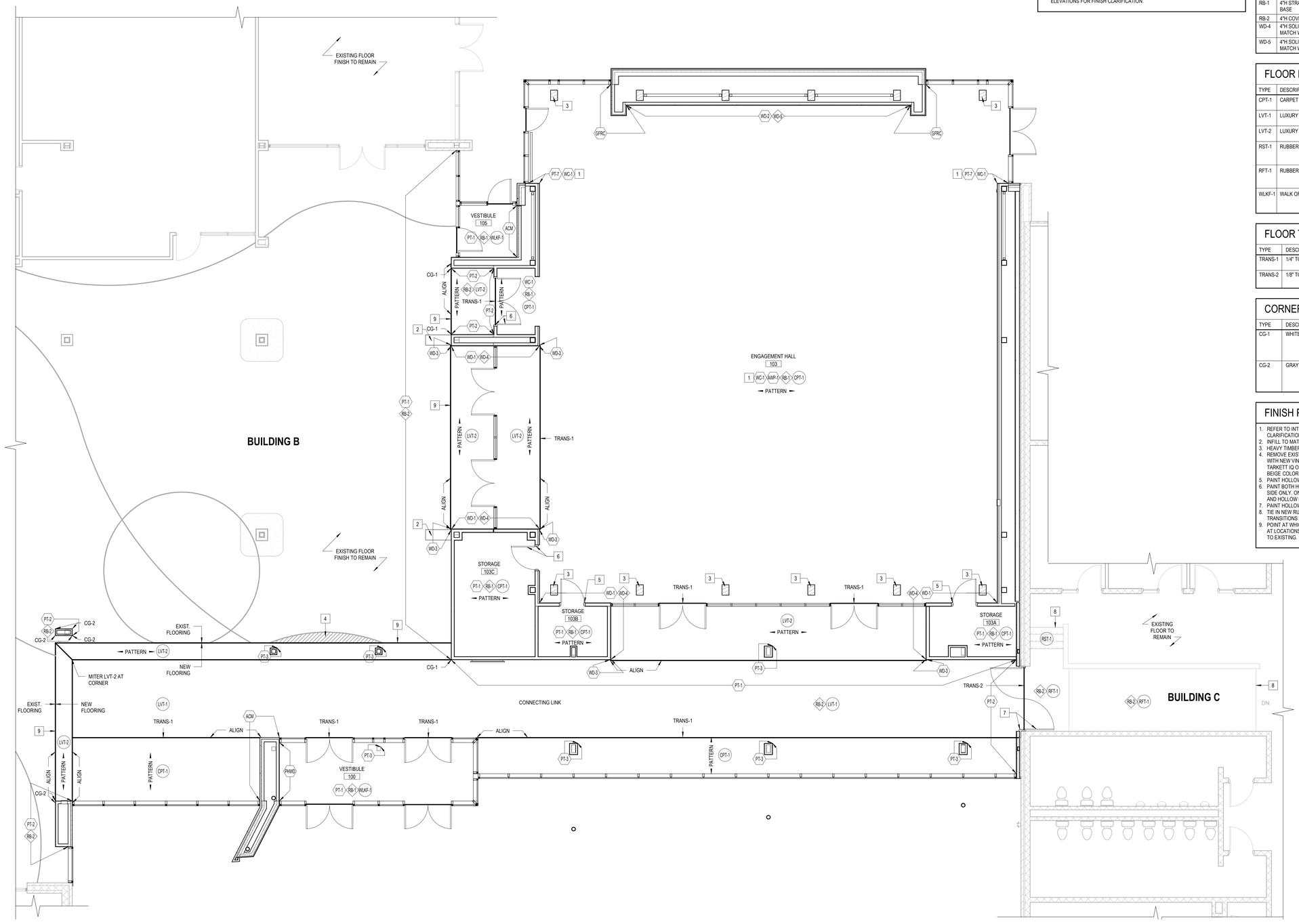

1 FINISH PLAN - OVERALL
3/16" = 1'-0"

FINISH PLAN SYMBOLS LEGEND:

(X) WALL FINISH TYPE (X) WALL BASE TYPE (X) FLOOR FINISH TYPE

FINISH PLAN GENERAL NOTES:

1. PAINT ALL EXPOSED CONDUIT, DUCTWORK, PIPING, ETC. IN ALL FINISHED SPACES. REFER TO INTERIOR FINISH PLANS AND REFLECTED CEILING PLANS FOR CLARIFICATIONS.
2. PAINT ALL EXPOSED METAL ON EXTERIOR INCLUDING, BUT NOT LIMITED TO: CONDUIT, PIPING, FLASHING, MECHANICAL FLUES AND DUCTS, AND HOLLOW METAL FRAMES AND DOORS.
3. PROVIDE CEMENTITIOUS SELF-LEVELING UNDERLAYMENT AT REMOVAL OF EXISTING FLOOR DRAINS AS REQUIRED TO PROVIDE A LEVEL SUBSTRATE FOR NEW FLOOR FINISH.
4. **ALL FINISHES ARE MONUMENTAL PER ROOM UNLESS NOTED OTHERWISE.**
5. AT ALL LOCATIONS WHERE EXISTING CASEWORK IS TO REMAIN, THE SUBSEQUENT BASE TYPE SPECIFIED FOR EACH ROOM SHALL BE INSTALLED OVER CASEWORK TOE KICKS UNLESS NOTED OTHERWISE. REFER TO FLOOR PLANS FOR CASEWORK LOCATIONS.
6. ALL CARPET TILE TO BE INSTALLED ASHLAR UNLESS SPECIFIED OTHERWISE.
7. ALL LUXURY VINYL TILE TO BE INSTALLED RANDOM STAGGERED UNLESS SPECIFIED OTHERWISE.
9. ALL EXPOSED CEILING DUCT WORK IN EVENT CENTER 103 TO BE PAINTED PT-6. REFER TO RCP AND MECH.
10. FOR ALL WALLS WITH MULTIPLE WALL FINISH TAGS, REFER TO INTERIOR ELEVATIONS FOR FINISH CLARIFICATION.

WALL FINISH TYPES:

TYPE	DESCRIPTION	MANUFACTURER	NAME/#/COLOR
PT-1	GENERAL PAINT	BENJAMIN MOORE	CHALK WHITE 2126-70
PT-2	GRAY PAINT	SHERWIN WILLIAMS	ACIER 9170
PT-3	BLACK PAINT	BENJAMIN MOORE	BLACK 2132-10
PT-4	TAN PAINT	SHERWIN WILLIAMS	SOFT FAWN 9097
PT-5	DARK GRAY PAINT	SHERWIN WILLIAMS	GAUNTLET GRAY 7019
PT-6	DUCT WORK PAINT	SHERWIN WILLIAMS	BEIGE INTENSO 9096
PT-7	IVORY PAINT	SHERWIN WILLIAMS	CRUSHED ICE 7647
WC-1	WALLCOVERING	KOROSEAL	LINSEY / WOOLSEY SE81-21
WD-1	WOOD VENEER PANEL	SEE SPEC	SEE SPEC
WD-2	WOOD VENEER PANEL	SEE SPEC	SEE SPEC
WD-3	SOLID WOOD EDGE TRIM TO MATCH WD-1	SEE SPEC	SEE SPEC
GFRC	GFRC	SEE SPEC	SEE SPEC
PHWD	PHENOLIC WOOD	SEE SPEC	SEE SPEC
ACM	ACM METAL PANEL	SEE SPEC	SEE SPEC
AWP-1	ACOUSTIC WALL PANEL	SEE SPEC	DUVALTEX / TWEED / BLEACH WHITE

WALL BASE TYPES:

TYPE	DESCRIPTION	MANUFACTURER	NAME/#/COLOR
RB-1	4"H STRAIGHT RUBBER BASE	JOHNSONITE	40 BLACK
RB-2	4"H COVE RUBBER BASE	JOHNSONITE	40 BLACK
WD-4	4"H SOLID WOOD BASE TO MATCH WD-1	SEE SPEC	SEE SPEC
WD-5	4"H SOLID WOOD BASE TO MATCH WD-2	SEE SPEC	SEE SPEC

FLOOR FINISH TYPES:

TYPE	DESCRIPTION	MANUFACTURER	NAME/#/COLOR
CPT-1	CARPET TILE	INTERFACE	OPEN AIR 410 / GRANITE 106972, 9X36
LVT-1	LUXURY VINYL TILE	MOHAWK GROUP	TERRAZZO 2.5MM / TEPHRA 727 / 12X24
LVT-2	LUXURY VINYL TILE	MANNINGTON	SPACIA WOOD 2.5MM / SPRING MAPLE/ 7X48
RST-1	RUBBER STAIR TREAD	JOHNSONITE	RUBBER TREAD/ RISER, RAISED ROUND, COLOR: BURNT UMBER 63
RFT-1	RUBBER FLOOR TILE	JOHNSONITE	RUBBER TILE, RAISED ROUND, COLOR: BURNT UMBER 63, 24X24
WLKF-1	WALK OFF CARPET	SHAW CONTRACT	WELCOME II TILE / CHARCOAL 31549, 24X24, INSTALL: MONOLITHIC

FLOOR TRANSITION TYPES: TRANS-X

TYPE	DESCRIPTION	MANUFACTURER	NAME/#/COLOR
TRANS-1	1/4" TO 1/8"	JOHNSONITE	SLT-XX-A, COLOR: BURNT UMBER 63
TRANS-2	1/8" TO 0.80"	JOHNSONITE	SLT-XX-B, COLOR: BLACK 40

CORNER GUARD TYPES: CG-X

TYPE	DESCRIPTION	MANUFACTURER	COLOR/ LENGTH
CG-1	WHITE	INPRO	TAPE-ON CORNER GUARDS, 3/4" X 3/4", ADHESIVE APPLIED, FULL HEIGHT, COLOR: FEATHER 0238
CG-2	GRAY	INPRO	TAPE-ON CORNER GUARDS, 3/4" X 3/4", ADHESIVE APPLIED, FULL HEIGHT, COLOR: SHIPROCK 0280

FINISH PLAN REFERENCED NOTES: (X)

1. REFER TO INTERIOR ELEVATIONS FOR EXTENT OF WALL FINISHES AND CLARIFICATIONS.
2. INFILL TO MATCH ADJACENT EXISTING VINYL FLOOR.
3. HEAVY TIMBER COLUMN. REFER TO STRUCT AND SPECS.
4. REMOVE EXISTING GRAY VINYL FLOORING IN HATCHED AREA ONLY AND REPLACE WITH NEW VINYL FLOORING TO MATCH EXISTING ADJACENT BEIGE FLOORING - TARKETT IQ OPTIMA, COLOR: BLEND SAND 0996. CONTRACTOR TO VERIFY EXISTING BEIGE COLOR IN FIELD TO ENSURE A CORRECT MATCH.
5. PAINT HOLLOW METAL FRAME PT-4.
6. PAINT BOTH HOLLOW METAL DOOR AND FRAME PT-2 ON ENGAGEMENT HALL 103 SIDE ONLY. ON BUILDING B CAFETERIA SIDE, PAINT HOLLOW METAL DOOR PT-5 AND HOLLOW METAL FRAME PT-3.
7. PAINT HOLLOW METAL DOOR PT-5 AND PAINT HOLLOW METAL FRAME PT-3.
8. TIE IN NEW RUBBER STAIR TREADS AND NEW RUBBER FLOOR TILES INTO EXISTING TRANSITIONS AT BOTH TOP OF STAIRS AND END OF RAMP.
9. POINT AT WHICH THE INSTALLATION OF NEW LVT MEETS EXISTING VINYL FLOORING AT LOCATIONS NOTED ON PLAN, INSTALL FLOORING TO BE SEAMLESS FROM NEW TO EXISTING.

dka

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McHenry County College
ENGAGEMENT HALL

8900 NORTHWEST HWY #14
CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
FINISH PLAN - EVENT CENTER & ENTRY

SHEET NUMBER:
A11.01

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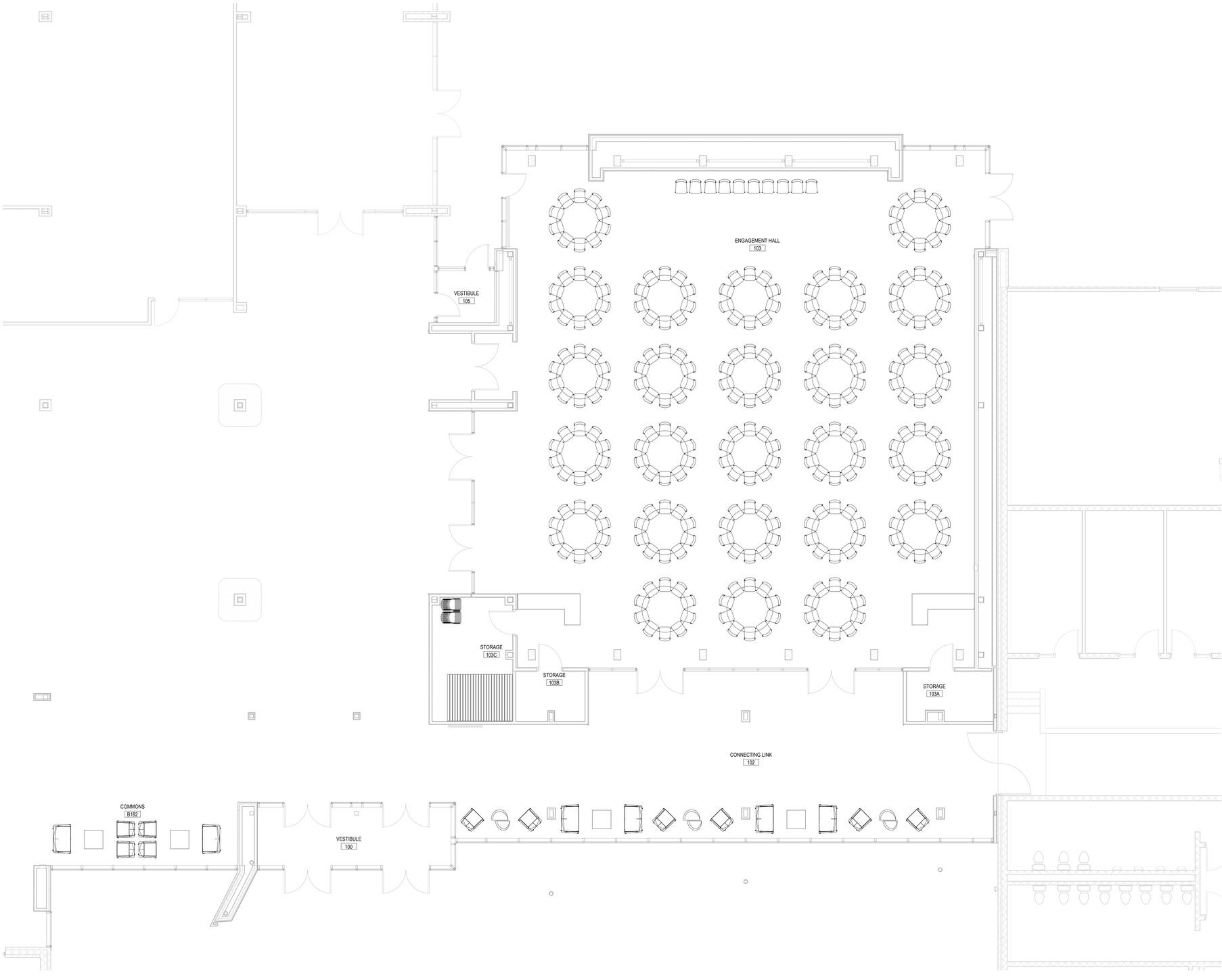

1 FURNITURE PLAN (FOR REFERENCE ONLY)
3/16" = 1'-0"

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KEY PLAN:

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ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
FURNITURE PLANS (FOR REFERENCE ONLY)

SHEET NUMBER:
A12.01

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DESIGN CRITERIA

1. STRUCTURE HAS BEEN DESIGNED TO COMPLY WITH THE 2018 INTERNATIONAL BUILDING CODE (IBC) AND SUBSEQUENT REFERENCE STANDARDS.
2. RISK CATEGORY: II
3. SUPERIMPOSED DEAD LOADS:

ROOF	Event Center	16 PSF
	Entry	22 PSF

4. SUPERIMPOSED LIVE LOADS: LIVE LOAD REDUCTION USED AS ALLOWED PER CODE

ROOF	TYPICAL	20 PSF

5. SNOW:

GROUND SNOW	30 PSF
SNOW EXPOSURE FACTOR	1.0
THERMAL FACTOR	1.0
SLOPE FACTOR(S)	1.0
IMPORTANCE FACTOR	1.0
FLAT-ROOF SNOW	21 PSF
DESIGN SNOW	25 PSF
SEE S0.02 FOR SNOW DRIFT PLAN.	

6. SEISMIC:

SEISMIC DESIGN CATEGORY	B
IMPORTANCE FACTOR	1.0
SITE CLASS	D
SS	0.112 g
S1	0.059 g
SDS	0.12 g
SD1	0.094 g
SEISMIC FORCE RESISTING SYSTEM	TIMBER FRAMES (E-W) AND STEEL SYSTEM NOT SPECIFICALLY DETAILED (N-S)
RESPONSE MODIFICATION COEFFICIENT, R	1 1/2 (E-W), 3 (N-S)
Cd	1 1/2 (E-W)
Omega o	1 1/2 (E-W), 3 (N-S)
Rho	1.0
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE
SEISMIC RESPONSE COEFFICIENT, CS	0.08 (E-W), 0.04 (N-S)
DESIGN BASE SHEAR (STRENGTH LEVEL)	20.9 KIPS (E-W), 10.5 KIPS (N-S)

7. WIND:

BASIC WIND SPEED	VULT = 107 MPH VASD = 83 MPH		
EXPOSURE CLASS	C		
INTERNAL PRESSURE COEFFICIENT, GCpi	±0.18		
MAIN WIND FORCE PRESSURE (STRENGTH LEVEL)	23 PSF		
COMPONENTS & CLADDING:			
ROOF COMPONENTS	ZONE 1	ZONE 2	ZONE 3
SUPPORT BEAMS (A>100 SF)	33.1 PSF	44 PSF	52.4 PSF
ROOF SHEATHING (A=50 SF)	35.9 PSF	47.6 PSF	59.6 PSF
DECK FASTENERS (A=10 SF)	42.4 PSF	56 PSF	76.3 PSF
WALL COMPONENTS	ZONE 4	ZONE 5	
A=200 SF	21.7 PSF	23.2 PSF	
A=50 SF	23.9 PSF	27.5 PSF	
A=20 SF	26.4 PSF	32.5 PSF	

C & C NOTES:
   a. THE PRESSURES LISTED ARE IN ACCORDANCE IBC AND ASCE 7, AND THE DESIGN FORCES USED BY THE SUBCONTRACTOR FOR A SPECIFIC APPLICATION ARE THE RESPONSIBILITY OF THE SUBCONTRACTOR.
   b. WIND PRESSURES ARE ULTIMATE DESIGN LEVEL.
   c. SEE ASCE 7 FOR ZONE DEFINITIONS AND EXTENT OF ZONES.
   d. SUBMIT DESIGN CALCULATIONS SIGNED AND SEALED BY A LICENSED ENGINEER IN THE PROJECT’S JURISDICTION FOR ANY DESIRED MODIFICATION TO THE STATED PRESSURES.

8. RAIN:

RAIN INTENSITY, i	6.4 IN/HR

9. ALL LATERAL LOAD RESISTANCE AND STABILITY OF THE BUILDING IN THE COMPLETED STRUCTURE IS PROVIDED BY BRACED FRAMES IN EACH ORTHOGONAL DIRECTION. SEE PLANS FOR LOCATIONS. THE CLT DECK SERVE AS HORIZONTAL DIAPHRAGMS DISTRIBUTING THE LATERAL FORCES TO THE VERTICAL LATERAL ELEMENTS WHICH IN TURN CARRY THE LOAD TO THE BUILDING FOUNDATIONS.

GENERAL

1. DURING THE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONNEL AND PROPERTY ON AND AROUND THE JOBSITE. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BRACING, GUYS, ETC. IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES. TEMPORARY BRACING, SHORING, GUYING, ETC. SHALL AVOID EXCESSIVE STRESSES AND HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION. THE STRUCTURE SHOULD NOT BE CONSIDERED STABLE UNTIL ALL STRUCTURAL ELEMENTS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
2. ALL DRAWINGS AND SPECIFICATIONS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE START OF CONSTRUCTION SO A CLARIFICATION CAN BE ISSUED. ANY WORK THAT DEVIATES FROM OR IS PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR THE DESIGN PROFESSIONALS.
3. THE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ALLOWABLE CONSTRUCTION LOADS AND FOR DETERMINING SEQUENCES OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND SAFETY OF WORKERS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO: FALSEWORK, FORMWORK, STAGING, BRACING, AND SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT SHALL NOT INCLUDE INSPECTION OR APPROVAL OF THE ABOVE ITEMS AND DO NOT IN ANY WAY RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITIES FOR THE ABOVE. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
4. ALL DIMENSIONS AND SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOBSITE PRIOR TO BID SUBMITTAL, START OF SHOP DRAWINGS, START OF CONSTRUCTION, AND/OR FABRICATION OF MATERIALS. IF DISCREPANCIES ARE ENCOUNTERED, OR CONDITIONS DEVELOP THAT ARE NOT COVERED BY THE CONTRACT DOCUMENTS, THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.
5. STRUCTURAL SUBSTITUTIONS MAY BE ALLOWED WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. SUPPLIER SHALL PROVIDE SIGNED AND SEALED DESIGN CALCULATIONS OR SUITABLE PRODUCT LITERATURE FOR THE COMPONENTS. ALL PRODUCT SUBSTITUTIONS SHALL INCLUDE A CODE EVALUATION REPORT SPECIFIC TO THE BUILDING CODE LISTED IN THE DESIGN CRITERIA.
6. STRUCTURAL DRAWINGS INCLUDE DESIGN REQUIREMENTS AND DIMENSIONS FOR STRUCTURAL INTEGRITY BUT DO NOT SHOW ALL DETAIL DIMENSIONS TO FIT INTRICATE ARCHITECTURAL AND MECHANICAL DETAILS. CONTRACTOR SHALL CONSTRUCT THE WORK SO IT WILL CONFORM TO THE CLEARANCES REQUIRED BY ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DESIGN.
7. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
8. DO NOT SCALE DRAWINGS. PRINTED DIMENSIONS HAVE PRECEDENCE OVER SCALED DRAWINGS AND LARGE-SCALE OVER SMALL-SCALE DRAWINGS. CONTRACTOR TO DETERMINE FINAL DIMENSION WITH ARCHITECT.
9. TYPICAL DETAILS SHALL APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY REFERENCED. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
10. SEE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS FOR DETAILS, CONDITIONS, PITS, TRENCHES, PADS, DEPRESSIONS, ROOF / FLOOR OPENINGS, TOP OF WALL ELEVATIONS, STAIRS, SLEEVES, ITEMS TO BE EMBEDDED OR ATTACHED TO STRUCTURAL ELEMENTS, ETC., NOT SHOWN ON THE STRUCTURAL DRAWINGS. FOR THESE NON-STRUCTURAL ELEMENTS SHOWN ON STRUCTURAL DRAWINGS, THEY ARE FOR GENERAL INFORMATION ONLY.
11. COORDINATE FLOOR FINISH INCLUDING, BUT NOT LIMITED TO THE "FLATNESS" AND "LEVELNESS" REQUIREMENTS, WITH THE FLOOR FINISH CONTRACTOR. PROVIDE UNDERLAYMENT / TOPPING WHERE REQUIRED TO PROVIDE A SURFACE ACCEPTABLE FOR INSTALLATION OF FLOOR FINISHES. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
12. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR MECHANICAL, ELECTRICAL, AND PLUMBING WITH APPROPRIATE TRADE CONTRACTORS. OPENING SIZES AND LOCATIONS SHOWN FOR DUCTS, PIPE, INSERTS, AND OTHER PENETRATIONS WHEN SHOWN ARE FOR GENERAL INFORMATION ONLY AND SHALL BE VERIFIED PRIOR TO FORMING.
13. THE EXACT WEIGHTS, DIMENSIONS, AND LOCATIONS OF ALL MECHANICAL UNITS AND ELECTRICAL GEAR SUPPORTED ON STRUCTURAL FRAMING SHALL BE DETERMINED AND COORDINATED BY THE CONTRACTOR PRIOR TO DETAILING THE STRUCTURAL FRAMING SUPPORTING THOSE UNITS. IF THE UNIT WEIGHTS ARE GREATER THAN THE WEIGHTS SHOWN ON THE STRUCTURAL DRAWINGS, THE STRUCTURAL ENGINEER SHALL BE NOTIFIED PRIOR TO DETAILING THE STRUCTURE. UNIT WEIGHTS, DIMENSIONS, AND LOCATIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE APPROXIMATE ONLY AND SHALL NOT BE USED FOR DETAILING THE STRUCTURE.
14. PROVIDE TEMPORARY BLOCKOUTS AND TEMPORARY OPENINGS IN THE STRUCTURE AS REQUIRED TO PERMIT INSTALLATION OF ALL WORK. BLOCKOUTS AND TEMPORARY OPENINGS SHALL BE LOCATED, CONFIGURED, DETAILED, AND INFILLED IN A MANNER THAT ALTERS NEITHER THE STRENGTH OF THE STRUCTURAL FRAMING NOR THE STRENGTH OF CONNECTIONS. INFILL ALL BLOCKOUTS AND TEMPORARY OPENINGS USING THE MATERIALS SPECIFIED FOR THE FRAMING AT THE LOCATIONS WHERE THE BLOCKOUTS AND OPENINGS OCCUR. SUBMIT DRAWINGS INDICATING THE LOCATIONS, DIMENSIONS, AND DETAILS OF ALL PROPOSED BLOCKOUTS AND OPENINGS AND DETAILS INDICATING THE MANNER IN WHICH THE BLOCKOUTS AND OPENINGS WILL BE INFILLED.
15. NO HOLES, NOTCHES, BLOCK-OUTS, ETC. ARE ALLOWED IN STRUCTURAL ELEMENTS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.
16. BEFORE SUBMITTING A PROPOSAL FOR THIS WORK, CONTRACTOR SHALL VISIT THE PREMISES AND BECOME FULLY ACQUAINTED WITH FIELD CONDITIONS, TEMPORARY CONSTRUCTION REQUIRED, QUANTITIES AND TYPE OF EQUIPMENT, ETC. THE PROPOSAL SHALL INCLUDE ALL SUMS REQUIRED TO DO THE WORK.
17. ELEMENTS SUCH AS NON-BEARING PARTITIONS, ETC. ATTACHED TO AND/OR SUPPORTED BY THE STRUCTURE SHALL TAKE INTO ACCOUNT DEFLECTIONS AND OTHER STRUCTURAL MOVEMENTS. THE STRUCTURAL FRAMING WAS DESIGNED TO LIMIT DRIFT AND DEFLECTION OF THE STRUCTURAL SYSTEM TO LESS THAN THE MAXIMUM PERMITTED DEFLECTIONS LISTED IN THE BUILDING CODE. THE CONTRACTOR SHALL COORDINATE THE WORK OF OTHER TRADES TO ACCOMMODATE THESE DEFLECTIONS AND TO ACCOMMODATE CONSTRUCTION TOLERANCES.
18. TOPS OF ALL MASONRY WALLS SHALL BE CONNECTED TO THE UNDERSIDE OF THE STRUCTURAL FRAMING PER DETAILS PROVIDED ON THE STRUCTURAL DRAWINGS. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF SUCH WALLS.
19. FIRE PROTECTION FOR ALL STRUCTURAL PARTS SHALL BE PROVIDED AS SPECIFIED BY THE ARCHITECTURAL DRAWINGS. UL FIRE RESISTANCE RATING RESTRAINT CLASSIFICATION AS FOLLOWS:
   a. "PRIMARY STRUCTURAL FRAME", AS DEFINED BY IBC SECTION 202 IS "RESTRAINED" EXCEPT AS INDICATED IN FOLLOWING NOTE.
   b. THE FOLLOWING FRAMING IS "UNRESTRAINED":
      1. FRAMING SUPPORTED BY BEARING WALLS, OTHER THAN CAST-IN-PLACE CONCRETE WALLS, IN END BAYS AND OTHER LOCATIONS WHERE THE END OF THE FRAMING IS NOT ABUTTING FRAMING IN AN ADJACENT BAY.
      2. HOLLOW CORE SLABS IN END BAYS AND OTHER LOCATIONS WHERE THE END OF THE SLAB IS NOT ABUTTING SLABS IN AN ADJACENT BAY.
      3. STEEL JOISTS IN END BAYS ON ROOFS SUPPORTING STEEL DECK.
      4. ALL WOOD CONSTRUCTION.

SUBMITTALS

1. SUBMITTALS ARE:
   a. CONCRETE MIX DESIGNS
   b. MATERIAL PRODUCT DATA FOR STRUCTURAL MATERIALS
   c. CONCRETE REINFORCING
   d. ENGINEERED LUMBER
   e. CLT/DLT DECKING
   f. STEEL FABRICATION AND MISCELLANEOUS METALS
   g. STEEL DECK
   h. COLD FORMED STEEL FRAMING AND CONNECTIONS
2. SUBMITTALS SHALL BE REVIEWED AND COORDINATED PRIOR TO SUBMITTING TO THE ARCHITECT. EACH SHOP DRAWING SUBMITTED SHALL BE STAMPED INDICATING REVIEW BY THE CONSTRUCTION MANAGER/GENERAL CONTRACTOR AND REVIEW BY THE ARCHITECT SHALL NOT BEGIN UNTIL THIS IS COMPLETE. WORK SHALL NOT BEGIN WITHOUT REVIEW BY THE DESIGN PROFESSIONALS.
3. SUBMITTALS SHALL BE REVIEWED BY THE DESIGN PROFESSIONALS FOR GENERAL CONFORMANCE WITH DESIGN CONCEPT ONLY. NOTATIONS MADE BY THE DESIGN PROFESSIONALS ON THE SHOP DRAWINGS DO NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE REQUIREMENTS OF THE DRAWINGS.
4. FOR ADDITIONAL INFORMATION ON REQUIRED SUBMITTALS, SEE INDIVIDUAL MATERIAL SECTIONS.

DELEGATED DESIGN

1. DELEGATED DESIGNS PER SECTION 107.3.4.1 SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND THE DESIGN PROFESSIONALS AND REVIEWED PRIOR TO INSTALLATION.
2. DELEGATED DESIGNS ARE:
   a. EXCAVATION, SHORING, AND UNDERPINNING
   b. EXTERIOR WALL SYSTEMS
   c. CURTAIN WALL AND STOREFRONT SYSTEMS
   d. COLD FORMED STEEL FRAMING AND CONNECTIONS
   e. STAIRS, ACCESS LADDERS, HANDRAILS, GUARDRAILS, AND GRATING
3. ALL DELEGATED DESIGNS SHALL BE SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE PROJECT'S JURISDICTION RESPONSIBLE FOR THE PREPARATION OF THESE DOCUMENTS.

EXISTING CONDITIONS / DEMOLITION

1. EXISTING CONDITIONS:
   a. EXISTING STRUCTURAL INFORMATION SHOWN WAS OBTAINED FROM EXISTING DRAWINGS DATED SEPTEMBER 5, 1989 BY LEGAT / PSA ARCHITECTS.
   b. ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE. CONTRACTOR TO VERIFY EXISTING INFORMATION, DIMENSIONS, AND SIZES AS REQUIRED TO COMPLETE THEIR WORK. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE ARCHITECT SO CLARIFICATION MAY BE MADE. MODIFICATION OF CONSTRUCTION DETAILS SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE ARCHITECT.
2. ALL DEMOLITION SHALL BE CARRIED OUT IN SUCH A WAY TO PREVENT DAMAGE TO EXISTING ELEMENTS WHICH ARE TO REMAIN.
3. ALL ELEMENTS WHICH ARE TO REMAIN AND WHICH ARE DAMAGED DURING DEMOLITION WORK SHALL BE REPLACED AT NO ADDED COST. CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ADJACENT EXISTING SURFACES AND AREAS WHICH MAY BE DAMAGED AS A RESULT OF NEW WORK.
4. CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS OF EXISTING STRUCTURE AND SITES THAT ARE AFFECTED BY NEW WORK BEFORE PROCEEDING WITH FABRICATION AND CONSTRUCTION.
5. ALL CONSTRUCTION IS NEW UNLESS IDENTIFIED AS EXISTING, "(E)". THE CONTRACTOR SHALL VERIFY ALL EXISTING BUILDING INFORMATION AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO FABRICATION OF ANY STRUCTURAL COMPONENT. NEW SLABS ARE TO BE AT THE SAME ELEVATIONS AS ADJACENT EXISTING SLABS UON. FOUNDATION ELEVATIONS OR COLUMN LENGTHS SHALL BE ADJUSTED WITH THE APPROVAL OF THE STRUCTURAL ENGINEER TO ACHIEVE MATCHING SLAB ELEVATIONS.
6. REINFORCING STEEL IN EXISTING CONCRETE SHALL BE LOCATED PRIOR TO INSTALLATION OF NEW OPENINGS OR CORING OF HOLES IN THE CONCRETE. REINFORCING STEEL MAY NOT BE CUT WITHOUT APPROVAL FROM THE ENGINEER.
7. SHORING:
   a. SHORING DRAWINGS AND CALCULATIONS BY OTHERS, AS REQUIRED, ARE NOT INCLUDED IN THIS PACKAGE. SHORING DRAWINGS AND STRUCTURAL CALCULATIONS SHALL BE PROVIDED BY CONTRACTOR FOR REVIEW.
   b. SHORING / UNDERPINNING OF EXISTING BUILDINGS OR IMPROVEMENTS SHALL BE PROVIDED BEFORE EXISTING SUPPORTING WALLS, SLABS, FOUNDATIONS, PAVEMENT, ETC. ARE CUT, MODIFIED, OR REMOVED.

EARTHWORK

1. FOUNDATION DESIGN IS BASED ON GEOTECHNICAL REPORT NO. G24.162 DATED NOVEMBER 8, 2024, BY RUBINO ENGINEERING INC. FOLLOW RECOMMENDATIONS IN REPORT FOR ALL FOUNDATION WORK. REPORT IS ON FILE WITH THE ARCHITECT.
2. SOIL PROPERTIES:

FROST DEPTH	2 FT (HEATED) 3.5 FT (UNHEATED)

3. SUBGRADE PREPARATION FOR FOOTINGS AND SLABS-ON-GRADE SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND SHALL BE IN COMPLIANCE WITH THE APPLICABLE REQUIREMENTS OF THE GOVERNING AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL DIRECT QUESTIONS REGARDING THE SUBGRADE PREPARATION REQUIREMENTS TO THE GEOTECHNICAL ENGINEER.
4. ANY TESTS, INSPECTIONS, FIELD OBSERVATIONS, OR APPROVAL FROM THE GEOTECHNICAL ENGINEER SHALL BE PERFORMED PRIOR TO PLACEMENT OF CONCRETE. ALTERATIONS TO SITE PREPARATION OR GRADING SHALL BE REPORTED TO THE GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.
5. PROPERTY LINE LOCATIONS INDICATED ON FOUNDATION PLANS ARE APPROXIMATE. SEE ARCHITECTURAL AND/OR SITE DRAWINGS FOR LOCATION OF THE STRUCTURE ON THE SITE.
6. ALL EXCAVATIONS SHALL BE PROPERLY AND SAFELY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING / BASEMENT WALLS BEFORE CONCRETE HAS ATTAINED SPECIFIED COMPRESSIVE STRENGTH. CONTRACTOR SHALL BRACE OR PROTECT ALL WALLS BELOW GRADE FROM LATERAL LOADS UNTIL SUPPORTING FLOORS ARE COMPLETELY IN PLACE AND HAVE ATTAINED 7-DAY STRENGTH MINIMUM. BACKFILLING IS NOT PERMITTED FOR FOUNDATION WALLS UNTIL SUPPORTED SLAB TOP AND BOTTOM ARE IN PLACE OR THE WALL IS ADEQUATELY BRACED TO RESIST LATERAL LOADS.
7. SOIL BEHIND RETAINING WALLS AND BASEMENT WALLS SHALL BE DRAINED TO ELIMINATE HYDROSTATIC PRESSURE BEHIND THE WALL. DESIGN OF SUCH WALL DRAINAGE SYSTEMS IS THE RESPONSIBILITY OF THE CONTRACTOR.
8. CONTRACTOR SHALL PROVIDE DE-WATERING OF EXCAVATIONS FROM SURFACE WATER, GROUNDWATER, OR SEEPAGE. DETAILS OF GROUNDWATER INFORMATION SHALL BE OBTAINED FROM THE GEOTECHNICAL REPORT. IF GROUNDWATER IS ENCOUNTERED DURING EXCAVATION, PROCEDURES SHALL BE IMPLEMENTED AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
9. PROVIDE SHORING WHERE THERE IS INSUFFICIENT SPACE FOR STABLE-SLOPED EMBANKMENTS.
10. CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILL MATERIAL OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS, AND FOUNDATIONS. IF ANY SUCH MATERIAL OR STRUCTURES ARE FOUND, ARCHITECT SHALL BE NOTIFIED IMMEDIATELY.
11. ANY REQUIRED IMPORT FILL SHALL HAVE A LOW POTENTIAL FOR EXPANSION AND SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO IMPORTING.
12. UTILITY LINES SHALL NOT BE PLACED THROUGH OR BELOW FOUNDATIONS WITHOUT THE STRUCTURAL ENGINEER'S APPROVAL. BELOW GRADE UTILITY OR PIPE ELEVATIONS, WHERE SHOWN, ARE INDICATED FOR REFERENCE ONLY. REQUIRED ELEVATIONS SHALL BE DETERMINED BY OTHERS AND COORDINATED WITH THE FOUNDATIONS.
13. WHERE GRADE ELEVATIONS ARE APPROXIMATELY EQUAL ON BOTH SIDES OF WALLS, BACKFILL SHALL BE PLACED SO THAT IT IS NOT UNBALANCED BY MORE THAN 2 FEET ON EITHER SIDE.
14. ALL REQUIRED BACKFILL AND UTILITY TRENCH BACKFILL WITHIN THE BUILDING AREA SHALL BE COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.

SHALLOW FOUNDATIONS

1. SEE THE GEOTECHNICAL REPORT FOR SHALLOW FOUNDATION REQUIREMENTS.
2. SHALLOW FOUNDATIONS SHALL HAVE THE FOLLOWING MINIMUM NET ALLOWABLE SERVICE LOAD BEARING PRESSURES:

SERVICE LOAD BEARING PRESSURES:	
NET ALLOWABLE BEARING PRESSURE AT SPREAD FOOTING	4000 PSF
NET ALLOWABLE BEARING PRESSURE AT WALL FOOTING	3500 PSF

3. FOUNDATION ELEVATIONS SHOWN INDICATE LOCATIONS WHERE ADEQUATE SOIL BEARING PRESSURE IS ANTICIPATED. IF INADEQUATE BEARING CAPACITY IS ENCOUNTERED, CONTACT STRUCTURAL ENGINEER FOR RESOLUTION. BEARING ELEVATIONS ARE ESTIMATED FROM SOIL BORING DATA INDICATED IN THE GEOTECHNICAL REPORT. DETERMINATION OF FINAL BEARING ELEVATIONS AND FIELD VERIFICATION OF ALLOWABLE BEARING PRESSURE SHALL BE MADE BY AN EXPERIENCED, QUALIFIED GEOTECHNICAL ENGINEER PRIOR TO PLACING FOUNDATIONS.
4. ALL FOUNDATIONS SHALL BEAR BELOW THE FROST DEPTH, OR LOWER WHERE INDICATED ON FOUNDATION PLAN. IN CASE OF CONFLICT, NOTIFY THE DESIGN PROFESSIONALS IN ADVANCE OF ANY CONSTRUCTION TO ALLOW FOR ADJUSTMENT.
5. FOUNDATIONS SHALL BE PLACED ON UNDISTURBED SOIL OR COMPACTED STRUCTURAL FILL, AND CLEAN AND FREE OF LOOSE DEBRIS AND STANDING WATER AT TIME OF CONCRETE PLACEMENT.
6. WHERE FOUNDATIONS BEAR ON ROCK, FOUNDATIONS SHALL BEAR ON THAT ROCK OR ON LEAN CONCRETE FILL.
7. NEW FOOTING BEARING ELEVATIONS SHALL MATCH ADJACENT EXISTING FOOTING BEARING ELEVATIONS WHERE OCCURRING UON.
8. THE SLOPE BETWEEN THE LOWER EDGES OF ADJACENT FOOTINGS SHALL NOT EXCEED 45 DEGREES WITH THE HORIZONTAL UON IN THE GEOTECHNICAL REPORT. CONTACT STRUCTURAL ENGINEER WHERE ADEQUATE SLOPE IS NOT ACHIEVED.

REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN CONFORMANCE WITH ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", AND ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE", UON.

REINFORCING STEEL UON	ASTM A615, GR 60	Fy=60 KSI
WELDED WIRE REINFORCING	ASTM A1064	Fy=65 KSI
STEEL WIRE	ASTM A1064	Fy=60 KSI

2. CONCRETE REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING STANDARDS:

CONCRETE EXPOSURE	MEMBER	REINFORCEMENT	COVER (IN)
CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND	ALL	ALL	3
EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	ALL	#6 TO #18	2
		#5 AND SMALLER	1 1/2
NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	SLABS, JOISTS, AND WALLS	#14 & #18	1 1/2
		#11 AND SMALLER	3/4
	BEAMS, COLUMNS, PEDESTALS, AND TENSION TIES	PRIMARY REINF, STIRRUPS, TIES, SPIRALS, AND HOOPS	1 1/2
OTHER	BOUNDARY ELEMENTS	ALL	1 1/2
	PARKING LEVEL SLABS	TOP BARS	1 1/2
		BOTTOM BARS	1

3. MINIMUM CONCRETE COVER SHALL BE PROVIDED AS FOLLOWS TO THE OUTERMOST REINFORCING BARS:
4. FIELD BENDING OF REINFORCING STEEL IS NOT PERMITTED UON.
5. WELDING OF REINFORCING STEEL OTHER THAN A706 IS PROHIBITED. WELDING OF REINFORCING BARS SHALL BE IN ACCORDANCE WITH AWS D1.4 OR D1.8.
6. HEADED STUDS AND DEFORMED BAR ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
7. SUPPORTS AND TIE WIRE FOR COATED REINFORCING SHALL BE PLASTIC PROTECTED. SUPPORTS AND TIE WIRE FOR STAINLESS OR GALVANIZED REINFORCING SHALL BE STAINLESS OR GALVANIZED STEEL PROTECTED RESPECTIVELY. SUPPORTS AND TIE WIRE FOR UNCOATING REINFORCING SHALL BE PLAIN WIRE, NO PROTECTION.
8. ALL WELDED WIRE REINFORCING SHALL BE LAP SPLICED 2 PANELS (1'-0" MIN).
9. SPLICING:
   a. SPLICES IN REINFORCING STEEL SHALL BE MADE ONLY AT THOSE LOCATIONS WHERE SPLICES ARE SHOWN ON THE STRUCTURAL DRAWINGS AND AT THOSE LOCATIONS WHERE SPLICES HAVE BEEN DETAILED ON THE REINFORCING STEEL PLACING DRAWINGS THAT HAVE BEEN REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER. ALL SPLICES SHALL BE CLASS B TENSION LAP SPLICES UON.
   b. MECHANICAL SPLICE COUPLERS MAY BE USED INSTEAD OF TENSION LAP SPLICES AT THE CONTRACTOR'S OPTION AT ANY LOCATION. MECHANICAL SPLICE COUPLERS MUST BE USED WHERE SPLICING #14 AND LARGER BARS, INCLUDING WHERE SPLICING #14 AND LARGER BARS TO #11 AND SMALLER BARS. STAGGER MECHANICAL SPLICES IN ADJACENT BARS 30" MINIMUM.
   c. COMPRESSION LAP SPLICES MAY BE USED ONLY AT THOSE LOCATIONS WHERE SUCH SPLICES ARE SPECIFICALLY INDICATED. STAGGER SPLICES WHERE REQUIRED TO PROVIDE 1 1/2" MINIMUM CLEAR SPACING BETWEEN REINFORCING STEEL AT SPLICE LOCATIONS.
10. ALL HOOKS SHALL BE STANDARD HOOKS OR STANDARD STIRRUP HOOKS UON. STANDARD STIRRUP HOOKS SHALL HAVE CONTINUOUS BAR AT INSIDE CORNER OF HOOK.
11. VERTICAL REINFORCING STEEL IN CONCRETE AND MASONRY WALLS WITH ONE LAYER OF REINFORCING BARS SHALL BE INSTALLED IN THE CENTER OF THE WALL UON.
12. STANDARD STIRRUP HOOKS FOR #3, #4, AND #5 BARS SHALL BE PROVIDED IN SLABS LESS THAN 9" THICK.
13. DOWELS SHALL MATCH GRADE, SIZE, SPACING, AND QUANTITY OF LAPPED REINFORCING STEEL UON. EXTEND ALL DOWELS FOR FULL DEPTH OF SUPPORTING ELEMENT AND PROVIDE HOOKS UON. DOWELS SHALL NOT BE POST-INSTALLED INTO FRESH CONCRETE.
14. HEADED DEFORMED BARS MAY ONLY BE USED ON #11 AND SMALLER BARS. THREADED OR FORGED HEADS CAN BE USED AT THE FABRICATOR'S DISCRETION.
15. FIELD CUTTING OF REINFORCING STEEL IS PROHIBITED UNLESS INDICATED ON THE REINFORCING PLACING DRAWINGS.
16. HEATING OF BARS FOR BENDING IS PROHIBITED.
17. REINFORCING STEEL PLACING DRAWINGS SHALL BE PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 315. THE PLACING DRAWINGS SHALL SHOW ALL INFORMATION NECESSARY TO FABRICATE AND PLACE THE REINFORCING STEEL.
18. REINFORCING STEEL SPACINGS ARE CENTER-TO-CENTER DIMENSIONS UON. REINFORCING STEEL SHOWN IN SECTION PERPENDICULAR TO THE CUT ARE CONTINUOUS UON.
19. THE SPACING OF ALL REINFORCING STEEL MUST BE COMPUTED BY THE REINFORCING STEEL DETAILER AND MUST BE INDICATED ON THE PLACING DRAWINGS. EXTENT ARROWS MUST BE USED TO CLEARLY INDICATE THE LOCATIONS WHERE GROUPS OF REINFORCING BARS ARE TO BE INSTALLED.
20. A LIST OF ALL APPLICABLE REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE INDICATED ON ALL REINFORCING STEEL PLACING DRAWINGS. PLACING DRAWINGS THAT DO NOT SHOW SUFFICIENT INFORMATION NEEDED TO PLACE THE REINFORCING STEEL WILL BE REJECTED.

CAST-IN-PLACE CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, AND ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE UON.
2. CONCRETE MATERIALS SHALL CONFORM TO:

PORTLAND LIMESTONE CEMENT	ASTM C595, TYPE IL
FLY ASH	ASTM C618, TYPE C OR F
SLAG CEMENT	ASTM C989
FINE AND COARSE AGGREGATE	ASTM C33
WATER	POTABLE
AIR-ENTRAINING ADMIXTURE	ASTM C260
WATER REDUCING ADMIXTURE	ASTM C494

3. CONCRETE STRENGTHS SHALL CONFORM TO:

LOCATION	f'c AT 28 DAYS (PSI)	MAX PERMITTED W/C	EXPOSURE CLASS
ALL FOUNDATION CONCRETE UON	4500	0.45	F2
SLAB-ON-GRADE UON	3000	0.55	F0

4. AIR ENTRAINMENT:

NOMINAL MAXIMUM AGGREGATE SIZE	REQUIRED AIR CONTENT PER EXPOSURE CATEGORY	
	F1	F2
3/8"	6%	7.5%
1/2"	5.5%	7%
3/4"	5%	6%
1"	4.5%	6%

   a. CONCRETE IN THESE LOCATIONS SHALL BE AIR ENTRAINED WITH THE APPROPRIATE PERCENTAGE AIR CONTENT LISTED IN THE TABLE ABOVE AS APPLICABLE FOR THE INDICATED EXPOSURE CLASS AND NOMINAL MAXIMUM AGGREGATE SIZE IN THE CONCRETE MIX.
5. ALL FOUNDATION ELEMENTS SHALL BE CENTERED UNDER WALLS, PIERS, OR COLUMNS UON.
6. "ROUGH JOINTS" ARE JOINTS ROUGHENED TO AN AMPLITUDE OF 1/4" AND FREE AND CLEAN OF LAITANCE. PROVIDE ROUGH JOINTS AT ALL CONSTRUCTION JOINTS UON.
7. CONTRACTOR SHALL SUBMIT PROPOSED LOCATIONS OF ALL CONSTRUCTION JOINTS WHERE JOINTS ARE NOT INDICATED ON THE DRAWINGS.
8. CONSTRUCTION JOINTS IN CAST-IN-PLACE CONCRETE SHALL BE LOCATED WITHIN THE MIDDLE THIRD OF SPAN. PROPOSED CONSTRUCTION JOINT LOCATIONS SHALL BE SHOWN ON REINFORCING STEEL PLACING DRAWINGS. ANY STOP IN CONCRETE WORK MUST BE MADE WITH VERTICAL BULKHEADS AND HORIZONTAL KEYS UON. ALL REINFORCING TO BE CONTINUOUS THROUGH JOINTS UON.
9. HORIZONTAL CONSTRUCTION JOINTS THROUGH CAST-IN-PLACE CONCRETE FRAMING ARE NOT PERMITTED EXCEPT WHERE SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS.
10. JOINTS ABUTTING EXISTING CONCRETE CONSTRUCTION SHALL BE ROUGH JOINTS UON.
11. INSTALLATION OF ELECTRICAL CABLE, CONDUIT, AND PIPING IN OR THROUGH CONCRETE COLUMNS AND WALLS IS PROHIBITED UNLESS APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION. INSTALLATION OF PIPING IN CAST-IN-PLACE CONCRETE IS PROHIBITED UNLESS APPROVED BY STRUCTURAL ENGINEER PRIOR TO INSTALLATION. DRAWINGS SHALL BE SUBMITTED FOR REVIEW SHOWING PROPOSED PLACEMENT OF ELECTRICAL CABLE AND CONDUIT IN SLABS. THOSE DRAWINGS SHALL SHOW SIZES AND DIMENSIONED LOCATIONS OF ALL CABLE AND CONDUIT.
12. PROJECTING CORNERS OF BEAMS, WALLS, COLUMNS, ETC. SHALL BE FORMED WITH A 3/4" CHAMFER UON ON ARCHITECTURAL DRAWINGS.
13. SLOPE SLABS TO DRAINS. SEE ARCHITECTURAL AND MEP DRAWINGS FOR DRAIN LOCATIONS AND SLOPE REQUIREMENTS. SLAB THICKNESSES SHOWN ON DRAWINGS ARE MINIMUMS.
14. NOTIFY THE ARCHITECT 48 HOURS MINIMUM PRIOR TO ALL POURS.
15. CONTRACTOR SHALL SURVEY ALL CONCRETE WORK WITHIN 48 HOURS OF PLACING CONCRETE TO ENSURE PLACEMENT IS IN ACCORDANCE WITH PROJECT REQUIREMENTS.
16. CORING OF CONCRETE IS NOT PERMITTED UNLESS APPROVED BY THE STRUCTURAL ENGINEER. SUBMIT LOCATIONS OF PROPOSED CONCRETE CORES.
17. REINFORCING STEEL SHALL NOT BE DAMAGED WHEN DRILLING CONCRETE.
18. ADHERE TO ACI 305R AND ACI 306R FOR HOT AND COLD WEATHER CONCRETE CONSTRUCTION.
19. DRYPACK AND GROUT SHALL HAVE A MINIMUM 28-DAY STRENGTH OF 7000 PSI.
20. THE PROPOSED MATERIALS AND MIX DESIGN SHALL BE FULLY DOCUMENTED AND REVIEWED BY THE TESTING AND INSPECTION AGENCY. RESPONSIBILITY FOR OBTAINING THE REQUIRED DESIGN STRENGTH IS THE CONTRACTOR'S. SUBMIT TEST DATA ON EACH PROPOSED MIX FOR REVIEW IN ACCORDANCE WITH THE APPLICABLE CODE. MIX DESIGNS SUBMITTED WITHOUT THE REQUIRED TEST DATA WILL BE RETURNED WITHOUT REVIEW.
21. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, LOCATIONS, AND DETAILS OF ALL ARCHITECTURAL FEATURES IN THE CONCRETE. SEE ARCHITECTURAL DRAWINGS AND PROJECT SPECIFICATIONS FOR REQUIREMENTS FOR ALL CONCRETE FINISHES.

STEEL

1. STRUCTURAL STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "DETAILING FOR STEEL CONSTRUCTION" AND FABRICATED AND ERECTED IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS".
2. STRUCTURAL STEEL SHALL CONFORM TO ASTM STANDARDS AS NOTED BELOW:

WIDE FLANGE AND WT SHAPES	ASTM A992	Fy=50 KSI
CHANNEL SHAPES	ASTM A992	Fy=50 KSI
ANGLE SHAPES	ASTM A572	Fy=50 KSI
PIPE SECTIONS	ASTM A53, GR B	Fy=35 KSI
HSS SECTIONS, ROUND	ASTM A500, GR C	Fy=50 KSI
HSS SECTIONS, SQ/RECT	ASTM A500, GR C	Fy=50 KSI
PLATES	ASTM A572	Fy=50 KSI
ANCHOR RODS	ASTM F1554, GR 36	Fy=36 KSI
HIGH STRENGTH BOLTS	ASTM F3125, GR A325	Fu=120 KSI
HIGH STRENGTH TWIST-OFF BOLTS	ASTM F3125, GR F1852	Fu=120 KSI
HEAVY HEX NUTS	ASTM A563	
WASHERS FOR HIGH STRENGTH BOLTS	ASTM F436	
HEADED STUD ANCHORS (HSA)	ASTM A108, TYPE B	
ELECTRODES FOR ARC WELDING	AWS 5.1, E70XX	

3. HIGH STRENGTH BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH AISC "SPECIFICATIONS FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS". SEE DETAILS FOR BOLT SIZE AND MATERIAL ASTM DESIGNATION.
4. ALL BOLTED CONNECTIONS SHALL BE GRADE A325N BEARING TYPE BOLTS UON. ALL BOLTS SHALL BE INSTALLED TO A MINIMUM SNUG TIGHT CONDITION UON.
5. FULLY TENSIONED HIGH STRENGTH BOLTS AND SLIP CRITICAL HIGH STRENGTH BOLTS SHALL USE TENSION-CONTROL "TWIST-OFF" BOLTS OR BE INSTALLED USING THE TURN OF THE NUT METHOD.
6. FIELD CONNECTIONS SHALL BE WELDED OR BOLTED. SHOP CONNECTIONS SHALL BE WELDED UON. WELDS INDICATED WITH A SHOP WELD SYMBOL MAY BE MADE IN THE FIELD WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. LOCATIONS OF ALL FIELD WELDS SHALL BE CLEARLY SHOWN ON THE SHOP DRAWINGS. WELDS SHALL BE DESIGNED TO BE FULLY EQUIVALENT IN STRENGTH TO BOLTED CONNECTIONS DETAILED TO MINIMIZE BENDING IN THE CONNECTION.
7. WELD LENGTHS INDICATED ON THE DRAWINGS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE WELD LENGTH IS NOT SPECIFIED, PROVIDE WELD ALONG ENTIRE INTERSECTION OF THE JOINED PARTS. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM WELD SIZE AS SPECIFIED IN AISC 360, TABLE J2.4.
8. ALL WELDING OF STRUCTURAL STEEL SHALL BE PERFORMED BY CERTIFIED WELDERS WITH EXPERIENCE AND CERTIFICATION IN THE TYPES OF WELDING INDICATED. WELDERS SHALL HAVE BEEN RECENTLY QUALIFIED AS PRESCRIBED IN "QUALIFICATION PROCEDURES" OF THE AMERICAN WELDING SOCIETY (AWS).
9. BEAMS SHALL BE CAMBERED UPWARD WHERE SHOWN ON THE DRAWINGS. WHERE NO UPWARD CAMBER IS INDICATED, ANY MILL CAMBER SHALL BE DETAILED UPWARD IN THE BEAMS.
10. SPLICING OF STEEL MEMBERS WHERE NOT DETAILED ON THE DRAWINGS IS PROHIBITED WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER AS TO LOCATION, TYPE OF SPLICE, AND CONNECTION TO BE MADE.
11. PROVIDE ONE SHOP COAT OF PAINT ON ALL STRUCTURAL STEEL NOT COVERED WITH CONCRETE, FIREPROOFING, MASONRY, OR AT CONTACT SURFACES AT HIGH STRENGTH BOLTS.
12. ALL STEEL EXPOSED TO WEATHER OR AS NOTED ON PLAN SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 G60. ABRADED AREAS TO BE TOUCHED UP WITH COLD GALVANIZING COMPOUND IN ACCORDANCE WITH ASTM A780.
13. ALL GALVANIZED HOLLOW SECTIONS SHALL HAVE WELDED CAP PLATES TO SEAL EXPOSED ENDS.
14. CUTS, HOLES, OPENINGS, ETC. REQUIRED IN STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES SHALL BE SHOWN ON THE SHOP DRAWINGS. BURNING OR TORCHING OF HOLES, CUTS, AND OTHER FIELD MODIFICATIONS SHALL NOT BE ALLOWED, EXCEPT BY WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER.
15. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, ETC. FOR MISCELLANEOUS STEEL NOT DETAILED SPECIFICALLY ON THE STRUCTURAL DRAWINGS.
16. GROUT FOR BASE AND BEARING PLATES SHALL BE A NON-SHRINK, NON-METALLIC PRODUCT. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 10,000 PSI. INSTALL GROUT PRIOR TO APPLYING SIGNIFICANT LOADING TO MEMBER.
17. THE STRUCTURAL STEEL FABRICATOR SHALL FURNISH SHOP DRAWINGS OF ALL STRUCTURAL STEEL FOR REVIEW AND APPROVAL BEFORE FABRICATION.

ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS)

1. WHERE INDICATED ON THE CONSTRUCTION DOCUMENTS, STEEL MEMBERS AND THEIR CONNECTIONS SHALL BE AESS.
2. SEE ARCHITECTURAL DRAWINGS FOR AESS CATEGORY AND ANY ADDITIONAL REQUIREMENTS. SEE AISC 303, TABLE 10.1 FOR AESS CATEGORY DEFINITIONS.
3. PREPARE, FABRICATE, AND ERECT ALL AESS MEMBERS IN ACCORDANCE WITH AISC 303, SECTION 10.
4. WHERE AESS CATEGORY IS NOT INDICATED ON CONSTRUCTION DOCUMENTS, GENERAL CONTRACTOR TO VERIFY REQUIREMENTS WITH ARCHITECT.

STEEL DECK

1. MATERIAL, DETAILING, DESIGN, MANUFACTURE, AND ERECTION OF STEEL DECKS SHALL BE IN ACCORDANCE WITH THE STEEL DECK INSTITUTE (SDI) SPECIFICATION.
2. DECK SIZE AND GAUGE INDICATED ON THE DRAWINGS ARE BASED ON THE FOLLOWING:
   a. CURRENT VERSION OF VULCRAFT CATALOG FOR GRAVITY DESIGN LOADS AND UNSHORED CONSTRUCTION SPANS
   b. SDI DIAPHRAGM DESIGN MANUAL 4 FOR DIAPHRAGM LOADS
3. PROVIDE MINIMUM DECK BEARING AND LAP LENGTHS PER MANUFACTURER'S RECOMMENDATIONS.
4. FOR PENETRATIONS LESS THAN OR EQUAL TO 12"Ø OR 12"x12", FRAMING OF OPENINGS FOR OTHER TRADES SHALL BE THE RESPONSIBILITY OF THE TRADES INVOLVED. HOLES LOCATED AND DIMENSIONED ON THE DRAWINGS SHALL BE THE RESPONSIBILITY OF THE DECK ERECTOR. SEE STRUCTURAL FRAMING DETAILS FOR ANY OPENING EXCEEDING LIMITS NOTED.
5. SUBMIT SHOP DRAWINGS SHOWING DECKING LAYOUT, DECK GAUGE, DECK DIRECTION, FASTENERS, AND FASTENING PATTERN FOR REVIEW AND APPROVAL.
6. FURNISH DECKING IN MINIMUM LENGTHS TO ACHIEVE 3-SPAN CONDITION UON.
7. ROOF DECK:
   a. ALL ROOF DECK SHALL BE GALVANIZED TO CONFORM TO ASTM A653 WITH A MINIMUM COATING OF G60.
   b. DO NOT EXCEED 25 LBS PER HANGER AND A MINIMUM SPACING OF 2'-0" ON CENTER WHEN ATTACHING TO ROOF DECK. THIS 25 LBS LOAD AND 2'-0" SPACING INCLUDE ADJACENT MECHANICAL, ELECTRICAL, AND ARCHITECTURAL ITEMS HANGING FROM THE DECK. IF THE HANGER RESTRICTIONS CANNOT BE ACHIEVED, SUPPLEMENTAL FRAMING SUPPORTED OFF STEEL FRAMING WILL NEED TO BE ADDED. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING LOCATION AND WEIGHT OF ALL THE ELEMENTS BEING HUNG WITH STRUCTURAL ENGINEER UON.
   c. DECK MANUFACTURER SHALL FURNISH ALL RIDGE AND VALLEY PLATES, SUMP PANS, DRAIN PLATES, AND OTHER ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION.

STRUCTURAL SHEET INDEX

SHEET NUMBER	SHEET NAME
S0.00	GENERAL NOTES
S0.01	GENERAL NOTES, SYMBOLS, ABBREVIATIONS AND 3D VIEW
S0.02	SPECIAL INSPECTIONS AND TESTS
S0.03	LOADING PLAN
SD1.00	MAIN ENTRANCE FOUNDATION PLAN - DEMO
SD1.01	MAIN ENTRANCE FRAMING PLAN - DEMO
S1.00	EVENT CENTER FOUNDATION PLAN
S1.01	MAIN ENTRANCE FOUNDATION PLAN
S2.00	EVENT CENTER ROOF FRAMING PLAN
S2.01	MAIN ENTRANCE FRAMING PLAN
S3.00	CONCRETE DETAILS
S3.01	CONCRETE DETAILS
S4.00	MASS TIMBER DETAILS
S4.01	DETAILS
S4.02	DETAILS
S4.03	DETAILS
S5.00	ELEVATIONS
GRAND TOTAL: 17	

FOR REVIEW ONLY
NOT FOR
CONSTRUCTION

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CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:

GENERAL NOTES

SHEET NUMBER:

S0.00

5/16/2025 6:49:08 AM

CROSS-LAMINATED TIMBER (CLT)

1. PRODUCT SHALL BE MERCER CLT PANELS OR APPROVED EQUIVALENT. PANELS SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI/APA PRG 320.
2. MATERIAL & GRADE: ALL CLT PANELS STRENGTH TO BE AS SHOWN ON THE PLANS OR GREATER.
3. SEE PLANS FOR PANEL THICKNESS AND SPANS.
4. CLT PANELS SHALL BE ORIENTED WITH EXTERIOR LAYERS PERPENDICULAR TO SUPPORTS UON.
5. SEE ARCHITECTURAL DRAWINGS FOR SURFACE FINISH REQUIREMENTS AT EXPOSED FACES. ALL NONEXPOSED FACES SHALL BE OF NONVISIBLE QUALITY (NSI). PANELS SHALL BE ARCHITECTURAL (EXPOSED) WITH LAYUPS AS NOTED ON THE ARCHITECTURAL PLAN, OF THE STRENGTHS INDICATED AND MINIMUM ALLOWABLE DESIGN PROPERTIES.
6. ALL PANEL COMPONENTS MUST BE A MINIMUM WIDTH OF 4 FEET AND CONTINUOUS FROM SUPPORT-TO-SUPPORT UON.
7. CLT SHALL BE PROTECTED DURING TRANSPORTATION AND STORAGE AGAINST ANY DAMAGE AND WEATHER. FOLLOW THE MANUFACTURER'S WRITTEN INSTRUCTIONS FOR PACKAGING, TRANSPORT, AND STORAGE.
8. PROTECT ALL EDGES OF CLT FROM DIRECT CONTACT WITH CONCRETE, MASONRY, OR WEATHER IN THE INSTALLED STATE.
9. PANEL LIFTING CONNECTORS SHALL NOT DAMAGE THE PANEL. HOLES IN EXPOSED PANEL FACES MUST BE PLUGGED PER ARCHITECTURAL SPECIFICATIONS.
10. CUTTING AND DRILLING OF CLT PANELS IN THE FIELD SHALL NOT BE PERMITTED WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT
11. MANUFACTURER SHALL SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION. DRAWINGS SHALL INCLUDE THE FOLLOWING INFORMATION:
    a. PANEL MAKEUP DESIGNATIONS INCLUDING TOTAL THICKNESS, LAMINATION THICKNESS, F_bS_{eff}, E_{eff}, AND V_r FOR BOTH THE MAJOR AND MINOR DIRECTIONS.
    b. PANEL LAYOUT INCLUDING ORIENTATION, PANEL LENGTHS AND WIDTHS, AND JOINT IDENTIFICATION (SPLINE OR LAP).
    c. CUTS, HOLES, OR NOTCHES: PANEL SHALL NOT BE FIELD CUT OR TRIMMED WITHOUT STRUCTURAL ENGINEER REVIEW.
    d. ERECTION DETAILS AND INSTRUCTIONS.
12. THE PANEL SHALL MEET THE REQUIRED ASSEMBLY FIRE RATING WHERE NOTED ON THE ARCHITECTURAL DRAWINGS.
13. SELF-DRILLING SCREWS FOR WOOD-TO-WOOD AND WOOD-TO-STEEL CONNECTIONS SHALL BE AS SHOWN ON THE STRUCTURAL DRAWINGS FROM THE FOLLOWING APPROVED MANUFACTURERS.

SCREW TYPE	MANUFACTURER	EVALUATION REPORT
SDS SERIES WOOD SCREW	SIMPSON STRONG-TIE	ICC ESR-2236
SDWS SERIES WOOD SCREW	SIMPSON STRONG-TIE	IAMPO ER-0192
SWG ASSY STRUCTURAL SCREW	MyTiCon TIMBER CONNECTORS	ICC ESR-3178 & 3179

14. THE SUDDEN APPLICATION OF HEAT TO A BUILDING IN COLD WEATHER CAN RAPIDLY CHANGE THE MOISTURE CONTENT OF CLT MEMBERS. THIS CAN AFFECT THE STRUCTURAL INTEGRITY AND VISUAL AESTHETICS OF THESE MEMBERS. IT IS IMPORTANT THAT CARE IS TAKEN DURING TRANSIT, STORAGE, AND THROUGHOUT ALL STAGES OF CONSTRUCTION TO AVOID RAPID CHANGES IN MOISTURE CONTENT. CONSULT CLT MANUFACTURER.

