

BUILDING CODE SUMMARY

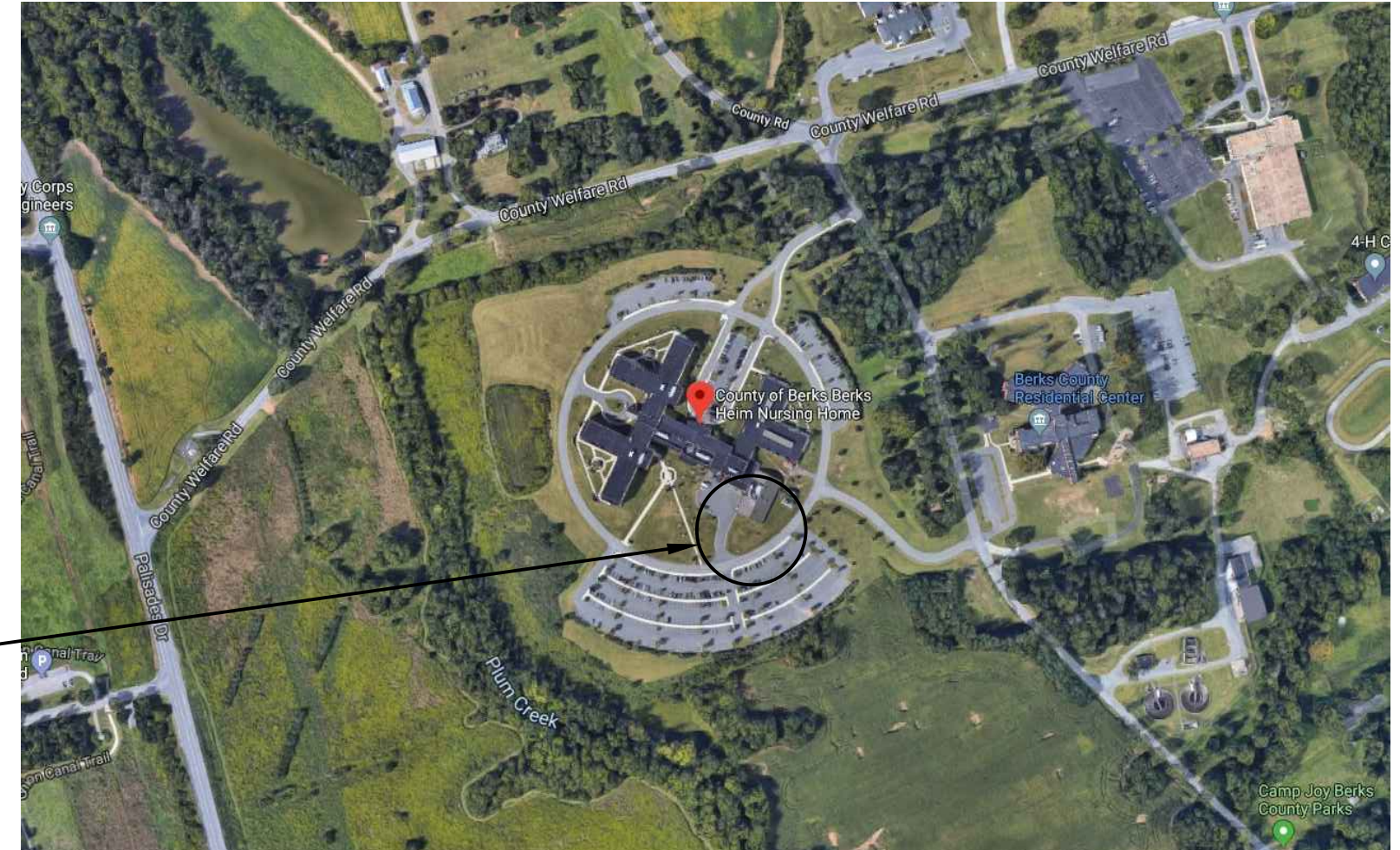
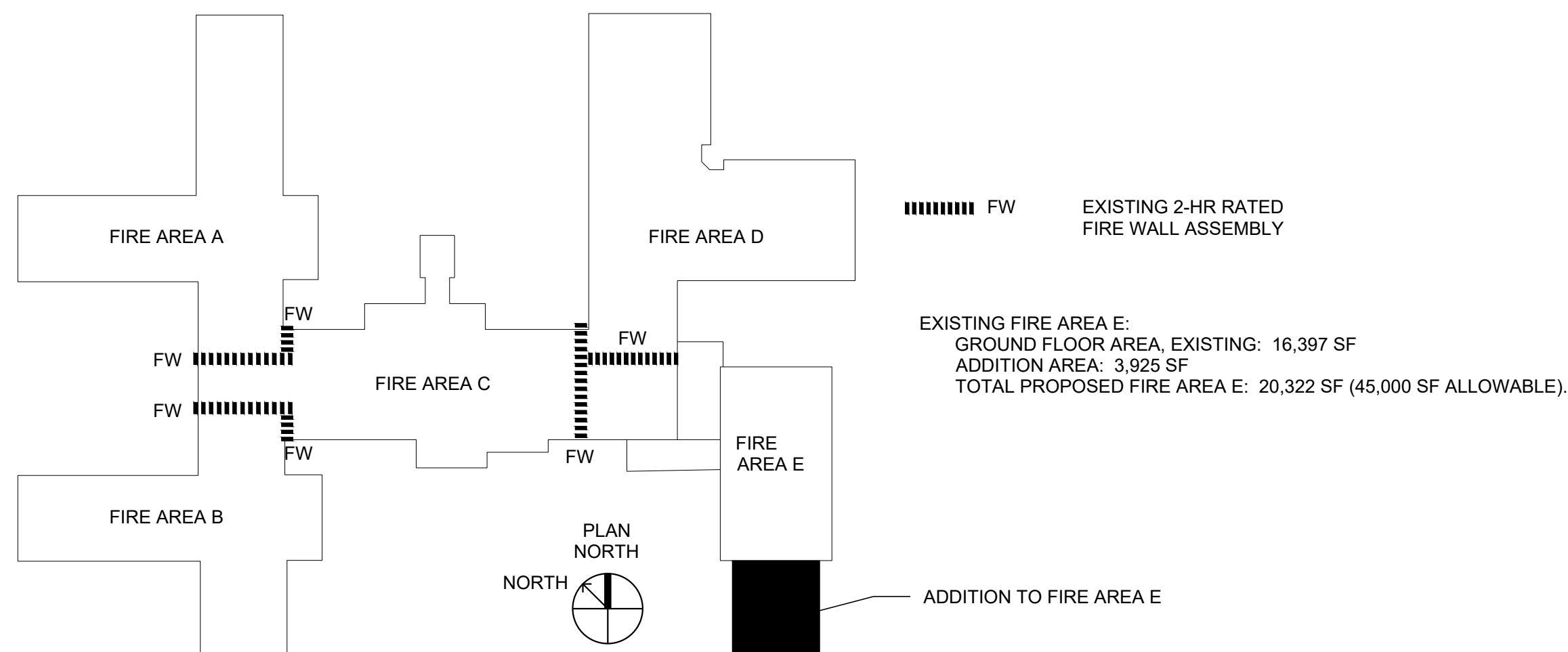
PROJECT NAME: BERKS COUNTY BERKS HEIM NURSING HOME BOILER PROJECT
 PROJECT LOCATION: LEESPORT, PA 19533
 OWNER: COUNTY OF BERKS
 DESIGN PROFESSIONAL: ENTECH ENGINEERING, INC. 201 PENN STREET, SUITE 200 P.O. BOX 32 READING, PA 19603

CODES APPLICABLE TO THIS PROJECT INCLUDE THE FOLLOWING:
 INTERNATIONAL EXISTING BUILDING CODE (IEBC) 2015
 INTERNATIONAL BUILDING CODE (IBC) 2015
 INTERNATIONAL FIRE CODE (IFC) 2015
 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) 2015
 INTERNATIONAL MECHANICAL CODE (IMC) 2015
 INTERNATIONAL FUEL GAS CODE (IFGC) 2015
 INTERNATIONAL PLUMBING CODE (IPC) 2015
 NATIONAL ELECTRIC CODE (NEC) 2014

EXISTING BUILDING:
 USE GROUP: INSTITUTIONAL GROUP I-2
 TYPE OF CONSTRUCTION: BOCA 1996 TYPE 2B PROTECTED (IBC 2015 TYPE IIA EQUIVALENT)
 SPRINKLER PROTECTION: FULLY SPRINKLERED

ADDITION:
 USE GROUP: INSTITUTIONAL GROUP I-2 (TO MATCH EXISTING).
 BOILER ROOM (INCIDENTAL USE PER TABLE 509)
 STORAGE (ACCESSORY OCCUPANCY PER 508.2)
 TYPE OF CONSTRUCTION: TYPE IIA (TO MATCH EXISTING)
 AREA: 3,925 SF
 SPRINKLER PROTECTION: FULLY SPRINKLERED

TABLE 601 FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (HOURS), TYPE IIA CONSTRUCTION:
 PRIMARY STRUCTURAL FRAME: 1 HR.
 BEARING WALLS, EXTERIOR: 1 HR.
 NONBEARING WALLS AND PARTITIONS, EXTERIOR: 0 HR. PER TABLE 602
 ROOF CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS: 1 HR.



1 LOCATION MAP
 Scale: NONE

COUNTY OF BERKS BERKS HEIM NURSING HOME 1011 Berks Road, Leesport, PA 19533 BOILER PROJECT



Prepared by:
Entech Engineering, Inc.
 Reading, Pennsylvania
 ENTECH PROJECT NO. 4177.009

JANUARY 30, 2020

DRAWING INDEX

DWG. NO.	TITLE
G-001	GENERAL - COVER SHEET, LOCATION MAP AND DRAWING INDEX
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C-103	CIVIL - UTILITY SITE PLAN
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A-301	ARCHITECTURAL - BUILDING SECTIONS
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FP-101	FIRE PROTECTION - SPRINKLER PLAN
P-101	PLUMBING - PARTIAL SITE PLAN
M-101	MECHANICAL - PARTIAL SITE PLAN
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M-601	MECHANICAL - PIPING AND INSTRUMENT DIAGRAM
M-602	MECHANICAL - PROPANE FLOW DIAGRAM
M-701	MECHANICAL - LEGEND, SCHEDULE AND DETAILS
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E-103	ELECTRICAL - NEW BOILER ROOM CONTROL WIRING
E-701	ELECTRICAL - ONE-LINE DIAGRAM, SCHEDULES, LEGEND AND NOTES



2 EXISTING BUILDING PHOTO
 Scale: NONE

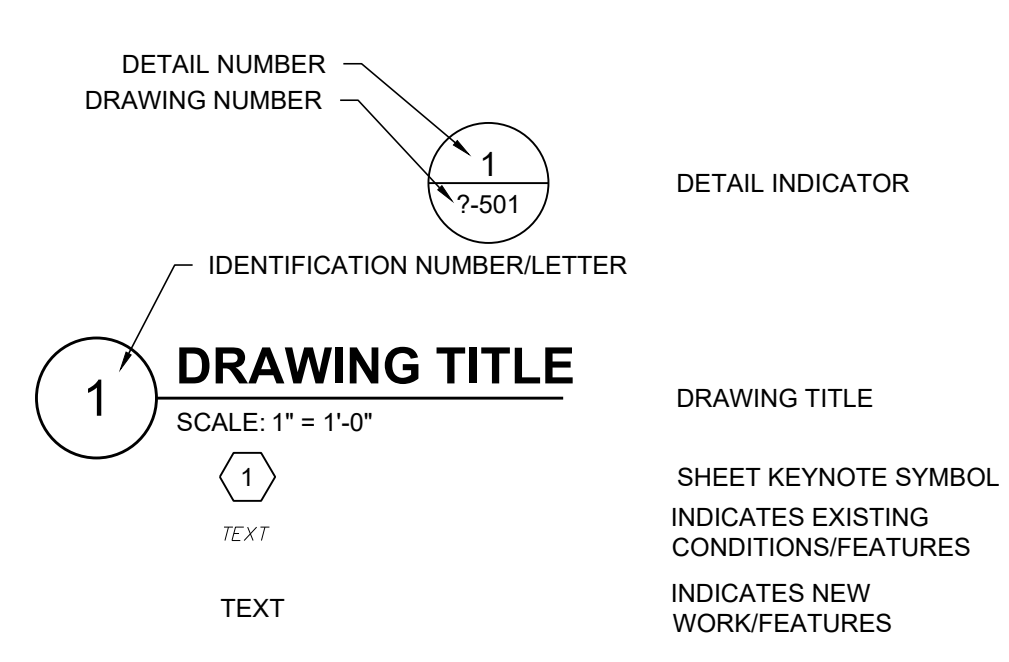
GENERAL NOTES

- IT IS REQUIRED THAT THE CONTRACTOR VISIT THE PROJECT SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH THE BUILDING STRUCTURE AND EXISTING CONDITIONS.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO THE START OF WORK. NOTIFY ENGINEER OF ANY SIGNIFICANT CHANGES IN DIMENSIONS OR CONDITIONS.
- THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, TOOLS, EQUIPMENT AND NECESSARY FACILITIES, AND PERFORM ALL LABOR AND SERVICES OF EVERY DESCRIPTION AS MAY BE NECESSARY TO COMPLETE THE SCOPE OF WORK DEFINED ON THE DRAWINGS.
- CONTRACTOR SHALL ARRANGE FOR ALL INSPECTIONS REQUIRED BY LOCAL MUNICIPALITY.
- FABRICATE AND INSTALL ALL WORK IN STRICT ACCORDANCE WITH THE IBC, ALL APPLICABLE STATE AND LOCAL CODES, AND THE REQUIREMENTS OF THE OWNER.
- ALL CONTRACTORS AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR THE PROPER PERFORMANCE OF THEIR WORK, COORDINATING WITH OTHER TRADES, MEANS AND METHODS OF CONSTRUCTION, SAFETY AND SECURITY ON SITE. CONTRACTOR SHALL BE REQUIRED TO FOLLOW COUNTY OF BERKS SAFETY PROTOCOLS AND THEIR OWN WHILE ON SITE.
- CONTRACTOR SHALL PROTECT THE EXISTING FACILITY FROM WEATHER AND MAINTAIN SECURITY DURING ALL DEMOLITION AND CONSTRUCTION WORK.
- PROTECT EXISTING PROPERTY DURING CONSTRUCTION. REPAIR OR REPLACE, WITHOUT ADDITIONAL CHARGE TO THE OWNER, ANY EXISTING WORK DAMAGED DURING THE COURSE OF CONSTRUCTION.
- THE WORK SHALL BE COORDINATED WITH THE PERSONNEL OF THE COUNTY OF BERKS.
- UNLESS ITEMS OF MATERIAL, EQUIPMENT OR WORK ARE SPECIFICALLY NOTED TO BE PROVIDED OR FURNISHED BY OTHERS, THEY SHALL BE PROVIDED UNDER THIS CONTRACT.
- ALL WORK SHALL BE PERFORMED BY SKILLED WORKERS IN A WORKMANLIKE AND PROFESSIONAL MANNER CONSISTENT WITH INDUSTRY STANDARDS.
- DURING THE CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TRASH AND SOLID WASTE.
- THE ELEVATION OF THE TOP OF THE NEW GROUND FLOOR SLAB (EL. 0'-0") IS EQUAL TO THE SITE ELEVATION OF EL. 259.89'. THE ELEVATION OF THE TOP OF THE NEW GROUND FLOOR SLAB IS THE SAME ELEVATION AS THE TOP OF THE EXISTING GROUND FLOOR SLAB IN THE LAUNDRY, WHICH IS SHOWN AS EL. 260'-0" ON THE EXISTING DRAWINGS. THE ELEVATION DISCREPANCY OCCURRED DUE TO THE USE OF DIFFERENT SURVEY DATUMS.

GENERAL PROJECT NOTES

- FIELD SURVEY BY SNYDER SURVEYING, DATED OCTOBER 2019.
- THE LOCATION AND DIMENSIONS OF ALL SITE FEATURES SHOWN ARE APPROXIMATE AND MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ALL UNDERGROUND UTILITIES SHALL BE LOCATED BY THE CONTRACTOR PRIOR TO ANY EARTH MOVING ACTIVITIES, PURSUANT TO ACT 287. UNDERGROUND UTILITY LOCATIONS MUST BE VERIFIED BY CALLING 1-800-242-1776.
- ALL UNDERGROUND UTILITY LOCATIONS AND ELEVATIONS ON THE CONSTRUCTION PLANS APPROXIMATE LOCATIONS DELINEATED FROM LIMITED FIELD MARKINGS AND AVAILABLE RECORDS. THEREFORE, ANY UTILITIES NOT SHOWN OR NOT LOCATED AS SHOWN, SHALL NOT BE THE CAUSE OF THE CONTRACTOR TO DENY RESPONSIBILITY FOR PROTECTION AND/OR REPAIR DURING CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING FACILITIES AND PROVIDE ALL PROTECTIVE MEASUREMENTS, RESTRAINTS AND APPURTENANCES AS NECESSARY.
- THESE DESIGN DRAWINGS MUST BE WORKED IN CONJUNCTION WITH THE PROJECT MANUAL/SPECIFICATIONS.
- CONTRACTOR SHALL PROVIDE ALL FITTINGS NECESSARY TO MAINTAIN HORIZONTAL AND VERTICAL ALIGNMENT OF PIPELINES.
- CONTRACTOR SHALL USE, MAINTAIN AND PROVIDE ADEQUATE, PROPER SHORING DEVICES ON SITE AT ALL TIMES. CONTRACTOR SHALL CONFORM TO ALL LOCAL, STATE AND FEDERAL REGULATIONS.
- CONTRACTOR SHALL ABIDE BY ISSUED LAND DEVELOPMENT PERMIT CONDITIONS INCLUDING TRAFFIC CONTROL, AND EROSION AND SEDIMENTATION CONTROL.

REFERENCE LEGEND



DATE	ISSUED FOR CONSTRUCTION	ISSUED FOR PERMITTING	ISSUED FOR BIDDING	ISSUED FOR REVISION
08/18/20	2	1	0	0
08/18/20				
01/30/20				

COUNTY OF BERKS
 BERKS HEIM
 BERN TOWNSHIP
 BOILER PROJECT
 GENERAL
 COVER SHEET, LOCATION MAP AND DRAWING INDEX

DESIGN PA ONE CALL 811

UTILITY RESPONSE	ADDRESS	CONTACT INFORMATION	CONTACT PERSON	RESPONSE
WINDSTREAM	1450 CENTER POINT RD. HIAWATHA, IA 52233			PLANS SENT
BERN TOWNSHIP	1069 OLD BERNVILLE RD. READING, PA 19605			CLEAR - NO FACILITIES
COMCAST	400 RIVERFRONT DR. READING, PA 19602			DID NOT RESPOND
BUCKEYE PARTNERS FACILITIES	5 TEK PARK 9999 HAMILTON BLVD. BREINIGSVILLE, PA 19031			CLEAR - NO FACILITIES
LEESPORT BOROUGH WATER AUTHORITY	27 S CANAL ST. PO BOX 710 LEESPORT, PA 19533			CLEAR - NO FACILITIES
MET ED FIRST ENERGY	2800 POTTSVILLE PIKE READING, PA 19612			DID NOT RESPOND
READING AREA WATER AUTHORITY	1801 KUTZTOWN RD. READING, PA 19604			CLEAR - NO FACILITIES
UGI UTILITIES INC.	225 MORGANTOWN RD. READING, PA 19611			CLEAR - NO FACILITIES



SCALE: AS NOTED
 PREPARED BY: SMF
 CHECKED BY: MDR
 APPROVED BY: MAF
 PROJECT NO: 4177.009
 DRAWING NO: G-001

Last Edited by: mdr/entech

GENERAL SHEET NOTES

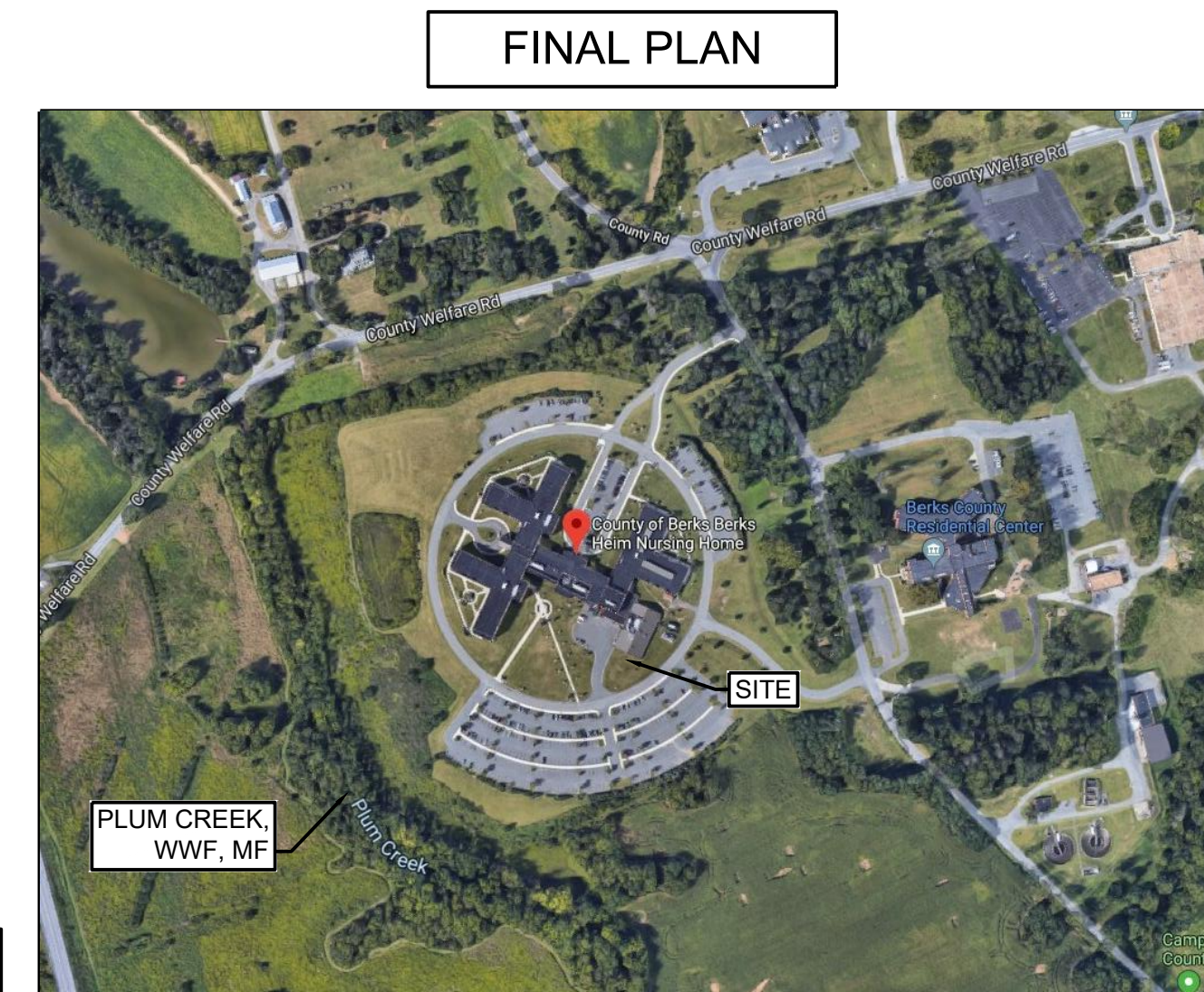
1. FIELD SURVEY BY SNYDER SURVEYING, DATED OCTOBER 2016. NAD88 DATUM.
2. ONE CALL PERFORMED BY SNYDER SURVEYING, DATED OCTOBER 2016.
3. UNDERGROUND UTILITIES LOCATED BY MASTER LOCATORS, DATED NOVEMBER 2019.
4. THE LOCATION AND DIMENSIONS OF ALL SITE FEATURES SHOWN ARE APPROXIMATE AND MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO BIDDING.
5. ALL UNDERGROUND UTILITIES SHALL BE LOCATED BY THE CONTRACTOR PRIOR TO ANY EARTH MOVING ACTIVITIES. PURSUANT TO ACT 187, UNDERGROUND UTILITY LOCATIONS MUST BE VERIFIED BY CALLING 1-800-242-1776.
6. ALL UNDERGROUND UTILITY LOCATIONS AND ELEVATIONS ON THE CONSTRUCTION PLANS ARE APPROXIMATE LOCATIONS DELINEATED FROM LIMITED FIELD MARKINGS AND AVAILABLE RECORDS. THEREFORE, ANY UTILITIES NOT SHOWN OR NOT LOCATED AS SHOWN, SHALL NOT BE THE CAUSE OF THE CONTRACTOR TO DEEM RESPONSIBILITY FOR PROTECTION AND/OR REPAIR DURING CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING FACILITIES AND PROVIDE ALL PROTECTIVE MEASURES, RESTRAINTS AND APPURTENANCES AS NECESSARY.
7. THESE DESIGN DRAWINGS MUST BE WORKED IN CONJUNCTION WITH THE PROJECT MANUAL/SPECIFICATIONS.
8. CONTRACTOR SHALL USE, MAINTAIN AND PROVIDE ADEQUATE PROPER SHORING DEVICES ON SITE AT ALL TIMES. CONTRACTOR SHALL CONFORM TO ALL LOCAL, STATE AND FEDERAL REGULATIONS.

E&S LEGEND

- 355 --- EXISTING CONTOURS (MAJOR)
 - 357 --- EXISTING CONTOURS (MINOR)
 - LIMIT OF DISTURBANCE
 - SSK --- SSK --- COMPOST SILT SOCK (12')
 - Bh SwD --- SOIL LINE AND TYPE
 - [Symbol] ROCK CONSTRUCTION ENTRANCE
 - [Symbol] CONCRETE WASHOUT
 - [Symbol] ROCK FILTER BERM
 - [Symbol] TOPSOIL STOCKPILE
- SOILS
DdB - DUFFIELD SILT LOAMS, 8 TO 15 PERCENT SLOPES



1 EROSION AND SEDIMENTATION PLAN
SCALE: 1" = 20'
PLAN NORTH



1 LOCATION MAP
SCALE: NONE

THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE GENERAL CONTRACT EXCEPT AS NOTED OTHERWISE.



DATE	REV	ISSUED FOR PERMITTING	ISSUED FOR BIDDING	ISSUED FOR REVISION
08/16/20	2	MAF	MAF	APFD
08/07/20	1	MAF	MAF	
01/20/20	0			

COUNTY OF BERKS
BERKS HEIM
BERN TOWNSHIP
BOILER PROJECT
CIVIL
EROSION AND SEDIMENTATION PLAN

SCALE: AS NOTED
PREPARED BY: GEM
CHECKED BY: KLG
APPROVED BY: MAF
PROJECT NO: 4177.009
DRAWING NO: ES-101

STANDARD E&S PLAN NOTES

- 1. ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT (E&S) PLAN...

MATERIAL NOTES

- 1. ALL BUILDING MATERIALS AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS...

SEQUENCE NOTES

- 1. AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES (INCLUDING CLEARING AND GRUBBING), THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS...

STABILIZATION NOTES

- 1. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAP(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING...

RECOMMENDED MULCHING SPECIFICATIONS

- 1. MULCHING SHALL BE PROVIDED AS REQUIRED IN AREAS DIFFICULT TO VEGETATE, AND DURING OFF-SEASON OPERATIONS. MULCHING METHODS AND MATERIALS SHALL CONFORM TO THE FOLLOWING:

CONSTRUCTION SEQUENCE

- 1. PRIOR TO CONSTRUCTION THE PROPOSED LIMIT OF DISTURBANCE (LOD) SHALL BE DELINEATED AND STAKED IN THE FIELD. THE BOUNDARY OF ANY ADJACENT WETLANDS SHALL ALSO BE STAKED.

NOTE:

A COPY OF THE EROSION AND SEDIMENTATION CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE DURING CONSTRUCTION UNTIL THE SITE IS STABILIZED.

GROUND COVER

AFTER THE EARTH DISTURBANCE ACTIVITY IS COMPLETED, THE DISTURBED AREA MUST BE REVEGETATED. THE VEGETATIVE COVER MUST BE A UNIFORM 70% PERENNIAL VEGETATIVE COVER...

TEMPORARY SEEDING

TEMPORARY SEEDING WILL BE PERFORMED DURING THE GERMINATION SEASON (APRIL TO OCTOBER) FOR THE ESTABLISHMENT OF GRASS SEED ON DISTURBED AREAS BEFORE THE START OF THE DORMANT SEASON...

PERMANENT SEEDING

PERMANENT SEEDING SHALL TAKE PLACE IN ALL DISTURBED AREAS AS FOLLOWS:
1. AGRICULTURAL LIME - 240 POUNDS PER 1,000 SQUARE FEET
2. FERTILIZER - 25 POUNDS PER 1,000 SQUARE FEET
3. FERTILIZER - 12.5 POUNDS PER 1,000 SQUARE FEET

PERMANENT SEEDING SHALL TAKE PLACE IN ALL DISTURBED AREAS AS FOLLOWS:

Table with columns: MATERIAL NUMBER, SPECIES, RECOMMENDED SEED MIXTURE #, SEEDING RATE (LBS/1000 SQ FT), and AMOUNT (LBS/1000 SQ FT).

UPON COMPLETION OF EARTH DISTURBANCE ACTIVITIES, THE SITE SHALL BE IMMEDIATELY STABILIZED.

- 1. THE FOLLOWING SHALL BE SPREAD AND WORKED INTO THE TOPSOIL TO A DEPTH OF 2 TO 4 INCHES:
a. AGRICULTURAL LIME - 240 POUNDS PER 1,000 SQUARE FEET
b. FERTILIZER - 25 POUNDS PER 1,000 SQUARE FEET
c. THE FERTILIZER SHALL BE A COMMERCIAL TYPE 10-10-20.

PERMANENT SEED MIXTURE:

- 1. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP-SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT...

MAINTENANCE PROGRAM

IF EROSION DOES OCCUR, THE CONTRACTOR SHALL REPAIR AND RESEED THOSE AREAS OR USE OTHER STABILIZATION METHODS AS REQUIRED. THE CONTRACTOR SHALL USE JUTE, WOOD FIBER, OR OTHER THE DOWN FILTER NETTING ON TOP OF THE NEW SEED AS REQUIRED...

EMERGENCY EROSION PROTECTION

IF EROSION DOES OCCUR, THE CONTRACTOR SHALL REPAIR AND RESEED THOSE AREAS OR USE OTHER STABILIZATION METHODS AS REQUIRED. THE CONTRACTOR SHALL USE JUTE, WOOD FIBER, OR OTHER THE DOWN FILTER NETTING ON TOP OF THE NEW SEED AS REQUIRED...

PERIODIC INSPECTION PROGRAM

THE CONTRACTOR WILL BE RESPONSIBLE FOR THE INSPECTION, OPERATION, MAINTENANCE, AND REMOVAL OF ALL EROSION AND SEDIMENTATION CONTROLS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN UP, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, AND RENEWING MUST BE PERFORMED IMMEDIATELY...

MAINTENANCE OPERATIONS

AS PART OF THE LONG TERM OPERATION AND MAINTENANCE, ROUTINE MAINTENANCE INSPECTIONS WILL BE REQUIRED TO INSURE THE EFFICIENCY OF ALL THE SEDIMENT CONTROL DEVICES. AT A MINIMUM, ALL BMP'S SHALL BE INSPECTED ON A WEEKLY BASIS AFTER EACH MEASURABLE RUNOFF EVENT...

REMOVAL OF CONTROLS AND CONTINUING MAINTENANCE

ALL REQUIRED TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE AREA THEY PROTECT HAS BEEN STABILIZED. AREAS DISTURBED DURING REMOVAL OF THE CONTROLS MUST BE STABILIZED IMMEDIATELY.

RECYCLING AND DISPOSAL METHODS

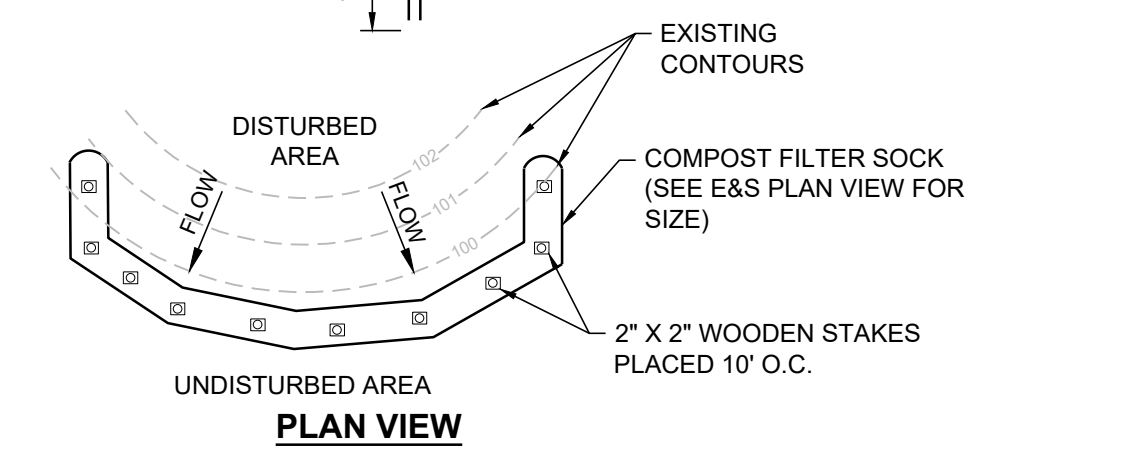
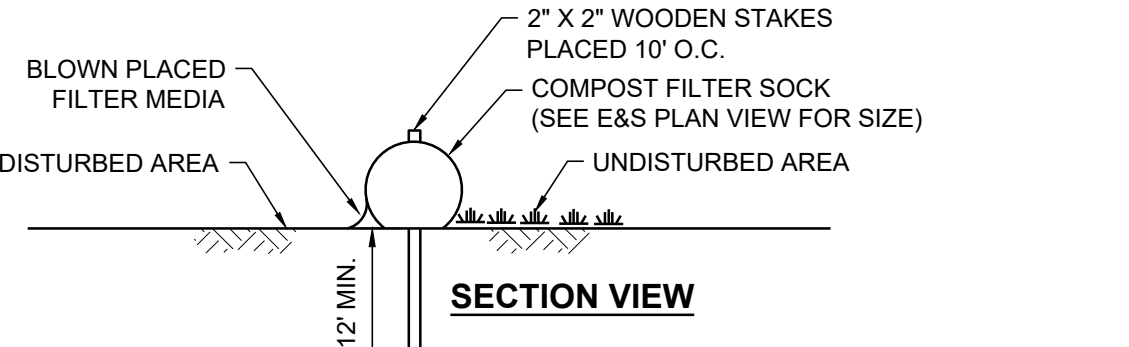
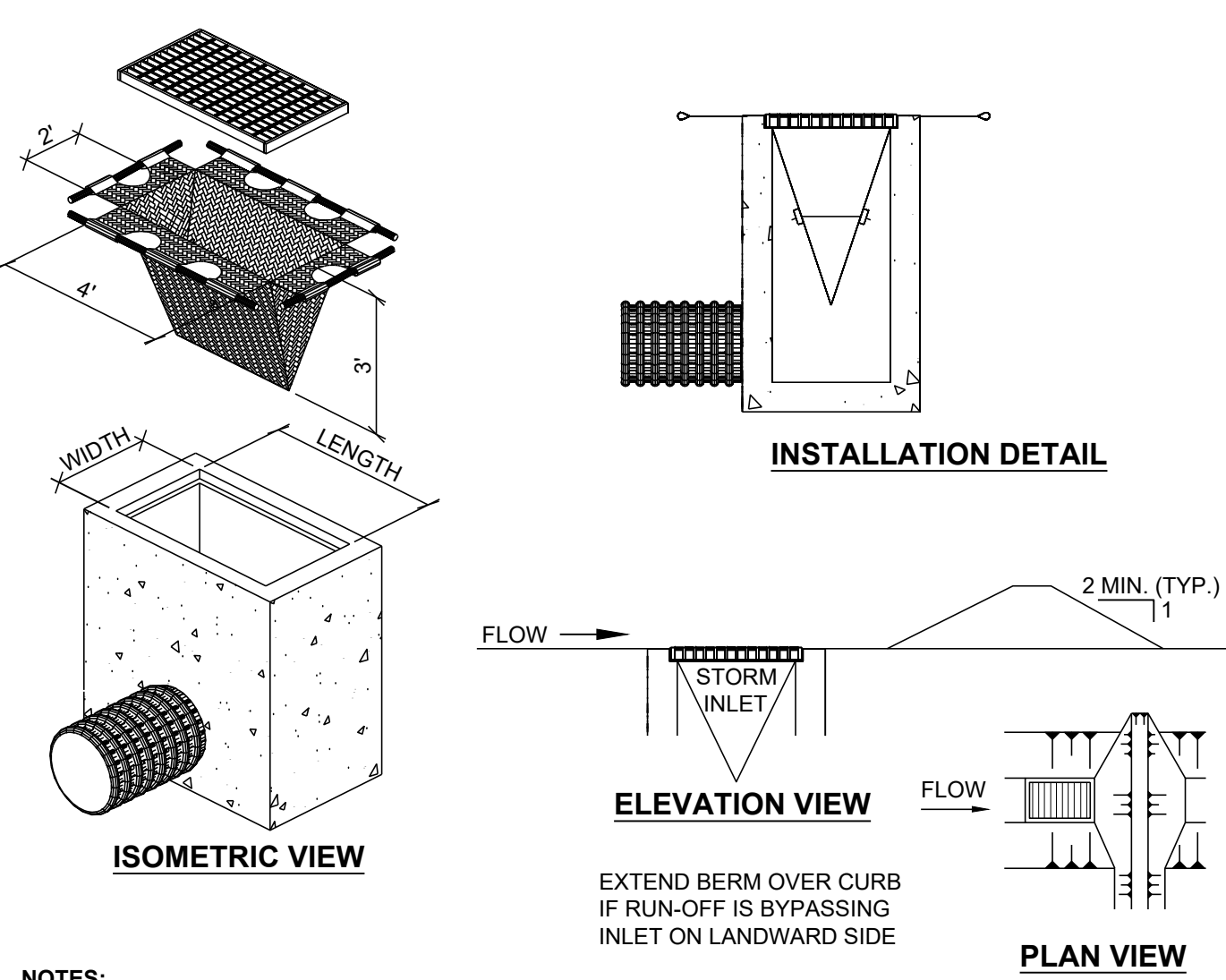
- 1. COLLECTED SEDIMENT WILL BE PLACED ON FILL SLOPES AND GRADED, SEEDED AND MULCHED AS NEEDED TO ATTAIN STABILIZATION.
2. THE CONTRACTOR SHALL REMOVE FROM THE SITES, RECYCLE OR DISPOSE OF ALL MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENTS SOLID WASTE MANAGEMENT REGULATIONS...

TABLE 4.1 Compost Sock Fabric Minimum Specifications

Table with columns: Material Type, Photo-degradable, Bio-degradable, Multi-Filament Polypropylene (MPPF), and Heavy Duty Multi-Filament Polypropylene (HDMPFF).