GLUED-LAMINATED CONSTRUCTION

1. MATERIALS, MANUFACTURE, AND QUALITY CONTROL SHALL BE IN CONFORMANCE WITH ANSI/AITC STANDARD A190.1, ASTM D3737, AND AITC 117.
2. LUMBER FOR LAMINATING SHALL COMPLY WITH THE FOLLOWING FOR BEAMS:

SPECIES	DOUGLAS FIR
STRESS CLASSIFICATION	24F-V8
EXTREME FIBER BENDING, TENSION	2400 PSI
EXTREME FIBER BENDING, COMPRESSION	2400 PSI
HORIZONTAL SHEAR	265 PSI
MODULUS OF ELASTICITY, E	1800 PSI

3. THE MAXIMUM MOISTURE CONTENT OF THE WOOD AT THE TIME OF GLUING SHALL NOT EXCEED 16% FOR PROJECTS LOCATED IN COASTAL AREAS, 12% FOR PROJECTS LOCATED IN INTERIOR VALLEYS, OR 10% FOR PROJECTS LOCATED IN DESERT AREAS, WITH THE GEOGRAPHICAL AREAS AS DETERMINED BY THE AREA HAVING JURISDICTION. MOISTURE CONTENT OF THE WOOD FOR MEMBERS EXPOSED TO DIRECT SUNLIGHT IN THE FINISHED STRUCTURE SHALL NOT EXCEED 10% AT THE TIME OF GLUING. THE MINIMUM MOISTURE CONTENT SHALL NOT BE LESS THAN 7%. THE RANGE OF MOISTURE CONTENT OF LAMINATIONS ASSEMBLED INTO A SINGLE MEMBER SHALL NOT EXCEED 5% AT THE TIME OF GLUING.
4. ALL GLULAM BEAMS AND COLUMNS HAVE BEEN OVERSIZED FOR A 1-HOUR FIRE CHAR RATING PER NDS CHAPTER 16. GLULAM MANUFACTURER/SUPPLIER TO PROVIDE ADDITIONAL TENSION/COMPRESSION LAMINATIONS ON MEMBERS TO ACCOUNT FOR CHAR RATING.
5. THOSE PORTIONS OF GLUED-LAMINATED TIMBERS WHICH FORM THE STRUCTURAL SUPPORTS FOR THE BUILDING AND ARE EXPOSED TO WEATHER AND NOT PROPERLY PROTECTED BY A ROOF, EAVES, OVERHANGS, OR SIMILAR COVERING SHALL BE TREATED WITH AN APPROVED PRESERVATIVE.
6. ADHESIVES SHALL MEET THE REQUIREMENTS OF ASTM D2559 FOR WET SERVICE CONDITION. TEMPERATURE OF LUMBER IN SERVICE SHALL NOT EXCEED 150°F.
7. A COAT OF END SEALER SHALL BE APPLIED TO THE ENDS OF ALL MEMBERS AS SOON AS PRACTICAL AFTER END TRIMMING. SURFACES OF THE MEMBERS SHALL BE SEALED WITH A PENETRATING SEALER.
8. MEMBERS SHALL BE PROTECTED DURING CONSTRUCTION.
9. EACH MEMBER SHALL BE STAMPED WITH A QUALITY MARK AND AN IDENTIFYING MARK INDICATING SPECIES OF LUMBER, GRADE, TYPE OF GLUE, EXTREMES OF MOISTURE CONTENT, AND COMBINATION SYMBOL INDICATING CONFORMANCE WITH THE ABOVE NOTED PRODUCT STANDARD.
10. ALL GLUED-LAMINATED TIMBER SHALL BE CONTINUOUSLY INSPECTED DURING FABRICATION BY A GLUE FABRICATION INSPECTOR. INSTALLATION OF ALL TIMBER CONNECTORS SHALL BE INSPECTED BY A QUALIFIED INSPECTOR.
11. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW BY THE STRUCTURAL ENGINEER PRIOR TO FABRICATION.
12. LAMINATED WOOD SUPPLIER SHALL FURNISH ALL CONNECTION HANGERS AND HARDWARE.
13. GLULAM APPEARANCE GRADE TO BE PREMIUM AT ALL COLUMNS AND ARCHITECTURAL AT ALL BEAMS.
14. ALL WOOD-TO-WOOD AND WOOD-TO-STEEL CONNECTIONS NOT SPECIFICALLY DETAILED ON THE CONTRACT DOCUMENTS SHALL BE DESIGNED BY THE STRUCTURAL WOOD SUPPLIER AND COORDINATED WITH THE STRUCTURAL STEEL SUPPLIER.
15. ALL ERECTION BRACING SHALL BE DESIGNED BY THE FABRICATOR'S ENGINEER LICENSED IN THE PROJECT'S JURISDICTION.

POST-INSTALLED ANCHORS

1. BASIS OF DESIGN ANCHORS:

INSTALLATION CONDITION	ANCHOR TYPE
EXPANSION ANCHORS INTO CONCRETE	HILTI KWIK BOLT TZ2 (ESR-4266)
SCREW ANCHORS > 1/4"Ø INTO CONCRETE	HILTI KWIK HUS-EZ (ESR-3027)
ADHESIVE ANCHORS INTO CONCRETE	HILTI SAFE-SET SYSTEM w/ HIT-HY 200 V3 AND HIT-Z ROD (ESR-4868)or HILTI SAFE-SET SYSTEM w/ HIT-HY 200 V3 AND HAS-E THREADED ROD (ESR-4868) or HILTI SAFE-SET SYSTEM w/ HIT-RE 500 V3 AND HAS-E THREADED ROD (ESR-3814) FOR ALL ADHESIVE ANCHORS, HOLES SHALL BE HAMMER DRILLED AND HOLES MAY BE DRY OR WATER SATURATED.
EXPANSION ANCHORS INTO GROUTED CMU	HILTI KWIK TZ2 (EST-4561)
SCREW ANCHORS > 1/4"Ø INTO GROUTED CMU	HILTI KWIK HUS-EZ (ESR-3056)
SCREW ANCHORS = 1/4"Ø INTO CONCRETE OR GROUTED CMU	HILTI KWIK-CON II+
ADHESIVE ANCHORS IN GROUTED CMU OR SOLID BRICK	HILTI HIT-HY 270 SYSTEM w/ HAS-E THREADED ROD (ESR-4143)
ADHESIVE ANCHORS INTO HOLLOW CMU, BRICK OR MULTI-WYTHE BRICK WALLS	HILTI HIT-HY 270 SYSTEM w/ HAS-E THREADED ROD AND APPROPRIATE SCREEN TUBE (ESR-4144)
ADHESIVE DOWELING FOR ANCHORING REINFORCING BARS INTO (E) CONCRETE	HILTI SAFE-SET SYSTEM w/ HIT-HY 200 V3 ADHESIVE (ESR-4868) or HILTI SAFE-SET SYSTEM w/ HIT-RE 500 V3 ADHESIVE (ESR-3814)
POWDER-ACTUATED FASTENERS (PAF's) IN CONCRETE	HILTI X-U FASTENERS (ESR-2269)

2. ALTERNATIVE ANCHORS MAY BE USED IF APPROVED IN WRITING BY THE STRUCTURAL ENGINEER. THE CONTRACTOR SHALL SUBMIT CALCULATIONS SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE PROJECT'S JURISDICTION VERIFYING PROPOSED ALTERNATIVE ANCHORS WILL PROVIDE THE SAME OR GREATER LOAD-CARRYING CAPACITY AS THE SPECIFIED ANCHORS. THE CONTRACTOR SHALL SUBMIT EVALUATION REPORTS. EACH ANCHOR CONFIGURATION SHALL BE EVALUATED AND COMPARED TO THE SPECIFIED ANCHOR.
3. CRACKED CONCRETE IS ASSUMED FOR ALL ANCHORAGE DESIGN CONDITIONS UNLESS IT CAN BE DEMONSTRATED THROUGH ENGINEERING ANALYSIS THAT THE CONCRETE REMAINS UNCRACKED DURING THE GOVERNING ULTIMATE LOAD STATE.
4. POST-INSTALLED ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.
5. THE CONTRACTOR SHALL ARRANGE FOR AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR EACH SPECIFIED ANCHOR TYPE. THE STRUCTURAL ENGINEER SHALL RECEIVE DOCUMENTATION VERIFYING ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS HAVE BEEN TRAINED PRIOR TO COMMENCEMENT OF INSTALLING ANCHORS.
6. INSTALLATION OF ADHESIVE ANCHORS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY AN APPROVED CERTIFICATION PROGRAM. CERTIFICATION SHALL INCLUDE WRITTEN AND PERFORMANCE TESTS IN ACCORDANCE WITH THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM OR EQUIVALENT. THE ACCEPTABILITY OF CERTIFICATIONS OTHER THAN THE ACI/CRSI ADHESIVE INSTALLER CERTIFICATION WILL BE DETERMINED BY THE STRUCTURAL ENGINEER.
7. CONCRETE SHALL HAVE ACHIEVED DESIGN STRENGTH PRIOR TO INSTALLING POST-INSTALLED ANCHORS. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE THAT HAS CURED FOR A MINIMUM OF 21 DAYS.
8. ANCHOR CAPACITY IS DEPENDENT UPON SPACING BETWEEN ANCHORS AND PROXIMITY OF ANCHORS TO EDGES OF CONCRETE OR MASONRY. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.
9. POST-INSTALLED ANCHORS AND DOWELS SHALL BE INSTALLED IN A MANNER THAT DOES NOT DAMAGE REINFORCING STEEL, CONDUIT OR OTHER EMBEDDED ITEMS. REINFORCING STEEL SHALL BE LOCATED BY NON-DESTRUCTIVE MEANS PRIOR TO DRILLING HOLES. PLATES AND BRACKETS THROUGH WHICH ANCHORS WILL BE INSTALLED SHALL NOT BE FABRICATED UNTIL AFTER REINFORCING STEEL IS LOCATED AND ANCHOR LOCATIONS ARE ADJUSTED. CONTRACTOR SHALL NOTIFY STRUCTURAL ENGINEER TO OBTAIN ALTERNATIVE ANCHOR LAYOUT WHERE ANCHORS MUST BE RELOCATED TO AVOID INTERFERENCE WITH REINFORCING STEEL.
10. ADHESIVE ANCHORING SYSTEMS ARE PERMITTED TO BE USED FOR INSTALLATION OF REINFORCING STEEL INTO EXISTING CONCRETE ONLY WHERE SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS OR WITH APPROVAL FROM THE STRUCTURAL ENGINEER. LOCATIONS WHERE REINFORCING STEEL WAS INCORRECTLY PLACED OR MISSED SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
11. WHERE POST-INSTALLED MECHANICAL ANCHOR EMBEDMENT DEPTHS ARE SPECIFIED, THOSE DEPTHS ARE THE REQUIRED MINIMUM NOMINAL EMBEDMENT DEPTHS. WHERE MECHANICAL ANCHOR EMBEDMENT DEPTHS ARE NOT INDICATED, THE ANCHORS SHALL BE INSTALLED TO THE MAXIMUM EMBEDMENT DEPTH NOTED IN THE MANUFACTURER'S PRODUCT TECHNICAL GUIDE.
12. ADHESIVE ANCHORS SHALL BE INSTALLED WITH A MINIMUM 6" EMBEDMENT DEPTH UON.

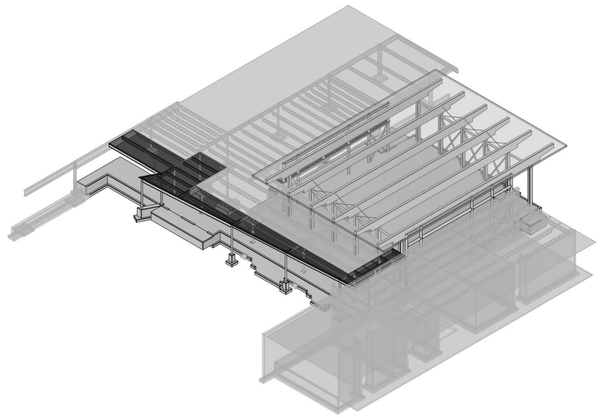
MATERIAL LEGEND

MATERIAL LEGEND:

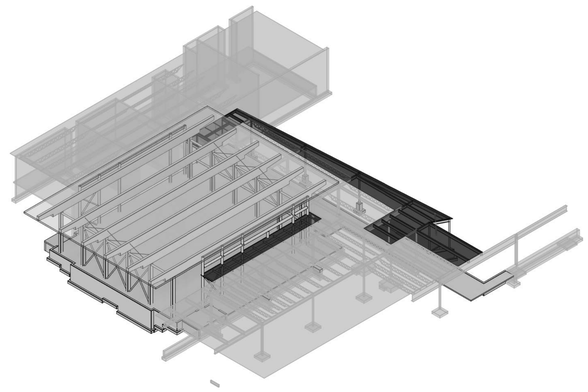
- CONCRETE
- CONCRETE - EXISTING
- EARTH
- GRAVEL OR GRANULAR FILL
- GROUT OR DRYPACK OR SAND
- CMU OR MASONRY
- METAL / COLD-FORM STUD
- WOOD / STUD
- PRECAST CONCRETE
- STEEL
- OTHER/SPECIALTY

STRUCTURAL ABBREVIATION KEY

ABBR:	DESCRIPTION:	ABBR:	DESCRIPTION:
#	NUMBER OR POUNDS	KSF	KIPS PER SQUARE FOOT
@	AT	KSI	KIPS PER SQUARE INCH
°	DEGREE	L	LENGTH
ø	DIAMETER	LBS	POUNDS
(E)	EXISTING	LL	LIVE LOAD
A.B.	ANCHOR BOLT	LLH	LONG LEG HORIZONTAL
ARCH	ARCHITECT. -URE, -URAL	LLV	LONG LEG VERTICAL
B.O.	BOTTOM OF	LONG.	LONGITUDINAL
bf	BEAM FLANGE WIDTH	LSH	LONG SIDE HORIZONTAL
BF	BRACE FRAME	LSV	LONG SIDE VERTICAL
BM	BEAM	LT WT	LIGHTWEIGHT
B.N.	BOUNDARY NAILING	MAX	MAXIMUM
BOTT	BOTTOM	MECH	MECHANICAL
BTWN	BETWEEN	MANUF	MANUFACTURER
CFSF	COLD FORM STEEL FRAMING	MIN	MINIMUM
CGS	CENTER OF GRAVITY OF THE TENDON.	NIC	NOT IN CONTRACT
CJP	COMPLETE JOINT PENETRATION WELD	NTS	NOT TO SCALE
CLR	CLEAR	OH	OPPOSITE HAND
CL	CENTERLINE	OPNG	OPENING
CMU	CONCRETE MASONRY UNIT	OSB	ORIENTED STRAND BOARD
COL	COLUMN	PCF	POUNDS PER CUBIC FOOT
CONC	CONCRETE	P.H.	PENTHOUSE
CONN	CONNECTION	PJP	PARTIAL JOINT PENETRATION WELD
CONST	CONSTRUCTION	PL	PLATE
CONT	CONTINUOUS	PLF	POUNDS PER LINEAR FOOT
COORD	COORDINATION	PSF	POUNDS PER SQUARE FOOT
DIA	DIAMETER	PSI	POUNDS PER SQUARE INCH
DL	DEAD LOAD	PT	POST-TENSION, -ED, -ING
DET	DETAIL	R	RADIUS
DWG	DRAWING	REINF	REINFORCING, -MENT, -ED
DWL	DOWEL	REQD	REQUIRED
EA	EACH	RTU	ROOF TOP UNIT
EF	EACH FACE	SC	SLIP CRITICAL
EFF	EFFECTIVE	SCHED	SCHEDULE
EL	ELEVATION	SFRS	SEISMIC FORCE-RESISTING SYSTEM
ELEC	ELECTRICAL	SIM	SIMILAR
EMBED	EMBEDMENT	SL	SNOW LOAD
E.N.	EDGE NAILING	S.M.S.	SHEET METAL SCREW
EOD	EDGE OF DECK	SP	SPACE(S)
EOS	EDGE OF SLAB	SPECS	SPECIFICATION(S)
EQ	EQUAL	SQ	SQUARE
EQUIP	EQUIPMENT	STIFF	STIFFENER
ETC	ETCETERA	STL	STEEL
EW	EACH WAY	SYM	SYMMETRICAL
EXP	EXPANSION	T&B	TOP AND BOTTOM
EXT	EXTERIOR	T.O.	TOP OF
f 'c	CONCRETE COMPRESSIVE STRENGTH	TC	PRE-TENSIONED BOLT
FDN	FOUNDATION	TEMP	TEMPERATURE
F.N.	FIELD NAILING	tf	BEAM FLANGE THICKNESS
FT	FOOT	THK	THICK
FTG	FOOTING	TRANS	TRANSVERSE
Fy	YIELD STRESS	TYP	TYPICAL
GA	GAGE OR GAUGE	UON	UNLESS OTHERWISE NOTED
GALV	GALVANIZED	VERT	VERTICAL
GLB	GLULAM BEAM	VIF	VERIFY IN FIELD
GT	GIRDER TRUSS	w/	WITH
HORIZ	HORIZONTAL	WP	WORK POINT
HSA	HEADED STUD ANCHOR	WT	WEIGHT
HSB	HIGH STRENGTH BOLT	WWR	WELDED WIRE REINFORCING
JT	JOINT		
K, KIP	KILOPOUND (1,000 POUNDS)		

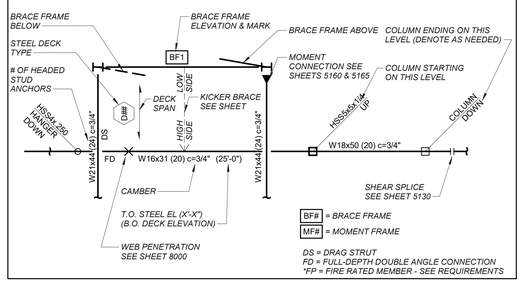


1 **3D VIEW (FOR REFERENCE ONLY)**

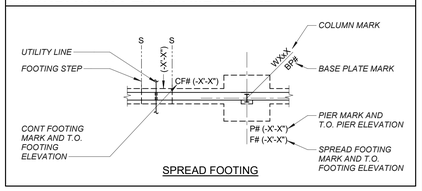


2 **3D VIEW (FOR REFERENCE ONLY)**

STEEL PLAN SYMBOLS KEY



FOUNDATION PLAN SYMBOLS KEY



FOR REVIEW ONLY
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KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
GENERAL NOTES, SYMBOLS, ABBREVIATIONS AND 3D VIEW

SHEET NUMBER:
S0.01

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STRUCTURAL COMPONENT TESTING AND INSPECTION

1. THE FOLLOWING TESTING AND INSPECTION OF STRUCTURAL COMPONENTS IS REQUIRED AS DETAILED IN CHAPTER 17 OF THE 2018 INTERNATIONAL BUILDING CODE (IBC) AND PROJECT SPECIFICATIONS.

2. SEE ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING AND ELECTRICAL SPECIFICATIONS FOR TESTING AND INSPECTION REQUIREMENTS OF NON-STRUCTURAL COMPONENTS.

3. WORK PERFORMED ON THE PREMISES OF A FABRICATOR APPROVED BY THE BUILDING OFFICIAL PER SECTION 1704.2.5.1 OF CHAPTER 17 OF THE 2015 INTERNATIONAL BUILDING CODE NEED NOT BE TESTED AND INSPECTED PER THE TABLE BELOW. THE FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE THAT THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS TO THE BUILDING OFFICIAL AND THE ARCHITECT AND ENGINEER OF RECORD.

DUTIES OF THE SPECIAL INSPECTION AGENCY (IBC CHAPTER 17):

A. SUBMIT A PROPOSED TESTING AND INSPECTION PROGRAM TO THE OWNER, THE ARCHITECT AND THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF WORK. THE TABLE BELOW SHALL SERVE AS A GUIDELINE FOR THE SCOPE OF THE TESTING AND INSPECTION PROGRAM.

B. PERFORM ALL TESTING AND INSPECTION REQUIRED PER APPROVED TESTING AND INSPECTION PROGRAM.

C. FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, THE OWNER, THE ARCHITECT, THE ENGINEER OF RECORD AND THE GENERAL CONTRACTOR. THE REPORTS SHALL BE COMPLETED AND FURNISHED WITHIN 48 HOURS OF INSPECTED WORK.

D. SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE SPECIAL INSPECTION AGENCY'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.

	CONTINUOUS	PERIODIC	REFERENCED STANDARD	IBC REFERENCE
FOUNDATION PREPARATION				
VERIFY MATERIALS BELOW SHALLOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.		X		
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.		X		
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.		X		
VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X			
PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT THE SITE HAS BEEN PROPERLY PREPARED.		X		
CONCRETE AND CONCRETE PLACEMENT				
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.		X	ACI 318: 26.11.1.2(b)	
INSPECTION OF FABRICATORS AND DURING FABRICATION.		X		1704.2
INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT.		X	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1 - 26.6.3	1908.4
REINFORCING BAR WELDING: A. VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A706. B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16". C. INSPECT ALL OTHER WELDS.	X	X X	AWS D1.4, ACI318: 26.6.4	
REVIEW OF PROPOSED MIX DESIGN AND SUPPORTING TEST RESULTS.		X		
INSPECT ANCHORS CAST IN CONCRETE.	X		ACI 318: 17.8.2	
INSPECTION ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS. A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS. B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN ROW ABOVE.	X	X	ACI 318: 17.8.2.4 ACI 318: 17.8.2	
VERIFYING USE OF REQUIRED DESIGN MIX.		X	ACI 318: CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X		ASTM C172, ASTM C31, ACI 318: 26.4, 26.12	1908.10
INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X		ACI 318: 26.5	1908.6, 1908.7, 1908.8
INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.		X	ACI 318: 26.5.3 - 26.5.5	1908.9
VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.		X	ACI 318: 26.11.2	
F_F AND F_L SLAB ON GRADE FLATNESS TESTING			ASTM E1155	
WET UNIT WEIGHT TESTING				

AISC 360 - CHAPTER N: STRUCTURAL STEEL QUALITY ASSURANCE

O - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
P - PERFORM THESE TASKS FOR EACH WELDED JOINT MEMBER.

INSPECTION TASKS PRIOR TO WELDING				
WELDING PROCEDURE SPECIFICATIONS (WPSS) AVAILABLE	P			
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	P			
MATERIAL IDENTIFICATION (TYPE / GRADE)	O			
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY) • JOINT PREPARATION • DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION) • BACKING TYPE AND FIT (IF APPLICABLE)	O			
CONFIGURATION AND FINISH OF ACCESS HOLES	O			
FIT-UP OF FILLET WELDS • DIMENSIONS (ALIGNMENT, GAPS AT ROOT) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION)	O			
INSPECTION TASKS DURING WELDING				
USE OF QUALIFIED WELDERS	O			
CONTROL AND HANDLING OF WELDING CONSUMABLES • PACKAGING • EXPOSURE CONTROL	O			
NO WELDING OVER CRACKED TACK WELDS	O			
ENVIRONMENTAL CONDITIONS • WIND SPEED WITHIN LIMITS • PRECIPITATION AND TEMPERATURE	O			
WPS FOLLOWED • SETTINGS ON WELDING EQUIPMENT • TRAVEL SPEED • SELECTED WELDING MATERIALS • SHIELDING GAS TYPE / FLOW RATE • PREHEAT APPLIED • INTERPASS TEMPERATURE MAINTAINED (MIN. / MAX.) • PROPER POSITION (F,V,H,OH)	O			
WELDING TECHNIQUES • INTERPASS AND FINAL CLEANING • EACH PASS WITHIN PROFILE LIMITATIONS • EACH PASS MEETS QUALITY REQUIREMENTS	O			
INSPECTION TASKS AFTER WELDING				
WELDS CLEANED	O			
SIZE, LENGTH, AND LOCATION OF WELDS	P			
WELDS MEETS VISUAL ACCEPTANCE CRITERIA • CRACK PROHIBITION • WELD / BASE-METAL FUSION • CRATER CROSS SECTION • WELD PROFILES • WELD SIZE • UNDERCUT • POROSITY	P			
ARC STRIKES	P			
K-AREA: WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3 INCHES OF THE WELD	P			
BACKING REMOVED AND WELD TABS REMOVED AND FINISHED (IF REQUIRED)	P			
REPAIR ACTIVITIES	P			
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	P			
NONDESTRUCTIVE TESTING OF WELDED JOINTS				
FOR STRUCTURES IN RISK CATEGORY III OR IV, ULTRASONIC TESTING SHALL BE PERFORMED ON ALL CJP GROOVE WELDS SUBJECT TO TRANSVERSELY APPLIED TENSION LOADING IN BUTT, T- AND CORNER JOINTS, IN MATERIALS 5/16 IN. THICK OR GREATER. REFER TO AISC 360-10, SECTION N.5E FOR REDUCTION OF RATE OF ULTRASONIC TESTING.				
FOR STRUCTURES IN RISK CATEGORY II, ULTRASONIC TESTING SHALL BE PERFORMED ON 10% OF CJP GROOVE WELDS SUBJECT TO TRANSVERSELY APPLIED TENSION LOADING IN BUTT, T- AND CORNER JOINTS, IN MATERIALS 5/16 IN. THICK OR GREATER. REFER TO AISC 360-10, SECTION N.5F FOR INCREASE IN THE RATE OF ULTRASONIC TESTING.				
THERMALLY CUT SURFACES OF ACCESS HOLES SHALL BE TESTED USING MAGNETIC PARTICLE TESTING OR PENETRANT TESTING, WHEN THE FLANGE THICKNESS EXCEEDS 2 INCHES FOR ROLLED SHAPES OR WHEN THE WEB THICKNESS EXCEEDS 2 INCHES FOR BUILT-UP SHAPES. ANY CRACK SHALL BE DEEMED UNACCEPTABLE.				
WELDED JOINT SUBJECTED TO FATIGUE SHALL BE TESTED BY RADIOGRAPHIC OR ULTRASONIC INSPECTION. THE REDUCTION RATE OF ULTRASONIC TESTING IS PROHIBITED.				
INSPECTION TASKS PRIOR TO BOLTING				
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS.	P			
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS.	O			
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE).	O			
PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL.	O			
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS.	O			
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED.	O			
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS.	O			
INSPECTION TASKS DURING BOLTING				
FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED.	O			
JOINT BROUGHT TO THE SNUG CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED.	O			
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING.	O			
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGE.	O			
INSPECTION TASKS AFTER BOLTING				
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS.	P			
OTHER INSPECTION TASKS				
INSPECTION DURING THE PLACEMENT OF ANCHOR RODS AND OTHER EMBEDMENTS SUPPORTING STRUCTURAL STEEL. AS A MINIMUM, THE DIAMETER, GRADE, TYPE AND LENGTH OF ANCHOR ROD OR EMBEDDED ITEM, AND THE EXTENT OR DEPTH OF EMBEDMENT INTO THE CONCRETE SHALL BE VERIFIED	P			
INSPECT THE FABRICATED STEEL OR ERECTED STEEL FRAME TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE CONSTRUCTION DOCUMENTS, SUCH AS BRACES, STIFFENERS, MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION.	O			
INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT				
PLACEMENT AND INSTALLATION OF STEEL DECK.	P			
PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS.	P			
DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS.	P			

	CONTINUOUS		REFERENCED STANDARD	IBC REFERENCE
STEEL DECK				
SDI - QA / QC STANDARD FOR STEEL DECK INSTALLATION O - OBSERVE THESE ITEMS ON AN INTERMITTENT BASIS P - PERFORM THESE TASKS PRIOR TO FINAL ACCEPTANCE FOR EACH ITEM OR ELEMENT.				
INSPECTION TASKS PRIOR TO DECK PLACEMENT				
VERIFY COMPLIANCE OF MATERIALS (DECK AND ALL DECK ACCESSORIES) WITH CONSTRUCTION DOCUMENTS, INCLUDING PROFILES, MATERIAL PROPERTIES, AND BASE METAL THICKNESS	P			
DOCUMENT ACCEPTANCE OR REJECTION OF DECK AND DECK ACCESSORIES	P			
INSPECTION TASKS AFTER DECK PLACEMENT				
VERIFY COMPLIANCE OF DECK AND ALL DECK ACCESSORIES INSTALLATION WITH CONSTRUCTION DOCUMENTS	P			
VERIFY COMPLIANCE OF DECK MATERIALS ARE REPRESENTED BY THE MILL CERTIFICATIONS THAT COMPLY WITH THE CONSTRUCTION DOCUMENTS	P			
DOCUMENTS ACCEPTANCE OR REJECTION OF INSTALLATION OF DECK AND DECK ACCESSORIES	P			
INSPECTION TASKS PRIOR TO WELDING				
WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE	O			
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	O			
MATERIAL IDENTIFICATION (TYPE / GRADE)	O			
CHECK WELDING EQUIPMENT	O			
INSPECTION TASKS DURING WELDING				
USE OF QUALIFIED WELDERS	O			
CONTROL OF HANDLING OF WELDING CONSUMABLES	O			
ENVIRONMENTAL CONDITIONS (WIND SPEED, MOISTURE, TEMPERATURE)	O			
WPS FOLLOWED	O			
INSPECTION TASKS AFTER WELDING				
VERIFY SIZE AND LOCATION OF WELDS, INCLUDING SUPPORT, SIDELAP, AND PERIMETER WELDS	P			
WELDS MEET VISUAL ACCEPTANCE CRITERIA	P			
VERIFY REPAIR ACTIVITIES	P			
DOCUMENT ACCEPTANCE OR REJECTION OF WELDS	P			
INSPECTION TASKS PRIOR TO MECHANICAL FASTENING				
MANUFACTURER INSTALLATION INSTRUCTIONS ARE AVAILABLE FOR MECHANICAL FASTENERS	O			
PROPER TOOLS ARE AVAILABLE FOR FASTENERS INSTALLATION	O			
PROPER STORAGE FOR MECHANICAL FASTENERS	O			
INSPECTION TASKS DURING MECHANICAL FASTENING				
FASTENERS ARE POSITIONED AS REQUIRED	O			
FASTENERS ARE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS	O			
INSPECTION TASKS AFTER MECHANICAL FASTENING				
CHECKING SPACING, TYPE, AND INSTALLATION OF SUPPORT FASTENERS	P			
CHECK SPACING, TYPE, AND INSTALLATION OF SIDELAP FASTENERS	P			
CHECK SPACING, TYPE, AND INSTALLATION OF PERIMETER FASTENERS	P			
VERIFY REPAIR ACTIVITIES	P			
DOCUMENTS ACCEPTANCE OR REJECTION OF MECHANICAL FASTENERS	P			

WOOD			REFERENCED STANDARD	IBC REFERENCE
INSPECTION OF FABRICATORS AND DURING CONSTRUCTION				1704.2.5
METAL-PLATE-CONNECTED WOOD TRUSSES SPANNING 60 FEET OR GREATER.		X		1705.5.2
JOIST CONNECTIONS		X	ASTM D1761	1711.1
HIGH-LOAD DIAPHRAGMS	X			1704.6.1
STRUCTURAL WOOD WITH SEISMIC RESISTANCE				
A. FIELD GLUING OF ELEMENTS OF THE SEISMIC FORCE-RESISTING SYSTEM	X			1705.11.2
B. NAILING, BOLTING, ANCHORING AND OTHER FASTENING OF COMPONENTS WITHIN THE SEISMIC FORCE-RESISTING SYSTEM, INCLUDING WOOD SHEAR WALLS, WOOD DIAPHRAGMS, DRAG STRUTS, BRACES, SHEAR PANELS AND HOLD DOWNS.		X		1705.11.2

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REF. SCALE IN INCHES 0 1 2 3

PROJECT #24005446.00

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CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025

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NO:	DESCRIPTION:	DATE:

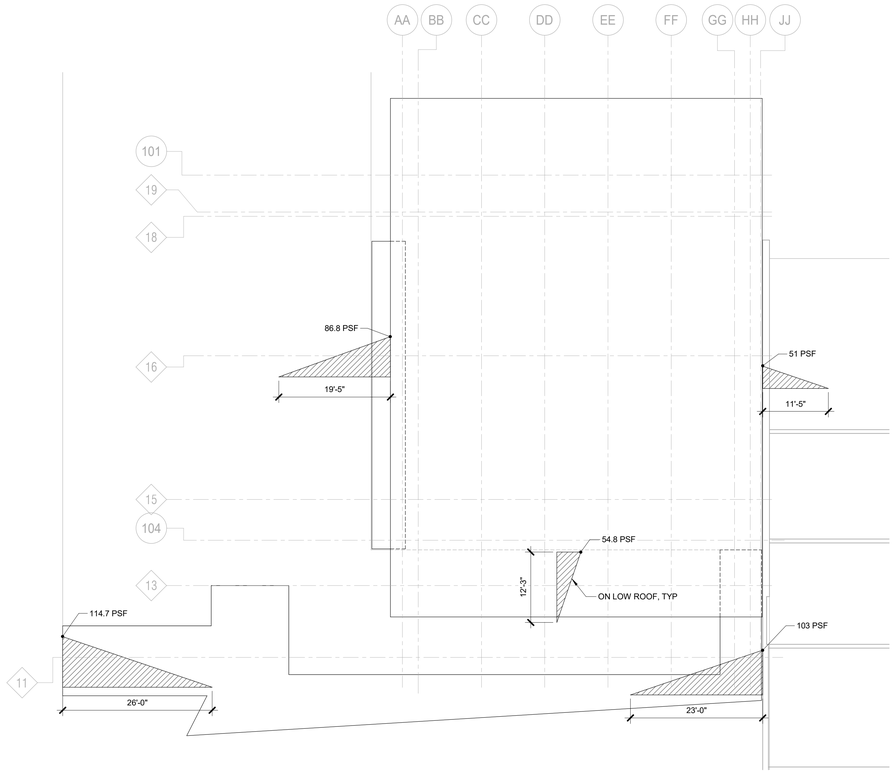
SHEET TITLE:

SPECIAL INSPECTIONS AND TESTS

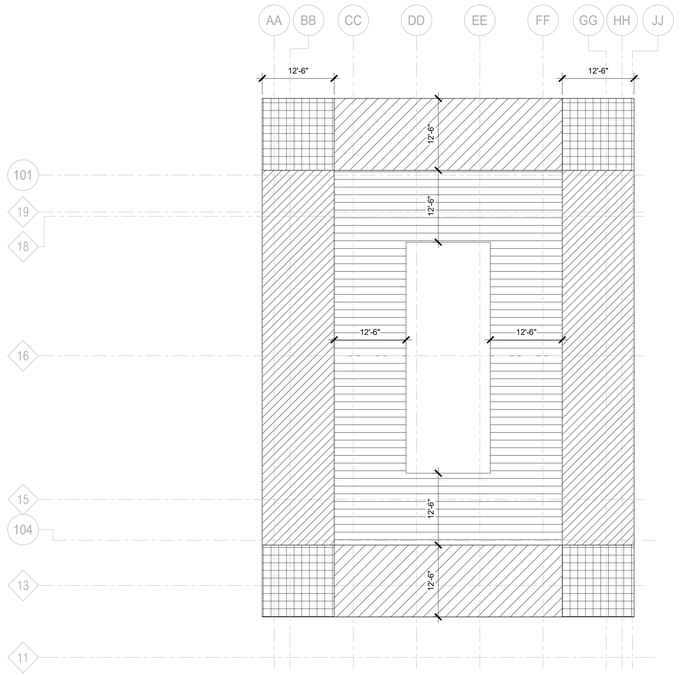
SHEET NUMBER:

S0.02

5/16/2025 6:49:20 AM



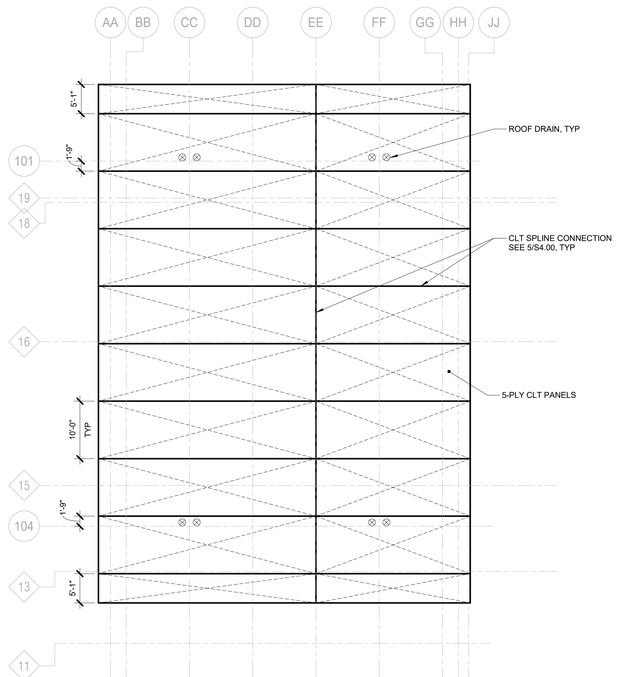
1 SNOW DRIFT PLAN
3/32" = 1'-0"



NOTES:

1. UNHATCHED REGION INDICATES AREA WITH SERVICE (0.6WL) UPLIFT = 14.6 PSF.
2. HATCH INDICATES AREA WITH SERVICE (0.6WL) UPLIFT = 21.5 PSF.
3. HATCH INDICATES AREA WITH SERVICE (0.6WL) UPLIFT = 28.6 PSF.
4. HATCH INDICATES AREA WITH SERVICE (0.6WL) UPLIFT = 36.2 PSF.

2 CLT WIND UPLIFT PLAN
3/32" = 1'-0"



3 CLT LAYOUT PLAN
3/32" = 1'-0"

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
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NO:	DESCRIPTION:	DATE:

SHEET TITLE:
LOADING PLAN

SHEET NUMBER:
S0.03

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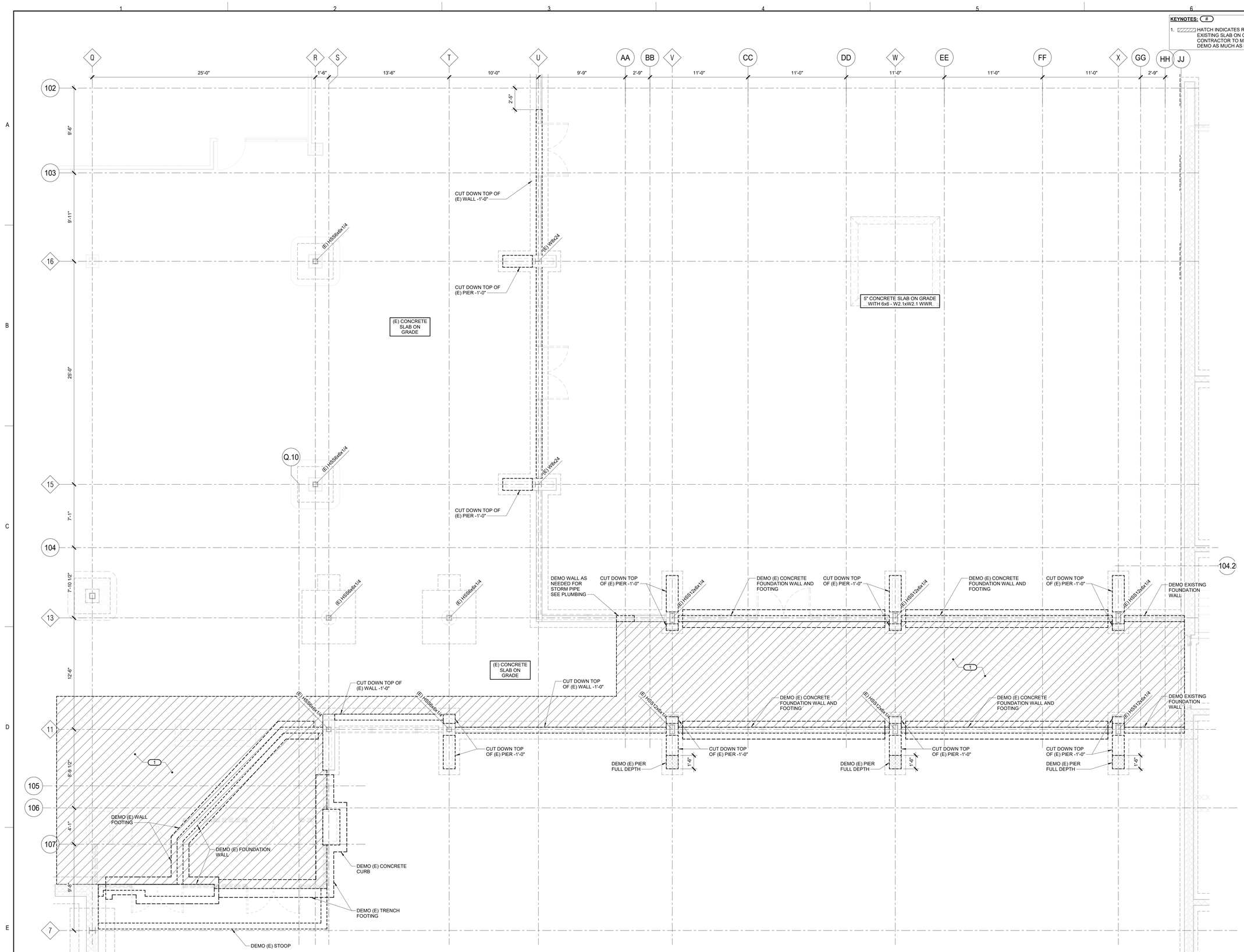
REF. SCALE IN INCHES 0 1 2 3

PROJECT #24005446.00

5/16/2025 6:49:21 AM

KEYNOTES: (#)

1. HATCH INDICATES REGION TO DEMO EXISTING SLAB ON GRADE AS NEEDED. CONTRACTOR TO MINIMIZE EXTENT OF DEMO AS MUCH AS POSSIBLE.



1 MAIN ENTRANCE FOUNDATION PLAN - DEMO

1/4" = 1'-0"

NORTH

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REF. SCALE IN INCHES

PROJECT #24005446.00

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:

MAIN ENTRANCE FOUNDATION PLAN - DEMO

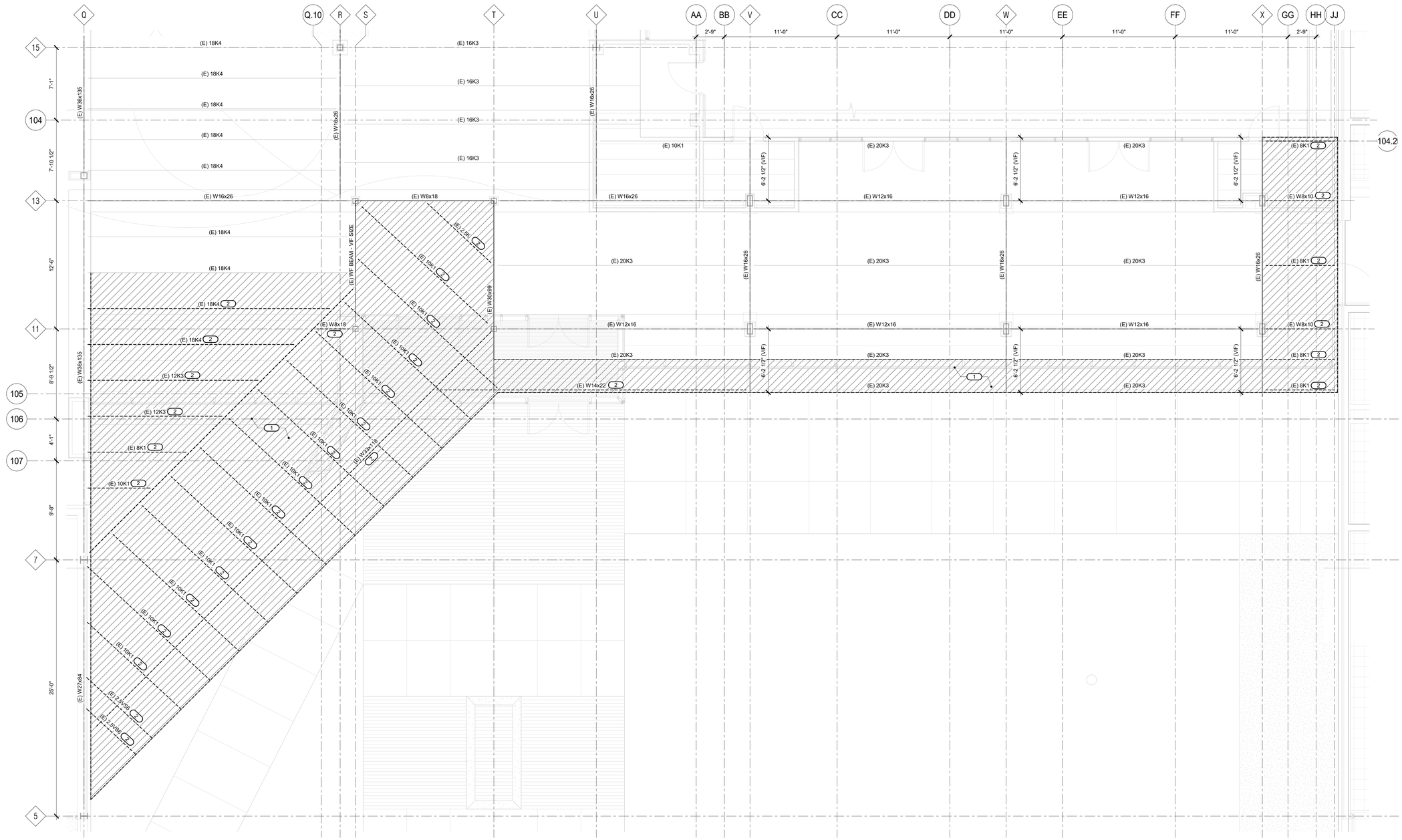
SHEET NUMBER:

SD1.00

5/16/2025 6:49:22 AM

KEYNOTES: (#)

1. HATCH INDICATES REGION TO DEMO EXISTING STEEL ROOF DECK.
2. DEMO EXISTING BEAM/JOIST.



NORTH

1 MAIN ENTRANCE FRAMING PLAN - DEMO

1/4" = 1'-0"

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
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NO:	DESCRIPTION:	DATE:

SHEET TITLE:
MAIN ENTRANCE FRAMING PLAN - DEMO

SHEET NUMBER:
SD1.01

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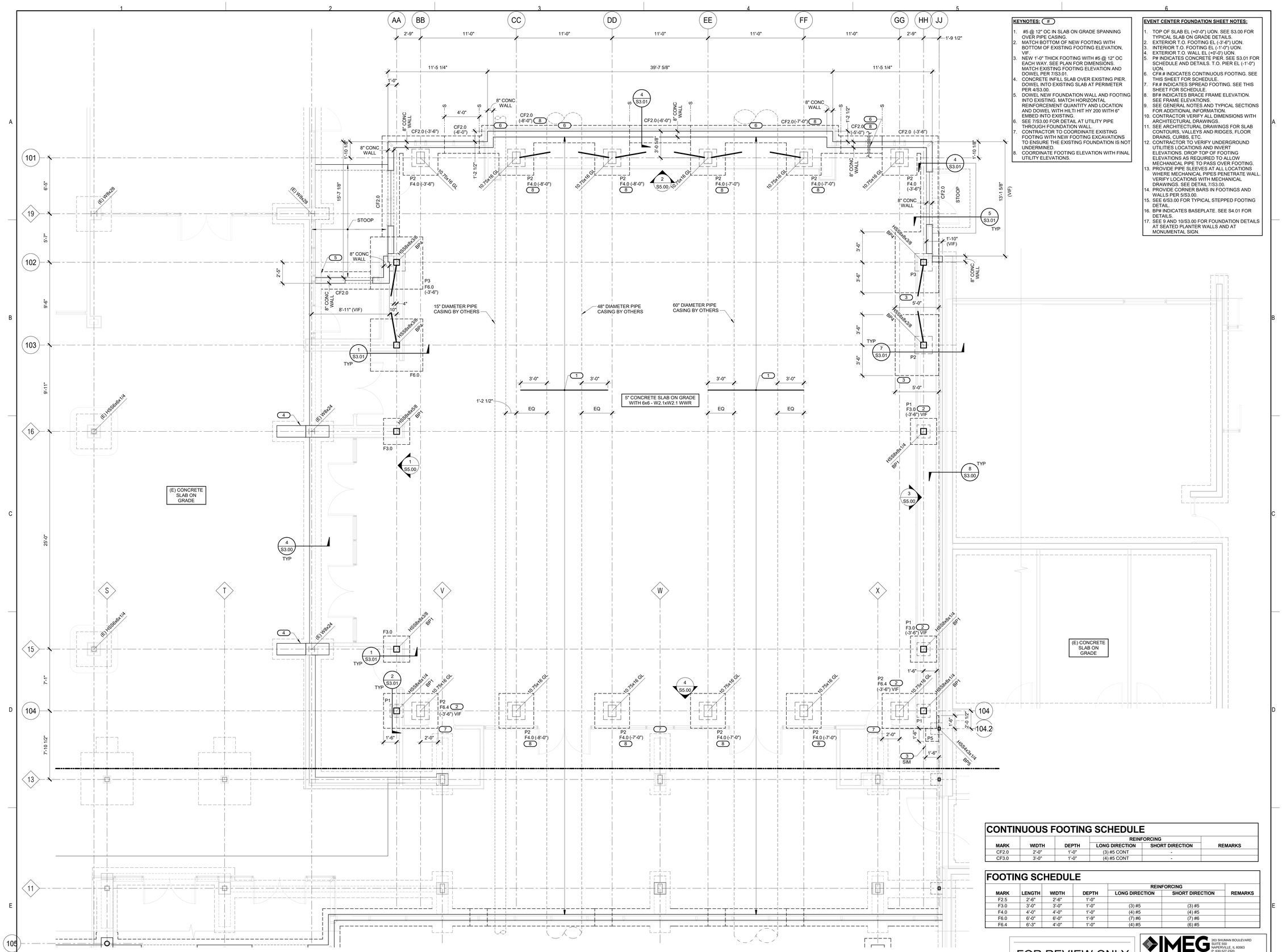

KEYNOTES: (#)

1. #5 @ 12" OC IN SLAB ON GRADE SPANNING OVER PIPE CASING.
2. MATCH BOTTOM OF NEW FOOTING WITH BOTTOM OF EXISTING FOOTING ELEVATION, VIF.
3. NEW 1'-0" THICK FOOTING WITH #5 @ 12" OC EACH WAY. SEE PLAN FOR DIMENSIONS. MATCH EXISTING FOOTING ELEVATION AND DOWEL PER 7/S3.01.
4. CONCRETE INFILL SLAB OVER EXISTING PIER. DOWEL INTO EXISTING SLAB AT PERIMETER PER 4/S3.00.
5. DOWEL NEW FOUNDATION WALL AND FOOTING INTO EXISTING. MATCH HORIZONTAL REINFORCEMENT QUANTITY AND LOCATION AND DOWEL WITH HILTI HIT HY 200 WITH 6" EMBED INTO EXISTING.
6. SEE 7/S3.00 FOR DETAIL AT UTILITY PIPE THROUGH FOUNDATION WALL.
7. CONTRACTOR TO COORDINATE EXISTING FOOTING WITH NEW FOOTING EXCAVATIONS TO ENSURE THE EXISTING FOUNDATION IS NOT UNDERMINED.
8. COORDINATE FOOTING ELEVATION WITH FINAL UTILITY ELEVATIONS.

EVENT CENTER FOUNDATION SHEET NOTES:

1. TOP OF SLAB EL (+0'-0") UON. SEE S3.00 FOR TYPICAL SLAB ON GRADE DETAILS.
2. EXTERIOR T.O. FOOTING EL (-3'-6") UON.
3. INTERIOR T.O. FOOTING EL (-1'-0") UON.
4. EXTERIOR T.O. WALL EL (+0'-0") UON.
5. P# INDICATES CONCRETE PIER. SEE S3.01 FOR SCHEDULE AND DETAILS. T.O. PIER EL (-1'-0") UON.
6. CF#.# INDICATES CONTINUOUS FOOTING. SEE THIS SHEET FOR SCHEDULE.
7. F#.# INDICATES SPREAD FOOTING. SEE THIS SHEET FOR SCHEDULE.
8. BF# INDICATES BRACE FRAME ELEVATION. SEE FRAME ELEVATIONS.
9. SEE GENERAL NOTES AND TYPICAL SECTIONS FOR ADDITIONAL INFORMATION.
10. CONTRACTOR VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
11. SEE ARCHITECTURAL DRAWINGS FOR SLAB CONTOURS, VALLEYS AND RIDGES, FLOOR DRAINS, CURBS, ETC.
12. CONTRACTOR TO VERIFY UNDERGROUND UTILITIES LOCATIONS AND INVERT ELEVATIONS. DROP TOP OF FOOTING ELEVATIONS AS REQUIRED TO ALLOW MECHANICAL PIPE TO PASS OVER FOOTING.
13. PROVIDE PIPE SLEEVES AT ALL LOCATIONS WHERE MECHANICAL PIPES PENETRATE WALL. VERIFY LOCATIONS WITH MECHANICAL DRAWINGS. SEE DETAIL 7/S3.00.
14. PROVIDE CORNER BARS IN FOOTINGS AND WALLS PER 5/S3.00.
15. SEE 6/S3.00 FOR TYPICAL STEPPED FOOTING DETAIL.
16. BP# INDICATES BASEPLATE. SEE S4.01 FOR DETAILS.
17. SEE 9 AND 10/S3.00 FOR FOUNDATION DETAILS AT SEATED PLANTER WALLS AND AT MONUMENTAL SIGN.

CONTINUOUS FOOTING SCHEDULE

MARK	WIDTH	DEPTH	REINFORCING		REMARKS
			LONG DIRECTION	SHORT DIRECTION	
CF2.0	2'-0"	1'-0"	(3) #5 CONT	-	
CF3.0	3'-0"	1'-0"	(4) #5 CONT	-	

FOOTING SCHEDULE

MARK	LENGTH	WIDTH	DEPTH	REINFORCING		REMARKS
				LONG DIRECTION	SHORT DIRECTION	
F2.5	2'-6"	2'-6"	1'-0"			
F3.0	3'-0"	3'-0"	1'-0"	(3) #5	(3) #5	
F4.0	4'-0"	4'-0"	1'-0"	(4) #5	(4) #5	
F6.0	6'-0"	6'-0"	1'-0"	(7) #6	(7) #6	
F6.4	6'-3"	4'-0"	1'-0"	(4) #5	(6) #5	

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1 EVENT CENTER FOUNDATION PLAN
1/4" = 1'-0"

dka
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CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
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NO:	DESCRIPTION:	DATE:

SHEET TITLE:
EVENT CENTER FOUNDATION PLAN

SHEET NUMBER:
S1.00

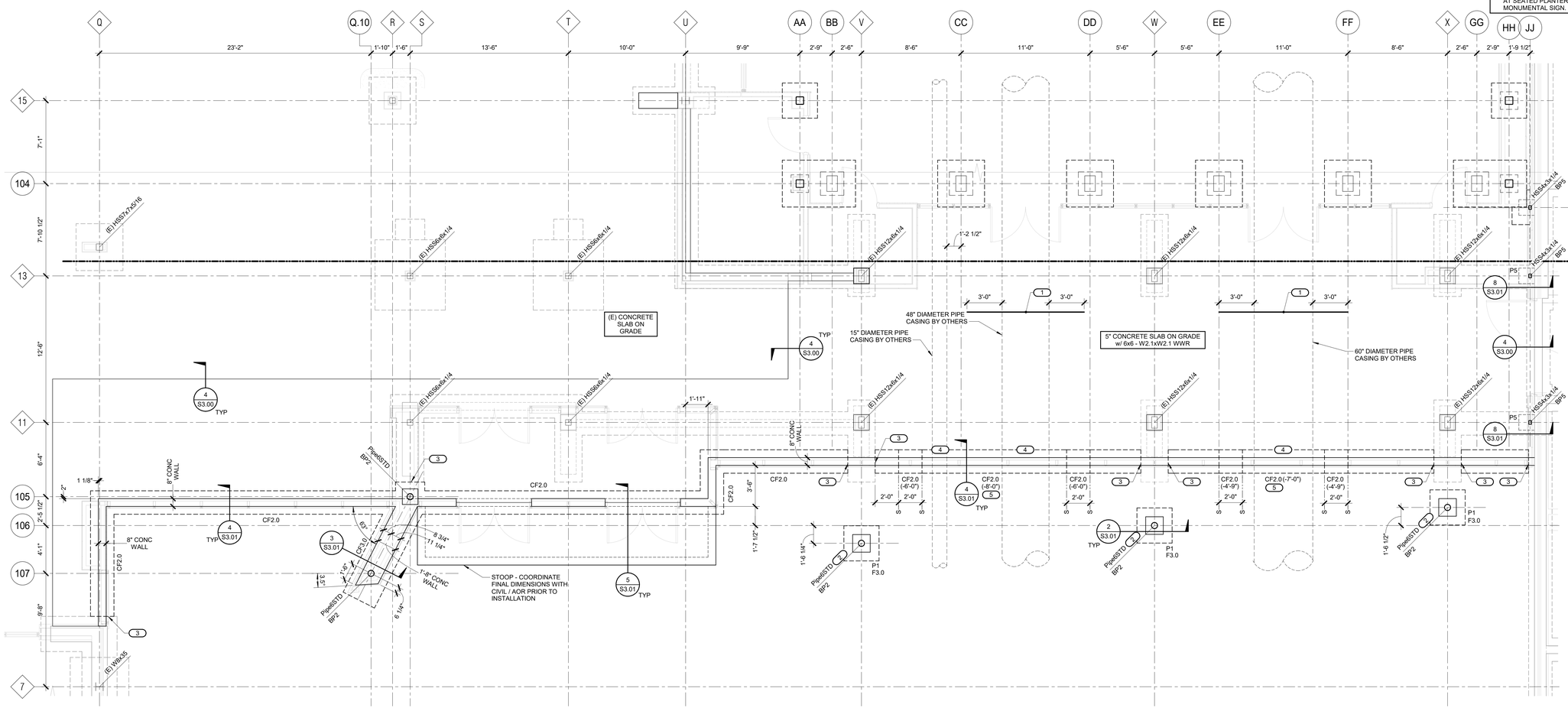
5/16/2025 6:49:25 AM

KEYNOTES: (#)

1. #5 @ 12" OC IN SLAB ON GRADE SPANNING OVER PIPE CASING.
2. PROVIDE AESS CATEGORY 2 AT EXPOSED STEEL.
3. DOWEL NEW FOUNDATION WALL AND FOOTING INTO EXISTING. MATCH HORIZONTAL REINFORCEMENT QUANTITY AND LOCATION AND DOWEL WITH HILTI HIT HY 200 WITH 6" EMBED INTO EXISTING.
4. SEE 7/S3.00 FOR DETAIL AT UTILITY PIPE THROUGH FOUNDATION WALL.
5. COORDINATE FOOTING ELEVATION WITH FINAL UTILITY ELEVATIONS.

MAIN ENTRANCE FOUNDATION SHEET NOTES:

1. TOP OF SLAB EL (+0'-0") UON. SEE S3.00 FOR TYPICAL SLAB ON GRADE DETAILS.
2. EXTERIOR T.O. FOOTING EL (-3'-6") UON.
3. INTERIOR T.O. FOOTING EL (-1'-0") UON.
4. EXTERIOR T.O. WALL EL (+0'-0") UON.
5. P# INDICATES CONCRETE PIER. SEE S3.01 FOR SCHEDULE AND DETAILS. T.O. PIER EL (-1'-0") UON.
6. CF# # INDICATES CONTINUOUS FOOTING. SEE S1.00 FOR SCHEDULE.
7. F#.# INDICATES SPREAD FOOTING. SEE S1.00 FOR SCHEDULE.
8. BF# INDICATES BRACE FRAME ELEVATION. SEE FRAME ELEVATIONS.
9. SEE GENERAL NOTES AND TYPICAL SECTIONS FOR ADDITIONAL INFORMATION.
10. CONTRACTOR VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
11. SEE ARCHITECTURAL DRAWINGS FOR SLAB CONTOURS, VALLEYS AND RIDGES, FLOOR DRAINS, CURBS, ETC.
12. CONTRACTOR TO VERIFY UNDERGROUND UTILITIES LOCATIONS AND INVERT ELEVATIONS. DROP TOP OF FOOTING ELEVATIONS AS REQUIRED TO ALLOW MECHANICAL PIPE TO PASS OVER FOOTING.
13. PROVIDE PIPE SLEEVES AT ALL LOCATIONS WHERE MECHANICAL PIPES PENETRATE WALL. VERIFY LOCATIONS WITH MECHANICAL DRAWINGS. SEE DETAIL 7/S3.00.
14. PROVIDE CORNER BARS IN FOOTINGS AND WALLS PER 5/S3.00.
15. SEE 6/S3.00 FOR TYPICAL STEPPED FOOTING DETAIL.
16. BP# INDICATES BASEPLATE. SEE S4.01 FOR DETAILS.
17. SEE 9 AND 10/S3.00 FOR FOUNDATION DETAILS AT SEATED PLANTER WALLS AND AT MONUMENTAL SIGN.



1 MAIN ENTRANCE FOUNDATION PLAN

1/4" = 1'-0"

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
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NO:	DESCRIPTION:	DATE:

SHEET TITLE:
MAIN ENTRANCE FOUNDATION PLAN

SHEET NUMBER:
S1.01

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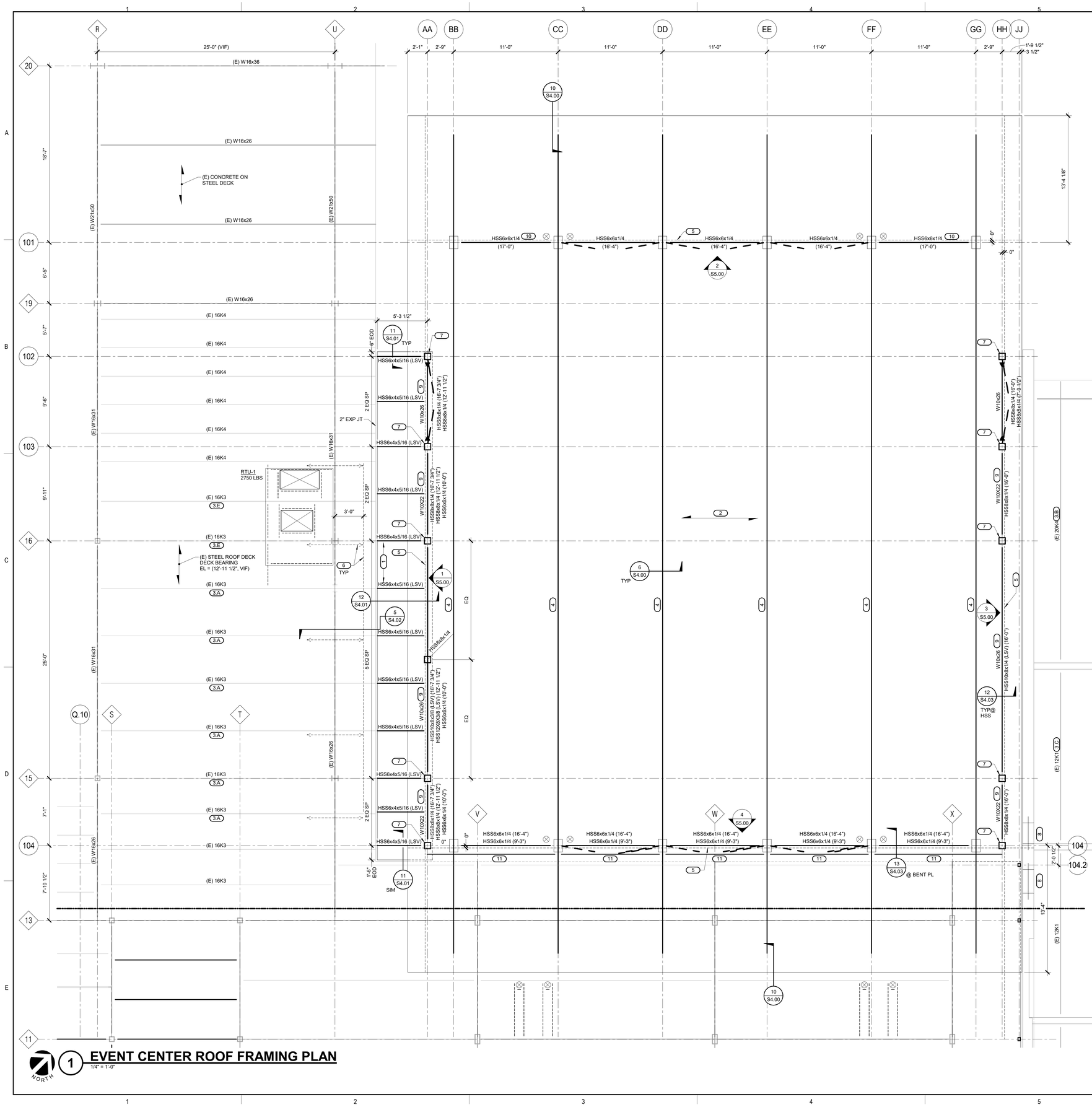

FRAMING NOTES:

1. DECK BERAING ELEVATION NOTED ON PLAN.
2. SEE GENERAL NOTES AND TYPICAL DETAILS FOR ADDITIONAL INFORMATION.
3. SEE S4.01 FOR TYPICAL SHEAR AND MOMENT CONNECTION DETAILS.
4. PROVIDE ANGLE FRAMING UNDER ALL ROOFTOP MECHANICAL EQUIPMENT CURBS AND AROUND ALL ROOF OPENINGS PER 1/S4.02.
5. PROVIDE STRUT PER 2/S4.02 WHERE CONCENTRATED LOAD IS APPLIED OFF JOIST PANEL POINT.
6. SEE 4/S4.00 FOR TYPICAL GLULAM COLUMN TO BEAM CONNECTION DETAIL.
7. SEE S4.00 FOR TYPICAL CLT DETAILS.

(#) — INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL

KEYNOTES: (#)

1. 1 1/2" (20 GA) TYPE B STEEL ROOF DECK (3 SPAN MINIMUM). FASTENING = 36/4 (2) WITH 5/8" PUDDLE WELDS AND #10 TEK SCREW SIDELAP FASTENERS. DECK BEARING EL (12'-11 1/2"). MATCH EXISTING ELEVATION, VIF.
2. 5-PLY CROSS LAMINATED TIMBER (CLT) DECKING (TOTAL THICKNESS = 5.47") GRADE V2.1. ALL VALUES TO BE COORDINATED WITH THE MANUFACTURER FOR FINALIZED PROPERTIES.
3. JOISTS REINFORCEMENT REQUIRED, SEE DETAIL 2/S4.02 FOR MORE INFORMATION. THE LETTER CORRESPONDS TO THE TYPE OF REINFORCING.
4. 10.75x42 GLULAM BEAM WITH TAPERED ENDS. SEE ARCHITECTURAL FOR PROFILE AT CANTILEVERED ENDS. PROVIDE ADDITIONAL COMPRESSION/TENSION LAMINATIONS AT TAPERED CANTILEVERED ENDS. CAMBER BEAM UPWARD 3/4".
5. (3)CS14 COILED STRAP INSTALLED ON TOPSIDE OF CLT. INSTALL PER MANUFACTURER SPECIFICATIONS.
6. L8x4x1/2 (LLV) AND KICKERS PER 5/S4.02.
7. SEE 11/S4.00 FOR TOP OF COLUMN DETAIL.
8. LINTEL FOR MECHANICAL OPENING. COORDINATE SIZE AND LOCATION WITH MECHANICAL CONTRACTOR. SEE 8/S4.02 FOR DETAIL.
9. PROVIDE SLIP CRITICAL BOLTS AT BEAM TO COLUMN CONNECTION.
10. PROVIDE AESS CATEGORY 2 AT EXPOSED STEEL.
11. CONTINUOUS BENT PLATE. T.O. BENT PLATE EL (+13'-4"). SEE DETAIL 13/S4.03.

1 EVENT CENTER ROOF FRAMING PLAN

1/4" = 1'-0"

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KEY PLAN:

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SHEET TITLE:

EVENT CENTER ROOF FRAMING PLAN

SHEET NUMBER:

S2.00

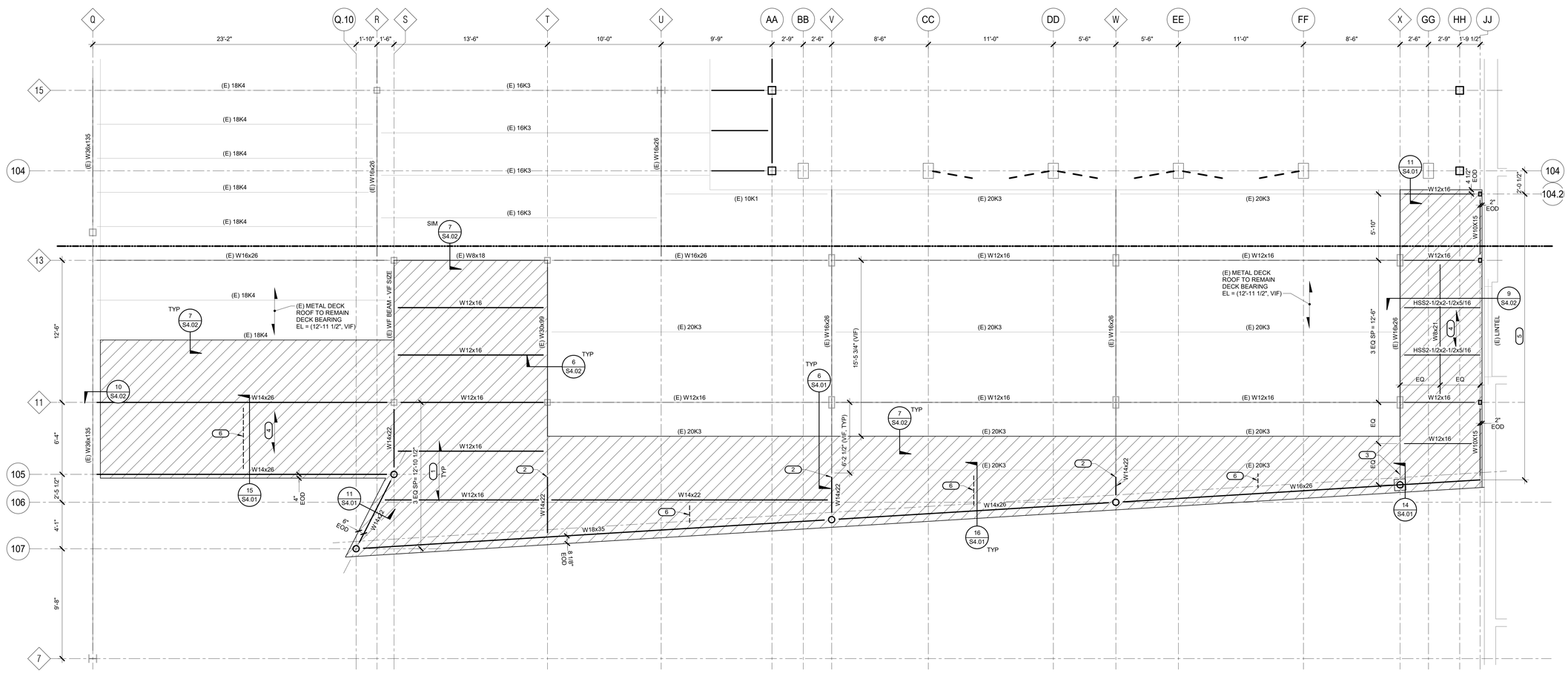
5/16/2025 6:49:29 AM

FRAMING NOTES:

1. DECK BERAING ELEVATION NOTED ON PLAN.
2. SEE GENERAL NOTES AND TYPICAL DETAILS FOR ADDITIONAL INFORMATION.
3. SEE S4.01 FOR TYPICAL SHEAR CONNECTION DETAILS.
4. PROVIDE ANGLE FRAMING UNDER ALL ROOFTOP MECHANICAL EQUIPMENT CURBS AND AROUND ALL ROOF OPENINGS PER 1/S4.02.
5. PROVIDE STRUT PER 2/S4.02 WHERE CONCENTRATED LOAD IS APPLIED OFF JOIST PANEL POINT.