TABLE 4.2 Compost Standards

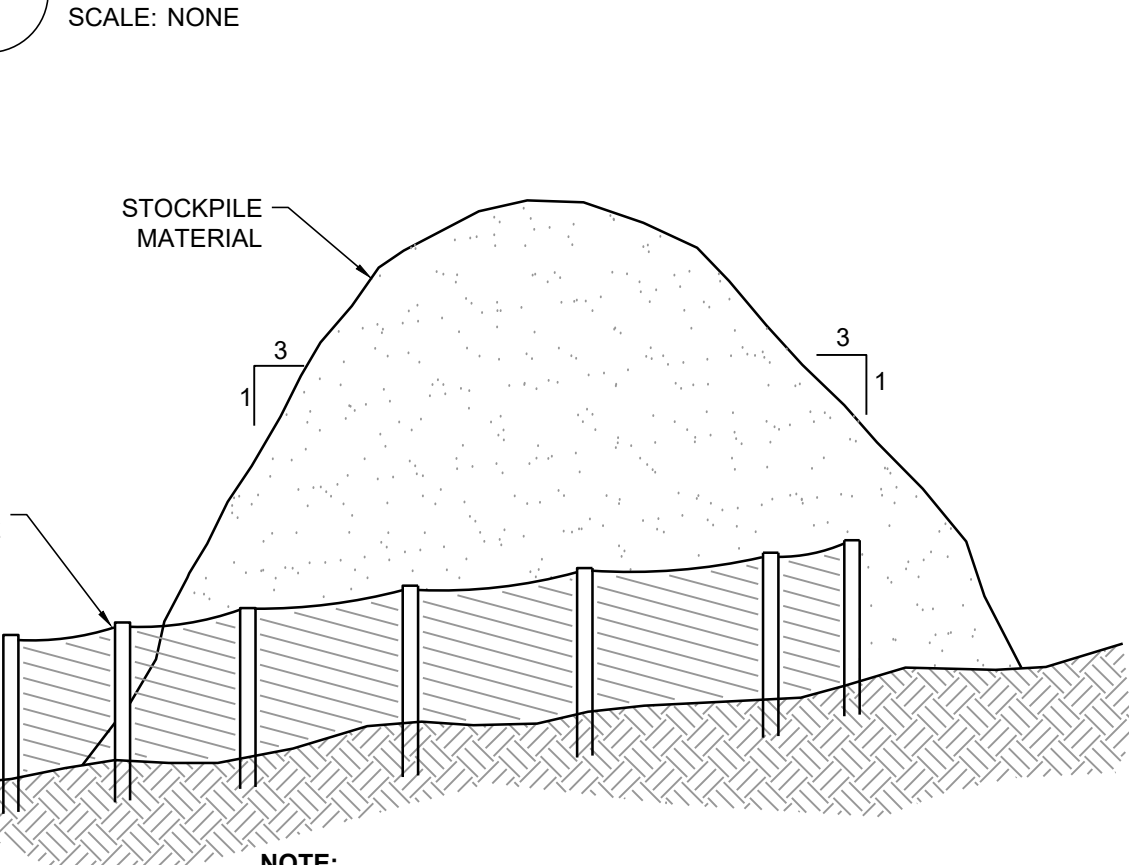
Table with columns: Organic Matter Content, Organic Carbon, Nitrogen Content, Phosphorus, and Soluble Salt Concentration.



NOTES:

- 1. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP-SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT...

STANDARD CONSTRUCTION DETAIL #4-1 COMPOST FILTER SOCK



5 TYPICAL STOCKPILE DETAIL



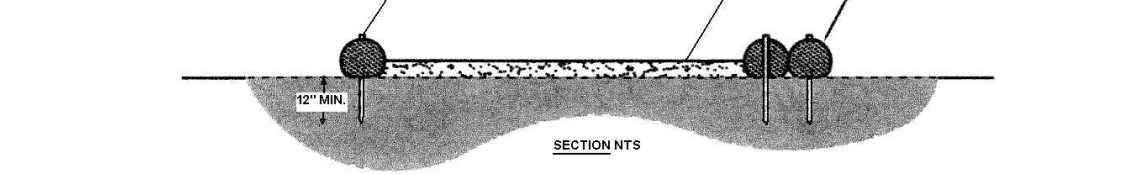
3 STANDARD CONSTRUCTION DETAIL #3-1 ROCK CONSTRUCTION ENTRANCE



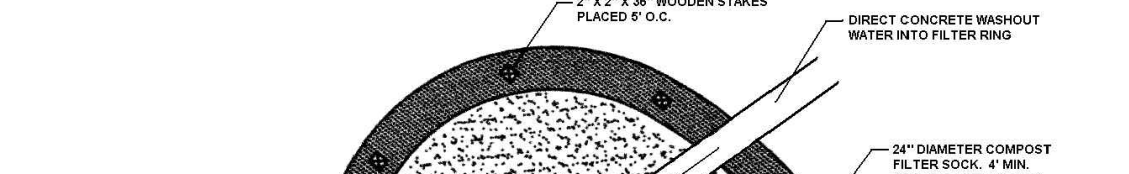
4 ROCK FILTER BERM



6 CONCRETE WASHOUT DETAIL

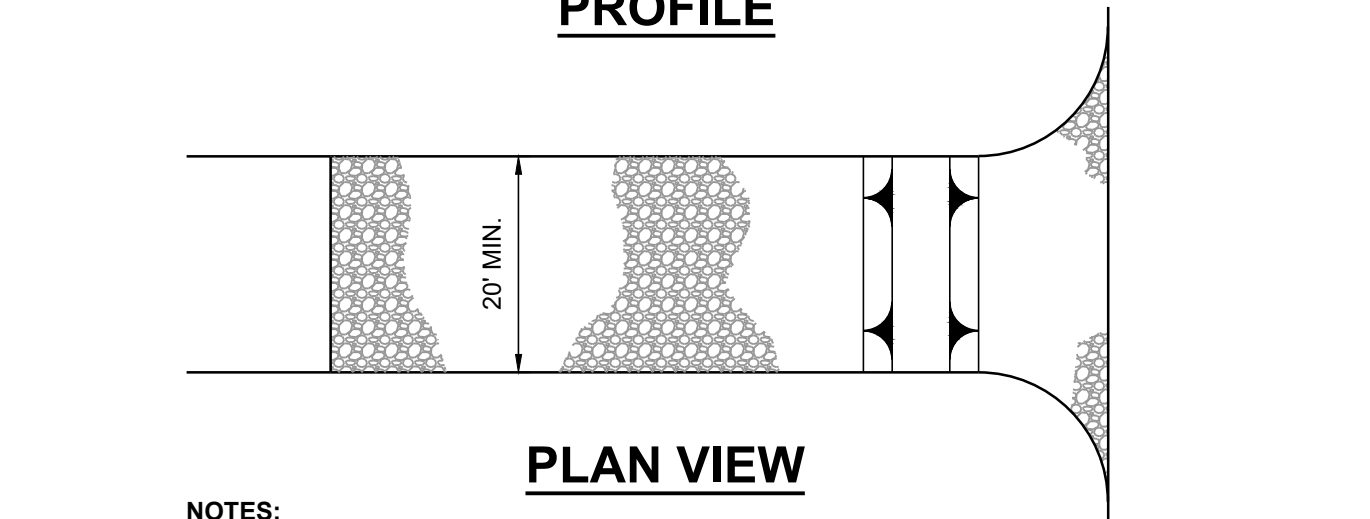
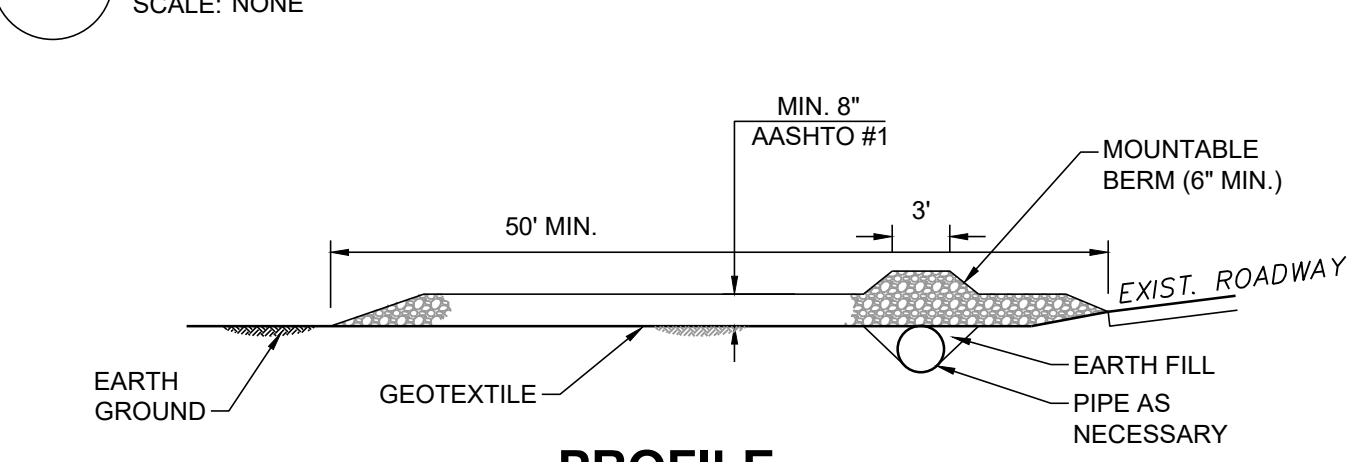


FINAL PLAN



- 1. MAXIMUM DRAINAGE AREA= 1/2 ACRE
2. INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BAGS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

STANDARD CONSTRUCTION DETAIL #4-16 FILTER BAG INLET PROTECTION - TYPE M INLET



PLAN VIEW

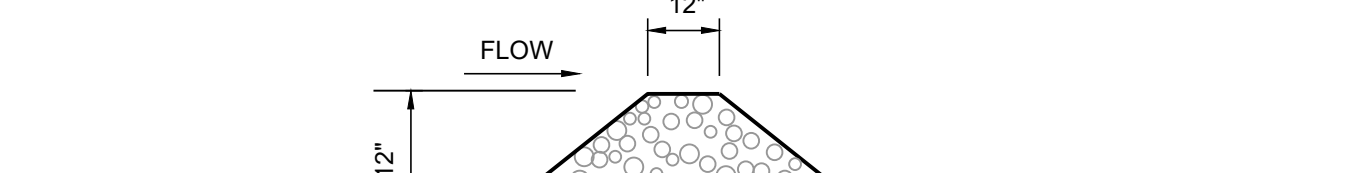
- 1. REMOVE TOPSOIL PRIOR TO INSTALLATION OF CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE. SEDIMENT SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

MAINTENANCE- ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY...

STANDARD CONSTRUCTION DETAIL #3-1 ROCK CONSTRUCTION ENTRANCE



4 ROCK FILTER BERM



FINAL PLAN

- 1. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE HEIGHT OF THE FILTER.
2. IMMEDIATELY UPON STABILIZATION OF EACH BASIN, INSTALLER SHALL REMOVE ACCUMULATED SEDIMENT, REMOVE ROCK FILTER, AND STABILIZE DISTURBED AREAS.

ROCK FILTER BERM



FINAL PLAN

A suitable impervious geomembrane shall be placed at the location of the washout prior to installing the socks. Adapted from Filtrix

THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE GENERAL CONTRACT EXCEPT AS NOTED OTHERWISE.

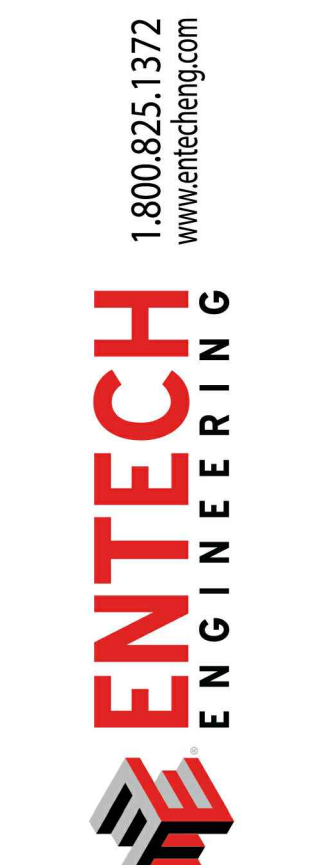


Table with columns: DATE, ISSUED FOR BIDDING, ISSUED FOR PERMITTING, ISSUED FOR CONSTRUCTION, DATE.

Table with columns: DATE, ISSUED FOR BIDDING, ISSUED FOR PERMITTING, ISSUED FOR CONSTRUCTION, DATE.

COUNTY OF BERKS, BERKS HEIM BERN TOWNSHIP, BOILER PROJECT, CIVIL, EROSION AND SEDIMENTATION NOTES AND DETAILS

Table with columns: SCALE, AS NOTED, PREPARED BY, CHECKED BY, PROJECT NO, DRAWING NO.

ES-501



1 EXISTING FEATURES AND SITE DEMOLITION PLAN
 SCALE: 1" = 20'
 NORTH

GENERAL SHEET NOTES

- FIELD SURVEY BY SNYDER SURVEYING, DATED OCTOBER 2019. NAVD88 DATUM.
- ONE CALL PERFORMED BY SNYDER SURVEYING, DATED OCTOBER 2019.
- UNDERGROUND UTILITIES LOCATED BY MASTER LOCATORS, DATED NOVEMBER 2019.
- THE LOCATION AND DIMENSIONS OF ALL SITE FEATURES SHOWN ARE APPROXIMATE AND MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO BIDDING.
- ALL UNDERGROUND UTILITIES SHALL BE LOCATED BY THE CONTRACTOR PRIOR TO ANY EARTH MOVING ACTIVITIES. PURSUANT TO ACT 187, UNDERGROUND UTILITY LOCATIONS MUST BE VERIFIED BY CALLING 1-800-242-1776.
- ALL UNDERGROUND UTILITY LOCATIONS AND ELEVATIONS ON THE CONSTRUCTION PLANS ARE APPROXIMATE LOCATIONS DELINEATED FROM LIMITED FIELD MARKINGS AND AVAILABLE RECORDS. THEREFORE, ANY UTILITIES NOT SHOWN OR NOT LOCATED AS SHOWN, SHALL NOT BE THE CAUSE OF THE CONTRACTOR TO DENY RESPONSIBILITY FOR PROTECTION AND/OR REPAIR DURING CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING FACILITIES AND PROVIDE ALL PROTECTIVE MEASURES, RESTRAINTS AND APPURTENANCES AS NECESSARY.
- THESE DESIGN DRAWINGS MUST BE WORKED IN CONJUNCTION WITH THE PROJECT MANUAL/SPECIFICATIONS.
- CONTRACTOR SHALL USE, MAINTAIN AND PROVIDE ADEQUATE PROPER SHORING DEVICES ON SITE AT ALL TIMES. CONTRACTOR SHALL CONFORM TO ALL LOCAL, STATE AND FEDERAL REGULATIONS.

SHEET KEY NOTES

- REMOVAL AND ABANDONMENT OF EXISTING SANITARY SEWER FORCE MAIN MUST BE COORDINATED WITH THE INSTALLATION OF THE RELOCATED FORCE MAIN, SEE SHEET C-101.

CIVIL LEGEND

- 355 --- EXISTING CONTOURS (MAJOR)
- 357 --- EXISTING CONTOURS (MINOR)
- --- EXISTING TREE LINE OR BRUSH
- Bh Swd SOIL LINE AND TYPE
- --- PROPERTY LINE
- --- EXISTING EASEMENT
- --- EXISTING CHAIN LINK FENCE
- --- STREAM / SWALE
- --- 1% FLOODPLAIN LINE
- --- EXISTING STORM DRAIN
- --- EXISTING OVERHEAD ELECTRIC LINE
- --- EXISTING WATERLINE
- SAN --- EXISTING SANITARY SEWER
- FM --- EXISTING SANITARY FORCE MAIN
- FD --- EXISTING FOUNDATION DRAIN
- (TBR) TO BE REMOVED



1 LOCATION MAP
 SCALE: NONE

THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE GENERAL CONTRACT EXCEPT AS NOTED OTHERWISE.

DATE	REV.	ISSUED FOR BIDDING	ISSUED FOR PERMITTING	MAF	MAF	APPD
08/16/20	2					
08/07/20	1					
01/09/20	0					

DATE	REV.	ISSUED FOR BIDDING	ISSUED FOR PERMITTING	MAF	MAF	APPD
08/16/20	2					
08/07/20	1					
01/09/20	0					

COUNTY OF BERKS
 BERKS HEIM
 BERN TOWNSHIP
 BOILER PROJECT
 CIVIL
 EXISTING FEATURES AND SITE DEMOLITION PLAN

SCALE: AS NOTED
 PREPARED BY: GEM
 CHECKED BY: KLG
 APPROVED BY: MAF

PROJECT NO: 4177.009
 DRAWING NO: CD-101

GENERAL SHEET NOTES

- FIELD SURVEY BY SNYDER SURVEYING, DATED OCTOBER 2019. NAD88 DATUM.
- ONE CALL PERFORMED BY SNYDER SURVEYING, DATED OCTOBER 2019.
- UNDERGROUND UTILITIES LOCATED BY MASTER LOCATORS, DATED NOVEMBER 2019.
- THE LOCATION AND DIMENSIONS OF ALL SITE FEATURES SHOWN ARE APPROXIMATE AND MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO BIDDING.
- ALL UNDERGROUND UTILITIES SHALL BE LOCATED BY THE CONTRACTOR PRIOR TO ANY EARTH MOVING ACTIVITIES. PURSUANT TO ACT 187, UNDERGROUND UTILITY LOCATIONS MUST BE VERIFIED BY CALLING 1-800-242-1776.
- ALL UNDERGROUND UTILITY LOCATIONS AND ELEVATIONS ON THE CONSTRUCTION PLANS ARE APPROXIMATE LOCATIONS DELINEATED FROM LIMITED FIELD MARKINGS AND AVAILABLE RECORDS. THEREFORE, ANY UTILITIES NOT SHOWN OR NOT LOCATED AS SHOWN, SHALL NOT BE THE CAUSE OF THE CONTRACTOR TO DEEM RESPONSIBILITY FOR PROTECTION AND/OR REPAIR DURING CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING FACILITIES AND PROVIDE ALL PROTECTIVE MEASURES, RESTRAINTS AND APPURTENANCES AS NECESSARY.
- THESE DESIGN DRAWINGS MUST BE WORKED IN CONJUNCTION WITH THE PROJECT MANUAL/SPECIFICATIONS.
- CONTRACTOR SHALL USE, MAINTAIN AND PROVIDE ADEQUATE PROPER SHORING DEVICES ON SITE AT ALL TIMES. CONTRACTOR SHALL CONFORM TO ALL LOCAL, STATE AND FEDERAL REGULATIONS.

SHEET KEY NOTES

- REFER TO MECHANICAL AND STRUCTURAL DRAWINGS FOR DETAILS OF EQUIPMENT AND PIPING.
- EXISTING BUILDING FLOOR ELEVATION = 259.89. PROPOSED BUILDING FLOOR ELEVATION = 259.89. CORRESPONDS TO FLOOR ELEVATION 0.0 ON OTHER DISCIPLINE DRAWINGS.
- PROVIDE 6" THICK CONCRETE APRON AT OVERHEAD DOOR. REINFORCE WITH W.W.R. TO MATCH FLOOR SLAB.

STORMWATER ACCESS EASEMENT
 THE COUNTY HEREBY PROVIDES A BLANKET EASEMENT AROUND THE NEW STORMWATER MANAGEMENT FACILITIES OF THIS PROJECT AND ACROSS THEIR PROPERTY TO THE MUNICIPALITY THAT PROVIDES INGRESS TO AND EGRESS FROM A PUBLIC RIGHT-OF-WAY FOR PURPOSES OF INSPECTIONS AS OUTLINED IN THE STORMWATER MANAGEMENT OPERATIONS AND MAINTENANCE AGREEMENT.

CIVIL LEGEND

- 355 --- EXISTING CONTOURS (MAJOR)
- 357 --- EXISTING CONTOURS (MINOR)
- --- EXISTING TREELINE OR BRUSH
- Bh Swd** SOIL LINE AND TYPE
- --- PROPERTY LINE
- --- EXISTING EASEMENT
- --- EXISTING CHAIN LINK FENCE
- --- STREAM / SWALE
- --- 1X FLOODPLAIN LINE
- --- EXISTING STORM DRAIN
- --- EXISTING OVERHEAD ELECTRIC LINE
- --- EXISTING WATERLINE
- --- EXISTING SANITARY SEWER
- --- EXISTING SANITARY FORCEMAIN
- --- EXISTING FOUNDATION DRAIN
- --- PROPOSED DRAIN
- --- PROPOSED ALUMINUM FENCE
- --- PROPOSED GAS LINE
- --- PROPOSED SANITARY FORCE MAIN



1 SITE GRADING PLAN
 SCALE: 1" = 20'
 PLAN NORTH

DRAINAGE PLAN CERTIFICATION
 I, HERRY GOOD, ON THIS DATE _____ HEREBY CERTIFY THAT THE DRAINAGE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE TULPEHOCKEN CREEK WATERSHED ACT 167 STORMWATER MANAGEMENT ORDINANCE.

SIGNATURE _____ DATE _____

OWNERS CERTIFICATION
 AS AN AUTHORIZED REPRESENTATIVE OF THE LANDOWNER, THE COUNTY OF BERKS ACKNOWLEDGES THAT THE STORMWATER MANAGEMENT SYSTEM TO BE A PERMANENT FEATURE THAT CAN BE ALTERED OR REMOVED ONLY AFTER APPROVAL OF A REVISED PLAN BY THE MUNICIPALITY.

SIGNATURE _____ DATE _____

THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE GENERAL CONTRACT EXCEPT AS NOTED OTHERWISE.



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ENGINEERING

NO.	DATE	REV.	DESCRIPTION
1	08/07/20	1	ISSUED FOR PERMITTING
2	08/07/20	2	ISSUED FOR CONSTRUCTION
3	01/20/20	0	ISSUED FOR BIDDING
4	01/20/20	0	ISSUED FOR REVISION

COUNTY OF BERKS
 BERKS HEIM
 BERN TOWNSHIP
 BOILER PROJECT
 CIVIL
 SITE GRADING PLAN

SCALE: AS NOTED
 PREPARED BY: GEM
 CHECKED BY: KLG
 APPROVED BY: MAF
 PROJECT NO: 4177.009
 DRAWING NO: C-101

Last Edited by: gmcantano

GENERAL SHEET NOTES

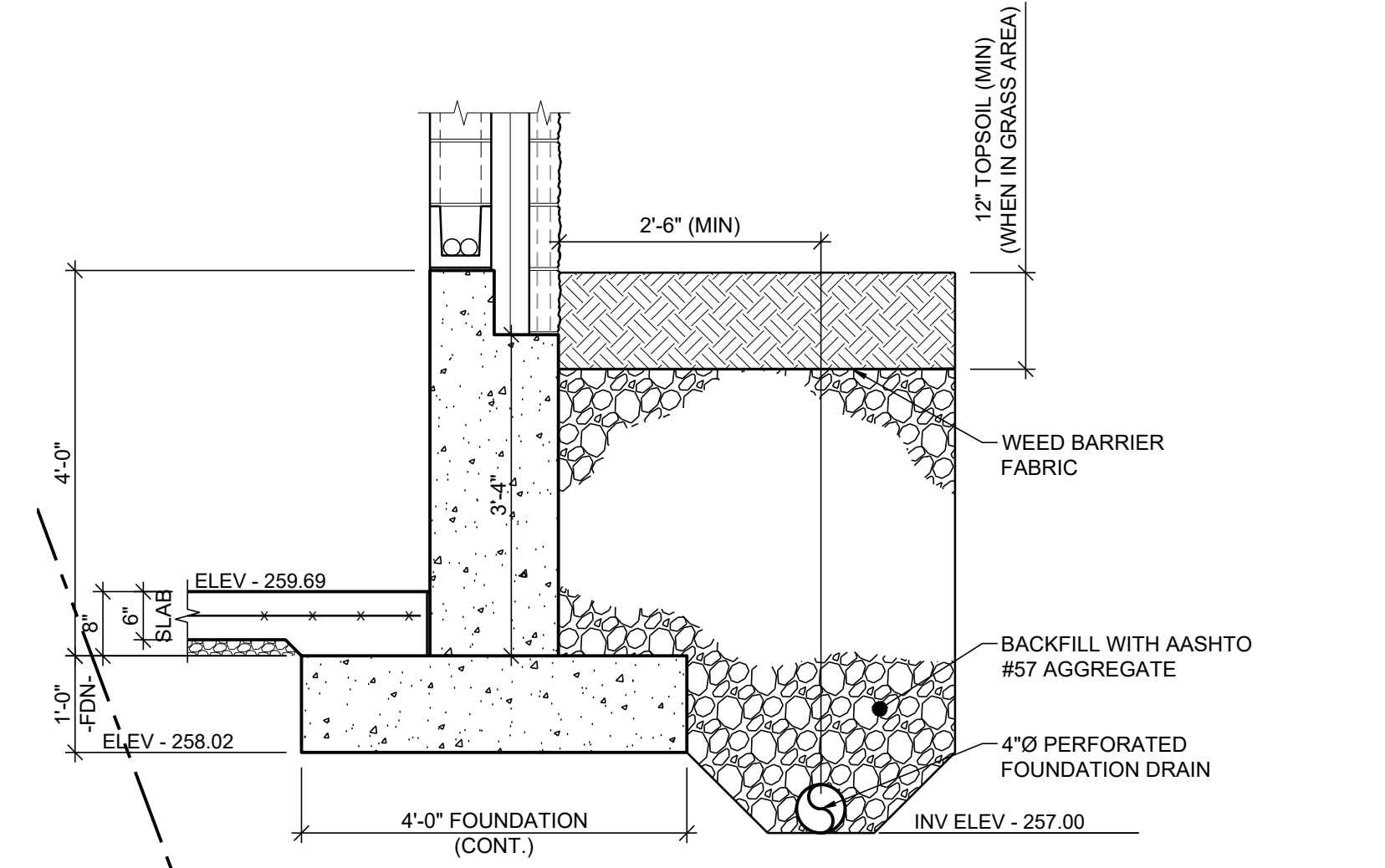
- FIELD SURVEY BY SNYDER SURVEYING, DATED OCTOBER 2016. NAD88 DATUM.
- ONE CALL PERFORMED BY SNYDER SURVEYING, DATED OCTOBER 2016.
- UNDERGROUND UTILITIES LOCATED BY MASTER LOCATORS, DATED NOVEMBER 2019.
- THE LOCATION AND DIMENSIONS OF ALL SITE FEATURES SHOWN ARE APPROXIMATE AND MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO BIDDING.
- ALL UNDERGROUND UTILITIES SHALL BE LOCATED BY THE CONTRACTOR PRIOR TO ANY EARTH MOVING ACTIVITIES. PURSUANT TO ACT 187, UNDERGROUND UTILITY LOCATIONS MUST BE VERIFIED BY CALLING 1-800-242-1176.
- ALL UNDERGROUND UTILITY LOCATIONS AND ELEVATIONS ON THE CONSTRUCTION PLANS ARE APPROXIMATE LOCATIONS DELINEATED FROM LIMITED FIELD MARKINGS AND AVAILABLE RECORDS. THEREFORE, ANY UTILITIES NOT SHOWN OR NOT LOCATED AS SHOWN, SHALL NOT BE THE CAUSE OF THE CONTRACTOR TO DENY RESPONSIBILITY FOR PROTECTION AND/OR REPAIR DURING CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING FACILITIES AND PROVIDE ALL PROTECTIVE MEASURES, RESTRAINTS AND APPURTENANCES AS NECESSARY.
- THESE DESIGN DRAWINGS MUST BE WORKED IN CONJUNCTION WITH THE PROJECT MANUAL/SPECIFICATIONS.
- CONTRACTOR SHALL USE, MAINTAIN AND PROVIDE ADEQUATE PROPER SHORING DEVICES ON SITE AT ALL TIMES. CONTRACTOR SHALL CONFORM TO ALL LOCAL, STATE AND FEDERAL REGULATIONS.

SHEET KEY NOTES

- REFER TO MECHANICAL AND STRUCTURAL DRAWINGS FOR DETAILS OF EQUIPMENT, PIPING, CONCRETE PADS AND FOUNDATIONS.
- MAINTAIN POSITIVE SLOPE ON RELOCATED ROOF DRAIN PIPING.
- CONNECTION OF RELOCATED FORCE MAIN TO EXISTING FORCE MAIN SHALL BE COORDINATED WITH THE ENGINEER AND BERKS HEIM FACILITIES DEPARTMENT. CONNECTION IS TO BE PLANNED TO LIMIT THE DOWN TIME OF THE PUMP STATION AND FORCE MAIN TO A MAXIMUM OF 8 HOURS.
- PROVIDE FLOOR DRAIN, CAST IRON WITH LARGE GRATE AND SEDIMENT BUCKET. JASOM MODEL 32330 OR APPROVED EQUAL.

CIVIL LEGEND

- 3.5 --- EXISTING CONTOURS (MAJOR)
- 3.5 --- EXISTING CONTOURS (MINOR)
- --- EXISTING TREELINE OR BRUSH
- Bh SwD** SOIL LINE AND TYPE
- --- PROPERTY LINE
- --- EXISTING EASEMENT
- --- EXISTING CHAIN LINK FENCE
- --- STREAM / SWALE
- --- 1% FLOODPLAIN LINE
- --- EXISTING STORM DRAIN
- --- EXISTING OVERHEAD ELECTRIC LINE
- --- EXISTING WATERLINE
- --- EXISTING SANITARY SEWER
- --- EXISTING SANITARY FORCEMAIN
- --- EXISTING FOUNDATION DRAIN
- --- PROPOSED DRAIN
- --- PROPOSED ALUMINUM FENCE
- --- PROPOSED GAS LINE
- --- PROPOSED SANITARY FORCE MAIN

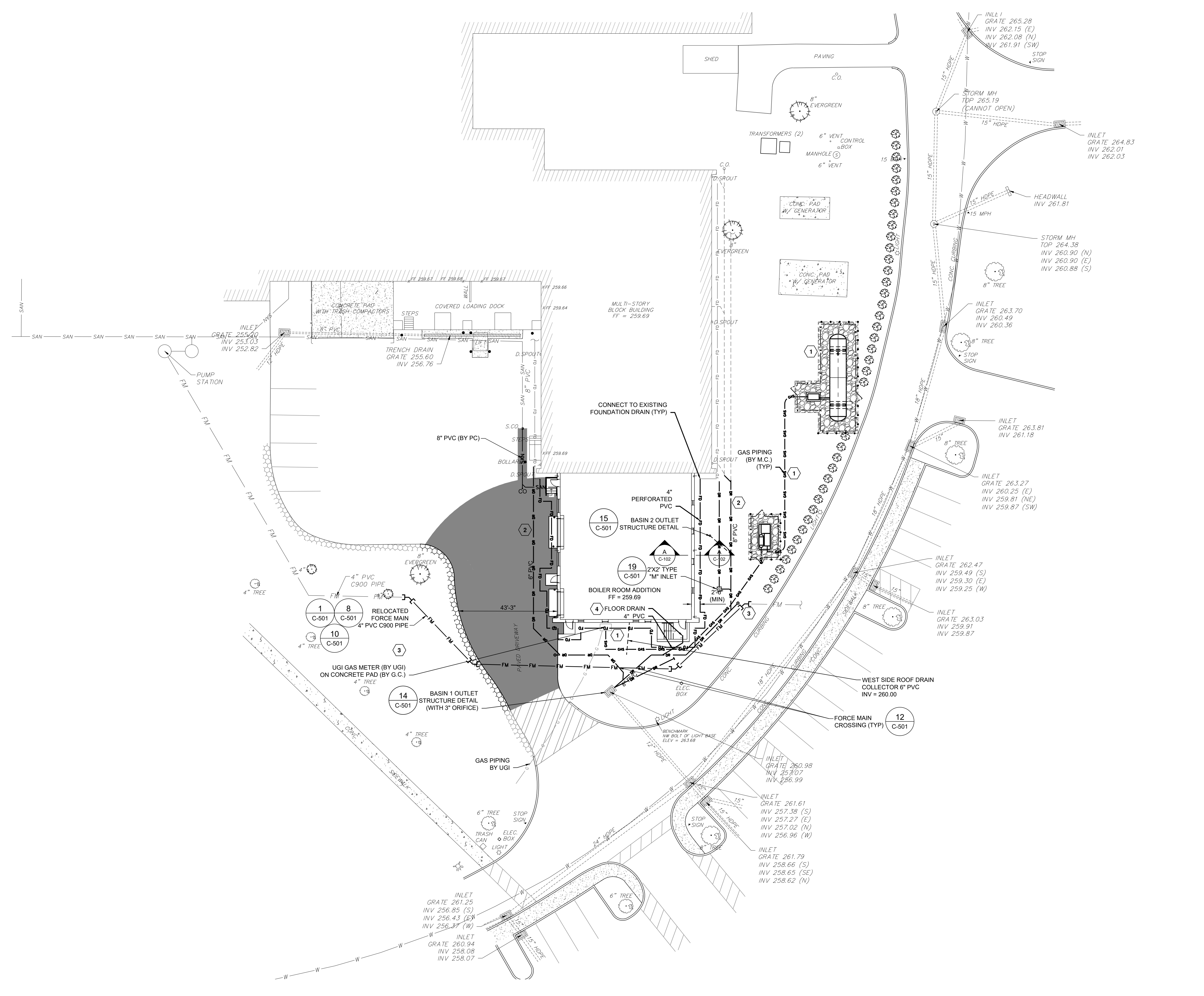


A SECTION
SCALE: NONE

FINAL PLAN



1 LOCATION MAP
SCALE: NONE



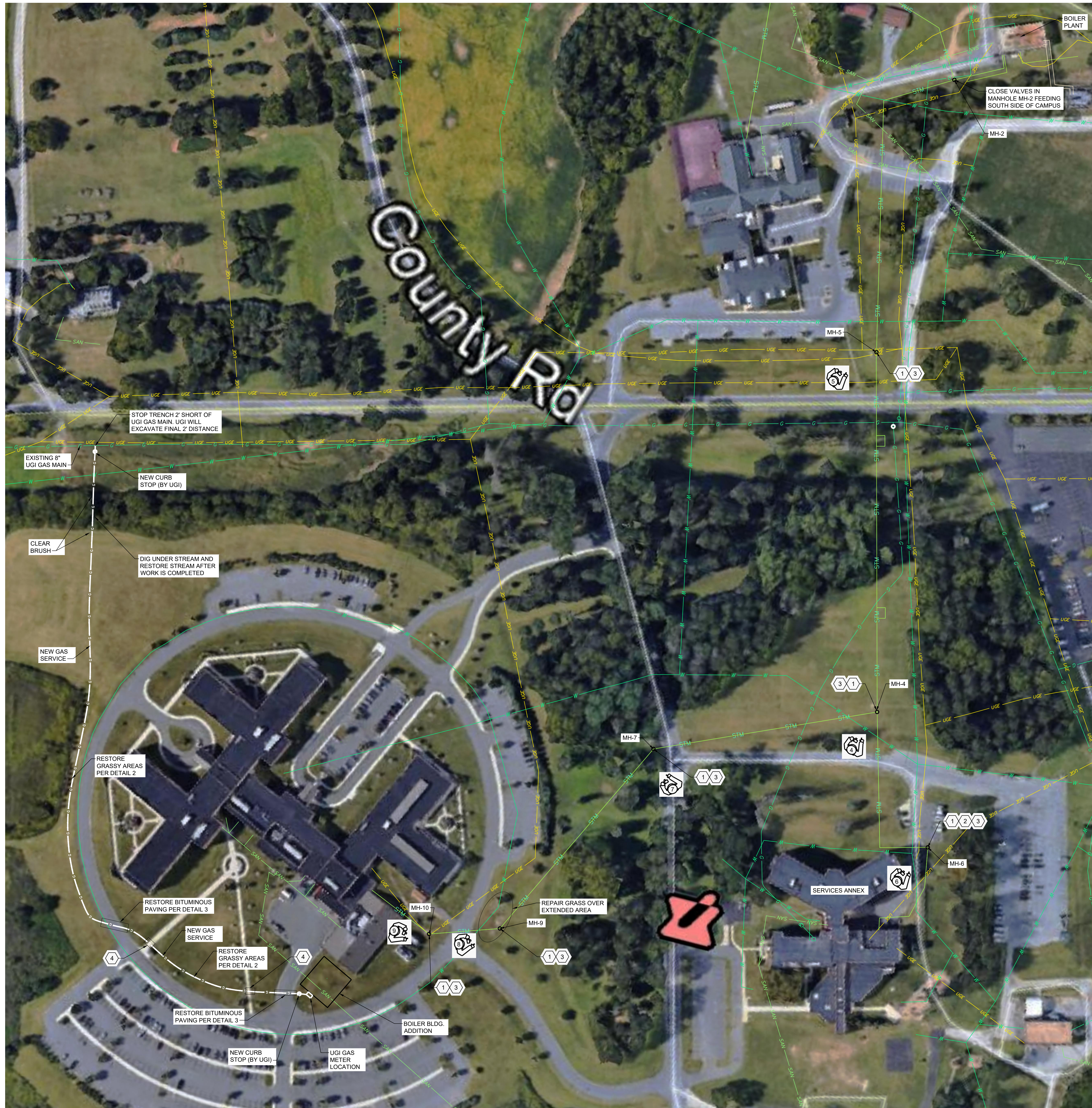
1 SITE UTILITY PLAN
SCALE: 1" = 20'
PLAN NORTH

THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE GENERAL CONTRACT EXCEPT AS NOTED OTHERWISE.

NO.	DATE	ISSUED FOR CONSTRUCTION	ISSUED FOR PERMITTING	ISSUED FOR BIDDING	ISSUED FOR REVISION	REV.
1	08/07/20	1	1	0	0	0
2	08/07/20	2	1	0	0	0

COUNTY OF BERKS
BERKS HEIM
BERN TOWNSHIP
BOILER PROJECT
CIVIL
SITE UTILITY PLAN

SCALE:	AS NOTED
PREPARED BY:	GEM
CHECKED BY:	KLJ
APPROVED BY:	MAE
PROJECT NO:	4177.009
DRAWING NO:	



GENERAL SHEET NOTES

- GENERAL CONTRACTOR SHALL PROVIDE TRENCHING, PIPE BEDDING, BACK FILL AND RESTORATION OF GRADE. ONLY PIPING AND TRACER WIRE IS PROVIDED BY UGI.
- PROVIDE TRENCHING AND RESTORATION OF GRADE IN ACCORDANCE WITH SPECIFICATION DIVISIONS 31 AND 32. SOIL IS UNCLASSIFIED. ROCK REMOVAL IF ENCOUNTERED IS INCLUDED WITHIN THE BID AMOUNT.
- MAINTAIN 5' SEPARATION FROM PARALLEL UTILITIES AND 12' SEPARATION FROM CROSSING UTILITIES. COORDINATE GAS PIPING CLEARANCES TO EXISTING UTILITIES AND EXCEPTIONS TO MINIMUM COVER DEPTH WITH ON-SITE UGI INSPECTOR.
- PROVIDE MINIMUM 12" OF BACKFILL OVER PIPING (GAS) PRIOR TO ANY COMPACTION.

SHEET KEYNOTES

- PERMANENTLY CLOSE (6 QTY) ABANDONED STEAM MANHOLES. REMOVE AND DISPOSE OF MANHOLE RISERS AND REINFORCED CONCRETE COVERS LOCATED AT GRADE. REMOVE ALL CONCRETE CONSTRUCTION AND PIPING EXTENSIONS TO A MINIMUM OF 18" BELOW ADJACENT GRADE. JACK HAMMER A SMALL HOLE IN THE BOTTOM OF EACH MANHOLE SO ACCUMULATED RAINWATER DRAINS FROM THE ABANDONED STRUCTURE. FILL MANHOLE WITH CRUSHED GRAVEL TO 18" BELOW ADJACENT GRADE. COMPACTING GRAVEL TO THE EXTENT THAT THE ABANDONED PIPING IN THE MANHOLE ALLOWS. FILL THE REMAINDER OF EACH EXCAVATION WITH SUB-SOIL AND TOP SOIL STOCKPILED FROM THE CONSTRUCTION OF THE BOILER ADDITION. COMPACT SUB-SOIL. FINISH GRADE TOP SOIL AT AND THE SURROUNDING EXCAVATION. SEED AND MULCH. WATER SEED UNTIL FINAL ACCEPTANCE.
- SAW CUT BITUMINOUS PAVING ADJACENT TO EXCAVATION TO CREATE A SMOOTH EDGE. REMOVE AND DISPOSE OF UNNEEDED BITUMINOUS PAVING. PREPARE AND SEED AS NOTED IN KEYNOTE 1 ABOVE.
- DISCONNECT AND REMOVE CONTROL SENSORS, CONDUITS, BOXES AND SUPPORTS. CAP CONDUITS AND REMOVE WIRING TO SOURCE.
- CUT AND PATCH CONCRETE SIDEWALKS NEEDED FOR PIPE TRENCH. SAW CUT SIDEWALK AT EXISTING CONSTRUCTION JOINT AND DISPOSE OF CONCRETE. BACKFILL AND COMPACT GRAVEL BACKFILL UNDER SIDEWALK. PROVIDE NEW CONCRETE SIDEWALK WITH WELDED WIRE FABRIC. CONCRETE THICKNESS TO MATCH ADJACENT EXISTING.



4 DEMO STEAM MANHOLE MH-4
Scale: NONE



5 DEMO STEAM MANHOLE MH-5
Scale: NONE



6 DEMO STEAM MANHOLE MH-6
Scale: NONE



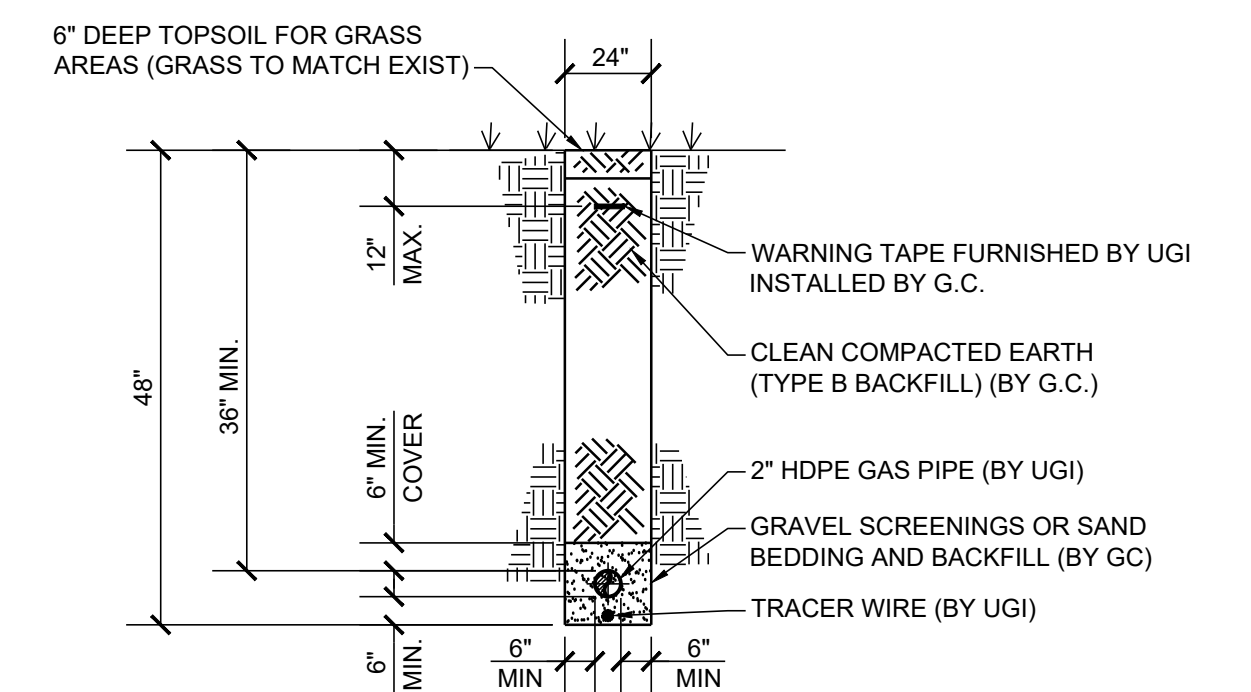
7 DEMO STEAM MANHOLE MH-7
Scale: NONE



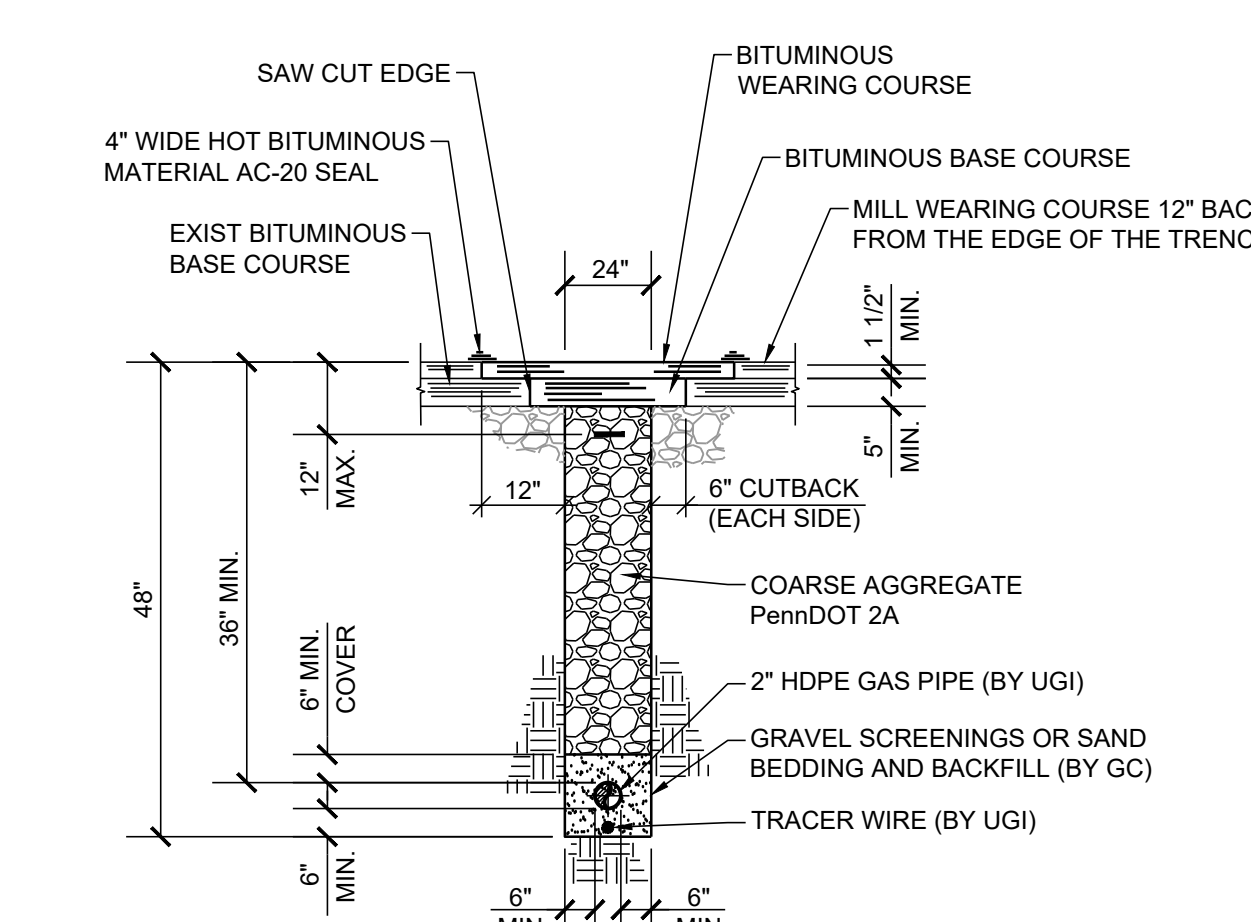
8 DEMO STEAM MANHOLE MH-8
Scale: NONE



9 DEMO STEAM MANHOLE MH-9
Scale: NONE

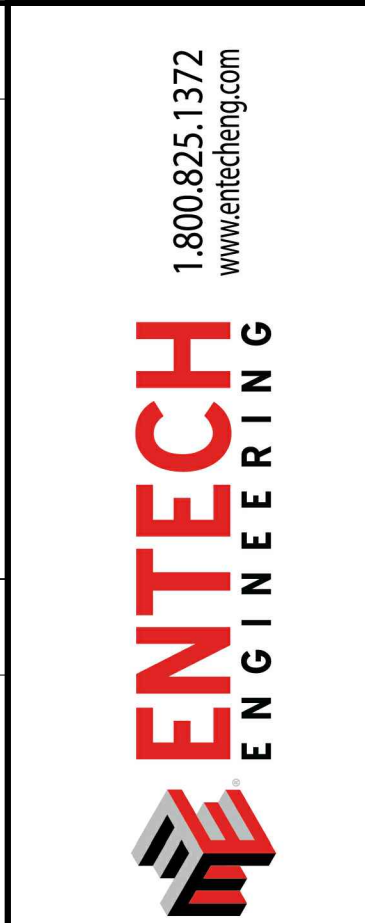


TYPICAL GAS PIPING EXCAVATION BACKFILL & SURFACE RESTORATION DETAIL FOR GRASS AREAS
Scale: N.T.S



TYPICAL GAS PIPING EXCAVATION BACKFILL & SURFACE RESTORATION DETAIL FOR ROADS AND WALKS
Scale: N.T.S

NOTE: IN LIEU OF TRENCHING THRU PAVING, CONTRACTOR AT HIS OPTION MAY BORE UNDER PAVING. PROVIDE A 6" DIAMETER SCHEDULE 40 PVC SLEEVE TEMPORARILY TAPED AT EACH END TO EXCLUDE DIRT. UGI WILL FURNISH HEAVY TRACER WIRE TO TAPE ON OUTSIDE OF PVC SLEEVE.



DATE	REV.	ISSUED FOR PERMITTING	ISSUED FOR BIDDING	ISSUED FOR CONSTRUCTION
01/23/20	0			
08/07/20	1			
08/18/20	2			

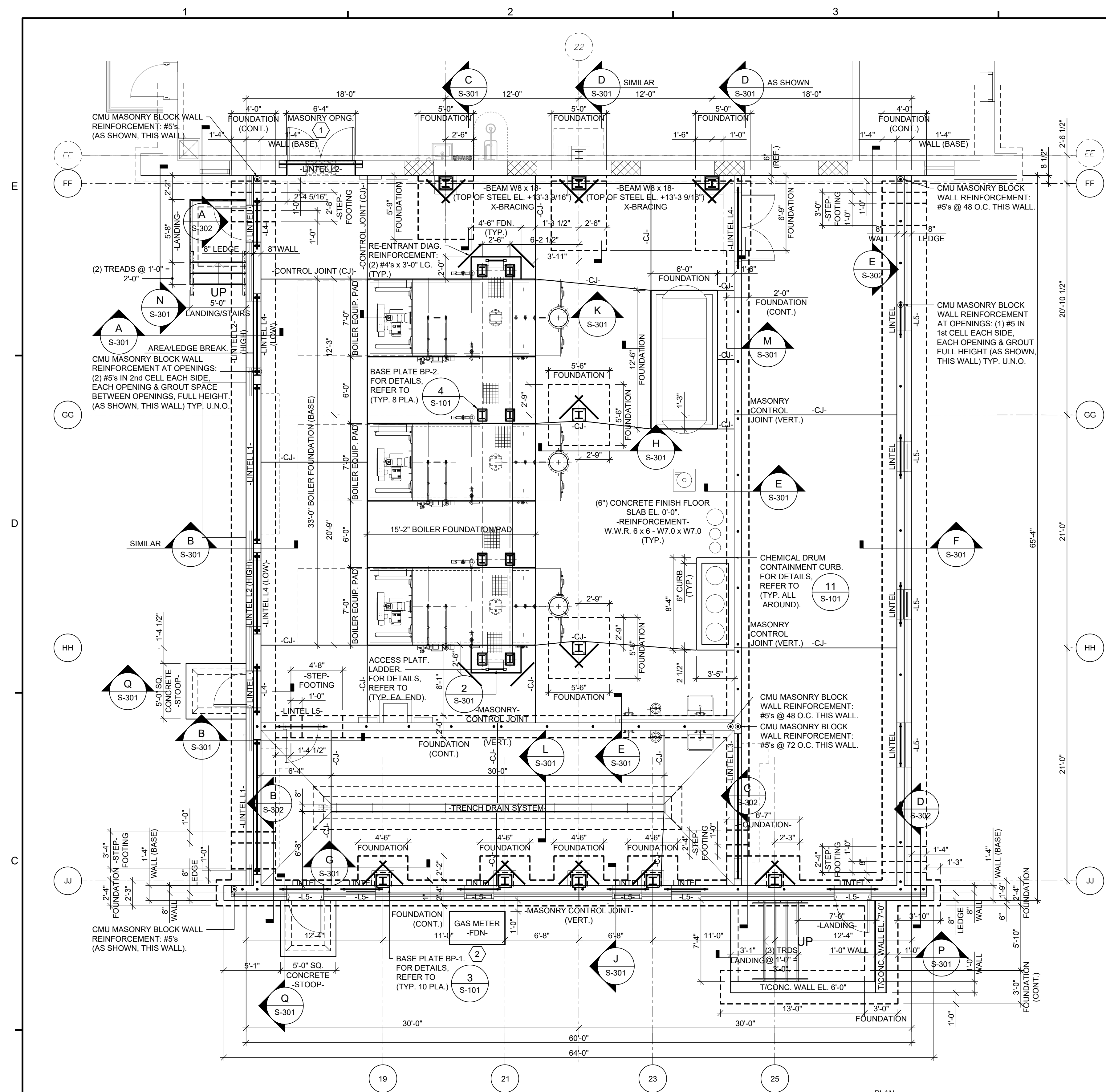
COUNTY OF BERKS
BERKS HEIM
BERN TOWNSHIP
BOILER PROJECT
CIVIL
UTILITY SITE PLAN

SCALE:	AS NOTED
PREPARED BY:	MAR
CHECKED BY:	MAR
APPROVED BY:	MAF
PROJECT NO:	4177.009
DRAWING NO:	

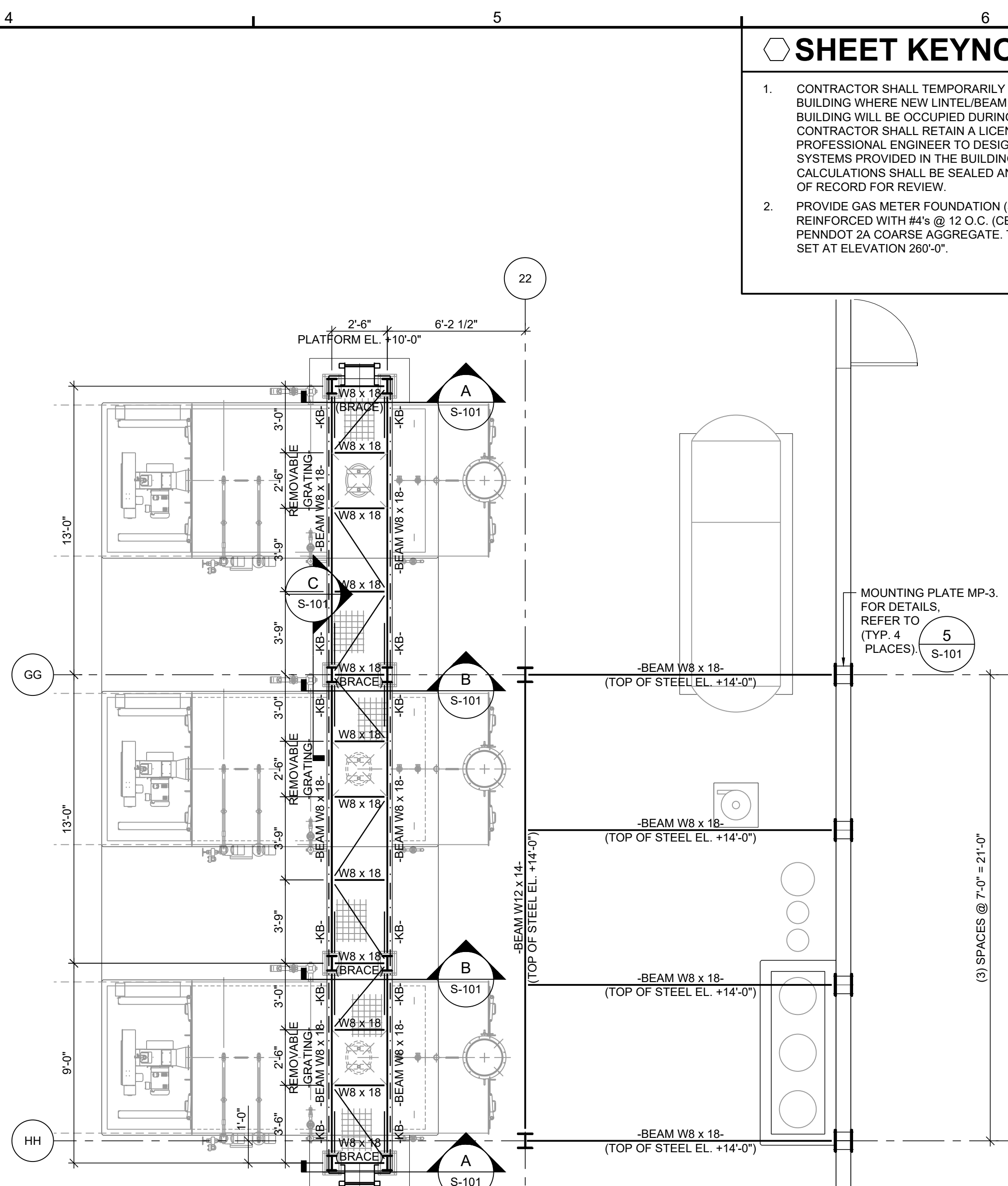
THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE GENERAL CONTRACT EXCEPT AS NOTED OTHERWISE.

C-103

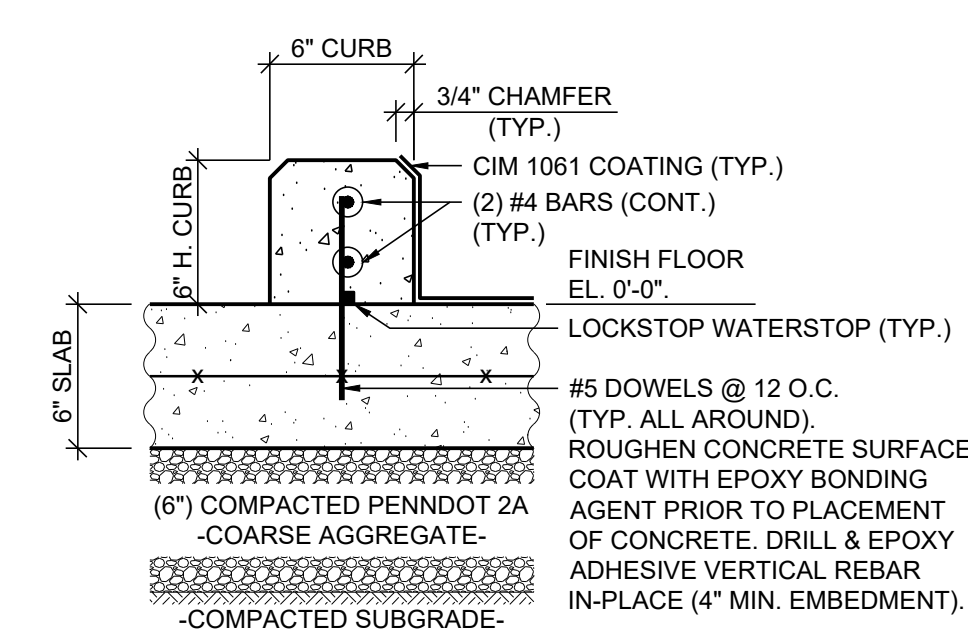
Last Edited by: srf@enteck



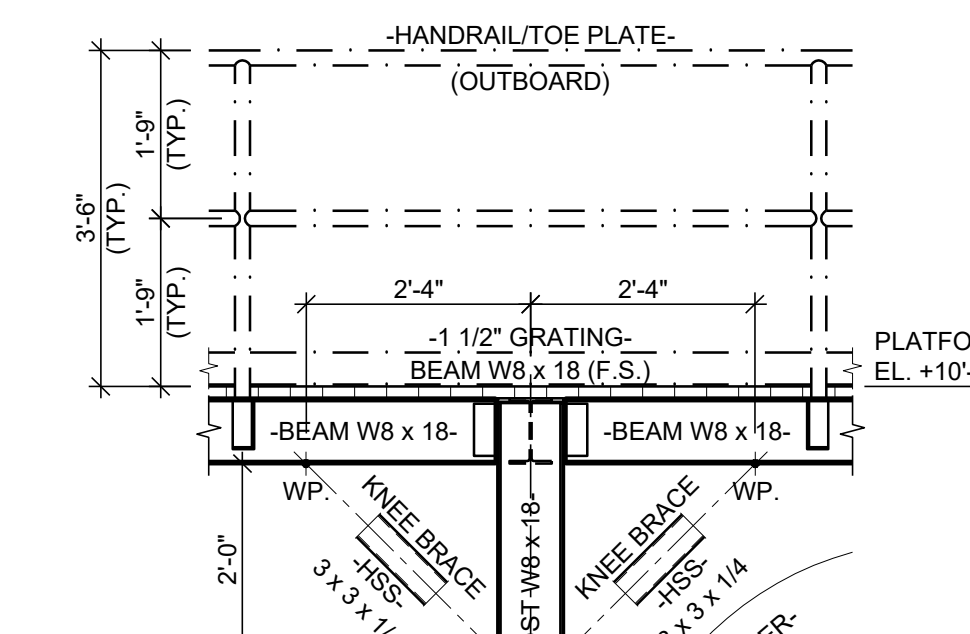
1 EXISTING BUILDING & NEW BOILER BUILDING FOUNDATION PLAN
Scale: 3/16" = 1'-0".



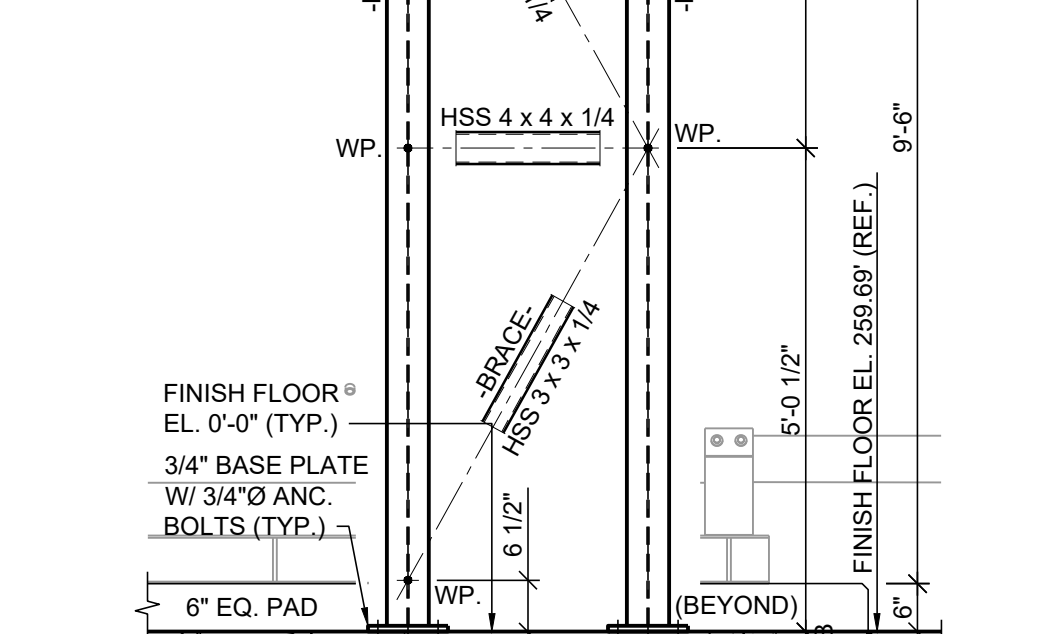
2 NEW BOILER BUILDING ACCESS PLATFORM/PIPE SUPPORT STEEL FRAMING PLAN
Scale: 1/4" = 1'-0".



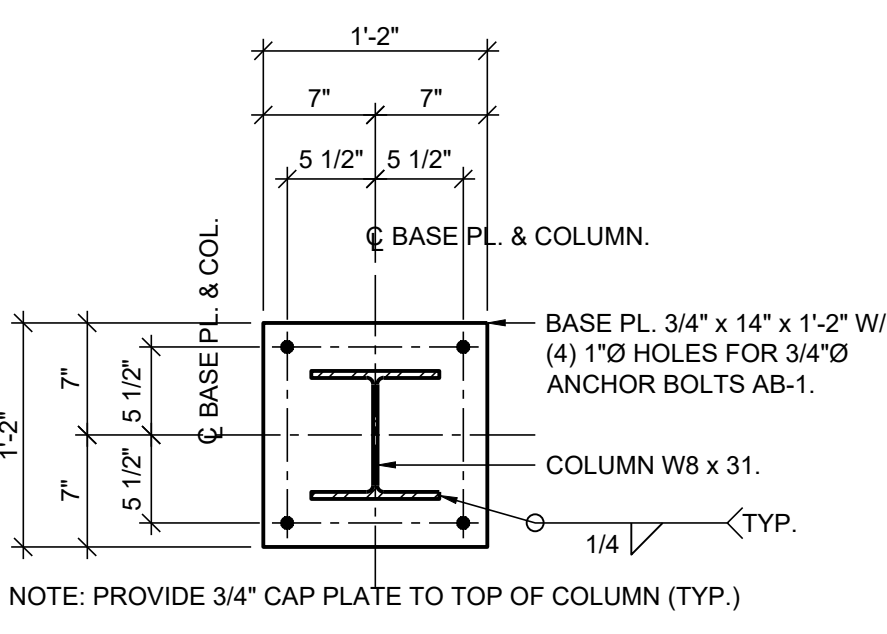
11 TYP. CHEMICAL DRUM CONTAINMENT CURB DETAIL
Scale: 1 1/2" = 1'-0".



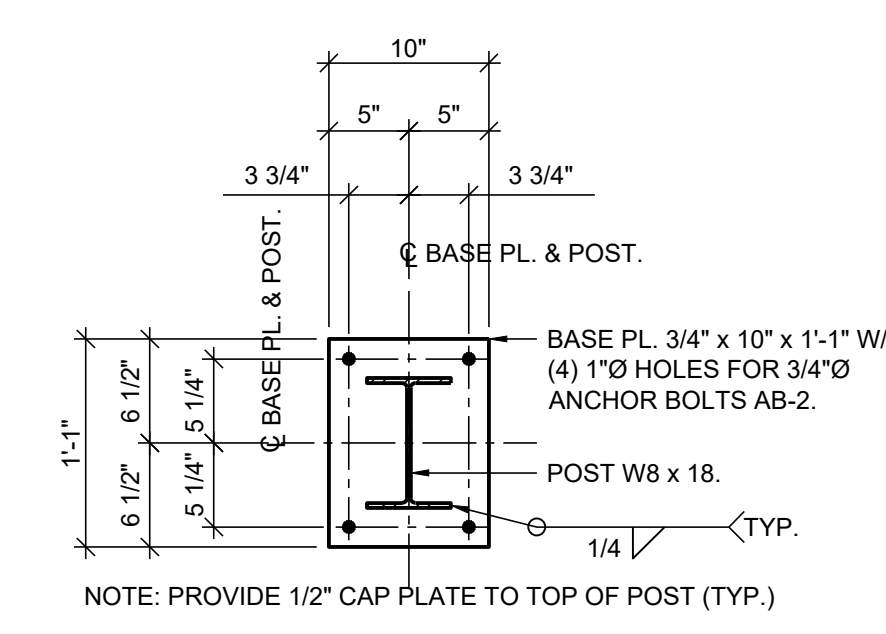
C SECTION
Scale: 1/2" = 1'-0".



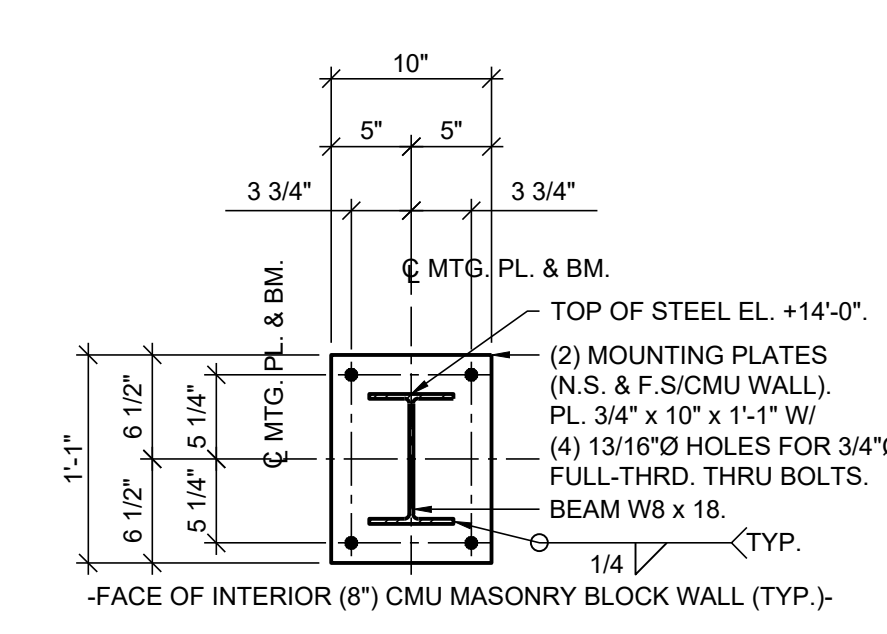
B SECTION
Scale: 1/2" = 1'-0".



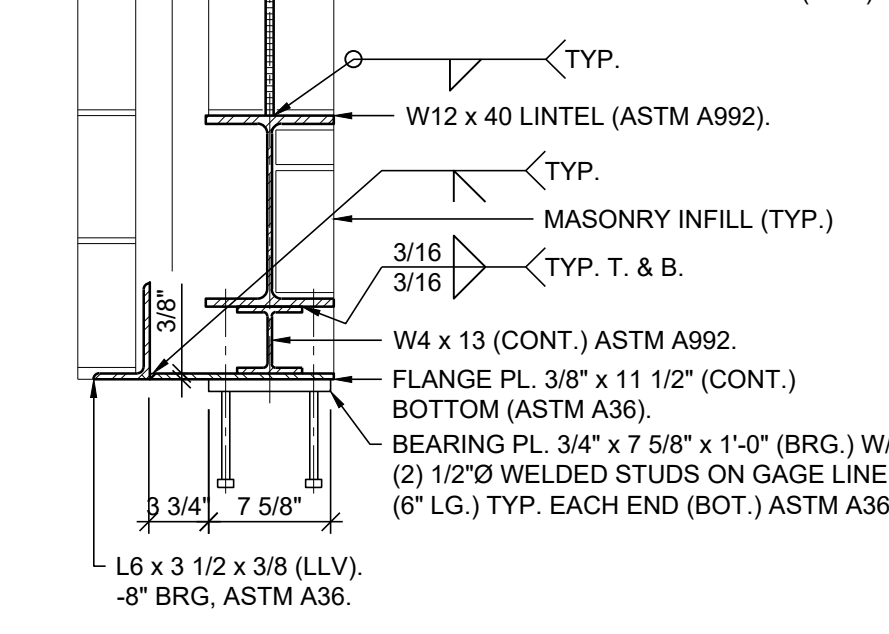
3 BASE PLATE BP-1 DETAIL
Scale: 1" = 1'-0".



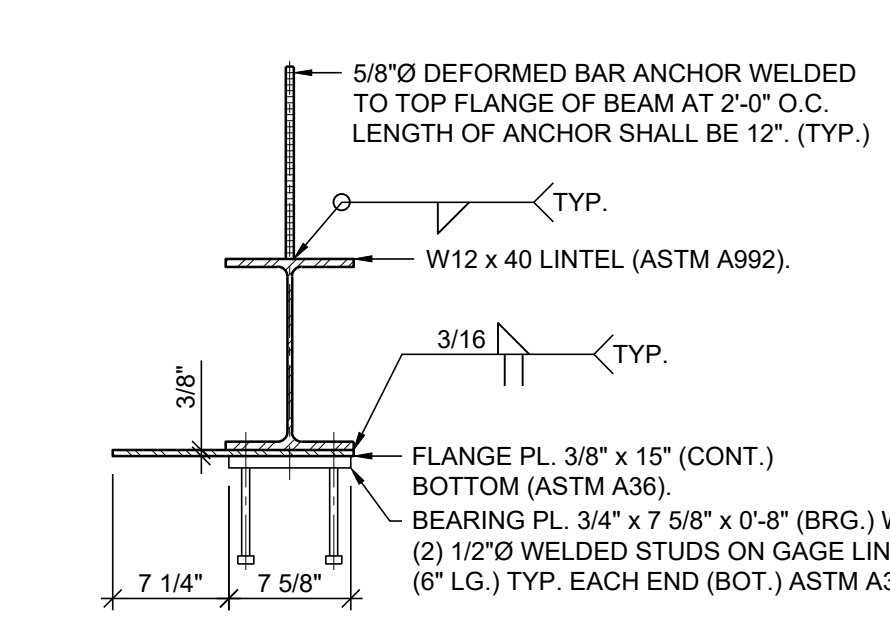
4 BASE PLATE BP-2 DETAIL
Scale: 1" = 1'-0".



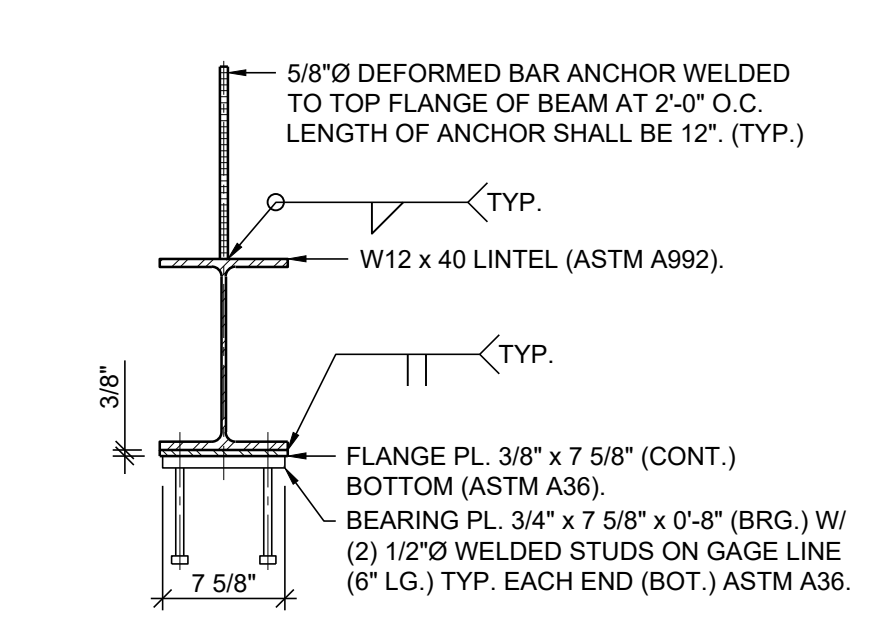
5 MOUNTING PLATE MP-3 DETAIL
Scale: 1" = 1'-0".



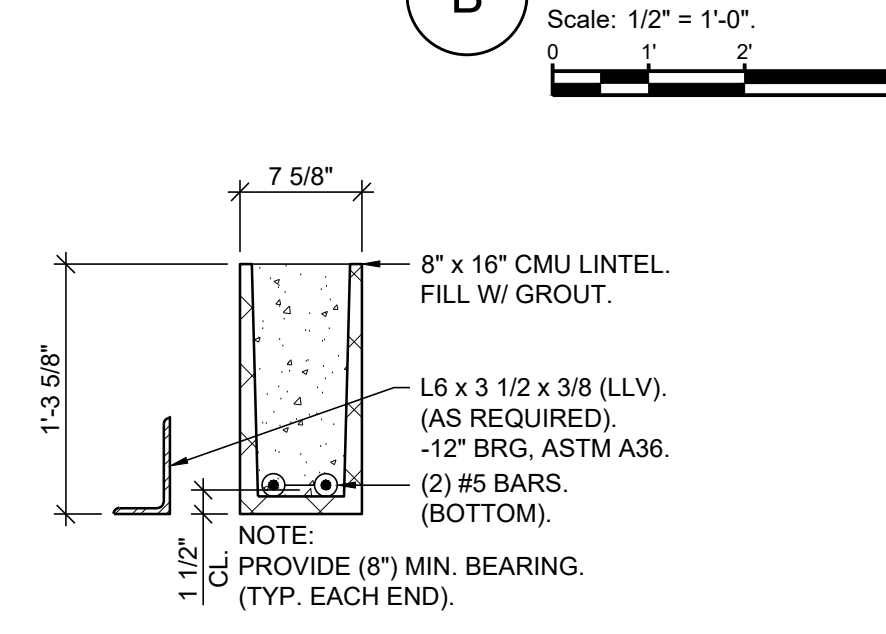
6 LINTEL L1 DETAIL
Scale: 1" = 1'-0".



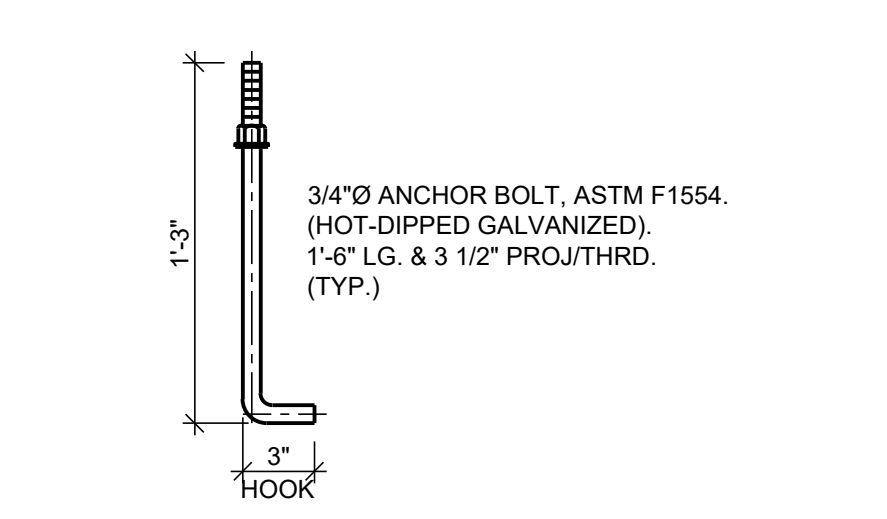
7 LINTEL L2 DETAIL
Scale: 1" = 1'-0".



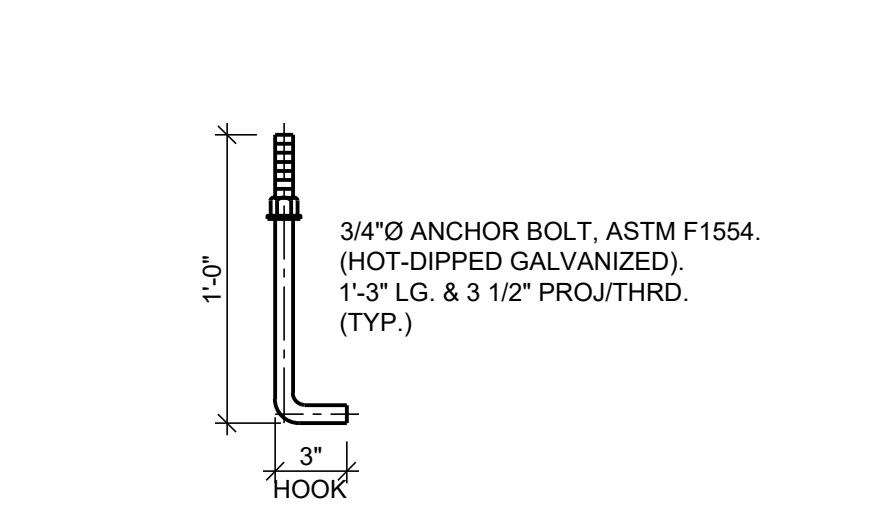
8 LINTEL L3 DETAIL
Scale: 1" = 1'-0".