KEYNOTES: (#)

1. 1 1/2" (20 GA) TYPE B STEEL ROOF DECK. FASTENING = 36/4 (2) WITH 5/8" PUDDLE WELDS AND #10 TEK SCREW SIDELAP FASTNERS. DECK BEARING EL (12'-11 1/2", VIF). HATCH INDICATES EXTENT OF NEW DECK.
2. CONNECT BEAM TO EXISTING BEAM PER 6/S4.01.
3. CONNECT COLUMN TO EXISTING BEAM PER 14/S4.01.
4. 1 1/2" (18 GA) TYPE B STEEL ROOF DECK.
5. STEEL IN FIREWALL TO BE INTUMENSCENT PAINTED.
6. L3x3x1/4 KICKER. SEE 15 AND 16/S4.01.



1 MAIN ENTRANCE FRAMING PLAN

1/4" = 1'-0"

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McHenry County College
ENGAGEMENT HALL

8900 NORTHWEST HWY #14
CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24-027

KEY PLAN:

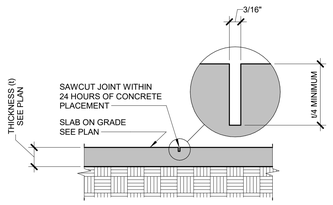
SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
MAIN ENTRANCE FRAMING PLAN

SHEET NUMBER:
S2.01

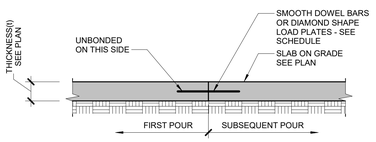
5/16/2025 6:49:29 AM



NOTE:

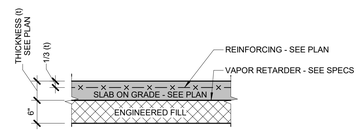
1. SEE CAST-IN-PLACE CONCRETE GENERAL NOTES CONCERNING LOCATION OF JOINTS.

1 TYPICAL CONTROL JOINT
3/4" = 1'-0"



SLAB THICKNESS	SMOOTH DOWEL BAR	DIAMOND SHAPE LOAD PLATES
4"	1/2"Ø x 1'-4" @ 18" OC	1/4"x4 1/2" x 0'-4 1/2" @ 18" OC
5"	3/4"Ø x 1'-4" @ 12" OC	
6"		
> 6"	1"Ø x 1'-4" @ 12" OC	3/8"x4 1/2" x 0'-4 1/2" @ 18" OC

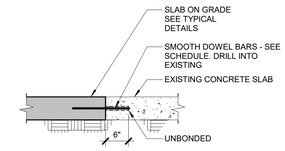
2 TYPICAL CONSTRUCTION JOINT
3/4" = 1'-0"



NOTES:

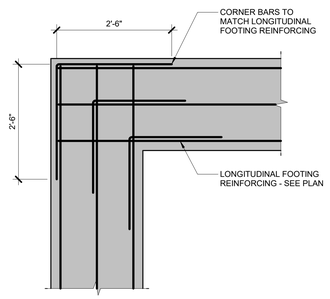
1. COMPACT ALL FILL MATERIAL TO 95% OF THE MAXIMUM DRY DENSITY PER ASTM D1557.
2. VAPOR RETARDER TO MEET ASTM E1745, CLASS A AND BE NOT LESS THAN 15 MILS THICK.

3 TYPICAL SLAB SECTION
3/4" = 1'-0"

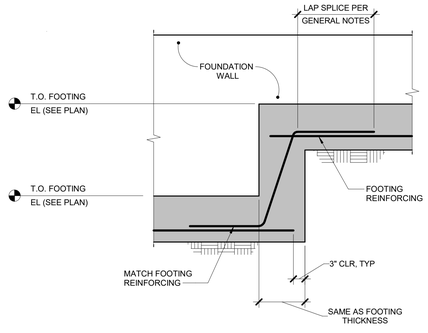


SLAB THICKNESS	SMOOTH DOWEL BAR
4"	1/2"Ø x 1'-4" @ 18" OC
5"	3/4"Ø x 1'-4" @ 12" OC
6"	
> 6"	1"Ø x 1'-4" @ 12" OC

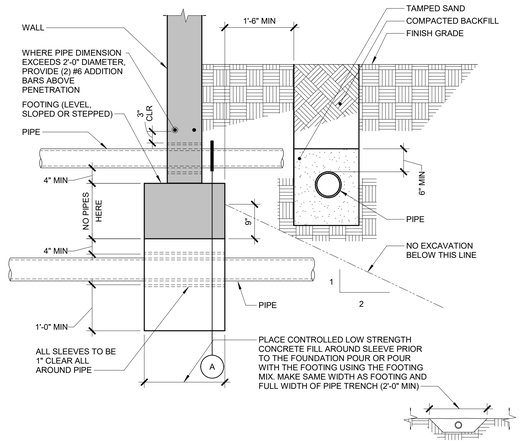
4 NEW TO EXISTING SLAB DETAIL
3/4" = 1'-0"



5 FOOTING CORNER BARS
3/4" = 1'-0"



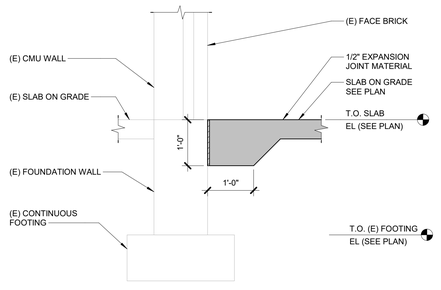
6 TYPICAL STEPPED FOOTING DETAIL
3/4" = 1'-0"



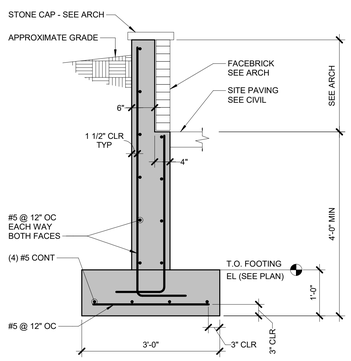
NOTES:

1. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ALL LOCATIONS, ELEVATIONS, ETC. OF SITE UTILITIES.
2. PIPE IS NOT ALLOWED UNDER SPREAD FOOTINGS.

7 TYPICAL PIPE TRENCH DETAIL
3/4" = 1'-0"



8 SLAB DETAIL
3/4" = 1'-0"



9 SEATED PLANTER WALL DETAIL
3/4" = 1'-0"

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Illinois Design Firm Registration #184008976-0014

0 1 2 3
REF. SCALE IN INCHES

PROJECT #24005446.00

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CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24-027

KEY PLAN:

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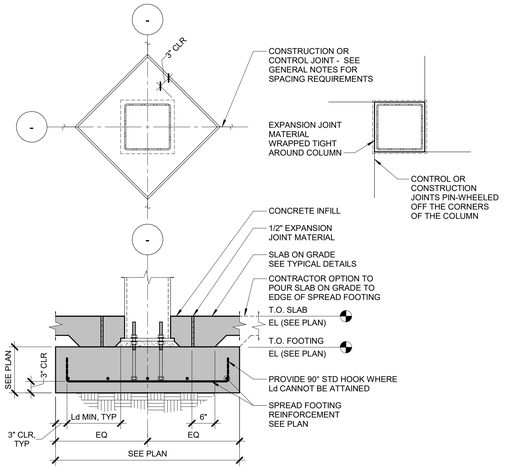
NO:	DESCRIPTION:	DATE:

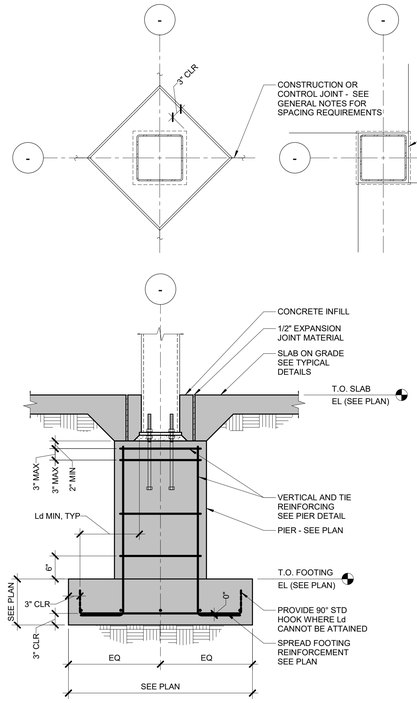
SHEET TITLE:
CONCRETE DETAILS

SHEET NUMBER:
S3.00

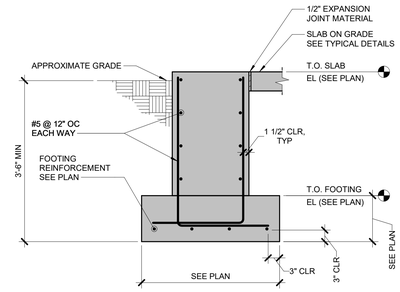
5/16/2025 6:49:30 AM



1 COLUMN FOOTING DETAIL
3/4" = 1'-0"



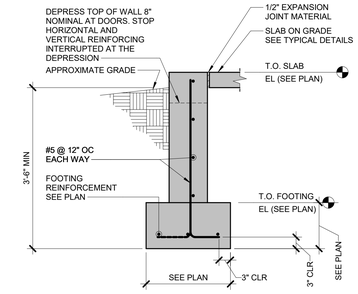
2 COLUMN ON PIER/FOOTING
3/4" = 1'-0"



NOTE:

1. FOR HEIGHTS EXCEEDING 4'-0", EACH SIDE OF THE WALL SHALL BE BACKFILLED AT THE SAME TIME.

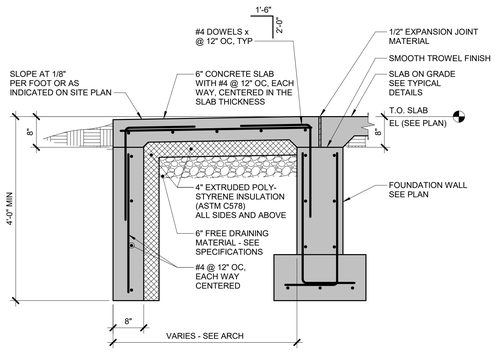
3 TYPICAL PERIMETER FROST WALL
3/4" = 1'-0"



NOTE:

1. FOR HEIGHTS EXCEEDING 4'-0", EACH SIDE OF THE WALL SHALL BE BACKFILLED AT THE SAME TIME.

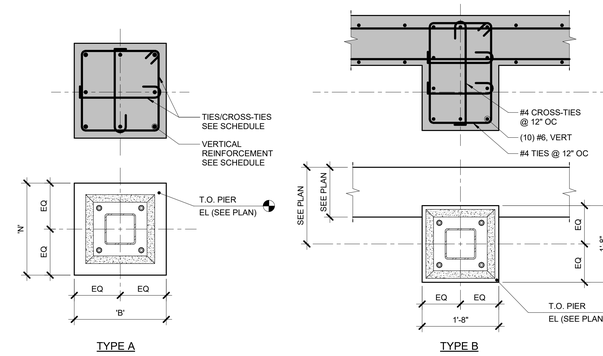
4 TYPICAL PERIMETER FROST WALL
3/4" = 1'-0"



NOTE:

1. SEE ARCHITECTURAL DRAWINGS FOR EXACT STOOP LAYOUT AND LOCATIONS.

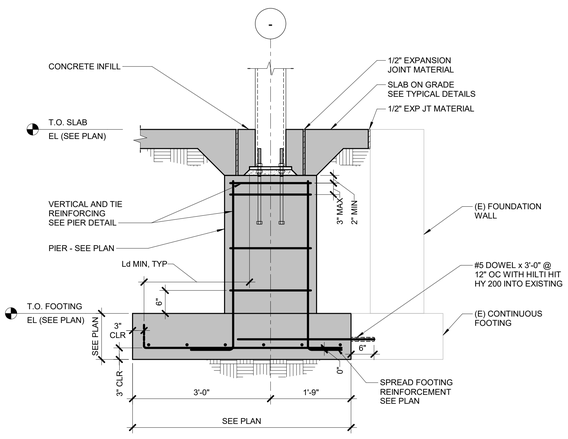
5 TYPICAL STOOP DETAIL
3/4" = 1'-0"



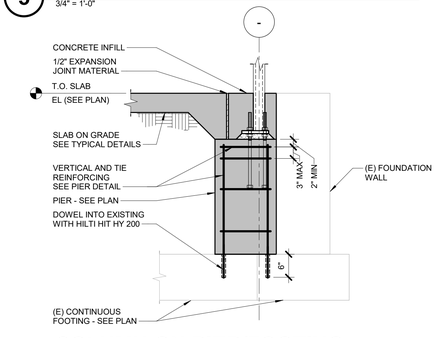
PIER SCHEDULE

MARK	'B'	'N'	VERTICAL BARS	TIES/CROSS-TIES	DETAIL TYPE	REMARKS
P1	18"	18"	(4) #6	#4 @ 12" OC	A	-
P2	24"	24"	(8) #6	#4 @ 12" OC	A	-
P3	24"	24"	(8) #6	#4 @ 12" OC	C	-
P4	18"	18"	(4) #6	#4 @ 12" OC	B	-
P5	16"	16"	(4) #6	#4 @ 12" OC	A, SIM	POUR TIGHT TO EXISTING FDN WALL, OFF SET CENTERLINE AS NEEDED

6 PIER DETAIL
3/4" = 1'-0"



7 COLUMN ON PIER/FOOTING
3/4" = 1'-0"



8 COLUMN ON PIER/FOOTING DETAIL
3/4" = 1'-0"

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dkA

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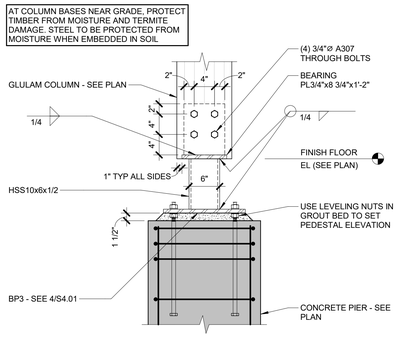
NO:	DESCRIPTION:	DATE:

SHEET TITLE:
CONCRETE DETAILS

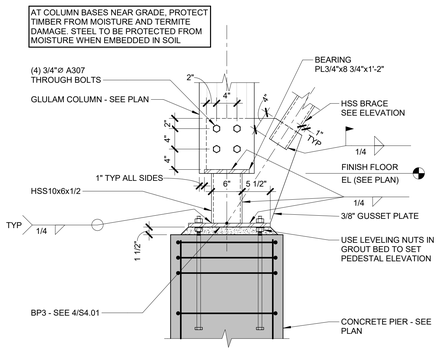
SHEET NUMBER:
S3.01

5/16/2025 6:49:31 AM



1 TYPICAL GLULAM COLUMN BEARING ON CONCRETE

1" = 1'-0"

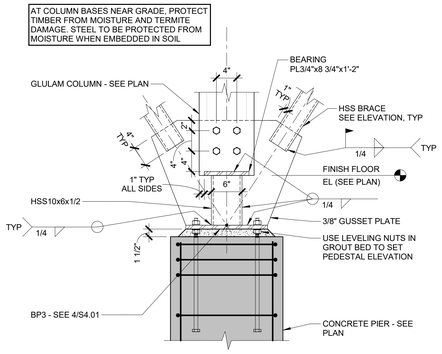


NOTE:

1. FABRICATOR SHALL OPTIMIZE THE SIZE AND SHAPE OF THE GUSSET PLATE TO WORK WITH GEOMETRY OF BRACES.

2 GLULAM COLUMN BEARING ON CONCRETE AT BRACED FRAME

1" = 1'-0"

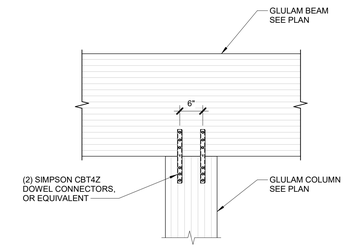


NOTE:

1. FABRICATOR SHALL OPTIMIZE THE SIZE AND SHAPE OF THE GUSSET PLATE TO WORK WITH GEOMETRY OF BRACES.

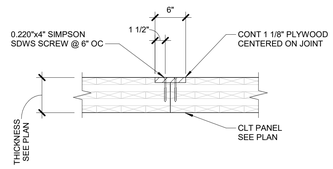
3 GLULAM COLUMN BEARING ON CONCRETE AT BRACED FRAME

1" = 1'-0"



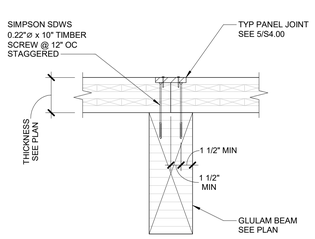
4 GLULAM CONNECTION TO COLUMN

3/4" = 1'-0"



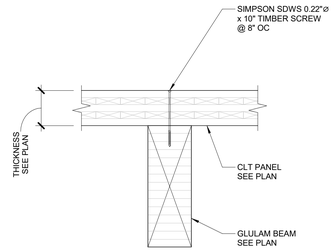
5 CLT TYPICAL SPLINE DETAIL

1" = 1'-0"



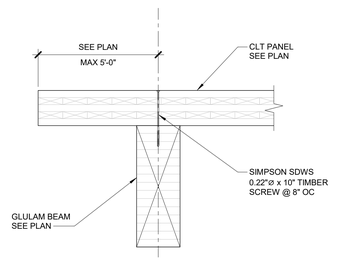
6 CLT PANEL JOINT AT BEAM SUPPORT

1" = 1'-0"



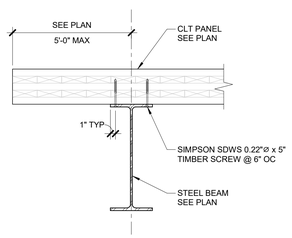
7 CLT PANEL CONTINUOUS AT BEAM SUPPORT

1" = 1'-0"



8 CLT PANEL END AT BEAM SUPPORT

1" = 1'-0"

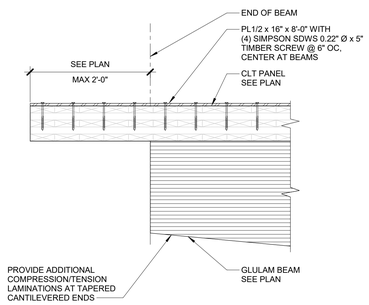


NOTES:

1. STAGGER CONNECTIONS UON.
2. DETAIL AND TABLE TO BE READ IN CONJUNCTION WITH GENERAL NOTES.
3. STEEL FABRICATOR TO COORDINATE ALL SCREW HOLES AND CLT ATTACHMENTS WITH CLT MANUF.

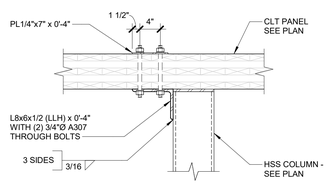
9 CLT PANEL ON STEEL BEAM

1" = 1'-0"



10 CLT PANEL END

1" = 1'-0"



NOTES:

1. STEEL BEAM NOT SHOWN FOR CLARITY.

11 TOP OF HSS DETAIL

1" = 1'-0"

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PROJECT #24005446.00

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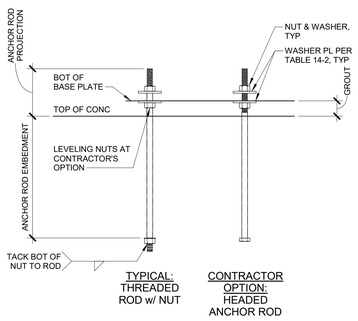
MASS TIMBER DETAILS

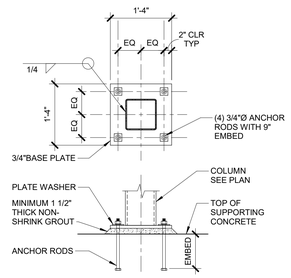
SHEET NUMBER:
S4.00

5/16/2025 6:49:32 AM



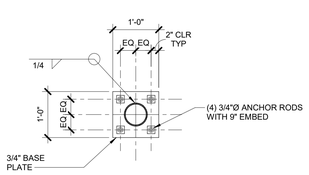
1 CAST-IN PLACE ANCHOR RODS
3/4" = 1'-0"

SEE AISC MANUAL TABLE 14-2 FOR REQD BASE PLATE HOLE AND PLATE WASHER DIMENSIONS



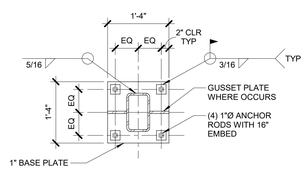
2 BASE PLATE (BP1)
3/4" = 1'-0"

SEE AISC MANUAL TABLE 14-2 FOR REQD BASE PLATE HOLE AND PLATE WASHER DIMENSIONS



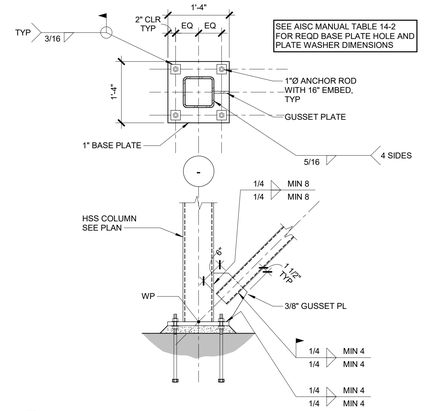
3 BASE PLATE (BP2)
3/4" = 1'-0"

SEE AISC MANUAL TABLE 14-2 FOR REQD BASE PLATE HOLE AND PLATE WASHER DIMENSIONS

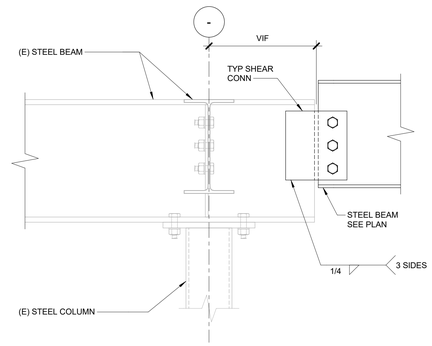


4 BASE PLATE (BP3) AT GLULAM COLUMNS
3/4" = 1'-0"

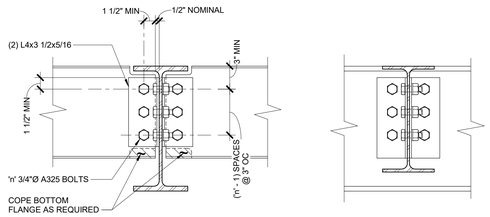
SEE AISC MANUAL TABLE 14-2 FOR REQD BASE PLATE HOLE AND PLATE WASHER DIMENSIONS



5 BASE PLATE (BP4) AT HSS BRACE
3/4" = 1'-0"



6 BEAM BEARING ON HSS COLUMN
1 1/2" = 1'-0"



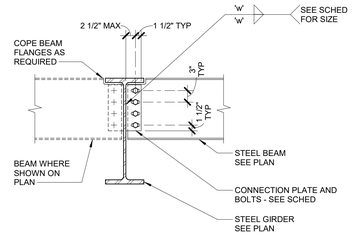
DOUBLE ANGLE CONN	
SUPPORTED BEAM	'n'
W8, W10	2
W12, W14	3
W16	4
W18	5

NOTES:

1. DETAILER IS RESPONSIBLE FOR FULLY DEVELOPING GEOMETRY AND DIMENSIONAL INFORMATION REQUIRED TO FABRICATE.
2. WHERE TYP SHEAR CONNECTION DETAIL IS NOT APPLICABLE, FABRICATOR SHALL SELECT AND DETAIL ALTERNATE CONNECTION CAPABLE OF DEVELOPING EQUAL STRENGTH. ALTERNATE CONNECTION SHALL BE SELECTED IN ACCORDANCE WITH AISC CONNECTION TABLES.

7 DOUBLE ANGLE SHEAR CONNECTION
1 1/2" = 1'-0"

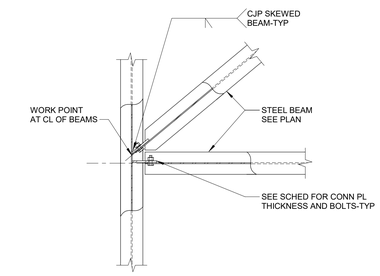
GRAVITY BEAM CONNECTION SCHEDULE			
BEAM SIZE	NO. OF BOLTS (3)	CONNECTION WITH 3/4"Ø BOLTS	
		PL THICK	PL WELD (1)
C8, C10	2	1/4"	3/16"
W8, W10	2	1/4"	3/16"
W12, W14	3	1/4"	3/16"
W16	4	5/16"	1/4"
W18	5	5/16"	1/4"



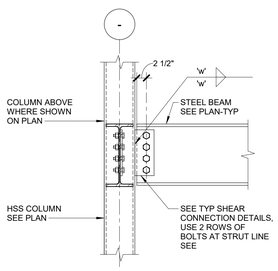
NOTES:

1. FILLET WELD SIZE, 'w', SHALL BE AS SHOWN UNLESS A LARGER SIZE IS REQUIRED BY AISC STEEL CONSTRUCTION MANUAL TABLE J2.4.
2. BOLT SIZE AND QUANTITY SHALL BE TYP FOR ALL CONDITIONS UNLESS DETAILED OTHERWISE.

8 SHEAR CONNECTION TO BEAM
3/4" = 1'-0"



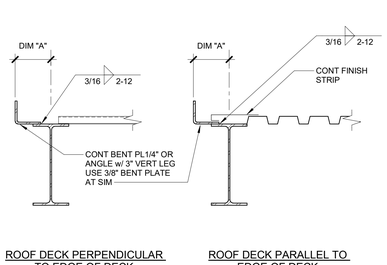
9 PLAN VIEW OF SKEWED SHEAR CONNECTIONS
3/4" = 1'-0"



NOTES:

1. SLOT COLUMN WALLS TO ALLOW FOR INSTALLATION OF SHEAR PLATE FROM TOP OF COLUMN. SLOT TO NOT EXCEED 1/8" LARGER THAN SHEAR PLATE THICKNESS.

10 WF CONNECTION TO HSS COLUMN
3/4" = 1'-0"



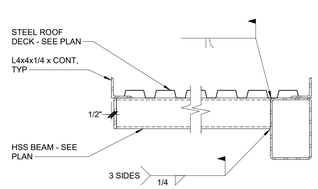
ROOF DECK PERPENDICULAR TO EDGE OF DECK

ROOF DECK PARALLEL TO EDGE OF DECK

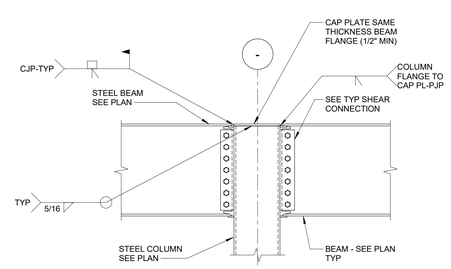
NOTES:

1. THIS DETAIL IS APPLICABLE AT ALL EDGE OF ROOF DECK LOCATIONS, UON.
2. SEE PLANS FOR DIM "A" OR SEE ARCH DWGS WHERE EDGE OF DECK DIMENSION IS INDICATED ON STRUCTURAL DRAWINGS.

11 EDGE OF ROOF DECK
1" = 1'-0"



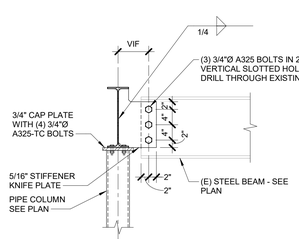
12 OUTRIGGER DETAIL
1" = 1'-0"



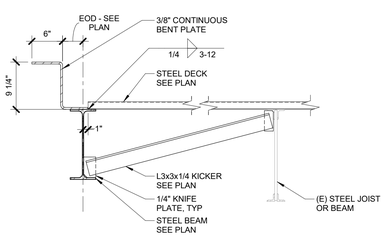
NOTES:

1. INTERSECTING BEAM NOT SHOWN FOR CLARITY.

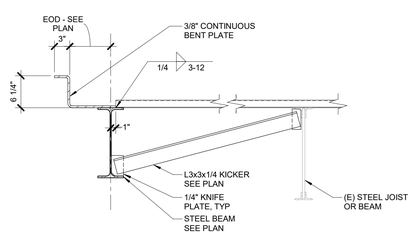
13 BEAM AT COLUMN MOMENT CONNECTION
3/4" = 1'-0"



14 COLUMN CONNECTION DETAIL
3/4" = 1'-0"

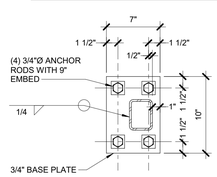


EDGE OF ROOF DECK AT CURTAIN WALL
1" = 1'-0"



16 EDGE OF ROOF DECK AT CANOPY
1" = 1'-0"

SEE AISC MANUAL TABLE 14-2 FOR REQD BASE PLATE HOLE AND PLATE WASHER DIMENSIONS



17 BASE PLATE (BP5)
1 1/2" = 1'-0"

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SHEET STATUS: 05/16/2025
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DETAILS

SHEET NUMBER:
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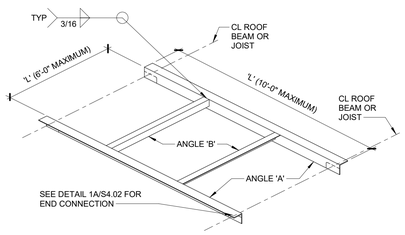
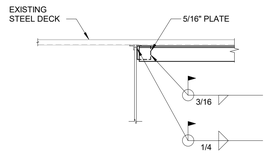


'L'	ANGLE 'A'	ANGLE 'B'
UP TO 1'-0"	NONE	NONE
1'-1" TO 4'-6"	L4x4x1/4	L4x4x1/4
4'-7" TO 6'-0"	L4x4x5/16	L4x4x1/4
6'-1" TO 8'-0"	L4x4x3/8	-
8'-1" TO 10'-0"	L6x4x3/8 (LLV)	-

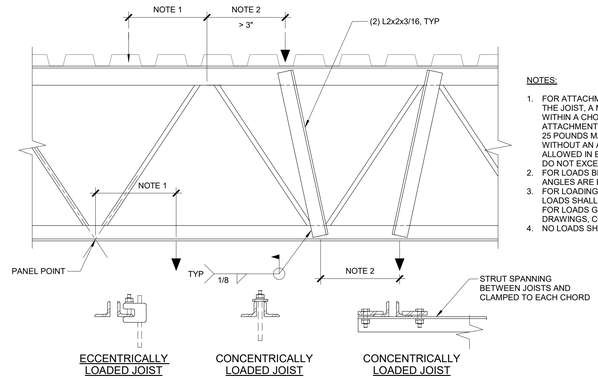
NOTES:

1. SEE ARCH AND MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF ALL OPENINGS.
2. ROOF OPENING FRAMING NOT REQUIRED AT SIDE DISCHARGE ROOF DRAINS. COORDINATE WITH MECHANICAL CONTRACTOR.

1 ROOF OPENING FRAMING
3/4" = 1'-0"



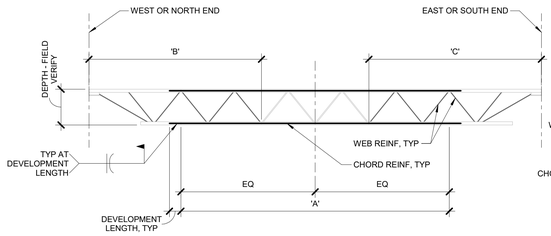
1A ANGLE TO JOIST CONNECTION
3/4" = 1'-0"

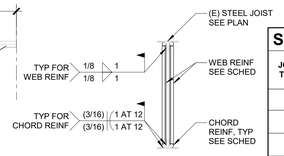


NOTES:

1. FOR ATTACHMENTS TO JOISTS THAT ARE CONCENTRICALLY LOADED ON THE JOIST, A MAX OF 100 POUNDS MAY BE ATTACHED TO THE JOIST WITHIN A CHORD PANEL WITHOUT AN ADDITIONAL ANGLE. FOR ATTACHMENTS TO JOISTS THAT ARE ECCENTRICALLY LOADED, A MAX OF 25 POUNDS MAY BE ATTACHED TO THE JOIST WITHIN A CHORD PANEL WITHOUT AN ADDITIONAL ANGLE. MULTIPLE ATTACHMENTS ARE ALLOWED IN EACH CHORD PANEL AS LONG AS THE SUM OF THE LOADS DO NOT EXCEED THE MAX LOAD INDICATED.
2. FOR LOADS BETWEEN 100 POUNDS AND 200 POUNDS, ADDITIONAL ANGLES ARE REQUIRED AND JOIST MUST BE CONCENTRICALLY LOADED.
3. FOR LOADING CONDITIONS IN NOTES 1 AND 2 ABOVE, TOTAL SUM OF LOADS SHALL NOT EXCEED 200 LBS FOR AN 8 FOOT SEGMENT OF JOIST. FOR LOADS GREATER THAN 200 POUNDS AND NOT NOTED ON THE DRAWINGS, CONTACT ENGINEER PRIOR TO INSTALLATION.
4. NO LOADS SHALL BE SUPPORTED FROM JOIST BRIDGING.

2 CONCENTRATED LOADS ON K-JOIST
1 1/2" = 1'-0"



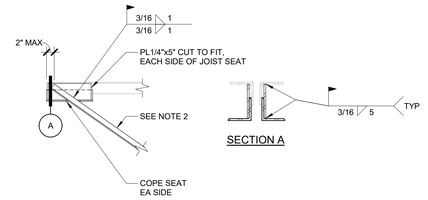


NOTES:

1. REMOVE AND REINSTALL JOIST BRIDGING AS NECESSARY TO INSTALL REINF MEMBERS.
2. JOIST REINF IS DUE TO NEW ROOF EQUIPMENT OR SNOW DRIFT. PRIOR TO PLACING EQUIPMENT OR BUILDING TALLER STRUCTURE, JOIST REINF MUST BE INSTALLED.
3. SPLICE CHORD REINF. SEGMENTS TOGETHER TO DEVELOP FULL CAPACITY OF MEMBER. SPLICE DETAIL BY STEEL FABRICATOR.

STEEL JOIST REINFORCING SCHEDULE

JOIST TYPE	CHORD REINFORCING			WEB REINFORCING			REMARKS
	SIZE	'A'	DEVELOPMENT LENGTH	SIZE	'B'	'C'	
A	N/A	N/A	N/A	L2x2x3/16	NA	6'-0"	
B	(2) 1/2"Ø GR50 RODS	10'-0"	4"	L2x2x3/16	12'-0"	12'-0"	
C	(2) 1/2"Ø GR50 RODS	10'-0"	4"	L2x2x3/16	8'-0"	8'-0"	
D	N/A	N/A	N/A	L2x2x3/16	13'-0"	N/A	
E	(2) 1/2"Ø GR50 RODS	10'-0"	4"	L2x2x3/16	10'-0"	10'-0"	

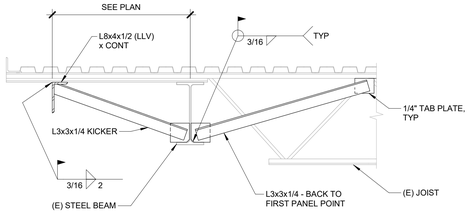


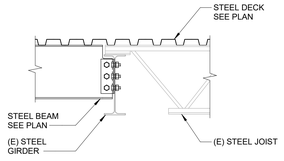
NOTES:

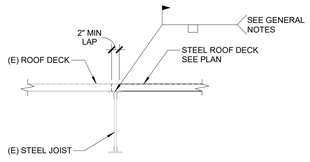
1. DETAIL REQUIRED ONLY WHEN FIRST WEB MEMBER IS REINF.
2. ANGLE REINF SHOWN TO ILLUSTRATE CONCEPT. (E) WEB NOT SHOWN FOR CLARITY.

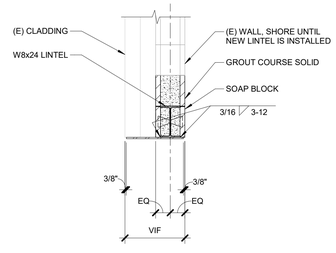
3 JOIST WEB / CHORD REINFORCEMENT
3/4" = 1'-0"

4 JOIST SEAT REINFORCEMENT
3/4" = 1'-0"







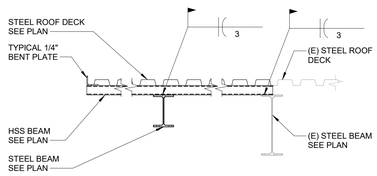


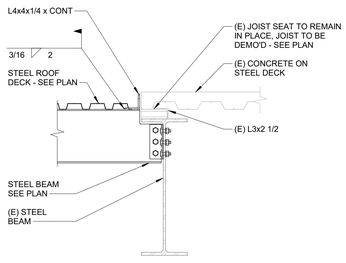
5 BOTTOM FLANGE BRACING
3/4" = 1'-0"

6 JOIST / BEAM BEARING AT ROOF GIRDER
3/4" = 1'-0"

7 TYPICAL DECK LAP DETAIL
3/4" = 1'-0"

8 LINTEL (ML1) DETAIL
3/4" = 1'-0"





9 FRAMING DETAIL
3/4" = 1'-0"

10 BEAM TO EXISTING GIRDER DETAIL
3/4" = 1'-0"

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PROJECT #24005446.00

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DKA PROJECT NO: 24-027

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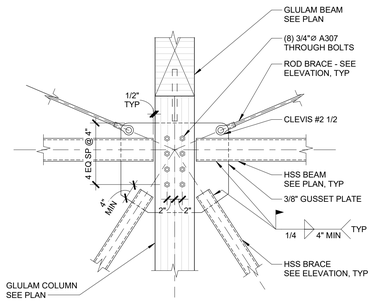
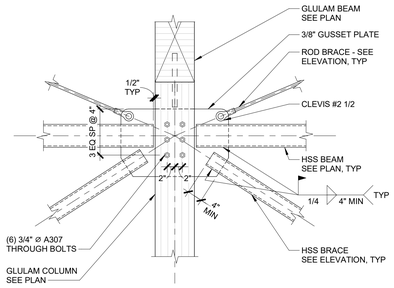


NOTES:

1. FABRICATOR SHALL OPTIMIZE THE SIZE AND SHAPE OF THE GUSSET PLATE TO WORK WITH GEOMETRY OF BRACES.

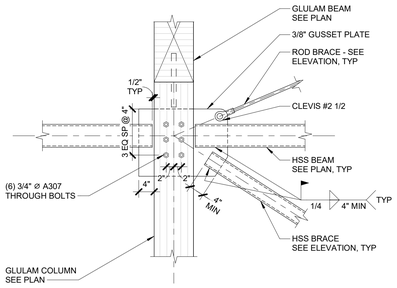
1 CONNECTION DETAIL
3/4" = 1'-0"



NOTES:

1. FABRICATOR SHALL OPTIMIZE THE SIZE AND SHAPE OF THE GUSSET PLATE TO WORK WITH GEOMETRY OF BRACES.

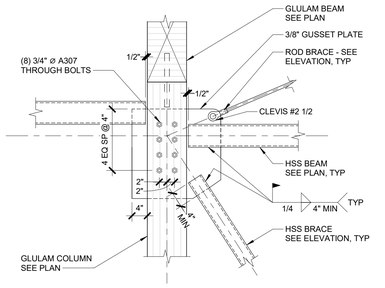
2 CONNECTION DETAIL
3/4" = 1'-0"



NOTES:

1. FABRICATOR SHALL OPTIMIZE THE SIZE AND SHAPE OF THE GUSSET PLATE TO WORK WITH GEOMETRY OF BRACES.

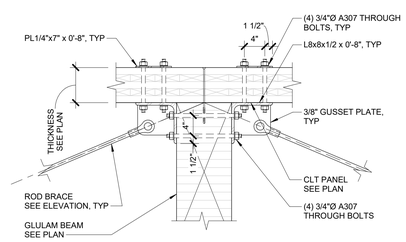
3 CONNECTION DETAIL
3/4" = 1'-0"



NOTES:

1. FABRICATOR SHALL OPTIMIZE THE SIZE AND SHAPE OF THE GUSSET PLATE TO WORK WITH GEOMETRY OF BRACES.

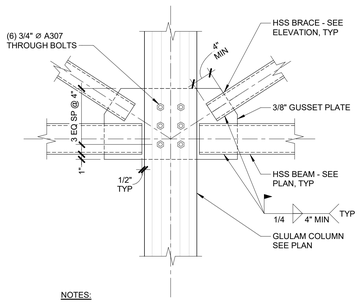
4 CONNECTION DETAIL
3/4" = 1'-0"



NOTE:

1. BRACE CONNECTION ONLY ONE SIDE AT SIM.

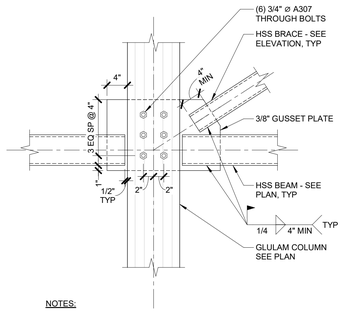
5 CONNECTION DETAIL
1" = 1'-0"



NOTES:

1. FABRICATOR SHALL OPTIMIZE THE SIZE AND SHAPE OF THE GUSSET PLATE TO WORK WITH GEOMETRY OF BRACES.

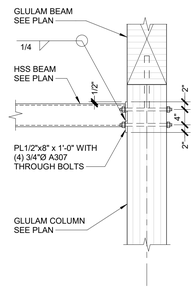
6 CONNECTION DETAIL
1" = 1'-0"



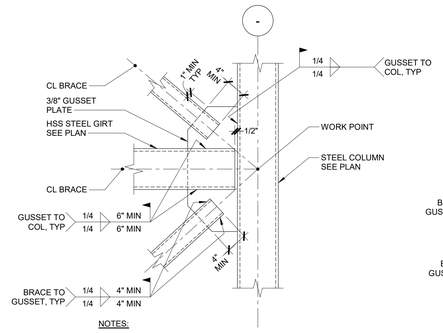
NOTES:

1. FABRICATOR SHALL OPTIMIZE THE SIZE AND SHAPE OF THE GUSSET PLATE TO WORK WITH GEOMETRY OF BRACES.

7 CONNECTION DETAIL
1" = 1'-0"



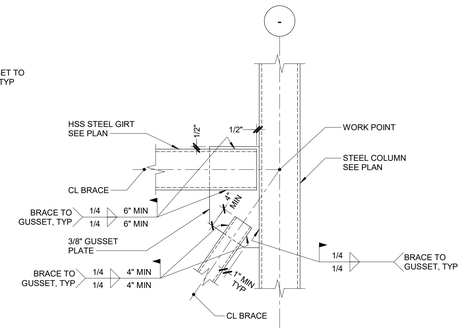
8 CONNECTION DETAIL
3/4" = 1'-0"



NOTES:

1. FABRICATOR SHALL OPTIMIZE THE SIZE AND SHAPE OF THE GUSSET PLATE TO WORK WITH GEOMETRY OF BRACES.

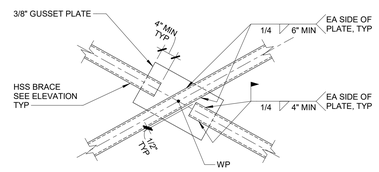
9 BRACE CONNECTION TO BEAM/COLUMN DETAIL
1" = 1'-0"



NOTES:

1. FABRICATOR SHALL OPTIMIZE THE SIZE AND SHAPE OF THE GUSSET PLATE TO WORK WITH GEOMETRY OF BRACES.

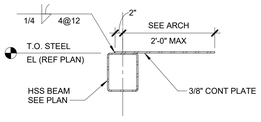
10 BRACE CONNECTION TO BEAM/COLUMN DETAIL
1" = 1'-0"



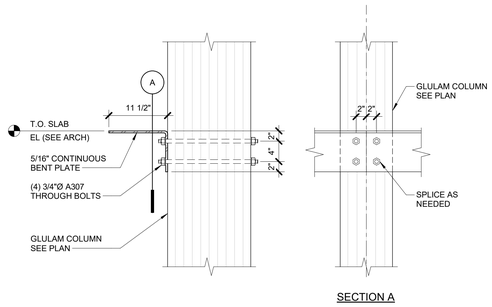
NOTES:

1. FABRICATOR SHALL OPTIMIZE THE SIZE AND SHAPE OF THE GUSSET PLATE TO WORK WITH GEOMETRY OF BRACES.

11 HSS BRACE CONNECTION
3/4" = 1'-0"



12 STEEL SUPPORT AT TOP OF FIREWALL
3/4" = 1'-0"



SECTION A

13 BENT PLATE WALL SUPPORT DETAIL
1" = 1'-0"

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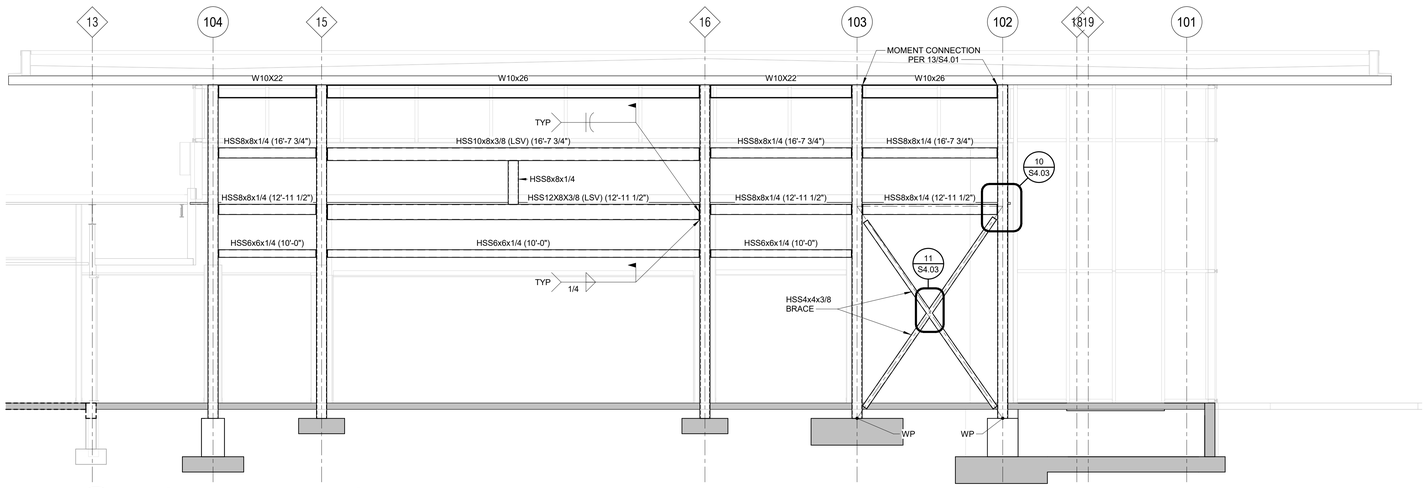
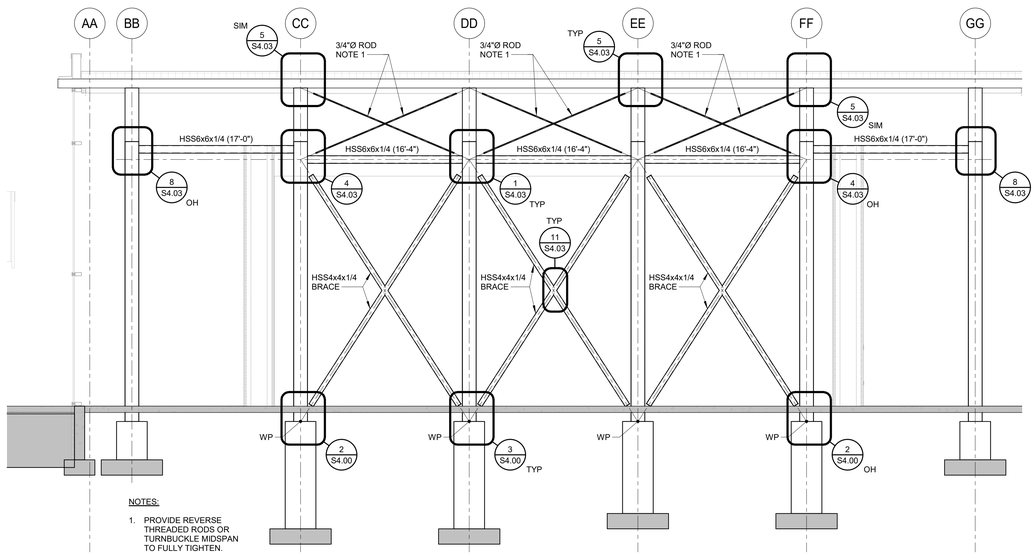
PROJECT #24005446.00



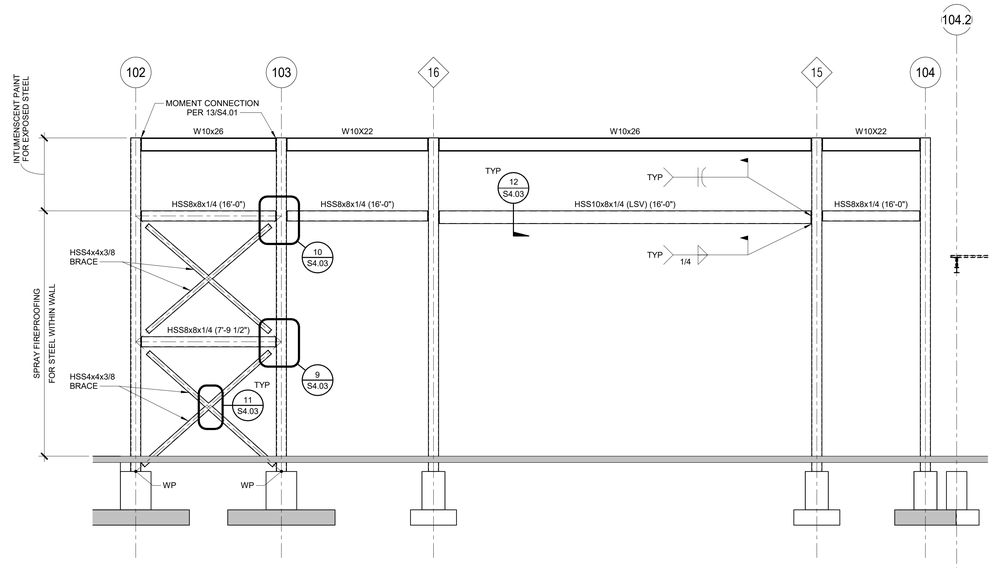
1 WEST WALL ELEVATION
1/4" = 1'-0"



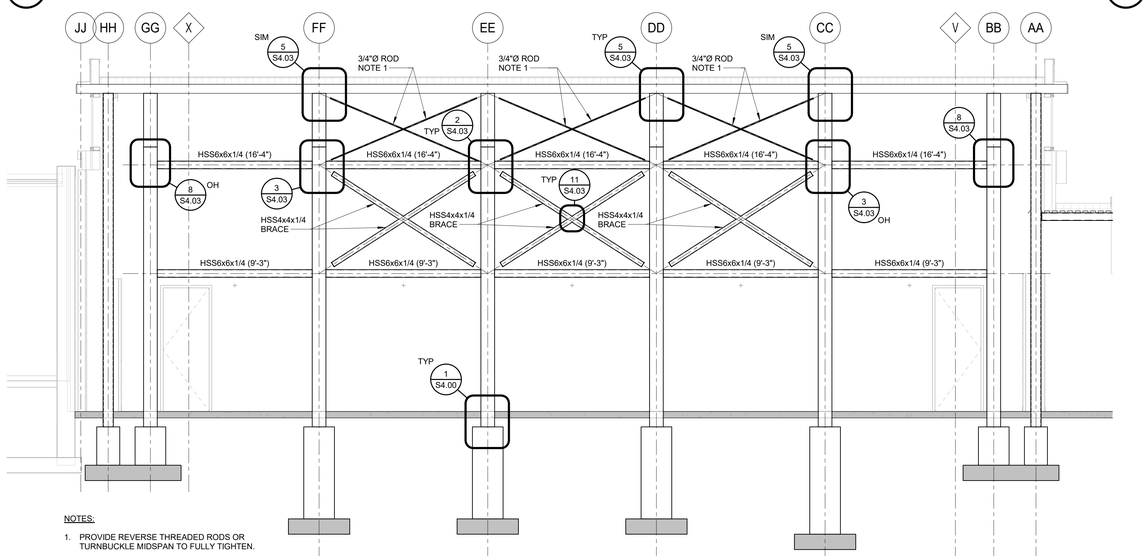
NOTES:

1. PROVIDE REVERSE THREADED RODS OR TURNBUCKLE MIDSPAN TO FULLY TIGHTEN.

2 NORTH WALL ELEVATION
1/4" = 1'-0"



3 EAST WALL ELEVATION
1/4" = 1'-0"



NOTES:

1. PROVIDE REVERSE THREADED RODS OR TURNBUCKLE MIDSPAN TO FULLY TIGHTEN.

4 SOUTH WALL ELEVATION
1/4" = 1'-0"

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
ELEVATIONS

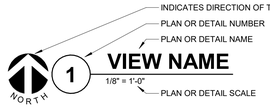
SHEET NUMBER:
S5.00

5/16/2025 6:49:39 AM

VIEW KEY

NAME — LEVEL NAME
10'-0" — HEIGHT ABOVE PROJECT 0'-0"

1 — KEYNOTE: INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL



LINE TYPE AND TAG KEY:

- NEW WORK BY THIS CONTRACTOR (DARK SOLID LINE)
- NEW WORK BY OTHER (LIGHT COLD LINE)
- NEW UNDERFLOOR
- EQUIPMENT CLEARANCE (DASHED LINE)

CONTRACTOR ABBREVIATION KEY

ABBR:	DESCRIPTION:
E.C.	ELECTRICAL CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
T.C.C.	TEMPERATURE CONTROLS CONTRACTOR
A.V.C.	AUDIO VISUAL CONTRACTOR
T.C.	TECHNOLOGY CONTRACTOR

HVAC SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

SYMBOL:	DESCRIPTION:
CWR	CHILLED WATER RETURN
CWS	CHILLED WATER SUPPLY
G	NATURAL GAS
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
	PIPE CAP
	PIPE DOWN
	PIPE UP OR UP/DOWN
	DIRECTION OF FLOW IN PIPE
	UNION/FLANGE
	CONTROL VALVE (TWO-WAY)
	SHUTOFF VALVE NORMALLY OPEN
	PRESSURE/TEMPERATURE TEST PLUG
	GAS REGULATOR
	PRESSURE/TEMPERATURE TEST PLUG
FM	FLOW METER (DUCT)
DSD	DUCT SMOKE DETECTOR
H	HUMIDITY SENSOR
T	TEMPERATURE SENSOR (DUCT)
AI	ANALOG INPUT
AO	ANALOG OUTPUT
DI	DIGITAL INPUT
DO	DIGITAL OUTPUT
	SAWCUT

HVAC SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

SYMBOL:	DESCRIPTION:
	FLEXIBLE DUCT
	MANUAL VOLUME DAMPER
	DUCT CAP
	DUCT DOWN
	DUCT UP
	SUPPLY/OUTSIDE AIR DUCT SECTION
	RETURN AIR DUCT SECTION
	EXHAUST/RELIEF AIR DUCT SECTION
SD-1 6/115	AIR TERMINAL PROPERTIES SYMBOL NECK SIZE/CFM
P	PRESSURE SENSOR/MONITOR
T	THERMOSTAT/SENSOR
CO2	CARBON DIOXIDE SENSOR

HVAC ABBREVIATION KEY

ABBR:	DESCRIPTION:
SA	SUPPLY AIR
SCCR	SHORT CIRCUIT CURRENT RATING
RA	RETURN AIR
TAB	TERMINAL AIR BOX
TD	TRANSFER DUCT
TYP	TYPICAL
FD	FIRE DAMPER

HVAC SHEET INDEX

M0.00	HVAC COVERSHEET
MD1.01	FLOOR PLAN DEMOLITION - PIPING
MD1.02	ROOF PLAN DEMOLITION - PIPING
MD1.11	FLOOR PLAN DEMOLITION - VENTILATION
M1.01	FLOOR PLAN - PIPING
M1.11	FLOOR PLAN - VENTILATION
M1.12	ROOF PLAN - MECHANICAL
M2.00	SECTION VIEWS
M3.00	HVAC DETAILS
M3.01	HVAC DETAILS
M4.00	HVAC DIAGRAMS
M4.01	HVAC DIAGRAMS
M5.00	HVAC SCHEDULES
GRAND TOTAL: 13	

PIPE INSULATION SCHEDULE (HVAC)

GENERAL NOTES:
1. REFER TO THE SPECIFICATIONS FOR TYPE DESCRIPTIONS AND JACKETING REQUIREMENTS.
2. TYPE E IS NOT ALLOWED IN RETURN AIR PLENUMS, UNLESS LISTED AND LABELED AS 25/50 RATED PER ASTM E84/UL723
3. PROVIDE RIGID INSERT AT HANGERS, EITHER PRE-MANUFACTURED COUPLINGS (REFER TO PIPE HANGER AND SUPPORTS SPECIFICATIONS) OR TYPE C INSULATION. SEE SPEC. FOR MORE DETAILS.
4. DIRECT BUIRED PIPING SHALL ONLY USE TYPE C OR TYPE E. REDUCTION IN THICKNESS FOR DIRECT BURED PIPING IS ALLOWED PER IECC AS APPLICABLE.

SYMBOL	PIPE SYSTEM	INSULATION TYPE	INSULATION THICKNESS PER NOMINAL PIPE OR TUBE SIZE			NOTES
			< 1"	1" TO < 1.5"	1.5" TO < 4"	
23 PIPING - HEATING WATER						
HWR	HEATING WATER RETURN	A (GlsFbr), C (CelGla), E (Plyiso)	1 1/2"	1 1/2"	2"	ALL
HWS	HEATING WATER SUPPLY	A (GlsFbr), C (CelGla), E (Plyiso)	1 1/2"	1 1/2"	2"	ALL

PIPING GENERAL NOTES:

1. THE SIZE OF BRANCH PIPING TO TERMINAL HEATING DEVICES AND COILS SHALL BE 3/4" UNLESS NOTED OTHERWISE.

VENTILATION GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, THE SIZE OF EACH BRANCH DUCT TO A TERMINAL AIR BOX (TAB) SHALL MATCH THE INLET SIZE UNLESS THE BRANCH IS GREATER THAN 6 FEET IN LENGTH, IN WHICH CASE THE BRANCH DUCT SHALL BE SIZED AT A PRESSURE DROP OF 0.07" W.C. PER 100' OF DUCTWORK.
2. UNLESS NOTED OTHERWISE, THE SIZE OF EACH BRANCH DUCT TO AN AIR TERMINAL SHALL MATCH THE INLET SIZE.
3. ALIGN TEMPERATURE SENSORS WITH LIGHT SWITCHES AND WHEN IN CLOSE PROXIMITY TO EACH OTHER.
4. PROVIDE ACCESS DOORS AT ALL DUCT MOUNTED EQUIPMENT.

MECHANICAL GENERAL NOTES:

1. DRAWINGS SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC., AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.
2. CATALOG AND MODEL NUMBERS SHALL NOT BE CONSIDERED COMPLETE, BUT ARE GIVEN AS AN AID TO THE CONTRACTOR AND TO INDICATE THE QUALITY REQUIRED. CONTRACTOR IS RESPONSIBLE FOR THE COMPLETE DESCRIPTION OF MATERIAL SCHEDULED ON THESE DRAWINGS AND IN THE SPECIFICATIONS BEFORE ORDERING. THE DESCRIPTION OF THE MATERIAL AND SCHEDULED PERFORMANCE TAKES PRECEDENCE OVER THE MODEL NUMBER. THE FIRST MANUFACTURER SCHEDULED IS THE BASIS OF DESIGN.
3. DETERMINATION OF QUANTITIES OF MATERIAL AND EQUIPMENT REQUIRED SHALL BE MADE BY THE CONTRACTOR FROM THE DOCUMENTS. WHERE MATERIAL AND/OR QUANTITY DISCREPANCIES ARISE BETWEEN DRAWINGS, SCHEDULES AND/OR SPECIFICATIONS, THE HIGHER QUALITY/ GREATER NUMBER SHALL GOVERN.
4. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS, INCLUDING THOSE OF OTHER TRADES.
5. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO PROVIDE CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE, AND TO VERIFY NON-INTERFERENCE WITH OTHER WORK. DO NOT FABRICATE PRIOR TO VERIFICATION OF NECESSARY CLEARANCES FOR ALL TRADES. BRING ANY INTERFERENCES OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH FABRICATION OR EQUIPMENT ORDERS.
6. REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED OR SUBSTITUTED AND MAKE REASONABLE ACCOMMODATIONS IN LAYOUT AND POSITIONING TO PROVIDE PROPER ACCESS.
7. ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.
8. EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
9. IN AREAS WITH DRYWALL CEILINGS COORDINATE LOCATIONS OF ACCESS PANELS WITH THE GC FOR ACCESS TO VALVES, DUCTWORK ACCESSORIES, DAMPERS, ETC. COORDINATE PANEL TYPE AND COLOR WITH ARCHITECT. NOTIFY THE GC OF THE REQUIRED ACCESS PANELS PRIOR TO BIDDING.
10. SEAL ALL FLOOR AND WALL PENETRATIONS AIRTIGHT WHERE CONDUITS, PIPING, AND DUCTS PENETRATE.
11. CAULK ALL PIPE AND DUCT PENETRATIONS OF FULL HEIGHT NON-FIRE RATED WALL, PARTITION, FLOOR, AND ROOF ASSEMBLIES. THIS IS ESSENTIAL TO PREVENT NOISE TRANSMISSION FROM ONE ROOM TO ANOTHER AND TO PROVIDE THE DESIRED NC LEVELS WITHIN ROOMS.
12. DO NOT BLOCK TUBE PULL OR EQUIPMENT SERVICE CLEARANCES.
13. MAINTAIN A MINIMUM WORKING CLEARANCE OF 3'-6" IN FRONT OF ALL ELECTRICAL EQUIPMENT REQUIRING MAINTENANCE, INSPECTION, AND TESTING INCLUDING BUT NOT LIMITED TO PANELS, DISTRIBUTION PANELS, SWITCHBOARDS, MOTOR CONTROL CENTERS, TRANSFORMERS, EQUIPMENT DISCONNECTS AND STARTERS.
14. MAINTAIN THE DEDICATED ELECTRICAL EQUIPMENT SPACE DEFINED BY THE WIDTH / DEPTH OF ELECTRICAL EQUIPMENT MEASURED FROM THE FLOOR TO A HEIGHT 6'-0" ABOVE THE EQUIPMENT OR THE STRUCTURAL CEILING, WHICHEVER IS LOWER. SYSTEMS FOREIGN TO THE ELECTRICAL DISTRIBUTION SYSTEM ARE NOT ALLOWED IN THE DEDICATED ELECTRICAL SPACE INCLUDING: DUCTWORK, PIPING, ETC.
15. DO NOT EXCEED 25 LBS PER HANGER AND A MINIMUM SPACING OF 2'-0" ON CENTER WHEN ATTACHING TO METAL ROOF DECKING (LIMITATION NOT REQUIRED WITH CONCRETE ON METAL DECK). THIS 25 LBS. LOAD AND 2'-0" SPACING INCLUDE ADJACENT ELECTRICAL AND ARCHITECTURAL ITEMS HANGING FROM DECK. IF THE HANGER RESTRICTIONS CANNOT BE ACHIEVED, SUPPLEMENTAL FRAMING OFF STEEL FRAMING SHALL BE ADDED. ANCHORS EMBEDDED IN CONCRETE SHALL BE CRACKED CONCRETE APPROVED IN ACCORDANCE WITH SPECIFICATIONS.

TAB PRE-DEMOLITION NOTES:

1. BEFORE ANY DEMOLITION WORK IS BEGUN A COMPLETE AIR BALANCE TEST SHALL BE PERFORMED BY THE TESTING, ADJUSTING AND BALANCING (TAB) CONTRACTOR ON EXISTING TERMINAL AIR BOXES SERVING THE AREAS AFFECTED BY CONSTRUCTION. EQUIPMENT TO BE DEMOLISHED DOES NOT REQUIRE TESTING. PROVIDE AIR BALANCE TESTING ONLY ON EQUIPMENT THAT WILL CONTINUE TO BE USED TO SERVE RENOVATED AREAS AFTER THE CONSTRUCTION PHASE IS COMPLETED.
2. PROVIDE DUCT TRAVERSE READINGS AT LOCATIONS DESIGNATED ON THE DRAWINGS BY THE "AIRFLOW MEASUREMENT SYMBOL". THOSE MEASUREMENTS SHALL BE INCLUDED IN THE PRE DEMOLITION REPORT AND SHALL BE DESIGNATED WITH THE IDENTIFIER AS MARKED ON THE DRAWINGS. READINGS SHALL BE DESIGNATED WITH THE ROOM NAME AND NUMBER AS MARKED ON THE DRAWINGS. IF FLOOR PLANS DO NOT HAVE UNIQUE ROOM NAMES AND NUMBERS, TAB CONTRACTOR SHALL INCLUDE FLOOR PLAN WITH UNIQUE NUMBER DESIGNATIONS ASSIGNED TO READINGS THAT MATCH THOSE USED IN THE FINAL PRE-DEMOLITION REPORT. DRAWINGS THAT ARE HAND-MARKED WITH RED INK ARE ACCEPTABLE, PROVIDED THEY ARE LEGIBLE.
3. IN THE EVENT A DUCT TRAVERSE LOCATION AS MARKED ON THIS PLAN IS INACCESSIBLE FOR MEASUREMENT, THE TAB CONTRACTOR SHALL PERFORM THE TRAVERSE AT AN ALTERNATE LOCATION OR SHALL TAKE MULTIPLE DUCT TRAVERSES AND/OR READINGS AS REQUIRED TO DETERMINE THE AIRFLOW READING WHERE THE DUCT TRAVERSE SYMBOL IS SHOWN. IN THE EVENT TRAVERSES ARE TAKEN AT ALTERNATE LOCATION(S), TAB CONTRACTOR SHALL INCLUDE A DRAWING THAT SHOWS THE LOCATIONS WHERE THE ACTUAL MEASUREMENTS WERE TAKEN.
4. TAKE A DUCT STATIC PRESSURE READING AT EACH LOCATION WHERE A DUCT TRAVERSE READING IS TAKEN AND INCLUDE IN THE FINAL PRE-DEMOLITION TAB REPORT.
5. TAB CONTRACTOR SHALL COMPILE AND SUBMIT FOUR COPIES OF THE FINAL PRE-DEMOLITION REPORT WITHIN 10 WORKING DAYS AFTER THE FIELD MEASUREMENTS ARE COMPLETED. FINAL TAB REPORT SHALL BE SUBMITTED FOR REVIEW TO THE ARCHITECT/ENGINEER. TESTING SHALL INCLUDE ALL ITEMS REQUIRED IN THE SPECIFICATIONS.
6. TAB CONTRACTOR SHALL PROVIDE DUCT TRAVERSE READINGS AT LOCATIONS DESIGNATED ON THE DRAWINGS BY THE "AIRFLOW MEASUREMENT SYMBOL". THOSE MEASUREMENTS SHALL BE INCLUDED IN THE POST-CONSTRUCTION REPORT AND SHALL BE DESIGNATED WITH THE IDENTIFIER AS MARKED ON THE CONSTRUCTION DRAWINGS. GRILLE AND DIFFUSER READINGS SHALL BE DESIGNATED WITH THE ROOM NAME AND NUMBER AS MARKED ON THE DRAWINGS. IF THE DRAWINGS DO NOT HAVE UNIQUE ROOM NAMES AND NUMBERS, TAB CONTRACTOR SHALL INCLUDE FLOOR PLANS WITH UNIQUE NUMBER DESIGNATIONS ASSIGNED TO TRAVERSES, GRILLES, AND DIFFUSERS THAT MATCH THOSE USED IN THE FINAL PRE-DEMOLITION REPORT. SIMILAR ROOM NAMES, NUMBERS, OR DESIGNATIONS SHALL BE USED TO SIMPLIFY THE CROSS- REFERENCING OF READINGS TAKEN BETWEEN PRE-DEMOLITION AND POST-CONSTRUCTION REPORTS.
7. BALANCING CONTRACTOR SHALL PRE-BALANCE ALL EXISTING SYSTEMS TO REMAIN PER SPECIFICATION SECTION 23 05 93. BALANCE READINGS WILL BE REQUIRED AT AIR OUTLETS AND DUCT TRAVERSES TO VERIFY EXISTING AIRFLOW TO UNAFFECTED SPACES.