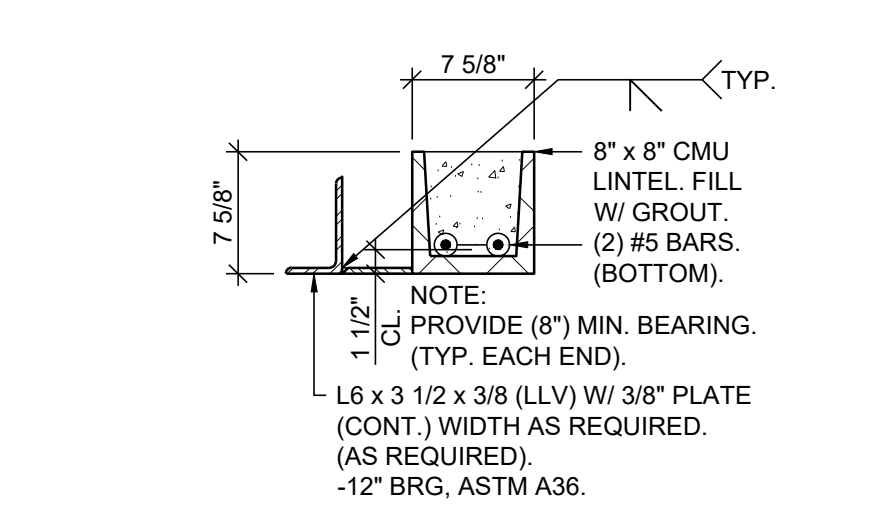
9 LINTEL L4 DETAIL
Scale: 1" = 1'-0".



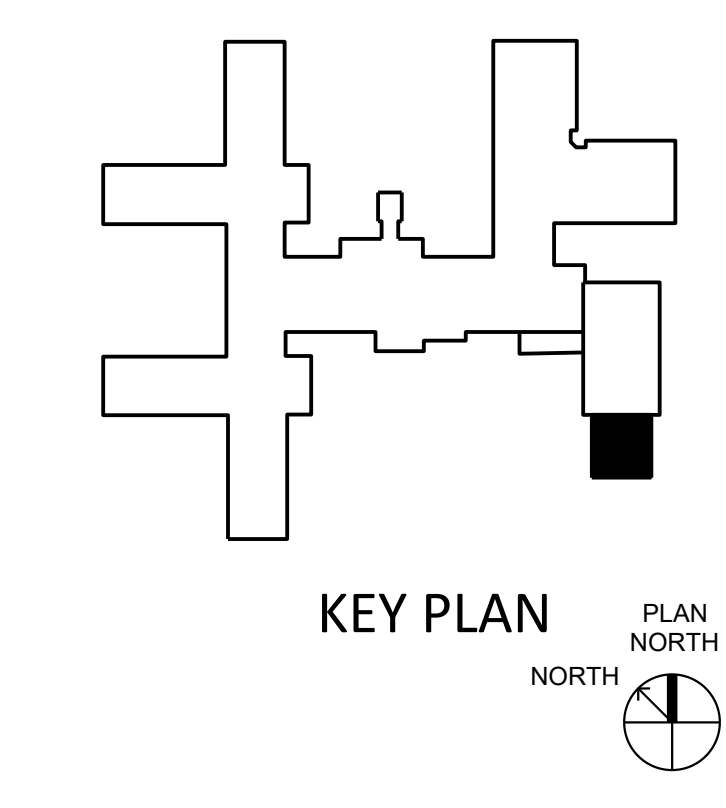
12 ANCHOR BOLT AB-1 DETAIL
Scale: 1 1/2" = 1'-0".



13 ANCHOR BOLT AB-2 DETAIL
Scale: 1 1/2" = 1'-0".



10 LINTEL L5 DETAIL
Scale: 1" = 1'-0".



KEY PLAN
PLAN NORTH

SHEET KEYNOTES

- CONTRACTOR SHALL TEMPORARILY SUPPORT/SHORE THE EXISTING BUILDING WHERE NEW LINTEL/BEAM ARE TO BE INSTALLED. THE BUILDING WILL BE OCCUPIED DURING THE CONSTRUCTION. CONTRACTOR SHALL RETAIN A LICENSED PENNSYLVANIA PROFESSIONAL ENGINEER TO DESIGN ALL TEMPORARY SHORING SYSTEMS PROVIDED IN THE BUILDING. ALL SHORING DRAWINGS AND CALCULATIONS SHALL BE SEALED AND SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW.
- PROVIDE GAS METER FOUNDATION (8'-0" x 3'-0" x 0'-5" THICK) REINFORCED WITH #4'S @ 12" O.C. (CENTRY) ON (6") COMPACTED PENNDOT 2A COARSE AGGREGATE. TOP OF FOUNDATION SHALL BE SET AT ELEVATION 260'-0".

GENERAL SHEET NOTES

- REFER TO DRAWING G-001 FOR DRAWING INDEX, GENERAL PROJECT NOTES AND DRAWING CONVENTIONS.

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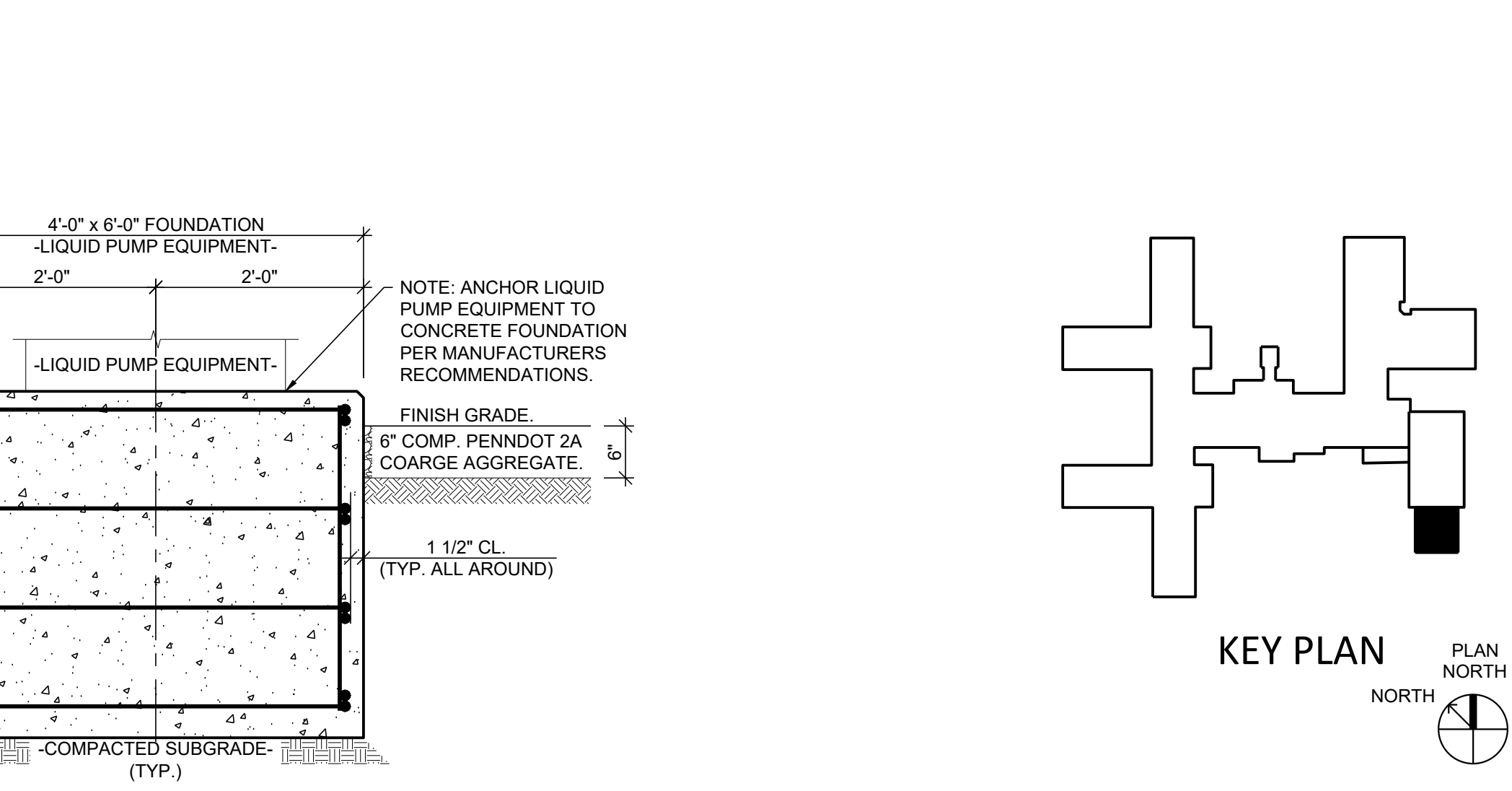
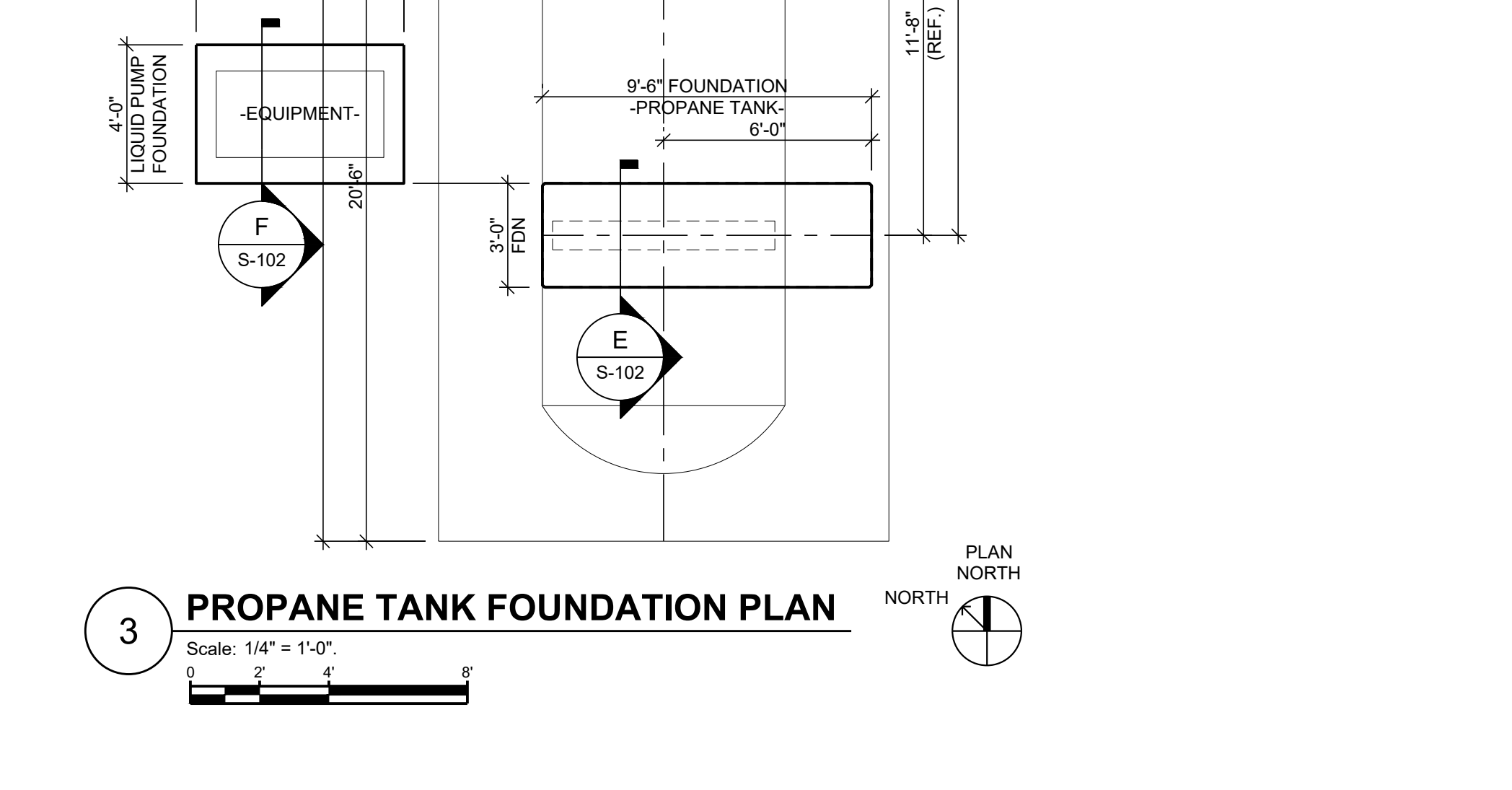
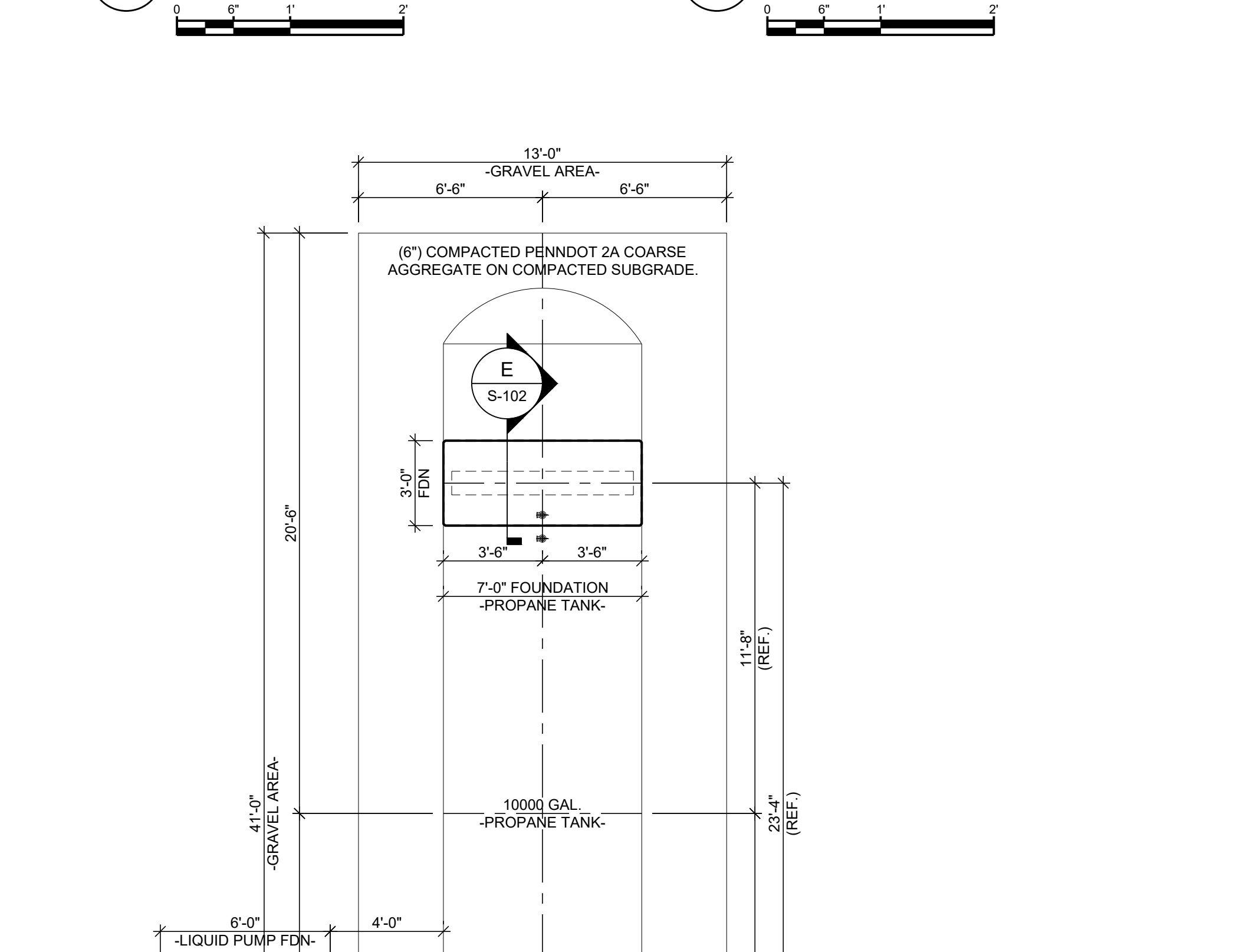
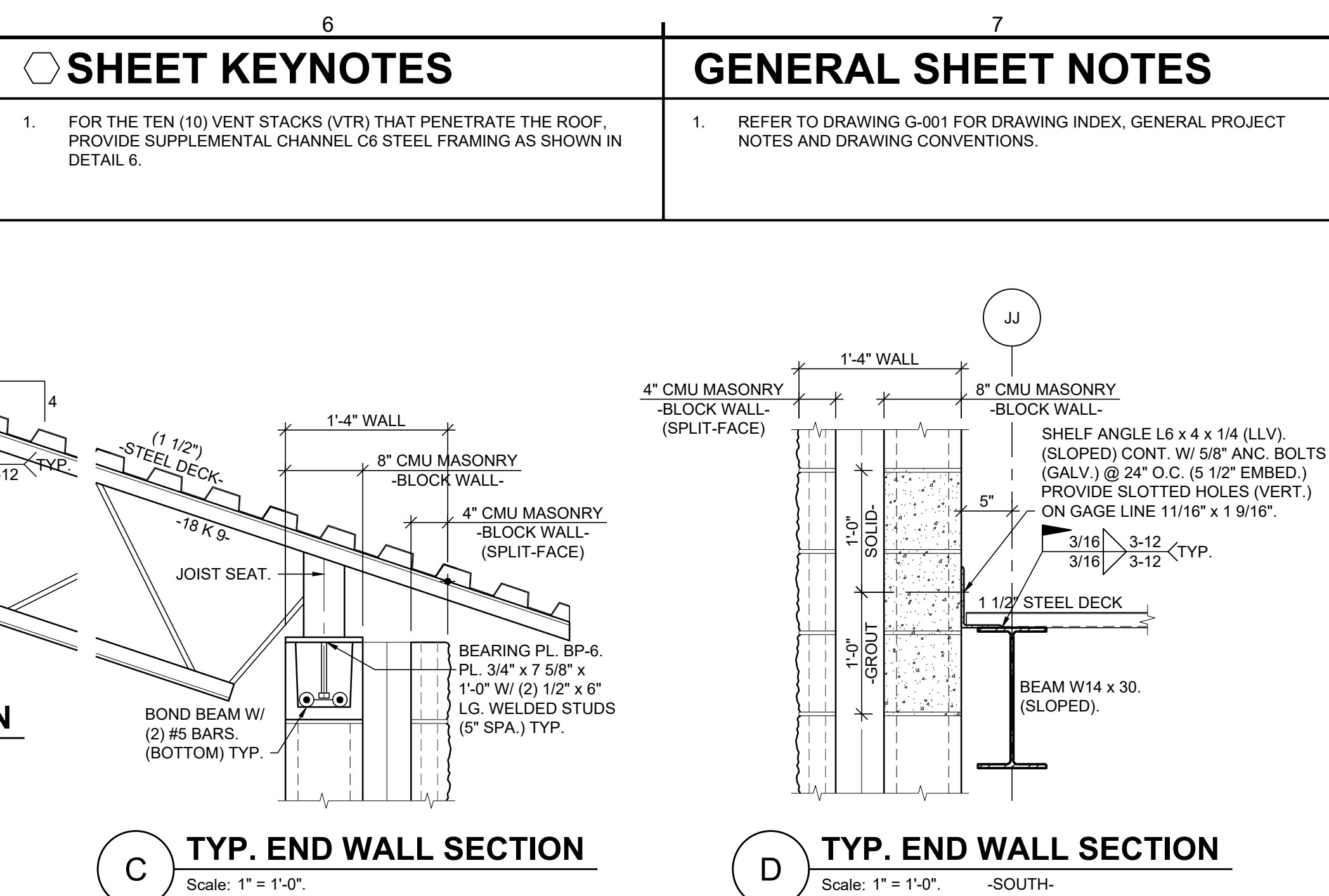
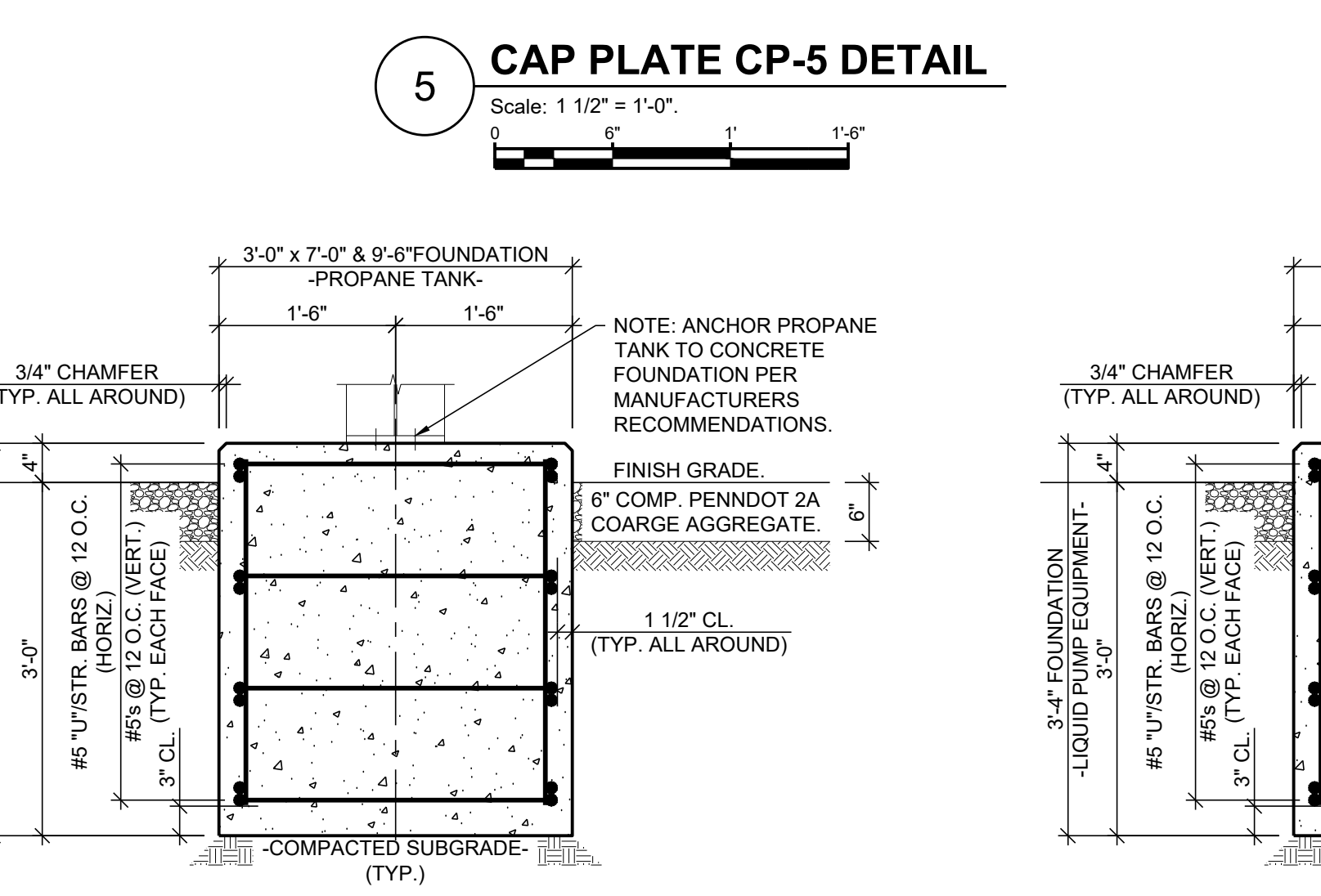
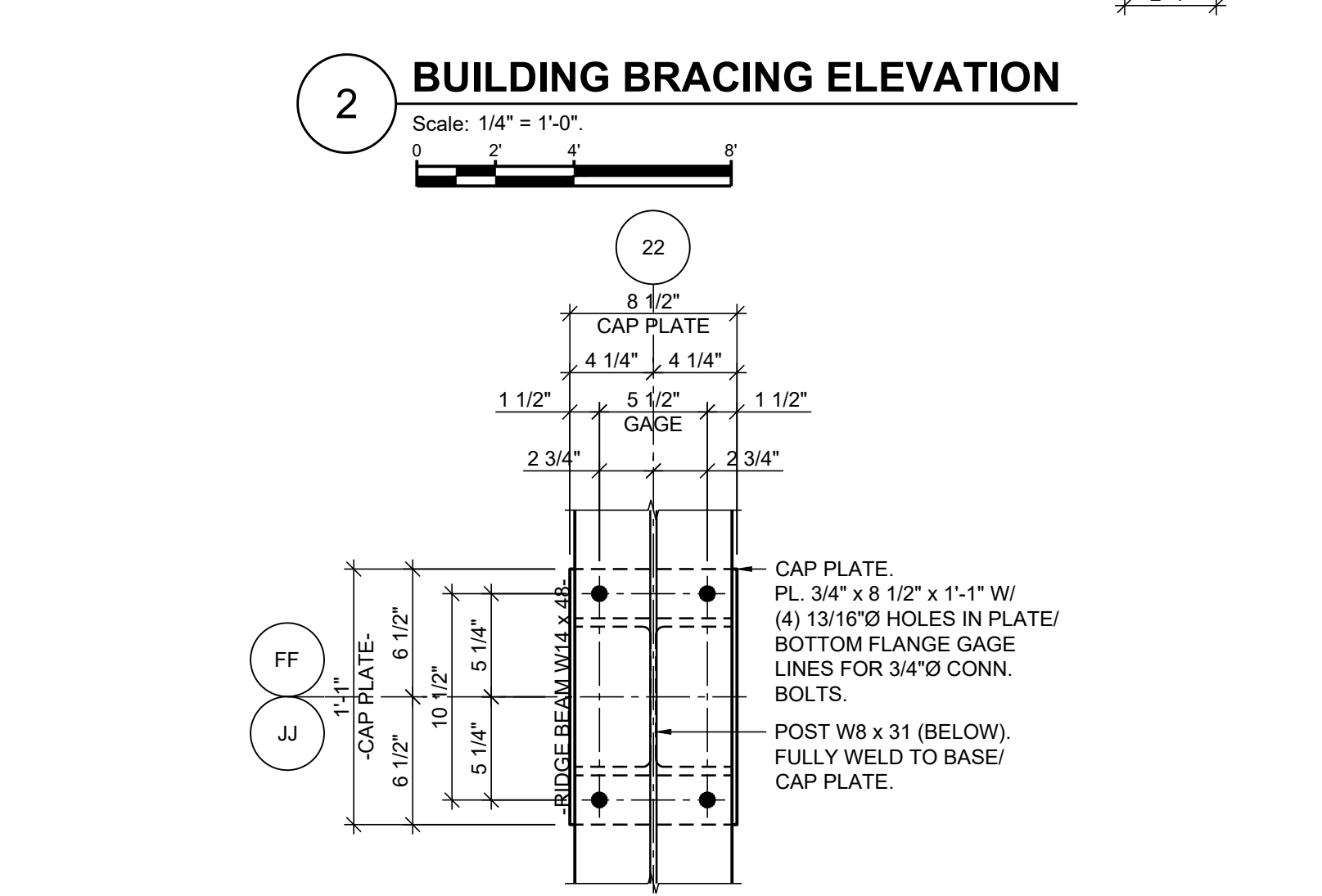
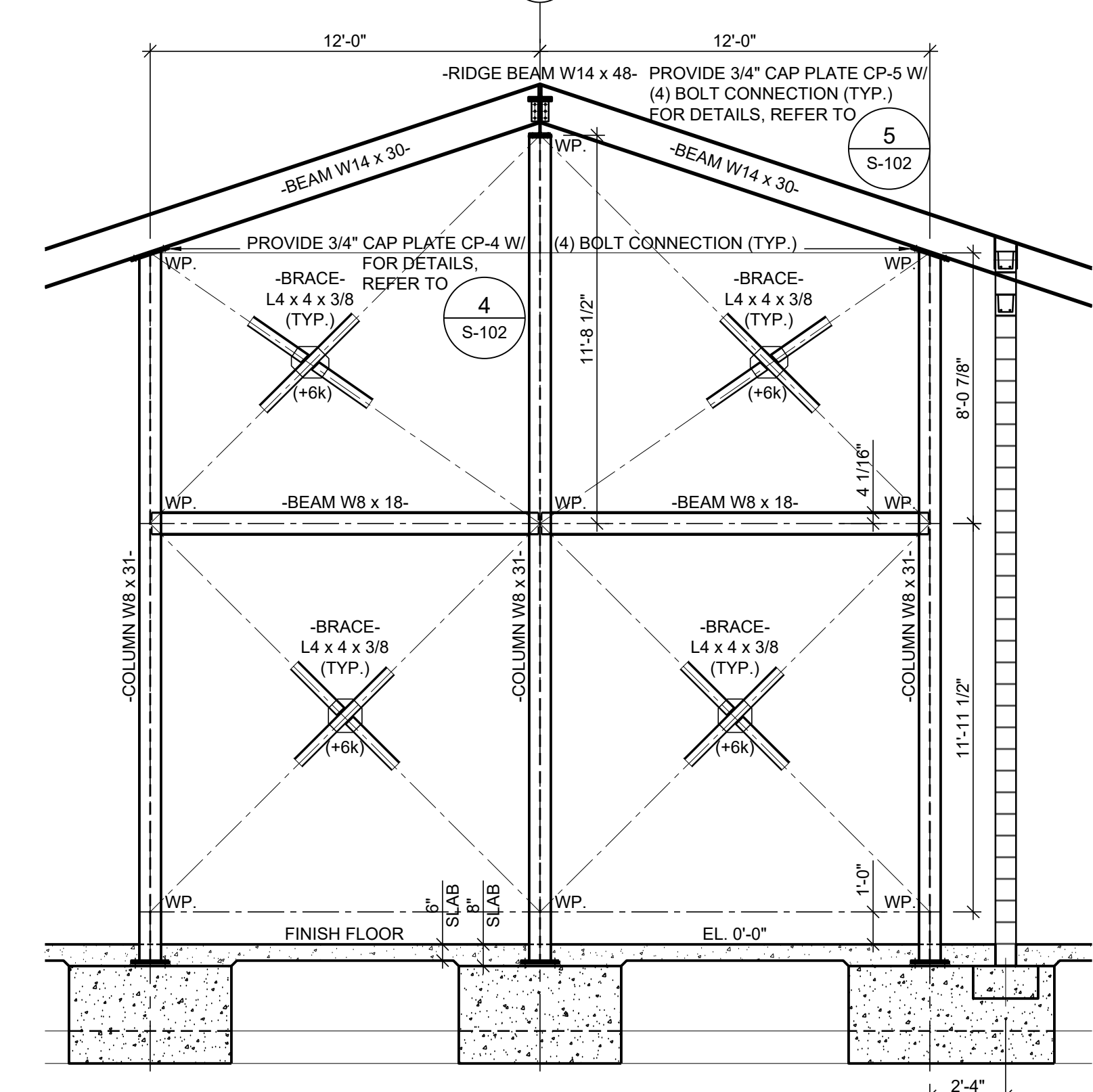
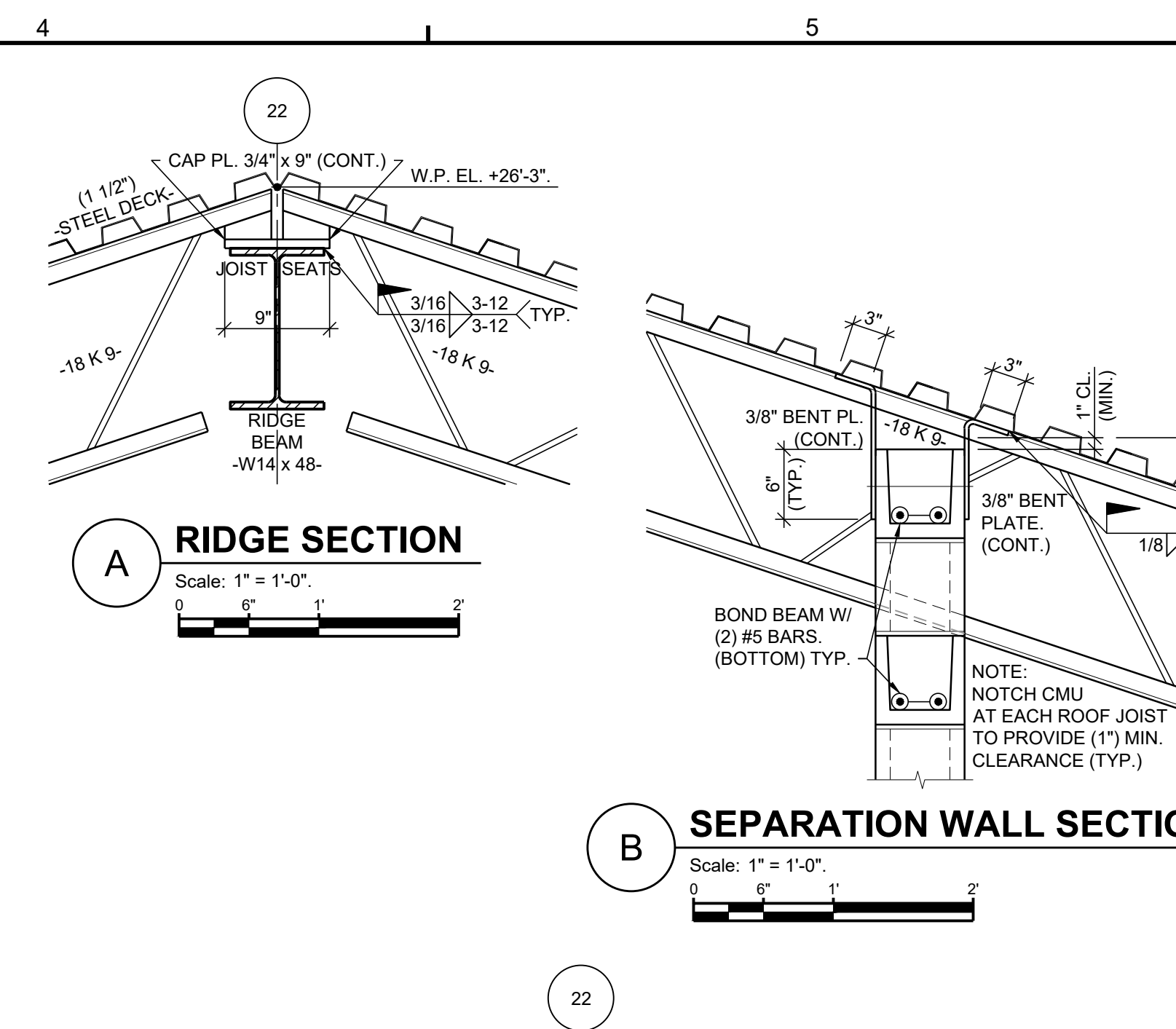
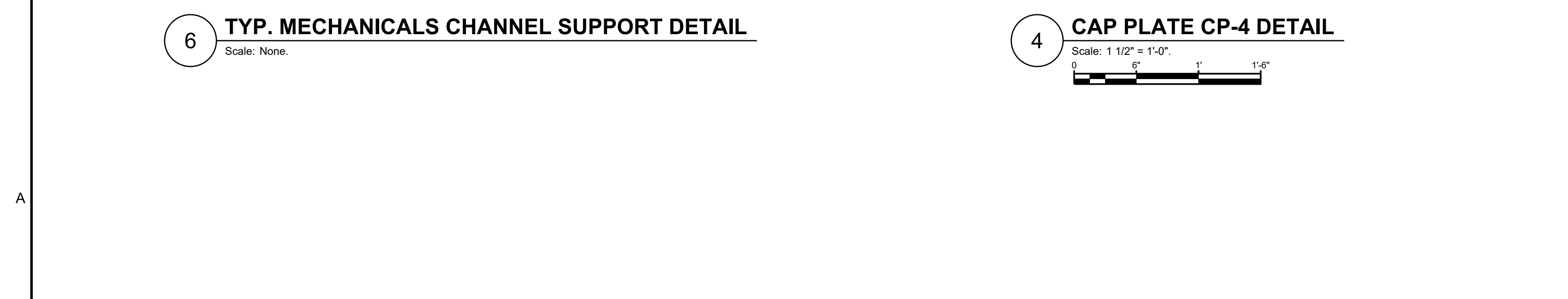
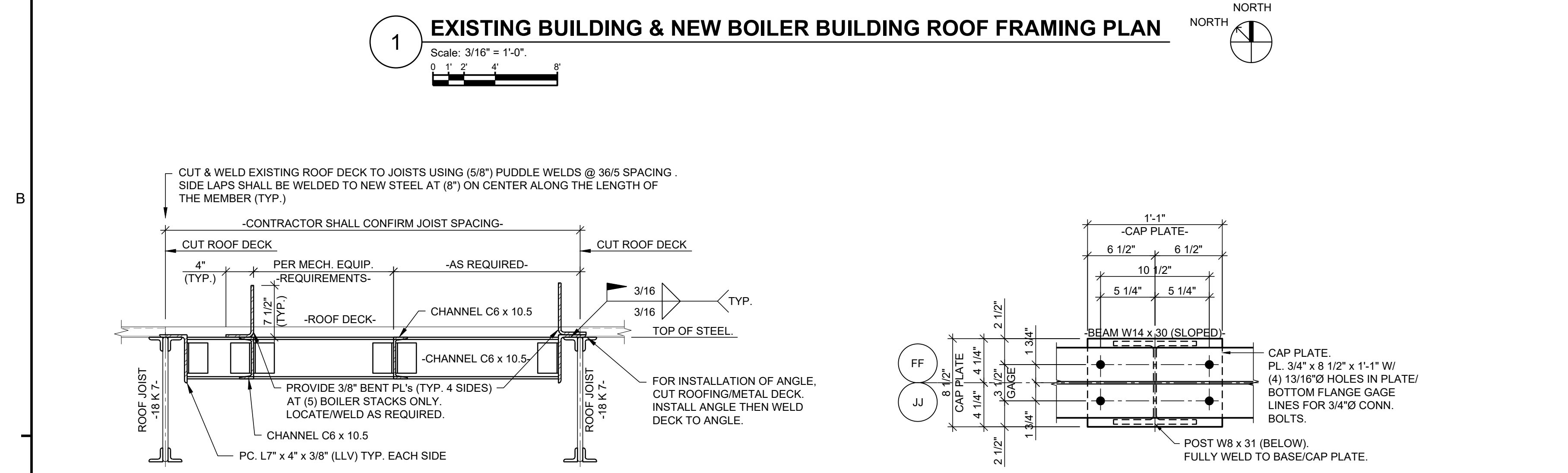
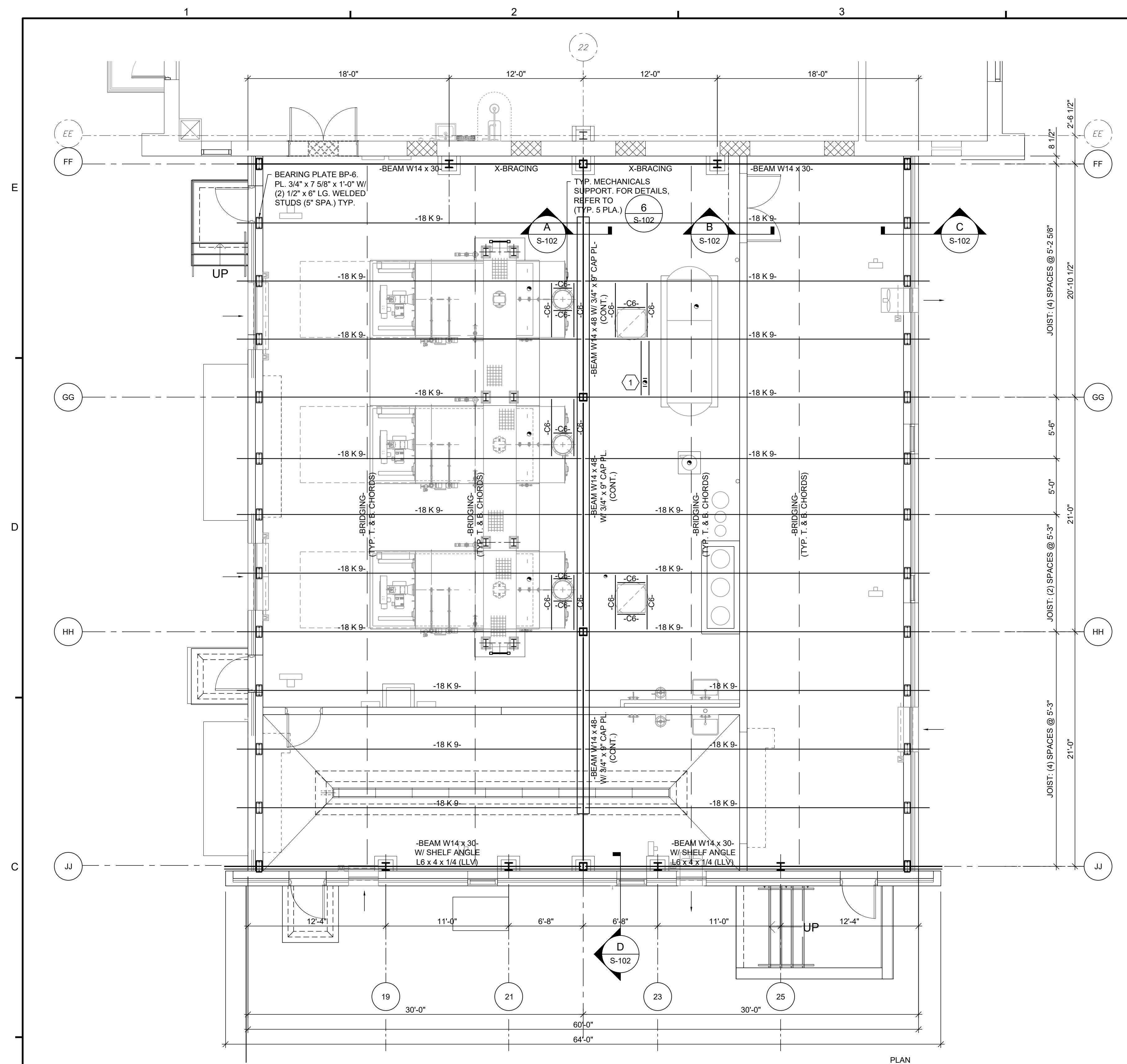
ENTECH ENGINEERING

NO.	DATE	REV.	DESCRIPTION
1	08/16/20	0	ISSUED FOR CONSTRUCTION
2	08/07/2020	0	ISSUED FOR PERMITTING
3	01/20/20	0	ISSUED FOR BIDDING
4		0	ISSUED FOR REVISION
5		0	ISSUED FOR REVISION
6		0	ISSUED FOR REVISION
7		0	ISSUED FOR REVISION
8		0	ISSUED FOR REVISION
9		0	ISSUED FOR REVISION
10		0	ISSUED FOR REVISION
11		0	ISSUED FOR REVISION
12		0	ISSUED FOR REVISION
13		0	ISSUED FOR REVISION

COUNTY OF BERKS
BERKS HEIM
BERN TOWNSHIP
BOILER PROJECT
STRUCTURAL
EXISTING BUILDING & NEW BOILER BUILDING FOUNDATION AND STEEL FRAMING PLATFORM PLANS

SCALE: AS NOTED
PREPARED BY: KCH
CHECKED BY: CJA
APPROVED BY: MAF
PROJECT NO: 1177.009
DRAWING NO: **S-101**

THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE GENERAL CONTRACT EXCEPT AS NOTED OTHERWISE.



ENTECH
ENGINEERING

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NO.	DATE	REV.	DESCRIPTION
01/16/20	08/07/20	1	ISSUED FOR CONSTRUCTION
01/20/20	01/20/20	0	ISSUED FOR BIDDING
			ISSUED FOR REVISION
			ISSUED FOR REVISED

KEY PLAN

COUNTY OF BERKS
BERKS HEIM
BERN TOWNSHIP
BOILER PROJECT
STRUCTURAL
EXISTING BUILDING & NEW BOILER BUILDING ROOF FRAMING PLAN, ELEVATION, & SECTIONS

SCALE: AS NOTED
PREPARED BY: KCH
CHECKED BY: CJJ
APPROVED BY: MAF

PROJECT NO: 4177.009
DRAWING NO: S-102

SHEET KEYNOTES

1. FOR THE TEN (10) VENT STACKS (VTR) THAT PENETRATE THE ROOF, PROVIDE SUPPLEMENTAL CHANNEL C6 STEEL FRAMING AS SHOWN IN DETAIL 6.

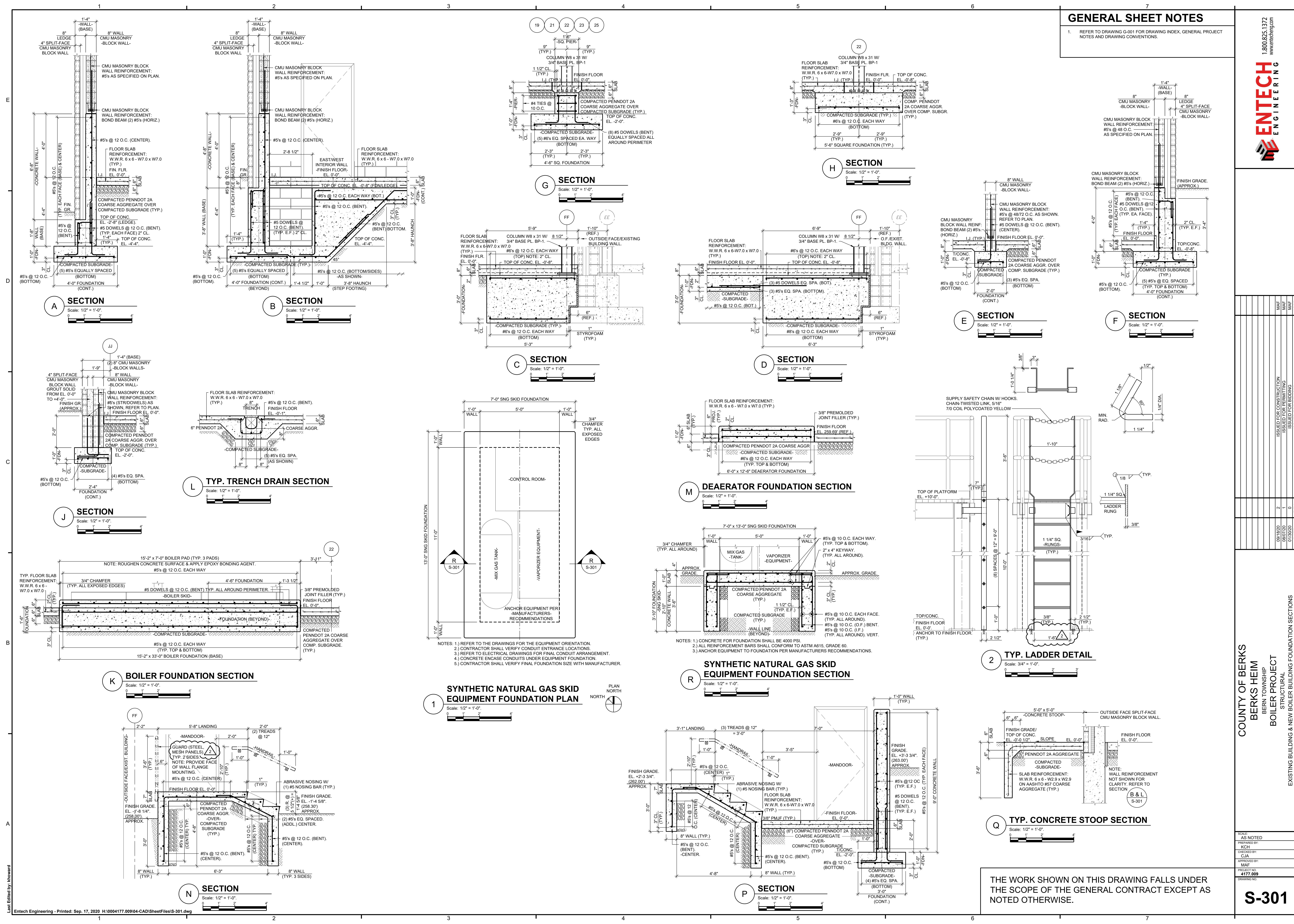
GENERAL SHEET NOTES

1. REFER TO DRAWING G-001 FOR DRAWING INDEX, GENERAL PROJECT NOTES AND DRAWING CONVENTIONS.

THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE GENERAL CONTRACT EXCEPT AS NOTED OTHERWISE.

GENERAL SHEET NOTES

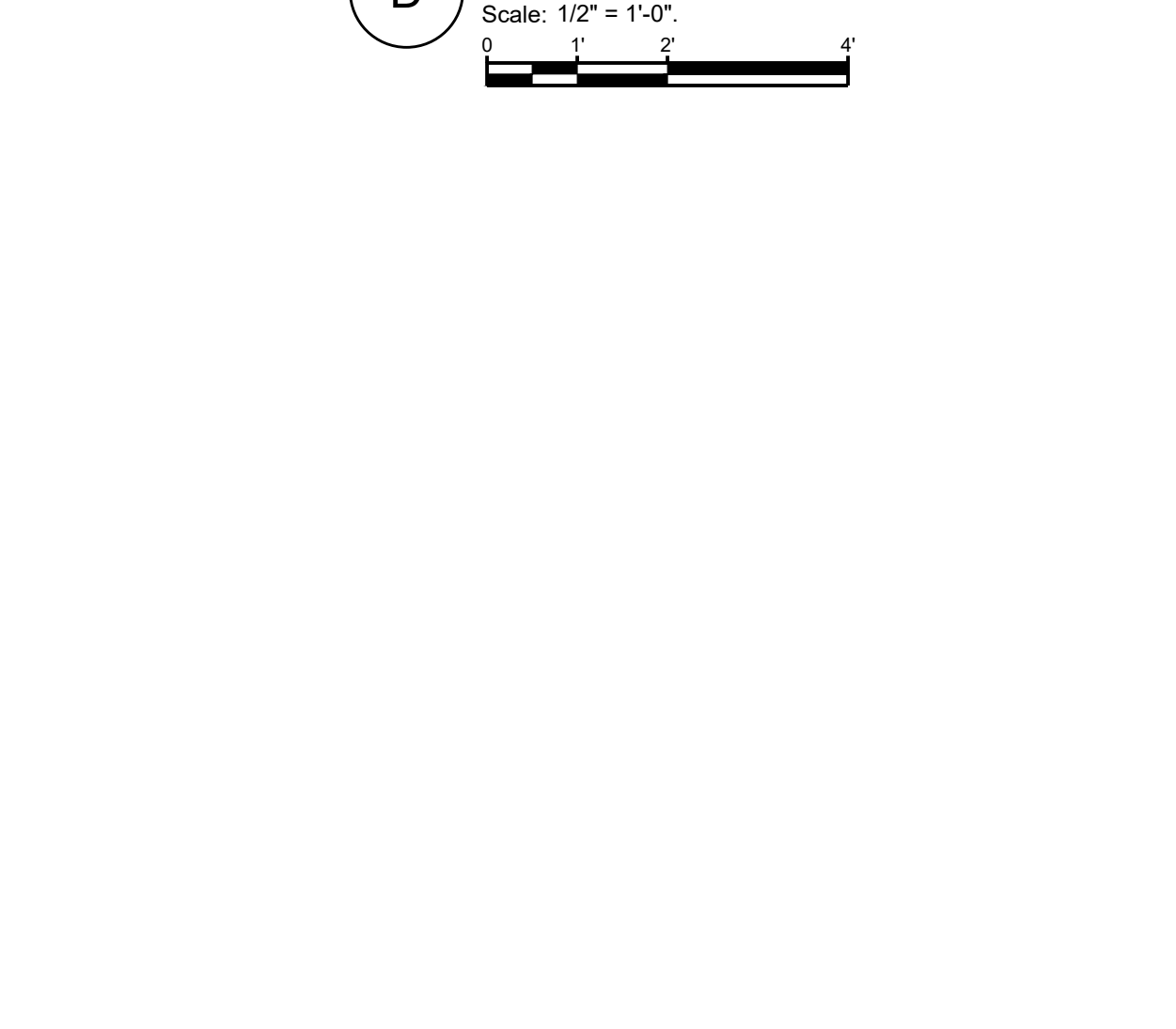
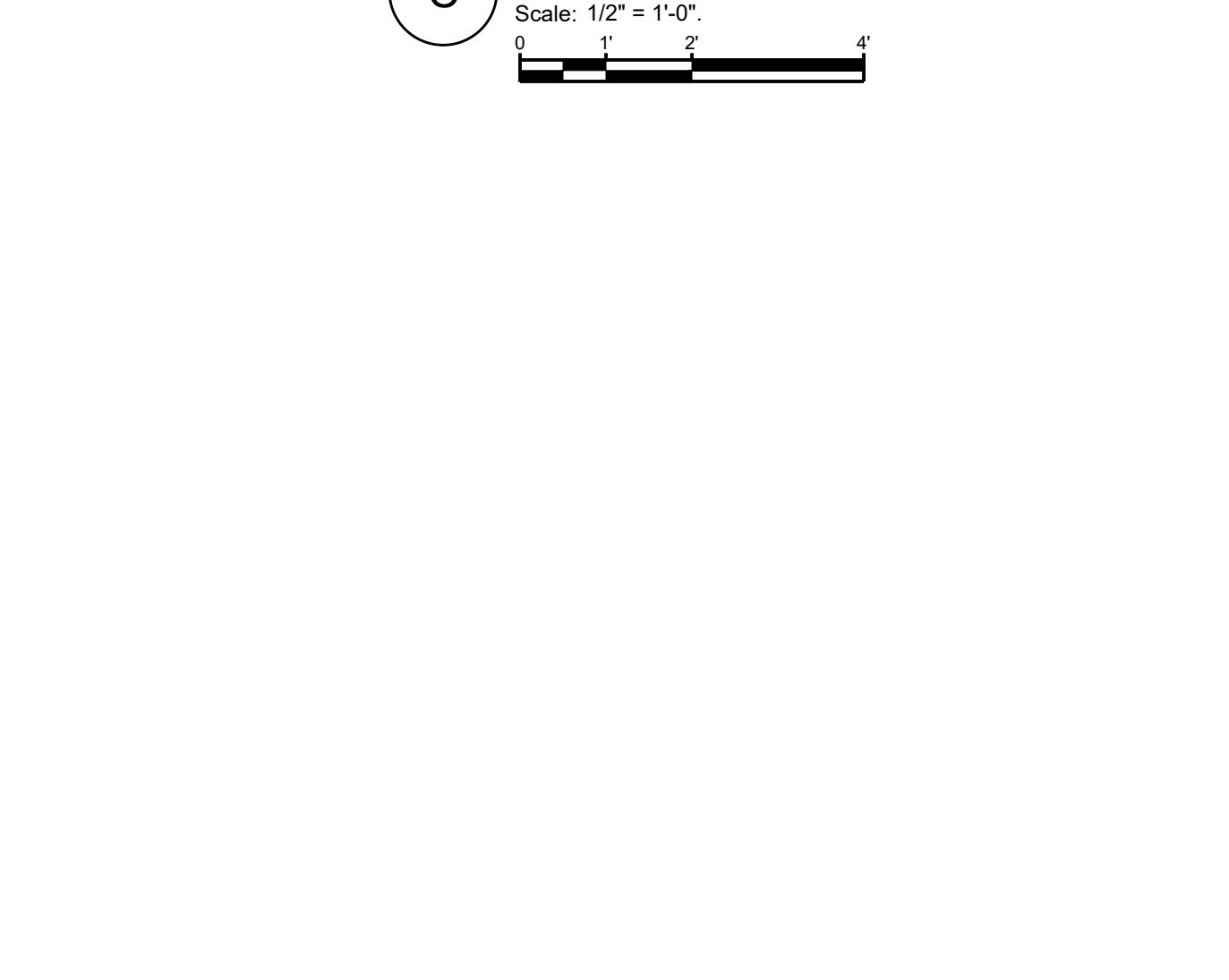
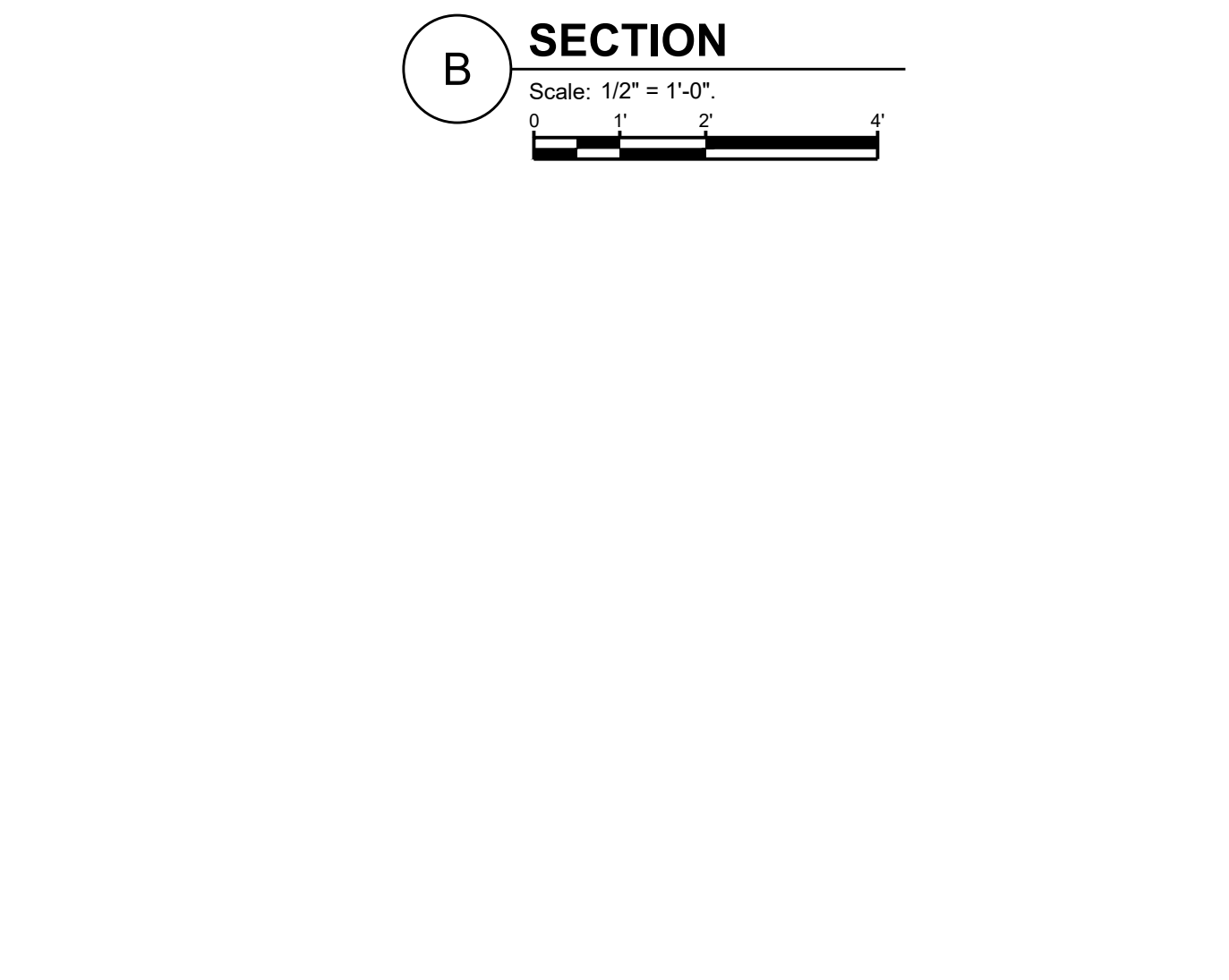
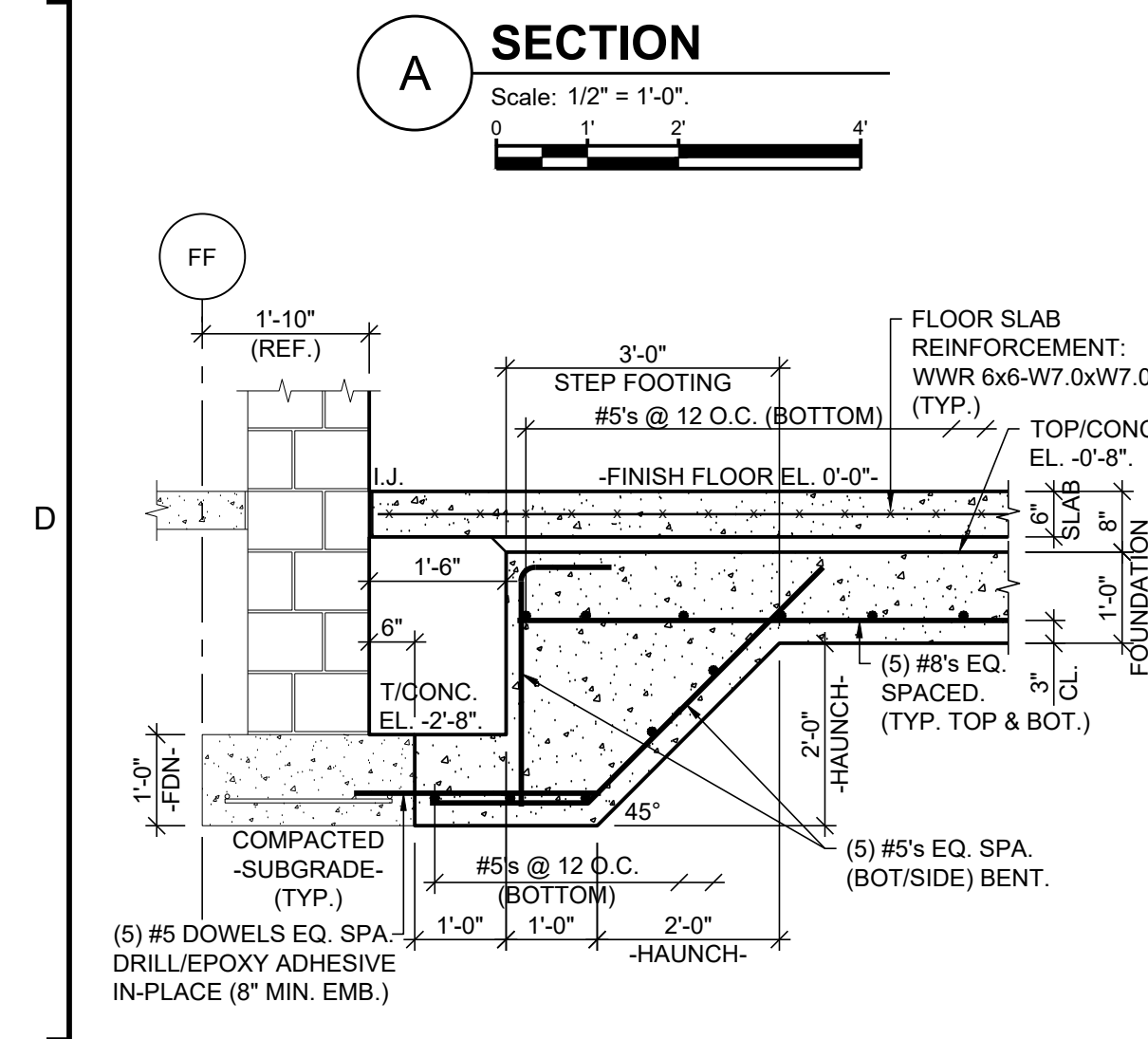
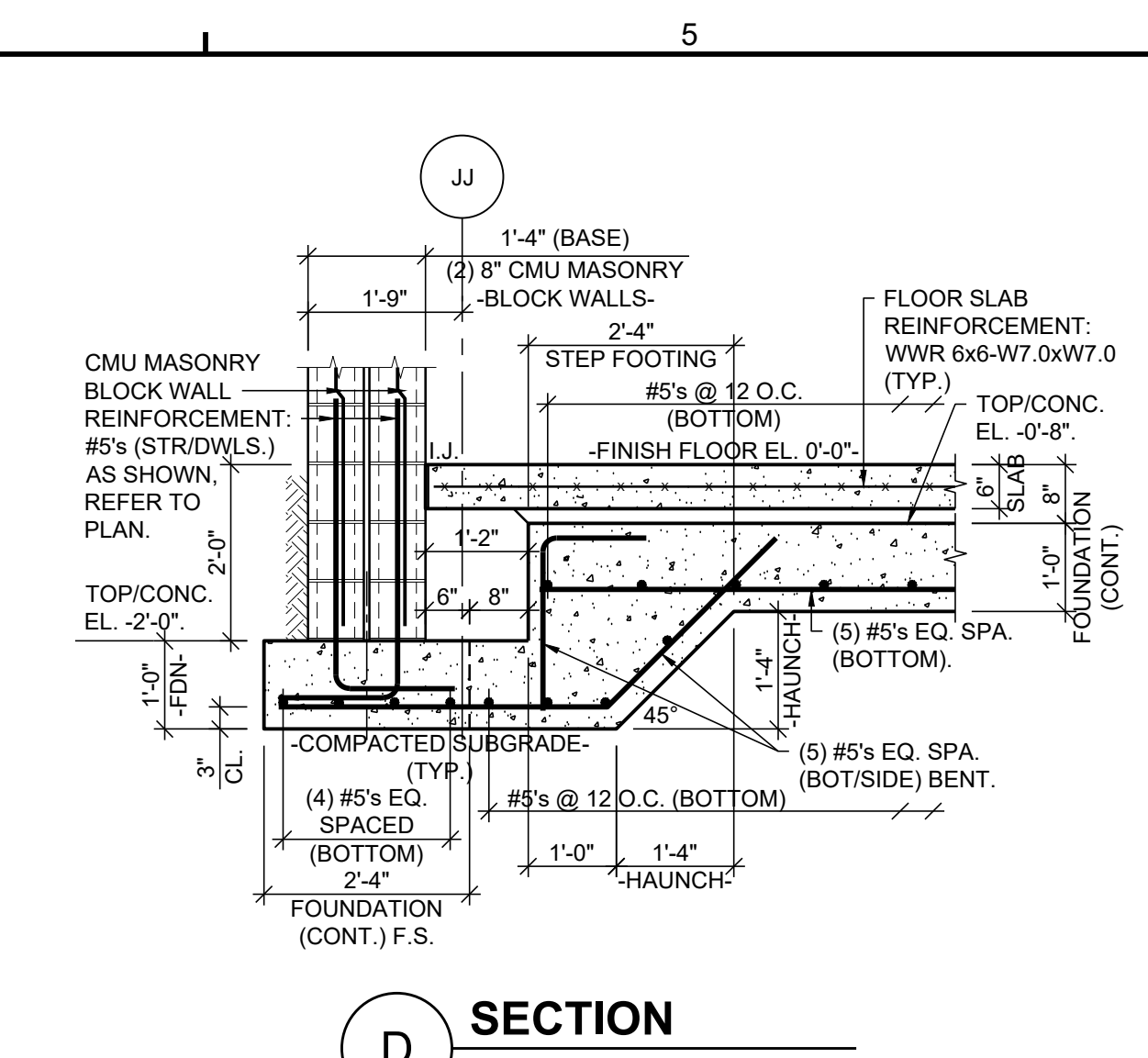
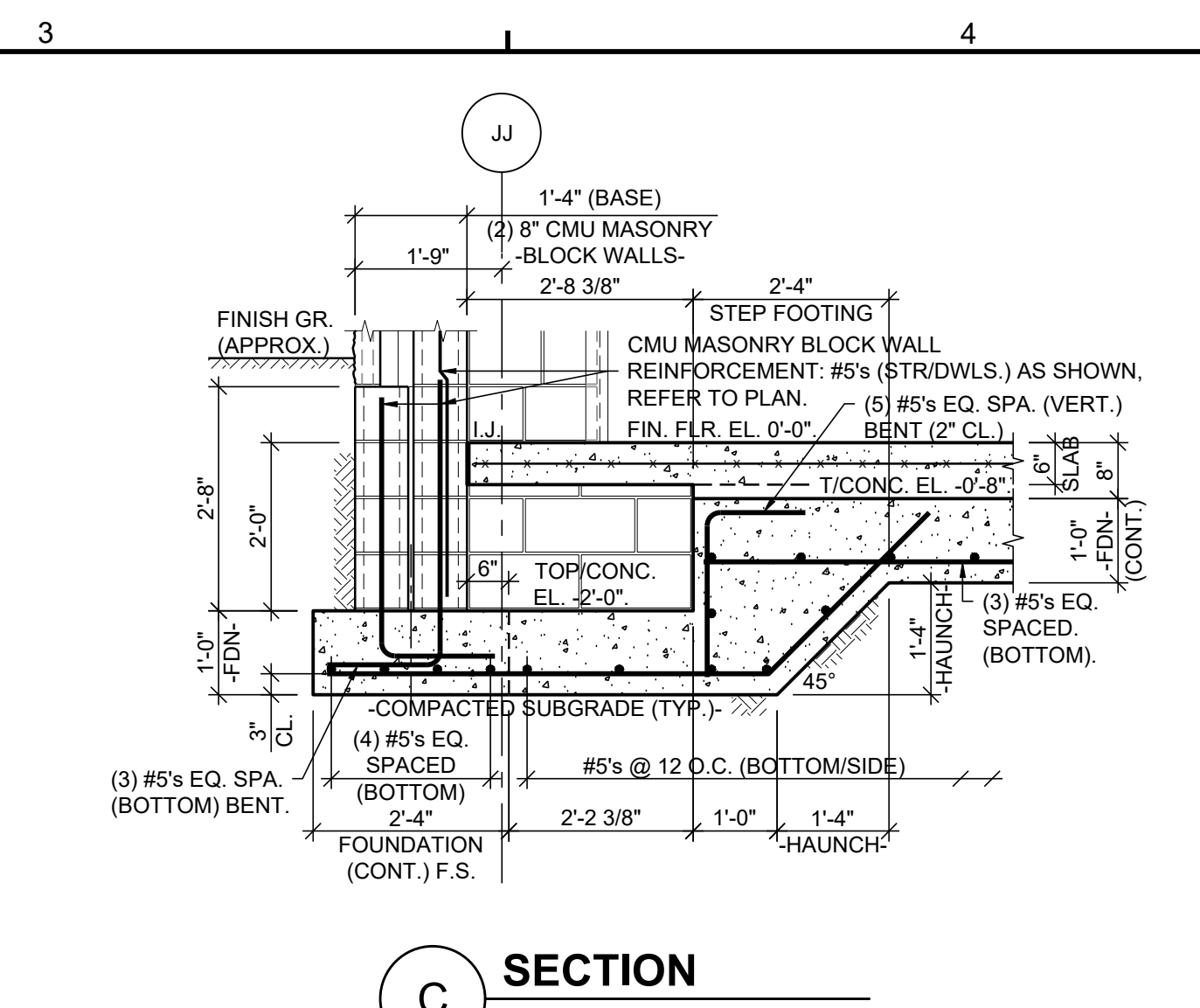
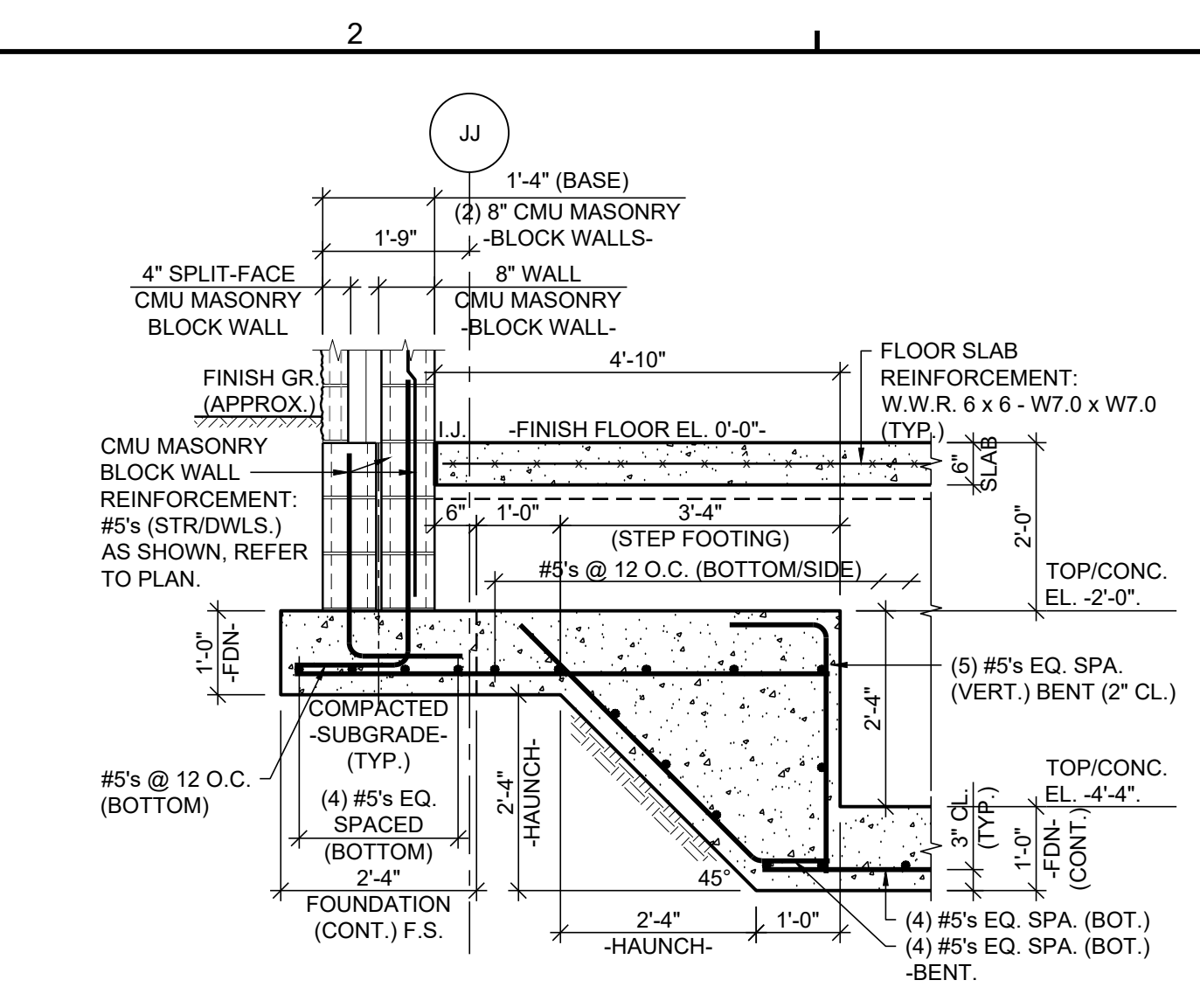
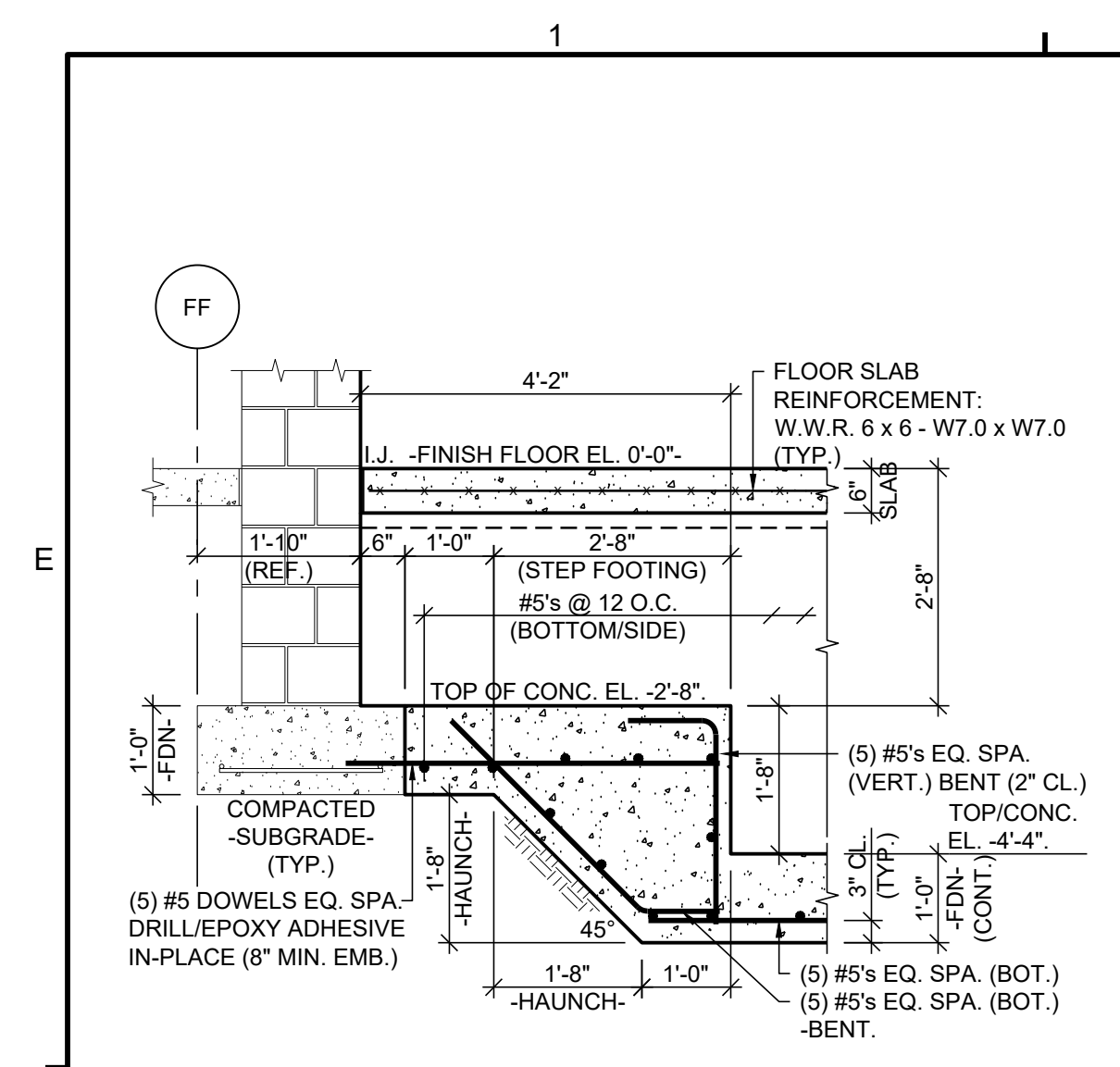
1. REFER TO DRAWING G-001 FOR DRAWING INDEX, GENERAL PROJECT NOTES AND DRAWING CONVENTIONS.



DATE	REV	ISSUED FOR BIDDING	ISSUED FOR PERMITTING	MAF	MAF	RPFD
08/16/20	2					
08/17/20	1					
01/20/20	0					

SCALE:	AS NOTED
PREPARED BY:	KCH
CHECKED BY:	CJA
APPROVED BY:	MAF
PROJECT NO:	1177.009
DRAWING NO:	

THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE GENERAL CONTRACT EXCEPT AS NOTED OTHERWISE.