TAB POST-CONSTRUCTION NOTES:

1. AFTER CONSTRUCTION ACTIVITIES ARE COMPLETE, TESTING, ADJUSTING (TAB) AND BALANCING CONTRACTOR SHALL REBALANCE TERMINAL AIR BOXES AS REQUIRED TO ACHIEVE THE NEW AIRFLOW VALUES SHOWN ON THE CONSTRUCTION DRAWINGS.
2. AREAS SERVED BY THIS EQUIPMENT WHICH WERE NOT RENOVATED SHALL BE RE-BALANCED TO THE AIRFLOW RATES MEASURED BEFORE THE RENOVATION OCCURRED (REFER TO THE FINAL PRE- DEMOLITION REPORT).
3. IF DUCT TRAVERSE LOCATION AS MARKED ON THE DRAWINGS IS INACCESSIBLE FOR MEASUREMENT, THE TAB CONTRACTOR SHALL PERFORM THE TRAVERSE AT AN ALTERNATE LOCATION OR SHALL TAKE MULTIPLE DUCT TRAVERSES AND/OR GRILLE READINGS AS REQUIRED TO DETERMINE THE FLOW RATE. IN THE EVENT TRAVERSES ARE TAKEN AT AN ALTERNATE LOCATION(S), TAB CONTRACTOR SHALL INCLUDE A DRAWING THAT SHOWS THE LOCATIONS WHERE THE ACTUAL MEASUREMENTS WERE TAKEN.
4. A DUCT STATIC PRESSURE READING SHALL BE TAKEN AT EACH LOCATION WHERE A DUCT TRAVERSE READING IS TAKEN AND SHALL BE INCLUDED IN THE FINAL POST-CONSTRUCTION TAB REPORT.
5. TAB CONTRACTOR SHALL COMPILE AND SUBMIT COPIES OF THE FINAL POST-CONSTRUCTION TAB REPORT AS REQUIRED BY SECTION 23 05 93.
6. THE FINAL POST CONSTRUCTION REPORT SHALL INCLUDE ALL ITEMS REQUIRED IN THE SPECIFICATIONS.

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CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
HVAC COVERSHEET

SHEET NUMBER:
M0.00

5/16/2025 11:12:38 AM

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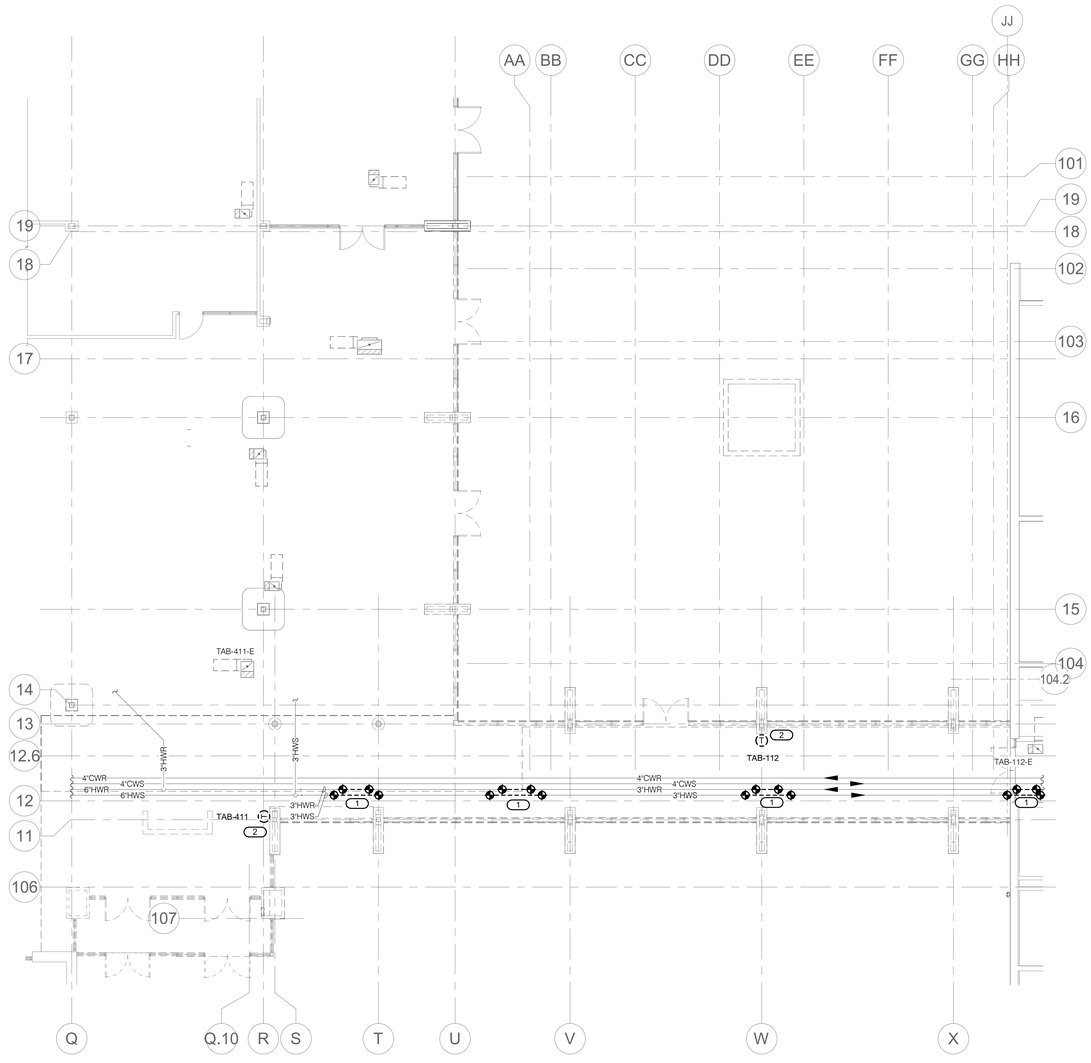
Illinois Design Firm Registration #184008976-0014

0 1 2 3
REF. SCALE IN INCHES
PROJECT #250054446.00

KEYNOTES:

1. DISCONNECT AND REMOVE SECTION OF HWR/HWS PIPING AS REQUIRED TO INSTALL NEW BRANCH PIPING. COORDINATE ISOLATION AND DRAINING OF HEATING WATER SYSTEM WITH OWNER. (TYP.).
2. DISCONNECT AND REMOVE EXISTING THERMOSTAT EXTEND WIRING TO NEW LOCATION. REFER TO NEW WORK FOR ADDITIONAL INFORMATION.



1 FLOOR PLAN DEMOLITION - PIPING

1/8" = 1'-0"

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
FLOOR PLAN DEMOLITION - PIPING

SHEET NUMBER:
MD1.01

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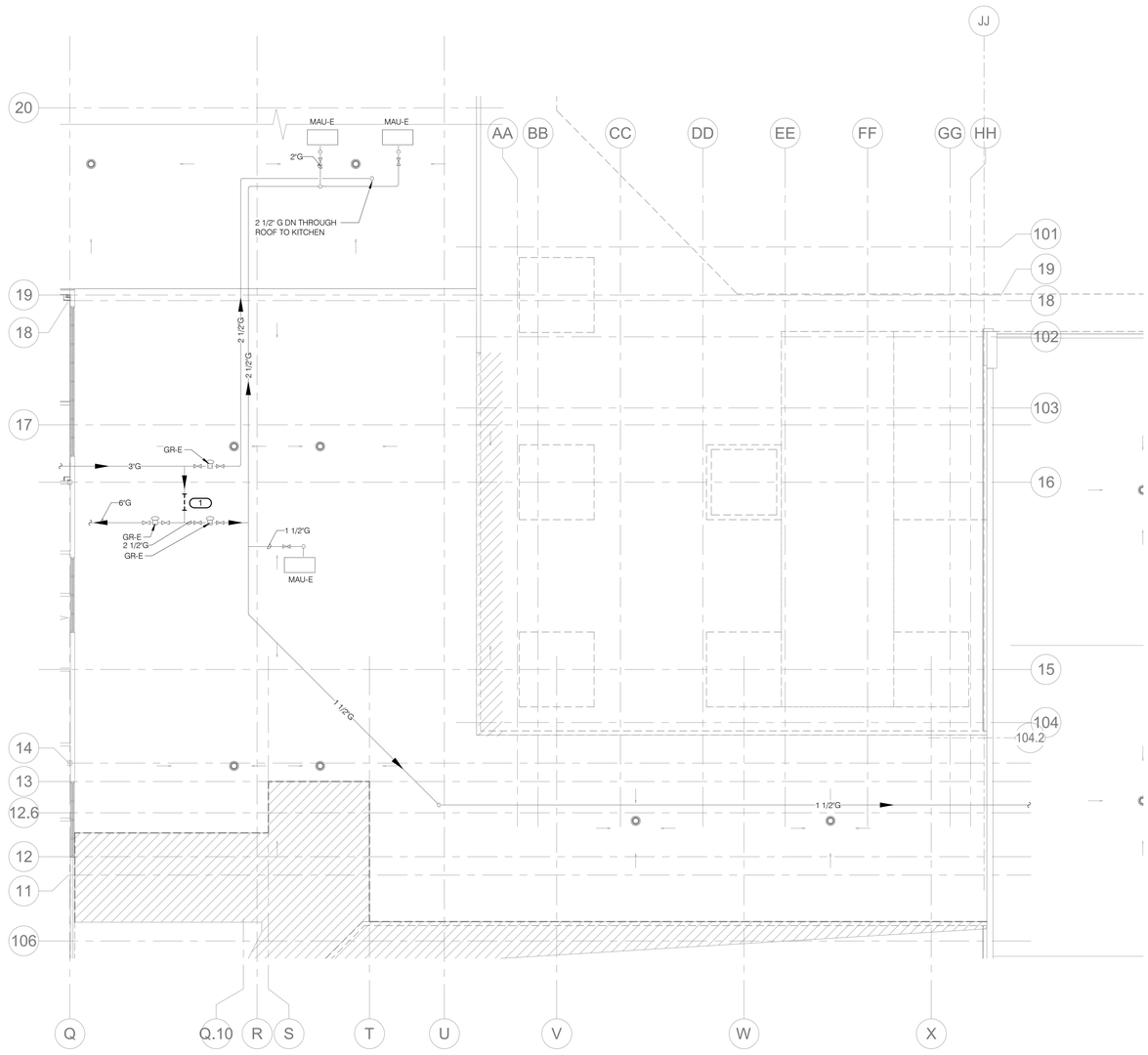
0 1 2 3
REF. SCALE IN INCHES

PROJECT #250005446.00

5/16/2025 11:12:39 AM

KEYNOTES:
1. DISCONNECT AND REMOVE SECTION OF GAS PIPING AS REQUIRED FOR NEW BRANCH CONNECTION.



NORTH

1 ROOF PLAN DEMOLITION - PIPING
1/8" = 1'-0"

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CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

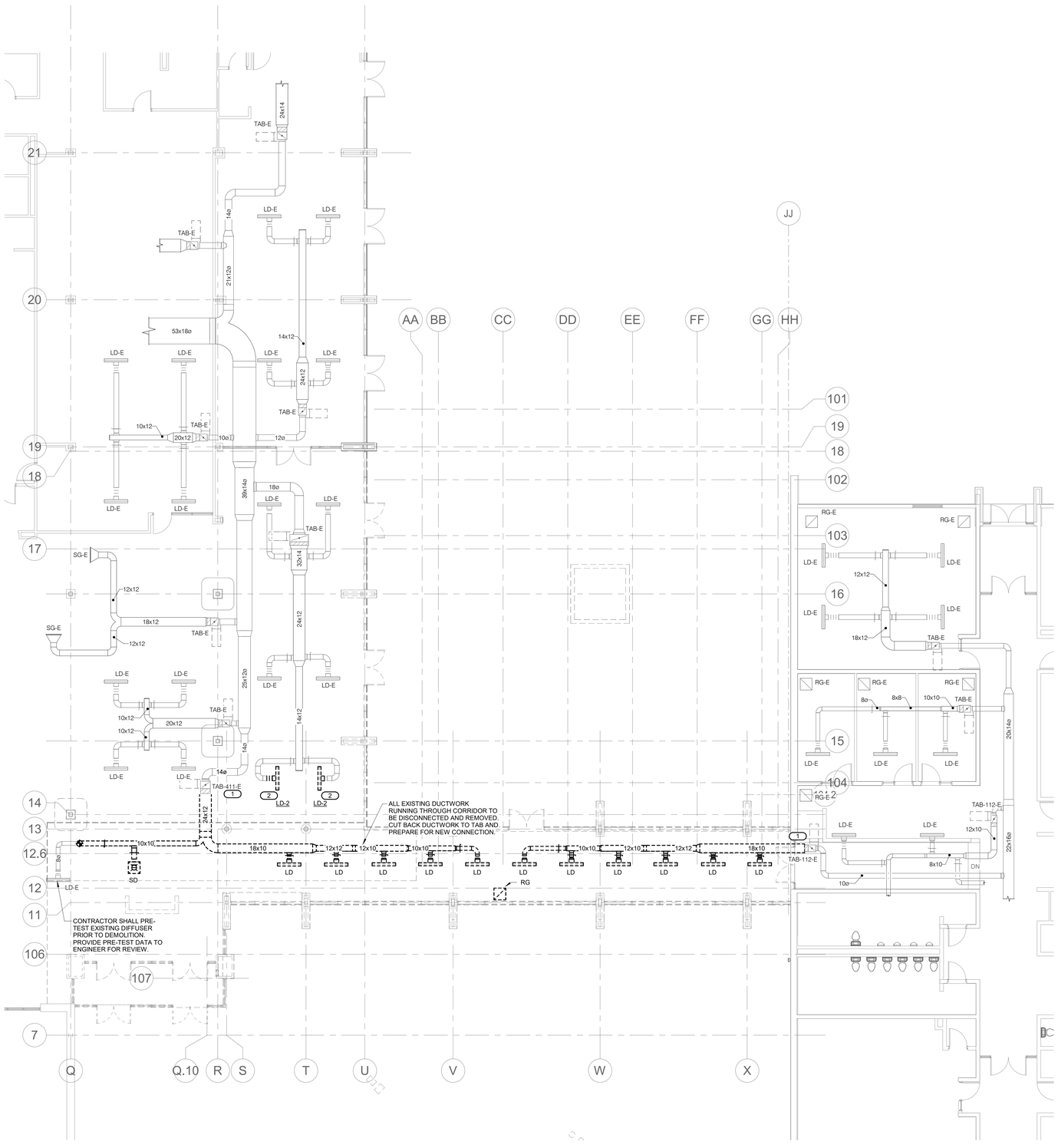
SHEET TITLE:
ROOF PLAN DEMOLITION - PIPING

SHEET NUMBER:
MD1.02

5/16/2025 11:12:39 AM

KEYNOTES:

1. PROVIDE PRETEST AND BALANCE ON TERMINAL AIR BOX AND ALL DIFFUSERS DOWNSTREAM PRIOR TO DEMOLITION. PROVIDE VALUES TO ENGINEER.
2. DISCONNECT AND REMOVE EXISTING DIFFUSER AND ASSOCIATED FLEXIBLE DUCTWORK. EXISTING BRANCH DUCT TO BE DEMOLISHED AS REQUIRED TO EXTEND TO NEW DIFFUSER IN RAISED CEILING.



1 FLOOR PLAN DEMOLITION - VENTILATION

1/8" = 1'-0"

NORTH

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
FLOOR PLAN DEMOLITION - VENTILATION

SHEET NUMBER:
MD1.11

5/16/2025 11:12:41 AM

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Illinois Design Firm Registration #184008976-0014

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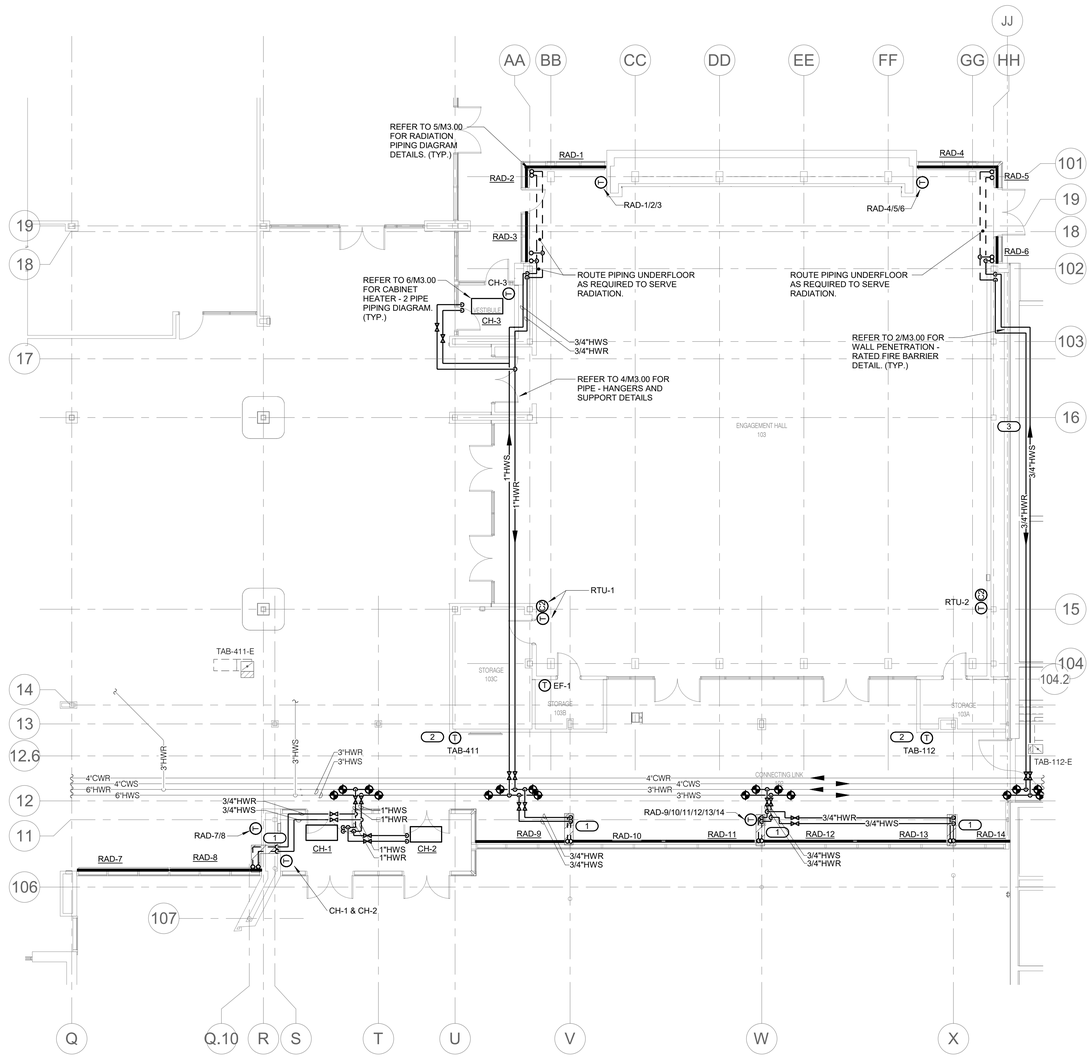
REF. SCALE IN INCHES

PROJECT #25005446.00

KEYNOTES:

1. DROP PIPING IN CHASE AND ROUTE UNDERFLOOR TO SERVE PEDESTAL MOUNTED RADIATION ON EACH SIDE. RADIATION TO BE CONTINOUS ALONG WALL. PROVIDE CONNECTORS/END CAPS AS REQUIRED. (TYP.)
2. PROVIDE NEW THERMOSTAT FOR TAB. PROVIDE NEW CONTROLS WIRING AS REQUIRED FOR NEW THERMOSTAT LOCATION
3. COORDINATE PIPING INSTALLATION WITH EXISTING CEILING CONTRACTOR TO REMOVE AND REPLACE CEILING TILES AS REQUIRED TO INSTALL PIPING.



1 FLOOR PLAN - PIPING

1/8" = 1'-0"

NORTH

ARCHITECT OF RECORD
DEMONICA KEMPER ARCHITECTS
125 N. HALSTED STREET, SUITE 301
CHICAGO, IL 60661
P: 312.496.0000

MEP-FP-T-ENGINEERS
IMEG CORP.
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P: 630.527.2320

CVIL-LANDSCAPE ENGINEER
HR GREEN
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P. 815.385.1778

CONSTRUCTION MANAGER
PEPPER CONSTRUCTION
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BARRINGTON, IL 60010
P. 847.381.2760

McHenry County College
ENGAGEMENT HALL

8900 NORTHWEST HWY #14
CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
FLOOR PLAN - PIPING

SHEET NUMBER:
M1.01

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0 1 2 3

REF. SCALE IN INCHES

PROJECT #25005446.00

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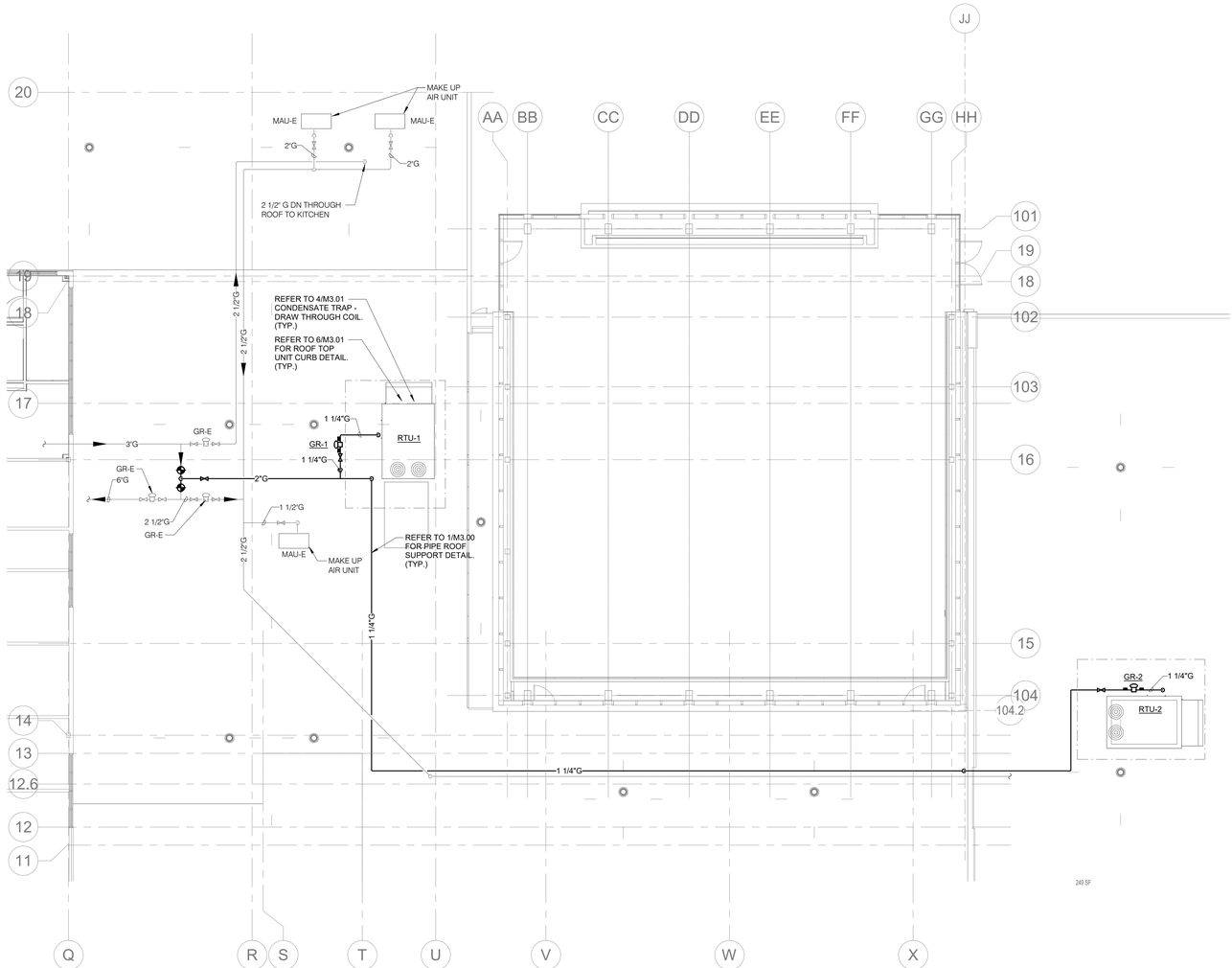

1 ROOF PLAN - PIPING

1/8" = 1'-0"

NORTH

ARCHITECT OF RECORD
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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:

ROOF PLAN - MECHANICAL

SHEET NUMBER:

M1.12

5/16/2025 11:12:44 AM

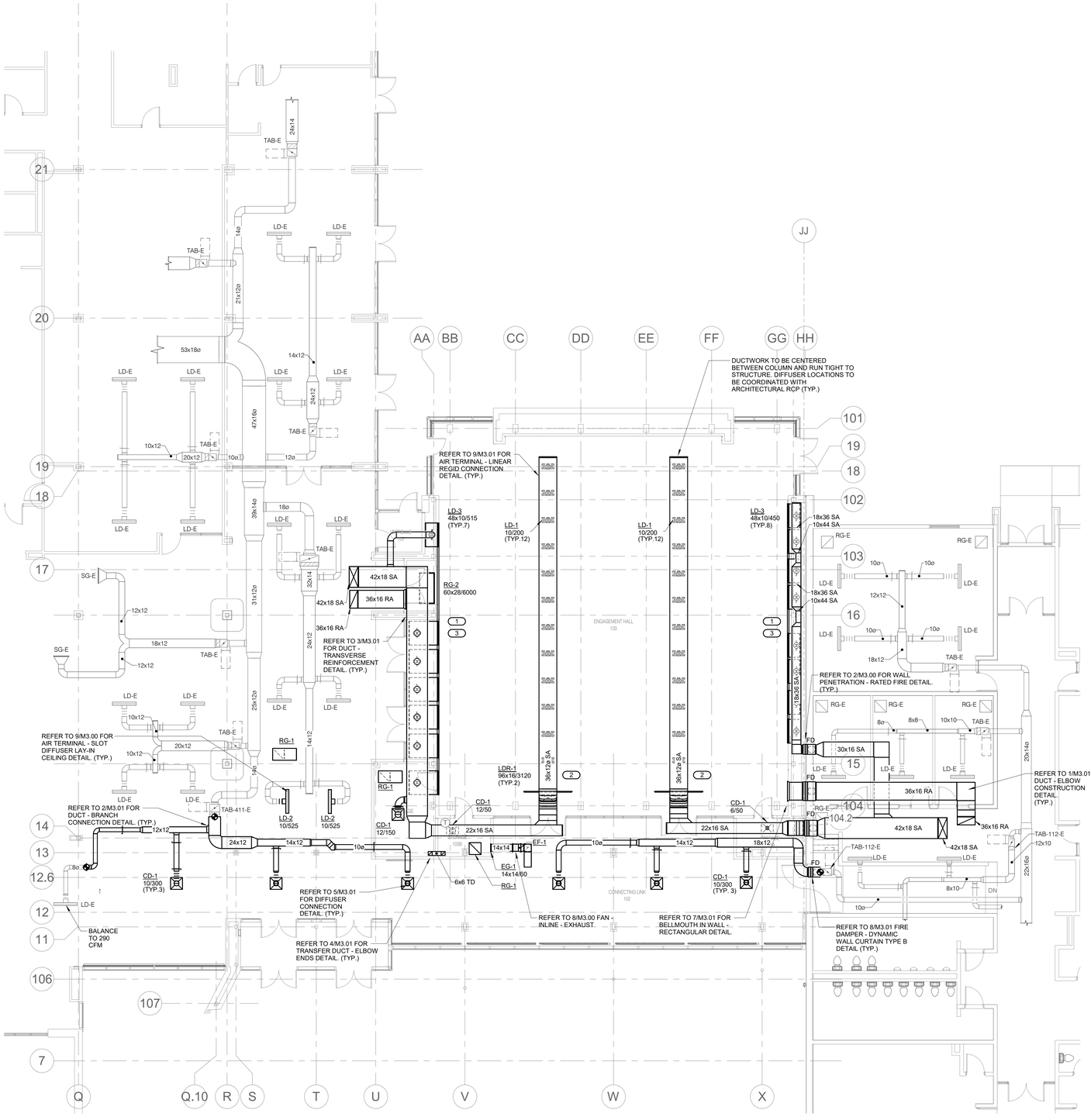
0 1 2 3

REF. SCALE IN INCHES

PROJECT #25005446.00

KEY NOTES: (#)

1. PROVIDE CONTINUOUS LINEAR DIFFUSER TO MATCH LENGTH SHOWN IN ARCHITECTURAL DRAWINGS. PROVIDE ACTIVE SECTION AS SCHEDULED. BLANK OFF UNUSED PORTION AS REQUIRED.
2. PROVIDE WALL MOUNTED LINEAR GRILLE ABOVE ENTRANCE TO FEED AIR INTO SOFFIT. REFER TO ARCHITECTURAL PLANS FOR MOUNTING ELEVATIONS.
3. DIFFUSERS AND DUCTWORK ARE TO BE COORDINATED WITH STRUCTURAL CROSS BRACING, HORIZONTAL BEAMS, AND VERTICAL COLUMNS.



1 FLOOR PLAN - VENTILATION

1/8" = 1'-0"

NORTH

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DEMONICA KEMPER ARCHITECTS
125 N. HALSTED STREET, SUITE 301
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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:

FLOOR PLAN - VENTILATION

SHEET NUMBER:

M1.11

5/16/2025 11:12:45 AM

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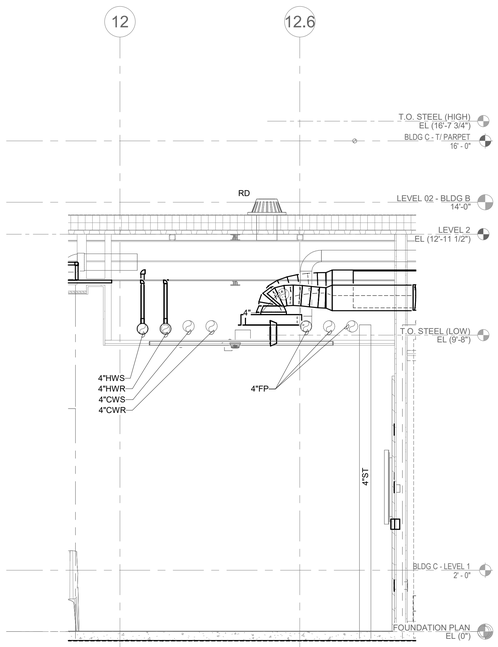
REF. SCALE IN INCHES 0 1 2 3

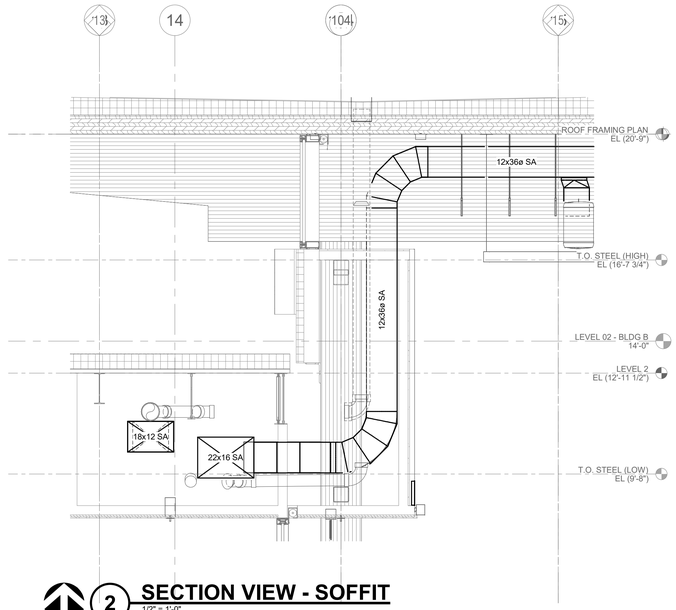
PROJECT #250054460.00



NORTH

1 **SECTION VIEW - CORRIDOR**

1/2" = 1'-0"



NORTH

2 **SECTION VIEW - SOFFIT**

1/2" = 1'-0"

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ENGAGEMENT HALL

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:

SECTION VIEWS

SHEET NUMBER:

M2.00

5/16/2025 11:12:48 AM

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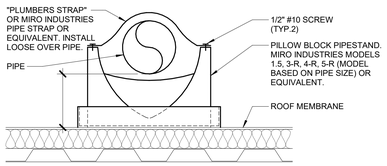
REF. SCALE IN INCHES

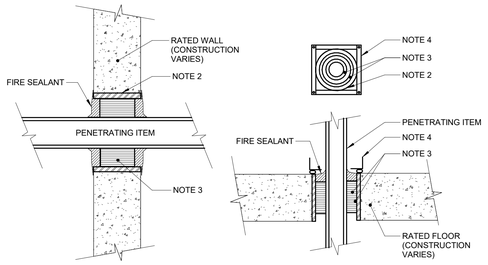
PROJECT #25005446.00



NOTES:

1. PIPE SUPPORT SHALL BE AT 8 FT. MAXIMUM SPACING. PROVIDE PIPE SUPPORT AT EACH SIDE OF 90° TURN.
2. PROVIDE EPDM PAD TO PROTECT ROOF IF REQUIRED BY ROOFING MANUFACTURER.
3. BASIS OF DESIGN: MIRO INDUSTRIES.

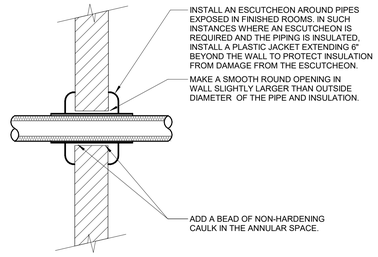
1 PIPE ROOF SUPPORT
NO SCALE



NOTES:

1. THIS GENERAL DETAIL APPLIES TO ALL ITEMS PENETRATING FIRE RATED WALLS OR FLOORS. THE INTENT IS TO MAINTAIN THE FIRE RATING AND TO ALLOW LONGITUDINAL MOVEMENT. REFER TO SPECIFICATION SECTION 23 05 03 - FOR SELECTION OF THROUGH PENETRATION FIRE STOPPING.
2. SCHEDULE 5 PIPE SLEEVE EMBEDDED IN WALL OR FLOOR, OR SMOOTH CORE DRILL. EACH CONTRACTOR FURNISHES SLEEVE TO G.C., COORDINATES SLEEVE LOCATIONS AND DEBURS SLEEVE. G.C. BUILDS SLEEVE INTO WALL ALLOWING NO GAP AROUND SLEEVE. IF SLEEVE IS NOT PROVIDED WHEN WALL OR FLOOR IS BUILT, CONTRACTOR SHALL INSTALL SLEEVE. SLEEVE SIZE SHALL ALLOW ANNULAR SPACE REQUIRED BY THE SELECTED FIRE STOP SYSTEM.
3. INSTALL BACKING MATERIAL, SUCH AS MINERAL WOOL SAFING, AS REQUIRED FOR FIRE STOP SYSTEM. INSTALL IN ACCORDANCE WITH FIRE STOP SYSTEM APPLICATION LISTING. SECURE TO WALL OR FLOOR TO ALLOW LONGITUDINAL MOVEMENT OF PENETRATING ITEM WITHOUT MOVEMENT OF FIRE BARRIER.
4. WATERTIGHT WELDED 1"x1" 20 GAUGE MINIMUM GALVANIZED SHEET METAL ANGLE FRAME, BY CONTRACTOR IN EQUIPMENT ROOMS FOR WATER STOP. PLACE A BEAD OF WATERPROOF SEALANT BETWEEN FLOOR AND BOTTOM OF ANGLE FRAME. SECURE TO FLOOR WITH MASONRY ANCHORS IN CORNERS AND ON 12" MAXIMUM CENTERS. MULTIPLE PENETRATING ITEMS MAY BE ENCLOSED IN ONE FRAME.

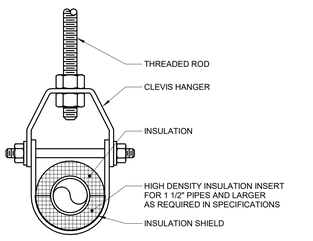
2 WALL PENETRATION - RATED FIRE BARRIER
NO SCALE



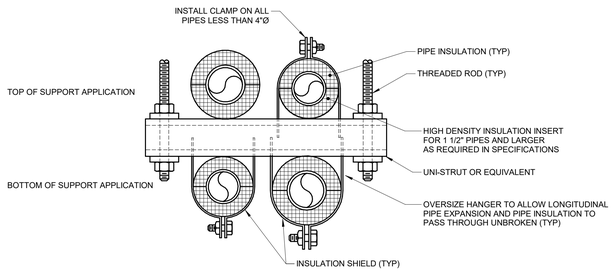
NOTES:

1. THIS DETAIL APPLIES TO ALL PIPES. THE INTENTION IS TO CONTINUE THE INSULATION AND VAPOR BARRIER THROUGH ALL PENETRATIONS. PERMIT THERMAL EXPANSION WITHOUT DAMAGING INSULATION, AND TO SEAL AIRTIGHT AROUND INSULATED AND UNINSULATED PIPES FOR NOISE TRANSMISSION CONTROL.
2. SEE SPECIFICATION SECTIONS 23 05 29 - HVAC) FOR ADDITIONAL INFORMATION.

3 WALL PENETRATION - NON-FIRE RATED
NO SCALE



INSULATED COLD PIPE HANGER

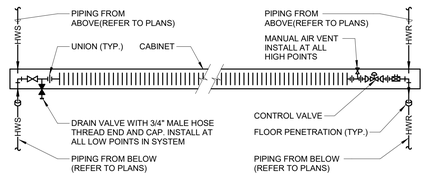


TRAPEZE HANGER

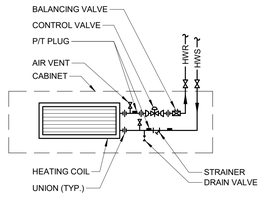
NOTES:

1. REFER TO SPECIFICATION SECTIONS 23 05 29 & 23 07 19.

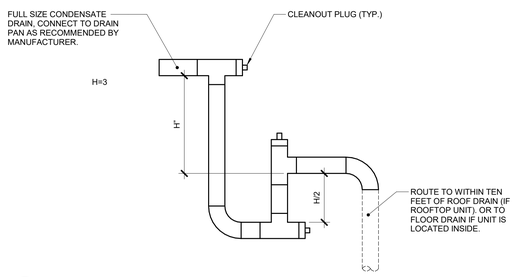
4 PIPE - HANGERS AND SUPPORTS
NO SCALE



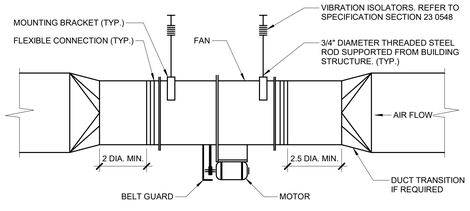
5 RADIATION - PIPING DIAGRAM
NO SCALE



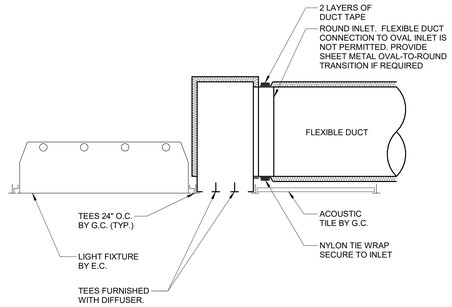
6 CABINET HEATER - 2-PIPE PIPING DIAGRAM
NO SCALE



7 CONDENSATE TRAP - DRAW THROUGH COIL
NO SCALE



8 FAN - IN-LINE EXHAUST
NO SCALE



9 AIR TERMINAL - SLOT DIFFUSER LAY-IN CEILING
NO SCALE

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8900 NORTHWEST HWY #14
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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
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NO:	DESCRIPTION:	DATE:

SHEET TITLE:
HVAC DETAILS

SHEET NUMBER:
M3.00

5/16/2025 11:12:49 AM

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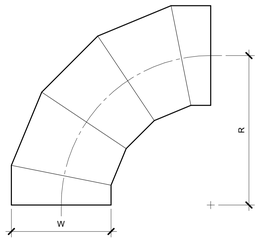
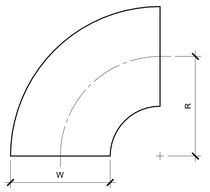
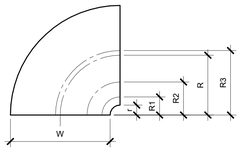
PROJECT #25005446.00



OVAL / ROUND
RADIUS ELBOW
SMOOTH OR 5 GORE (MINIMUM)
R/W = 1.5 (MINIMUM)

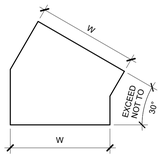


RECTANGULAR
RADIUS ELBOW
TYPE RE1
R/W = 1.0 (MINIMUM)
R/W < 1.0 SHALL BE TYPE RE3



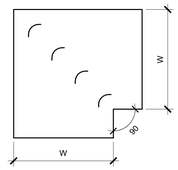
RECTANGULAR
RADIUS ELBOW WITH VANES
TYPE RE3

REFER TO SMACNA HVAC SYSTEMS DUCT DESIGN MANUAL, FOURTH EDITION, SECTION 5.14 "SPLITTER VANES" AND SMACNA HVAC DUCT CONSTRUCTION STANDARDS, THIRD EDITION, FIGURES 4-2 AND 4-9 AND CHARTS 4-1 AND 4-1M. ELBOW SHALL HAVE THREE SPLITTER VANES AND r/W = 0.10 (R/W = 0.60) UNLESS NOTED OTHERWISE.

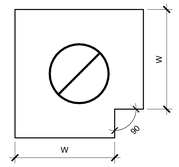


RECTANGULAR
MITERED ELBOW
TYPE RE6

USE ONLY AS PART OF OFFSETS AND TRANSITIONS PER FIGURE 4-7 TYPE 2 OR AS SHOWN ON DRAWINGS. OFFSETS ABOVE 30° SHALL BE TYPE RE1.

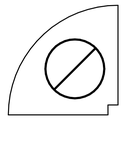


RECTANGULAR
MITERED ELBOW
WITH VANES
TYPE RE2



RECTANGULAR / OVAL / ROUND
MITERED ELBOW
WITHOUT VANES
TYPE RE4

NOT ALLOWED



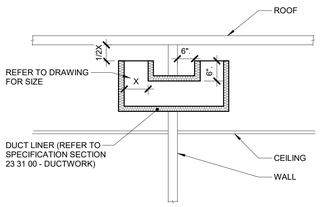
RECTANGULAR
RADIUS ELBOW WITH
SQUARE THROAT

NOT ALLOWED

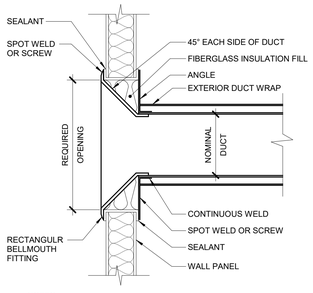
NOTES:

1. BEAD, CROSSBREAK, AND REINFORCE FLAT SURFACES AS IN STRAIGHT DUCT.
2. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. DEFAULT ELBOW SHALL BE TYPE "RE1".
4. ELBOW TYPES SHALL BE INSTALLED AS SHOWN AND NOT BE SUBSTITUTED WITHOUT PERMISSION. EXCEPTION: RE1 OR RE3 MAY BE SUBSTITUTED FOR RE2.

1 DUCT - ELBOW CONSTRUCTION
NO SCALE



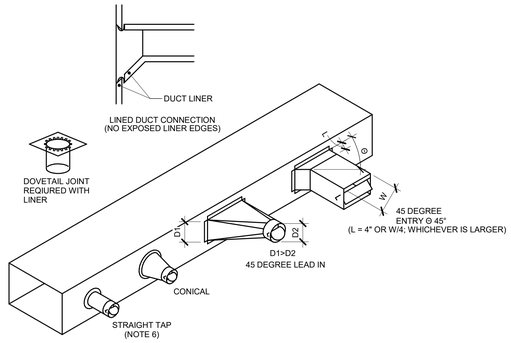
4 TRANSFER DUCT - ELBOW ENDS
NO SCALE



NOTES:

1. COORDINATE WITH HOUSING PANEL MANUFACTURER FOR EXACT BELLMOUTH FITTING INSTALLATION REQUIREMENTS.

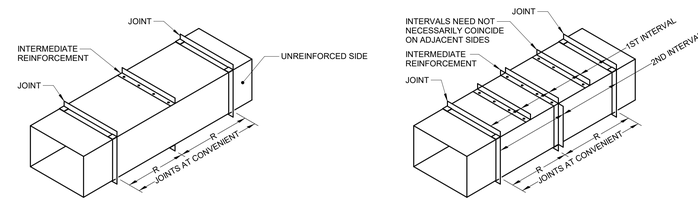
7 BELLMOUTH IN WALL DETAIL - RECTANGULAR
NO SCALE



NOTES:

1. DO NOT USE CONNECTIONS WITH SCOOPS.
2. FIT ALL CONNECTIONS TO AVOID VISIBLE OPENINGS AND SEAL SUITABLY FOR THE PRESSURE CLASS.
3. ADDITIONAL MECHANICAL FASTENERS ARE REQUIRED FOR 4" W.G. AND OVER.
4. REFER TO SPECIFICATIONS FOR VOLUME DAMPER REQUIREMENTS.
5. OPENINGS SHALL BE CUT ACCURATELY (SHAPE AND SIZE).
6. STRAIGHT TAPS ONLY ALLOWED DOWNSTREAM OF TERMINAL AIR BOX OR LOW PRESSURE (<2"W.C. PRESSURE CLASS)

2 DUCT - BRANCH CONNECTIONS
NO SCALE



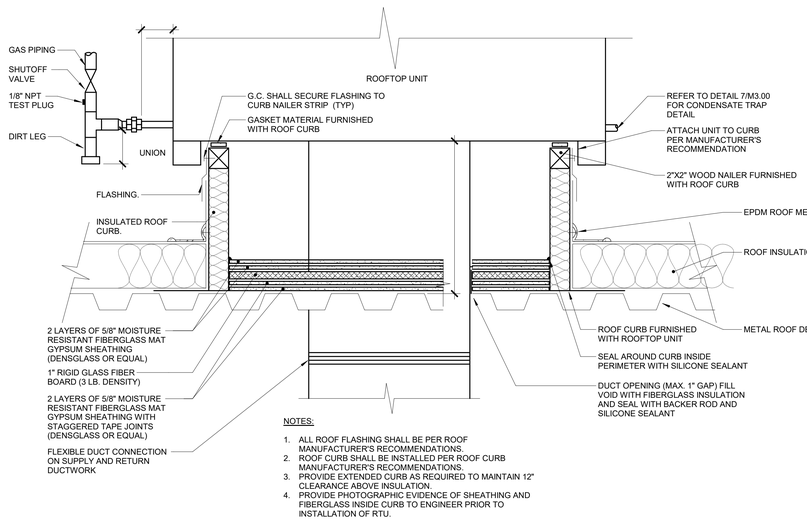
DUCT REINFORCED ON TWO SIDES

DUCT REINFORCED ON ALL SIDES

NOTES:

1. 'R' IS AN ALLOWABLE REINFORCEMENT INTERVAL.
2. TOP AND BOTTOM JOINTS MUST QUALIFY AS REINFORCEMENT
3. DUCT SIZES THAT ARE 19 INCHES (483 mm) AND OVER ARE 20 GAGE (1.00 mm) OR LESS, WITH MORE THAN 10 SQUARE FEET (0.93 SQUARE METER) OF UNBRACED PANEL AREA, SHALL BE CROSSBROKEN OR BEADED UNLESS THEY ARE LINED OR EXTERNALLY INSULATED. DUCTS THAT ARE OF HEAVIER GAGE, SMALLER DIMENSIONS, AND SMALLER PANEL AREA AND THOSE THAT ARE LINED OR EXTERNALLY INSULATED ARE NOT REQUIRED TO HAVE CROSSBREAKING OR BEADING.
4. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

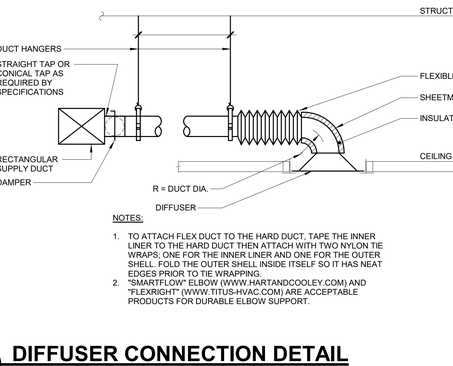
3 DUCT - TRANSVERSE REINFORCEMENT
NO SCALE



NOTES:

1. ALL ROOF FLASHING SHALL BE PER ROOF MANUFACTURER'S RECOMMENDATIONS.
2. ROOF CURB SHALL BE INSTALLED PER ROOF CURB MANUFACTURER'S RECOMMENDATIONS.
3. PROVIDE EXTENDED CURB AS REQUIRED TO MAINTAIN 12" CLEARANCE ABOVE INSULATION.
4. PROVIDE PHOTOGRAPHIC EVIDENCE OF SHEATHING AND FIBERGLASS INSIDE CURB TO ENGINEER PRIOR TO INSTALLATION OF RTU.

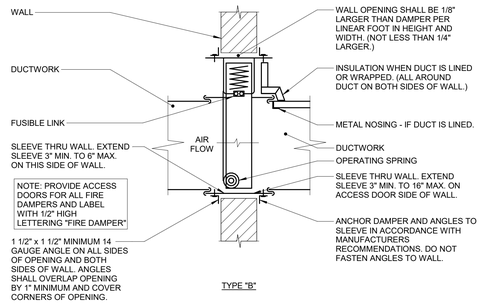
6 ROOF TOP UNIT CURB
NO SCALE



NOTES:

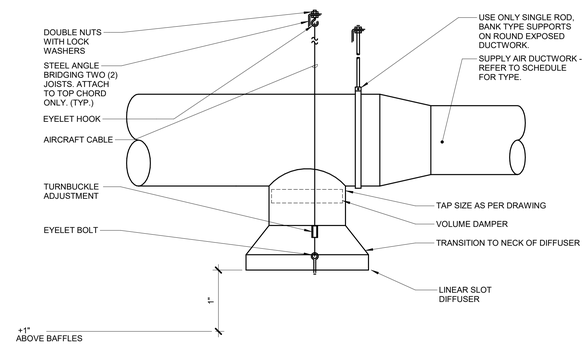
1. TO ATTACH FLEX DUCT TO THE HARD DUCT, TAPE THE INNER LINER TO THE HARD DUCT THEN ATTACH WITH TWO NYLON TIE WRAPS; ONE FOR THE INNER LINER AND ONE FOR THE OUTER SHELL. FOLD THE OUTER SHELL INSIDE ITSELF SO IT HAS NEAT EDGES PRIOR TO TIE WRAPPING.
2. "SMARTFLOW" ELBOW (WWW.HARTANDCOOLEY.COM) AND "FLEXRIGHT" (WWW.TITUS-HVAC.COM) ARE ACCEPTABLE PRODUCTS FOR DURABLE ELBOW SUPPORT.

5 DIFFUSER CONNECTION DETAIL
NO SCALE



TYPE "B"

8 FIRE DAMPER - DYNAMIC WALL CURTAIN TYPE B
NO SCALE



9 AIR TERMINAL - LINEAR RIGID CONNECTION
NO SCALE

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
HVAC DETAILS

SHEET NUMBER:
M3.01

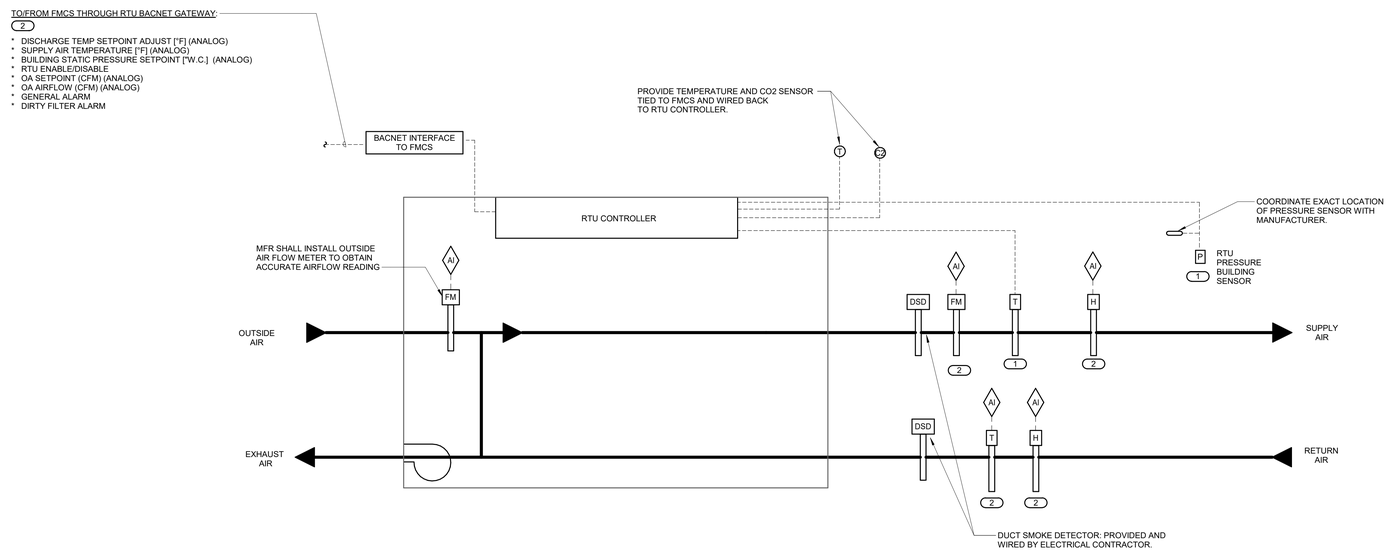
REF. SCALE IN INCHES 0 1 2 3 — PROJECT #25005446.00

5/16/2025 11:12:50 AM

RTU REPORT GENERATION:
DDC FMCS SHALL MONITOR THE FOLLOWING POINTS ON 10 MINUTE (ADJ.) INTERVALS WITHIN A SINGLE TREND. THE TREND SHALL RUN FOR 365 DAY (ADJ.) DURATION AT WHICH POINT THE NEWEST VALUES SHALL AUTOMATICALLY OVERWRITE THE OLDEST VALUES.

PROVIDED BY PACKAGED MANUFACTURER THROUGH GATEWAY TO FMCS:	POINTS PROVIDED BY FMCS AND SYSTEM:
• SUPPLY AIR TEMP (SAT) [°F] • OUTSIDE AIRFLOW [CFM] • FILTER SWITCH • SUPPLY FAN VFD OUTPUT [% FULL SPEED] • RETURN FAN VFD OUTPUT [% FULL SPEED] • OUTSIDE AIR DAMPER POSITION [% OPEN] • RETURN AIR DAMPER POSITION [% OPEN]	• DATE • TIME • GLOBAL OUTSIDE AIR TEMP [°F] • GLOBAL OUTSIDE AIR DEWPOINT [°F] GLOBAL OUTSIDE AIR HUMIDITY [%RH] • SUPPLY AIR RELATIVE HUMIDITY [%] • ROOM AIR TEMP SETPOINT [°F] • RETURN AIR TEMP (RAT) [°F] • RETURN AIR RELATIVE HUMIDITY [%] • SUPPLY AIRFLOW [CFM]

THIS INFORMATION SHALL BE ACCESSIBLE TO VIEW IN EITHER TABULAR OR GRAPHICAL FORM ON THE FMCS OPERATOR WORKSTATION.



1 PACKAGED ROOFTOP UNIT - DX COOLING & GAS HEATING DIAGRAM
NO SCALE

KEYNOTES:

1. SENSOR PROVIDED BY RTU MANUFACTURER. SENSOR FEEDER/RACEWAY AND CONNECTION SHALL BE INSTALLED BY TCC CONTRACTOR IN THE FIELD.
2. POINT, SENSOR AND FEEDER/RACEWAY PROVIDED BY TCC.

ROOF TOP UNIT OPERATION AND CONTROL

PACKAGE ROOFTOP UNIT SYSTEM DESCRIPTION:
- REFER TO SECTION 23 74 11 FOR A DESCRIPTION OF THE RTU.
- THE TCC SHALL EXTEND THE FMCS NETWORK TO THE RTU BACNET INTERFACE PER THE PROTOCOL SPECIFIED IN SECTION 23 09 00 AND ON THE FLOOR PLANS.
- THE TCC SHALL WIRE ALL LOOSE CONTROLS PROVIDED BY THE RTU MANUFACTURER AS SHOWN ON THE CONTROL DIAGRAM.
- THE TCC SHALL PROVIDE ALL ADDITIONAL CONTROL COMPONENTS REQUIRED TO ACCOMPLISH THE SEQUENCE OF OPERATION LISTED BELOW.
- TCC AND RTU MANUFACTURER SHALL COORDINATE DURING BIDDING TO CONFIRM ALL SCOPE IS COVERED AND NOT DUPLICATED.
- MANUFACTURER SEQUENCE OF OPERATION MAY DIFFER FROM WHAT IS INDICATED BELOW. MANUFACTURER'S SEQUENCE SHALL TAKE PRECEDENCE BUT SHALL INCLUDE IMPLIED DESIGN SEQUENCE AS INDICATED. CONTROLS CONTRACTOR AND MANUFACTURER SHALL COORDINATE THAT COMPLETE INTEGRATION AND INTENDED OPERATION IS PER THE DESIGN DOCUMENTS.

SPACE CONDITIONS:
- RTU CONTROLLER SHALL BE SET TO MAINTAIN 72°F (ADJ.) DURING OCCUPIED OPERATION.
- RTU CONTROLLER SHALL BE SET TO MAINTAIN 65°F (ADJ.) WINTER AND 78°F (ADJ.) SUMMER DURING UNOCCUPIED OPERATION. SUMMER AND WINTER TURNOVER POINTS SHALL BE BASED ON OUTSIDE AIR TEMPERATURES, AND SHALL BE ADJUSTABLE. WINTER SHALL BE DEFINED AS OUTSIDE AIR TEMPERATURES LESS THEN 50F DEGREES (ADJ.). SUMMER SHALL BE DEFINED AS GREATER THAN 50F DEGREES (ADJ.).

BUILDING OCCUPANCY SCHEDULING:
ENABLE RTU TO RUN BASED ON THE FOLLOWING OCCUPANCY SCHEDULE WITH ALLOWANCE FOR ENERGY CODE OPTIMAL START.
- OCCUPIED MODE: MONDAY THROUGH FRIDAY 6:00AM-9:00PM (ADJ.); SATURDAY THROUGH SUNDAY 8:00AM-6:00PM (ADJ.)
- UNOCCUPIED MODE: MONDAY THROUGH FRIDAY 9:00PM-5:00AM (ADJ.); SATURDAY THROUGH SUNDAY 6:00PM-7:00AM (ADJ.)

SUPPLY FAN CONTROL:
- UNIT CONTROLLER SHALL START SUPPLY FAN. SUPPLY FAN SHALL RUN CONTINUOUSLY WHEN OCCUPIED.

EXHAUST FAN CONTROL:
- UNIT CONTROLLER SHALL MONITER BUILDING PRESSURE SIGNAL. MODULATE SIGNAL TO EXHAUST FAN AS REQUIRED TO MAINTAIN (+0.05)" (ADJ.) W.C.

VENTILATION CONTROL:
- WHENEVER THE UNIT IS IN OCCUPIED MODE THE OUTSIDE AIR DAMPER AND RETURN AIR DAMPER SHALL MODULATE IN OPPOSITION TO MAINTAIN THE MINIMUM OUTSIDE AIR FLOW RATE (AS DESCRIBED IN RTU SCHEDULE), OR TO SATISFY THE ECONOMIZER DISCHARGE AIR SEQUENCE.

SUPPLY AIR CONTROL:
- DISCHARGE AIR TEMPERATURE SHALL BE MODULATED AS REQUIRED TO MAINTAIN SPACE SETPOINT. WHENEVER THE SUPPLY AIR TEMPERATURE IS ABOVE SETPOINT. THE FOLLOWING SHALL OCCUR IN SEQUENCE:
  - MODULATE GAS BURNER OFF.
  - MODULATE OA DAMPER AS REQUIRED UNTIL SET POINT IS REACHED.
  - THE COMPRESSORS SHALL BE ENABLED AND MFR SHALL MODULATE COMPRESSOR CAPACITY AS REQUIRED TO MAINTAIN SET POINT.
- WHENEVER THE DISCHARGE TEMPERATURE IS BELOW SET POINT. THE FOLLOWING SHALL OCCUR IN SEQUENCE:
  - IF THE DISCHARGED AIR TEMPERATURE IS MORE THAN 5°F (ADJ) BELOW SET POINT. MFR SHALL MODULATE COMPRESSORS OFF.
  - MODULATE OA DAMPER AS REQUIRED UNTIL SET POINT IS REACHED.
  - IF SET POINT CANNOT BE MAINTAINED BY OA DAMPER CONTROL, MODULATE GAS BURNER AS REQUIRED TO MAINTAIN SET POINT.

DEHUMIDIFICATION CONTROL:
- UNIT SHALL BE EQUIPPED WITH A HUMIDITY SENSOR IN THE SPACE OR IN THE RETURN DUCTWORK.
- HUMIDITY SET POINT SHALL BE 60% (ADJ.) RELATIVE HUMIDITY. ONCE THE SPACE HUMIDITY VALUE EXCEEDS THE DEHUMIDIFICATION SETPOINT DEHUMIDIFICATION IS ENABLED. THE UNIT WILL MAINTAIN THE COMPRESSOR OPERATION AND REDUCE THE INDOOR FAN AIRFLOW TO INCREASE LATENT CAPACITY.
- DURING DEHUMIDIFICATION MODE, DISCHARGE AIR TEMPERATURE OFF THE COOLING COIL SHALL BE 55°F (ADJ.) HOT GAS REHEAT COIL SHALL MODULATE AS REQUIRED TO MAINTAIN SPACE SETPOINT.
- IF THE SPACE HUMIDITY VALUE EXCEEDS THE DEHUMIDIFICATION SETPOINT DURING NO ACTIVE CALL FOR COOLING, THE UNIT WILL ENERGIZE THE COMPRESSOR AND FANS TO AN OPTIMUM CAPACITY FOR DEHUMIDIFICATION. IF DURING DEHUMIDIFICATION THE SPACE HUMIDITY FALLS BELOW THE DEHUMIDIFICATION SETPOINT - 2% (ADJ.), DEHUMIDIFICATION SEQUENCE WILL BE DISABLED AND THE UNIT WILL TRANSITION BACK TO NORMAL COOLING OR HEATING CONTROL.

ECONIMIZER CONTROL
- ECONOMIZER CONTROL SHALL BE ENABLED BASED ON OUTSIDE AIR ENTHALPY. IF UNIT IS IN COOLING MODE AND OUTSIDE AIR TEMPERATURE IS LESS THAN THE RETURN AIR TEMPERATURE THE RTU CONTROLLER SHALL ENABLE ECONOMIZER CONTROL. WHEN THE OUTSIDE AIR TEMPERATURE IS GREATER THAN THE RETURN AIR TEMPERATURE FOR 10 MINUTES, THE RTU CONTROLLER SHALL DISABLE ECONOMIZER CONTROL AND SHALL RETURN THE UNIT TO MINIMUM OUTSIDE AIR MODE. ONCE ECONOMIZER CONTROLS HAVE BEEN ENABLED OR DISABLED, THE UNIT SHALL CONTINUE TO OPERATE IN THAT MODE FOR A MINIMUM OF 10 MINUTES (ADJ.) BEFORE BEING ALLOWED TO BE SWITCHED BACK (TO PREVENT SHORT CYCLING).

DEMAND CONTROL VENTILATION (DCV):
- IF THE SPACE CO2 LEVEL IS GREATER THAN OR EQUAL TO THE DESIGN MINIMUM CO2 SETPOINT, THE OUTDOOR AIR DAMPER SHALL OPEN TO THE DESIGN MINMUM OUTDOOR AIR DAMPER SET POINT. IF THERE IS A CALL FOR ECONOMIZER COOLING, THE DAMPER MAY BE OPEN FURTHER TO SATIFY THE COOLING REQUEST.
- IF THE SPACE CO2 LEVEL IS LESS THAN OR EQUAL TO THE DCV MINIMUM CO2 SETPOINT, THE OUTDOOR AIR DAMPER SHALL CLOSE TO THE DVC MINIMUM OUTDOOR AIR DAMPER SETPOINT. IF THERE IS A CALL FOR ECONOMIZER COOLING, THE DAMPER MAY BE OPENED FURTHER TO SATISFY THE COOLING REQUEST.
- IF THE SPACE CO2 LEVEL IS GREATER THAN THE DVC MINIMUM CO2 SETPOINT AND LESS THAN THE DESIGN MINIMUM CO2 SETPOINT, THE OUTDOOR AIR DAMPER POSITION SHALL BE MODULATED PROPORTIONALLY TO THE SPACE CO2 LEVEL RELATIVE TO A TARGET POSITION BETWEEN THE DCV MINIMUM CO2 SETPOINT AND THE DESIGN MINIMUM. IF THERE IS A CALL FOR ECONOMIZER COOLING, THE DAMPER MAY BE OPENED FURTHER TO SATISFY THE COOLING REQUEST.

WHENEVER THE UNIT IS SHUT DOWN. THE UNIT CONTROLLER SHALL COMMAND THE FOLLOWING TO OCCUR:
- THE SUPPLY FAN AND EXHAUST FAN SHALL STOP.
- OUTSIDE AIR AND EXHAUST AIR DAMPERS SHALL FULLY CLOSE.
- HEATING AND COOLING SHALL BE DISABLED.
- RETURN AIR DAMPER SHALL FULLY OPEN.