GENERAL STRUCTURAL NOTES

FOUNDATION

- SUBSURFACE INFORMATION AND FOUNDATION DESIGN ARE BASED ON THE GEOTECHNICAL REPORT PREPARED BY EARTH ENGINEERING, INC. DATED NOVEMBER 25, 2019 THAT SHOWS THE ALLOWABLE SOIL BEARING PRESSURE IS (3000) PSF.
 - THE STRUCTURAL BACKFILL BENEATH THE FOOTINGS SHALL BE COMPACTED SUBGRADE.
 - BACKFILL MATERIAL SHALL BE COMPACTED TO (95%) PERCENT OF MAXIMUM DRY DENSITY PER ASTM D1557.
- CAST-IN-PLACE CONCRETE**
- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH ACI 301 AND 318, LATEST EDITION.
 - ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT (28) DAYS.
SLUMP RANGE FOR FOOTINGS: ONE (1) INCH TO THREE (3) INCHES.
SLUMP RANGE FOR PIERS: TWO (2) INCHES TO FOUR (4) INCHES.
AIR CONTENT: SIX (6) PERCENT, PLUS OR MINUS (±) 1.0 PERCENT.
WATER/CEMENT RATIO: 0.45
 - ALL REINFORCING BARS SHALL MEET THE REQUIREMENTS OF ASTM A615, GRADE 60. DETAILING SHALL CONFORM TO ACI 315, LATEST EDITION. ALL WELDED WIRE REINFORCING SHALL MEET THE REQUIREMENTS OF ASTM A1064.
 - ALL CORNERS AND INTERSECTIONS PER ACI MANUAL OF STANDARD PRACTICE.
 - BAR CHAIRS, HIGH CHAIRS, SUPPORT BARS AND ALL OTHER ACCESSORIES SHALL BE PROVIDED IN ACCORDANCE WITH ACI AND CRSI STANDARDS.
 - BACKFILL AGAINST WALLS SHALL BE DEPOSITED EVENLY ON EACH SIDE UNTIL THE LOWER FINAL GRADE IS REACHED.
 - SIZE AND LOCATION OF ALL WALL AND FLOOR PENETRATIONS SHALL BE VERIFIED BY THE CONTRACTOR REQUIRING THE OPENING PRIOR TO PLACING OF CONCRETE.
 - CONTRACTOR SHALL PROVIDE LATERAL SUPPORT OF ALL CONCRETE WALLS UNTIL SUPPORTING ELEMENTS HAVE BEEN INSTALLED UNLESS NOTED OTHERWISE ON THE DRAWINGS.
 - ANCHOR BOLTS SHALL BE IN ACCORDANCE WITH ASTM F1554, HOT-DIPPED GALVANIZED.
 - NON-SHRINK, NON-METALLIC GROUT TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI.
 - FOR CONSTRUCTING CONCRETE PEDESTALS, ROUGHEN THE EXISTING CONCRETE SURFACE AND TREAT WITH APPROVED EPOXY BONDING COMPOUND FOR BONDING PRIOR TO PLACING CONCRETE.
 - CONTRACTOR SHALL PROVIDE CONTROL JOINTS IN SLAB, FLOOR SLAB SHALL BE POURED IN ALTERNATE SECTIONS.
 - ALL REINFORCING SPLICES SHALL BE IN ACCORDANCE WITH ACI 318.
 - FLOOR: CONCRETE SHALL BE AIR ENTRAINED (3% INTERIOR / 6% EXTERIOR).
 - FLOOR: CONCRETE SLUMP SHALL BE (2" TO 4") INCHES, PLUS OR MINUS ONE-HALF (1/2) INCH.
 - FLOOR: OVERALL FLOOR FLATNESS SHALL BE F20.
 - PROVIDE NO BURN MARKS ON SLAB SURFACE WHILE TROWELING.
 - FOR THE FLOOR, PROVIDE DAMP CURING, SEVEN (7) DAY CURE.
 - ISOLATION JOINTS (JJ) ARE (1/4") THICK JOINT FILLER STRIPS AND PLACED IN THE JOINT BETWEEN THE SLAB-ON-GRADE AND THE CONCRETE WALL AND AROUND THE COLUMNS.
 - RE-ENTRANT CORNER REINFORCEMENT SHOWN ON THE FLOOR PLAN SHALL BE (2) #4 x 3'-0" LONG DIAGONALS.

MASONRY

- CONCRETE MASONRY UNITS SHALL BE NORMAL WEIGHT UNITS AND SHALL CONFORM TO ASTM C90 WITH A MINIMUM DESIGN COMPRESSIVE UNIT STRENGTH OF (1000) PSI AND A PRISM STRENGTH OF (1500) PSI. CONCRETE MASONRY CONSTRUCTION SHALL CONFORM TO THE FOLLOWING STANDARDS:
A. "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES", ACI 530, LATEST EDITION.
B. "SPECIFICATIONS FOR MASONRY STRUCTURES", ACI 530.1.
- MORTAR FOR CONCRETE MASONRY SHALL CONFORM TO ASTM C270, TYPE S AT CONCRETE MASONRY UNITS.
- REINFORCING FOR CONCRETE MASONRY SHALL CONFORM TO ASTM A615, GRADE 60. MINIMUM LAP SPICE PER ACI 530.
- GROUT FOR BOND BEAMS AND TO FILL CORES OF WALLS WITH REINFORCING SHALL CONFORM TO ASTM C476, WITH A MINIMUM COMPRESSIVE CYLINDER STRENGTH OF (3000) PSI AT (28) DAYS. GROUT SHALL BE VIBRATED AND RE-VIBRATED AFTER INITIAL WATER LOSS TO INSURE COMPLETE FILLING OF CORES. PROVIDE (2) #5 BARS IN ALL BOND BEAMS. BOND BEAMS SHALL BE PLACED AT THE TOP OF ALL WALLS.
- PLACE LADDER TYPE HORIZONTAL JOINT REINFORCING WITH PREFORMED LAPPED CORNER REINFORCING AT (18") C/C AND (8") C/C VERTICALLY IN ALL INTERIOR AND EXTERIOR MASONRY WALLS RESPECTIVELY, UNLESS NOTED OTHERWISE.
A. JOINT REINFORCEMENT SHALL CONFORM TO ASTM A951, BE GALVANIZED, AND HAVE SIDE WIRES OF NINE (9) GAGE MINIMUM, CONFORMING TO A82, UNLESS NOTED OTHERWISE.
B. ALL JOINT REINFORCING SHALL BE HOT-DIPPED GALVANIZED.
- PROVIDE A CONTINUOUS BOND BEAM WITH TWO (2) #5s CONTINUOUS IN THE TOP COURSE OF ALL BLOCK WALLS. AT ALL LOCATIONS WHERE FRAMING MEMBERS ARE BOLTED TO FACE OF CMU WALLS.
- THE DISCONTINUED ENDS OF ALL MASONRY WALLS SHALL BE SOLIDLY GROUTED A MINIMUM OF EIGHT (8") INCHES OR ONE (1) BLOCK CELL AND REINFORCED FOR THEIR FULL HEIGHT WITH ONE (1) #7 BAR, UNLESS NOTED OTHERWISE.
- GROUT FILL AT LEAST TWO (2) COURSES BELOW BOND BEAM BEARING LOCATIONS.
- WHERE CMU COMES INTO A COLUMN, WELD ANCHORS TO THE EXISTING COLUMN AT EIGHT (8") INCHES ON VERTICAL CENTERS. ANCHORS SHALL BE AS SHOWN ON THE ARCHITECTURE DRAWINGS.
- ALL PRECAST CONCRETE LINTELS SHALL BE CONSTRUCTED FROM 3000 PSI CONCRETE.

GENERAL SHEET NOTES

- REFER TO DRAWING G-001 FOR DRAWING INDEX, GENERAL PROJECT NOTES AND DRAWING CONVENTIONS.

GENERAL STRUCTURAL NOTES (CONT.)

WELDING

- ALL WELDING SHALL BE IN ACCORDANCE WITH THE "STRUCTURAL WELDING CODE" AWS D1.1, LATEST EDITION USING E70XX ELECTRODES UNLESS SPECIFIC WELDING PROCEDURE REQUIRES OTHERWISE.
- PROPERLY PREPARE EXISTING STEEL BEFORE WELDING NEW STEEL TO EXISTING.
- ALL WELDERS USED ON THIS PROJECT SHALL BE AWS CERTIFIED WELDERS FOR THE TYPE OF WELDING BEING DONE.

STRUCTURAL STEEL

- ALL STRUCTURAL STEEL WORK SHALL CONFORM WITH THE AISC SPECIFICATION FOR STRUCTURAL STEEL FOR BUILDINGS ADOPTED JUNE 22, 2010.
 - ALL WIDE FLANGE STRUCTURAL STEEL SHALL CONFORM TO ASTM A992. ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO ASTM A36. ALL CUT AND EXPOSED EDGES SHALL BE GROUND SMOOTH.
 - TUBULAR STEEL SHALL CONFORM TO ASTM A500, GRADE B. ALL WELD SEAMS MUST BE GROUND SMOOTH.
 - STEEL ROOF DECK SHALL BE (1 1/2") DEEP, 18 GAGE, GALVANIZED, TYPE "F" ROOF DECKING AS MANUFACTURED BY VULCRAFT OR APPROVED EQUAL. THE DECKING SHALL BE WELDED TO THE STRUCTURAL STEEL AND PLATES AT 3/8" WELD SPACING USING (5/8") PUDDLE WELDS. MECHANICALLY FASTEN SIDE LAPS USING (2) No. 10 TEK SCREWS PER SIDELAP SPAN. DECKING SHALL BE INSTALLED PER THE REQUIREMENTS OF THE STEEL DECK INSTITUTE.
 - CONNECTIONS:
A. CONNECTIONS SHALL BE BEARING TYPE USING A325 BOLTS 3/4" DIAMETER.
B. THE INSTALLATION AND TIGHTENING OF ALL HIGH STRENGTH BOLTS SHALL CONFORM TO THE "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 BOLTS".
C. THE FIELD BURNING OF CORES, CUTS, HOLES, ETC. IN STRUCTURAL STEEL MEMBERS SHALL NOT BE PERMITTED UNLESS SPECIFICALLY AUTHORIZED BY THE ENGINEER.
D. BEAM CONNECTIONS NOT DETAILED SHALL BE DESIGNED AND PROVIDED TO SUPPORT A LOAD EQUAL TO 1/2 THE TOTAL UNIFORM LOAD FOR A GIVEN SIZE BEAM AND SPAN. ALL DESIGN AND DETAIL OF THE CONNECTIONS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.
 - ALL BASE PLATES & CAP PLATES SHALL BE WELDED TO THE COLUMNS.
 - ALL LEVELING PLATES SHALL BE SHIPPED LOOSE.
 - CONTRACTOR SHALL PROVIDE LATERAL SUPPORT OF ALL STEEL MEMBERS UNTIL SUPPORTING ELEMENTS HAVE BEEN INSTALLED.
 - ALL HIGH STRENGTH BOLTS TO BE IN ACCORDANCE WITH ASTM A325N.
 - ALL STRUCTURAL STEEL TO BE CLEANED AND PAINTED. REFER TO THE SPECIFICATIONS. DO NOT PAINT STEEL AREAS TO BE ENCASED IN CONCRETE OR WELDED AFTER INSTALLATION IS COMPLETE. PAINT THOSE AREAS WHICH NEED TO BE TOUCHED-UP. REMOVE LOOSE MILL SCALE, LOOSE RUST OR OTHER FOREIGN MATTER PRIOR TO PAINTING.
 - PROVIDE DOUBLE CLIP ANGLES AT ALL CONNECTIONS.
 - REPAINT ALL EXISTING STRUCTURAL ITEMS THAT WERE MODIFIED.
 - ALL STEEL LINTELS SHALL BE HOT-DIPPED GALVANIZED.
- STEEL JOISTS**
- MINIMUM BEARING OF K JOISTS SHALL BE (2 1/2") OVER SUPPORT STEEL AND (4") OVER SUPPORTING MASONRY, UNLESS NOTED OTHERWISE ON STRUCTURAL DRAWINGS.
 - JOISTS SHALL BE CONNECTED TO SUPPORTING STEEL WITH (2) 13/16" x 1" LONG FILLET WELDS (MIN) OR WITH (2) 1/2" BOLTS FOR EACH JOIST END (TYP.). EXCEPT ANY JOIST END FRAMING INTO A COLUMN, STRUT JOISTS (S.J.), SHALL BE CONNECTED TO THE COLUMN AND TO THE COLUMN, BEAM, OR BEARING PLATE AT THE OPPOSITE END WITH (2) 1/2" BOLTS FOR EACH JOIST END.
 - PROVIDE NUMBER OF ROWS AND TYPE OF HORIZONTAL CONTINUOUS BRIDGING AS SHOWN ON THE STRUCTURAL DRAWINGS. BRIDGING ROWS SHALL BE EQUALLY SPACED. SIZES AND CONNECTIONS OF BRIDGING MEMBERS SHALL MEET THE LATEST REQUIREMENTS OF THE STEEL JOIST INSTITUTE (SJI). SHOP PAINT ALL STEEL JOISTS WITH SHOP PRIMER IN ACCORDANCE WITH THE SPECIFICATIONS.
 - PROVIDE ONE (1) ROW OF CONTINUOUS BOTTOM CHORD BRIDGING NEAR THE FIRST BOTTOM CHORD PANEL POINTS OF JOISTS IN ACCORDANCE WITH SJI AS REQUIRED TO RESIST NET UPLIFT FORCES INDICATED IN ROOF DESIGN LOAD GENERAL NOTES.
 - ALL STEEL JOIST DESIGN, FABRICATION, AND ERECTION SHALL COMPLY WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) NEW STEEL ERECTION STANDARDS.

GENERAL NOTES

- ROOF DESIGN LOADS: TOTAL DEAD LOAD = 15 PSF.
TOTAL SNOW LOAD = 30 PSF.
TOTAL DESIGN LOAD = 45 PSF.

- WIND NET UPLIFT ON JOISTS = 10 PSF
- WIND LOAD BASED UPON A (115 MPH) BASIC WIND SPEED AND EXPOSURE C IN ACCORDANCE WITH IBC 2015 & ASCE 7-10.
- RELOCATE UTILITIES IN THE WORK AREA AS REQUIRED.
- CONTRACTOR SHALL TEMPORARILY SUPPORT/SHORE EXISTING MEMBERS THAT ARE TO REMAIN UNTIL PERMANENTLY CONNECTED TO PERMANENT MEMBERS.
- CONTRACTOR SHALL DEWATER ALL EXCAVATIONS. MAINTAIN WATER LEVEL TWO (2) FEET BELOW PROPOSED SUBGRADE ELEVATION. PUMPS SHALL BE RUNNING (24) HOURS A DAY, (7) DAYS A WEEK.
- CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR ALL ITEMS.
- CONTRACTOR SHALL PROVIDE ALL CONDUIT AND PIPE SUPPORTS FOR ALL NEW AND EXISTING THAT NEED TO BE RE-SUPPORTED.

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NO.	DATE	ISSUED FOR	BY	APP'D
1	08/16/20	ISSUED FOR CONSTRUCTION	MAF	
2	08/17/20	ISSUED FOR PERMITTING	MAF	
3	01/20/20	ISSUED FOR BIDDING	MAF	
4		ISSUED FOR REVISED	MAF	

COUNTY OF BERKS
BERKS HEIM
BERN TOWNSHIP
BOILER PROJECT
STRUCTURAL
EXISTING BUILDING & NEW BOILER BUILDING FOUNDATION SECTIONS AND NOTES

SCALE: AS NOTED
PREPARED BY: KCH
CHECKED BY: CJA
APPROVED BY: MAF
PROJECT NO: 4177.009
DRAWING NO:

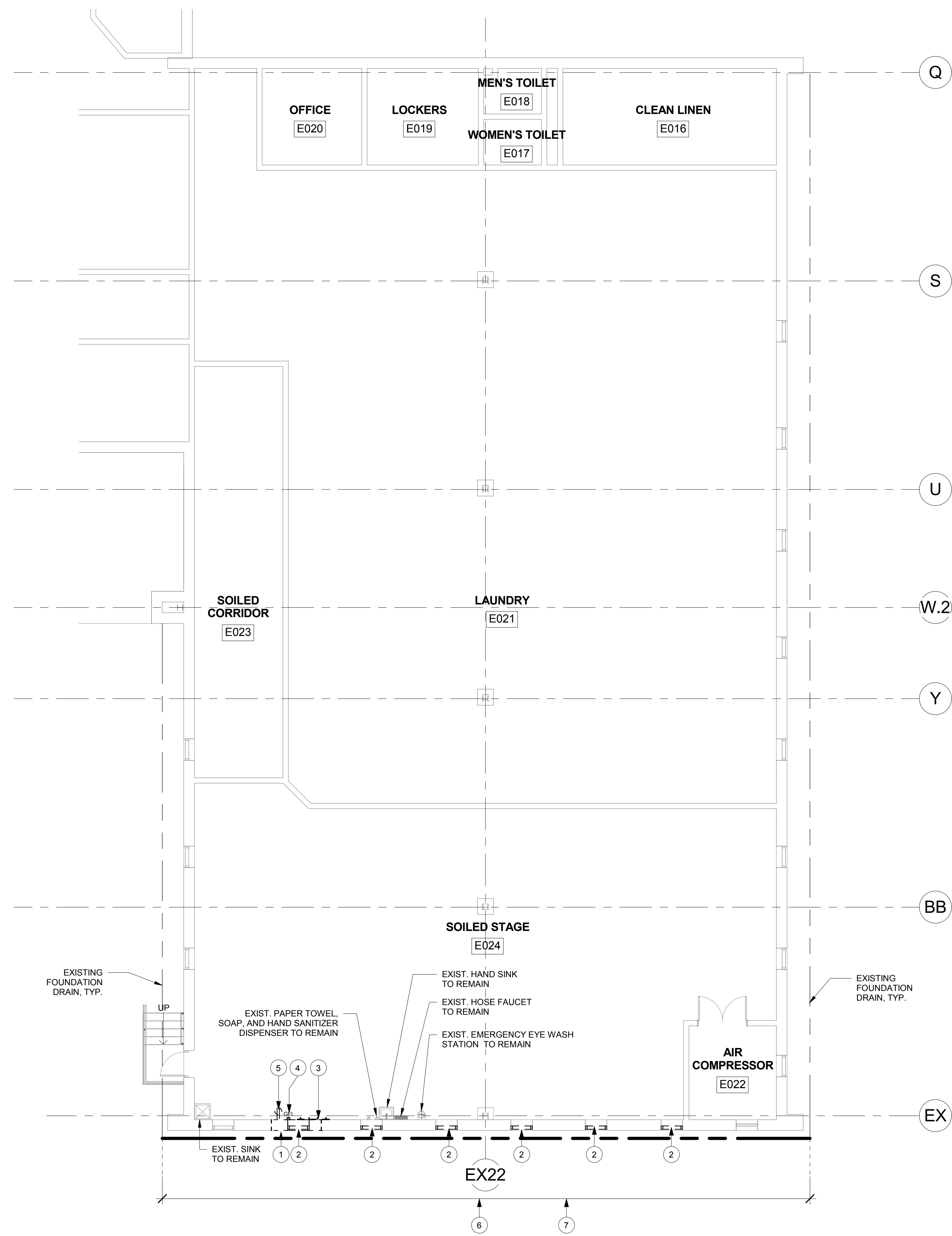
THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE GENERAL CONTRACT EXCEPT AS NOTED OTHERWISE.

GENERAL DEMOLITION NOTES

- GENERAL DEMOLITION NOTES:
1. VERIFY EXISTING CONDITIONS PRIOR TO START OF REMOVAL ACTIVITIES. COORDINATE REMOVALS WITH SCOPE OF NEW CONSTRUCTION.
 2. MAINTAIN THE STRUCTURAL INTEGRITY OF BERKS HEIM NUSING AND REHABILITATION BUILDING AT ALL TIMES.
 3. EXISTING CONSTRUCTION AND FINISHES TO REMAIN IN PLACE UNLESS OTHERWISE NOTED. PROTECT EXISTING MATERIALS FROM DAMAGE DURING CONSTRUCTION AND REPLACE OR RESTORE DAMAGED ELEMENTS TO PRE-CONSTRUCTION CONDITION.
 4. PROTECT EXISTING EQUIPMENT DURING CONSTRUCTION ACTIVITIES. PROTECTION TO INCLUDE PLASTIC SHEETING, TEMPORARY PARTITIONS, OR OTHER MEASURES DETERMINED BY OWNER.
 5. MATERIALS REMOVED DURING DEMOLITION ARE TO BE RECYCLED TO GREATEST EXTENT POSSIBLE.
 6. WHERE GENERAL CONSTRUCTION IS INDICATED FOR DEMOLITION, REMOVE ASSOCIATED MPE EQUIPMENT BACK TO NEAREST TRUNK DUCT, MAIN PIPE, OR JUNCTION BOX. COMPLY WITH REQUIREMENTS OF APPLICABLE CODES. COORDINATE WITH MPE DOCUMENTS.
 7. WHERE MATERIAL IS TO BE REMOVED FROM EXISTING CONSTRUCTION TO REMAIN, REMOVE ANCHORING DEVICES IN THEIR ENTIRETY AND INFILL CONSTRUCTION TO MATCH EXISTING. DO NOT CUT ANCHORING DEVICES AND LEAVE PORTIONS EMBEDDED IN EXISTING CONSTRUCTION TO REMAIN.
 8. KEYED NOTES WITHOUT LEADERS AND ABUTTING ROOM TAGS SHALL APPLY THROUGHOUT THE ROOM.

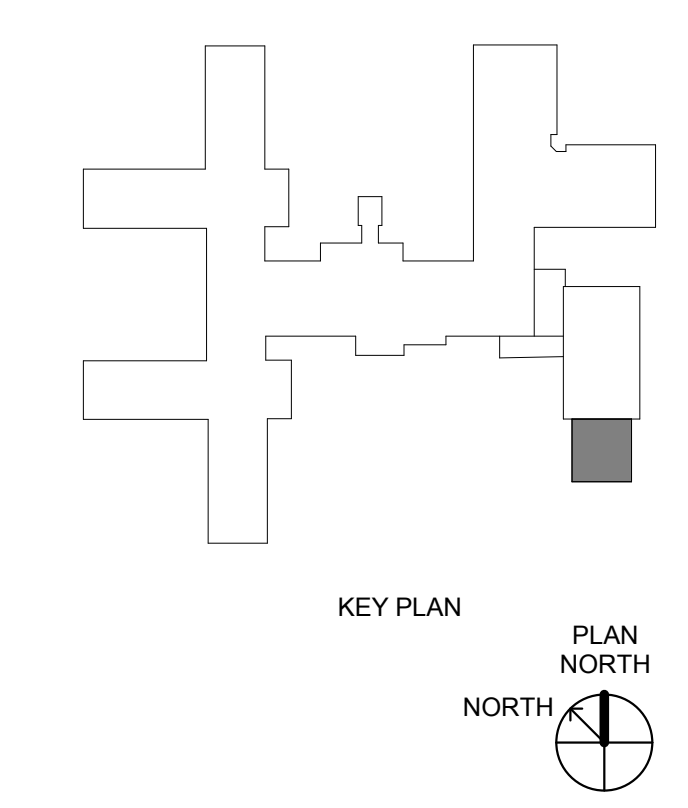
DEMOLITION KEYNOTES

1. REMOVE PORTION OF EXISTING MASONRY WALL TO ACCOMMODATE NEW DOOR FRAME.
2. REMOVE EXISTING WINDOW.
3. REMOVE WALL MOUNTED COAT RACK.
4. REMOVE REMOVE WALL MOUNTED HAND SANITIZER DISPENSER.
5. REMOVE ELECTRICAL OUTLET AND DEVICES.
6. REMOVE EXISTING FOUNDATION DRAIN TO EXTENT INDICATED.
7. REMOVE EXISTING DRAINAGE BOARD AND DAMPROOFING FROM EXPOSED CONDR. FOUNDATION WALL. CLEAN FOUNDATION WALL AND PREPARE TO RECEIVE PAINT FINISH.



1 DEMOLITION FLOOR PLAN
1/8" = 1'-0"

SCHEDULE WORK IN OCCUPIED SPACES AFTER 3 PM.



THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE GENERAL CONTRACT EXCEPT AS NOTED OTHERWISE.

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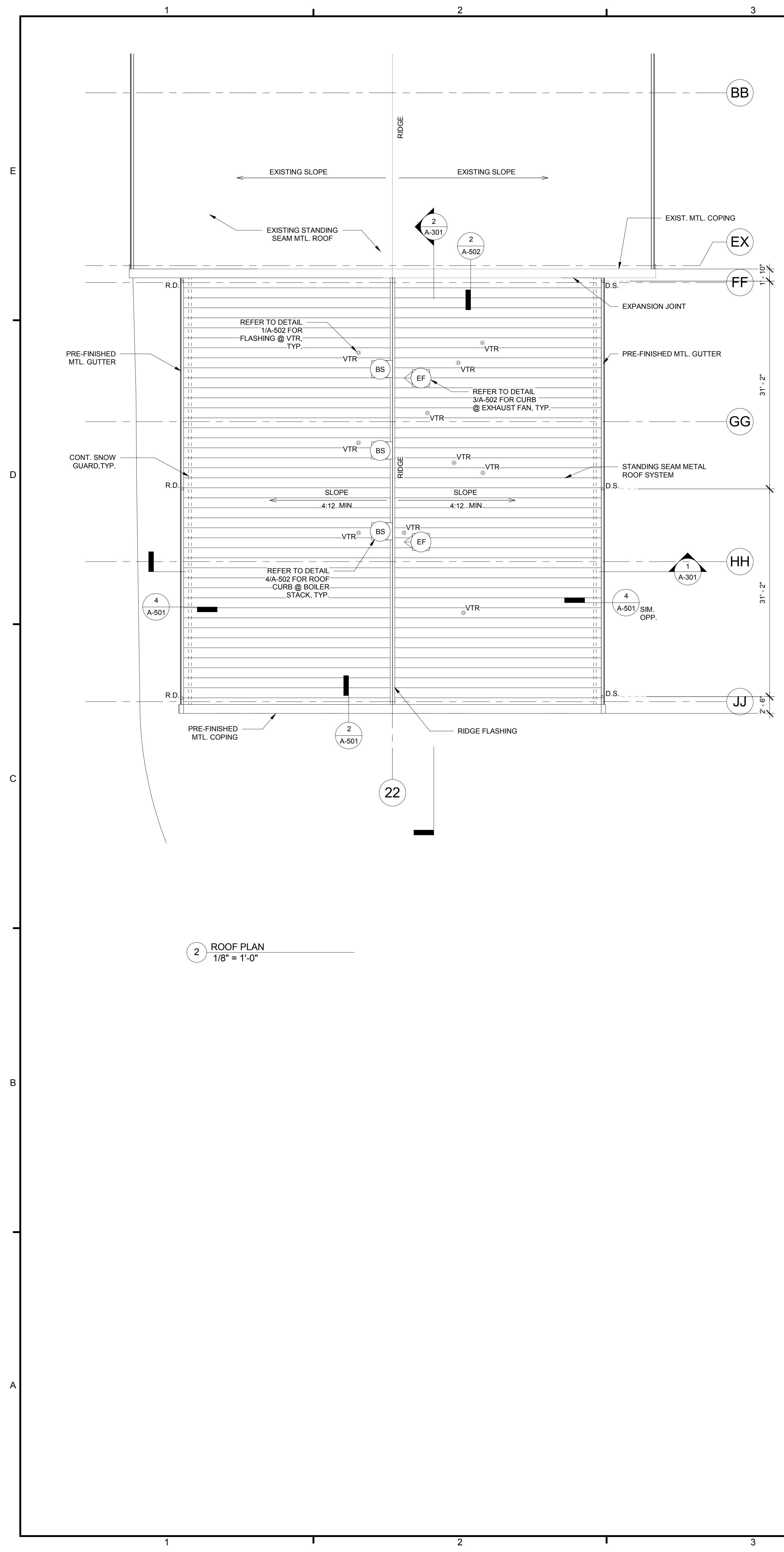
ZIMMERMAN STUDIO LLC
ARCHITECTURE - PROJECT MANAGEMENT

NO.	DATE	REV.	DESCRIPTION
1	08/18/20	0	ISSUED FOR CONSTRUCTION
2	08/27/20	1	ISSUED FOR PERMITTING
3	01/30/20	0	ISSUED FOR BIDDING
4			ISSUED FOR REVISION
5			APPD

COUNTY OF BERKS
BERKS HEIM
BERN TOWNSHIP
BOILER PROJECT
ARCHITECTURAL
DEMOLITION FLOOR PLAN

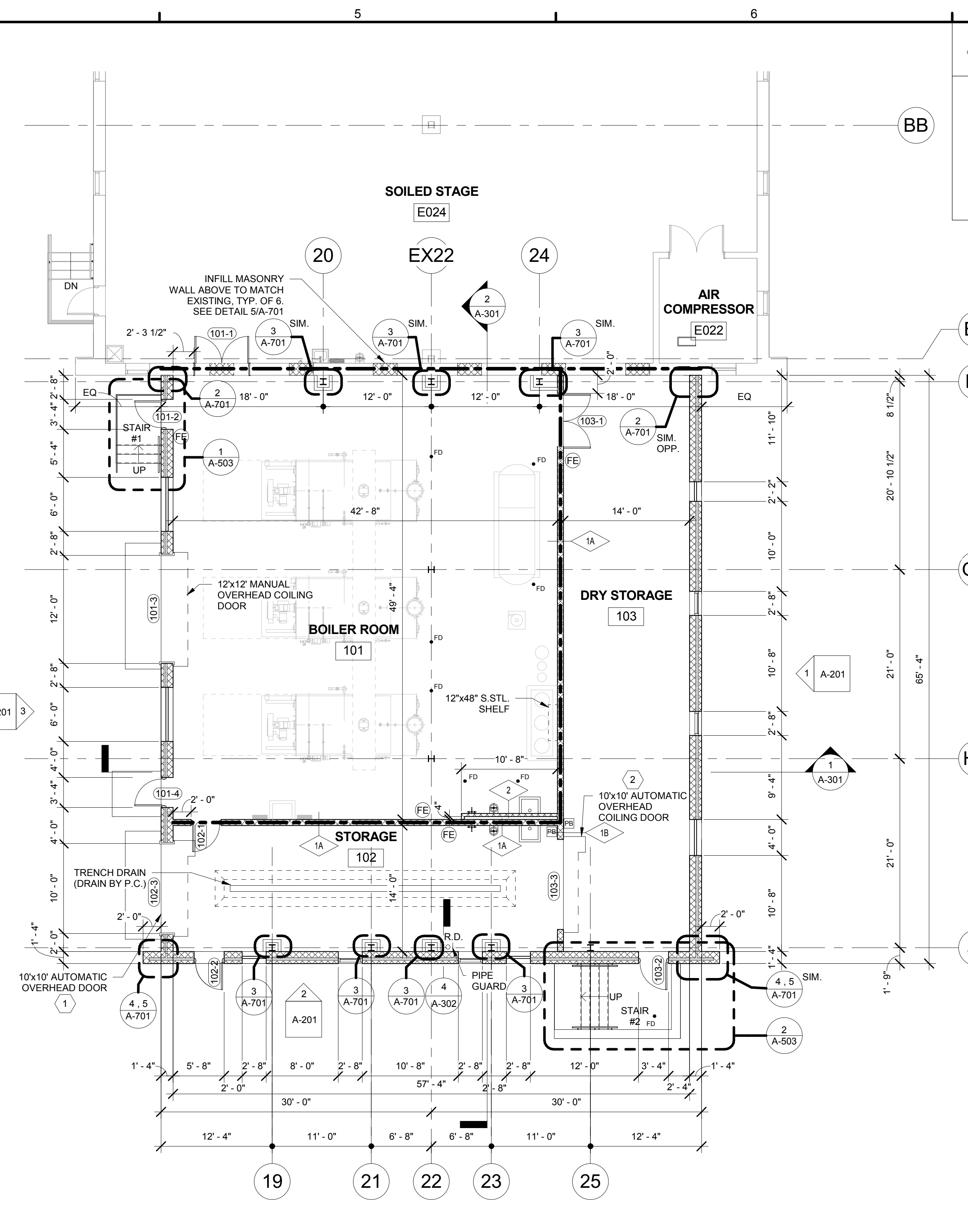
SCALE: As indicated
PREPARED BY: RNP
CHECKED BY: SED
APPROVED BY: SED

PROJECT NO: 4177.000
DRAWING NO: **AD-101**



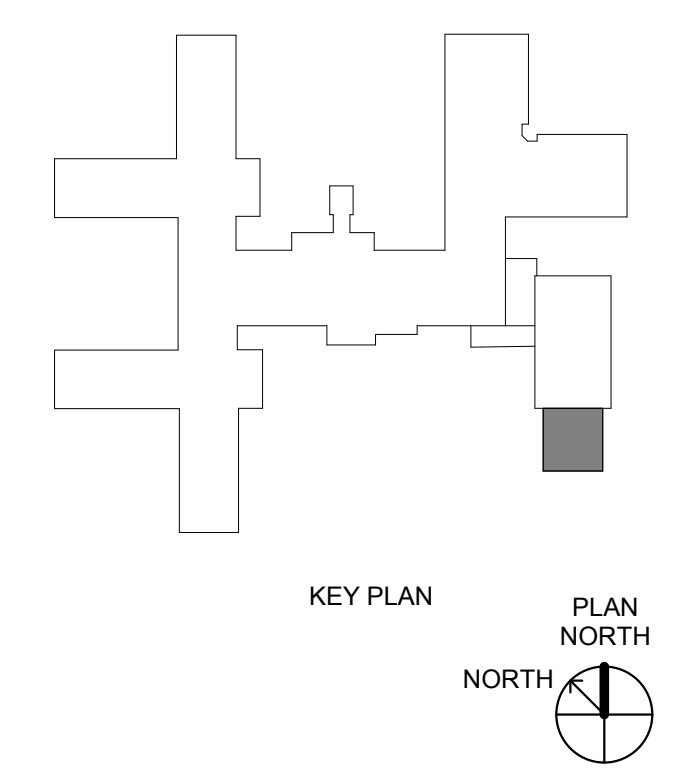
2 ROOF PLAN
1/8" = 1'-0"

- ROOF LEGEND**
- VTR VENT THRU ROOF WITH BOOT @ VENT FLASHING
 - DS 4"x5" DOWN SPOUT
 - RD ROOF DRAIN, PROVIDE 12" LONG DOWN SPOUT SECTION FOR ROOF DRAIN CONNECTION.
 - EF EXHAUST FAN ON PRE-FABRICATED CURB
 - BS BOILER STACK WITH PRE-FABRICATED CURB
- GENERAL ROOF NOTES**
1. TYP. ROOF SYSTEM: GALV. METAL DECK - CONT. VAPOR RETARDER - 6" POLYISO. RIGID INSULATION - CONT. UNDERLAYMENT - STANDING SEAM MTL. ROOF PANELS
 2. EXHAUST FANS, BOILER STACKS, VENTS, ETC. SHOWN FOR GENERAL LOCATION COORDINATION. COORDINATE SIZE AND LOCATIONS AS PER APPROVED EQUIPMENT SUBMITTALS.
 3. PROVIDE PRE-FABRICATED ROOF CURBS AT BOILER STACKS AND EXHAUST FANS.
 4. PROVIDE FLASHING ON BOILER STACK OVER CURB OPENING. FLASHING SHALL BE COMPATIBLE WITH BOILER STACK EXTERIOR WALL.
 5. PROVIDE FLASHING AND COUNTERFLASHING FOR EACH VENT THRU ROOF.



1 ADDITION FLOOR PLAN
1/8" = 1'-0"

- PLAN KEYNOTES**
1. PROVIDE AUTOMATIC OVERHEAD DOOR WITH PUSHBUTTON AND REMOTE CONTROL OPERATION. FURNISH DOOR WITH TWO (2) REMOTES.
 2. PROVIDE OVERHEAD DOOR WITH PUSHBUTTON OPERATION AT TWO LOCATIONS.



THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE GENERAL CONTRACT EXCEPT AS NOTED OTHERWISE.

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ARCHITECTURE - PROJECT MANAGEMENT

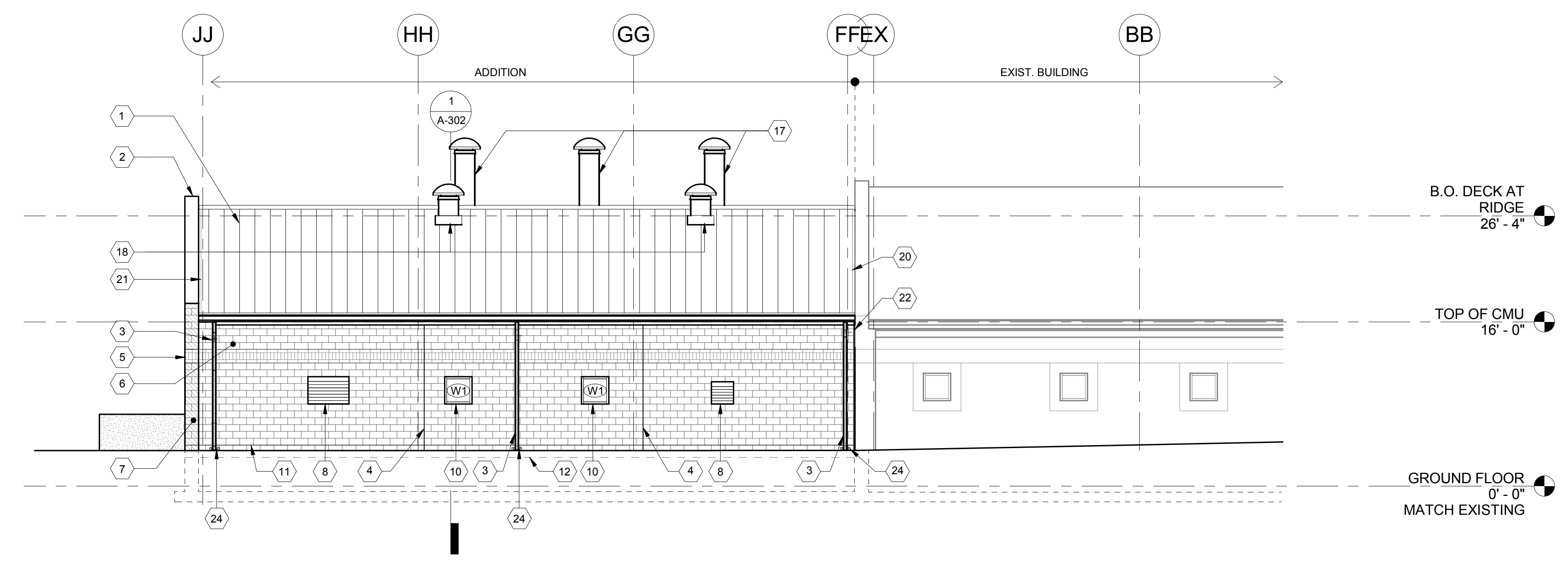
REV.	DATE	ISSUED FOR
0	01/20/20	ISSUED FOR BIDDING
1	08/07/20	ISSUED FOR PERMITTING
2	08/18/20	ISSUED FOR CONSTRUCTION

COUNTY OF BERKS
BERKS HEIM
BERN TOWNSHIP
BOILER PROJECT
ARCHITECTURAL
FLOOR PLAN AND ROOF PLAN

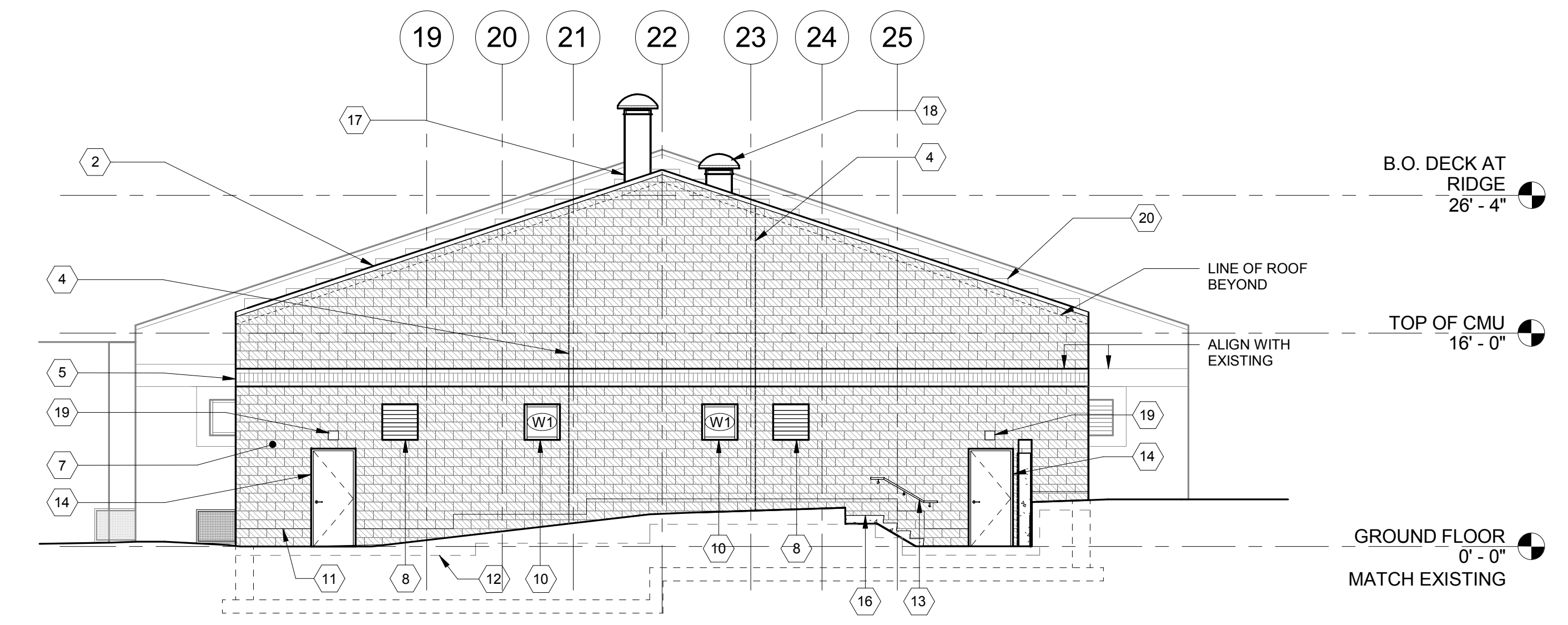
SCALE: As Indicated
PREPARED BY: RNP
CHECKED BY: SED
APPROVED BY: SED
PROJECT NO: 4177.009
DRAWING NO: **A-101**

SHEET KEYNOTES

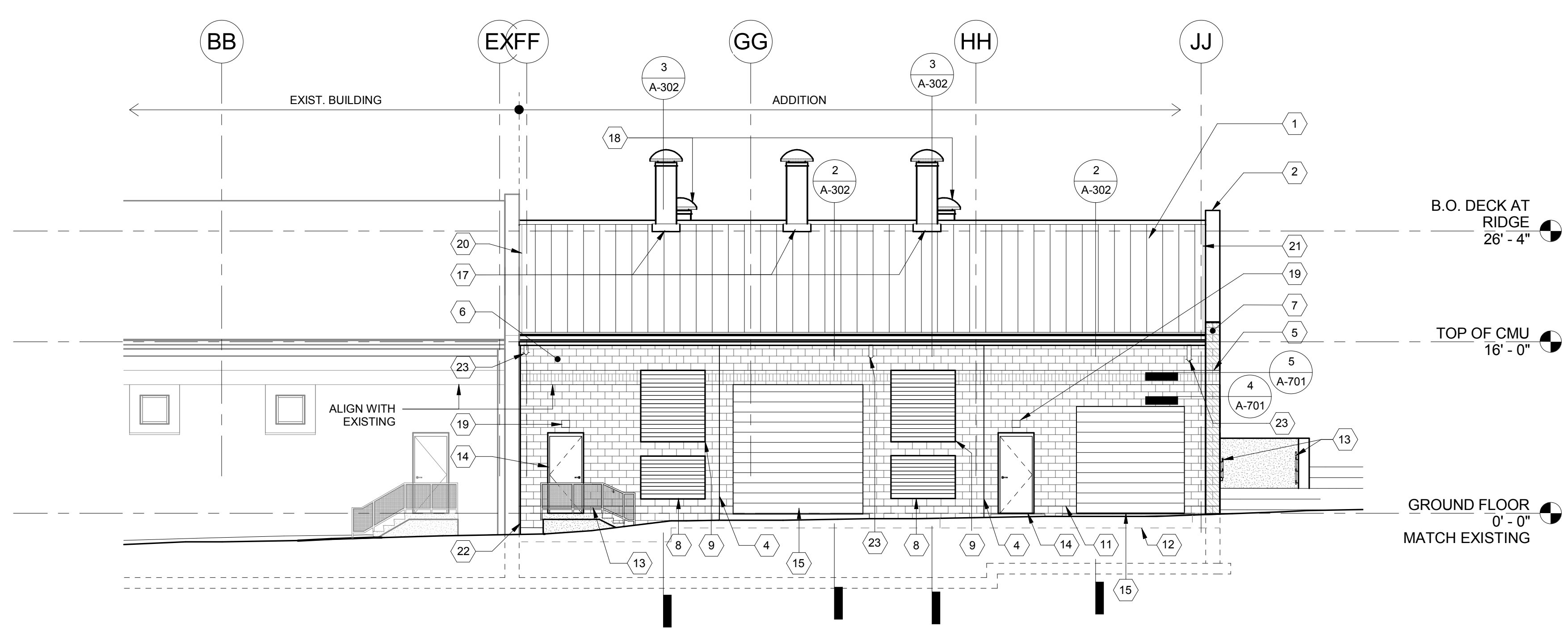
1. STANDING SEAM MTL. ROOF SYSTEM.
2. PRE-FINISHED MTL. COPING SYSTEM.
3. PRE-FINISHED 4"x6" MTL. DOWNSPOUT. DRAIN TO GRADE.
4. CONTROL JOINT.
5. 12"x4" UTILITY BRICK VENEER ACCENT STRIP. TO MATCH ADJACENT.
6. DECORATIVE CMU COLOR 1, TO MATCH EXISTING.
7. DECORATIVE CMU COLOR 2, TO MATCH EXISTING.
8. LOUVER (BY M.C.).
9. BUILDING VENTILATION/COMBUSTION AIR LOUVER (BY M.C.).
10. ALUMINUM WINDOW SYSTEM (OPERABLE).
11. CONT. THROUGH-WALL FLASHING.
12. BRICK SHELF, ELEV. VARIES.
13. MTL. GUARDRAIL/HANDRAIL, PTD.
14. H.M. DOOR AND FRAME, PTD.
15. OVERHEAD COILING DOOR.
16. CONC. STAIR.
17. BOILER STACK.
18. EXHAUST FAN.
19. WALL MOUNTED LIGHT FIXTURE (BY E.C.).
20. MTL. REGLET AND ROOF COUNTERFLASHING.
21. MTL. ROOF FLASHING.
22. PRE-FORMED EXPANSION JOINT.
23. ROOF DRAIN (BY P.C.).
24. PRECAST CONC. SPLASH BLOCK.



1 EAST ELEVATION
1/8" = 1'-0"



2 SOUTH ELEVATION
1/8" = 1'-0"



3 WEST ELEVATION
1/8" = 1'-0"

THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE GENERAL CONTRACT EXCEPT AS NOTED OTHERWISE.

DATE	REV.	DESCRIPTION
08/18/20	2	ISSUED FOR CONSTRUCTION
08/07/20	1	ISSUED FOR PERMITTING
01/30/20	0	ISSUED FOR BIDDING

GENERAL SHEET NOTES

1. AT EXTERIOR FOUNDATION WALLS: PROVIDE CONTINUOUS WATERPROOFING, DRAINAGE INSULATION PANELS, AND FOUNDATION DRAIN.
2. AT EXTERIOR CMU BACK-UP WALLS: PROVIDE CONTINUOUS FLUID-APPLIED MEMBRANE AIR BARRIER. INSTALL PER MANUFACTURER'S INSTRUCTIONS. SEAL SEAMS, PENETRATIONS, AND EDGES. REFER TO SPEC SECTION 072726.
3. PROVIDE 1 HOUR RATED CEMENTITIOUS SPRAY FIREPROOFING AT STEEL COLUMNS, BEAMS, JOISTS, AND METAL ROOF DECK.

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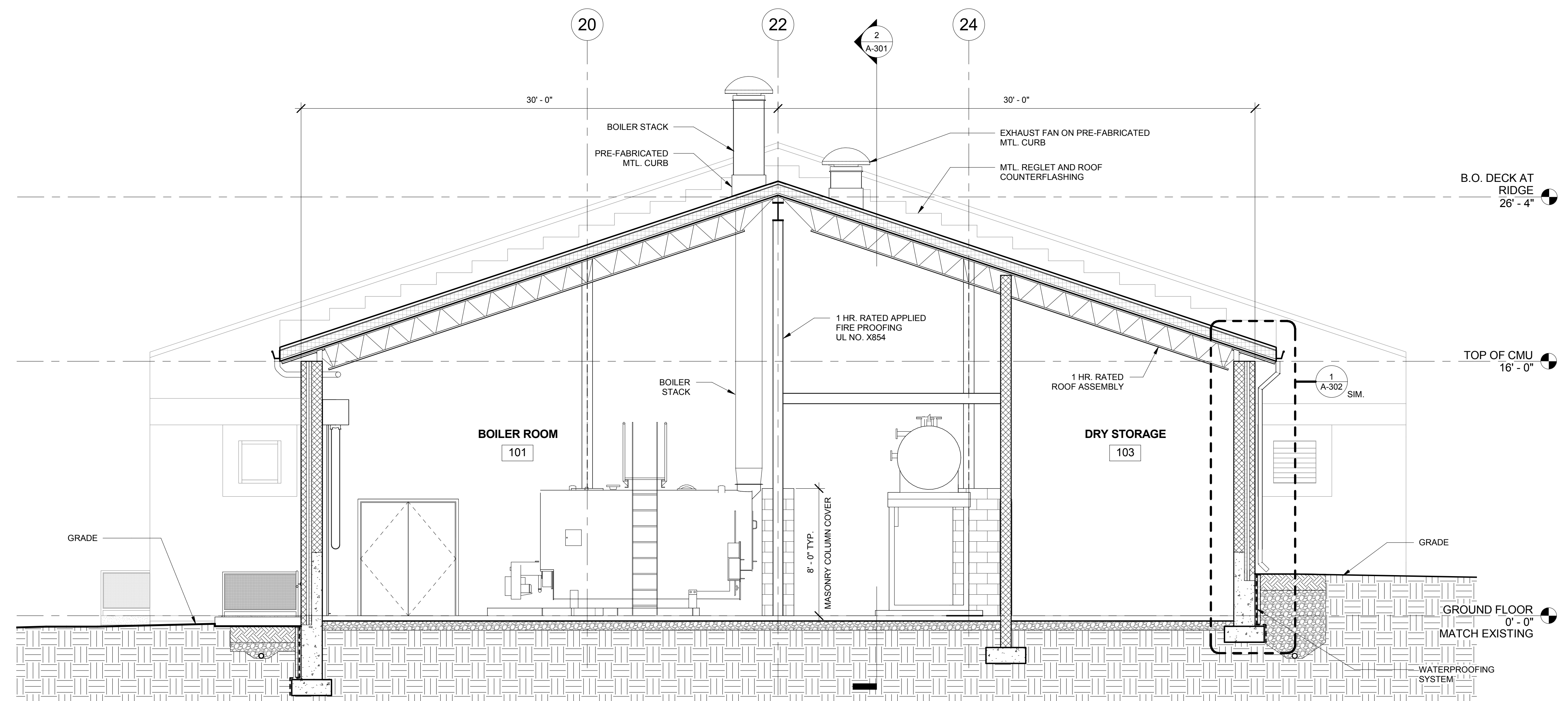
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ARCHITECTURE + PROJECT MANAGEMENT

NO.	DATE	REV.	DESCRIPTION
08/18/20	08/07/20	1	ISSUED FOR CONSTRUCTION
08/18/20	08/07/20	2	ISSUED FOR PERMITTING
01/30/20		0	ISSUED FOR BIDDING
			ISSUED FOR REVISION

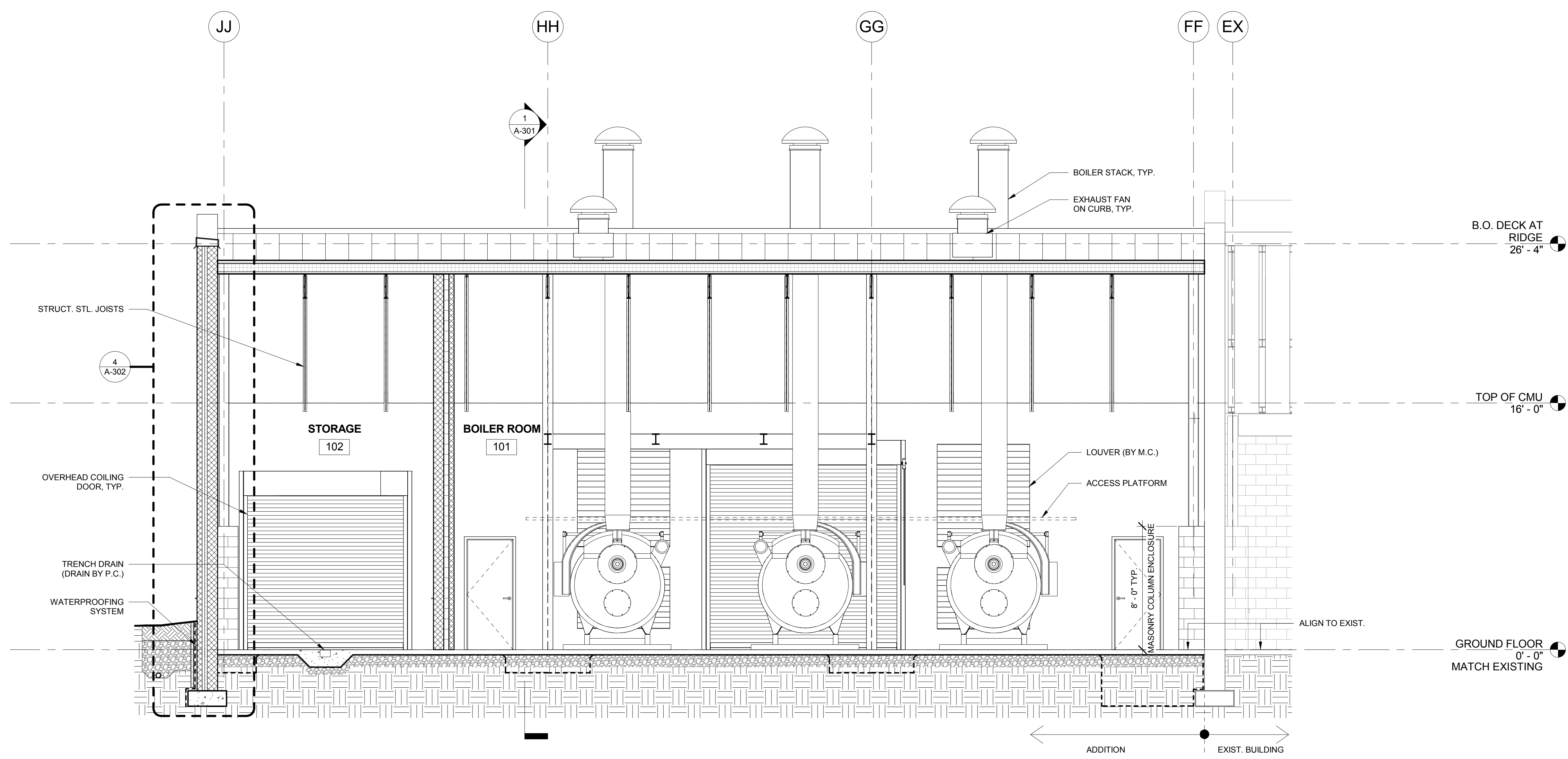
COUNTY OF BERKS
BERKS HEIM
BERN TOWNSHIP
BOILER PROJECT
ARCHITECTURAL
BUILDING SECTIONS

SCALE: 1/4" = 1'-0"
PREPARED BY: RNP
CHECKED BY: SED
APPROVED BY: SED
PROJECT NO: 4177.009
DRAWING NO:

A-301

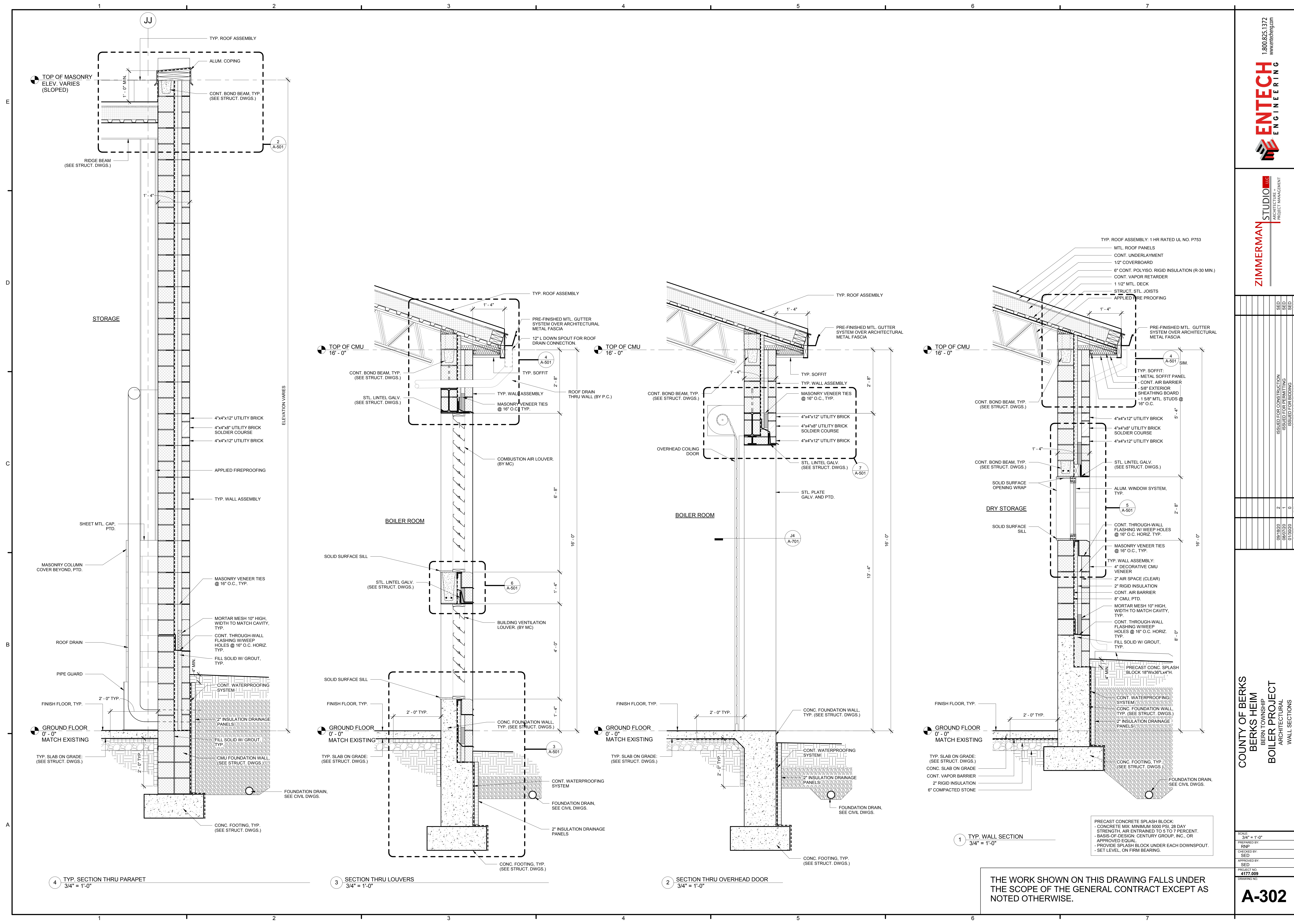


1 BUILDING SECTION - LOOKING NORTH
1/4" = 1'-0"



2 BUILDING SECTION - LOOKING WEST
1/4" = 1'-0"

THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE GENERAL CONTRACT EXCEPT AS NOTED OTHERWISE.

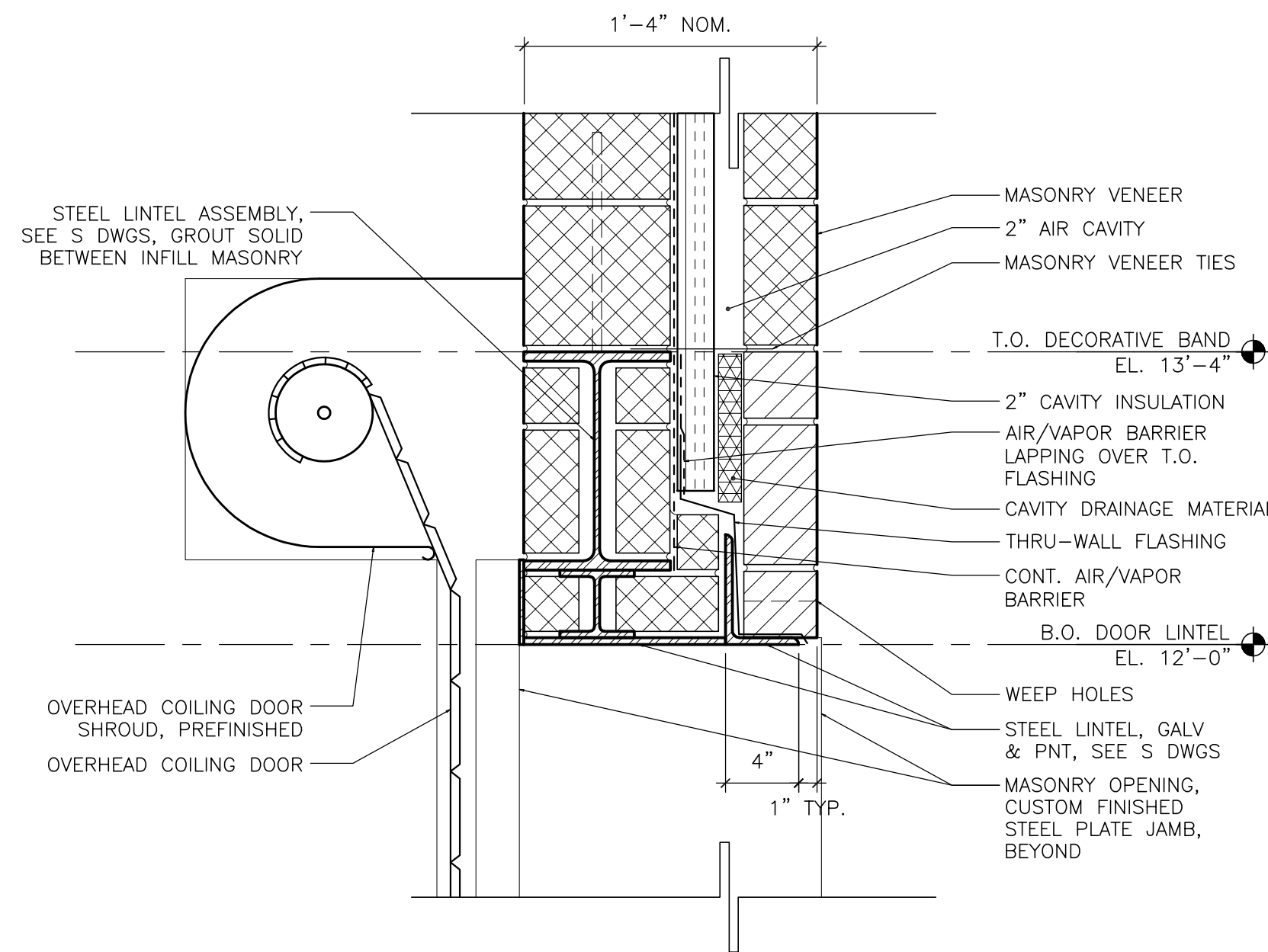


NO.	DATE	REV.	DESCRIPTION
1	08/18/20	0	ISSUED FOR CONSTRUCTION
2	08/27/20	1	ISSUED FOR PERMITTING
3	01/20/20	0	ISSUED FOR BIDDING
4		0	ISSUED FOR REVISION

COUNTY OF BERKS
 BERKS HEIM
 BERN TOWNSHIP
 BOILER PROJECT
 ARCHITECTURAL
 WALL SECTIONS

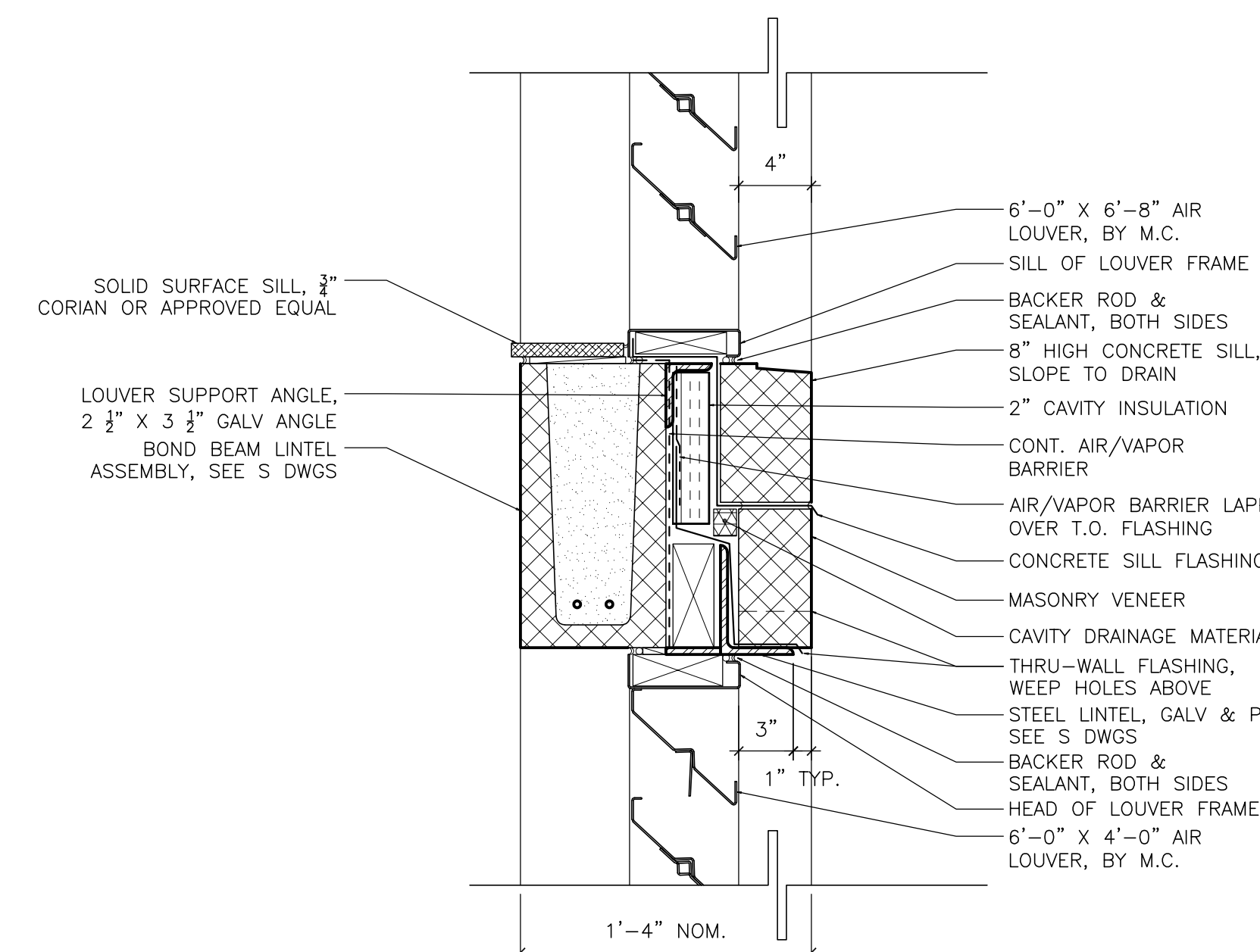
SCALE: 3/4" = 1'-0"
 PREPARED BY: RNP
 CHECKED BY: SED
 APPROVED BY: SED
 PROJECT NO: 4177.009
 DRAWING NO:

THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE GENERAL CONTRACT EXCEPT AS NOTED OTHERWISE.



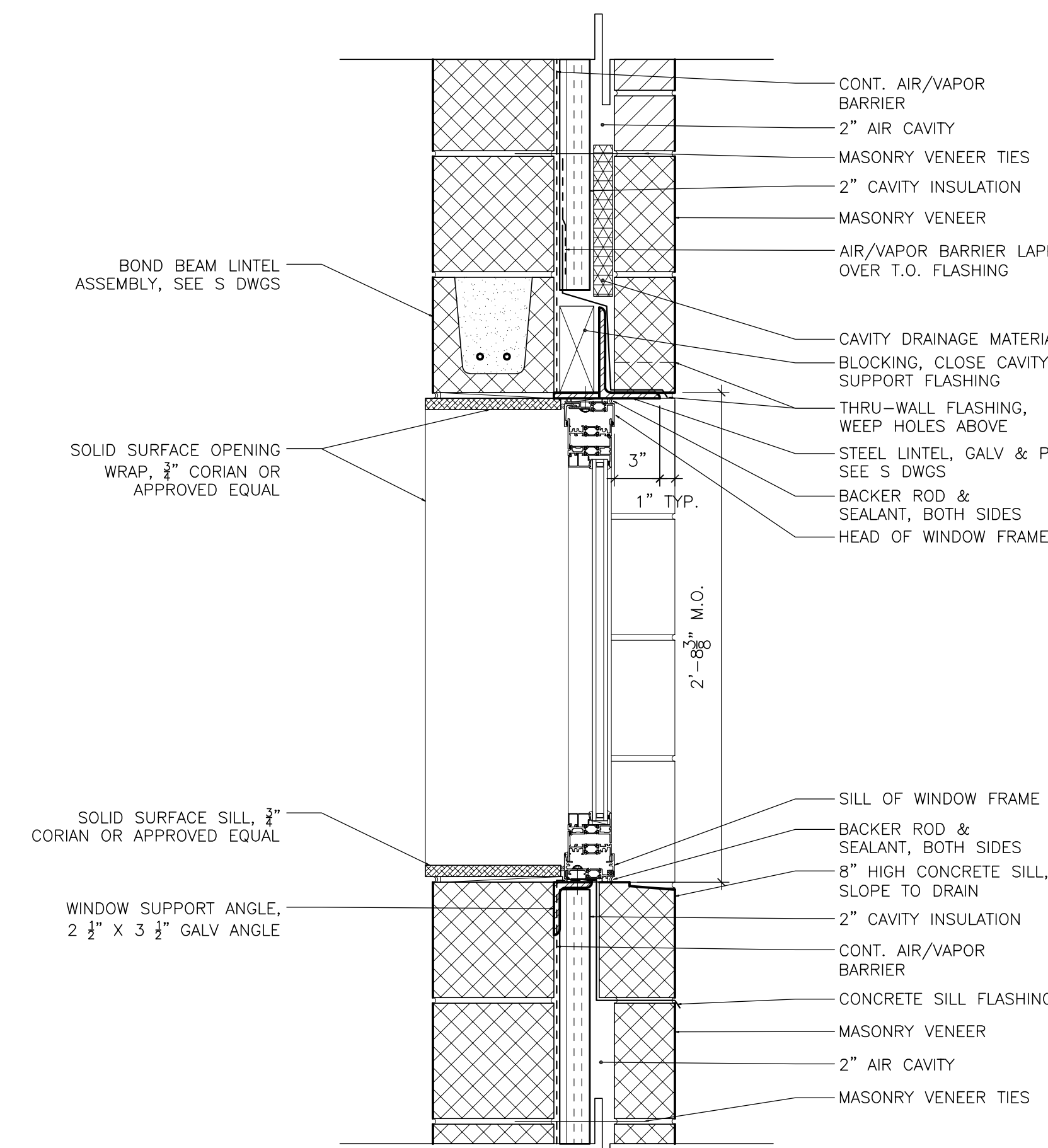
7 SECTION DETAIL - LINTEL, OH DOOR

A-501 1 1/2"=1'-0"



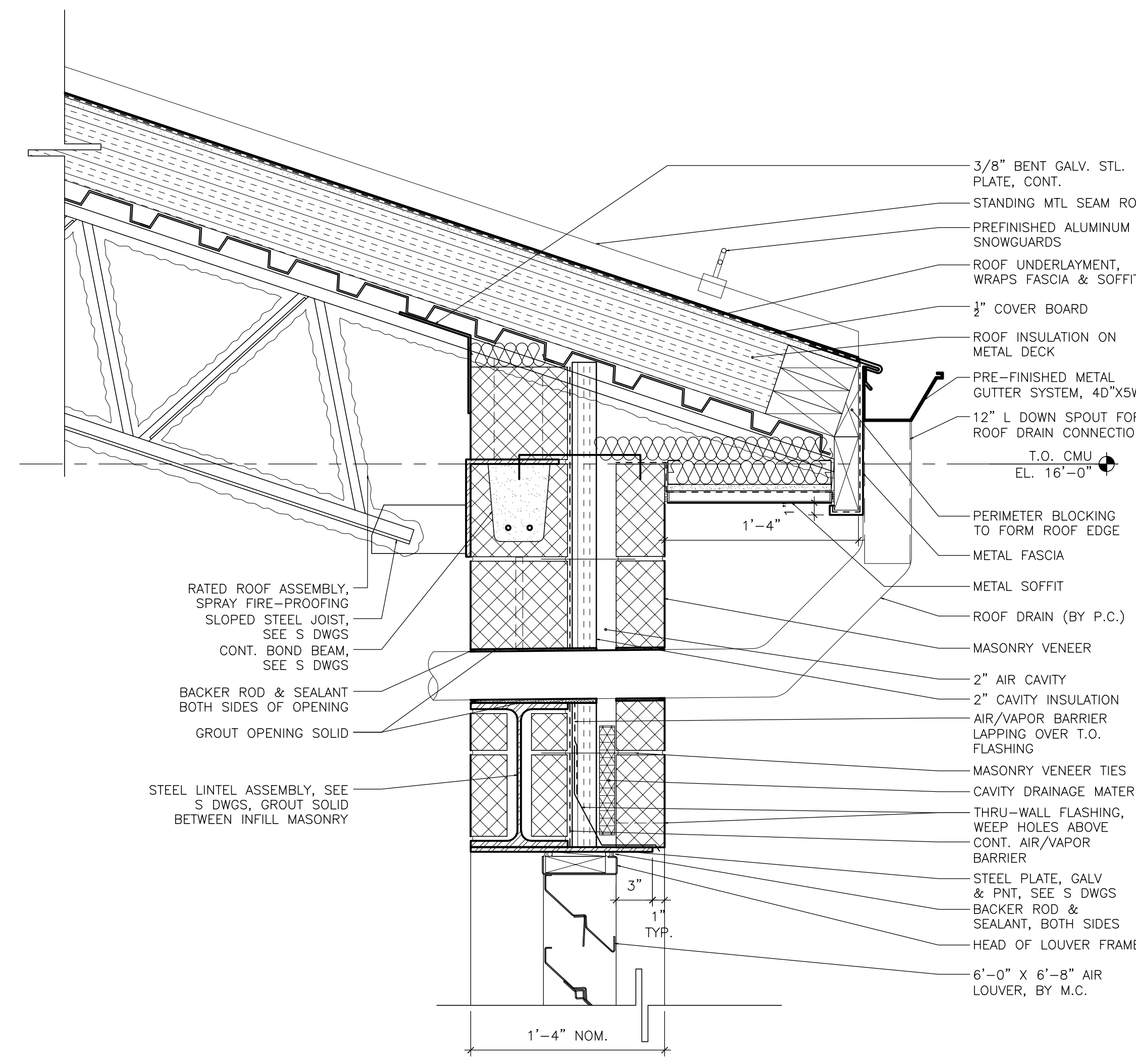
6 SECTION DETAIL - LINTEL, LOUVER

A-501 1 1/2"=1'-0"



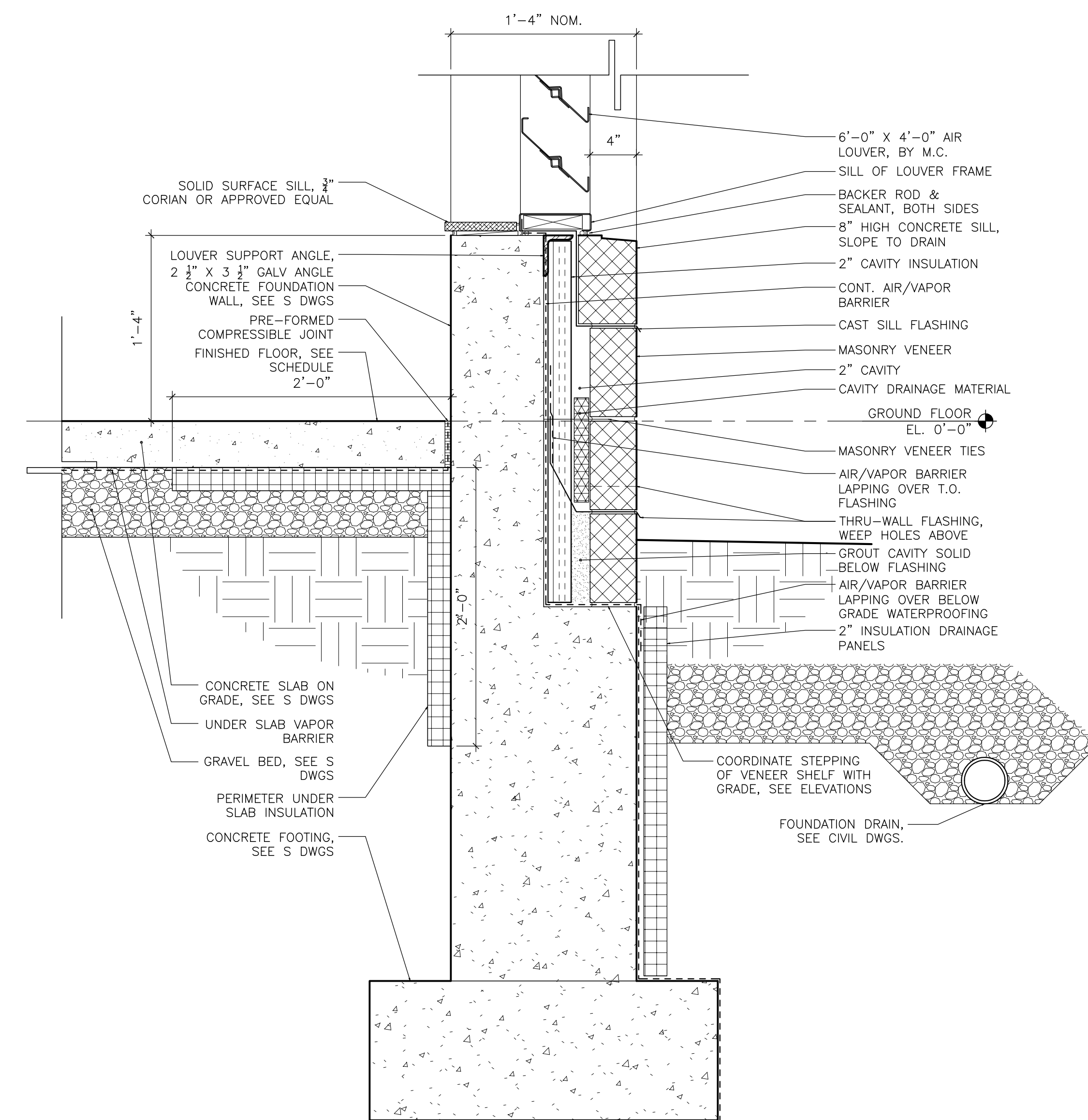
5 SECTION DETAIL - WINDOW, HEAD & SILL

A-501 1 1/2"=1'-0"