UNOCCUPIED MODE:
- WHEN THE UNIT ENTERS UNOCCUPIED MODE THE FOLLOWING SHALL OCCUR: THE SUPPLY FAN SHALL RUN AS NECESSARY TO MAINTAIN SPACE SETPOINTS. THE OUTSIDE AIR DAMPER SHALL CLOSE.
  - THE RETURN AIR DAMPER SHALL OPEN.
  - THE COOLING CIRCUITS AND HEATING CIRCUITS SHALL MODULATE AS NECESSARY TO MAINTAIN SETPOINTS.
- HEATING OPTIMUM START-UP:
  - THIS CYCLE SHALL OVERRIDE THE UNOCCUPIED CYCLE. IF THE SYSTEM WAS OPERATING AS A RESULT OF THE UNOCCUPIED CYCLE, THE SYSTEM SHALL CONTINUE TO OPERATE. THE FMCS SHALL DETERMINE THE MINIMUM RUNTIME TO WARM THE SPACES TO THEIR SETPOINT. WHEN THE COMPUTED START TIME IS REACHED, THE RTU DISCHARGE AIR TEMPERATURE SHALL BE MAINTAINED AT A SETPOINT OF 85°F (ADJ.). THE SYSTEM SHALL CONTINUE TO OPERATE IN THE MODE UNTIL ALL TEMPERATURES EXCEED A SETPOINT OF 72°F (ADJ.). AT THAT TIME, THE FMCS SHALL SWITCH TO OCCUPIED CONTROL.
- COOLING OPTIMUM START-UP:
  - THIS CYCLE SHALL OVERRIDE THE UNOCCUPIED CYCLE. IF THE SYSTEM WAS OPERATING AS A RESULT OF THE UNOCCUPIED CYCLE, THE SYSTEM SHALL CONTINUE TO OPERATE. THE FMCS SHALL DETERMINE THE MINIMUM RUNTIME TO COOL THE SPACES TO THEIR SETPOINT WHEN THE COMPUTED START TIME IS REACHED. THE RTU DISCHARGE AIR TEMPERATURE SHALL BE MAINTAINED AT A SETPOINT OF 56°F (ADJ.). THE SYSTEM SHALL CONTINUE TO OPERATE IN THE MODE UNTIL ALL TEMPERATURES ARE LESS THAN A SETPOINT OF 72°F (ADJ.). AT THAT TIME, THE FMCS SHALL SWITCH TO OCCUPIED CONTROL

ALARMS, INTERLOCKS AND SAFETIES:
- THE FOLLOWING SAFETIES SHALL BE INSTALLED AND WIRED IN THE FIELD:
  - FIRE ALARM RELAY (WIRED TO UNIT ENABLE/DISABLE TO TURN FANS OFF)
- THE FOLLOWING CONDITIONS SHALL SHUTDOWN THE RTU AND INDICATE AN ALARM CONDITION AT THE FMCS OPERATOR
  - WORKSTATIONTHE SUPPLY FAN IS COMMANDED TO RUN AND THE DIFFERENTIAL PRESSURE SWITCH OR VFD INDICATES INSUFFICIENT CURRENT.
  - A DUCT SMOKE DETECTOR SENDS A SUPERVISORY SIGNAL TO THE FIRE ALARM CONTROL PANEL.
- THE FOLLOWING CONDITIONS SHALL INDICATE AN ALARM CONDITION AT THE FMCS OPERATOR WORKSTATION BUT THE RTU SHALL CONTINUE TO RUN:
  - AN ALARM IS INDICATED AT THE SUPPLY FAN VFD.
  - INSUFFICIENT CURRENT AT THE EXHAUST FAN.
  - THE DIFFERENTIAL PRESSURE SWITCH ACROSS A MERV 8 FILTER EXCEEDS 0.6" W.C. (ADJ.).
- IF SPACE TEMPERATURE IS MORE THAN 10°F (ADJ.) ABOVE OR BELOW SETPOINT THE FOLLOWING SHALL OCCUR:
  - THE EXHAUST AND OUTSIDE AIR DAMPERS SHALL CLOSE.
  - THE RETURN AIR DAMPER SHALL OPEN.
  - AN ALARM SHALL BE GENERATED AT THE FMCS OPERATOR WORKSTATION.
  - NORMAL OPERATION SHALL NOT RESUME UNTIL THE ALARM HAS BEEN ACKNOWLEDGED
  - BY FMCS OPERATOR

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
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NO:	DESCRIPTION:	DATE:

SHEET TITLE:
HVAC DIAGRAMS

SHEET NUMBER:
M4.00

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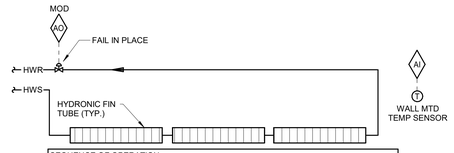


SEQUENCE OF OPERATION:

WHEN THE OUTDOOR AIR TEMPERATURE IS BELOW 40°F (ADJ.), THE FMCS SHALL MODULATE THE RADIATION CONTROL VALVE TO MAINTAIN A SPACE TEMPERATURE SETPOINT OF 68°F (ADJ.). ALL PIECES OF RADIATION CONNECTED TO A SINGLE TEMPURATE SENSOR SHALL BE CONNECTED TO A SINGLE CONTROL VALVE.

WHEN THE OUTDOOR AIR TEMPERATURE IS ABOVE 60°F (ADJ.), CONTROL VALVE SHALL BE FULLY CLOSED.

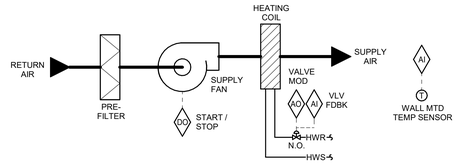
FMCS SHALL PERFORM AN AUTO-ZERO FUNCTION EVERY NIGHT DURING UNOCCUPIED TIMES. THE FMCS SHALL STAGGER AUTO-ZERO SEQUENCES SO THAT ALL VALVES DO NOT SIMULTANEOUSLY CLOSE.

NIGHT SETBACK CONTROL:
OCCUPIED/UNOCCUPIED SCHEDULE SHALL BE SET AT THE OPERATOR INTERFACE FOR THIS ZONE. WHEN THE ZONE IS SCHEDULED UNOCCUPIED, THE SPACE TEMPERATURE SETPOINT SHALL BE RESET TO 55°F (ADJ.).

ALARMS, INTERLOCKS & SAFETIES:

SEND AN ALARM TO THE FMCS OPERATOR INTERFACE IF THE SPACE TEMPERATURE FALLS 10°F (ADJ.) BELOW SETPOINT.

1 STAND ALONE RADIATION CONTROL
NO SCALE



SEQUENCE OF OPERATION:

THE CABINET HEATER SHALL BE FURNISHED WITH A UNIT MOUNTED FAN SPEED SELECTOR SWITCH (OFF-HIGH-MED-LOW). THE UNIT SHALL MAINTAIN A SPACE TEMPERATURE OF NO MORE THAN 60°F.

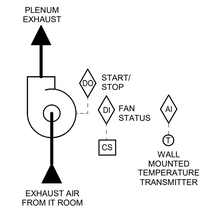
WHEN THE OUTDOOR AIR TEMPERATURE IS ABOVE 45°F, THE FMCS SHALL MODULATE THE CONTROL VALVE TO MAINTAIN SETPOINT. FMCS SHALL ENABLE THE FAN WHEN THE CONTROL VALVE IS OPEN AND DISABLE THE FAN WHEN THE CONTROL VALVE IS CLOSED.

WHEN THE OUTDOOR AIR TEMPERATURE IS BELOW 45°F, THE FMCS SHALL MODULATE THE CONTROL VALVE TO MAINTAIN SETPOINT AND THE FAN SHALL RUN CONTINUOUSLY.

ALARMS, INTERLOCKS & SAFETIES:

- SEND AN ALARM TO THE FMCS OPERATOR INTERFACE IF SPACE TEMPERATURE FALLS 10°F (ADJ.) BELOW SETPOINT.

2 CABINET HEATER CONTROL - HYDRONIC
NO SCALE



SEQUENCE OF OPERATION:
EXHAUST FAN SHALL OPERATE WHEN THE ROOM TEMPERATURE RISES ABOVE 78°F(ADJ). WHEN ROOM TEMPERATURE DROPS BELOW 74°F(ADJ.), FMCS SHALL DE-ENERGIZE FAN.

ALARMS, INTERLOCKS AND SAFETIES:
AN ALARM SHALL BE GENERATED AT THE FMCS OPERATOR WORKSTATION IN THE EVENT OF THE FOLLOWING:
- THE FMCS COMMANDS THE EXHAUST FAN TO OPERATE AND THE CURRENT SENSING RELAY DETECTS INSUFFICIENT CURRENT DRAW
- AN ALARM SHALL BE GENERATED AT THE FMCS OPERATOR WORKSTATION WHEN THE ROOM TEMPERATURE REACHES 80°F (ADJ.).

3 FAN - TEMPERATURE CONTROL
NO SCALE

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REF. SCALE IN INCHES

PROJECT #25005446.00

SCHEDULE GENERAL NOTES:

A. DISCONNECT AND CONTROLLER STARTER FURNISHED AND INSTALLED BY:
MFR = MANUFACTURER
EC = ELECTRICAL CONTRACTOR.
MC = FURNISHED BY MECHANICAL CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR.
MFR/EC = FURNISHED LOOSE BY MANUFACTURER INSTALLED BY ELECTRICAL CONTRACTOR.
TCC = TEMPERATURE CONTROL CONTRACTOR

B. DISCONNECT TYPE:
CB = CIRCUIT BREAKER
F = FUSED
NF = NON-FUSED

C. NO EQUIPMENT SHALL BE SELECTED ABOVE 90% OF MOTOR NAME PLATE RATING.

D. MUST BE WITHIN +/- 10% OF SCHEDULED RPM.

E. CURB TYPE:
MFR = STANDARD CURB BY MANUFACTURER
GC = BY GENERAL CONTRACTOR
SAC = SOUND ATTENUATOR CURB

ROOFTOP UNIT SCHEDULE – GAS-DX

NOTES:
1.PROVIDE SHAFT GROUNDING AS REQUIRED
2.LAT LISTED IS AT LEAVING SIDE OF COOLING COIL
3.PROVIDE WITH MODULATING HOT GAS REHEAT. HUMIDITY SENSOR PROVIDED WITH UNIT AND FIELD INSTALLED BY CONTRACTOR TO CONTROL THE SPACE RELATIVE HUMIDITY.
4.PROVIDE WITH FACTORY OUTDOOR AIRFLOW MEASURING STATION.

					SUPPLY FAN (NOTE 3)						EXHAUST FAN (NOTE 1)						UNIT ELECTRICAL DATA								COOLING COIL - DX							HEATING - GAS										MAX.DIMENSIONS						
																					DISCONNECT(S)		CONTROLLER STARTER(S)																								
TAG NAME	AREA SERVED	NOMINAL TONS	MINIMUM OUTSIDE AIR (CFM)	MAXIMUM OUTSIDE AIR (CFM)	NO. OF FANS	CFM TOTAL	EXT S.P. IN W.C.	R P M	BHP EACH	MHP EACH	FAN CFM	FAN QTY	TYPE	FAN RPM	BHP EACH (NOTE C)	MHP EACH (NOTE C)	VOLTAGE	PHASES	FLA	MCA	MOCP	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	SCCR	EAT DB °F	EAT WB °F	LAT DB °F (NOTE 2)	LAT WB °F (NOTE 2)	SENSIBLE MBH	TOTAL MBH	AMB TEMP °F	STAGES	MIN EFF AFUE	MIN INPUT MBH	MIN OUTPUT MBH	TURN DOWN/STEPS	MINIMUM FUEL PRESSURE in. WC	MAXIMUM FUEL PRESSURE in. WC	SEER	FILTER TYPE	CONTROL TYPE	CURB TYPE (NOTE E)	LENGTH	WIDTH	HEIGHT	OPERATING WEIGHT	MANUFACTURER	MODEL	NOTES
RTU-1	EVENT SPACE WEST	17.5	1860	2,800	2	6205	1.75	1350	1.8	3	0	1	DIRECT	1075	0.87	1	460	3	46.1	60	80	MFR	NF	MFR	5,000	81.0	68.0	55.9	55.0	154.4	248.9	95	2	81%	400	324	10:1	7	14	20.50	MERV 8	1/M3.0	MFR	10'-3"	7'-3"	5'-6"	2240	TRANE	YZK210	1,3,4,6
RTU-2	EVENT SPACE EAST	17.5	1815	2,725	2	6050	1.75	1350	1.8	3	0	1	DIRECT	1075	0.87	1	460	3	46.1	60	80	MFR	NF	MFR	5,000	81.0	68.0	55.9	55.0	115.5	154.0	95	2	81%	400	324	10:1	7	14	25.00	MERV 8	1/M3.0	MFR	10'-3"	7'-3"	5'-6"	2130	TRANE	YZK210	1,3,4,6

CABINET HEATER SCHEDULE - HOT WATER

NOTES:
1.COORDINATE COLOR SELECTION WITH ARCHITECT. PRIMED FOR FIELD PAINTING TO MATCH CEILING.

										ELECTRICAL								MAX. DIMENSIONS			WEIGHT				
															DISCONNECT		CONTROLLER/ STARTER		EMERGENCY								
TAG NAME	AREA SERVED	CONFIGURATION	NOMINAL CFM	MBH	GPM	EWT °F	LWT °F	MAX W.P.D. FT. HD	CONTROL TYPE	FAN HP	RPM	VOLTAGE	PHASES	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	SCCR	POWER	LENGTH	WIDTH	HEIGHT	DRY	OPERATING	MANUFACTURER	MODEL	NOTES
CH-1	103 VESTIBULE	HORIZONTALLY RECESSED	600	45	2.4	200	180	5	2/M4.01	0.25	1500	120	1	MFR	NF	TCC	5000	Yes	47	30	11	118	128	TRANE	FFE060	ALL
CH-2	103 VESTIBULE	HORIZONTALLY RECESSED	600	45	2.4	200	180	5	2/M4.01	0.25	1500	120	1	MFR	NF	TCC	5000	Yes	47	30	11	118	128	TRANE	FFE060	ALL
CH-3	101 VESTIBULE	HORIZONTALLY RECESSED	400	30	1.5	200	180	5	2/M4.01	0.25	1500	120	1	MFR	NF	TCC	5000	Yes	33	30	11	68	78	TRANE	FFE030	ALL

FAN SCHEDULE

								ELECTRICAL (NOTE 1)										
												DISCONNECT		CONTROLLER/ STARTER				
TAG NAME	AREA SERVED	CFM	S.P. IN. W.C.	FAN CLASS	WHEEL DIA. INCHES	FAN RPM (NOTE D)	DRIVE TYPE	BHP (NOTE C)	MHP (NOTE C)	VOLTAGE	PHASES	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	SCCR	EMERGENCY POWER	CONTROL TYPE	MANUFACTURER	MODEL
EF-1	STORAGE 103B	60	0.50	INLINE	12	1330	BELT	0.01	0.03	120	1	MFR	NF	TCC	5000	No	3/4.01	COOK	SQI

RADIATION SCHEDULE

NOTES:
1.REFER TO CONTROL DRAWINGS FOR DESCRIPTION OF CONTROL TYPE.
2.BLACK FINISH.
3.RADIATION TO BE PEDESTAL MOUNTED ELEMENT TO BE 5.7" TALL ON 3" PEDESTAL.
4.RADIATION BEING FED FROM BELOW SHALL HAVE AN END CAP.

		ELEMENT										
TAG NAME	AREA SERVED	BTU/FT	GPM	MAT'L	LENGTH FT.	PIPE SIZE	ENCLOSURE HEIGHT (NOTE 3)	ENCLOSURE WIDTH	AVERAGE WATER TEMP °F	CONTROL TYPE (NOTE 1)	MANUFACTURER	MODEL	NOTES
RAD-1	EVENT SPACE	480	0.5	ALUMINUM	10' - 6"	3/4"	8 3/4"	3 1/2"	190	1/M4.01	RITTLING	PR	1, 2, 3, 4
RAD-2	EVENT SPACE	480	0.5	ALUMINUM	2' - 6"	3/4"	8 3/4"	3 1/2"	190	1/M4.01	RITTLING	PR	1, 2, 3, 4
RAD-3	EVENT SPACE	480	0.5	ALUMINUM	6' - 6"	3/4"	8 3/4"	3 1/2"	190	1/M4.01	RITTLING	PR	1, 2, 3, 4
RAD-4	EVENT SPACE	480	0.5	ALUMINUM	10' - 6"	3/4"	8 3/4"	3 1/2"	190	1/M4.01	RITTLING	PR	1, 2, 3, 4
RAD-5	EVENT SPACE	480	0.5	ALUMINUM	2' - 6"	3/4"	8 3/4"	3 1/2"	190	1/M4.01	RITTLING	PR	1, 2, 3, 4
RAD-6	EVENT SPACE	480	0.5	ALUMINUM	3' - 6"	3/4"	8 3/4"	3 1/2"	190	1/M4.01	RITTLING	PR	1, 2, 3, 4
RAD-7	CORRIDOR	480	0.5	ALUMINUM	12' - 0"	3/4"	8 3/4"	3 1/2"	190	1/M4.01	RITTLING	PR	1, 2, 3, 4
RAD-8	CORRIDOR	480	0.5	ALUMINUM	12' - 0"	3/4"	8 3/4"	3 1/2"	190	1/M4.01	RITTLING	PR	1, 2, 3, 4
RAD-9	CORRIDOR	480	0.5	ALUMINUM	11' - 6"	3/4"	8 3/4"	3 1/2"	190	1/M4.01	RITTLING	PR	1, 2, 3, 4
RAD-10	CORRIDOR	480	0.5	ALUMINUM	11' - 6"	3/4"	8 3/4"	3 1/2"	190	1/M4.01	RITTLING	PR	1, 2, 3, 4
RAD-11	CORRIDOR	480	0.5	ALUMINUM	11' - 6"	3/4"	8 3/4"	3 1/2"	190	1/M4.01	RITTLING	PR	1, 2, 3, 4
RAD-12	CORRIDOR	480	0.5	ALUMINUM	11' - 6"	3/4"	8 3/4"	3 1/2"	190	1/M4.01	RITTLING	PR	1, 2, 3, 4
RAD-13	CORRIDOR	480	0.5	ALUMINUM	11' - 6"	3/4"	8 3/4"	3 1/2"	190	1/M4.01	RITTLING	PR	1, 2, 3, 4
RAD-14	CORRIDOR	480	0.5	ALUMINUM	7' - 0"	3/4"	8 3/4"	3 1/2"	190	1/M4.01	RITTLING	PR	1, 2, 3, 4

LINEAR DIFFUSER SCHEDULE

NOTES:
1.CONTRACTOR SHALL DETERMINE PROPER MARGIN STYLE TO MATCH CEILING CONSTRUCTION.
2.PROVIDE WITH CONCEALED FASTENERS.
3.DIFFUSERS WITH MULTIPLE SLOTS SHALL HAVE THE INNER MOST SLOT DIRECTED TOWARDS THE INTERIOR OF THE BUILDING, THE REMAINING SHALL BE DIRECTED TOWARDS THE EXTERIOR UNLESS NOTED OTHERWISE.

TAG NAME	MATERIAL	SLOT WIDTH	NO. OF SLOTS	WIDTH	LENGTH	PLENUM REQUIRED	PLENUM INSULATION TYPE	PLENUM INLET SIZE	PATTERN CONTROL REQUIRED	BALANCING DAMPER REQUIRED	FINISH	MANUFACTURER	MODEL	NOTES
LD-1	STEEL	1 1/2"	4	10"	2'-0"	Yes	WRAPPED	SEE DWG.	Yes	Yes	WHITE	TITUS	TBD-80	NOTE 1, 2 , & 3
LD-2	ALUMINUM	2"	1	6 1/4"	4'-0"	Yes	LINED	SEE DWG.	Yes	Yes	WHITE	TITUS	FL-HT	NOTE 1, 2 , & 3
LD-3	ALUMINUM	2'-0"	2	10'-0"	4'-0"	Yes	LINED	SEE DWG.	Yes	Yes	WHITE	TITUS	FL-20	NOTE 1, 2, & 3
LDR-1	ALUMINUM	1/2"	6	1'-4"	8'-0"	No	N/A	N/A	No	No	WHITE	TITUS	CT-540	NOTE 1 & 2

AIR TERMINAL SCHEDULE

NOTES:
1.CONTRACTOR SHALL DETERMINE PROPER BORDER TYPE TO MATCH CEILING CONSTRUCTION.
2.REFER TO DRAWINGS FOR NECK SIZE. ALL BRANCH DUCTWORK TO AIR TERMINALS SHALL BE NECK SIZE UNLESS NOTED OTHERWISE.

TAG NAME	FACE SIZE (IN.) (NOTE 2)	TYPE	BORDER (NOTE 1)	MATERIAL	FINISH	VOLUME DAMPER REQUIRED	MANUFACTURER	MODEL	NOTES
CD-1	24x24	PLAQUE	LAY-IN	STEEL	WHITE	NO	TITUS	OMNI	NOTE 1 & 2
EG-1	SEE DWG	35 DEGREE DEFLECTION	SURFACE MOUNT	STEEL	WHITE	NO	TITUS	350	LONG BLADES
RG-1	24x24	PERFORATED	LAY-IN	STEEL	WHITE	NO	TITUS	PAR	NOTE 1 & 2
RG-2	SEE DWG	35 DEGREE DEFLECTION	LAY-IN	ALUMINUM	WHITE	NO	TITUS	350RL	LONG BLADES

GAS REGULATOR SCHEDULE

TAG NAME	DESCRIPTION	MANUFACTURER AND MODEL
GR-1	GAS PRESSURE REGULATOR - CAST IRON BODY, INTERNAL PRESSURE RELIEF, THREADED CONNECTIONS, ADJUSTABLE PRESSURE SETTING, TIGHT SHUTOFF. 2 PSI INLET PRESSURE, 11" WC OUTLET PRESSURE, 400 CFH CAPACITY, MINIMUM CONTROLLABLE FLOW OF CFH 40	FISHER (S200 SERIES) OR EQUAL BY ITRON, SENSUS OR MAXITROL
GR-2	GAS PRESSURE REGULATOR - CAST IRON BODY, INTERNAL PRESSURE RELIEF, THREADED CONNECTIONS, ADJUSTABLE PRESSURE SETTING, TIGHT SHUTOFF. 2 PSI INLET PRESSURE, 11" WC OUTLET PRESSURE, 250 CFH CAPACITY, MINIMUM CONTROLLABLE FLOW OF CFH 25	FISHER (S200 SERIES) OR EQUAL BY ITRON, SENSUS OR MAXITROL

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
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NO:	DESCRIPTION:	DATE:

SHEET TITLE:
HVAC SCHEDULES

SHEET NUMBER:
M5.00

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PROJECT #25005446.00

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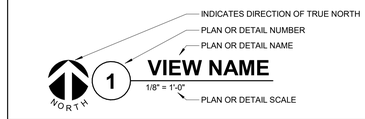
VIEW KEY

NAME — LEVEL NAME
10'-0" — HEIGHT ABOVE PROJECT 0'-0"

1 — KEYNOTE: INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL



LINE TYPE AND TAG KEY:

- NEW WORK BY THIS CONTRACTOR (DARK SOLID LINE)
- NEW WORK BY OTHER (LIGHT COLD LINE)
- NEW UNDERFLOOR
- EQUIPMENT CLEARANCE (DASHED LINE)

CONTRACTOR ABBREVIATION KEY

ABBR:	DESCRIPTION:
E.C.	ELECTRICAL CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
T.C.C.	TEMPERATURE CONTROLS CONTRACTOR
A.V.C.	AUDIO VISUAL CONTRACTOR
T.C.	TECHNOLOGY CONTRACTOR

PLUMBING SYMBOL LIST

SYMBOL:	DESCRIPTION:
—ST(100)—	STORM DRAINAGE (GPM)
—STS(100)—	SECONDARY STORM DRAINAGE (GPM)
	PIPE CONTINUATION
	PIPE CAP
	PIPE DOWN
	PIPE UP OR UP/DOWN
FD	PIPE SERVING FIXTURE ON FLOOR ABOVE (EXAMPLE: FD = FLOOR DRAIN)
	PITCH PIPE IN DIRECTION
RD-1 6"/100	ROOF DRAIN PROPERTIES SYMBOL SIZE /GPM
	SAWCUT

PLUMBING ABBREVIATION KEY

ABBR:	DESCRIPTION:
CO	CLEANOUT
FCO	FLOOR CLEANOUT
RD	ROOF DRAIN
TYP	TYPICAL
YCO	YARD CLEANOUT

PLUMBING SHEET INDEX

P0.00	PLUMBING COVERSHEET
PD1.00	UNDERFLOOR DEMOLITION - PLUMBING - EVENT SPACE
PD1.01	FLOOR PLAN DEMOLITION - PLUMBING - EVENT SPACE
P1.00	UNDERFLOOR - PLUMBING - EVENT SPACE
P1.01	FLOOR PLAN - PLUMBING - EVENT SPACE
P1.02	ROOF PLAN - PLUMBING
P2.00	PLUMBING DETAILS
GRAND TOTAL: 7	

PLUMBING GENERAL NOTES:

1. THE SYMBOLS AND THE MATERIAL LIST ARE FOR THE CONVENIENCE OF THE CONTRACTOR. CONTRACTOR SHALL VERIFY QUANTITIES AND FURNISH ALL MATERIALS REQUIRED FOR FULLY OPERATIONAL SYSTEMS, WHETHER SPECIFIED OR NOT.
2. CATALOG NUMBERS SHALL NOT BE CONSIDERED COMPLETE, BUT ARE GIVEN AS AN AID TO THE CONTRACTOR AND TO INDICATE THE QUALITY REQUIRED. CONTRACTOR IS RESPONSIBLE FOR A COMPLETE DESCRIPTION OF MATERIAL ON THESE DRAWINGS AND IN THE SPECIFICATIONS BEFORE ORDERING. THE DESCRIPTION OF THE MATERIAL TAKES PRECEDENCE OVER THE CATALOG NUMBER. THE FIRST MANUFACTURER LISTED IS THE BASIS OF DESIGN.
3. CONTRACTOR SHALL VERIFY THAT FIXTURES SUPPLIED ARE APPROVED PER ALL APPLICABLE STATE, LOCAL AND GOVERNING AUTHORITIES.
4. ALL FIXTURES SHALL CONFORM TO FEDERAL ACT S.3874
5. VERIFY UNDERGROUND PIPE SIZES, INVERT ELEVATIONS, AND LOCATIONS PRIOR TO BEGINNING ANY WORK.
6. REFER TO THE PLUMBING ROUGH-IN SCHEDULE FOR THE SIZES OF BRANCH PIPES TO PLUMBING FIXTURES.

MECHANICAL GENERAL NOTES:

1. DRAWINGS SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC., AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.
2. CATALOG AND MODEL NUMBERS SHALL NOT BE CONSIDERED COMPLETE, BUT ARE GIVEN AS AN AID TO THE CONTRACTOR AND TO INDICATE THE QUALITY REQUIRED. CONTRACTOR IS RESPONSIBLE FOR THE COMPLETE DESCRIPTION OF MATERIAL SCHEDULED ON THESE DRAWINGS AND IN THE SPECIFICATIONS BEFORE ORDERING. THE DESCRIPTION OF THE MATERIAL AND SCHEDULED PERFORMANCE TAKES PRECEDENCE OVER THE MODEL NUMBER. THE FIRST MANUFACTURER SCHEDULED IS THE BASIS OF DESIGN.
3. DETERMINATION OF QUANTITIES OF MATERIAL AND EQUIPMENT REQUIRED SHALL BE MADE BY THE CONTRACTOR FROM THE DOCUMENTS. WHERE MATERIAL AND/OR QUANTITY DISCREPANCIES ARISE BETWEEN DRAWINGS, SCHEDULES AND/OR SPECIFICATIONS, THE HIGHER QUALITY/ GREATER NUMBER SHALL GOVERN.
4. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS, INCLUDING THOSE OF OTHER TRADES.
5. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO PROVIDE CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE, AND TO VERIFY NON-INTERFERENCE WITH OTHER WORK. DO NOT FABRICATE PRIOR TO VERIFICATION OF NECESSARY CLEARANCES FOR ALL TRADES. BRING ANY INTERFERENCES OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH FABRICATION OR EQUIPMENT ORDERS.
6. REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED OR SUBSTITUTED AND MAKE REASONABLE ACCOMMODATIONS IN LAYOUT AND POSITIONING TO PROVIDE PROPER ACCESS.
7. ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.
8. EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
9. IN AREAS WITH DRYWALL CEILINGS COORDINATE LOCATIONS OF ACCESS PANELS WITH THE GC FOR ACCESS TO VALVES, DUCTWORK ACCESSORIES, DAMPERS, ETC. COORDINATE PANEL TYPE AND COLOR WITH ARCHITECT. NOTIFY THE GC OF THE REQUIRED ACCESS PANELS PRIOR TO BIDDING.
10. SEAL ALL FLOOR AND WALL PENETRATIONS AIRTIGHT WHERE CONDUITS, PIPING, AND DUCTS PENETRATE.
11. CAULK ALL PIPE AND DUCT PENETRATIONS OF FULL HEIGHT NON-FIRE RATED WALL, PARTITION, FLOOR, AND ROOF ASSEMBLIES. THIS IS ESSENTIAL TO PREVENT NOISE TRANSMISSION FROM ONE ROOM TO ANOTHER AND TO PROVIDE THE DESIRED NC LEVELS WITHIN ROOMS.
12. DO NOT BLOCK TUBE PULL OR EQUIPMENT SERVICE CLEARANCES.
13. MAINTAIN A MINIMUM WORKING CLEARANCE OF 3'-6" IN FRONT OF ALL ELECTRICAL EQUIPMENT REQUIRING MAINTENANCE, INSPECTION, AND TESTING INCLUDING BUT NOT LIMITED TO PANELS, DISTRIBUTION PANELS, SWITCHBOARDS, MOTOR CONTROL CENTERS, TRANSFORMERS, EQUIPMENT DISCONNECTS AND STARTERS.
14. MAINTAIN THE DEDICATED ELECTRICAL EQUIPMENT SPACE DEFINED BY THE WIDTH / DEPTH OF ELECTRICAL EQUIPMENT MEASURED FROM THE FLOOR TO A HEIGHT 6'-0" ABOVE THE EQUIPMENT OR THE STRUCTURAL CEILING, WHICHEVER IS LOWER. SYSTEMS FOREIGN TO THE ELECTRICAL DISTRIBUTION SYSTEM ARE NOT ALLOWED IN THE DEDICATED ELECTRICAL SPACE INCLUDING: DUCTWORK, PIPING, ETC.
15. DO NOT EXCEED 25 LBS PER HANGER AND A MINIMUM SPACING OF 2'-0" ON CENTER WHEN ATTACHING TO METAL ROOF DECKING (LIMITATION NOT REQUIRED WITH CONCRETE ON METAL DECK). THIS 25 LBS. LOAD AND 2'-0" SPACING INCLUDE ADJACENT ELECTRICAL AND ARCHITECTURAL ITEMS HANGING FROM DECK. IF THE HANGER RESTRICTIONS CANNOT BE ACHIEVED, SUPPLEMENTAL FRAMING OFF STEEL FRAMING SHALL BE ADDED. ANCHORS EMBEDDED IN CONCRETE SHALL BE CRACKED CONCRETE APPROVED IN ACCORDANCE WITH SPECIFICATIONS.

PIPE INSULATION SCHEDULE (PLUMBING)

GENERAL NOTES:
1. REFER TO THE SPECIFICATIONS FOR TYPE DESCRIPTIONS AND JACKETING REQUIREMENTS.
2. TYPE A INSULATION IS NOT ALLOWED IN NON-AIR CONDITIONED SPACES, SUCH AS MECHANICAL ROOMS, EXTERIOR, ATTICS, ETC.
3. PROVIDE RIGID INSERT AT HANGERS, EITHER PRE-MANUFACTURED COUPLINGS (REFER TO PIPE HANGER AND SUPPORTS SPECIFICATIONS) OR TYPE C INSULATION. SEE SPEC. FOR MORE DETAILS.
4. DIRECT BUIRED PIPING SHALL ONLY USE TYPE C OR TYPE E. REDUCTION IN THICKNESS FOR DIRECT BURED PIPING IS ALLOWED PER ASHRAE / IECC AS APPLICABLE.

SYMBOL	PIPE SYSTEM	INSULATION TYPE	INSULATION THICKNESS PER NOMINAL PIPE OR TUBE SIZE				NOTES
			< 1"	1" TO < 1.5"	1.5" TO < 4"	4" TO < 8"	
22 PLUMBING - STORM							
ST	STORM DRAINAGE	A (GlsFbr)	1/2"	1/2"	1"	1"	APPLY INSULATION TO ALL PIPES AND DRAIN BODIES
STS	STORM DRAINAGE - SECONDARY	A (GlsFbr)	1/2"	1/2"	1"	1"	APPLY INSULATION TO ALL PIPES AND DRAIN BODIES

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
PLUMBING COVERSHEET

SHEET NUMBER:
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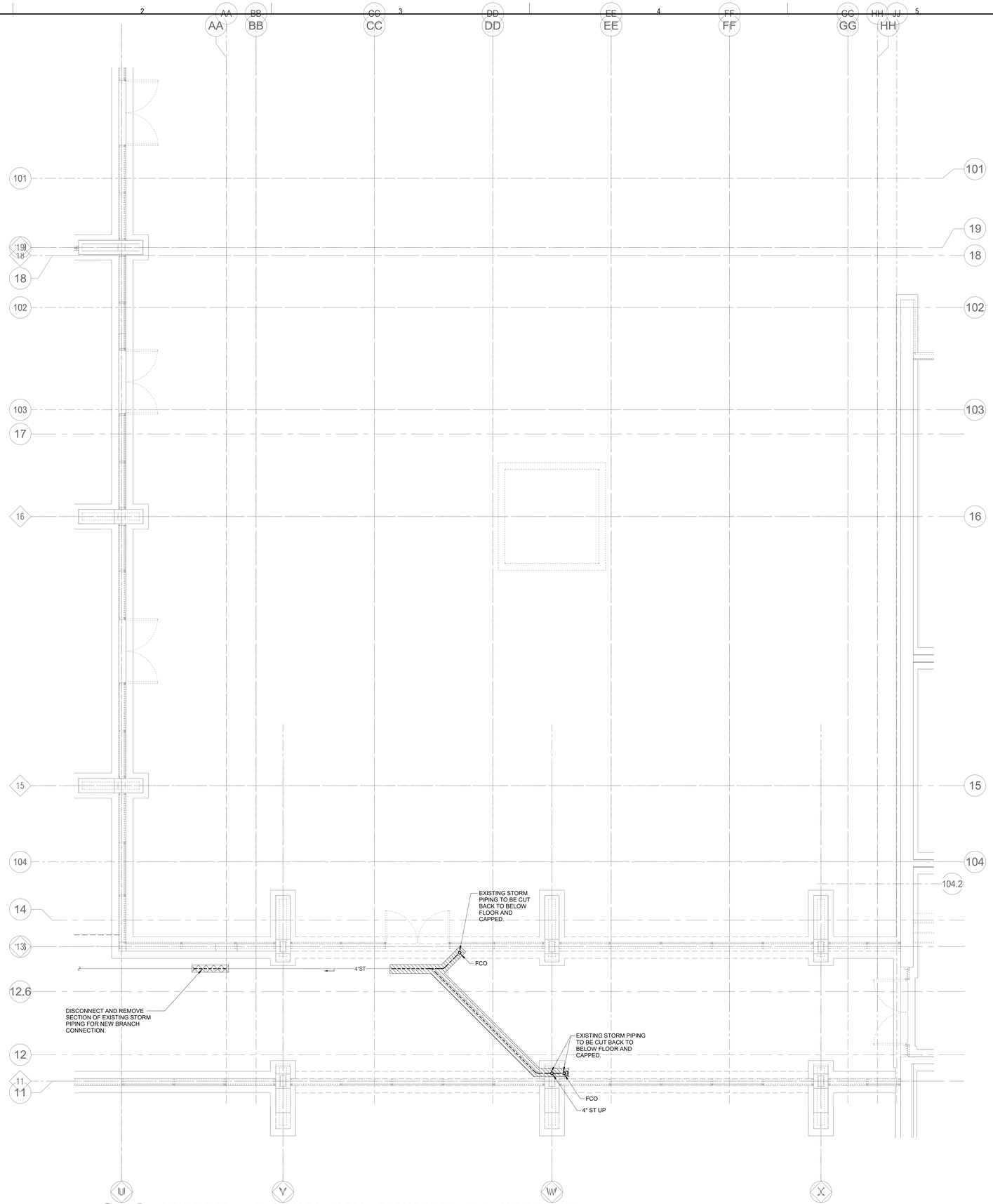

1 UNDERFLOOR DEMOLITION - PLUMBING - EVENT SPACE

1/4" = 1'-0"

NORTH

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KEY PLAN:

SHEET STATUS: 05/16/2025

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:

UNDERFLOOR DEMOLITION - PLUMBING - EVENT SPACE

SHEET NUMBER:

PD1.00

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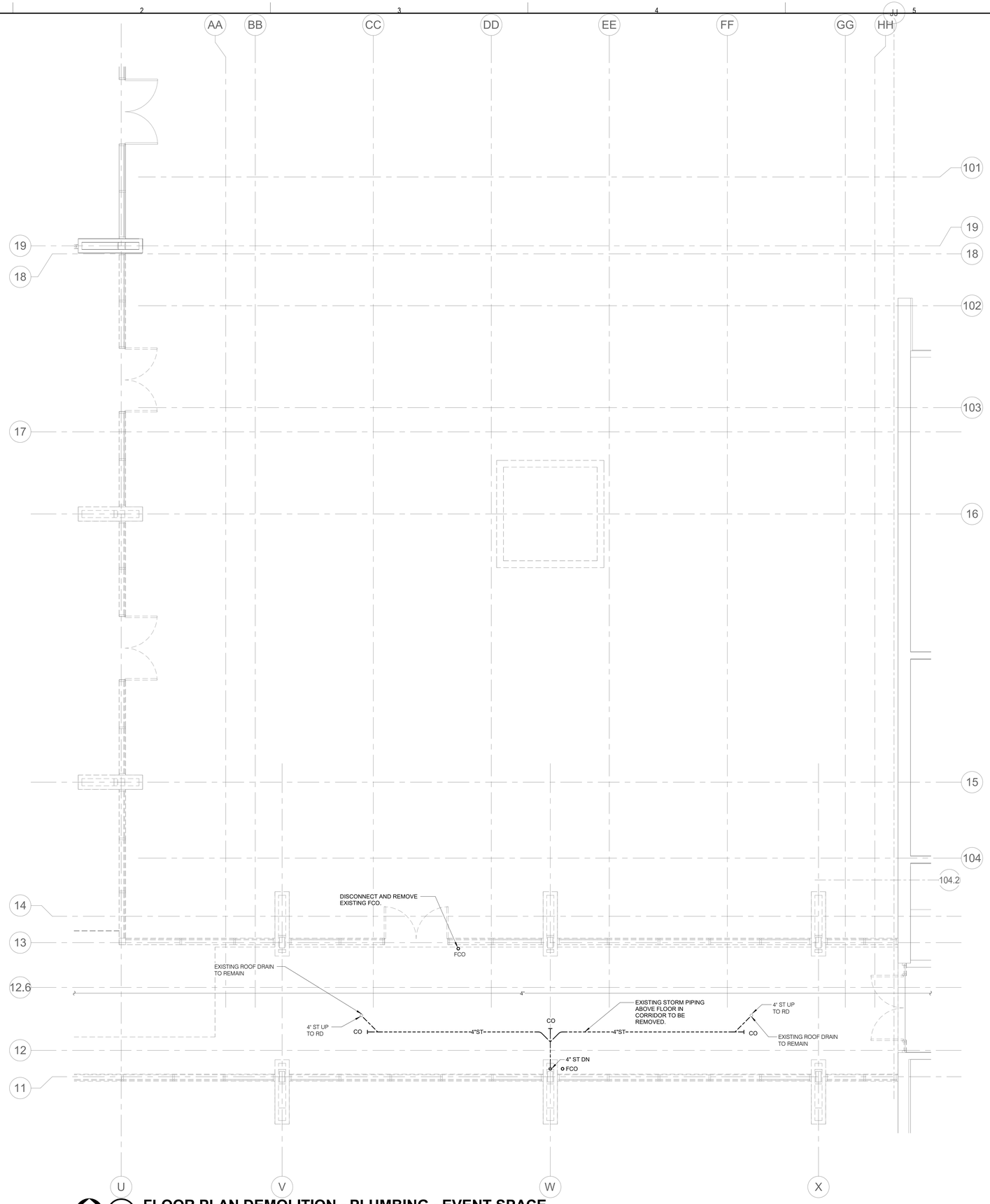

1 FLOOR PLAN DEMOLITION - PLUMBING - EVENT SPACE

1/4" = 1'-0"

NORTH

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
FLOOR PLAN DEMOLITION - PLUMBING - EVENT SPACE

SHEET NUMBER:
PD1.01

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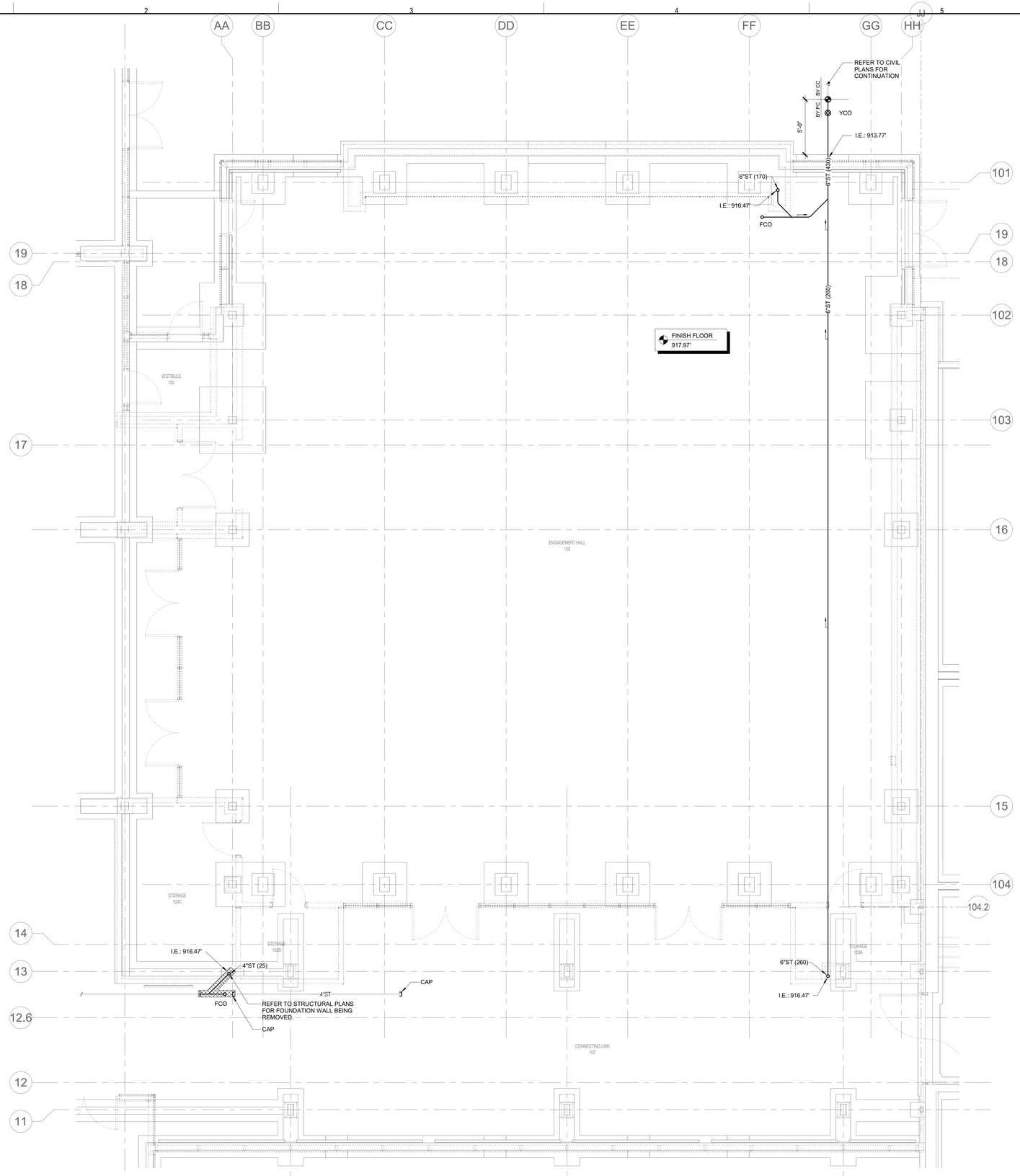

NORTH

1 UNDERFLOOR - PLUMBING - EVENT SPACE

1/4" = 1'-0"

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KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
UNDERFLOOR - PLUMBING - EVENT SPACE

SHEET NUMBER:
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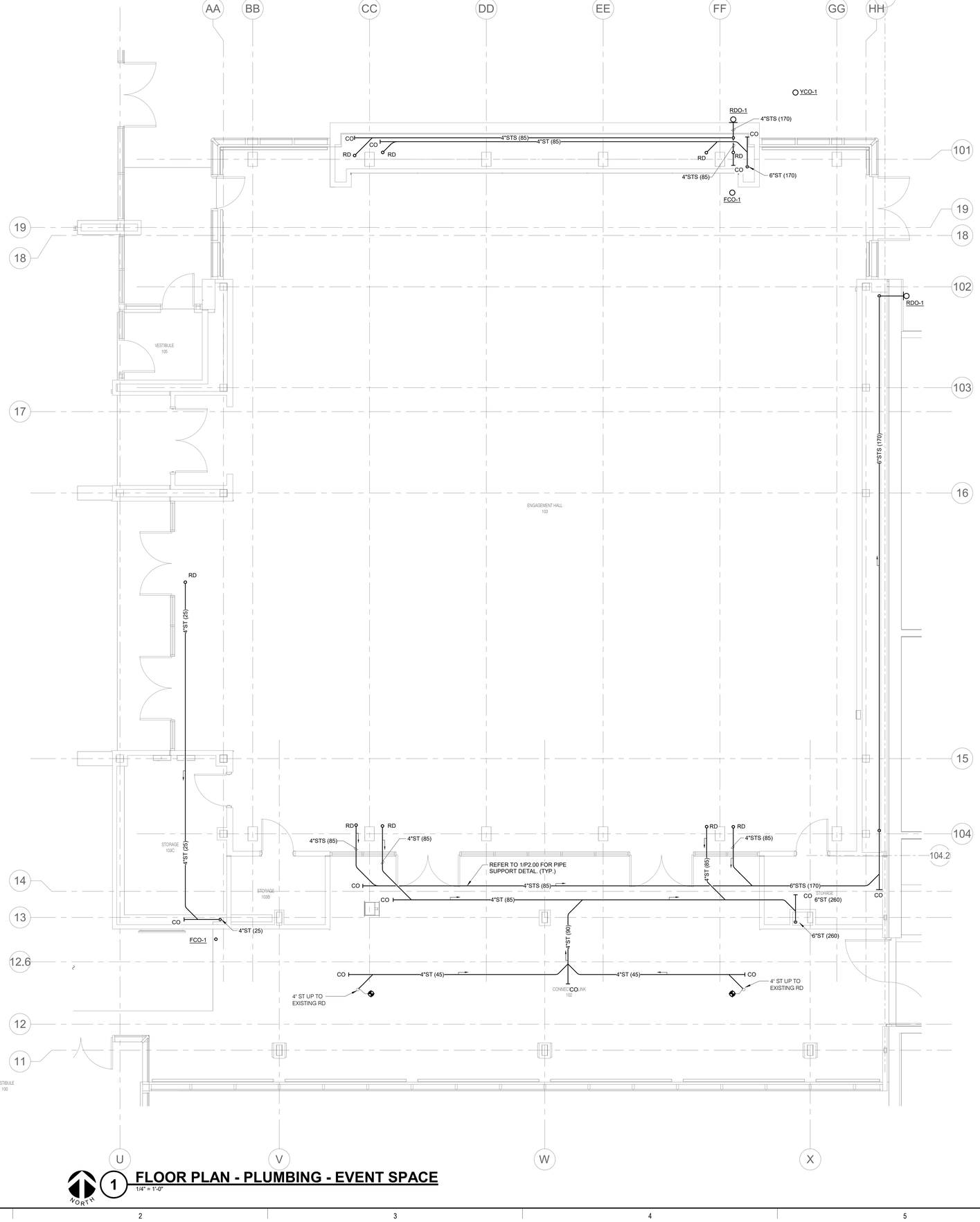

1 FLOOR PLAN - PLUMBING - EVENT SPACE

1/4" = 1'-0"

NORTH

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CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
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SHEET TITLE:
FLOOR PLAN - PLUMBING - EVENT SPACE

SHEET NUMBER:
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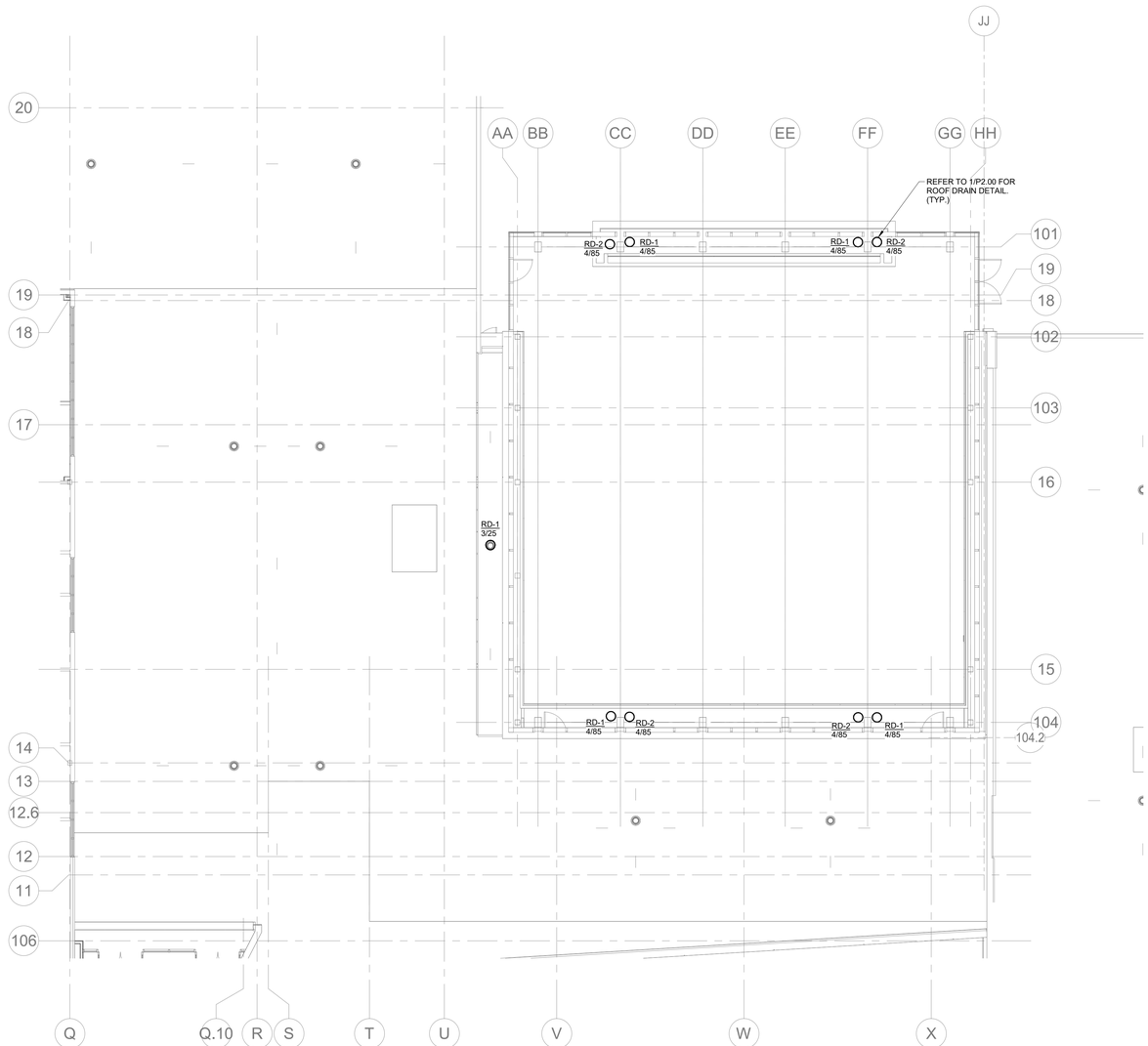

NORTH

1 ROOF PLAN - PLUMBING

1/8" = 1'-0"

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ROOF PLAN - PLUMBING

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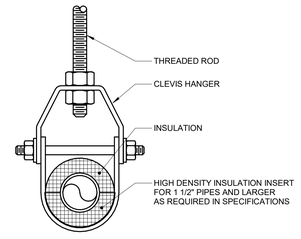
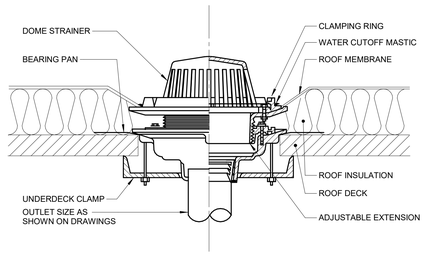


INSULATED COLD PIPE HANGER

NOTES:

1. REFER TO SPECIFICATION SECTIONS 22 05 29 & 22 07 19.

1 PIPE SUPPORT DETAIL
NO SCALE



2 ROOF DRAIN
NO SCALE

PLUMBING MATERIAL LIST

TAG NAME	DESCRIPTION	MANUFACTURER AND MODEL
FCO-1	FLOOR CLEANOUT - ADJUSTABLE, CAST IRON HOUSING, ANCHOR FLANGE, TAPERED THREAD PLUG, SECURED NICKEL BRONZE TOP TOP STYLE SHALL MATCH FLOOR FINISH AS FOLLOWS: CARPET - ROUND TOP WITH CARPET MARKER.	ACCEPTABLE MANUFACTURERS: ZURN (Z1400), JOSAM(55000), MIFAB (C1100), SMITH (4000), WADE (6000), WATTS (CO-200)
RD-1	ROOF DRAIN - CAST IRON BODY, SECURED CAST IRON DOME, 15" ROUND, BOTTOM OUTLET, FLASHING CLAMP, GRAVEL STOP, UNDERDECK CLAMP, BEARING PAN, ADJUSTABLE EXTENSION TO MATCH INSULATION THICKNESS, OUTLET SIZE AS LISTED ON DRAWINGS.	ZURN (Z-100 SERIES), SMITH (1010), WADE (3000), JOSAM (21500), WATTS (RD-300), MIFAB (R1200), SIOUX CHIEF (868-52CS)
RD-2	ROOF DRAIN - CAST IRON BODY, SECURED CAST IRON DOME, 15" ROUND, BOTTOM OUTLET, FLASHING CLAMP, GRAVEL STOP, UNDERDECK CLAMP, BEARING PAN, EXTENSION TO MATCH INSULATION THICKNESS, 4" TALL EXTERNAL WATER DAM, OUTLET SIZE AS LISTED ON DRAWINGS.	ZURN (Z-100 SERIES), SMITH (1010), WADE (3000), JOSAM (21500), WATTS (RD-300), MIFAB (R1200), SIOUX CHIEF (868-52CS)
RDO-1	ROOF DRAIN OUTLET - LAMBS TONGUE DOWNSPOUT NOZZLE, BRONZE BODY, INTEGRAL ANCHORING FLANGE, NO-HUB PIPE CONNECTION TYPE, OUTLET SIZE AS LISTED ON DRAWINGS.	ZURN (Z-199), SMITH (1770), WADE (3940), JOSAM (25010), WATTS (RD-940), SUN (RD4500)
YCO-1	YARD CLEANOUT - ROUND, DURA-COATED CAST IRON, SIZE AS LISTED ON DRAWINGS, DOUBLE FLANGED HOUSING, HEAVY DUTY SECURED SCORIATED DURA-COATED CAST IRON COVER, LIFTING DEVICE, BRONZE CLEANOUT PLUG WITH GASWATER-TIGHT SEAL.	ZURN (Z1474), SMITH (4261), WADE (8401), JOSAM (58680), WATTS (CO-300-MF), MIFAB (C1300-MF)

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VIEW KEY

1 — KEYNOTE: INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL

LINE TYPE AND TAG KEY:

- NEW WORK BY THIS CONTRACTOR (DARK SOLID LINE)
- NEW WORK BY OTHER (LIGHT COLD LINE)
- EQUIPMENT CLEARANCE (DASHED LINE)

FIRE PROTECTION SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

SYMBOL:	DESCRIPTION:
FP	FIRE PROTECTION
	PIPE CAP
	PIPE DOWN
	PIPE UP OR UP/DOWN
	DIRECTION OF FLOW IN PIPE
	AREA BOUNDARY
NO HATCH	LIGHT HAZARD
	ORDINARY GROUP 1

FIRE / SMOKE BARRIER DESIGNATIONS

FIRE AND SMOKE SEPERATIONS ARE NOT SHOWN ON THESE DOCUMENTS. CONTRACTOR SHALL REVIEW THE ARCHITECTURAL PLANS AND DETERMINE THE LOCATION OF ALL FIRE AND SMOKE PARTITION ,BARRIERS, AND WALLS. THIS INCLUDES FLOOR RATINGS. PRICING SHALL INCLUDE ALL MATERIALS AND LABOR REQUIRED TO MAINTAIN THE RATINGS OF ALL RATED SEPERATIONS,WHETHER SHOWN ON THE ENGINEERING PLANS OR NOT.

MECHANICAL GENERAL NOTES:

1. DRAWINGS SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC., AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.
2. CATALOG AND MODEL NUMBERS SHALL NOT BE CONSIDERED COMPLETE, BUT ARE GIVEN AS AN AID TO THE CONTRACTOR AND TO INDICATE THE QUALITY REQUIRED. CONTRACTOR IS RESPONSIBLE FOR THE COMPLETE DESCRIPTION OF MATERIAL SCHEDULED ON THESE DRAWINGS AND IN THE SPECIFICATIONS BEFORE ORDERING. THE DESCRIPTION OF THE MATERIAL AND SCHEDULED PERFORMANCE TAKES PRECEDENCE OVER THE MODEL NUMBER. THE FIRST MANUFACTURER SCHEDULED IS THE BASIS OF DESIGN.
3. DETERMINATION OF QUANTITIES OF MATERIAL AND EQUIPMENT REQUIRED SHALL BE MADE BY THE CONTRACTOR FROM THE DOCUMENTS. WHERE MATERIAL AND/OR QUANTITY DISCREPANCIES ARISE BETWEEN DRAWINGS, SCHEDULES AND/OR SPECIFICATIONS, THE HIGHER QUALITY/ GREATER NUMBER SHALL GOVERN.
4. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS, INCLUDING THOSE OF OTHER TRADES.
5. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO PROVIDE CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE, AND TO VERIFY NON-INTERFERENCE WITH OTHER WORK. DO NOT FABRICATE PRIOR TO VERIFICATION OF NECESSARY CLEARANCES FOR ALL TRADES. BRING ANY INTERFERENCES OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH FABRICATION OR EQUIPMENT ORDERS.
6. REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED OR SUBSTITUTED AND MAKE REASONABLE ACCOMMODATIONS IN LAYOUT AND POSITIONING TO PROVIDE PROPER ACCESS.
7. ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.
8. EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
9. IN AREAS WITH DRYWALL CEILINGS COORDINATE LOCATIONS OF ACCESS PANELS WITH THE GC FOR ACCESS TO VALVES, DUCTWORK ACCESSORIES, DAMPERS, ETC. COORDINATE PANEL TYPE AND COLOR WITH ARCHITECT. NOTIFY THE GC OF THE REQUIRED ACCESS PANELS PRIOR TO BIDDING.
10. SEAL ALL FLOOR AND WALL PENETRATIONS AIRTIGHT WHERE CONDUITS, PIPING, AND DUCTS PENETRATE.
11. CAULK ALL PIPE AND DUCT PENETRATIONS OF FULL HEIGHT NON-FIRE RATED WALL, PARTITION, FLOOR, AND ROOF ASSEMBLIES. THIS IS ESSENTIAL TO PREVENT NOISE TRANSMISSION FROM ONE ROOM TO ANOTHER AND TO PROVIDE THE DESIRED NC LEVELS WITHIN ROOMS.
12. DO NOT BLOCK TUBE PULL OR EQUIPMENT SERVICE CLEARANCES.
13. MAINTAIN A MINIMUM WORKING CLEARANCE OF 3'-6" IN FRONT OF ALL ELECTRICAL EQUIPMENT REQUIRING MAINTENANCE, INSPECTION, AND TESTING INCLUDING BUT NOT LIMITED TO PANELS, DISTRIBUTION PANELS, SWITCHBOARDS, MOTOR CONTROL CENTERS, TRANSFORMERS, EQUIPMENT DISCONNECTS AND STARTERS.
14. MAINTAIN THE DEDICATED ELECTRICAL EQUIPMENT SPACE DEFINED BY THE WIDTH / DEPTH OF ELECTRICAL EQUIPMENT MEASURED FROM THE FLOOR TO A HEIGHT 6'-0" ABOVE THE EQUIPMENT OR THE STRUCTURAL CEILING, WHICHEVER IS LOWER. SYSTEMS FOREIGN TO THE ELECTRICAL DISTRIBUTION SYSTEM ARE NOT ALLOWED IN THE DEDICATED ELECTRICAL SPACE INCLUDING: DUCTWORK, PIPING, ETC.
15. DO NOT EXCEED 25 LBS PER HANGER AND A MINIMUM SPACING OF 2'-0" ON CENTER WHEN ATTACHING TO METAL ROOF DECKING (LIMITATION NOT REQUIRED WITH CONCRETE ON METAL DECK). THIS 25 LBS. LOAD AND 2'-0" SPACING INCLUDE ADJACENT ELECTRICAL AND ARCHITECTURAL ITEMS HANGING FROM DECK. IF THE HANGER RESTRICTIONS CANNOT BE ACHIEVED, SUPPLEMENTAL FRAMING OFF STEEL FRAMING SHALL BE ADDED. ANCHORS EMBEDDED IN CONCRETE SHALL BE CRACKED CONCRETE APPROVED IN ACCORDANCE WITH SPECIFICATIONS.

FIRE PROTECTION GENERAL NOTES:

1. THE SYMBOLS AND THE MATERIAL LIST ARE FOR THE CONVENIENCE OF THE CONTRACTOR. CONTRACTOR SHALL VERIFY QUANTITIES AND FURNISH ALL MATERIALS REQUIRED FOR FULLY OPERATIONAL SYSTEMS, WHETHER SPECIFIED OR NOT.
2. CATALOG NUMBERS SHALL NOT BE CONSIDERED COMPLETE, BUT ARE GIVEN AS AN AID TO THE CONTRACTOR AND TO INDICATE THE QUALITY REQUIRED. CONTRACTOR IS RESPONSIBLE FOR COMPLETE DESCRIPTION OF MATERIAL ON THESE DRAWINGS AND IN THE SPECIFICATIONS BEFORE ORDERING. THE DESCRIPTION OF THE MATERIAL TAKES PRECEDENCE OVER THE CATALOG NUMBER. THE FIRST MANUFACTURER IS THE BASIS OF DESIGN.
3. CENTER SPRINKLERS IN CEILING TILES IN BOTH DIRECTIONS IN ALL AREAS. IN AREAS WITH 2'X4' CEILING TILES CENTERING USING A 2'X2' CEILING PATTERN IS ACCEPTABLE. SPRINKLER HEADS SHALL BE ALIGNED WITH OTHER SPRINKLER HEADS, LIGHTING, DIFFUSERS, AND ANY OTHER FEATURES IN THE CEILING.
4. NEW SPRINKLERS SHALL BE QUICK RESPONSE TYPE, UNLESS OTHERWISE NOTED. CONTRACTOR SHALL NOT MIX STANDARD RESPONSE SPRINKLERS WITH QUICK RESPONSE SPRINKLERS IN UNPARTITIONED SPACES.
5. PROVIDE COVERAGE ABOVE AND BELOW ALL EXPOSED DUCTWORK GREATER THAN 48" WIDE.
6. PROVIDE COVERAGE ABOVE (IF APPLICABLE) AND BELOW FLOATING CEILINGS, REFER TO ARCHITECTURAL PLANS.
7. FIRE PROTECTION PIPE ROUTING IS SHOWN FOR GENERAL LAYOUT. DETERMINE EXACT NUMBER OF SPRINKLERS, PIPE SIZING, AND PIPE ROUTING.
8. THE FIRE PROTECTION SYSTEM SHALL BE DESIGNED TO MEET OWNER'S INSURANCE COMPANY STANDARDS WHERE APPLICABLE. THE MORE STRINGENT OF THE OWNER'S INSURANCE UNDERWRITER'S DESIGN CRITERIA AND THE NFPA STANDARDS SHALL BE USED.
9. ALL BUILDING AREA SHALL BE FULLY SPRINKLERED INCLUDING CANOPIES, WALKWAYS, OVERHANGS, SOFFITS, AND BUILDING PROJECTIONS. ALL ACCESSIBLE COMBUSTIBLE CONCEALED SPACES SHALL BE FULLY PROTECTED BY THE SPRINKLER SYSTEM.
10. EACH ASSEMBLY SHALL INCLUDE CHECK VALVE BUTTERFLY CONTROL VALVE INDICATING "OPEN" OR "CLOSED" POSITION, TEST INSPECTION VALVE, FLOW SWITCH AND PRESSURE GAUGES.
11. PROVIDE RISER ROOM IDENTIFICATION SIGNAGE OUTSIDE THE FIRE RISER ROOM. COORDINATE EXACT SIGN LANGUAGE WITH AHJ.
12. WHERE FEASIBLE INSTALL PIPES HIGH AS POSSIBLE TO AVOID CONFLICT WITH OTHER DISCIPLINES.
13. INSTALL SYSTEM DRAINS AT LOW POCKET AREAS CONTAINING FIVE GALLONS OF WATER OR MORE, PROVIDE WITH ISOLATION VALVE AND THREADED HOSE CONNECTION.
14. MAIN PIPING PASSING BELOW SKYLIGHTS OR CLERESTORIES ARE NOT PERMITTED.
15. FOLLOW STRUCTURAL DETAILS WHEN PENETRATING OR PASSING THROUGH STRUCTURAL ELEMENTS. ALTERNATE DESIGNS WILL NEED TO BE APPROVED THROUGH THE STRUCTURAL ENGINEER.
16. FINAL HEAD LOCATION, TYPE AND FINISH SHALL BE REVIEWED AND APPROVED BY THE ARCHITECT.
17. EXACT LOCATION OF THE ALL PANELS SHALL BE VERIFIED ON SITE AND COORDINATED WITH THE ELECTRICAL CONTRACTOR.
18. PAINT ALL EXPOSED PIPING TO MATCH BACKGROUND OR AS DIRECTED BY THE ARCHITECT.
19. THE OWNER MUST BE NOTIFIED PRIOR TO EACH AND EVERY DRAINING OR RECHARGING OF THE SPRINKLER SYSTEM.
20. THE CONTRACTOR SHALL PREPARE A COORDINATED SET OF SHOP DRAWINGS AND SHALL OBTAIN APPROVAL FROM THE AUTHORITIES HAVING JURISDICTION AND THE LOCAL FIRE DEPARTMENT PRIOR TO ANY INSTALLATION.
21. DRAWINGS SHOW LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC. AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.
22. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS, INCLUDING THOSE OF OTHER TRADES.

FIRE PROTECTION SHEET INDEX

F0.00	FIRE PROTECTION COVERSHEET
FD1.01	FLOOR PLAN DEMOLITION - FIRE PROTECTION
F1.01	FLOOR PLAN - FIRE PROTECTION
F2.00	FIRE PROTECTION DETAILS
GRAND TOTAL: 4	

FIRE SPRINKLER USAGE SCHEDULE (SPK)

NOTES:
1.SEE FLOOR PLANS FOR ZONING REQUIREMENTS.
2.SPRINKLER SHALL HAVE COLOR CODED BULB THERMAL ELEMENT.
3.ALL SPRINKLERS SHALL BE UL LISTED.
4.CONTRACTOR TO VERIFY SPRINKLER REQUIREMENTS BASED ON ACTUAL INSTALLATION, USAGE, ARCHITECTURAL CEILING PLAN AND NFPA 13 REQUIREMENTS.
5.TAG NAME IS PRIMARILY FOR IDENTIFYING SPRINKLERS IN SUBMITTALS. IT MAY OR MAY NOT BE FOUND ELSEWHERE ON THE DRAWINGS. CONTRACTOR TO SUBMIT ALL SPRINKLER TYPES TO BE USED.
6.AREAS ARE GENERAL IN NATURE. CONTRACTOR TO MATCH UNSCHEDULED AREAS TO SIMILAR SPACES.
7.SPRINKLERS SHALL HAVE A 3mm QUICK RESPONSE BULB.
8.SPRINKLERS SPECIFIED WITHIN FIRE SPRINKLER USAGE SCHEDULE ARE STANDARD COVERAGE TYPE. EXTENDED COVERAGE SPRINKLERS ARE PERMITTED PROVIDED SPRINKLERS MEET THE REQUIREMENTS OF UL.

AREA (NOTE 1 & 6)		SPRINKLER (NOTE 4 & 5)						
DESCRIPTION	HAZARD	TAG NAME	TYPE	FINISH	RESPONSE	TEMP RATING	MANUFACTURER & MODEL	NOTES
EXPOSED STRUCTURE WITH OBSTRUCTIONS	SEE PLANS	SPR-1	UPRIGHT	ROUGH BRASS	QUICK	155	VIKING VK, RELIABLE F1FR, TYCO TY-FRB, VICTAULIC V2704	NOTE 2, 3, 7, 8
FINISHED AREA	AREAS WITH WOODEN CEILING	SPR-2	CONCEALED	CUSTOM COLOR. COORDINATE COLOR SELECTION WITH ARCHITECT	QUICK	155	VIKING VK, RELIABLE G4A, TYCO RFII, VICTAULIC V3802	NOTE 2, 3, 7, 8

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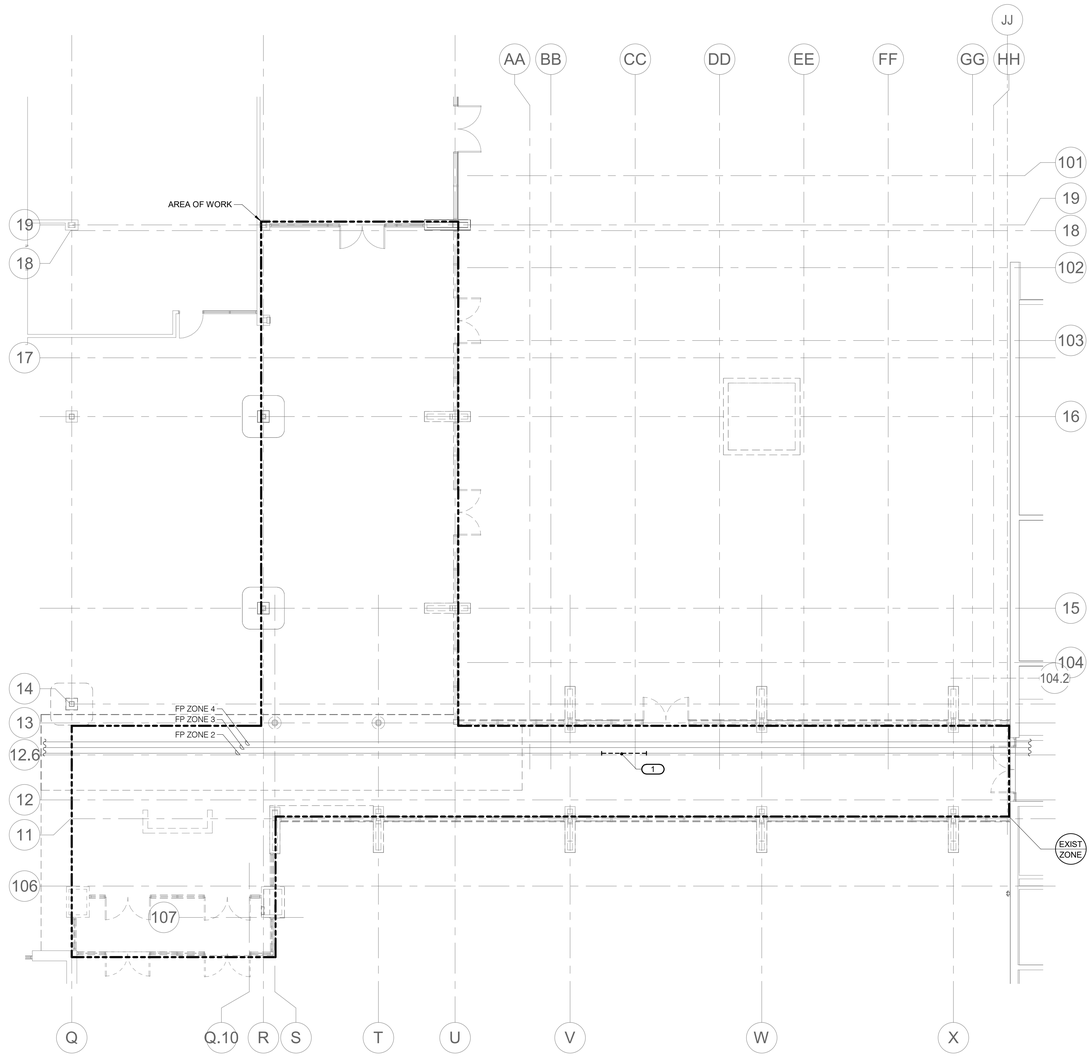
SHEET NOTES:

1. DISCONNECT AND REMOVE EXISTING SPRINKLER HEADS WHERE CEILING IS CHANGING. REFER TO ARCHITECTURAL CEILING PLANS FOR EXACT LOCATION. PREPARE PIPING FOR NEW CONNECTION.

KEYNOTES:

1. DISCONNECT AND REMOVE SECTION OF FIRE PROTECTION MAIN AS REQUIRED TO INSTALL A NEW BRANCH PIPING TO NEW ADDITION. ADDITION TO BE SERVED FROM EXISTING FIRE ZONE #2.



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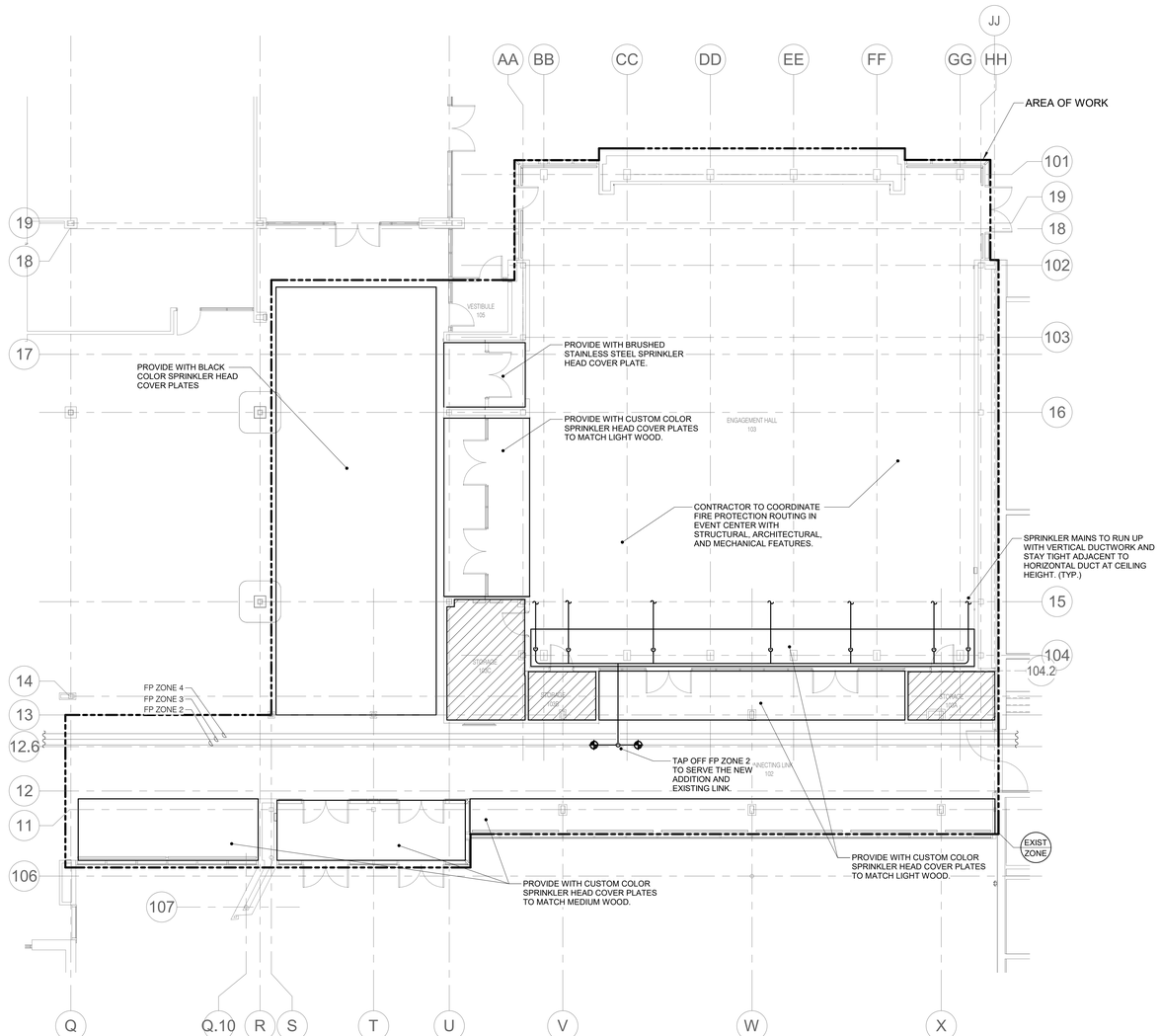
GENERAL SHEET NOTES:

1. PROVIDE NEW SPRINKLERS WITHIN AREA OF WORK AS REQUIRED PER NFPA 13. ROUTE AND SIZE SPRINKLER PIPING PER NFPA 13. CONTRACTOR RESPONSIBLE FOR FINAL DESIGN, LAYOUT AND QUANTITY OF SPRINKLER HEADS.
2. REFER TO 1/F2.00 FOR PIPE SUPPORT DETAIL.
3. REFER TO 2/F2.00 FOR SPRINKLER HEAD MOUNTING DETAIL.
4. REFER TO 3/F2.00 FOR NON-FIRE RATED WALL PENETRATION DETAIL.



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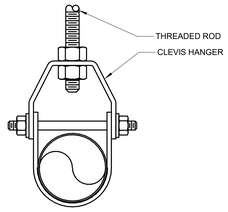
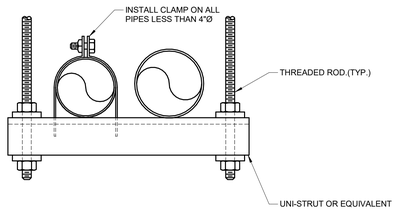
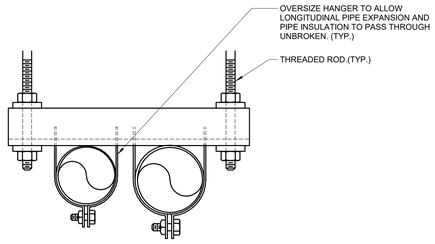
PROJECT #250005446.00



CLEVIS HANGER



TRAPEZE HANGER

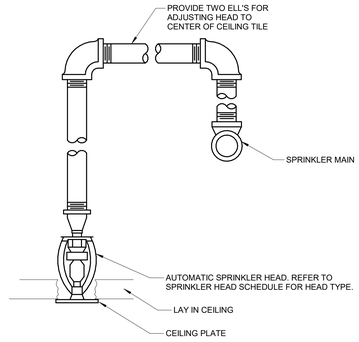


STRUT CLAMP HANGERS

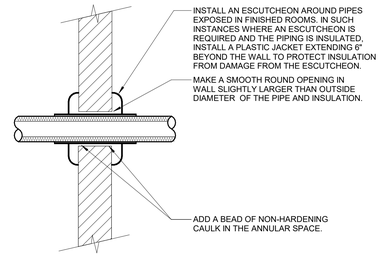
NOTES:

1. REFER TO SPECIFICATION SECTION 21 05 29.

1 PIPE SUPPORT DETAIL
NO SCALE



2 SPRINKLER HEAD MOUNTING DETAIL
NO SCALE



NOTES:

1. THIS DETAIL APPLIES TO ALL PIPES. THE INTENTION IS TO CONTINUE THE INSULATION AND VAPOR BARRIER THROUGH ALL PENETRATIONS. PERMIT THERMAL EXPANSION WITHOUT DAMAGING INSULATION, AND TO SEAL AIRTIGHT AROUND INSULATED AND UNINSULATED PIPES FOR NOISE TRANSMISSION CONTROL.
2. SEE SPECIFICATION SECTIONS SECTION 23 05 29 - HVAC FOR ADDITIONAL INFORMATION.
3. FLOOR OPENINGS ARE SIMILAR, SEE SPECIFICATION SECTION 23 05 29 - HVAC FOR DIFFERENCES BETWEEN FLOOR AND WALL PENETRATIONS.

3 NON-FIRE RATED WALL PENETRATION DETAIL
NO SCALE

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
FIRE PROTECTION DETAILS

SHEET NUMBER:
F2.00

5/16/2025 11:20:57 AM

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REF. SCALE IN INCHES

PROJECT #250005446.00

VIEW KEY

(1) KEYNOTE: INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL

LINE TYPE AND TAG KEY:

——— NEW WORK BY THIS CONTRACTOR (DARK SOLID LINE)

——— NEW WORK BY OTHER (LIGHT COLD LINE)

- - - - - - EQUIPMENT CLEARANCE (DASHED LINE)

LIGHTING SYSTEM DESCRIPTION KEY:

THE DESIGN DOCUMENTS DESCRIBE THE OPERATIONAL PERFORMANCE REQUIREMENTS OF THE LIGHTING CONTROL SYSTEM. THE PROJECT MAY REQUIRE ONE OR MORE LIGHTING CONTROL STRATEGIES FOR THE PROJECT. REFER TO THE ELECTRICAL SYMBOL KEY, SPECIFICATION SECTION 26 09 33 LIGHTING CONTROL SYSTEMS, AND THE DRAWINGS TO DETERMINE THE DESIGN APPLICATION FOR EACH SPACE. THE POTENTIAL STRATEGIES ARE AS FOLLOWS:

1. STANDALONE LIGHTING CONTROL DEVICES: INDEPENDENT (STANDALONE) DEVICES TRADITIONALLY OPERATING AT LINE OR LOW VOLTAGE, FIELD CONFIGURABLE WITH OTHER STANDALONE DEVICES TO PROVIDE AN OVERALL LIGHTING CONTROL SYSTEM.
2. ROOM BASED LIGHTING CONTROLS: INTEGRATED SYSTEM COMPRISED OF SWITCH STATIONS, SENSORS, ROOM CONTROLLERS, CONTROL PANELS, AND ACCESSORIES, OPERATING AT LINE AND/OR LOW VOLTAGE, CONFIGURED AS AN INTEGRATED OVERALL "INTELLIGENT" LIGHTING CONTROL SYSTEM. LIGHTING CONTROL ZONES AND POWER CIRCUITS COMMONLY ALIGN.

LIGHTING CONTROL SYSTEM DESIGNATION: THE FOLLOWING KEY MAY BE USED AS AN EXAMPLE TO DETERMINE THE DESIGNATED LIGHTING CONTROL SYSTEM FOR EACH SPACE. REFER TO ELECTRICAL COVERSHEET FOR ELECTRICAL SYMBOLS LIST AND DEVICE SPECIFICATION TAG. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

1. STANDALONE LIGHTING CONTROL DEVICES: CONTROL STATION COMMONLY DEFINED BY AN ALPHA CHARACTER WITH SUBSCRIPTS.
   - A. EXAMPLE SYMBOL "S", SPECIFICATION TAG "SW-1P", DESCRIPTION "SWITCH-SINGLE POLE SWITCH".
   - B. EXAMPLE CONTROL DESIGNATION: a, b, c (WHEN REQUIRED TO CLARIFY DESIGN INTENT).
   - C. SINGLE POLE LIGHT SWITCH "SA" CONTROLS LUMINAIRES WITH THE SUBSCRIPT "a" WITHIN THE SAME SPACE.
   - D. REFER TO THE LIGHT CONTROL SEQUENCE OF OPERATION TAG (L#-##) FOR A COMPLETE DESCRIPTION OF THE LIGHTING CONTROL REQUIREMENTS.

2. ROOM BASED LIGHTING CONTROLS: CONTROL STATION COMMONLY DEFINED BY A RECTANGLE SYMBOL.
   - A. EXAMPLE CONTROL STATION: SYMBOL "#B", TAGGED "SW-#B", DESCRIPTION "LIGHTING CONTROL STATION".
   - B. EXAMPLE PANEL/RACK/CABINET: TAGGED "LCPR#", DESCRIPTION "ROOM BASED LIGHTING CONTROL PANEL/RACK/CABINET.
   - C. EXAMPLE CONTROL DESIGNATIONS: a, b, c
   - D. LIGHTING CONTROL STATION "#B" a,b CONTROLS LUMINAIRES WITH THE SUBSCRIPT "a" AND "b" WITHIN THE SAME SPACE
   - E. REFER TO THE LIGHT CONTROL SEQUENCE OF OPERATION TAG (L#-##) FOR A COMPLETE DESCRIPTION OF THE LIGHTING CONTROL AND PRE-PROGRAMMED SCENE SELECTION REQUIREMENTS.

LIGHTING CONTROL NOTES:

LIGHTING CONTROL NOTES:

"NL" INDICATES LUMINAIRE IS UNSWITCHED FOR NIGHT LIGHT.
"SE" INDICATES LUMINAIRE IS SWITCHED/CONTROLLED DURING NORMAL OPERATION AND OPERATES FROM LIFE SAFETY CIRCUIT UPON LOSS OF POWER. PROVIDE GENERATOR TRANSFER DEVICE.

(L#-##) INDICATES THE LIGHTING SEQUENCE OF OPERATION FOR THE SPACE. REFER TO THE LIGHTING SEQUENCE OF OPERATION MATRIX ON SHEET E5.00.

(#B) LIGHTING CONTROL STATION. THE "#" INDICATES THE MINIMUM QUANTITY OF ZONES/SCENES AS DEFINED IN THE LIGHTING SEQUENCE OF OPERATIONS. THE LIGHTING CONTROL STATION SHALL PROVIDE SEPARATE ON AND OFF AS WELL AS RAISE AND LOWER BUTTON(S). CONTROL SHALL BE CAPABLE OF DIMMING UP/DOWN AND SWITCHING AS DEFINED IN THE LIGHTING SEQUENCE OF OPERATIONS. REFER TO DRAWINGS AND LUMINAIRE SUBSCRIPTS TO DETERMINE IF A ROOM BASED CONTROLLER (a, b, c SUBSCRIPTS).

(z##) INDICATES ZONING AND REFLECTS A LIGHTING CONTROL GROUP. PROVIDE RELAYS AS REQUIRED TO ALLOW LUMINAIRES WITHIN THE DEFINED ZONE TO FUNCTION TOGETHER.

LIGHTING CONTROL SUBSCRIPTS:
1. LOWER CASE ALPHA SUBSCRIPTS "a, b, c" INDICATE LINE VOLTAGE OR ROOM BASED LIGHTING CONTROL SYSTEMS. REFER TO DRAWINGS TO DETERMINE IF LINE VOLTAGE CONTROL (S, S3, S4, ETC) OR (#B) ROOM BASED CONTROLLER SYSTEM (#B) IS REQUIRED.

REFER TO SHEET E5.00 FOR LUMINAIRE SCHEDULE

ELECTRICAL SYMBOL LIST

SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:
			LINEAR LUMINAIRES
	REFER TO LUMINAIRE SCHEDULE		TROFFER
			PENDANT LUMINAIRE
			DOWNLIGHT LUMINAIRE
			SINGLE FACE EXIT SIGN
			DOUBLE FACE EXIT SIGN

CONDUIT INSTALLATION SCHEDULE

THE FOLLOWING SCHEDULE SHALL BE ADHERED TO UNLESS THEY CONSTITUTE A VIOLATION OF APPLICABLE CODES OR ARE NOTED OTHERWISE ON THE DRAWINGS. THE INSTALLATION OF RMC CONDUIT WILL BE PERMITTED IN PLACE OF ALL CONDUIT SPECIFIED IN THIS SCHEDULE. REFER TO CONDUIT AND BOXES SPECIFICATION 26 05 33 FOR ADDITIONAL INFORMATION.

INSTALLATION TYPE	RMC	IMC	EMT	PVC	PVC CONCRETE ENCASED
FEEDERS: SWITCHBOARDS, DISTRIBUTION PANELS, PANELBOARDS, MOTOR CONTROL CENTERS, ETC.		X	X		
BRANCH CIRCUITS: LIGHTING, RECEPTACLES, CONTROLS, ETC.		X	X		
MECHANICAL EQUIPMENT FEEDERS: PUMPS, CHILLERS, AIR HANDLING UNITS, ETC.		X	X		
FLOOR MOUNTED EQUIPMENT FEEDERS: PUMPS, ETC. (INCLUDE NO MORE THAN 6 FEET OF LFMC TO PUMP)		X	X		
CONTROLS (LIGHTING, POWER, BUILDING AUTOMATION, ETC.)		X	X		
WET AND DAMP LOCATIONS: (CONDUIT, BOXES, FITTINGS, INSTALLED AND EQUIPPED TO PREVENT WATER ENTRY)	X				
INTERIOR LOCATIONS WITH FINISHED CEILING AND WALLS: CONCEALED IN WALLS AND ABOVE FINISHED CEILINGS			X		
INTERIOR LOCATIONS WITHOUT FINISHED CEILINGS: CONCEALED IN WALL, EXPOSED ABOVE CEILINGS		X	X		
EXISTING INTERIOR LOCATIONS WITH FINISHED CEILINGS AND WALLS: CONCEALED IN WALLS AND ABOVE FINISHED CEILING UNLESS OTHERWISE NOTED			X		
UNDERGROUND / UNDER SLABS ON GRADE					
WITHIN 5' FROM THE PERIMETER OF THE BUILDING	X			X	
WITHIN 5' FROM THE PERIMETER OF THE BUILDING WHEN PASSING THROUGH THE PERIMETER OF THE BUILDING FOUNDATION:	X				
UNDERGROUND SITE CONDUITS:					
WITHIN 5' FROM THE PERIMETER OF A BUILDING FOUNDATION	X				
5' OR GREATER FROM THE PERIMETER OF A BUILDING FOUNDATION	X			X	
UNDER ROADS, DRIVES, AND VEHICLE TRAVELED WAYS.					X

ELECTRICAL SYMBOL LIST

SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:
E / E	ECONN	26 05 33	ELECTRICAL CONNECTION
J	JB	26 05 33	JUNCTION BOX
	FB-#	26 27 26	FLOOR BOX
	PANEL '###'	26 24 16	PANELBOARD - SURFACE MOUNT
	REC-DUP	26 27 26	DUPLEX RECEPTACLE, TAMPER RESISTANT, 125V
W	REC-DUP-WP	26 27 26	DUPLEX GFI WEATHERPROOF RECEPTACLE, TAMPER RESISTANT, 125V
U	REC-USB	26 27 26	DUPLEX RECEPTACLE, USB CHARGING, TYPE A AND C, TAMPER RESISTANT, 125V
	REC-QUAD	26 27 26	QUAD RECEPTACLE, TAMPER RESISTANT, 125V
W	REC-QUAD-WP	26 27 26	QUAD WEATHERPROOF RECEPTACLE, TAMPER RESISTANT, 125V
	PB-1	26 27 26	POWER BOLLARD WITH GFI RECEPTACLE AND USB CHARGER
PP			PUSH PAD (BY OTHERS)

ELECTRICAL SYMBOL LIST

SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:
V / S	SW-V	26 09 33	SWITCH SUBSCRIPTS: V = DUAL TECHNOLOGY VACANCY SENSOR WITH WALL SWITCH
VC	SW-VC-D	26 09 33	VACANCY SENSOR - CEILING MOUNTED SUBSCRIPTS: BLANK = DUAL TECHNOLOGY
TS	SW-LCD	26 09 33	LCD TOUCH SCREEN LIGHTING CONTROL STATION
PB	SW-PB	26 09 33	LOW VOLTAGE CONTROLLER. REFER TO DETAIL 5/E3.00
#B	SW-#B	26 09 33	LIGHTING CONTROL STATION - DEFAULT DIMMED CONTROL - # DEFINES MINIMUM QUANTITY OF CONTROL SCENES, PLUS OFF, REFER TO LIGHTING SEQUENCE OF OPERATIONS WHEN NOT DEFINED. SUBSCRIPTS: BLANK = DIMMING CONTROL
TC	SW-TC	26 09 33	TIME CLOCK SWITCH
	LC-#	26 28 21	LIGHTING CONTACTOR, REFER TO CONTACTOR SCHEDULE

ELECTRICAL SYMBOL LIST

SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:
COMMON AND SEQUENCE OF OPERATION SUBSCRIPTS			SUBSCRIPTS: TYPE / PROGRAMMING W = WEATHERPROOF DH = DOOR HOLD RELEASE # = 15, 30, 75, 110, 177 CANDELA RATING
S	FA-120	28 31 00	FIRE ALARM SMOKE DETECTOR, CEILING MOUNT BLANK - PHOTOELECTRIC
S	FA-122	28 31 00	FIRE ALARM DUCT SMOKE DETECTOR
F	FA-130	28 31 00	FIRE ALARM MANUAL PULL STATION
#	FA-200	28 31 00	FIRE ALARM VISUAL ALARM DEVICE, CEILING OR WALL MOUNT # = CANDELA RATING.
F # F #	FA-211	28 31 00	COMBINATION HORN AND VISUAL ALARM DEVICE, CEILING OR WALL MOUNTED # = CANDELA RATING W = WEATHER PROOF
RT	FA-242	28 31 00	FIRE ALARM REMOTE INDICATOR WITH TEST SWITCH
CM	FA-161	28 31 00	FIRE ALARM ADDRESSABLE CONTROL MODULE
DH	FA-271	28 31 00	DOOR HOLD OPEN

ELECTRICAL RENOVATION NOTES:

THESE NOTES APPLY TO ALL ELECTRICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, LIGHTING, POWER, FIRE ALARM, AND OTHER LOW VOLTAGE SYSTEMS.

1. EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS, EXISTING BUILDING DOCUMENTS. CONTRACTOR SHALL REVIEW EXISTING CONDITIONS AND REPORT CONFLICTS.
2. NOT ALL EXISTING EQUIPMENT, LUMINAIRES, AND CONDUIT ARE SHOWN. CONTRACTOR SHALL REVIEW EXISTING CONDITIONS AND REPORT CONFLICTS.
3. ELECTRICAL CONTRACTOR SHALL REVIEW EXISTING CONDITIONS TO VERIFY ACCESSIBILITY TO THE AREAS OF THEIR WORK INCLUDING WALLS, FLOOR, CEILINGS, CEILING TILES/GRID, AND ROOF. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE CUTTING, REMOVAL, PATCHING, AND REINSTALLATION OF AFFECTED AREAS ASSOCIATED WITH THEIR WORK BY COORDINATING WITH THE GENERAL CONTRACTOR OR QUALIFIED CONTRACTOR.
4. WHERE EXISTING ELECTRICAL SYSTEMS ARE LOCATED IN AREAS THAT CONFLICT WITH NEW EQUIPMENT, PIPING, OR DUCTWORK TO BE INSTALLED, EACH CONTRACTOR SHALL EITHER ARRANGE NEW EQUIPMENT, CONDUIT, OR DUCTWORK IN SUCH A FASHION THAT IT DOES NOT CONFLICT WITH EXISTING SYSTEMS, OR REWORK EXISTING ELECTRICAL SYSTEMS TO ALLOW FOR INSTALLATION OF NEW EQUIPMENT, PIPING, OR DUCTWORK.

ELECTRICAL ABBREVIATION KEY

ABBR:	DESCRIPTION:
AFF	ABOVE FINISHED FLOOR
C	CONDUIT (BRANCH CIRCUIT OR FEEDER CONTEXT)
EGC	EQUIPMENT GROUNDING CONDUCTOR
NEMA #	NEMA RATING
NIC	NOT IN CONTRACTED SCOPE
ROOF	EQUIPMENT LOCATED ON ROOF ABOVE
SM	SURFACE MOUNTED
TYP	TYPICAL
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE

CONTRACTOR ABBREVIATION KEY

ABBR:	DESCRIPTION:
E.C.	ELECTRICAL CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
T.C.C.	TEMPERATURE CONTROLS CONTRACTOR
A.V.C.	AUDIO VISUAL CONTRACTOR
T.C.	TECHNOLOGY CONTRACTOR

RECEPTACLE SUBSCRIPT KEY:

DEVICE KEY:

DEVICE # — # = MOUNTING (IF APPLICABLE)
1 = CIRCUIT NUMBER

*IF LABEL IS ORIENTED HORIZONTALLY A SLASH WILL SEPARATE THIS INFORMATION. EX: A / 1

ELECTRICAL MOUNTING SUBSCRIPT KEY:
C MOUNT AT CEILING (DEVICE OR ROUGH-IN CONTEXT)
W WEATHERPROOF WIRING DEVICE, NEMA 3R WHILE-IN-USE COVER, WR LISTED

ELECTRICAL INSTALLATION NOTES:

1. THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE ADA STANDARDS FOR ACCESSIBLE DESIGN.
2. CIRCUIT NUMBERS ARE SHOWN FOR CIRCUIT IDENTIFICATION. CIRCUITING SHALL AGREE WITH NUMBERING ON THE PANEL PROVIDED. COMMON NEUTRALS MAY NOT BE USED FOR BRANCH CIRCUITS. BALANCE THE LOAD ON PANEL AS EVENLY AS POSSIBLE BETWEEN EACH PHASE.
3. LIFE SAFETY BRANCH WIRING FOR FEEDERS AND BRANCH CIRCUITS SHALL BE ROUTED IN SEPARATE RACEWAY, JUNCTION BOXES, PULL BOXES, AND CABINETS. WIRING FOR EACH BRANCH SHALL BE INDEPENDENT FROM OTHER BRANCHES, INCLUDING THE NORMAL BRANCH.
4. FLUSH MOUNT ALL LIGHTING CONTROL DEVICES AT +42" FROM FLOOR (CENTERLINE DIMENSION), EXCEPT WHERE OTHERWISE NOTED.
5. FLUSH MOUNT ALL DUPLEX RECEPTACLES AND TECHNOLOGY OUTLETS AT +18" FROM FLOOR (CENTERLINE DIMENSION), EXCEPT WHERE OTHERWISE NOTED. RECEPTACLES AND OUTLETS MAY BE SURFACE MOUNTED WHEN CONDUIT IS SPECIFIED EXPOSED. MOUNT EXTERIOR LOCATED RECEPTACLES WITH WHILE-IN-USE COVERS AT +20" FROM FINISHED GRADE (CENTER DIMENSIONS) TO MAINTAIN INSTALLATION ADA COMPLIANCE.
6. ALL MATERIALS USED TO SEAL PENETRATIONS OF FIRE RATED WALLS AND FLOORS SHALL BE TESTED AND CERTIFIED AS A SYSTEM PER ASTM E814 STANDARDS FOR FIRE TESTS OF THROUGH-PENETRATION FIRESTOPS. REFER TO 26 05 03 FOR ADDITIONAL INFORMATION AND REQUIREMENTS SPECIFIC TO FIRESTOPPING.
7. MOUNT ALL FIRE ALARM PULL STATIONS AT +42" FROM FLOOR (CENTERLINE DIMENSION) EXCEPT WHERE OTHERWISE NOTED.
8. INSTALL ALL WALL MOUNTED FIRE ALARM NOTIFICATION DEVICES AT 90" ABOVE FINISHED FLOOR OR 6" BELOW THE CEILING, WHICHEVER IS LOWER, EXCEPT WHERE OTHERWISE NOTED. HEIGHT SHALL BE MEASURED TO THE TOP OF THE DEVICE.
9. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL CEILING MOUNTED DEVICES AND EQUIPMENT WITH LUMINAIRES, SPRINKLER, AND CEILING DIFFUSERS. CENTER ALL DEVICES IN CEILING TILE PATTERN. SMOKE DETECTORS,CARBON MONOXIDE DETECTORS, AND OCCUPANCY/VACANCY SENSORS SHALL BE LOCATED NO CLOSER THAN 3 FEET TO AN AIR SUPPLY DIFFUSER OR RETURN GRILLE.
10. CONTRACTOR SHALL VERIFY ALL FURNITURE, MODULAR FURNITURE, AND EQUIPMENT LOCATIONS WITH ARCHITECTURAL PLANS, ELEVATIONS, AND REVIEWED SHOP DRAWINGS. PRIOR TO MAKING THE ACTUAL ELECTRICAL INSTALLATION, THIS CONTRACTOR SHALL ADJUST RECEPTACLES, OUTLETS, OR CONNECTION LOCATIONS TO ACCOMMODATE FURNITURE AND/OR EQUIPMENT.
11. ELECTRICAL AND TECHNOLOGY EQUIPMENT SHALL BE MOUNTED TO AVOID IMPEDANCE OF, OPERATION OF, AND/OR ACCESS TO ELECTRICAL AND MECHANICAL EQUIPMENT. ALL MOUNTING OF ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT, ON EQUIPMENT SUPPLIED BY ANOTHER CONTRACTOR, SHALL BE APPROVED IN ADVANCE BY THE OTHER CONTRACTOR.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPENINGS REQUIRED IN WALLS. ALL OPENINGS SHALL BE REPAIRED TO MATCH EXISTING BY A QUALIFIED CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR. ALL CONDUITS THROUGH WALLS SHALL BE GROUTED OR SEALED INTO OPENINGS.
13. EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO THE WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
14. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIO/VISUAL, AND OTHER ELECTRICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.
15. ELECTRICAL IDENTIFICATION. REFER TO SPECIFICATION SECTION 26 05 53 FOR COLOR/LABEL REQUIREMENTS FOR CONDUIT, BOX, CABLE/WIRE, AND EQUIPMENT.

ELECTRICAL SHEET INDEX

E0.00	ELECTRICAL COVERSHEET
ED1.01	FLOOR PLAN DEMOLITION - ELECTRICAL
E1.00	OVERALL PLAN - ELECTRICAL
E1.01	FLOOR PLAN - LIGHTING
E1.02	FLOOR PLAN - POWER
E1.03	FLOOR PLAN - SYSTEMS
E1.04	ROOF PLAN - POWER & SYSTEMS
E3.00	ELECTRICAL DETAILS
E4.00	ELECTRICAL RISER DIAGRAM
E5.00	ELECTRICAL SCHEDULES
E6.00	ELECTRICAL PANEL SCHEDULES
GRAND TOTAL: 11	

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
ELECTRICAL COVERSHEET

SHEET NUMBER:
E0.00

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REF. SCALE IN INCHES
PROJECT #25005446.00

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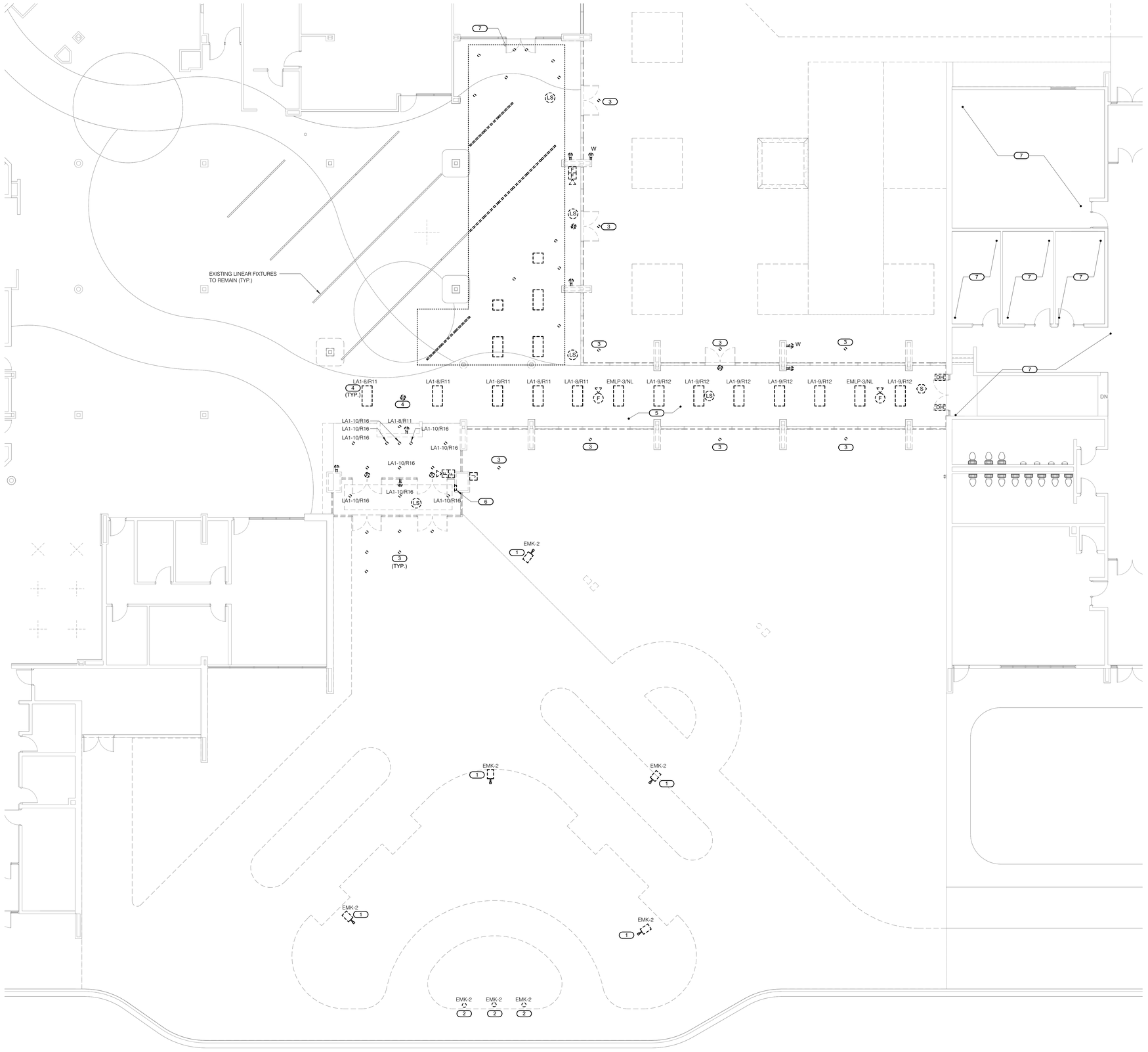

GENERAL SHEET NOTES:

1. REFER TO SHEET E000 FOR GENERAL ELECTRICAL NOTES, SYMBOLS, ELECTRICAL INSTALLATION NOTES AND OTHER MISCELLANEOUS INFORMATION.
2. REFER TO SPECIFICATION SECTION 26 05 05 FOR DEMOLITION REQUIREMENTS.

KEYNOTES:

1. REMOVE LIGHT POLE AND HEAD AND TURN OVER TO THE OWNER. REMOVE CONCRETE POLE BASE AND CONDUIT. EXISTING CIRCUIT TO BE INTERCEPTED IN THE HAND HOLE AND EXTENDED TO NEW BOLLARDS. EXISTING ACTIVE CIRCUIT SHALL BE EXTENDED AS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY.
2. EXISTING FLAG UP-LIGHT TO BE REMOVED BY THE OWNER. EC TO REMOVE CONCRETE BASE, CIRCUIT AND CONDUIT TO THE LAST ACTIVE DEVICE OR SOURCE PANEL.
3. REMOVE SOFFIT MOUNTED DOWNLIGHT. REMOVE CONDUIT AND WIRE AS REQUIRED. EXISTING CIRCUIT TO REMAIN. EC SHALL REWORK EXISTING CIRCUIT TO ALLOW FOR NEW CONSTRUCTION. CONTRACTOR SHALL EXTEND EXISTING CIRCUIT TO MAINTAIN CIRCUIT CONTINUITY. MATCH CONDUIT AND WIRE, MINIMUM (2#8 & 1#8 EGC IN 1 1/4" C.)
4. EXISTING NORMAL AND EMERGENCY CIRCUIT TO REMAIN FOR REUSE. REFER TO NEW PLAN FOR ADDITIONAL INFORMATION. EXISTING BRANCH WIRING SHALL BE REWORKED AS REQUIRED TO ALLOW FOR NEW CONSTRUCTION.
5. EXISTING FIRE ALARM CABLING TO BE PROTECTED DURING CONSTRUCTION.
6. REMOVE AND RELOCATE EXISTING FIRE ALARM ANNUNCIATOR PANEL. REFER TO SHEET E1.03 FOR NEW WORK.
7. E.C. TO REMOVE AND RE-INSTALL ALL CEILING MOUNTED DEVICES SERVING THE SPACE INCLUDING LIGHTING FIXTURES, WIRING AND FIRE ALARM DEVICES AS REQUIRED FOR ABOVE THE CEILING MECHANICAL WORK.

ELECTRICAL DEMOLITION SYMBOL LIST

SYMBOL:	DESCRIPTION:
	2'X4' TROFFER
	DOWNLIGHT LUMINAIRE
LS	DAYLIGHT SENSOR
	DUPLEX RECEPTACLE, 125V
	SINGLE FACE EXIT SIGN
	DOUBLE FACE EXIT SIGN
	POLE MOUNTED LUMINAIRE
F	FIRE ALARM MANUAL PULL STATION
S	FIRE ALARM SMOKE DETECTOR, CEILING MOUNT
F# F#	COMBINATION HORN AND VISUAL ALARM DEVICE, CEILING OR WALL MOUNT

1 FLOOR PLAN DEMOLITION - ELECTRICAL

1/8" = 1'-0"

NORTH

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ENGAGEMENT HALL

8900 NORTHWEST HWY #14
CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
FLOOR PLAN DEMOLITION - ELECTRICAL

SHEET NUMBER:
ED1.01

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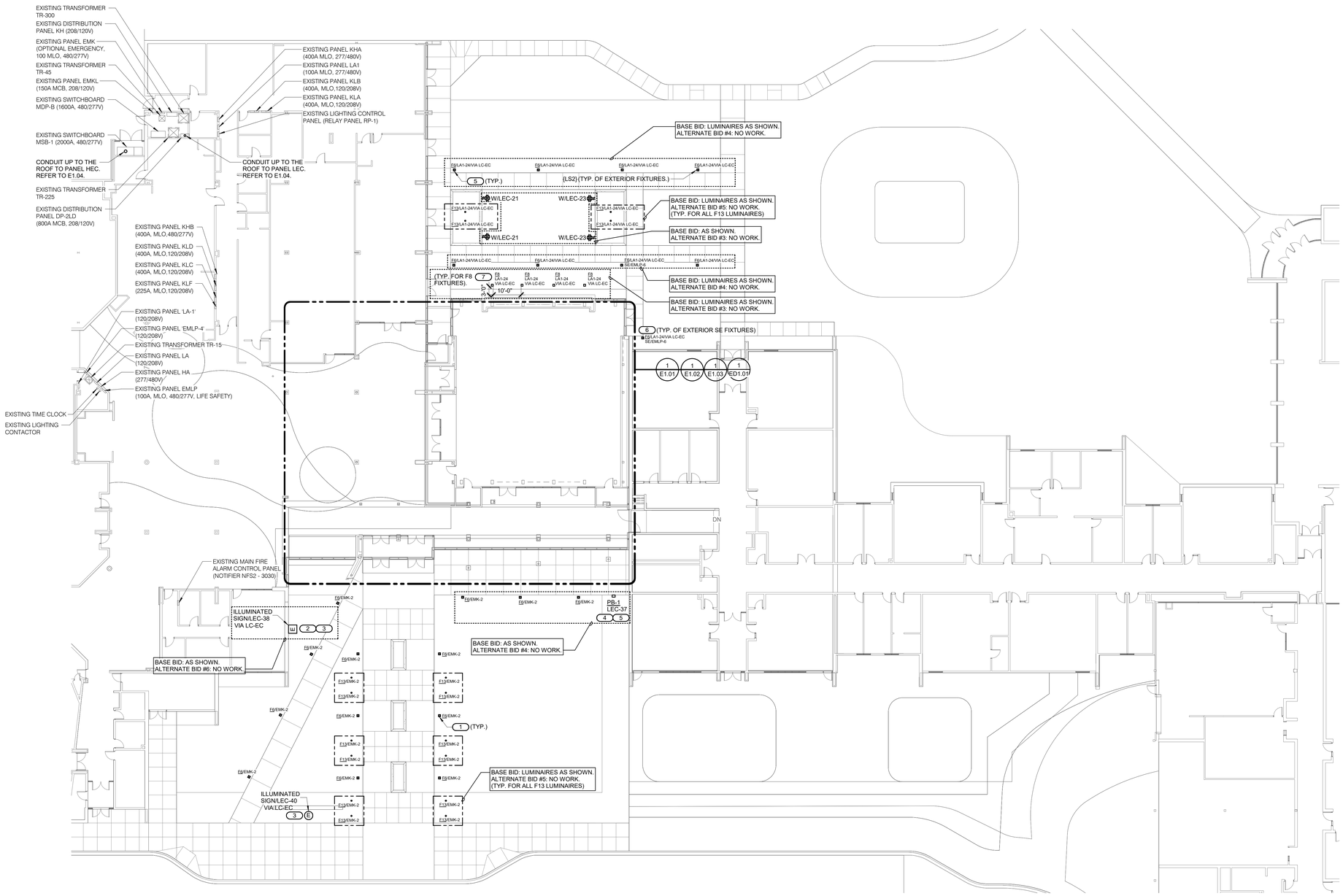
0 1 2 3
REF. SCALE IN INCHES
PROJECT #250054460.00



1 OVERALL PLAN - ELECTRICAL

1/16" = 1'-0"

GENERAL SHEET NOTES:

1. REFER TO SHEET E0.00 FOR GENERAL ELECTRICAL NOTES, SYMBOLS, ELECTRICAL INSTALLATION NOTES, ELECTRICAL RENOVATION NOTES, CONDUIT INSTALLATION SCHEDULE AND OTHER MISCELLANEOUS INFORMATION.
2. REFER TO SHEET E4.00 ELECTRICAL RISER DIAGRAM.
3. REFER TO SHEET E5.00 FOR LUMINAIRE SCHEDULE AND LIGHTING SEQUENCE OF OPERATION.
4. SURFACE MOUNTED CONDUITS ON THE EXTERIOR WALLS ARE NOT ALLOWED.

KEYNOTES:

1. REFER TO BASE DETAIL 3/E3.00. EXTEND EXISTING 277 SITE EMERGENCY LIGHTING CIRCUIT TO NEW FIXTURES. VERIFY CIRCUIT NUMBER IN FIELD. MATCH CONDUIT AND WIRE, MINIMUM (2)#8 & 1#8 EGC IN 1 1/4" C.). CIRCUIT IS CURRENTLY CONTROLLED BY TIME CLOCK VIA LIGHTING CONTACTOR.
2. SAW CUT EXISTING WALL AS REQUIRED FOR BACKBOX AND CONDUIT INSTALLATION. PATCH AND REPAIR TO MATCH EXISTING CONDITIONS. COORDINATE EXACT SIGNAGE LOCATION WITH ARCHITECT.
3. PROVIDE 20A, 120V DISCONNECT SWITCH WITH NEMA 3R ENCLOSURE (SQUARE D 2510 SERIES OR APPROVED EQUAL).
4. COORDINATE LOCATION WITH ARCHITECT. USB RECEPTACLE SHALL BE WIRED DOWNSTREAM OF GFCI.
5. REFER TO BASE DETAIL 3/E3.00.
6. PROVIDE WITH GENERATOR TRANSFER DEVICE (ACUITYBRANDS ETS20).
7. INSTALL ON CONCRETE BASE. REFER TO DETAIL 4/E3.00.

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SHEET TITLE:
OVERALL PLAN - ELECTRICAL

SHEET NUMBER:
E1.00

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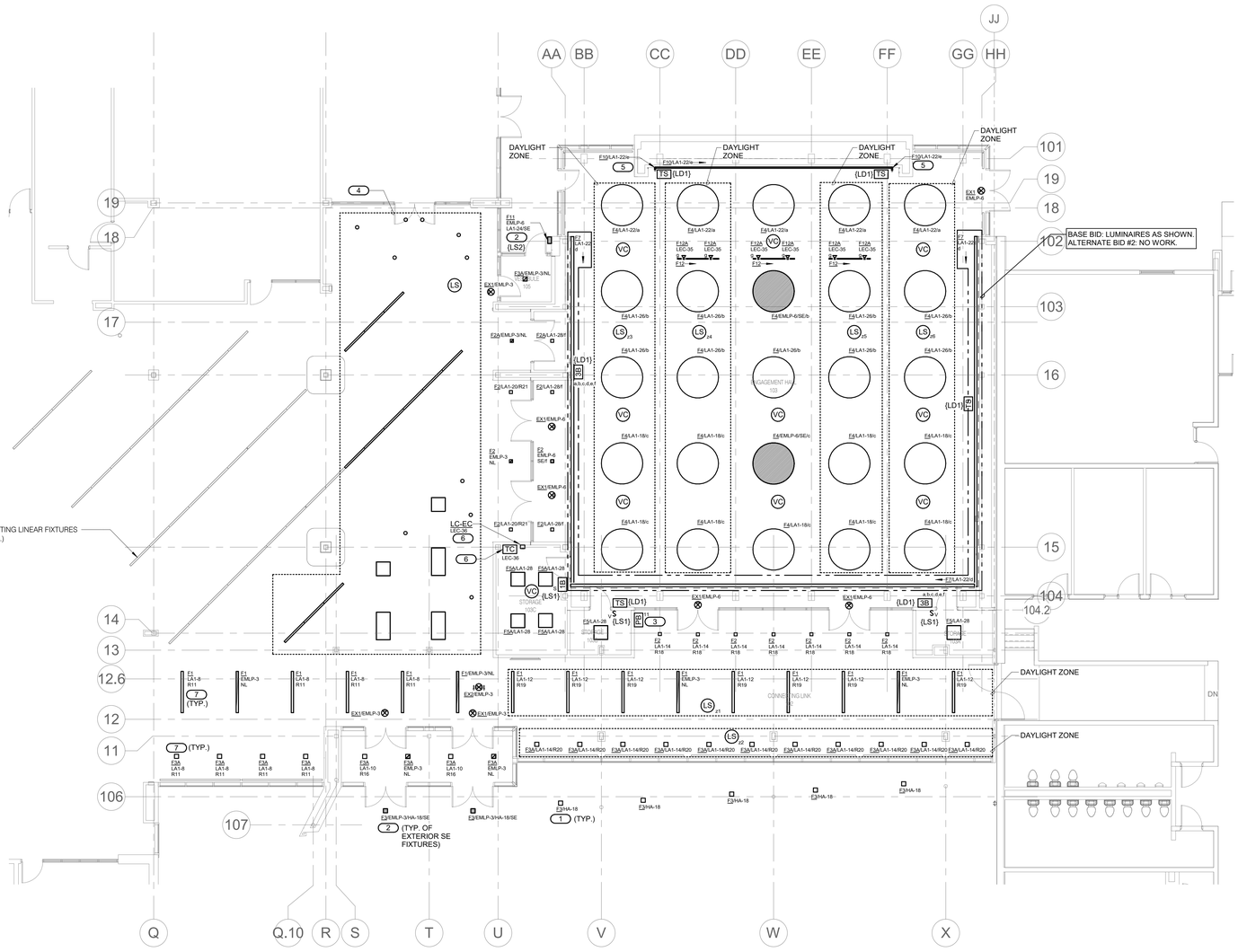
REF. SCALE IN INCHES 0 1 2 3 — PROJECT #250005446.00



1 FLOOR PLAN - LIGHTING

1/8" = 1'-0"

BRANCH CIRCUIT NOTES:

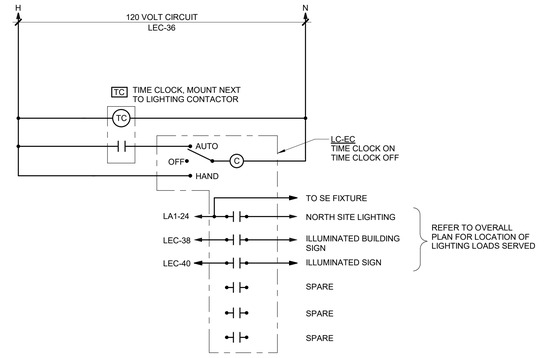
1. U.N.O., CONNECT ALL 277V LIGHTING BRANCH CIRCUITS WITH CIRCUIT PREFIX 'LA1' TO EXISTING PANEL LA1. REFER TO SHEET E1.00 FOR PANEL LOCATION.
2. U.N.O., CONNECT ALL 277V LIGHTING BRANCH CIRCUITS WITH CIRCUIT PREFIX 'HA' TO EXISTING PANEL HA. REFER TO SHEET E1.00 FOR PANEL LOCATION.
3. U.N.O., CONNECT ALL 120V LIGHTING BRANCH CIRCUITS WITH CIRCUIT PREFIX 'LEC' TO NEW PANEL LEC. REFER TO SHEET E1.02 FOR PANEL LOCATION.
4. U.N.O., CONNECT ALL 277V EMERGENCY LIGHTING BRANCH CIRCUITS WITH CIRCUIT PREFIX 'EMLP' TO EXISTING LIFE SAFETY PANEL EMLP. REFER TO SHEET E1.00 FOR PANEL LOCATION.

GENERAL SHEET NOTES:

1. REFER TO SHEET E0.00 FOR GENERAL ELECTRICAL NOTES, SYMBOLS, ELECTRICAL INSTALLATION NOTES, ELECTRICAL RENOVATION NOTES, CONDUIT INSTALLATION SCHEDULE AND OTHER MISCELLANEOUS INFORMATION.
2. REFER TO SHEETS E6.00 FOR PANEL SCHEDULES.
3. REFER TO SHEET E5.00 FOR LUMINAIRE SCHEDULE AND LIGHTING SEQUENCE OF OPERATION.
4. ALL LOW VOLTAGE WIRING IN EVENT CENTER 103 SHALL BE INSTALLED IN CONDUIT.
5. CONDUITS IN EVENT CENTER 103 SHALL BE GROUPED TOGETHER. ROUTING TO BE REVIEWED AND APPROVED BY THE ARCHITECT.
6. REFER TO LIGHTING RELAY CONTROL DIAGRAM 5/E3.00 FOR ALL PUBLIC CORRIDOR LIGHTING.

KEYNOTES:

1. EXTEND EXISTING 277 SOFFIT LIGHTING CIRCUIT TO NEW FIXTURES. VERIFY CIRCUIT NUMBER IN FIELD. MATCH CONDUIT AND WIRE, MINIMUM (2#8 & 1#8 EGC IN 1 1/4" C.). CIRCUIT IS CURRENTLY CONTROLLED BY TIME CLOCK VIA LIGHTING CONTACTOR.
2. PROVIDE WITH GENERATOR TRANSFER DEVICE (ACUITYBRANDS ETS20)
3. REFER TO LIGHTING RELAY CONTROL DIAGRAM 5/E3.00.
4. RE-INSTALL ALL EXISTING LIGHTING FIXTURES AND DAYLIGHT SENSOR WITHIN THIS AREA AS SHOWN. RECONNECT TO EXISTING LIGHTING CIRCUIT AND CONTROLS.
5. FIXTURE RUN SHALL EXTEND VERTICALLY DOWN THE ENTIRE LENGTH OF THE STAGE WALL. PROVIDE CONTINUOUS LENS SO THERE IS NO SEEM. REFER TO ARCHITECTURAL PLANS.
6. REFER TO 2/E1.01 FOR EXTERIOR LIGHTING CONTROL.
7. CONNECT NEW LIGHTING FIXTURES TO EXISTING CIRCUIT AND LIGHTING CONTROLS SERVING THE SPACE. EXTEND CIRCUIT AS REQUIRED, MINIMUM (2#12 & 1#12 EGC IN 3/4" C.). REFER TO LIGHTING RELAY CONTROL DIAGRAM 5/E3.00.



2 EXTERIOR LIGHTING CONTROL DETAIL

NO SCALE

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DKA PROJECT NO: 24-027

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SHEET TITLE:
FLOOR PLAN - LIGHTING

SHEET NUMBER:
E1.01

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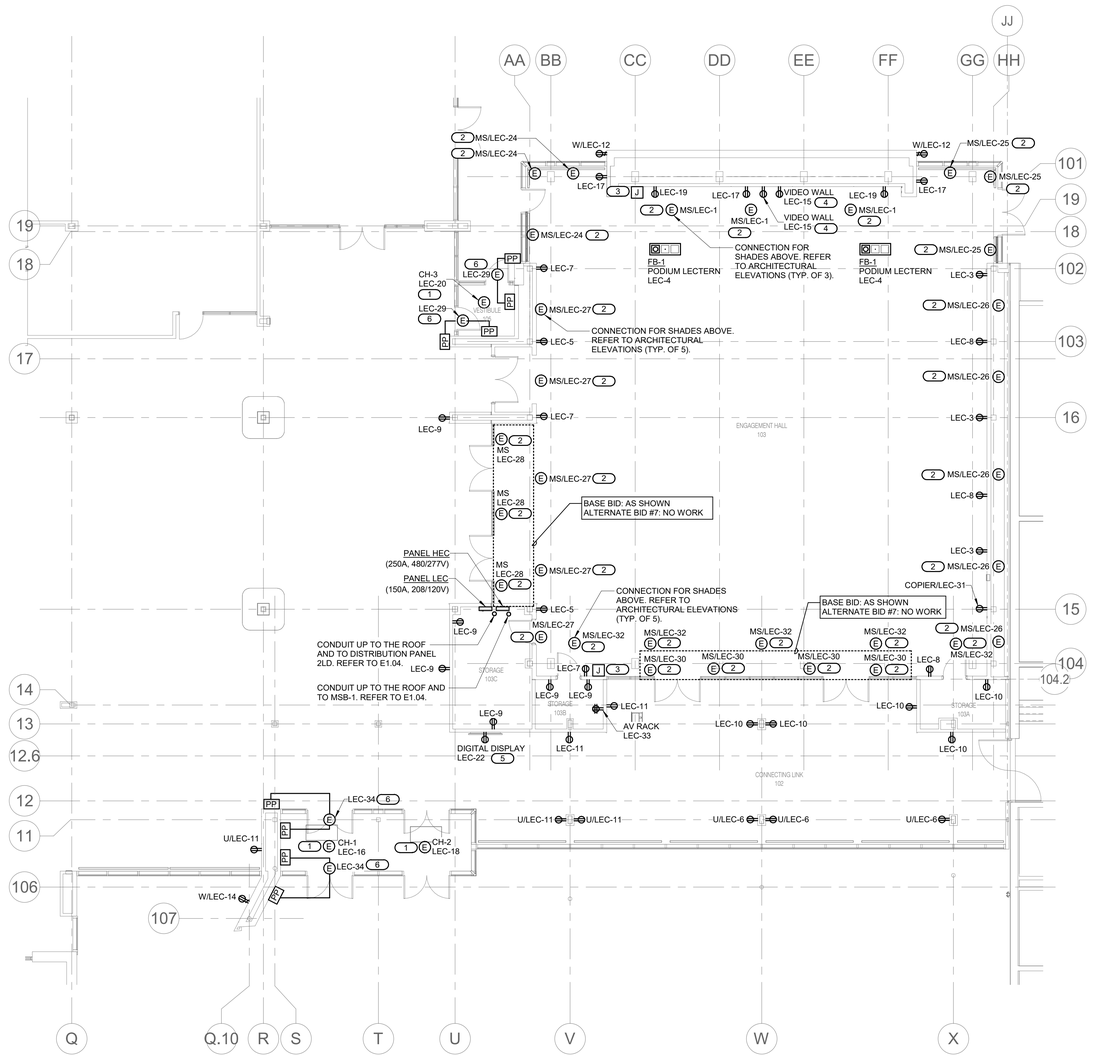

NORTH

1 FLOOR PLAN - POWER

1/8" = 1'-0"

GENERAL SHEET NOTES:

1. REFER TO SHEET E0.00 FOR GENERAL ELECTRICAL NOTES, SYMBOLS, ELECTRICAL INSTALLATION NOTES, ELECTRICAL RENOVATION NOTES, CONDUIT INSTALLATION SCHEDULE AND OTHER MISCELLANEOUS INFORMATION.
2. REFER TO SHEET E4.00 FOR ELECTRICAL RISER DIAGRAM.
3. REFER TO SHEET E6.00 FOR ELECTRICAL PANEL SCHEDULES.
4. COORDINATE FLOOR BOX LOCATION WITH ARCHITECT.
5. CONDUITS IN EVENT CENTER 103 SHALL BE GROUPED TOGETHER. ROUTING TO BE REVIEWED AND APPROVED BY THE ARCHITECT.

KEYNOTES:

1. CONNECT TO MANUFACTURER PROVIDED DISCONNECT/CONTROLLER/STARTER.
2. CONNECTION TO MOTORIZED SHADES. COORDINATE EXACT QUANTITY AND LOCATION OF MOTOR AND WIRING REQUIREMENTS WITH SHADE MANUFACTURER. SHADES SHALL HAVE MANUAL CONTROL. REFER TO 6/E3.00 FOR MOTORIZED SHADE CONTROL DIAGRAM DETAIL.
3. INSTALL SHADE CONTROLLER IN JUNCTION BOX PER MANUFACTURER'S REQUIREMENTS. MOUNT ADJACENT TO LIGHTING WALL CONTROLLER. GROUP INTO THREE ZONES: 1. ALL LOWER SHADES AT INTERIOR WINDOWS 2. HIGH EAST / SOUTH / WEST SHADES 3. FULL HEIGHT EAST / WEST SHADES AND ALL NORTH SHADES.
4. COORDINATE LOCATION WITH AV INSTALLER PRIOR TO ROUGH-IN.
5. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
6. 120V CONNECTION TO DOOR OPERATOR. COORDINATE LOCATION OF POWER SUPPLY WITH DOOR HARDWARE INSTALLER. PUSH PLATES PROVIDED WITH DOOR OPERATORS, INSTALLED AND WIRED BY E.C. FINAL LOCATION OF ADA PUSHPLATES SHALL BE COORDINATED WITH ARCHITECT.

dka

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DKA PROJECT NO: 24-027

KEY PLAN:

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SHEET TITLE:
FLOOR PLAN - POWER

SHEET NUMBER:
E1.02

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REF. SCALE IN INCHES

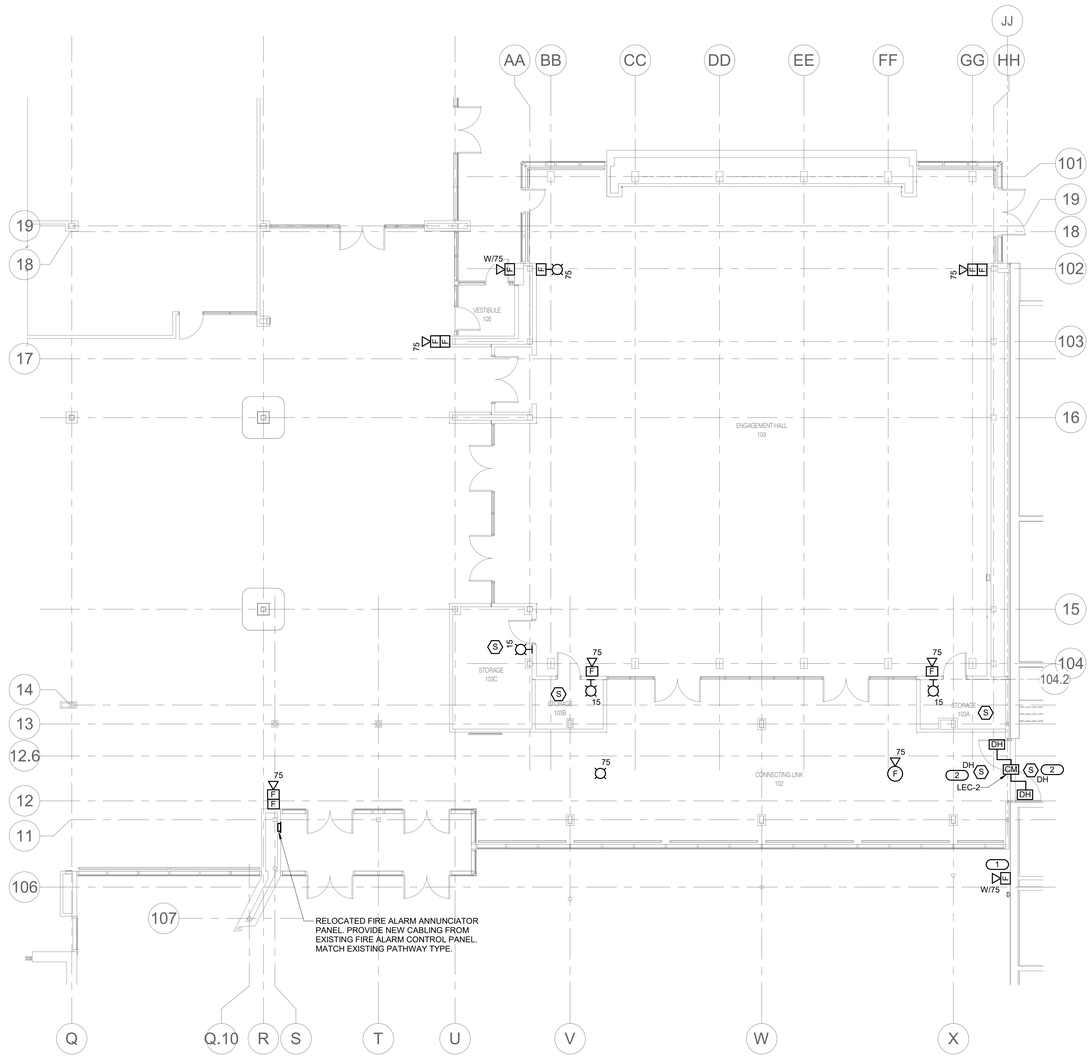
PROJECT #250054460.00

GENERAL SHEET NOTES:

1. REFER TO SHEET E0.00 FOR GENERAL ELECTRICAL NOTES, SYMBOLS, ELECTRICAL INSTALLATION NOTES, ELECTRICAL RENOVATION NOTES, CONDUIT INSTALLATION SCHEDULE AND OTHER MISCELLANEOUS INFORMATION.
2. REFER TO SHEET E3.00 FOR FIRE ALARM RISER DIAGRAM AND MATRIX.
3. ALL FIRE ALARM WIRING IN EVENT CENTER 103 SHALL BE INSTALLED IN CONDUIT.
4. CONDUITS IN EVENT CENTER 103 SHALL BE GROUPED TOGETHER. ROUTING TO BE REVIEWED AND APPROVED BY THE ARCHITECT.

KEYNOTES:

1. SAW CUT EXISTING WALL AS REQUIRED FOR BACKBOX AND CONDUIT INSTALLATION. PATCH AND REPAIR TO MATCH EXISTING CONDITIONS.
2. INSTALL SMOKE DETECTOR WITHIN 5'-0" OF CONTROLLED DOOR.



1 FLOOR PLAN - SYSTEMS

1/8" = 1'-0"

NORTH

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KEY PLAN:

SHEET STATUS: 05/16/2025
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NO:	DESCRIPTION:	DATE:

SHEET TITLE:
FLOOR PLAN - SYSTEMS

SHEET NUMBER:
E1.03

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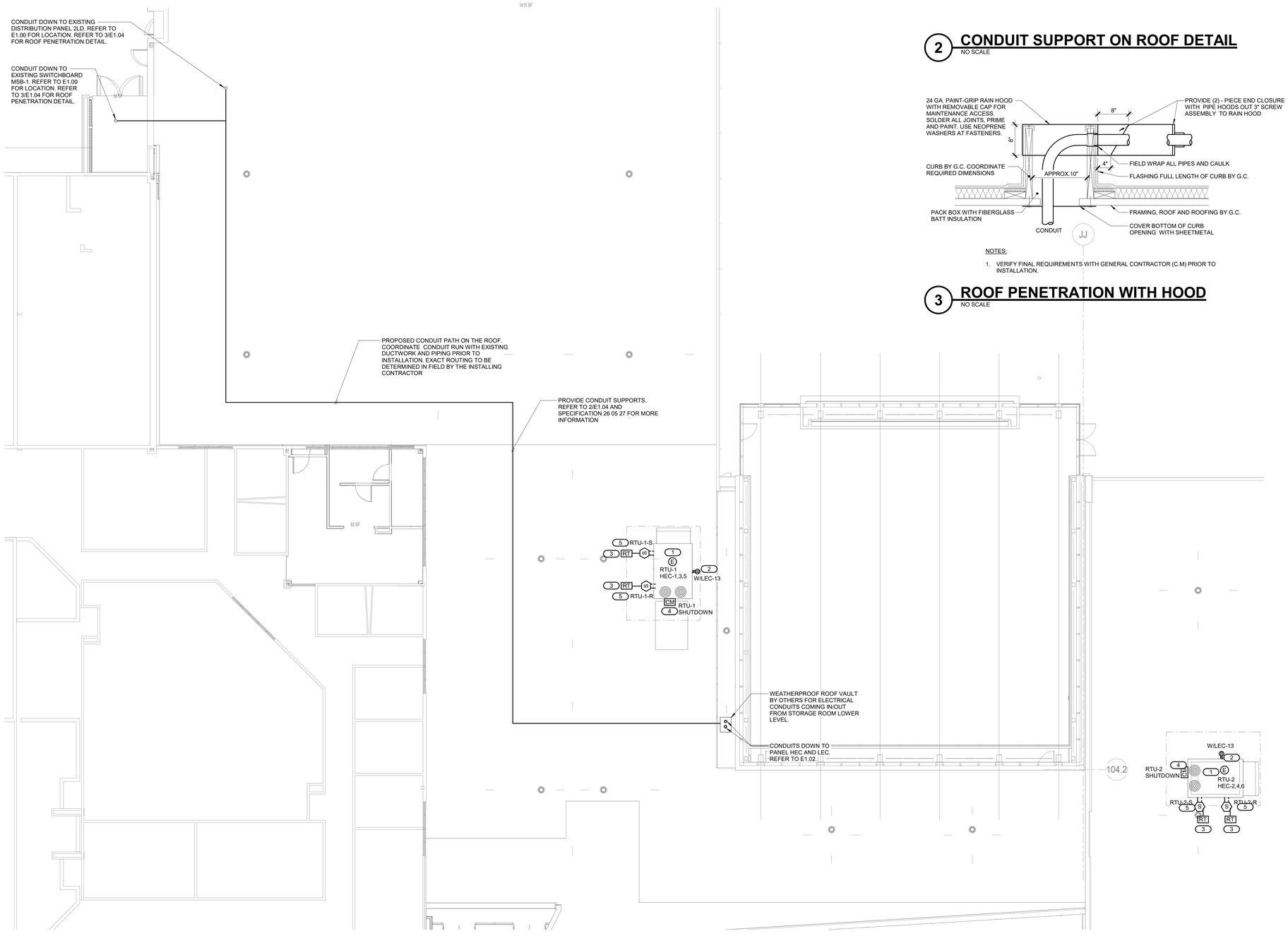
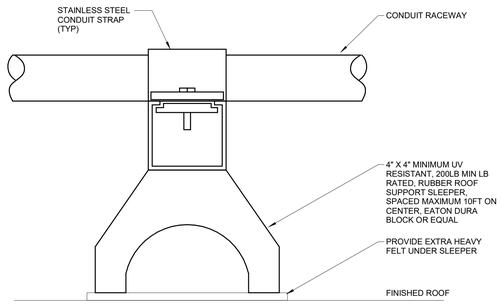
REF. SCALE IN INCHES

PROJECT #250005446.00



1 **ROOF PLAN - POWER & SYSTEMS**
1/8" = 1'-0"



2 **CONDUIT SUPPORT ON ROOF DETAIL**
NO SCALE

NOTES:

1. VERIFY FINAL REQUIREMENTS WITH GENERAL CONTRACTOR (C.M) PRIOR TO INSTALLATION.

3 **ROOF PENETRATION WITH HOOD**
NO SCALE

GENERAL SHEET NOTES:

1. REFER TO SHEET E0.00 FOR GENERAL ELECTRICAL NOTES, SYMBOLS, ELECTRICAL INSTALLATION NOTES, ELECTRICAL RENOVATION NOTES, CONDUIT INSTALLATION SCHEDULE AND OTHER MISCELLANEOUS INFORMATION.
2. REFER TO SHEET E3.00 FOR FIRE ALARM RISER DIAGRAM AND MATRIX.
3. REFER TO SHEET E4.00 AND E6.00 FOR PANEL SCHEDULES AND ELECTRICAL RISER DIAGRAM.

KEYNOTES:

1. CONNECT TO MANUFACTURER PROVIDED DISCONNECT/CONTROLLER/STARTER.
2. MOUNT RECEPTACLE ON THE UNIT. COORDINATE LOCATION WITH M.C.
3. INSTALL REMOTE INDICATOR ON THE WALL OR IN THE CEILING BELOW AT VISIBLE LOCATION. COORDINATE LOCATION WITH OWNER. PROVIDE LABEL INDICATING HVAC UNIT AND DUCT TYPE AND ADDRESS OF ASSOCIATED DETECTOR.
4. CONNECTION TO MOTOR CONTROLLER FOR MOTOR SHUTDOWN SEQUENCE.
5. INSTALL SAMPLING TUBE IN STRAIGHT RUN OF THE DUCT, DOWN STREAM OF FILTERS, AND AHEAD ANY BRANCH DUCTS. COORDINATE INSTALLATION WITH M.C. PRIOR TO ROUGH-IN. SEAL ALL DUCT PENETRATIONS AIR-TIGHT.

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ROOF PLAN - POWER & SYSTEMS

SHEET NUMBER:
E1.04

5/16/2025 6:31:28 PM

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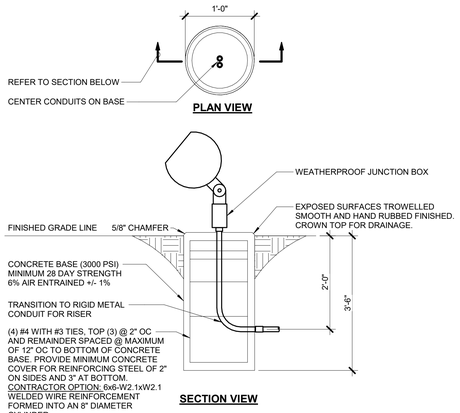
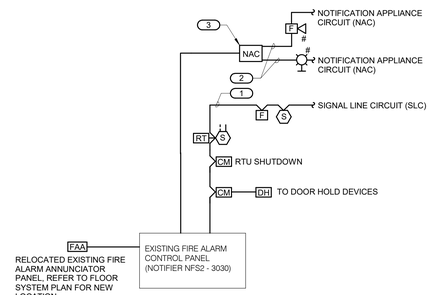
REF. SCALE IN INCHES
PROJECT #250054460.00

SYSTEM INPUTS \ SEQUENCE OF OPERATION		PANEL/ANNUNCIATOR ALARM INDICATION	PANEL/ANNUNCIATOR SUPERVISORY INDICATION	PANEL/ANNUNCIATOR TROUBLE INDICATION	AUDIBLE ALARMS SEQUENCE	VISUAL ALARMS SEQUENCE	[CM] AHU & MECHANICAL FAN SHUTDOWN SEQUENCE	[CM] DOOR HOLDER SEQUENCE
FIRE ALARM PANEL, TRANSPONDER, NAC PANEL LOW BATTERY			X					
FIRE ALARM PANEL, TRANSPONDER, NAC PANEL BATTERY OR CHARGER FAILURE				X				
FIRE ALARM PANEL, TRANSPONDER, NAC PANEL ABNORMAL SWITCH OR CONTROL POSITION.			X					
FIRE ALARM PANEL, TRANSPONDER, NAC PANEL GROUND FAULT, OPEN CIRCUIT, SHORT CIRCUIT				X				
FIRE ALARM PANEL, TRANSPONDER, NAC PANEL AC POWER LOSS OR IRREGULARITY				X				
NOTIFICATION APPLIANCE CIRCUIT OR SLC LOOP GROUND FAULT, OPEN CIRCUIT, SHORT CIRCUIT				X				
INITIATING DEVICE FAILURE OR COMMUNICATION ERROR				X				
FIRE ALARM PANEL MANUAL FIRE DRILL			X		X	X		
MANUAL PULL STATION	[F]	X			X	X		
SMOKE DETECTOR	[S]	X			X	X		
SMOKE DETECTOR FOR HVAC CONTROL	[SD]		X				X	
SMOKE DETECTOR AT DOOR	[S]DH [DH]	X			X	X		X

1 FIRE ALARM OPERATION MATRIX
NO SCALE



4 GROUND MOUNT BASE DETAIL
NO SCALE



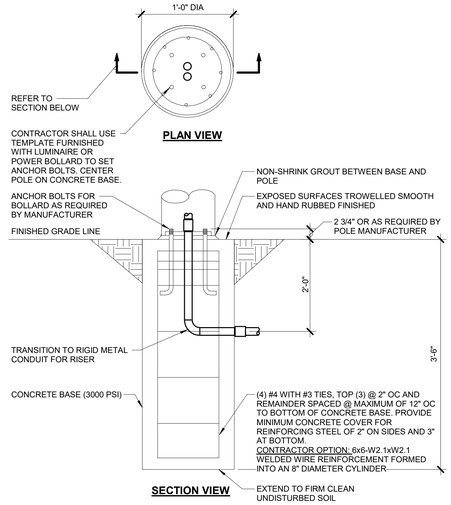
2 FIRE ALARM RISER
NO SCALE

NOTES:

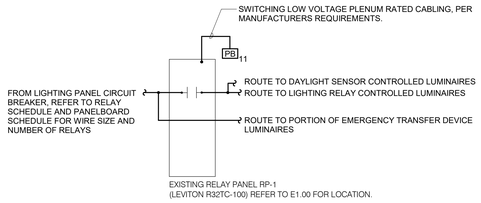
1. THE RISER DIAGRAM IS INTENDED TO CONVEY THE TYPES OF FIRE ALARM CONNECTIONS AND SPECIFICALLY DOES NOT INDICATE QUANTITIES, NUMBER OF CIRCUITS REQUIRED OR DISTANCES.
2. THE COMPLETE FIRE ALARM SYSTEM SHALL MEET ALL APPLICABLE CODES AND MANUFACTURER'S RECOMMENDATIONS.
3. CONTRACTOR SHALL COORDINATE ALL WIRE SIZES, TYPES AND REQUIREMENTS WITH THE VENDOR PRIOR TO BID. REFER TO SPECIFICATIONS TO DETERMINE CIRCUIT STYLES AND IF CONDUIT IS REQUIRED OR PLENUM RATED CABLE IS ACCEPTABLE.
4. ALL +120VAC WIRING REQUIRED FOR OPERATION OF THE SYSTEM AS DESCRIBED IN THE CONSTRUCTION DOCUMENTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
5. ALL NECESSARY RELAYS MAY NOT BE SHOWN ON THIS PLAN, BUT WHERE REQUIRED FOR PROPER OPERATION OF THE SYSTEM THEY SHALL BE PROVIDED BY THE CONTRACTOR.
6. EXISTING SYSTEM SEQUENCES OF OPERATION SHALL REMAIN AND BE USED FOR NEW DEVICES. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

KEYNOTES: (#)

1. REFER TO SPECIFICATION FOR REQUIREMENTS OF EACH INITIATION LOOP AND WIRING STYLE. REFER TO FLOOR PLANS FOR DEVICES AND THEIR LOCATIONS.
2. REFER TO SPECIFICATION FOR REQUIREMENTS OF EACH NOTIFICATION APPLIANCE CIRCUIT AND WIRING STYLE. REFER TO FLOOR PLANS FOR DEVICES AND THEIR LOCATIONS.
3. PROVIDE NOTIFICATION APPLIANCE EXTENDER PANELS AS REQUIRED. DETERMINATION OF NEED TO BE MADE BY FIRE ALARM VENDOR. REFER TO SPECIFICATIONS FOR REQUIREMENTS AND ACCEPTABLE MOUNTING LOCATIONS.



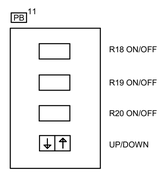
3 BOLLARD BASE DETAIL
NO SCALE



EXISTING RELAY PANEL 'RP-1'

RELAY	CIRCUIT	AREA SERVED
R1	LA1-1	CULINARY ARTS LAB
R2	LA1-1	WAREWASH
R3	LA1-3	SERVICE CORRIDOR
R4	LA1-3	PRODUCTION KITCHEN
R5	LA1-1	CULINARY ARTS LAB
R6	LA1-1	CULINARY ARTS LAB
R7	LA1-6	SERVERY
R8	KLF-42	SERVERY TRACK
R9	LA1-6	SERVERY
R10	LA1-7	DINING
R11	LA1-8	CORRIDOR/DINNING ROOM
R12	LA1-9	CORRIDOR TO C
R13	KLF-40	DINING TRACK
R14	LA1-10	LOUNGE B182 A
R15	LA1-10	LOUNGE B174 B
R16	LA1-10	VESTIBULE
R17	LA1-11	DINING
R18	LA1-14	DOWNLIGHTS OUTSIDE EVENT CENTER
R19	LA1-12	CORRIDOR LIGHT SOUTH OF EVENT CENTER
R20	LA1-14	DOWNLIGHTS NEAR SOUTH EXTERIOR WALL
R21	LA1-20	DOWN LIGHTS AT ENTRANCE OF EVENT CENTER IN DINING ROOM

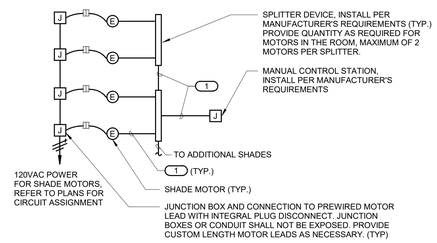
EXISTING LOADS AND PROGRAMMING TO REMAIN AS IS



5 LIGHTING RELAY CONTROL DIAGRAM
NO SCALE

NOTES:

1. A WIRING DIAGRAM DEPICTING AS-CONSTRUCTED CONDITIONS SHALL BE POSTED AT THE RELAY CONTROL PANEL (RP-1).
2. PROVIDE PROGRAMMING FOR THE NEW LOADS AT THE EXISTING LIGHTING CONTROL PANEL.
3. EXISTING LIGHTING CONTROL PANEL IS CONTROLLED BY BAS SYSTEM. PROVIDE ADDITIONAL BAS PROGRAMMING TO CONTROL ADDED LOADS.



NOTES:

1. COORDINATE ALL WIRING REQUIREMENTS WITH EQUIPMENT MANUFACTURER AND APPROVED SHOP DRAWINGS.

KEYNOTES:

(1) LOW VOLTAGE CABLE PER MANUFACTURER'S REQUIREMENTS. EXPOSED PLENUM RATED CABLE MAY BE USED ABOVE ACCESSIBLE CEILINGS ONLY. ROUTE IN CONDUIT IN EXPOSED CEILINGS.

6 MOTORIZED SHADE CONTROL DIAGRAM
NO SCALE

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McHenry County College
ENGAGEMENT HALL
8900 NORTHWEST HWY #14
CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
ELECTRICAL DETAILS

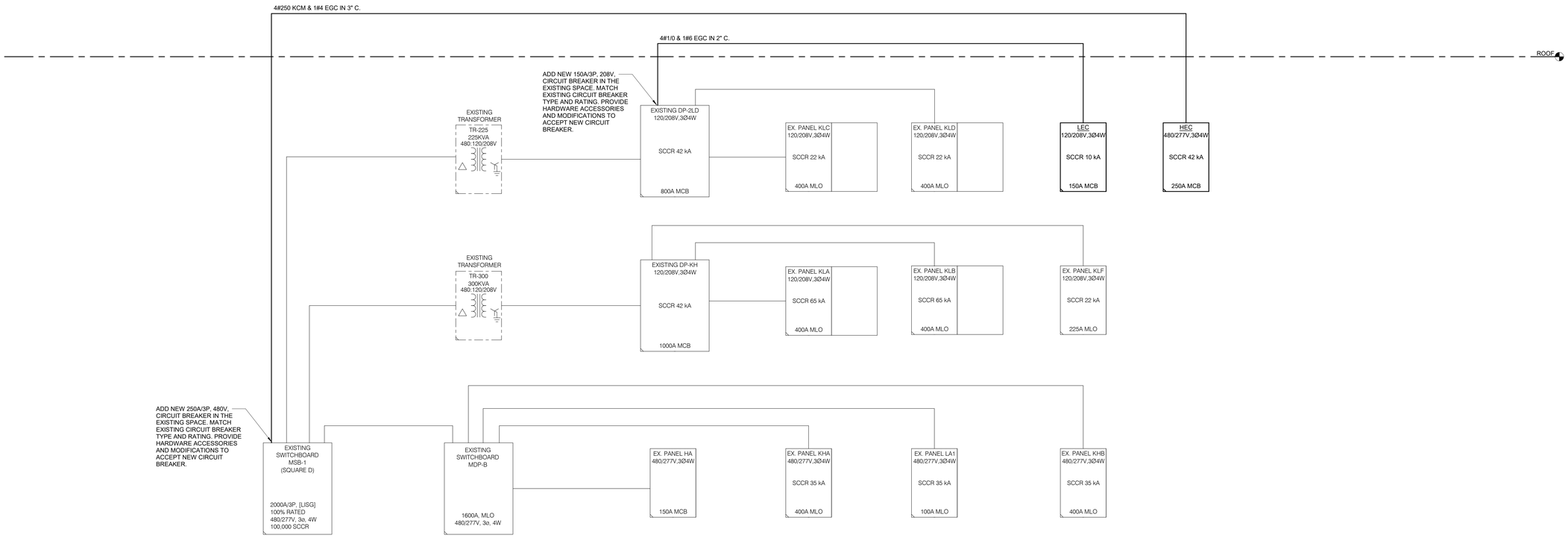
SHEET NUMBER:
E3.00

5/16/2025 6:31:29 PM

0 1 2 3
REF. SCALE IN INCHES PROJECT #250054446.00

ELECTRICAL - RISER DIAGRAM NOTES:

1. THE RISER DIAGRAM IS INTENDED TO CONVEY THE COMPONENTS OF THE ELECTRICAL DISTRIBUTION SYSTEM. REFER TO ELECTRICAL DRAWINGS, DETAILS, DISTRIBUTION / PANEL / EQUIPMENT / EQUIPMENT CONNECTION SCHEDULES, AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. SHORT CIRCUIT CURRENT RATINGS (SCCR) FOR EQUIPMENT ARE MINIMUM REQUIREMENTS FOR BUSS BRACING AND DEVICE RATING. ALL EQUIPMENT SHALL BE FULLY RATED UNLESS SPECIFICALLY NOTED AS SERIES RATED.
3. THE BASIS OF DESIGN: THE CONTRACTOR SHALL BE RESPONSIBLE FOR DERATING AND SIZING CONDUCTORS AND CONDUITS TO EQUAL OR EXCEED AMPACITY OF THE BASIS OF DESIGN CIRCUITS WHEN ALTERNATIVE METHODS OR MATERIALS OTHER THAN THE BASIS OF DESIGN ARE APPLIED.
   a. RACEWAY: EMT UNLESS OTHERWISE NOTED
   b. FEEDER CHARACTERISTICS: ALL CURRENT CARRYING CONDUCTORS SHALL BE COPPER UNLESS NOTED OTHERWISE. REFER TO SPECIFICATION SECTION 25 05 13 WIRE AND CABLE FOR ADDITIONAL INFORMATION
4. PROVIDE O.Z. GEDNEY OR EQUAL GROUND BUSHING FOR ALL SERVICE AND FEEDER RACEWAYS BONDED TO GROUND BUS WITH CONDUCTOR SIZED TO MAXIMUM FEEDER GROUND CAPACITY.
5. CONDUCTORS AND GROUND SIZES ON THE LINE AND LOAD SIDES OF ALL DISCONNECT SWITCHES SHALL BE IDENTICAL UNLESS NOTED OTHERWISE.
6. REFER TO COVER SHEET FOR ADDITIONAL EQUIPMENT TAG INFORMATION.
7. REFER TO GROUNDING ELECTRODE SYSTEM AND BONDING DETAILS
8. CIRCUIT BREAKER CHARACTERISTICS AND ACCESSORIES:
   a. [CB] INDICATES CIRCUIT BREAKER
   b. [MLO] INDICATES MAIN LUG ONLY
   c. [MCB] INDICATES MAIN CIRCUIT BREAKER
   d. [MCCB] INDICATES MOLDED CASE CIRCUIT BREAKER
   e. [LSIG] INDICATES FEATURES PROVIDED WITH SOLID STATE CIRCUIT BREAKER [LONG TIME (W/DELAY), SHORT TIME (W/DELAY), INSTANTANEOUS, GROUND FAULT]
   f. [100% RATED] INDICATES INSULATED CASE BREAKER RATED FOR FULL CONTINUOUS CAPACITY OF CIRCUIT BREAKER NAMEPLATE
9. BRANCH PANEL KEY:
   a. *G = GROUND FAULT CIRCUIT INTERRUPT
   b. *P = PADLOCK HASP
   c. *R = RED HANDLE
10. ADDITIONAL ABBREVIATIONS:
   a. EGC - EQUIPMENT GROUNDING CONDUCTOR



1 ELECTRICAL RISER DIAGRAM
NO SCALE

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DKA PROJECT NO: 24-027

KEY PLAN:

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NO:	DESCRIPTION:	DATE:

SHEET TITLE:
ELECTRICAL RISER DIAGRAM

SHEET NUMBER:
E4.00

5/16/2025 6:31:30 PM

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Illinois Design Firm Registration #184008976-0014

0 1 2 3
REF. SCALE IN INCHES
PROJECT #25005446.00

LED LUMINAIRE SCHEDULE

(DESC) DOOR:	**DISTRIBUTION:**	**BEAMWIDTH:**	**(L/L) LENS/LOUVER:**
FA - FLAT ALUMINUM	II - ANSI/IES TYPE 2 DISTRIBUTION	NSP - VERY NARROW SPOT	A - .125" ACRYLIC
FS - FLAT STEEL	III - ANSI/IES TYPE 3 DISTRIBUTION	SP - SPOT	B - BAFFLE/LOUVER
RA - REGRESSED ALUMINUM	IV - ANSI/IES TYPE 4 DISTRIBUTION	MD - MEDIUM	C - CLEAR ALZAK
RS - REGRESSED STEEL	V - ANSI/IES TYPE 5 DISTRIBUTION	WD - WIDE	F - FROSTED ACRYLIC
FINISH:		VWD - VERY WIDE	G - TEMPERED GLASS
PAF - PAINT AFTER FABRICATION		WW - WALL WASH	K - KSH12 .125" ACRYLIC
CFSA - COLOR-FINISH SELECTION BY ARCHITECT			

			K19 - KSH19 .156" ACRYLIC
			M - MATTE DIFFUSE CLEAR
			N - NONE
			P - POLYCARBONATE
			R - HIGH IMPACT DR ACRYLIC
			SS - SEMI-SPECULAR CLEAR
			O - OTHER (SEE DESCRIPTION)
			[DESIGN SPECIFIC BLANKS]

(MTG) MOUNTING:	RE - RECESSED	**(WATT) PER:**	FIX - FIXTURE, FT - FOOT, LAMP
CL - CEILING SURFACE	SP - SUSPENDED	**(TYPE) LED**	RGB - COLOR CHANGING LED
CV - COVE	SU - SURFACE	LED - LIGHT EMITTING DIODE	RGBW - COLOR CHANGING + WHITE
FR - FLANGED RECESSED	UC - UNDER CABINET	TLED - TUBULAR LED LAMP	RGBA - COLOR CHANGING + AMBER
P - PERIMETER	WL - WALL	OLED - ORGANIC LED	RLED - RETROFIT LED
PL - POLE	O - OTHER (SEE DESCRIPTION)	DLED - DYNAMIC TUNABLE LED	WLED - WARM DIM LED

(TYPE) DRIVER:			
0-10V - 0-10V DIMMING	EB - ELECTRONIC	HL - HIGH/LOW (100%/50%) STEP DIM	MV - MULTI-VOLTAGE ELECTRONIC
DALI - DIGITAL ADDRESSABLE	ELV - ELECTRONIC LOW VOLTAGE	LINE - LINE VOLTAGE DIMMING	REM - REMOTE
DMX - DIGITAL MULTIPLEX	EM - EMERGENCY BATTERY	ML - MULTI-LEVEL SWITCHING	O - OTHER (SEE DESCRIPTION)

CATALOG NUMBER SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND CATALOG NUMBER ONLY. THE COMPLETE DESCRIPTION AND THE SPECIFICATION SHALL BE COORDINATED WITH THE CATALOG NUMBER TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE FIRST MANUFACTURER LISTED IS THE BASIS OF DESIGN.

VERIFY AND COORDINATE ALL CEILING TYPES WITH LUMINAIRE MOUNTING AND TRIM REQUIREMENTS PRIOR TO THE RELEASE OF THE LUMINAIRE ORDER.
CONFIRM ALL COLORS AND FINISHES OF ALL LUMINAIRE COMPONENTS WITH ARCHITECT AND INTERIOR DESIGNER PRIOR TO THE RELEASE OF THE LUMINAIRE ORDER.
UNLESS INDICATED ON LIGHTING PLANS OR BELOW, REFER TO ARCHITECTURAL AND INTERIOR DESIGN ELEVATIONS, SECTIONS AND DETAILS FOR ALL SUSPENDED AND WALL MOUNTED LUMINAIRE MOUNTING HEIGHTS.

REFER TO SPECIFICATION SECTIONS 26 51 19 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
INTERIOR CORRELATED COLOR TEMPERATURE 3500K, COLOR RENDERING INDEX (CRI) AT OR ABOVE 80, UNLESS NOTED OTHERWISE.
EXTERIOR CORRELATED COLOR TEMPERATURE 4000K, COLOR RENDERING INDEX (CRI) AT OR ABOVE 70, UNLESS NOTED OTHERWISE.

				DIMENSIONS				WATT		LED			DRIVER		
ITEM	DESCRIPTION	L/L	MTG	L	W	H	DIA.	ANSI WATTS	PER	TYPE	QTY	DELIVERED LUMENS (MIN)	VOLTS	TYPE	MANUFACTURER AND MODEL
EX1	SINGLE FACED EDGE-LITE EXIT SIGN, AC ONLY, LETTERNG COLOR SELECTED BY ARCHITECT, BRUSHED ALUMINUM TRIM. VERIFY BACK, SIDE, OR RECESSED MOUNTING AND ARROWS WITH PLANS.	O	CL	1'-1"	2"	9"		2	FIX	LED	1	L.E.D.	277	EB	LITHONIA LRP DUAL-LITE LES SURE-LITES CHLORIDE LIGHTALARMS SLED
EX2	DOUBLE FACED EDGE-LITE EXIT SIGN, AC ONLY, LETTERNG COLOR SELECTED BY ARCHITECT, BRUSHED ALUMINUM TRIM. VERIFY BACK, SIDE, OR RECESSED MOUNTING AND ARROWS WITH PLANS.	O	CL	1'-1"	2"	9"		2	FIX	LED	1	L.E.D.	277	EB	LITHONIA LRP DUAL-LITE LES SURE-LITES CHLORIDE LIGHTALARMS SLED
F1	4" EDGE-LIT RECESSED LINEAR LED. FLAT T-BAR FLANGE, FLUSH LENS, PROVIDE WITH REMOTE DRIVER. COORDINATE FINISH WITH ARCHITECT.	O	RE	6'-0"	4"	1 69/128"		5	FT	LED	1	500 LM/FT	277	0-10V	XICO GRIDSLOT
F2	4" LED SQUARE DOWNLIGHT, CLEAR REFLECTOR, FLANGELESS TRIM, SEMI-SPECULAR. MEDIUM-WIDE DISTRIBUTION.	O	RE	4"	4"	3/4"		9	FIX	LED	1	1000 LM	277	0-10V	GOTHAM EVO SQUARE LIGHTOLIER PRESCOLITE
F2A	SIMILAR TO F2, SELF-FLANGED TRIM.	O	RE	4"	4"	3/4"		9	FIX	LED	1	1000 LM	277	0-10V	REFER TO F2
F3	6" LED SQUARE DOWNLIGHT, CLEAR, SELF-FLANGED, SEMI-SPECULAR MEDIUM-WIDE DISTRIBUTION, WET LOCATION LISTED.	O	RE	6"	6"	6 3/4"		8	FIX	LED	1	750 LM	277	0-10V	GOTHAM EVO SQUARE LIGHTOLIER
F3A	SIMILAR TO F3, FLANGELESS TRIM, PROVIDE WITH DIFFERENT LUMEN PACKAGE.	O	RE	6"	6"	6 3/4"		13	FIX	LED	1	1500 LM	277	0-10V	REFER TO F3
F4	72" ROUND PATTERN PENDANT LED WITH VERTICAL AIRCRAFT CABLE, BLACK POWER CORD, AND REMOTE DRIVER ENCLOSURE, DIRECT DISTRIBUTION, HEIGHT EFFICIENCY LAMBERTIAN OPTICS, MATTE WHITE DIFFUSER, COORDINATE FINISH WITH ARCHITECT.	O	SP			4"	6'-0"	36	FIX	LED	1	750 LM/FT	277	0-10V	LUMENWERX CURVIA 2
F5	2X2 RECESSED TROFFER LED, EDGE-LIT, SATIN-WHITE ACRYLIC LENS.	O	RE	2'-0"	2'-0"	2 49/256"		45	FIX	LED	1	4800 LM	277	0-10V	LITHONIA EPANL DAY-BRITE METALUX HUBBELL HEW
F5A	SIMILAR TO F5, PROVIDE DIFFERENT LUMEN PACKAGE.	O	RE	<varies>	2'-0"	<varies>		19	FIX	LED	1	2000 LM	277	0-10V	REFER TO F5
F6	WIDE SPREAD SQUARE BOLLARD LED WITH SHIELDED ASYMMETRIC LIGHT DISTRIBUTION, MATTE FINISH, DARKSKY APPROVED. COORDINATE EXACT COLOR WITH ARCHITECT.	O	PL			3'-0"	7"	15	FIX	LED	1	1762 LM	277	EB	BEGA B84413
F7	WALL MOUNT INDIRECT LINEAR LED, EXTRUDED ACRYLIC SPOTLESS LENS, CONTINUOUS RUN LENGTH AND PATTERN AS SHOWN ON PLANS, COORDINATE FINISH WITH ARCHITECT.	O	WL	<varies>	3 3/8"	4 1/2"		4	FT	LED	1	INDIRECT: 500 LM/FT	277	0-10V	AXIS BEAM 2
F8	FLOODLIGHT, 350 DEGREE ROTATION, 70 DEGREE TILT ANGLE, FLAT BEAM DISTRIBUTION, COORDINATE FINISH WITH ARCHITECT. MOUNTED ON CONCRETE BASE.	O	SU	7 77/256"	6 1/2"	4"		21	FIX	LED	1	2056 LM	277	EB	BEGA 77536 FLOODLIGHT WE-EF
F10	2.25" PERIMETER WALLWASH TRIMLESS LINEAR RECESSED LED, 3" REGRESSED LENS, CONTINUOUS RUN LENGTH AND PATTERN AS SHOWN ON PLANS, CONTINUOUS RUN SHALL EXTEND VERTICALLY DOWN THE WALL. REFER TO ARCHITECTURAL PLANS. COORDINATE MOUNTING OPTIONS, EXACT LENGTH, AND FINISH WITH ARCHITECT.	O	RE	<varies>	2 1/4"	3 97/256"		5	FT	LED	1	517 LM/FT	277	0-10V	ALIGHT ACL9
F11	EXTERIOR BUILDING MOUNTED LUMINAIRE. BI-DIRECTIONAL LIGHT OUTPUT, WHITE CERAMIC COATED SAFETY GLASS, COLOR SELECTION BY ARCHITECT FROM STANDARD FINISHES.	O	WL	11 3/4"	4 3/4"	10 1/2"		8	FIX	LED	1	518 LM	277	EB	BEGA 33341
F12	SUSPENDED 6' TRACK SYSTEM WITH VERTICAL AIRCRAFT CABLE, COORDINATE TRACK FINISH AND CABLE COLOR WITH ARCHITECT, COORDINATE SUSPENSION HEIGHT WITH ARCHITECT, PROVIDE ALL MOUNTING HARDWARE FOR A COMPLETE FUNCTIONING SYSTEM.	O	SP	6'-0"	1 3/8"						1		120	0-10V	LUMENTURE K-BEAM TRACK
F12A	3" CYLINDRICAL TRACK HEAD MOUNTED TO F12 TRACK SYSTEM, 25 DEGREE BEAM SPREAD, 90 DEGREE TILT, 360 DEGREE ROTATION, PROVIDE QUANTITY SHOWN ON PLANS, COORDINATE CANOPY TYPE AND FINISH WITH ARCHITECT.	O	O	0"	3"		4"	20	FIX	LED	1	2000 LM	120	0-10V	LUMENTURE T80 TRACK HEAD
F13	EXTERIOR ADJUSTABLE COMPACT FLOODLIGHT, EARTH SPIKE MOUNT, MARINE GRADE HOUSING, SILICONE WIDE BEAM OPTIC, INSTALL PER MANUFACTURERS REQUIREMENTS, CONFIRM FINISH WITH ARCHITECT.	O	O			8"	5 1/2"	16	FIX	LED	1	1330 LM	277	EB	BEGA 77685 FLOODLIGHT
F#	STANDARD DOWNLIGHT		RE			9 1/2"	6"	0	FIX	LED	1	LUMENS	120	0-10V	

LUMINAIRE SCHEDULE NOTES:

1. F9 - NOT USED

LIGHTING SEQUENCE OF OPERATION

NOTES:
1. {L##} DENOTES THE LIGHTING SEQUENCE OF OPERATIONS FOR THIS SPACE.
2. {#B} PUSH BUTTON REFERS TO SCENE QUANTITY. CONTROL STATION SHALL BE CAPABLE OF [RAISE/LOWER AND] SWITCHING ON/OFF FOR MULTIPLE SCENES AS INDICATED ON SHEETS AND THE LIGHTING SEQUENCE OF OPERATIONS {L##}. COORDINATE QUANTITIES OF BUTTONS FOR CONTROL STATIONS WITH LIGHTING CONTROL MANUFACTURER.
3. a = SWITCH DESIGNATION FOR LIGHTING CONTROL.
4. VERIFY AND COORDINATE ALL PUSH BUTTON WALL DEVICES AND QUANTITIES OF INDIVIDUAL BUTTONS WITH SCENES AND ZONES PER LOCATION.
5. VERIFY AND COORDINATE ALL PUSH BUTTON QUANTITIES AND SCENE NAMES WITH OWNER PRIOR TO SUBMITTING ENGRAVING TEMPLATE TO MANUFACTURER.

PLAN ID	LIGHTING SWITCHED
{LD1}	SEQUENCE: Dimmed lights are vacancy and scene controlled in this space. ON: Lighting zones "a", "b", "c", "d", "e", and "f" are turned on to 100% output via wall controller. ENTRANCE CONTROLLERS (3B) ("ON/OFF", AV, AND RAISE/LOWER BUTTONS): Raises lighting zones "a", "b", "c", "d", "e", and "f" to 100% output via ON pushbutton. Raise/Lower buttons on wall controller shall dim lighting zones "a", "b", "c", "d", "e" and "f". AV button shall turn off zone 'a' and zone 'e.' The zones "b", "c", "d", and "f" shall dim to 50% output. Fixtures with 'SE' designation shall be controlled with normal lights. TOUCHSCREEN: Touchscreen shall allow programming and control of all zones. Touchscreen shall include ON/OFF and Raise/Lower softkeys for all zones and a minimum of 14 groups and 7 scenes. Groups and scenes shall be verfied with Owner prior to programming. ADJUST: All lights within the space are raised/lowered via wall controller. DAYLIGHTING: Lights in daylight zone indicated with "zil" subscript shall continuously adjust to the presence of daylighting to maintain 40FC at 30" AFF via local daylighting sensor. OFF: The lights are turned off via wall controller or touchscreen. After the space has been vacant for 15 minutes, the lights automatically turn off via vacancy sensors. Fixtures with 'SE' designation shall dim to 25% output. EMERGENCY: 'SE' luminaires shall turn on to 100% output when power is lost. Provide a shunt relay to allow full control during normal operation. Extend nearest normal lighting circuit to the shunt relay for normal circuit power loss monitoring.
{LS1}	SEQUENCE: Switched lights are vacancy controlled in this space. ON: The lights are manually turned on via wall controller. OFF: The lights turn on via wall controller. After the space has been vacant for 15 minutes, the lights are automatically turned off via vacancy sensor.
{LS2}	Sequence: Switched luminaires are controlled in this space by time clock, Refer to 2/E1.01 for lighting control diagram. ON: All luminaires shall turn on at a preset time (owner determined) via time clock or by lighting contactor HAND mode. OFF: Luminaires are turned off at a preset time (owner determined) via time clock or by lighting contactor OFF mode. EMERGENCY: 'SE' luminaires shall turn on to 100% output when power is lost. Provide a shunt relay to allow full control during normal operation. Extend normal lighting circuit to the shunt relay for normal circuit power loss monitoring.

LIGHTING CONTACTOR SCHEDULE

SWITCH TYPE:
EH - ELECTRICALLY HELD
MH - MECHANICALLY HELD

REMARKS:
HOA - HAND OFF AUTO

ITEM	SWITCH TYPE	CONTACT VOLTAGE	# OF POLES (CONTACTOR)	AMPS	NEMA ENCLOSURE	COIL VOLTAGE	REMARKS
LC-EC	EH	300	6	30	1	120	HOA

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ELECTRICAL SCHEDULES

SHEET NUMBER:
E5.00

5/16/2025 6:31:32 PM

EXISTING PANEL EMLP (LIFE SAFETY)

MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FED FROM:
LOCATION: JANITOR B164a

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

MAIN: 100 MLO
VOLTS: 480/277 Wye
PHASE: 3
WIRE: 4
SCCR: 14 kA

NOTES:

KEY	CKT NO.	LOAD DESCRIPTION	OCPD AMPS	P	WIRE SIZE H	N	G	A	B	C	WIRE SIZE G	N	H	OCPD P	AMPS	LOAD DESCRIPTION	CKT NO.	KEY
--	1	EXISTING LOAD	20	1	--	--	--	0	0		--	--	--	1	20	EXISTING LOAD	2	--
	3	**EXISTING LOAD, *E**	20	1	--	--			0.21	0	--	--	--	1	20	EXISTING LOAD	4	--
--	5	EXISTING LOAD	20	1	--	--	--			0	**0.11**	**10**	**10**	**1**	**20**	**Lighting**	6	
--	7	EXISTING LOAD	20	1	--	--	--	0	0		--	--	--	1	20	EXISTING LOAD	8	--
--	9	EXISTING LOAD	20	1	--	--	--		0	0	--	--	--	1	20	EXISTING LOAD	10	--
--	11	EXISTING SPACE	--	1	--	--	--			--	0	--	--	1	20	EXISTING LOAD	12	--
	13						0	--				--	--	1	--	EXISTING SPACE	14	--
--	15	EXISTING LOAD	20	3	--	--	--		0	--		--	--	1	--	EXISTING SPACE	16	--
	17									0	--	--	--	1	--	EXISTING SPACE	18	--
								Total Load:	0.00 kVA		0.21 kVA		0.11 kVA				
								Total Amps:	0.00		0.82		0.46				

LOAD SUMMARY

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
Lighting	0.32 kVA	100.00%	0.32 kVA

TOTALS*	
TOTAL CONNECTED LOAD:	0.32 kVA
TOTAL ESTIMATED DEMAND LOAD:	0.32 kVA
TOTAL CONNECTED AMPS:	0.38 A
TOTAL ESTIMATED DEMAND AMPS:	0.4

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES: *E = EXTEND EXISTING CIRCUIT TO NEW LIGHTS. MATCH CONDUIT AND WIRE, MINIMUM 2#12 & 1#12 EGC IN 3/4"C.

EXISTING PANEL LA1

MOUNTING: RECESSED
ENCLOSURE: NEMA 1
FED FROM: EXISTING 'MDP-B'
LOCATION: SERVICE CORRIDOR B180A

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

MAIN: 100 MLO
VOLTS: 480/277 Wye
PHASE: 3
WIRE: 4
SCCR: 35 kA

NOTES:

KEY	CKT NO.	LOAD DESCRIPTION	OCPD AMPS	P	WIRE SIZE H	N	G	A	B	C	WIRE SIZE G	N	H	OCPD P	AMPS	LOAD DESCRIPTION	CKT NO.	KEY
--	1	EXISTING LOAD	20	1	--	--	--	0	0		--	--	--	1	20	EXISTING LOAD	2	--
--	3	EXISTING LOAD	20	1	--	--	--			0	--	--	--	1	20	EXISTING LOAD	4	--
--	5	EXISTING LOAD	20	1	--	--	--			0	0	--	--	1	20	EXISTING LOAD	6	--
--	7	EXISTING LOAD	20	1	--	--	--	0	0.18			--	--	1	20	**EXISTING LOAD**	8	***E**
--	9	EXISTING LOAD	20	1	--	--	--			0	0.03			1	20	**EXISTING LOAD**	10	***E**
--	11	EXISTING LOAD	20	1	--	--	--				0	0.21		1	20	**EXISTING LOAD**	12	***E**
--	13	EXISTING SPARE	20	1	--	--	--	0	**0.23**					**12**	**12**	**12**	14	***RP**
--	15	EXISTING SPARE	20	1	--	--	--			0	0			--	--	1	16	--
--	17	EXISTING SPARE	20	1	--	--	--				0	**0.36**		**10**	**10**	**10**	18	
--	19	EXISTING SPARE	20	1	--	--	--	0	**0.02**					**10**	**10**	**10**	20	***RP**
--	21	EXISTING SPARE	20	1	--	--	--			0	**1.16**			**10**	**10**	**10**	22	
--	23	EXISTING SPARE	20	1	--	--	--				0	**0.31**	**8**	**8**	**8**	24	***C**
--	25	EXISTING SPARE	20	1	--	--	--	0	0.36					**10**	**10**	**10**	26	
--	27	EXISTING SPARE	20	1	--	--	--			0	0.21			**10**	**10**	**10**	28	
--	29	EXISTING SPARE	20	1	--	--	--					0	0	--	--	1	30	--
								Total Load:	0.79 kVA		1.41 kVA		0.88 kVA				
								Total Amps:	2.84		5.12		3.22				

LOAD SUMMARY

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
Lighting	3.069 kVA	100.00%	3.069 kVA

TOTALS*	
TOTAL CONNECTED LOAD:	3.07 kVA
TOTAL ESTIMATED DEMAND LOAD:	3.069 kVA
TOTAL CONNECTED AMPS:	3.69 A
TOTAL ESTIMATED DEMAND AMPS:	3.7

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES: *RP = THROUGH EXISTING RELAY PANEL 'RP-1',
***E = EXTEND EXISTING CIRCUIT TO NEW LIGHTS. MATCH CONDUIT AND WIRE, MINIMUM 2#12 & 1#12 EGC IN 3/4"C.**
***C = ROUTE CIRCUIT VIA LIGHTING CONTACTOR LC-EC, REFER TO DETAIL 2/E1.01**

EXISTING PANEL HA

MOUNTING: SURFACE
ENCLOSURE: NEMA 1
LOCATION: JANITOR B164a

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

MAIN: 150 MCB
VOLTS: 480/277 Wye
PHASE: 3
WIRE: 4

NOTES:

KEY	CKT NO.	LOAD DESCRIPTION	OCPD AMPS	P	WIRE SIZE H	N	G	A	B	C	WIRE SIZE G	N	H	OCPD P	AMPS	LOAD DESCRIPTION	CKT NO.	KEY
--	1	EXISTING LOAD	20	1	--	--	--	0	0		--	--	--	1	20	EXISTING LOAD	2	--
--	3	EXISTING LOAD	20	1	--	--	--			0	0	--	--	1	20	EXISTING LOAD	4	--
--	5	EXISTING LOAD	20	1	--	--	--				0	0	--	1	20	EXISTING LOAD	6	--
--	7	EXISTING LOAD	20	1	--	--	--	0	0				--	1	20	EXISTING LOAD	8	--
--	9	EXISTING LOAD	20	1	--	--	--			0	0		--	1	20	EXISTING LOAD	10	--
--	11	EXISTING LOAD	20	1	--	--	--				0	0	--	1	20	EXISTING LOAD	12	--
--	13	EXISTING LOAD	20	1	--	--	--	0	0				--	1	20	EXISTING LOAD	14	--
--	15	EXISTING LOAD	20	1	--	--	--			0	0		--	1	20	EXISTING LOAD	16	--
--	17	EXISTING LOAD	20	1	--	--	--				0	0.04	--	1	20	**EXISTING SOFFIT LIGHTING, *E**	18	***LC**
--	19	EXISTING LOAD	20	1	--	--	--	0	0				--	1	20	EXISTING SPARE	20	--
--	21	EXISTING LOAD	20	1	--	--	--				0	0	--	1	20	EXISTING SPARE	22	--
--	23	EXISTING LOAD	20	1	--	--	--					0	0	--	--	1	20	EXISTING SPARE	24	--
--	25								0	0							20	EXISTING SPARE	26	--
--	27	EXISTING SPARE	60	3	--	--	--				0	0					20	EXISTING LOAD	28	--
	29												0	0	--	--	1	20	EXISTING LOAD	30	--
--	31	EXISTING SPACE	--	1	--	--	--	--	0										32	
--	33	EXISTING SPARE	20	1	--	--	--			0	0			--	--	--	3	60	EXISTING LOAD	34	--
--	35	EXISTING SPARE	20	1	--	--	--					0	0						36	
--	37	EXISTING SPACE	--	1	--	--	--	--	--					--	--	--	1	--	EXISTING SPACE	38	--
--	39	EXISTING SPARE	20	1	--	--	--			0	--			--	--	--	1	--	EXISTING SPACE	40	--
--	41	EXISTING SPARE	20	1	--	--	--				0	--	--	--	--	--	1	--	EXISTING SPACE	42	--
								Total Load:	0.00 kVA		0.00 kVA		0.04 kVA				
								Total Amps:	0.00		0.00		0.16				

LOAD SUMMARY

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
Lighting	0.044 kVA	100.00%	0.044 kVA

TOTALS*	
TOTAL CONNECTED LOAD:	0.04 kVA
TOTAL ESTIMATED DEMAND LOAD:	0.044 kVA
TOTAL CONNECTED AMPS:	0.05 A
TOTAL ESTIMATED DEMAND AMPS:	0.1

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES: *LC = ROUTED VIA EXISTING LIGHTING CONTACTOR,
***E = EXTEND EXISTING CIRCUIT TO NEW LIGHTS. MATCH CONDUIT AND WIRE, MINIMUM 2#8 & 1#8 EGC IN 1 1/4"C.**

PANEL HEC

MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FED FROM: EXISTING SWITCHBOARD MSB-1
LOCATION: Room 102

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

MAIN: 250 MCB
VOLTS: 480/277 Wye
PHASE: 3
WIRE: 4
SCCR: 42 kA

NOTES:

KEY	CKT NO.	LOAD DESCRIPTION	OCPD AMPS	P	WIRE SIZE H	N	G	A	B	C	WIRE SIZE G	N	H	OCPD P	AMPS	LOAD DESCRIPTION	CKT NO.	KEY
	1							13.33	9.07								2	
	3	RTU-1	80	3	3	--	8			13.33	9.07			10	--	4	3	60	RTU-2	4	
	5											13.33	9.07							6	
	7							0	--						--	--	--	1	--	SPACE	8	--
--	9	SPARE	60	3	--	--	--			0	--				--	--	--	1	--	SPACE	10	--
	11											0	--		--	--	--	1	--	SPACE	12	--
--	13	SPACE	--	1	--	--	--	--	--						--	--	--	1	--	SPACE	14	--
--	15	SPACE	--	1	--	--	--			--	--				--	--	--	1	--	SPACE	16	--
--	17	SPACE	--	1	--	--	--					--	--		--	--	--	1	--	SPACE	18	--
--	19	SPACE	--	1	--	--	--	--	--						--	--	--	1	--	SPACE	20	--
--	21	SPACE	--	1	--	--	--			--	--				--	--	--	1	--	SPACE	22	--
								Total Load:	22.40 kVA		22.40 kVA		22.40 kVA							
								Total Amps:	80.87		80.87		80.87							

LOAD SUMMARY

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
Power	67.2 kVA	100.00%	67.2 kVA

TOTALS*	
TOTAL CONNECTED LOAD:	67.20 kVA
TOTAL ESTIMATED DEMAND LOAD:	67.2 kVA
TOTAL CONNECTED AMPS:	80.83 A
TOTAL ESTIMATED DEMAND AMPS:	80.8

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES:

PANEL LEC

MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FED FROM: EXISTING DIST. PANEL L2D
LOCATION: Room 102

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

MAIN: 150 MCB
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
SCCR: 10 kA

NOTES:

KEY	CKT NO.	LOAD DESCRIPTION	OCPD AMPS	P	WIRE SIZE H	N	G	A	B	C	WIRE SIZE G	N	H	OCPD P	AMPS	LOAD DESCRIPTION	CKT NO.	KEY
	1	MS	20	1	10	10	10	1.14	0.2					12	12	1	20	Door Hold Control Module	2	
	3	Receptacles	20	1	12	12	12			0.54	0.36			10	10	10	1	20	Floor Boxes	4	
	5	Receptacles	20	1	12	12	12					0.36	0.54	12	12	12	1	20	Receptacles	6	
	7	Receptacles	20	1	12	12	12	0.54	0.54					12	12	12	1	20	Receptacles	8	
	9	Receptacles	20	1	12	12	12			1.08	0.9			12	12	12	1	20	Receptacles	10	
	11	Receptacles	20	1	12	12	12					0.9	0.36	10	10	10	1	20	Receptacles	12	
	13	Receptacles	20	1	10	10	10	0.36	0.18					10	10	10	1	20	Receptacles	14	
	15	Video Wall	20	1	10	10	10			1	0.67			12	12	12	1	20	CH-1	16	
	17	Receptacles	20	1	10	10	10					0.54	0.67	12	12	12	1	20	CH-2	18	
	19	Receptacles	20	1	10	10	10	0.36	0.67					12	12	12	1	20	CH-3	20	
	21	Receptacles	20	1	10	10	10			0.72	0.3			12	12	12	1	20	DIGITAL DISPLAY	22	
	23	Receptacles	20	1	10	10	10					0.72	1.14	10	10	10	1	20	MS	24	
	25	MS	20	1	10	10	10	1.14	1.9					12	12	12	1	20	MS	26	
	27	MS	20	1	12	12	12			1.9	1.14			12	12	12	1	20	MS	28	
	29	Door Operators	20	1	12	12	12					0.4	1.52	12	12	12	1	20	MS	30	
	31	Receptacles	20	1	12	12	12	1	1.9					12	12	12	1	20	MS	32	
	33	AV Rack	20	1	12	12	12			0.36	0.4			12	12	12	1	20	Door Operators	34	
	35	Lighting	20	1	12	12	12					0.13	0	12	12	12	1	20	LIGHTING CONTACTOR LC-EC	36	
	37	Power Bollard	20	1	10	10	10	0.18	1					8	8	8	1	20	ILLUMINATED SIGN	38	*C
--	39	SPARE	20	1	--	--	--			0	1			8	8	8	1	20	ILLUMINATED SIGN	40	*C
--	41	SPARE	20	1	--	--	--					0	0	--	--	--	1	20	SPARE	42	--
--	43	SPARE	20	1	--	--	--	0	0					--	--	--	1	20	SPARE	44	--
--	45	SPARE	20	1	--	--	--			0	0			--	--	--	1	20	SPARE	46	--
--	47	SPARE	20	1	--	--	--					0	0	--	--	--	1	20	SPARE	48	--
--	49	SPARE	20	1	--	--	--	0	0					--	--	--	1	20	SPARE	50	--
--	51	SPARE	20	1	--	--	--			0	0			--	--	--	1	20	SPARE	52	--
--	53	SPARE	20	1	--	--	--					0	0	--	--	--	1	20	SPARE	54	--
								Total Load:	11.11 kVA		10.37 kVA		7.28 kVA							
								Total Amps:	96.54		90.37		60.69							

LOAD SUMMARY

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
Lighting	0.133 kVA	100.00%	0.133 kVA
Other	0.2 kVA	100.00%	0.2 kVA
Power	16.77 kVA	100.00%	16.77 kVA
Receptacles	11.66 kVA	92.88%	10.83 kVA

TOTALS*	
TOTAL CONNECTED LOAD:	28.76 kVA
TOTAL ESTIMATED DEMAND LOAD:	27.933 kVA
TOTAL CONNECTED AMPS:	79.84 A
TOTAL ESTIMATED DEMAND AMPS:	77.5

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES: *C = ROUTE CIRCUIT VIA LIGHTING CONTACTOR LC-EC, REFER TO DETAIL 2/E1.01

ARCHITECT OF RECORD
DEMONICA KEMPER ARCHITECTS
125 N. HALSTED STREET, SUITE 301
CHICAGO, IL 60661
P: 312.496.0000

MEP-FP-T-ENGINEERS
IMEG CORP.
263 SHUMAN BLVD, SUITE 550
NAPERVILLE, IL, 60563
P: 630.527.2320

CVIL-LANDSCAPE ENGINEER
HR GREEN
1391 CORPORATE DRIVE, SUITE 203
MCHENRY, IL, 60050
P. 815.385.1778

CONSTRUCTION MANAGER
PEPPER CONSTRUCTION
411 LAKE ZURICH RD.
BARRINGTON, IL 60010
P. 847.381.2760

McHenry County College
ENGAGEMENT HALL
8900 NORTHWEST HWY #14
CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
ELECTRICAL PANEL SCHEDULES

SHEET NUMBER:
E6.00

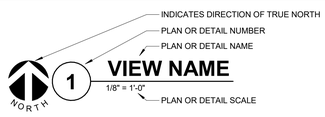
IMEG
263 SHUMAN BOULEVARD
SUITE 550
NAPERVILLE, IL 60563
P: 630.527.2320
www.imegcorp.com

Illinois Design Firm Registration #184008976-0014
0 1 2 3
REF. SCALE IN INCHES
PROJECT #250005446.00

5/16/2025 6:31:34 PM

VIEW KEY

1 — KEYNOTE: INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL



LINE TYPE AND TAG KEY:

- NEW WORK BY THIS CONTRACTOR (DARK SOLID LINE)
- NEW WORK BY OTHER (LIGHT COLD LINE)
- EQUIPMENT CLEARANCE (DASHED LINE)

CONTRACTOR ABBREVIATION KEY

ABBR:	DESCRIPTION:
E.C.	ELECTRICAL CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
T.C.C.	TEMPERATURE CONTROLS CONTRACTOR
A.V.C.	AUDIO VISUAL CONTRACTOR
T.C.	TECHNOLOGY CONTRACTOR

TECHNOLOGY ABBREVIATION KEY

ABBR:	DESCRIPTION:
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
BFC	BELOW FINISHED CEILING
C	CONDUIT
DE	DELAYED EGRESS
DPDT	DOUBLE POLE DOUBLE THROW
FOV	FIELD OF VIEW
J-BOX	JUNCTION BOX
POE	POWER OVER ETHERNET
PTZ	PAN TILT ZOOM
SIM	SIMILAR
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
+#	MOUNTING HEIGHT ABOVE FINISHED FLOOR
EF-#	ENTRANCE FACILITY
MC-#	MAIN CROSS-CONNECT
TR-#	TELECOMMUNICATIONS ROOM

TECHNOLOGY SYMBOL LIST

SYMBOL	TAG	EQUIPMENT LIST ABBREVIATION	DESCRIPTION
CSS			CONTROLLED SECURITY SCHEME SCHEDULE IDENTIFIER
R1		AC-R1-W	SECURITY CREDENTIAL READER (WALL) TYPE 1
R2		AC-R2-W	SECURITY CREDENTIAL READER (WALL) TYPE 2
A	AN1	AV-AN1-C	AV WIRELESS MICROPHONE ANTENNA (CEILING)
	AN2	AV-AN2-C	AV ALS ANTENNA (CEILING)
	AV1	AV-AV1-F	A/V EQUIPMENT CONNECTION IN FLOOR BOX
S	SB1	AV-SB1-C	AV PERFORMANCE SPEAKER (CEILING)
	SP2	AV-SP2-C	AV PERFORMANCE SPEAKER (CEILING)
	SP3	AV-SP3-G	AV PERFORMANCE SPEAKER (GROUND/SURFACE)
S	SP1	AV-SP1-W	AV PERFORMANCE SPEAKER (WALL)
1	TP1	AV-TP1-W	AV TOUCH PANEL (WALL)
◆	WP1	AV-WP1-W	AV WALLPLATE/BACKBOX (WALL)
	WP2	AV-WP2-W	AV WALLPLATE/BACKBOX (WALL)
		AV-CAM-1	CAM-1 SINGLE LENS CAMERA_WALL
S	S1	PA-S1-C	ENS SPEAKER (PENDANT)
	S2	PA-S2-C	ENS SPEAKER (CEILING)
C#	RI	SC-RI-C	INFORMATION OUTLET ROUGH-IN (CEILING)
	C2-WAP	SC-WAP-C	INFORMATION OUTLET (CEILING)
C#	C2	SC-IO-F	INFORMATION OUTLET CONNECTION IN FLOOR BOX
C#	C2	SC-IO-W	INFORMATION OUTLET (WALL)
	RI	SC-RI-W	INFORMATION OUTLET ROUGH-IN (WALL)

PATHWAY SYMBOL LIST:

SYMBOL	DESCRIPTION
WIDTH X HEIGHT	CABLE TRAY, CHANNEL TRAY, BASKET TRAY
WIDTH X HEIGHT	LADDER RACK
DIAMETERø C	CONDUIT
	CONDUIT DOWN
	CONDUIT UP OR UP/DOWN
	CONDUIT SLEEVE
	CONTINUATION

TECHNOLOGY SYMBOL LIST GENERAL NOTES:

1. "C#" INDICATES INFORMATION OUTLET FACEPLATE CONFIGURATION. REFER TO INFORMATION OUTLET SCHEDULE ON T5.00 FOR ADDITIONAL INFORMATION.
2. INFORMATION OUTLET INSTALLED IN E.C. PROVIDED FLOOR BOX. "C#" INDICATES INFORMATION OUTLET FACEPLATE CONFIGURATION. REFER TO INFORMATION OUTLET SCHEDULE ON T5.00 FOR ADDITIONAL INFORMATION. REFER TO THE ELECTRICAL FLOOR PLANS AND ELECTRICAL EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.

SUGGESTED MATRIX OF RESPONSIBILITY

ITEM:	SHOWN ON:	FURNISHED BY:	INSTALLED BY:	NOTES:
TECHNOLOGY ROUGH-IN, REFER TO TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR DEFINITION	T-SERIES	E.C.	E.C.	3. 4.
INFORMATION OUTLET FACEPLATES, JACKS, AND TERMINATIONS	T-SERIES	T.C.	T.C.	
CONDUIT SLEEVES (WHEN SHOWN ON DRAWINGS)	T-SERIES	E.C.	E.C.	
CONDUIT SLEEVES (NOT SHOWN BUT REQUIRED FOR PROPER INSTALLATION OF SYSTEM)	N/A	T.C.	T.C.	2. 4.
TELECOMMUNICATION SYSTEMS ROUGH-IN	T-SERIES	T.C.	E.C.	1.
TELECOMMUNICATION EQUIPMENT, CABLING, AND TERMINATIONS	T-SERIES	T.C.	T.C.	
CABLE TRAY (INCLUDING WIRE BASKET TRAY) REFER TO SPECIFICATION SECTION 27 05 28 FOR DEFINITION	T-SERIES	E.C.	E.C.	
LADDER RACK	T-SERIES	T.C.	T.C.	5.
GROUNDING LUGS ON TECHNOLOGY EQUIPMENT	T-SERIES	T.C.	E.C.	6.
BONDING SYSTEM FOR TECHNOLOGY SYSTEM, REFER TO SPECIFICATION SECTION 27 05 26 FOR DEFINITION	T-SERIES	E.C.	E.C.	7. 8.
CONNECTION OF TECHNOLOGY BONDING SYSTEM TO THE ELECTRICAL GROUND SYSTEM	T-SERIES	E.C.	E.C.	
LINE VOLTAGE POWER (+120V OR GREATER)	E-SERIES	E.C.	E.C.	
LINE VOLTAGE POWER (NOT SHOWN BUT REQUIRED FOR PROPER INSTALLATION OF SYSTEM)	N/A	T.C.	E.C.	2. 4.
LINE VOLTAGE POWER FOR DOOR HARDWARE POWER SUPPLIES	ARCH SPEC	E.C.	E.C.	
LOW VOLTAGE CABLING FOR TECHNOLOGY SYSTEMS	T-SERIES	T.C.	T.C.	
CABLE HANGERS AND SUPPORTS OR OTHER CABLE ROUTING METHODS (OTHER THAN CONDUIT AND CABLE TRAY)	T-SERIES	T.C.	T.C.	5.
TECHNOLOGY SERVICE ENTRANCE CONDUITS, HANDHOLES, AND MANHOLES	T-SERIES	E.C.	E.C.	
FLOOR BOX (ROUGH-IN)	T & E SERIES	E.C.	E.C.	

SUGGESTED MATRIX OF RESPONSIBILITY NOTES

1. LOCATIONS OF TELECOMMUNICATIONS ROUGH-INS SHALL BE INDICATED BY THE INFORMATION OUTLET SYMBOLS ON THE DRAWINGS. REFER TO THE TECHNOLOGY SYMBOL LIST FOR ADDITIONAL INFORMATION.
2. BASED ON THE INHERENT DIFFERENCES IN PRODUCTS FROM VARIOUS MANUFACTURERS, ALL REQUIRED EQUIPMENT MAY NOT BE SHOWN ON THE DRAWINGS FOR ALL ACCEPTABLE MANUFACTURERS.
3. INCLUDES BACKBOXES AND CONDUIT REQUIRED FOR THE TECHNOLOGY SYSTEMS INSTALLATION. THE E.C. SHALL BASE THE BID ON THE BASIS OF DESIGN SHOWN ON THE CONTRACT DOCUMENTS.
4. ALL CHANGES TO THE SLEEVES, BACKBOXES, CONDUITS, AND POWER REQUIRED BECAUSE OF THE T.C.'S SELECTION OF AN ALTERNATE ACCEPTABLE MANUFACTURER OR FROM SYSTEM CONFIGURATIONS THAT ARE LEFT TO THE CHOICE OF THE CONTRACTOR SHALL BE INCLUDED IN THE T.C.'S BID. THIS BID SHALL INCLUDE INSTALLATION BY A LICENSED ELECTRICIAN.
5. UNLESS TRADE RULES DICTATE OTHERWISE.
6. FURNISHED AS PART OF THE EQUIPMENT WHEN POSSIBLE, OR FURNISHED TO THE E.C. FOR INSTALLATION IN THE FIELD.
7. INCLUDES ALL CONDUCTORS, GROUND BARS, AND TERMINATIONS FOR THE COMPLETE BONDING SYSTEM REQUIRED BY THE SPECIFICATIONS.
8. REFER TO ELECTRICAL DRAWINGS FOR LOCATIONS OF PANELS AND SWITCHBOARDS SHOWN IN THE TECHNOLOGY BONDING RISER DIAGRAM AND TYPICAL TELECOM ROOM BONDING FLOW DIAGRAM.

TELECOM ROOM REFERENCES

TELECOM ROOM	DETAIL / SHEET REFERENCE	FLOOR PLAN REFERENCE
AV CLOSET	1/T2.00	1/T1.00
EXISTING TR	3/T2.00	1/T1.00

TECHNOLOGY SHEET INDEX

T0.00	TECHNOLOGY COVERSHEET
TD1.00	OVERALL PLAN DEMOLITION - TECHNOLOGY
TD1.02	FLOOR PLAN DEMOLITION - TECHNOLOGY - ENTRY
T1.00	OVERALL PLAN - TECHNOLOGY
T1.01	FLOOR PLAN - TECHNOLOGY - EVENT SPACE
T1.02	FLOOR PLAN - TECHNOLOGY - ENTRY
T2.00	TECHNOLOGY ENLARGED PLANS
T3.00	TECHNOLOGY DETAILS
T4.00	TECHNOLOGY DIAGRAMS
T5.00	TECHNOLOGY SCHEDULES
GRAND TOTAL: 10	

TECHNOLOGY GENERAL NOTES:

1. ##-###-# INDICATES TECHNOLOGY EQUIPMENT SCHEDULE ITEM LABELED AS "EQUIPMENT LIST ABBREVIATION"
2. REFER TO TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR FULL DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.

TECHNOLOGY MOUNTING SUBSCRIPT KEY:
- A MOUNT AT +6" TO CENTERLINE ABOVE COUNTER OR BACKSPLASH
- H MOUNT ORIENTED HORIZONTALLY
- L MOUNT IN CASEWORK
- M MOUNT IN MODULAR FURNITURE
- S MOUNT IN SURFACE RACEWAY

A SLASH IS USED BETWEEN TWO SUBSCRIPTS, E.G., A/H.

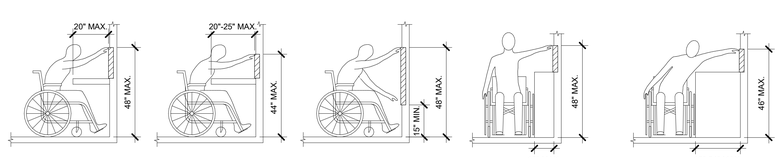
3. REFER TO THE TECHNOLOGY EQUIPMENT SCHEDULE FOR MORE COMPLETE DESCRIPTION AND ITEMS.
4. REFER TO DIAGRAMSS ON SHEET(S): **[TXXX, TXXX, TXXX]**.

TECHNOLOGY INSTALLATION NOTES:

1. THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE ADA STANDARDS FOR ACCESSIBLE DESIGN. REFER TO THE ADA GUIDELINES FOR ALL CONFIGURATION DETAILS ON THIS PAGE FOR ADDITIONAL INFORMATION.
2. CONCEAL ALL CONDUIT IN WALLS, PARTITIONS, ABOVE CEILING, IN FLOOR SLAB, ETC. UNLESS OTHERWISE INDICATED ON THE PLANS OR IN THE SPECIFICATIONS. CONDUIT IN MECHANICAL ROOMS AND STORAGE ROOMS WITHOUT CEILINGS MAY BE EXPOSED ON BUILDING STRUCTURE.
3. BOXES LOCATED ON OPPOSITE SIDES OF NON-RATED WALLS SHALL BE OFFSET A MINIMUM OF 6" HORIZONTALLY. BOXES ON OPPOSITE SIDES OF FIRE RATED WALLS SHALL BE OFFSET A MINIMUM OF 24" HORIZONTALLY. "THRU-THE-WALL" BOXES SHALL NOT BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER.
4. VERIFY ALL FURNITURE, MODULAR FURNITURE, AND EQUIPMENT LOCATIONS WITH ARCHITECTURAL PLANS, ELEVATIONS, AND REVIEWED SHOP DRAWINGS. PRIOR TO MAKING THE ACTUAL TELECOMMUNICATIONS INSTALLATION, ADJUST OUTLETS OR CONNECTION LOCATIONS TO ACCOMMODATE FURNITURE AND/OR EQUIPMENT.
5. TELECOMMUNICATIONS EQUIPMENT SHALL BE MOUNTED TO ALLOW ACCESS TO ELECTRICAL AND MECHANICAL EQUIPMENT. ALL MOUNTING OF TELECOMMUNICATION DEVICES ON EQUIPMENT SUPPLIED BY ANOTHER CONTRACTOR SHALL BE APPROVED IN ADVANCE BY THE OTHER CONTRACTOR.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPENINGS REQUIRED IN WALLS. ALL OPENINGS SHALL BE REPAIRED TO MATCH EXISTING BY A QUALIFIED CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR. ALL CONDUITS THROUGH WALLS SHALL BE GROUTED OR SEALED INTO OPENINGS.
7. ALL MATERIALS USED TO SEAL PENETRATIONS OF FIRE RATED WALLS AND FLOORS SHALL BE TESTED AND CERTIFIED AS A SYSTEM PER ASTM E814 STANDARDS FOR FIRE TESTS OF THROUGH-PENETRATION FIRESTOPS. REFER TO 27 05 03 AND 28 05 03 FOR ADDITIONAL INFORMATION AND REQUIREMENTS SPECIFIC TO FIRESTOPPING.
8. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF THE CEILINGS, CEILING TILES, AND CEILING GRID ASSOCIATED WITH THE AREAS OF WORK BY ALL CONTRACTORS.
9. ALL LADDER RACK SIZES ARE AS DEFINED ON THE DRAWINGS. REFER TO SPECIFICATION SECTION 27 11 00 FOR APPROVED MANUFACTURERS AND INSTALLATION REQUIREMENTS.
10. EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO THE WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.

TECHNOLOGY DEMOLITION NOTES

1. THE DRAWINGS INDICATE EXISTING ITEMS TO BE REMOVED. THE DRAWINGS ARE INTENDED TO INDICATE THE SCOPE OF WORK REQUIRED AND DO NOT INDICATE EVERY BOX, CONDUIT, OR WIRE THAT MUST BE REMOVED. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING A BID AND VERIFY EXISTING CONDITIONS.
2. ITEMS (i.e. SPEAKERS, SWITCHES, ETC.) REMOVED AND NOT RELOCATED REMAIN THE PROPERTY OF THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF MATERIAL THE OWNER DOES NOT WANT TO REUSE OR RETAIN. (i.e., FOR MAINTENANCE PURPOSES).
3. EXISTING TO REMAIN DEVICES WITHIN OR ADJACENT TO THE PATH OF CONSTRUCTION SHALL BE PROTECTED IN PLACE. DEVICES THAT MUST BE REMOVED SHALL BE TESTED PRIOR TO REMOVAL, PROTECTED FROM DAMAGE, AND RE-INSTALLED IN ITS ORIGINAL LOCATION DURING THE NEW CONSTRUCTION PHASE OF THE PROJECT.
4. OBTAIN APPROVAL FROM THE OWNER BEFORE TURNING OFF THE POWER TO EQUIPMENT, SYSTEMS, PANELS, ETC. COORDINATE ALL OUTAGES WITH OWNER. CONDUIT CONCEALED IN WALL CONSTRUCTION MAY BE ABANDONED IN PLACE IF NOT AFFECTED BY OTHER CONSTRUCTION.
5. ALL CONDUIT SHALL BE REMOVED WHERE WALLS ARE BEING REMOVED. WHERE CONDUIT IS IN THE CONCRETE SLAB, CUT OFF FLUSH, PULL OUT WIRE, AND PLUG. WHERE CONDUIT IS RUN EXPOSED, ALL ASSOCIATED CLAMPS, SUPPORTS, HANGERS, ETC., SHALL ALSO BE REMOVED.
6. COORDINATE ALL WORK WITH OTHER CONTRACTORS AT THE JOB SITE BEFORE REMOVING EXISTING EQUIPMENT AND INSTALLING NEW ITEMS.
7. EXISTING CONDUIT IN GOOD CONDITION, MAY BE REUSED IN PLACE. RELOCATING EXISTING CONDUIT SHALL NOT BE ALLOWED. BONDING CONDUCTORS SHALL BE INSTALLED IN ALL REUSED CONDUIT TO ASSURE PROPER GROUND PATH.
8. EQUIPMENT REMOVAL IN CERTAIN LOCATIONS MAY REQUIRE THE INSTALLATION OF A JUNCTION BOX TO RECONNECT CIRCUITS THAT REMAIN IN OPERATION. EXTEND CONDUIT AND WIRING AS REQUIRED TO MAINTAIN POWER TO REMAINING EQUIPMENT.
9. DEVICES TO BE REMOVED SHALL HAVE ALL CONNECTED WIRING REMOVED TO THE SOURCE.
10. DEVICES NOT TO BE REMOVED SHALL BE PROTECTED FROM THE ENVIRONMENT, AND ALL ASSOCIATED CABLE/RACEWAYS ARE TO REMAIN AND BE PROTECTED. T.C. SHALL BE RESPONSIBLE FOR REPAIR OF ANY INTERRUPTIONS TO PROTECTED DEVICES.
11. REFER TO SPECIFICATIONS SECTION 27 05 00 FOR ADDITIONAL INFORMATION.



ADA STANDARDS FOR ACCESSIBLE DESIGN

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

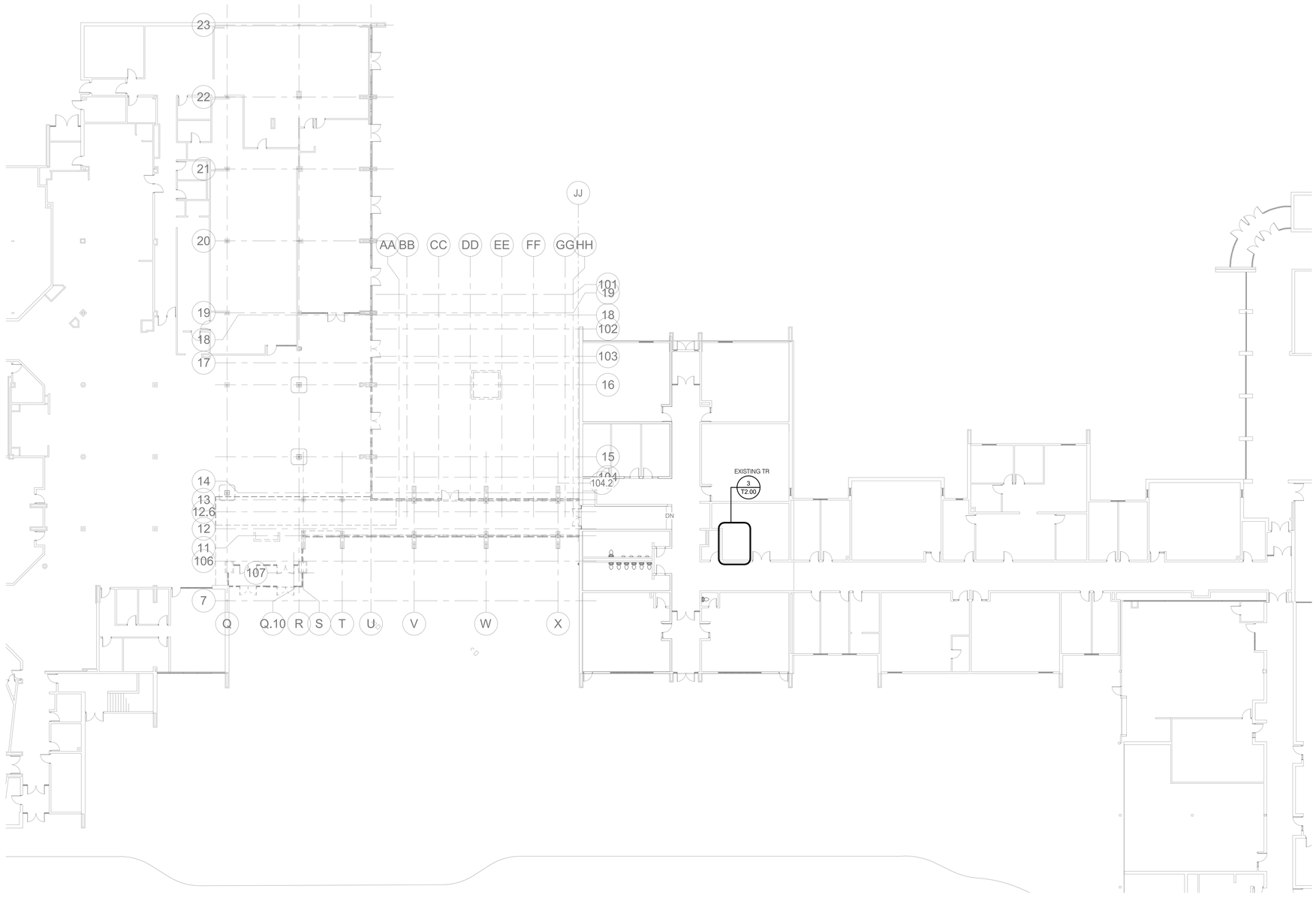
SHEET TITLE:
TECHNOLOGY COVERSHEET

SHEET NUMBER:
T0.00

5/16/2025 6:40:01 PM

SHEET NOTES:

1. NO WORK THIS SHEET FOR REFERENCE ONLY.



1 OVERALL PLAN DEMOLITION - TECHNOLOGY

1/16" = 1'-0"

NORTH

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
OVERALL PLAN DEMOLITION - TECHNOLOGY

SHEET NUMBER:
TD1.00

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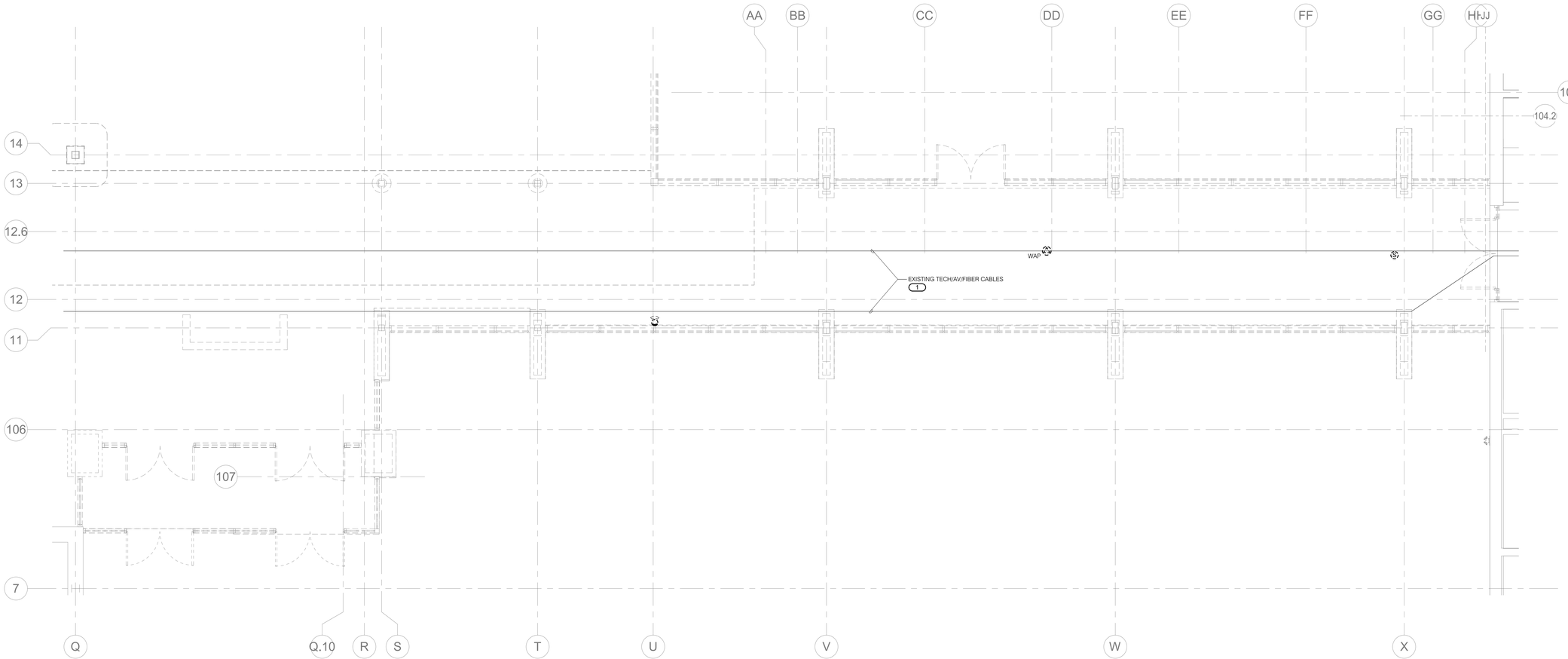
0 1 2 3
REF. SCALE IN INCHES
PROJECT #25005446.00

SHEET NOTES:

1. REFER TO T0.00 TECHNOLOGY COVERSHEET FOR TECHNOLOGY DEMOLITION NOTES AND TECHNOLOGY SYMBOL LIST.

KEYNOTES: (#)

1. EXISTING TECH/AV/FIBER CABLES TO BE PROTECTED DURING CONSTRUCTION.



1 FLOOR PLAN DEMOLITION - TECHNOLOGY - ENTRY

1/4" = 1'-0"

NORTH

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
FLOOR PLAN DEMOLITION - TECHNOLOGY - ENTRY

SHEET NUMBER:
TD1.02

5/16/2025 6:40:05 PM

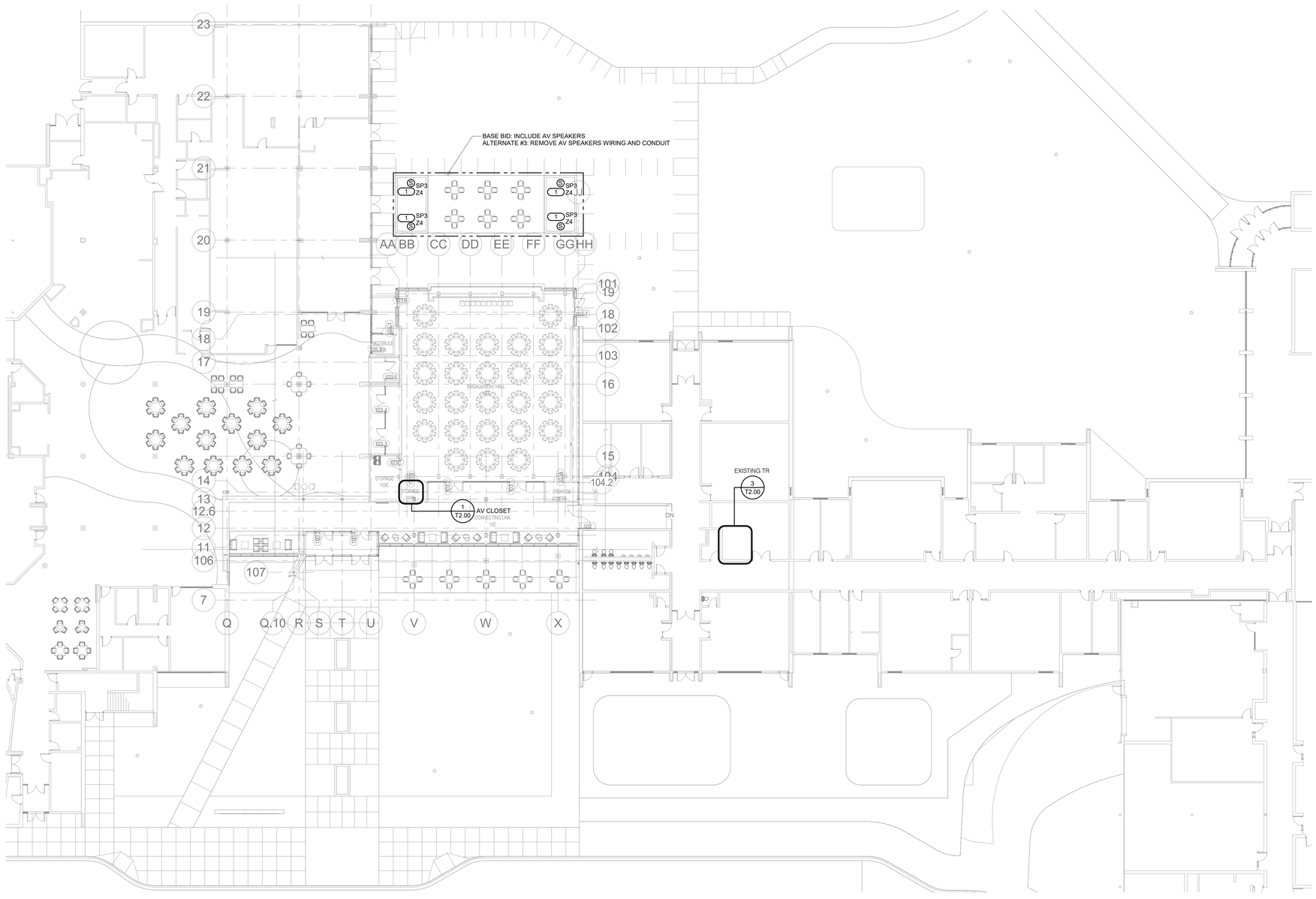
0 1 2 3
REF. SCALE IN INCHES
PROJECT #250005446.00

SHEET NOTES:

1. ALL THE AV DEVICES ON THIS SHEET WILL BE SERVED FROM AV CLOSET, REFER TO T1.00 FOR ITS EXACT LOCATION.
2. ALL THE LOW VOLTAGE CABLING TO BE IN CONDUIT. COORDINATE CONDUIT PATHWAYS WITH ALL TRADES.

KEYNOTES: (#)

1. ROUTE 1" C FROM SPEAKER LOCATION TO AV CLOSET.



1 OVERALL PLAN - TECHNOLOGY

1/16" = 1'-0"

NORTH

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
OVERALL PLAN - TECHNOLOGY

SHEET NUMBER:
T1.00

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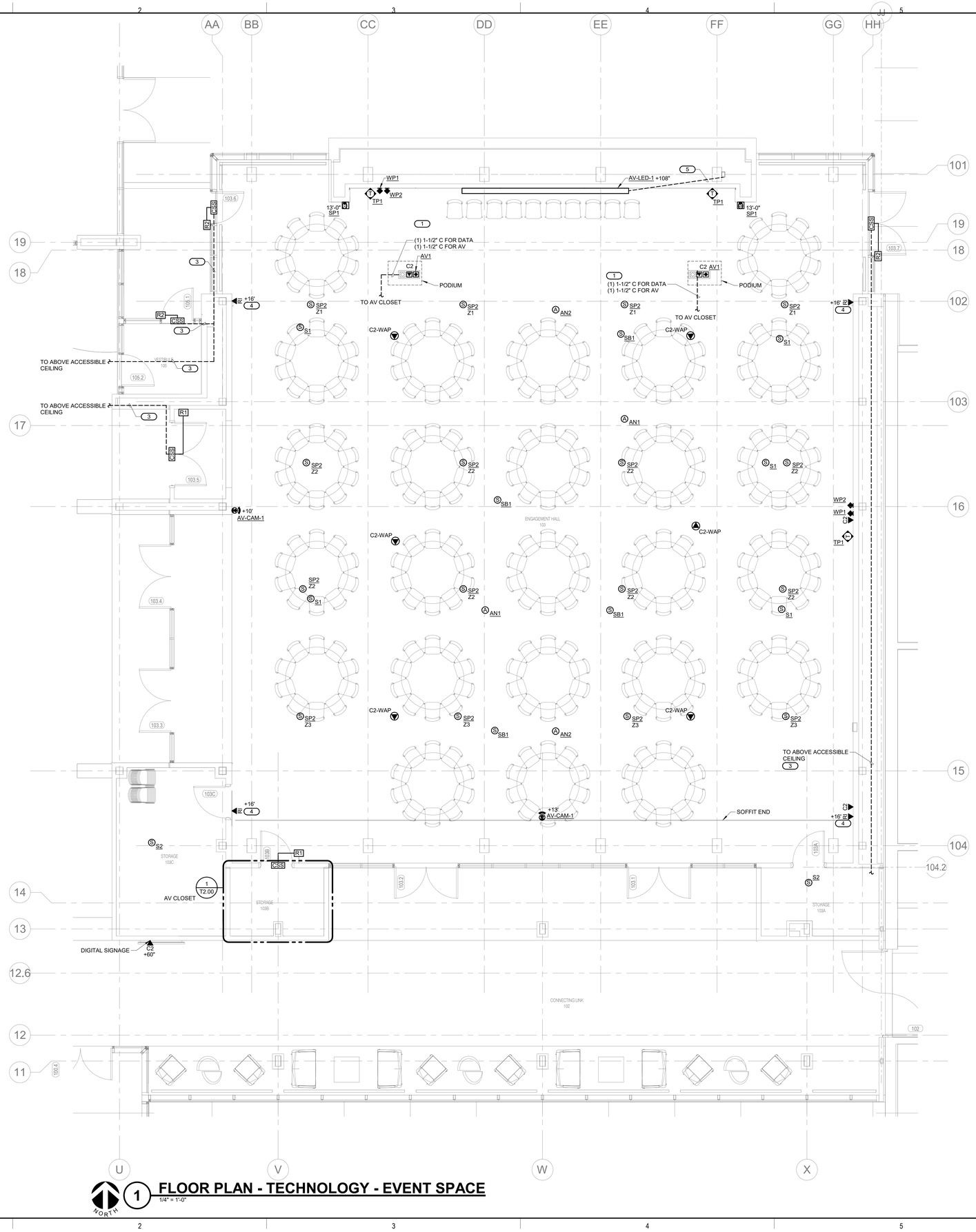
0 1 2 3

REF. SCALE IN INCHES PROJECT #25005446.00



SHEET NOTES:

1. ALL THE AV DEVICES ON THIS SHEET WILL BE SERVED FROM AV CLOSET, REFER TO T1.00 FOR ITS EXACT LOCATION.
2. ALL THE LOW VOLTAGE DEVICES ON THIS SHEET WILL BE SERVED FROM EXISTING TR, REFER TO SHEET T1.00 FOR ITS EXACT LOCATION.
3. ALL THE LOW VOLTAGE CABLING TO BE IN CONDUIT. COORDINATE CONDUIT PATHWAYS WITH ALL TRADES.

KEYNOTES: (#)

1. PROVIDE OUTDOOR RATED CABLES FOR DATA AND AV APPLICATIONS.
2. REFER TO 1/T4.00 AV DIAGRAM - EVENTS CENTER FOR ADDITIONAL INFORMATION.
3. ROUTE CONDUIT BACK TO WALL THROUGH MULLIONS. ROUTE TO NEAREST ACCESSIBLE CEILING.
4. ROUGH-IN FOR SECURITY CAMERA. COORDINATE FINAL LOCATION WITH OWNER.
5. 2" CONDUIT FOR VIDEO MONITOR. CABLING NEEDS TO BE INSTALLED TIGHT TO COLUMN AND RUN ABOVE BAFFLES. FINAL ROUTING TO BE COORDINATE WITH OWNER/ARCHITECT PRIOR TO INSTALLATION.

1 FLOOR PLAN - TECHNOLOGY - EVENT SPACE

1/4" = 1'-0"

NORTH

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:

FLOOR PLAN - TECHNOLOGY - EVENT SPACE

SHEET NUMBER:

T1.01

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REF. SCALE IN INCHES 0 1 2 3

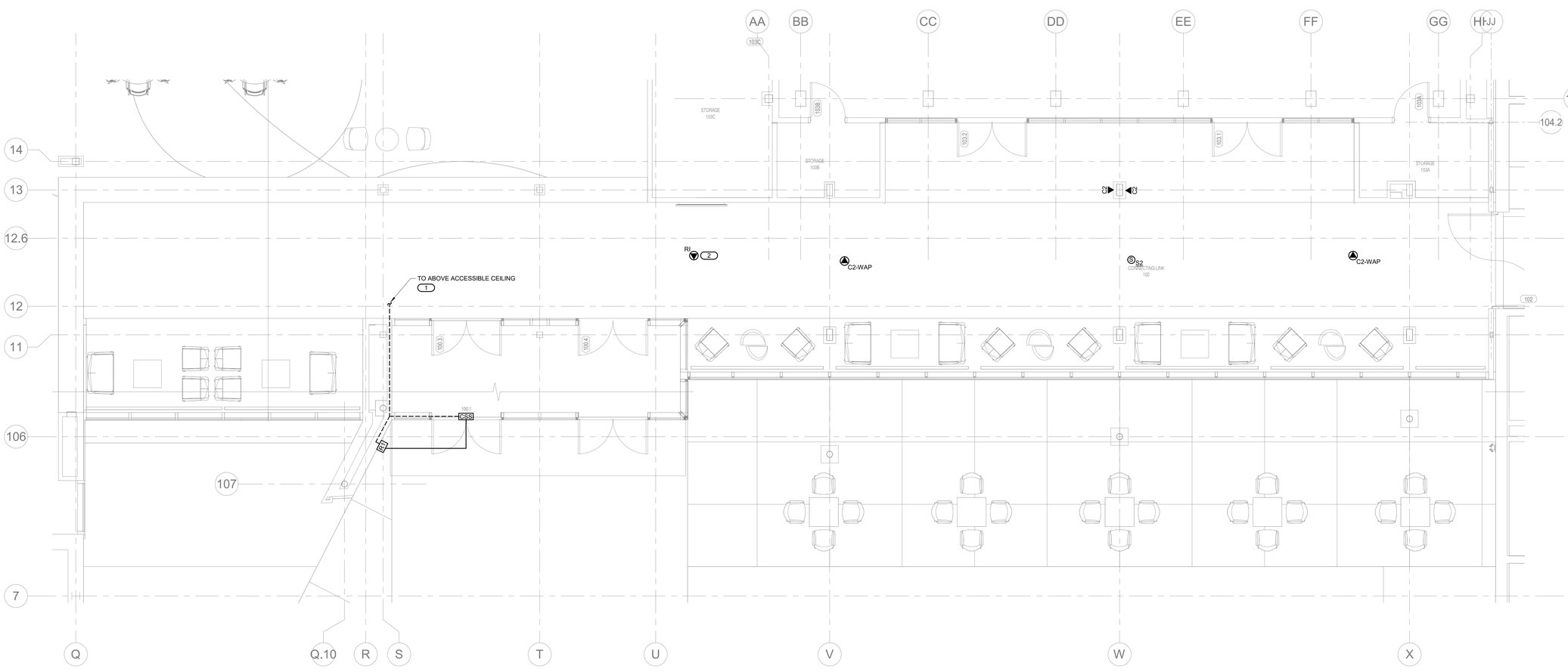
PROJECT #25005446.00

KEYNOTES: (#)

1. ROUTE CONDUIT BACK TO WALL THROUGH MULLIONS. ROUTE TO NEAREST ACCESSIBLE CEILING.
2. ROUGH-IN FOR SECURITY CAMERA. COORDINATE FINAL LOCATION WITH OWNER.

SHEET NOTES:

1. ALL THE AV DEVICES ON THIS SHEET WILL BE SERVED FROM AV CLOSET, REFER TO T1.00 FOR ITS EXACT LOCATION.
2. ALL THE LOW VOLTAGE DEVICES ON THIS SHEET WILL BE SERVED FROM EXISTING TR, REFER TO SHEET T1.00 FOR ITS EXACT LOCATION.
3. ALL THE LOW VOLTAGE CABLING TO BE IN CONDUIT. COORDINATE CONDUIT PATHWAYS WITH ALL TRADES.



1 FLOOR PLAN - TECHNOLOGY - ENTRY

1/4" = 1'-0"

NORTH

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025

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NO:	DESCRIPTION:	DATE:

SHEET TITLE:
FLOOR PLAN - TECHNOLOGY - ENTRY

SHEET NUMBER:
T1.02

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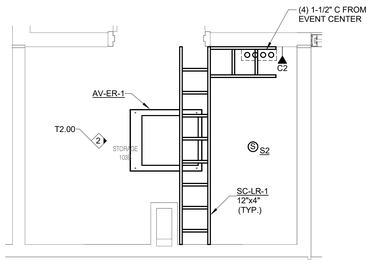
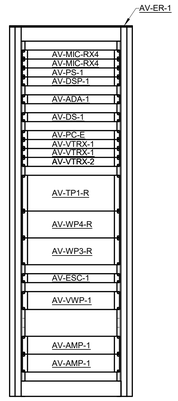
REF. SCALE IN INCHES

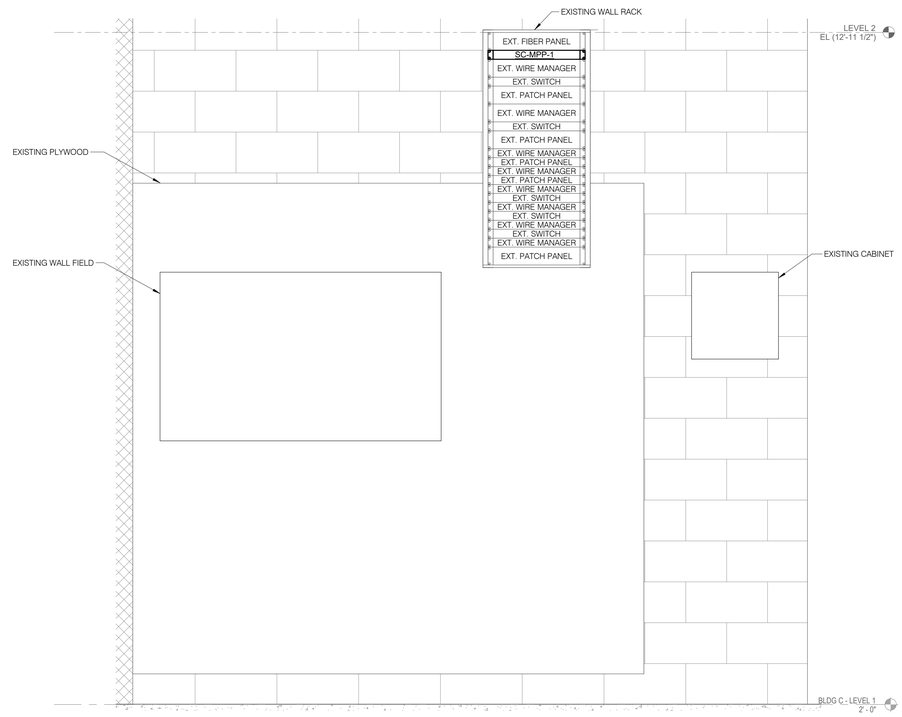
PROJECT #25005446.00



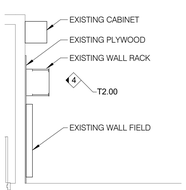
1 EQUIPMENT ROOM LAYOUT - AV CLOSET
1/2" = 1'-0"



2 AV CABINET ELEVATION
1" = 1'-0"



4 EQUIPMENT RACK ELEVATION - EXISTING TR
1" = 1'-0"



3 EQUIPMENT ROOM LAYOUT - EXISTING TR
1/4" = 1'-0"

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ENGAGEMENT HALL

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CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
TECHNOLOGY ENLARGED PLANS

SHEET NUMBER:
T2.00

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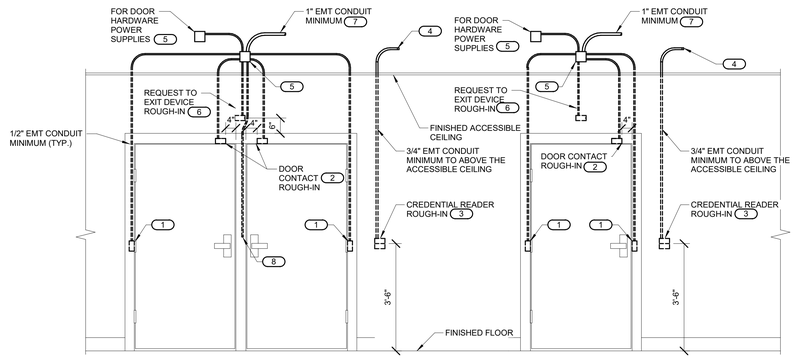
REF. SCALE IN INCHES
PROJECT #25005446.00



NOTES:

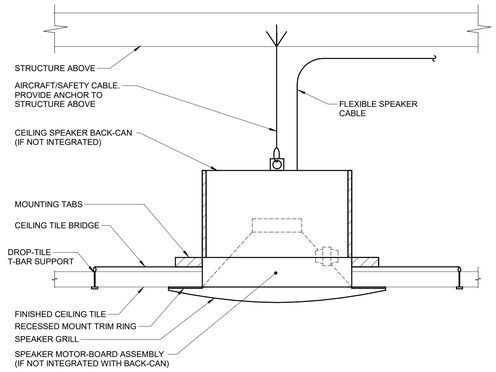
1. CONFIGURATIONS SHOWN IN THE DETAIL ABOVE ARE DIAGRAMMATIC, INTENDED TO DESCRIBE THE CONTROLLED SECURITY SCHEME ROUGH-IN REQUIREMENTS OF THE DOORS. DETAILS ABOVE MAY NOT ACCURATELY REPRESENT DOOR SIZE, DOOR SWING, DOOR HARDWARE, OR DOOR FUNCTIONALITY. REFER TO ARCHITECTURAL DOOR HARDWARE SCHEDULE, DOOR HARDWARE GROUPS AND DOOR HARDWARE SPECIFICATIONS FOR COMPLETE INFORMATION. MIRROR THE DETAIL AS REQUIRED.
2. ROUGH IN SHOWN IN THE DETAIL ABOVE REPRESENTS THE MINIMUM REQUIREMENTS FOR ALL CONTROLLED SECURITY SYSTEM DEVICES AND CABLING UNLESS OTHERWISE NOTED. COORDINATE EXACT REQUIREMENTS WITH SELECTED DOOR MATERIALS, DOOR HARDWARE, AND CONTROLLED SECURITY DEVICES AND CABLING PRIOR TO INSTALLATION.
3. ALL CABLING IN WALLS AND WHERE EXPOSED ON VERTICAL SURFACES SHALL BE INSTALLED IN EMT CONDUIT OR SURFACE MOUNT RACEWAY. CABLING ROUTED HORIZONTALLY ABOVE THE ACCESSIBLE CEILING MAY BE INSTALLED FREE-AIR CABLING PROPERLY RATED FOR THE CEILING ENVIRONMENT.
4. THE ELECTRICAL OR SECURITY CONTRACTOR SHALL NOT MODIFY ANY FIRE RATED DOOR AND/OR DOOR FRAME. REFER TO THE ARCHITECTURAL DOOR SCHEDULE, DOOR HARDWARE SCHEDULE, AND DOOR HARDWARE SPECIFICATION FOR ADDITIONAL INFORMATION. MODIFICATION TO ANY FIRE RATED DOOR AND/OR FRAME WILL REQUIRE A RE-CERTIFICATION OF THE DOOR AND FRAME WITH THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ).
5. INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR ALL CONTROLLED SECURITY SCHEME ROUGH-INS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
6. REFER TO THE CONTROLLED SECURITY SCHEME SCHEDULE ON T3.01 FOR ADDITIONAL INFORMATION.
7. INSTALLATION SHALL INCLUDE ALL POWER REQUIRED FOR SYSTEM OPERATION INCLUDING +120VAC. REFER TO THE SUGGESTED MATRIX OF SCOPE RESPONSIBILITY FOR ADDITIONAL INFORMATION.

KEYNOTES: (#)

1. PROVIDE JUNCTION BOXES IN THE DOOR FRAME WHERE SHOWN ON THIS DETAIL. ROUGH-IN SHALL BE PROVIDED WHETHER THE CURRENT SECURITY SCHEME UTILIZES THEM OR NOT. ALL CONDUITS SHALL BE EMT CONDUIT UNLESS OTHERWISE NOTED. FLEXIBLE CONDUIT OF ANY TYPE WILL NOT BE ACCEPTED. COORDINATE INSTALLATION WITH ON-SITE DOOR FRAME INSTALLATION CONTRACTOR.
2. ALL DOOR POSITION SWITCHES ARE REQUIRED TO BE RECESSED UNLESS OTHERWISE NOTED. ELECTRIC HINGE MONITORS ARE NOT AN ACCEPTABLE REPLACEMENT FOR THE RECESSED DOOR POSITION SWITCH.
3. 4" SQUARE BACKBOX WITH SINGLE GANG PLASTER RING. PROVIDE 2 1/2" DEEP MASONRY BOX WHERE APPLICABLE. REFER TO FLOOR PLAN(S) FOR ACTUAL CREDENTIAL READER TYPE AND ROUGH-IN LOCATIONS.
4. CONDUIT SHALL ROUTE FROM THE CREDENTIAL READER TO THE SECURED SIDE OF THE DOOR. CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING. PROVIDE A NYLON BUSHING ON CONDUIT END.
5. MOUNT A MINIMUM 4" SQUARE 2-1/8" DEEP JUNCTION BOX WITH BLANK COVER PLATE ON THE SECURED SIDE OF THE DOOR ABOVE ACCESSIBLE CEILING. INSTALLING CONTRACTOR SHALL SIZE THE JUNCTION BOXES PER SYSTEM INSTALLATION REQUIREMENTS AND APPLICABLE CODES. MAINTAIN ACCESS TO THE JUNCTION BOX.
6. PROVIDE A HORIZONTALLY MOUNTED SINGLE GANG BACKBOX FOR THE REQUEST TO EXIT SENSOR. REFER TO THE CONTROLLED SECURITY SCHEME SCHEDULE ON T3.01 FOR DOORS THAT REQUIRE THIS ROUGH-IN.
7. CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING. PROVIDE A NYLON BUSHING ON CONDUIT END.

1 CONTROLLED SECURITY SCHEME DOOR ROUGH-IN DETAIL

NO SCALE

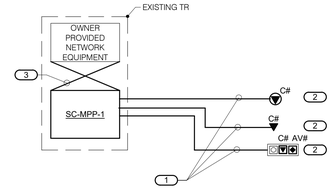


NOTES:

1. WHERE SUPPORTS ATTACH TO METAL ROOF DECKING, EXCLUDING CONCRETE ON METAL DECKING, DO NOT EXCEED 25 LBS. PER HANGAR AND A MINIMUM SPACING OF 2'-0" ON CENTER. THIS 25 LB. LOAD AND 2'-0" SPACING INCLUDE ELECTRICAL AND MECHANICAL ITEMS HANGING FROM DECK. IF THE HANGER RESTRICTIONS CANNOT BE ACHIEVED, THE ADDITION OF SUPPLEMENTAL FRAMING OFF STEEL FRAMING WILL BE REQUIRED.

2 CEILING SPEAKER MOUNTING DETAIL

NO SCALE



NOTES:

1. THIS RISER IS DIAGRAMMATIC AND MAY NOT SHOW ACTUAL ROUTING OR QUANTITIES OF MATERIALS SHOWN. THIS RISER IS SHOWN FOR CLARIFICATION OF CONNECTION(S), LOCATIONS AND CABLE TYPE. ALL INFORMATION OUTLETS ARE TYPICAL OF THE OUTLETS IN THE AREA SHOWN. REFER TO FLOOR PLANS FOR MORE SPECIFIC ROUTING INFORMATION. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

KEYNOTES: (#)

1. 23 GAUGE, 4-PAIR, CATEGORY 6, UNSHIELDED TWISTED PAIR CABLE, SEE SPECIFICATIONS.
2. REFER TO INFORMATION OUTLET SCHEDULE ON T600 AND THE FLOOR PLANS FOR QUANTITY OF CABLES AND JACKS TO BE INSTALLED AT EACH INFORMATION OUTLET.
3. RJ-45 TO RJ-45 CATEGORY CAT 6 UTP PATCH CORD. SEE SPECIFICATIONS.

3 CONNECTIVITY RISER DIAGRAM - EXISTING TR

NO SCALE

CONTROLLED SECURITY SCHEME (CSS) TYPE SCHEDULE

1. ELECTRONIC DOOR HARDWARE SUCH AS ELECTRIC STRIKES, ELECTRIC LATCH RETRACTION, ETC. SHALL BE PROVIDED AND INSTALLED BY OTHERS.
2. REFER TO THE TECHNOLOGY EQUIPMENT SCHEDULE FOR CREDENTIAL READER TYPE INFORMATION.

		CREDENTIAL READER			INTEGRATION												REQUEST TO EXIT			DOOR HARDWARE / MONITORING											OTHER (REFER TO NOTES)				
DOOR #	ROUGH-IN ONLY	CREDENTIAL READER TYPE	MULTIPLE CREDENTIAL READERS OPERATES SINGLE DOOR	OPERATES MULTIPLE DOORS	AUTOMATIC DOOR OPERATOR	ELEVATOR	LOCKED BY EMERGENCY DURESS SEQUENCE	INFANT PROTECTION	REMOTE UNLOCK VIA INTERCOM MASTER	REMOTE UNLOCK VIA PUSHBUTTON	INTRUSION DETECTION	REMOTE UNLOCK VIA FIRE COMMAND CENTER	VIDEO SURVEILLANCE	WANDER PREVENTION SYSTEM	MOTION DETECTOR	LOCAL PUSHBUTTON DOOR HARDWARE OVERRIDE	INTERNAL ELECTRIFIED HARDWARE CONNECTION (BY OTHERS)	ELECTRONIC LOCKING HARDWARE (BY OTHERS)	MAG LOCK	LATCH STATUS DETECTION (BY OTHERS)	LOCAL ALARM HORN	MONITOR LATCH BOLT (BY OTHERS)	MONITOR DOOR POSITION SWITCH SPDT	MONITOR DOOR POSITION SWITCH DPDT	MONITOR DOOR POSITION SWITCH - OVERHEAD DOOR	MONITOR DOOR POSITION SWITCH - ROOF HATCH	DELAYED EGRESS (BY OTHERS)	LOCAL 120VAC POWER SUPPLY	SCHEDULE BASED LOCKING	VISUAL STROBE/AUDIBLE ALARM	NOTES
100A	•	R1															•	•					•										
103.5	•	R1															•	•					•										
103.6	•	R2															•	•					•										
103.7	•	R2															•	•					•										
103B	•	R1															•	•					•										
105.1	•	R2															•	•					•										

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McHenry County College
ENGAGEMENT HALL

8900 NORTHWEST HWY #14
CRYSTAL LAKE, IL 60012
DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025

ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
TECHNOLOGY DETAILS

SHEET NUMBER:
T3.00

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REF. SCALE IN INCHES

PROJECT #25005446.00

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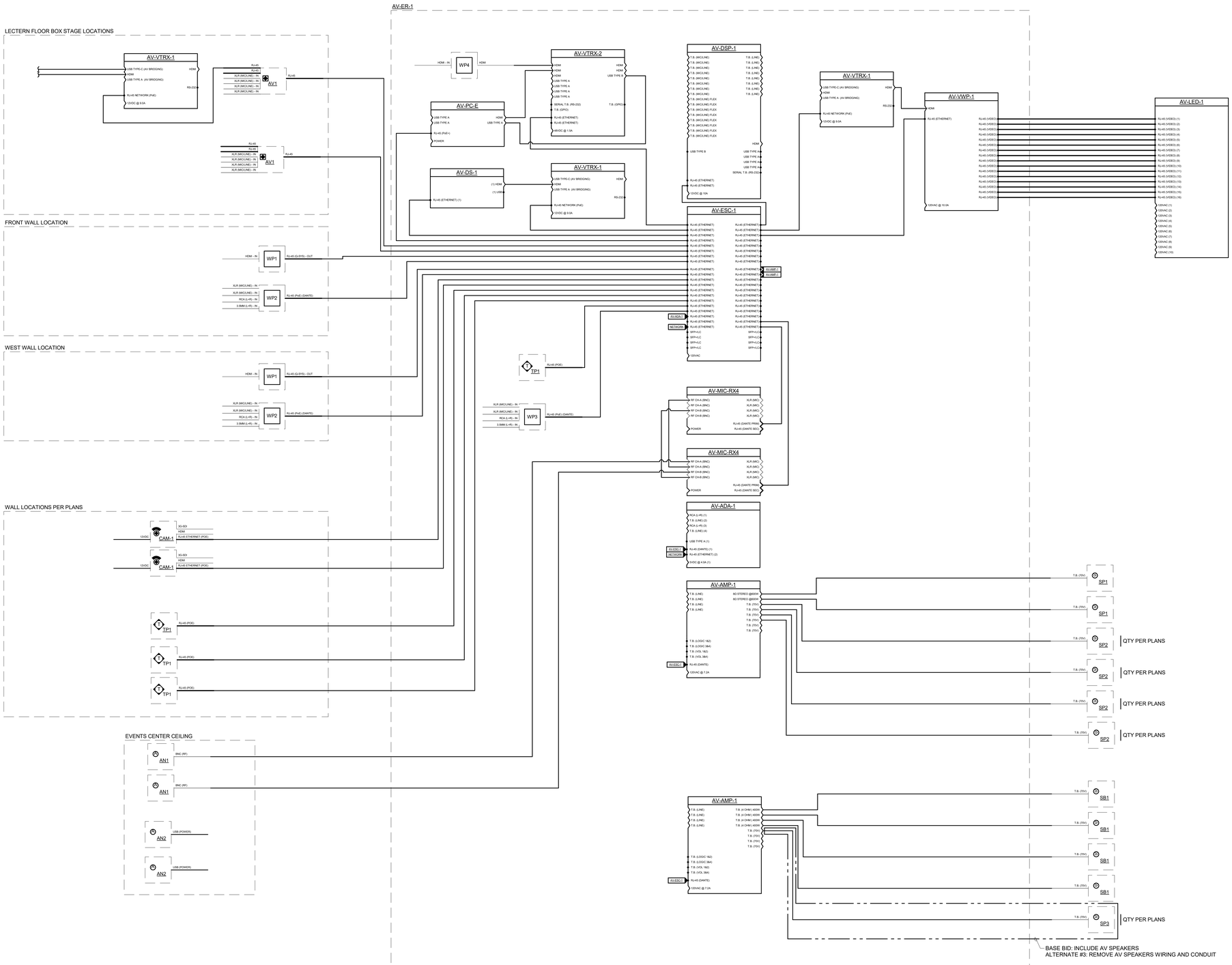

1 AV DIAGRAM - EVENTS CENTER

NO SCALE

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NO:	DESCRIPTION:	DATE:

SHEET TITLE:

TECHNOLOGY DIAGRAMS

SHEET NUMBER:

T4.00

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REF. SCALE IN INCHES

PROJECT #250005446.00

TECHNOLOGY EQUIPMENT SCHEDULE

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EQUIPMENT LIST ABBREVIATION	EQUIPMENT LIST DESCRIPTION	MANUFACTURER AND MODEL
AC-R1-W	CREDENTIAL READER, WALL MOUNT, ROUGH-IN ONLY. OWNER FURNISHED OWNER INSTALLED. PROVIDE 4" SQUARE BACKBOX WITH SINGLE-GANG REDUCER RING WITH (1) 3/4" CONDUIT TO THE NEAREST ACCESSIBLE CEILING IN SUPPORT OF CABLING TO CREDENTIAL READER. REFER TO DETAIL ON 4/T3.0 FOR CONDUIT INFORMATION.	ROUGH-IN ONLY
AC-R2-W	CREDENTIAL READER, MULLION MOUNT, ROUGH-IN ONLY. OWNER FURNISED OWNER INSTALLED. PROVIDE 4" SQUARE BACKBOX WITH SINGLE-GANG REDUCER RING WITH (1) 3/4" CONDUIT TO THE NEAREST ACCESSIBLE CEILING IN SUPPORT OF CABLING TO CREDENTIAL READER. REFER TO DETAIL ON 4/T3.0 FOR CONDUIT INFORMATION.	ROUGH-IN ONLY
AV-ADA-1	ASSISTED LISTENING SYSTEM WI-FI AUDIO SERVER, CAPABLE OF BROADCASTING 2 CHANNELS OF ANALOG AUDIO TO AUDIENCES OF UP TO 500 USERS. DIMENSIONS -H X W X D 1.77IN X 6.69IN X 4.6IN, 1RU 19" RACK (REQUIRES LW-327 RACK MOUNT KIT), POWDER COATED STAINLESS STEEL ENCLOSURE, AUDIO OUTPUT RJ-45 ETHERNET PORT, 2 BALANCED ANALOG AUDIO INPUTS.	LISTEN TECHNOLOGIES LW-110-2 OR PRE-APPROVED EQUAL
AV-AMP-1	ANALOG AUDIO AMPLIFIER, 300 WATTS TOTAL OUTPUT, 4 CHANNELS, SUPPORTING 100 V, 70 V, 8 OHM OR 4 OHM PER CHANNEL, 4 DBU INPUT SENSITIVITY, 75W PER CHANNEL.	BIAMP VOLTERA A 300.4 OR PRE-APPROVED EQUAL
AV-AN1-C	CEILING MOUNTED WIDEBAND ANTENNA WIRELESS MICROPHONE ANTENNA: ACTIVE DIRECTIONAL UHF ANTENNA WITH INTEGRATED AMPLIFIER. FOUR STAGE ADJUSTABLE GAIN, 100 DEGREE RECEPTION PATTERN. PROVIDE RG-8U COAXIAL CABLE FROM MICROPHONE TRANSMITTER. CONTRACTOR TO CALCULATE LOSS PER CABLE DISTANCE AND PROVIDE ANTENNA AMPLIFICATION TO MAINTAIN SIGNAL LEVEL PER ANTENNA CABLE DISTANCE. PROVIDE 2-GANG RECESS BOX WITH 1" CONDUIT TO LOCAL AUDIO RACK.	SHURE UA864
AV-AN2-C	ASSISTED LISTENING BLUETOOTH/IR BEACON. E.C. TO PROVIDE 1 GANG AV WALL BOX FOR MOUNTING , UNO, WITH (1) 1" CONDUIT TO AV RACK LOCATION TO SUPPLY POWER TO DEVICE. CONFIRM DISTANCE AND CABLING REQUIREMENTS.	LISTEN TECHNOLOGIES LA-490-BK-W9
AV-AV1-F	AV FLOOR PLATE: NETWORK AUDIO ENCODER, DANTE WITH (4) XLR FEMALE INPUTS. POE POWERED, +48 V PHANTOM POWER. CUSTOM WALL WALL PLATE WITH (2) NEUTRIK ETHERCON CONNECTORS TO CONNECT DEVICES TO AV-ESC-1. PROVIDE LABEL ENGRAVING. E.C. PROVIDED FLOOR BOX OR POKE THROUGH WITH (1) 3/4" TO AV-ESC-1. REFER TO ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR MORE INFORMATION. COORDINATE INSTALLATION WITH E.C.	QSC UNDX4I LIBERTY AV NEUTRIK WHIRLWIND PROCO
AV-CAM-1	PTZ CAMERA: PAN/TILT/ZOOM CAMERA. 12X OPTICAL ZOOM WITH 80 DEGREES WIDE FIELD OF VIEW, 2 MEGAPIXEL 1/2.8-TYPE IMAGING SENSOR, NATIVE HD RESOLUTION OF 1080P/60. HDMI, 3G-SDI, AND STREAMING OUTPUTS, AND NETWORK CONTROL. CONTRACTOR TO PROVIDE ADJUSTABLE MOUNTS AND MOUNTING HARDWARE. E.C. PROVIDED STANDARD 2-GANG RECESS BOX WITH 1" CONDUIT TO AV RACK LOCATION, UNO.	QSC NC-12X80
AV-DS-1	DIGITAL SIGNAGE: HDMI OUTPUT	DIGITAL SIGNAGE OWNER FURNISHED CONTRACTOR CONTRACTOR INSTALLED
AV-DSP-1	EXISTING AUDIO DSP: 24 CHANNELS OF ANALOG I/O (8 INPUT X 8 OUTPUT X 8 FLEX), 128 X 128 NETWORK AUDIO CHANNELS, 16 X 16 USB AUDIO CHANNELS, 16 CHANNELS OF ROUTABLE AEC, VOIP, DANTE DIGITAL AUDIO AND CONTROL OVER LAN. REFER TO SPECIFICATION 27 41 00 FOR CONFIGURATION AND PERFORMANCE REQUIREMENTS.	QSC CORE 110F
AV-ER-1	A/V FREESTANDING EQUIPMENT RACK, 19" EIA RACK SPACING, (38) RU, DIMENSIONS: 70.6"H X 23"W X 25.9"D, 4-POST RACK WITH VENTED LOCKABLE FRONT PANEL. SIDES, REAR VENTED DOORS, AND FANS. PROVIDE ACCESSORIES TO MANAGE ALL CABLING. PROVIDE 4RU RACK DRAWER FOR STORAGE	MIDDLE ATLANTIC BGR-3827-SA LOWELL CPI
AV-ESC-1	PRODUCTION SYSTEM ETHERNET NETWORK SWITCH - COMMERCIAL GRADE DATA SWITCH, LATEST VERSION AVAILABLE. UNITS SHALL BE MANAGED LAYER 2, GIGABIT ETHERNET SWITCHES WITH POE. FOURTY (40) 10/100/1000BASE-T RJ-45 PORTS, 40 WITH POE+. 1 RU RACKMOUNT CHASSIS. PROVIDE FIBER ADAPTERS AS OUTLINED ON RISER DIAGRAMS.	NETGEAR M4250-40G8F-POE+ CISCO EXTREME
AV-LED-1	LED VIDEO WALL: 217" DIAGONAL 4K LED VIDEO WALLS WITH A RESOLUTION OF 3840 X 2160 PIXELS, 1.25 PIXEL PITCH, 16:9 ASPECT RATIO, 600 NITS,8 BIT COLOR, 10000:1 CONTRAST, 3840 HZ REFRESH RATE, SCAN RATE 1/60, 160 DEG VIEWING ANGLE, CABINET SIZE 15' 8" W X 8' 10" H. PROVIDE WITH PROCESSOR(S) AV-VWP-1 AND MANUFACTURER INSTALLATION AND CALIBRATION. VOLUNTARY ALTERNATE MANUFACTURERS REQUIRE PRE-APPROVAL AND AN MUST INCLUDE PRICING COMPARISON TO THE BASIS OF DESIGN. CONTRACTOR TO INCLUDE MOUNTING DRAPER FOUNDATION SYSTEM. FIVE YEAR PARTS AND LABOR WARRANTY.	UNILUMIN UMINI W 1.2 DRAPER FOUNDATION MOUNTING SYSTEM NO SUBSTITUTIONS
AV-MIC-RX4	FOUR CHANNEL WIRELESS UHF MICROPHONE SYSTEM: WIRELESS MICROPHONE SYSTEM WITH THREE QUANTITY HANDHELD CARDIOID CONDENSER TRANSMITTER AND ONE QUANTITY BODYPACK TRANSMITTERS. PROVIDE WITH ONE QUANTITY LOW PROFILE OMNI-DIRECTIONAL HEADSET CONDENSER MICROPHONE AND MAX DURABILITY 2mm CABLE. VERIFY FREQUENCY REQUIREMENTS FOR GEOGRAPHIC AREA AND COORDINATE ANTENNAS REQUIREMENTS. REFER TO SPECIFICATIONS DIV 27 41 00 FOR ADDITIONAL REQUIREMENTS AND ACCESSORIES.	SHURE ULXD4Q ULXD1 ULXD2/B87A COUNTRYMAN E6X-O-W5-L-2-SL NO EQUAL
AV-PC-E	OWNER PROVIDED PC.	OWNER PROVIDED
AV-PS-1	RACK POWER STRIP: MULTI-STAGE SURGE PROTECTION, (8) REAR OUTLETS, CONTROLLED REAR OUTLETS, (1) FRONT OUTLET, FRONT POWER SWITCH.	MIDDLE ATLANTIC PDX-820R SURGE X
AV-SB1-C	12" CEILING SUBWOOFER, 400 WATTS CONTINUOUS, 1,600 WATTS PEAK POWER, 12" DRIVER WITH LONG THROW COPPER VOICE COIL. PROVIDE WITH CMS 1201SW BACKCAN AND ADDITIONAL REQUIRED ACCESSORIES. PROVIDE 4" SQUARE BACK BOX WITH SINGLE GANG PLASTER RING AND 1" EMT CONDUIT TO AV CLOSET.	TANNOY CMS 1201SW (SPEAKER) CMS 1201 BACKCAN NO SUBSTITUTIONS
AV-SP1-W	PASSIVE COLUMN ARRAY LOUDSPEAKER, 200 WATTS CONTINUOUS, 800 WATTS PEAK POWER, 7 VERTICALLY ARRAYED 3.5" LOW-FREQUENCY DRIVERS, 8 VERTICALLY ARRAYED 1" HIGH-FREQUENCY METAL DOME TWEETERS, EN 54-24 CERTIFIED FOR FIRE DETECTION AND FIRE ALARM SYSTEMS, LOW INSERTION LOSS 150 W, IP65 FOR OUTDOOR USE, TRANSFORMER TAP 150 W (33 Ω) / 75 W (66 Ω) / 37.5 W (133 Ω) / 19 W (265 Ω) / 9.5 W (520 Ω) / 5 W (1000 Ω) OFF & LOW IMPEDANCE OPERATION, DIMENSIONS H X W X D 32.1 X 4.8 X 5.8", ALUMINUM EXTRUSION CONSTRUCTION, POWDER COATED PERFORATED STEEL GRILLE. PROVIDE 4" SQUARE BACK BOX WITH SINGLE GANG PLASTER RING AND 1" EMT CONDUIT TO AV CLOSET.	TANNOY VLS 15 (EN54) NO SUBSTITUTIONS
AV-SP2-C	PERFORMANCE SPEAKER, 8" COAXIAL PENDANT LOUDSPEAKER, 240-WATT, WEATHER-RESISTANT ENCLOSURE, FREQUENCY RANGE 60 HZ - 30 KHZ, SYSTEM SENSITIVITY (1 W @1 M) 88 DB, DISPERSION 90 DEGREES CONICAL, ABS / STEEL ENCLOSURE, STEEL, PLATED AND POWDER COAT PAINTED GRILLE, TRANSFORMER TAPS 60 W / 30 W / 15 W / 7.5 W & LOW IMPEDANCE OPERATION, UL LISTED. PROVIDE 4" SQUARE BACK BOX WITH SINGLE GANG PLASTER RING AND 1" EMT CONDUIT TO AV CLOSET.	TANNOY OCV 8 NO SUBSTITUTIONS
AV-SP3-G	OUTDOOR SPEAKER: WEATHER RESISTANT MUSHROOM STYLE LANDSCAPE LOUDSPEAKER. 8" LF DRIVER AND 1.0" HF DRIVER POLYETHERIMDE DOME. 360 DEGREE COVERAGE NOMINAL, 240 WATTS CONTINUOUS PROGRAM POWER AND 60 HZ TO 15KHZ FREQUENCY RESPONSE. 8 OHMS PLUS 70V/100V TAPS AT 60W, 30W, 15W (AND 7.5W @ 70V). ENCLOSURE 20.1" X 14" X 14. IP-56 RATING. PROVIDE 4" SQUARE BACK BOX WITH SINGLE GANG PLASTER RING AND 1" CONDUIT FROM LOCAL AV RACK FOR SPEAKER LINE TO EACH DISTRIBUTED SPEAKER ZONE WITH CIRCULATING CABLE TO EACH SPEAKER PER PLANS. BASE BID: INCLUDE AV SPEAKERS ALTERNATE #3: REMOVE AV SPEAKERS WIRING AND CONDUIT	JBL CONTROL 88M
AV-TP1-R	TOUCH PANEL-WALL MOUNT: AUDIOVISUAL SYSTEM TOUCH PANEL CONTROL. 10" SCREEN WITH 1920X1080 RESOLUTION AND POE+. PROVIDE WITH RACK MOUNT IN AV-ER-1 RACK.	QSC TSC-101-G3
AV-TP1-W	TOUCH PANEL-WALL MOUNT: AUDIOVISUAL SYSTEM TOUCH PANEL CONTROL. 10" SCREEN WITH 1920X1080 RESOLUTION AND POE+. PROVIDE 4" SQUARE BACKBOX. 1" EMT CONDUIT TO AV RACK LOCATION.	QSC TSC-101-G3
AV-VTRX-1	DIGITAL MEDIA TRANSMITTER/RECEIVER: NETWORK BASED VIDEO ENCODER/DECODER. SIGNAL EXTENDER DEVICE WITH HDMI INPUT, USB C, USB A, HDMI OUTPUT AND POE NETWORK PORT. PROVIDE WITH AV BRIDGING. PROVIDE WITH USB C CHARGING POWER SUPPLY AT THE TABLES. SUPPORTS RESOLUTIONS UP TO 4K 60 4:4:4 PASSES CEC, EDID.	QSC NV-21 CRESTRON EXTRON
AV-VTRX-2	DIGITAL MEDIA TRANSMITTER/RECEIVER: NETWORK BASED VIDEO ENCODER/DECODER. SIGNAL EXTENDER DEVICE WITH (3) HDMI INPUTS, USB B, (4) USB A, (2) HDMI OUTPUTS (3)GPIO, AUDIO IN, AUDIO OUT AND (2) NETWORK PORTS. SUPPORTS RESOLUTIONS UP TO 4K 60 4:4:4 PASSES CEC, EDID.	QSC NV-32-H CRESTRON EXTRON
AV-VWP-1	LED VIDEO WALL PROCESSOR: PROVIDED WITH LED VIDEO WALL AV-LED-1. (2) HDMI INPUT AND RJ-45 VIDEO OUTPUT CARDS. PROCESSOR AND CONFIGURATION TO SUPPORT APPLICATION.	NEOTI NOVASTAR H-SERIES
AV-WP1-W	WALL MOUNTED HDMI TRANSMITTER: NETWORK BASED VIDEO ENCODER. SIGNAL EXTENDER DEVICE WITH HDMI INPUT AND POE NETWORK PORT. SUPPORTS RESOLUTIONS UP TO 4K 60 4:4:4 PASSES CEC, EDID. E.C. TO PROVIDE DEEP RECESSED 2 GANG AV WALL BOX AT OUTLET HEIGHT, UNO, WITH (1) 1 1/4" CONDUIT FOR AV CABLE TO FINISHED ACCESSIBLE CEILING OR TO THE AV CABLE TRAY IN OPEN CEILINGS.	QSC NV-1-HI-WE CRESTRON EXTRON
AV-WP2-W	WALL PLATE RACK MOUNTED: PROVIDE (1) DANTE/AES 67 AUDIO INTERFACE IN 2 GANG FACEPLATE. XLR FEMALE INPUTS, 2 RCA LINE LEVEL INPUTS AND 3.5 MM TRS LINE LEVEL INPUT. E.C. TO PROVIDE DEEP RECESSED 2 GANG AV WALL BOX AT OUTLET HEIGHT, UNO, WITH (1) 1 1/4" CONDUIT FOR AV CABLE TO FINISHED ACCESSIBLE CEILING OR TO THE AV CABLE TRAY IN OPEN CEILINGS.	QSC UND6I0 OR APPROVED EQUAL
AV-WP3-R	WALL PLATE RACK MOUNTED: PROVIDE (1) DANTE/AES 67 AUDIO INTERFACE IN 2 GANG FACEPLATE. XLR FEMALE INPUTS, 2 RCA LINE LEVEL INPUTS AND 3.5 MM TRS LINE LEVEL INPUT. PROVIDE STANDARD RACK MOUNTING PLATE TO BE LOCATED IN AV-ER-1 RACK LOCATION.	QSC UND6I0 OR APPROVED EQUAL
AV-WP4-R	HDMI INPUT RACK MOUNTED: ONE (1) HDMI PASS-THROUGH CONNECTOR IN METAL FACEPLATE. PROVIDE HDMI CABLE FROM WALL PLATE TO LOCAL AUX HDMI INPUT. PROVIDE ONE (1) 9' HDMI STATION CABLE . PROVIDE CUSTOM RACK PLATE FOR MOUNTING HDMI FACE PLATE.	LIBERTY AV PROCO C2G

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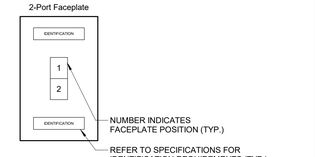
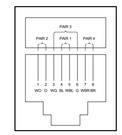
EQUIPMENT LIST ABBREVIATION	EQUIPMENT LIST DESCRIPTION	MANUFACTURER AND MODEL
PA-S1-C	PENDANT SPEAKER, WIDE DISPERSION 4-1/2" DRIVER, SELECTABLE POWER TAPS VIA REARMOUNTED CONTROL; 32, 16, 8, 4, 2, 1 WATTS @ 70V, 8 oz CERAMIC MAGNET, 70.7 VOLTS. PROVIDE BACK BOX AND MOUNTING HARDWARE AS NECESSARY FOR INSTALLATION IN LAY-IN CEILING. REFER TO SPECIFICATION SECTION 27 51 13 FOR CONDUIT REQUIREMENTS AND ADDITIONAL INFORMATION. PROVIDE COMPLETE WITH HANGING CABLE KIT CK-10B (BLACK).	BOGEN MPS1B ATLAS VALCOM
PA-S2-C	SPEAKER. 8" DUAL-CONE 4 WATT TRANSFORMER. 10 oz CERAMIC MAGNET. 25 AND 70.7 VOLTS. PROVIDE BACK BOX AND MOUNTING HARDWARE AS NECESSARY FOR INSTALLATION IN LAY-IN CEILING. REFER TO SPECIFICATION SECTION 27 51 13 FOR CONDUIT REQUIREMENTS AND ADDITIONAL INFORMATION. PROVIDE 4" SQUARE BACK BOX WITH SINGLE GANG PLASTER RING AND 1" EMT CONDUIT TO AV CLOSET.	BOGEN S10T22SPG8WVR ATLAS SOUND VALCOM
SC-IO-F	INFORMATION OUTLET, FLOOR BOX MOUNT, 2-PORT COVERPLATE AS INDICATED ON DRAWINGS, SEE INFORMATION OUTLET SCHEDULE ON T5.0 FOR PIN CONFIGURATION. "#" INDICATES INFORMATION OUTLET FACEPLATE CONFIGURATION AS INDICATED ON THE PLANS. REFER T5.0 FOR MORE INFORMATION. INSTALL INFORMATION OUTLET IN E.C. PROVIDED FLOOR BOX. PROVIDE 1" EMT CONDUIT TO ABOVE ACCESSIBLE CEILING. PROVIDE REMOVABLE BLANK INSERTS FOR UNUSED PORTS (HUBBELL SFB10A OR APPROVED EQUAL).	FACEPLATE: HUBBELL IFP12OW (2-PORT) JACK: HUBBELL HXJ6 SERIES NO SUBSTITUTIONS
SC-IO-W	INFORMATION OUTLET, WALL MOUNT, 2-PORT COVERPLATE AS INDICATED ON DRAWINGS, SEE INFORMATION OUTLET SCHEDULE ON T5.0 FOR PIN CONFIGURATION. "#" INDICATES INFORMATION OUTLET FACEPLATE CONFIGURATION AS INDICATED ON THE PLANS. REFER T5.0 FOR MORE INFORMATION. INSTALL INFORMATION OUTLET IN A 4" SQUARE BACKBOX WITH A SINGLE GANG PLASTER RING. INSTALL A 1" EMT CONDUIT TO ABOVE ACCESSIBLE CEILING. PROVIDE REMOVABLE BLANK INSERTS FOR UNUSED PORTS (HUBBELL SFB10A OR APPROVED EQUAL).	FACEPLATE: HUBBELL IFP12OW (2-PORT) JACK: HUBBELL HXJ6 SERIES NO SUBSTITUTIONS
SC-LR-1	LADDER RACK, 12" WIDE RECTANGULAR STEEL TUBING, RUST RESISTANT ENAMEL FINISH, REMOVE SHARP BURRS FROM LADDER RACK AND REPAINT ALL AREAS THAT HAVE BEEN FIELD MODIFIED, CUT OR EXPOSED. U.L. LISTED.	CPI 10250-712 HOMACO HOFFMAN
SC-MPP-1	MODULAR PATCH PANEL, RACK MOUNT, 24 MODULAR RJ-45 TERMINATIONS, MOUNTS DIRECTLY TO EIA/TIA STANDARD 19" RELAY RACK, PORT IDENTIFICATION NUMBERS, COLOR CODING AND LABEL HOLDER KITS, U.L. LISTED. REQUIRES (1) 1.75" MOUNTING SPACES.	HUBBELL P6E24U OR PRE-APPROVED EQUAL
SC-RI-C	INFORMATION OUTLET ROUGH-IN, CEILING MOUNT. INSTALL INFORMATION OUTLET IN A 4" SQUARE BACKBOX WITH A SINGLE GANG PLASTER RING. INSTALL A 1" EMT CONDUIT STUBBED TO ACCESSIBLE CEILING. PROVIDE REMOVABLE BLANK INSERTS FOR UNUSED PORTS (HUBBELL SFB10A OR APPROVED EQUAL).	ROUGH-IN ONLY
SC-RI-W	INFORMATION OUTLET ROUGH-IN, WALL MOUNT. INSTALL INFORMATION OUTLET IN A 4" SQUARE BACKBOX WITH A SINGLE GANG PLASTER RING. INSTALL A 1" EMT CONDUIT TO ABOVE ACCESSIBLE CEILING. PROVIDE REMOVABLE BLANK INSERTS FOR UNUSED PORTS (HUBBELL SFB10A OR APPROVED EQUAL).	ROUGH-IN ONLY
SC-WAP-C	INFORMATION OUTLET, 2-PORT SURFACE MOUNT BOX AS INDICATED ON DRAWINGS. "#" INDICATES INFORMATION OUTLET FACEPLATE CONFIGURATION AS INDICATED ON THE PLANS. REFER TO T5.00 FOR INFORMATION OUTLET SCHEDULE FOR PIN CONFIGURATION. INSTALL A 3/4" EMT CONDUIT 6" BEYOND BOX AND TERMINATE WITH A NYLON BUSHING.	FACEPLATE: HUBBELL ISB2BK (2-PORT) JACK: HUBBELL HXJ6 SERIES NO SUBSTITUTIONS

INFORMATION OUTLET SCHEDULE

SINGLE GANG WALLPLATES





ANSI/TIA/EIA T568B
PIN/PAIR ASSIGNMENT

NOTES:
1. PROVIDE REMOVABLE BLANK INSERT(S) FOR ALL UNUSED PORTS.
2. REFER TO SPECIFICATIONS SECTION 27 05 53 FOR ADDITIONAL INFORMATION ON LABELING REQUIREMENTS.

SCHEDULE NOTES:
1. LOCATION OF FUTURE OR OWNER PROVIDED WIRELESS ACCESS POINT. PROVIDE A 20' SLACK COIL AT THE NEAREST CABLE SUPPORT FOR POSSIBLE RELOCATION AFTER WIRELESS SURVEY.

LEGEND

DATA	CAT 6 RJ-45

CONFIGURATION	FACEPLATE PORTS	FACEPLATE PORT IDENTIFICATION						NOTES
		POSITION 1 JACK TYPE	POSITION 2 JACK TYPE	POSITION 3 JACK TYPE	POSITION 4 JACK TYPE	POSITION 5 JACK TYPE	POSITION 6 JACK TYPE	
C2	2	DATA	DATA					
C2-WAP	2	DATA	DATA					1.
RI	1	DATA						

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0 1 2 3
REF. SCALE IN INCHES
PROJECT #25005446.00

dka

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DKA PROJECT NO: 24-027

KEY PLAN:

SHEET STATUS: 05/16/2025
ISSUED FOR BID - NOT FOR CONSTRUCTION

NO:	DESCRIPTION:	DATE:

SHEET TITLE:
TECHNOLOGY SCHEDULES

SHEET NUMBER:
T5.00

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