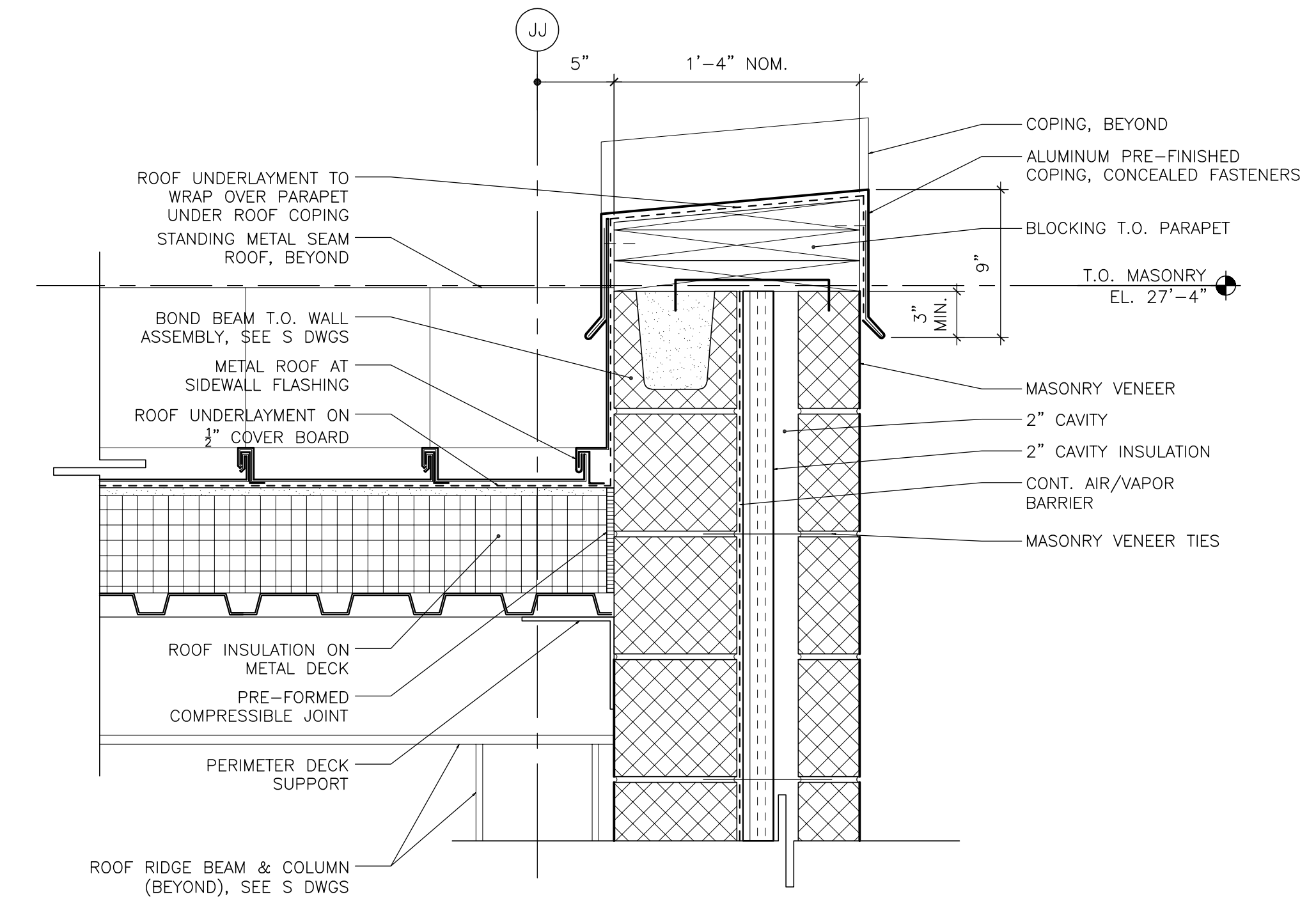
4 SECTION DETAIL - ROOF, WEST

A-501 1 1/2"=1'-0"



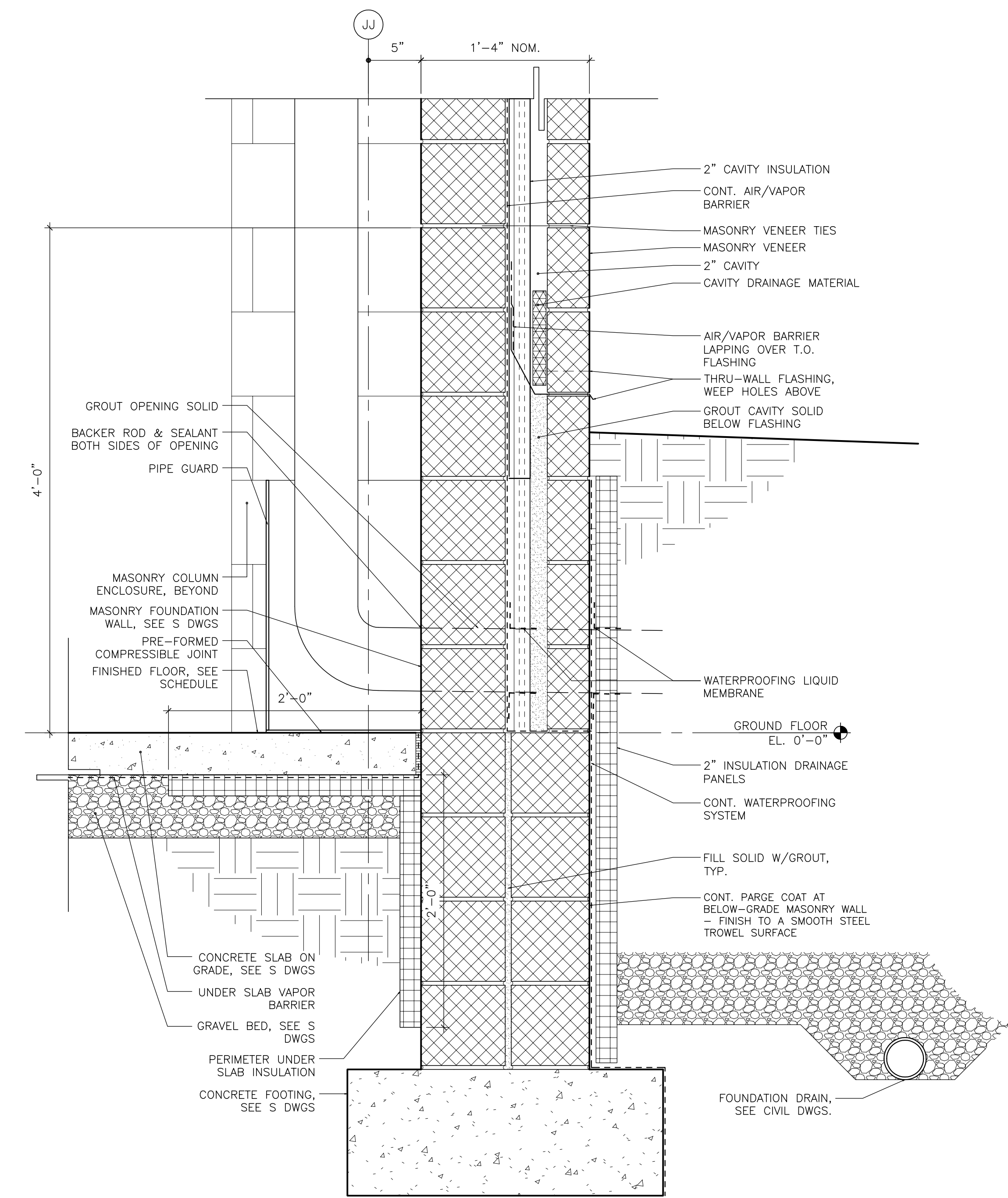
3 SECTION DETAIL - FOUNDATION, WEST (EAST SIMILAR)

A-501 1 1/2"=1'-0"



2 SECTION DETAIL - PARAPET, SOUTH

A-501 1 1/2"=1'-0"



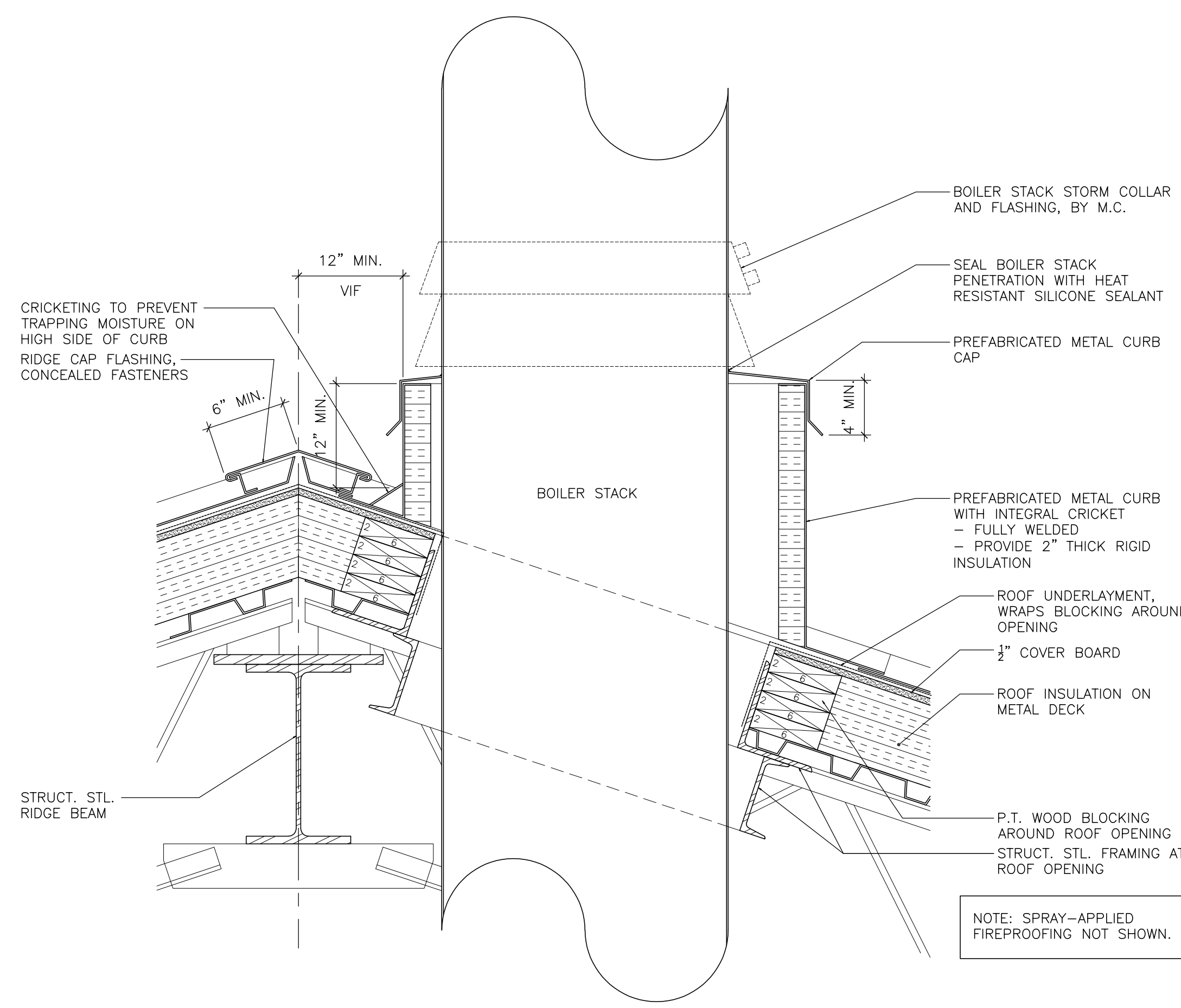
1 SECTION DETAIL - FOUNDATION, SOUTH

A-501 1 1/2"=1'-0"

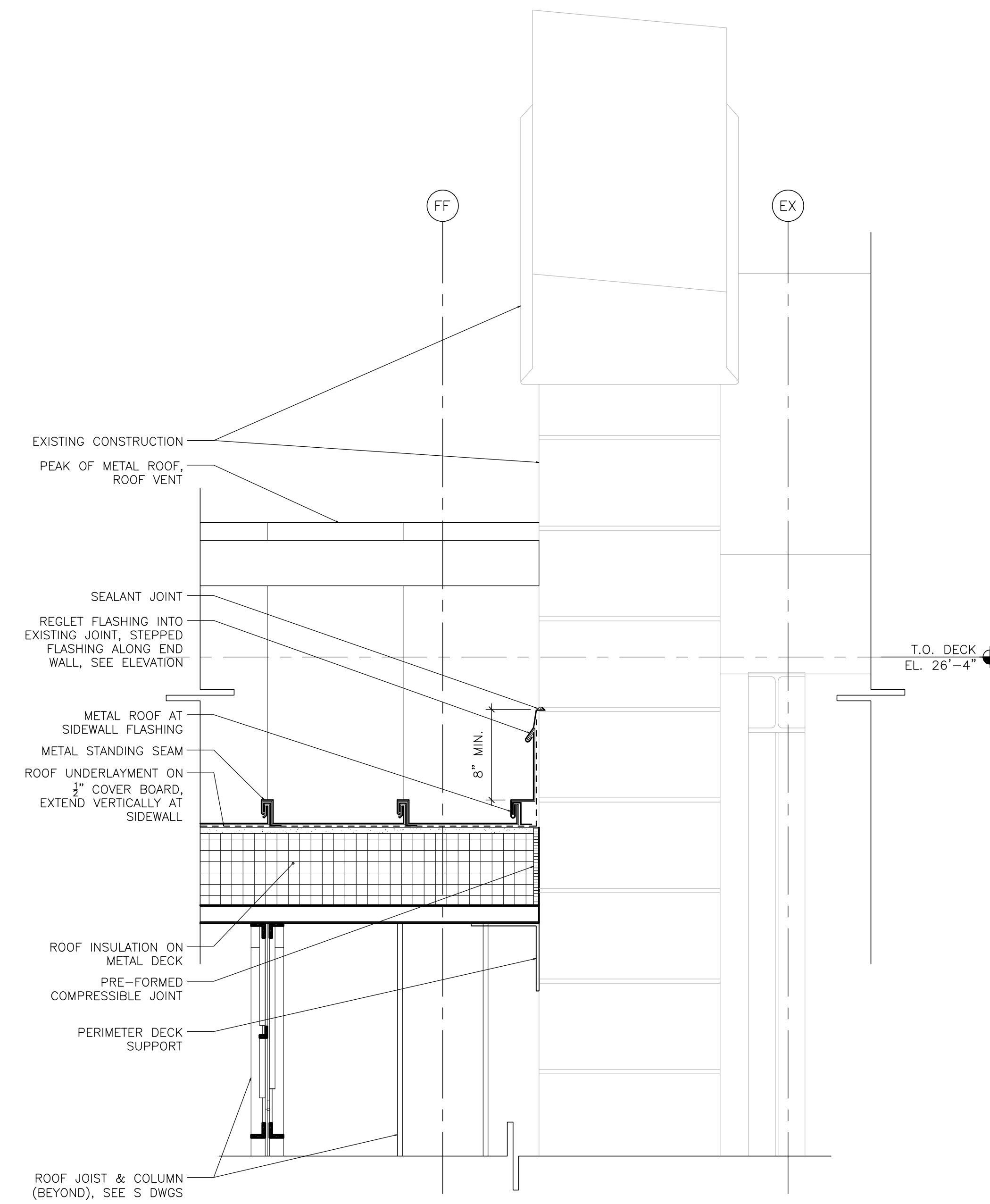
NO.	DATE	REV.	DESCRIPTION
2	09/18/20		ISSUED FOR CONSTRUCTION
1	08/07/20		ISSUED FOR PERMITTING
1	03/30/20		ISSUED FOR BIDDING
			ISSUED FOR RECORD

COUNTY OF BERKS
 BERKS HEIM
 BERN TOWNSHIP
 BOILER PROJECT
 ARCHITECTURAL
 WALL SECTION DETAILS

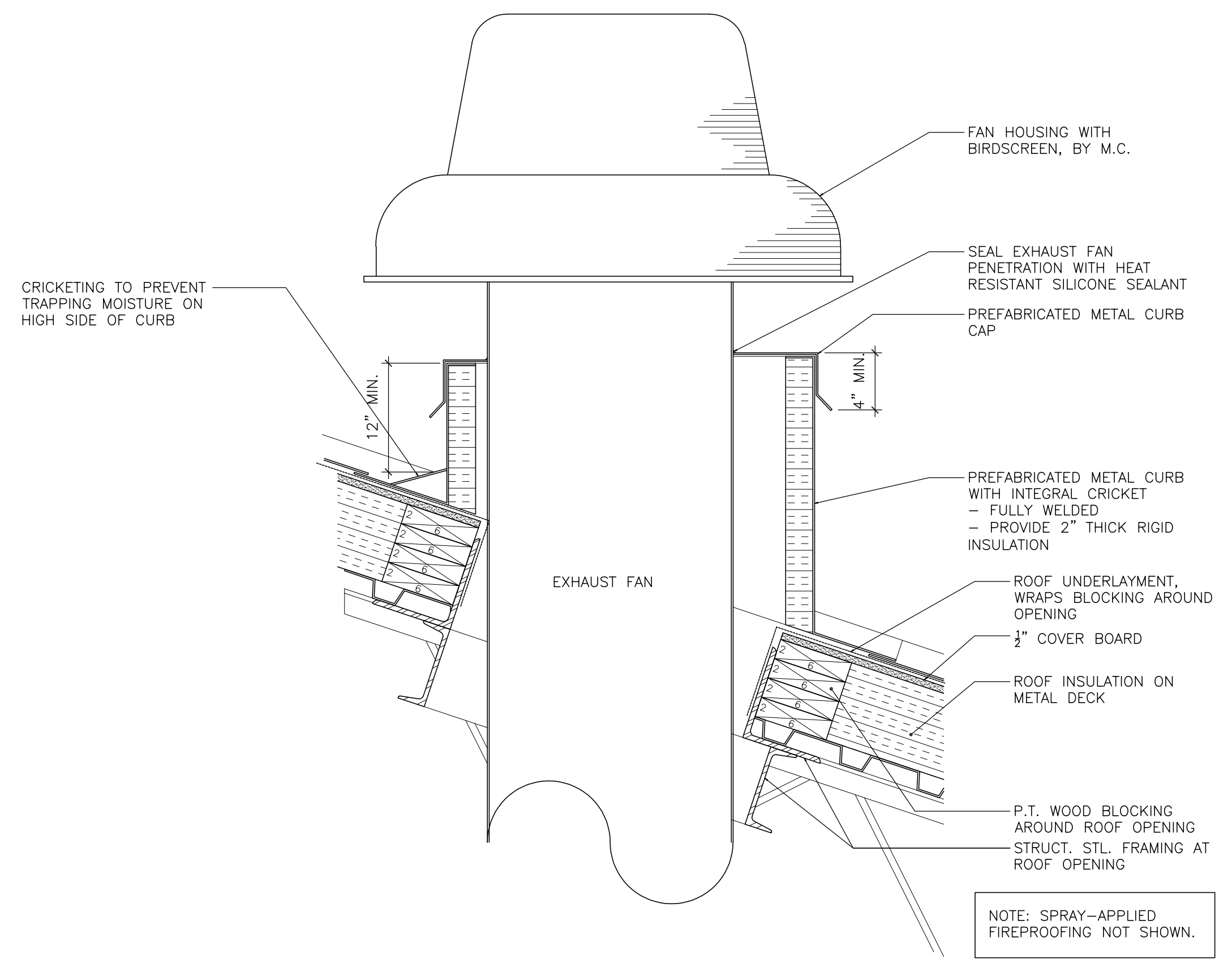
SCALE:	AS NOTED
PREPARED BY:	DRH
CHECKED BY:	SED
APPROVED BY:	SED
PROJECT NO.:	4177.009
DRAWING NO.:	



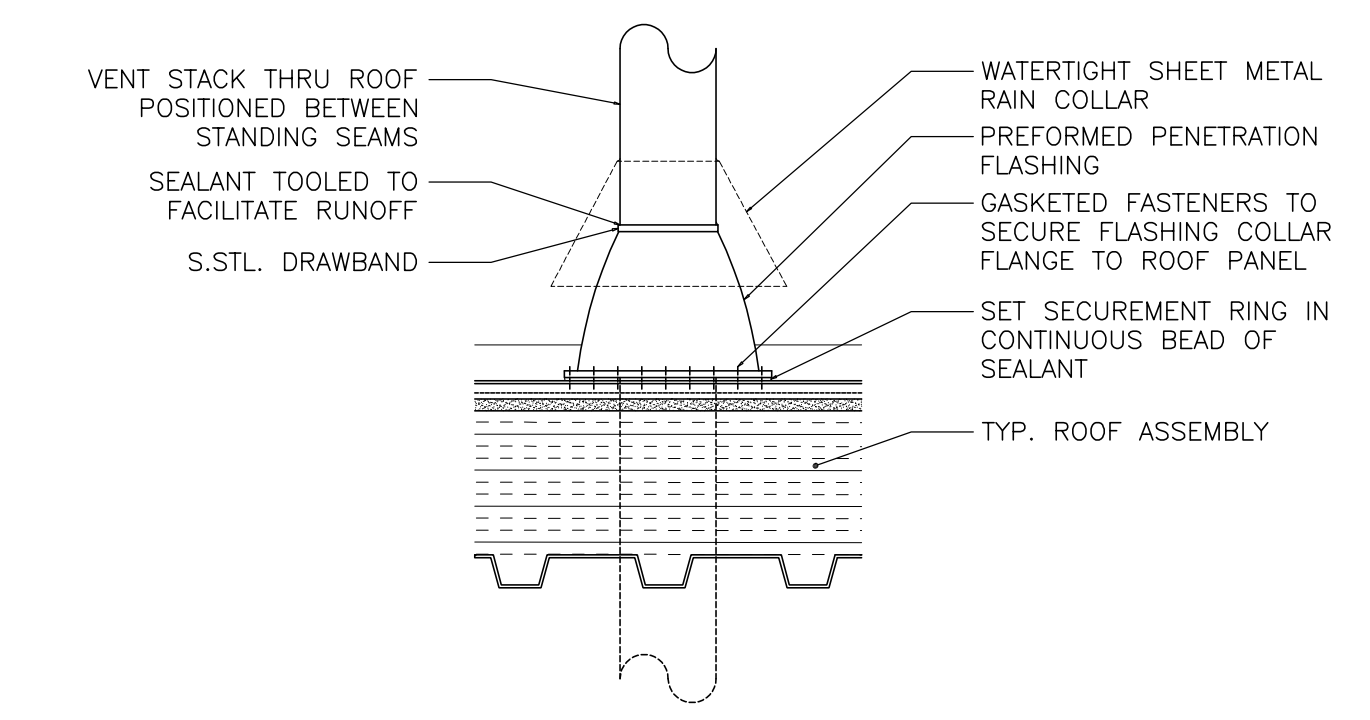
4 SECTION DETAIL - ROOF CURB @ STACK
A-502 1 1/2"=1'-0"



2 SECTION DETAIL - ROOF PARAPET @ EXISTING
A-502 1 1/2"=1'-0"



3 SECTION DETAIL - ROOF CURB @ EXHAUST
A-502 1 1/2"=1'-0"

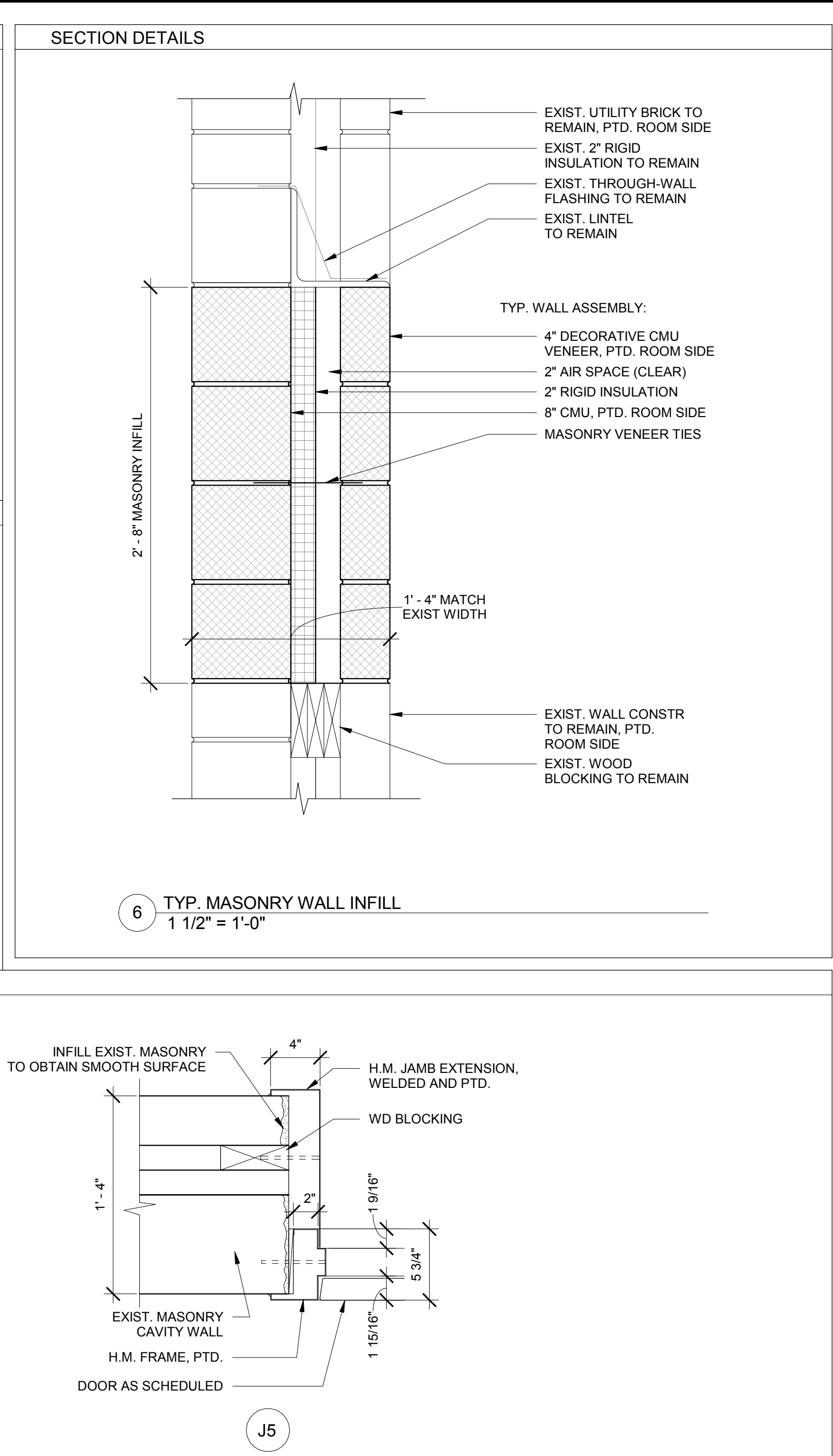
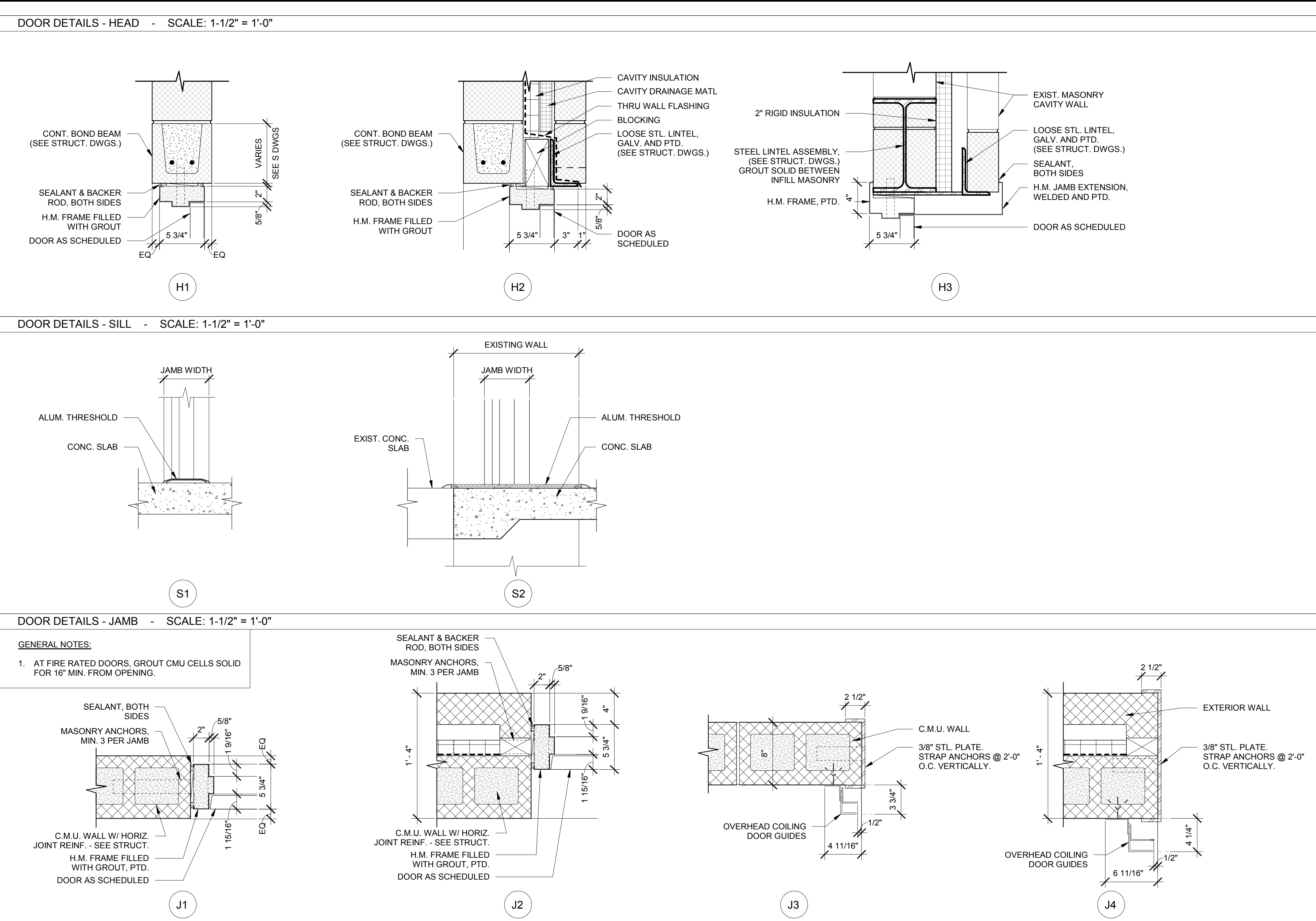


1 SECTION DETAIL - TYPICAL PIPE PENETRATION
A-502 1 1/2"=1'-0"

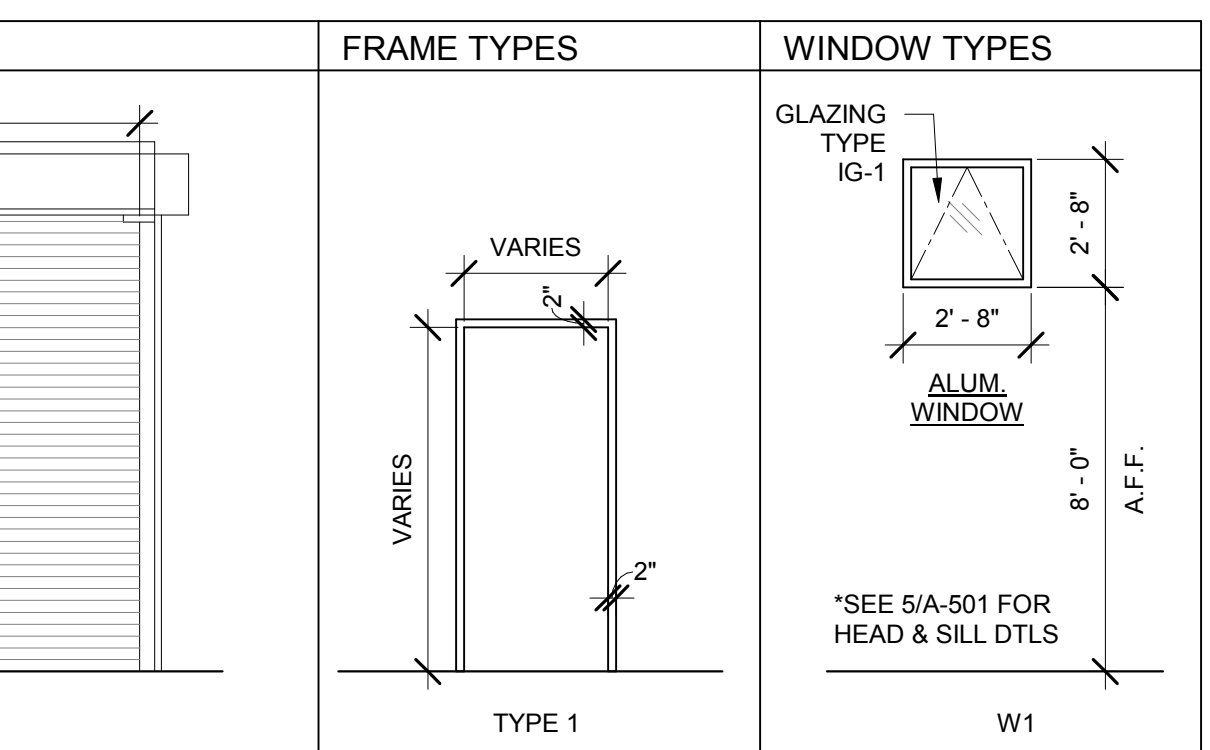
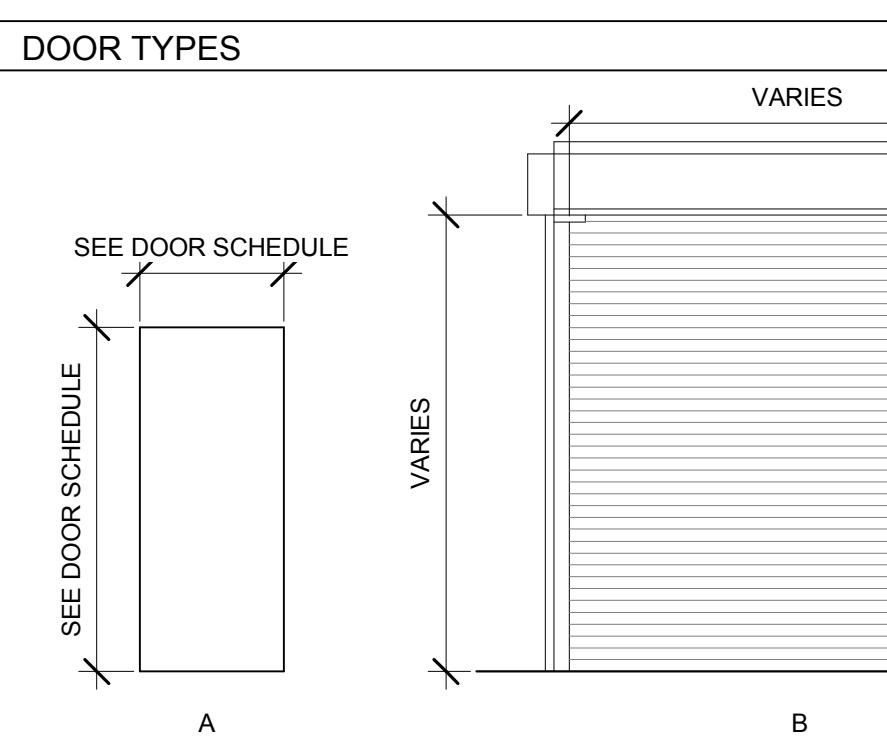
ISSUED FOR CONSTRUCTION	2	09/15/20	REV.
ISSUED FOR PERMITTING	1	08/07/20	REV.
ISSUED FOR BIDDING		07/30/20	REV.
ISSUED FOR RECORD			REV.
DATE			

ABBREVIATIONS	
ACOUSTIC	ACOUS
ADJUSTABLE	ADJ
ALUMINUM	AL OR ALUM
ARCHITECT, ARCHITECTURAL	ARCH
BOARD	BD
BOTTOM OF	B.O.
BOILER STACK	B.S.
BUILDING	BLDG
CABINET	CAB
CARPET	CPT
CEILING	C.G.
CENTER LINE	CL
CERAMIC TILE	CT
CLEAR	CLR
COLD WATER	CW
COLUMN	COL
CONCRETE	CONC
CONCRETE MASONRY UNIT	CMU
CONSTRUCTION	CONST
CONTINUOUS	CONT
DEMOLITION	DEMO
DETAIL	DTL
DIAMETER	DIA
DIMENSION	DM
DOOR	DR
DOWN	DN
DRAWING	DWG
EACH	EAC
ELECTRIC	ELEC
ELECTRICAL CONTRACTOR	E.C.
ELEVATION	ELEV
EQUIPMENT	EQUIP
ESTIMATE	EST
EXISTING	EXIST
FEET FOOT	FT FT
FINISH	FIN
FINISH FLOOR	F.F.
FIRE EXTINGUISHER	F.E.
FIRE EXTINGUISHER CABINET	F.E.C.
FIRE RESISTANCE TREATED	F.R.T.
FLOOR DRAIN	FD
FLUORESCENT	FLUOR
FRAME	FR
FURNITURE	FURN
GENERAL CONTRACTOR	GA
GLASS	GL
GYP/SUM WALL BOARD	GWB
HARDWARE	HW
HEIGHT	HT
HOLLOW METAL	HM
HORIZONTAL	HORIZ
HOT WATER	HW
HIGH	GRN
INSULATION	INSUL
INTERIOR	INT
JUNCTION BOX	JB
LAVATORY	JAV
MANUFACTURE	MFR
MASONRY OPENING	M.O.
MAXIMUM	MAX
MECHANICAL	MECH
MECHANICAL CONTRACTOR	M.C.
METAL	MTL
MINIMUM	MIN
MISCELLANEOUS	MISC
NOMINAL	NOM
NOT TO CONTRACT	NTC
NOT TO SCALE	NTS
OPPOSITE	OPP
PAINT PARTITION	PT, PTD
PARTITION	PTN
PLASTIC LAMINATE	PLAM
PLUMBING CONTRACTOR	P.L.C.
PLYWOOD	PLYWD
PRESSURE TREATED	P.T.
QUANTITY	QTY
RADIUS	R
RAINWATER CONDUCTOR	RWC
REFERENCE	REF
REINFORCE	RENF
REQUIRED	REQD
REVISION	REV
ROOF DRAIN	R.D.
ROOM	RM
ROUGH OPENING	R.O.
SIMILAR	SIM
SOLID CORE	SC
SPECIFICATIONS	SPECS
SQUARE FEET	SF OR SQ. FT.
SQUARE INCHES	SQ. IN.
STAINLESS STEEL	S.S.TL
STANDARD	STD
STEEL	ST
SUSPENDED	SUSP
SYSTEM	SYS
TELEPHONE	TEL
TOP OF	T.O.
TYPICAL	TYP
UNLESS NOTED OTHERWISE	UNO
VERIFY IN FIELD	V.I.F.
VERTICAL	VERT
W/RY COMPOSITION TILE	WCT
WATER CLOSET	WC
WEIGHT	WT
WELDED WIRE REINFORCING	WWR
WITH	W/O
WITHOUT	W/O
WOOD	WD

ARCHITECTURAL LEGEND	
	ROOM IDENTIFICATION
	ENLARGED PLAN OR DETAIL MARK
	BUILDING ELEVATION REFERENCE
	MULTIPLE ELEVATION REFERENCE
	ELEVATION REFERENCE
	SECTION REFERENCE
	WORKING POINT OR DATUM
	PARTITION TYPE
	COLUMN GRID
	SPOT ELEVATION TAG
	DOOR TAG IDENTIFICATION
	WINDOW TAG
	CLEAR DIMENSION BETWEEN ELEMENTS
	DIMENSION TO EDGE
	DIMENSION TO CENTERLINE
	FLOOR CORE, COORD. LOCATION WITH MPE DOCUMENTS
	PARTITION CORE, COORD. LOCATION & SIZE WITH MPE DOCUMENTS
	WALL OR PARTITION WITH 1/2-HOUR FIRE-RESISTANCE RATING
	WALL OR PARTITION WITH 1-HOUR FIRE-RESISTANCE RATING
	WALL OR PARTITION WITH 2-HOUR FIRE-RESISTANCE RATING
	FIRE EXTINGUISHER
	FIRE EXTINGUISHER CABINET
	AUTOMATIC PUSHBUTTON

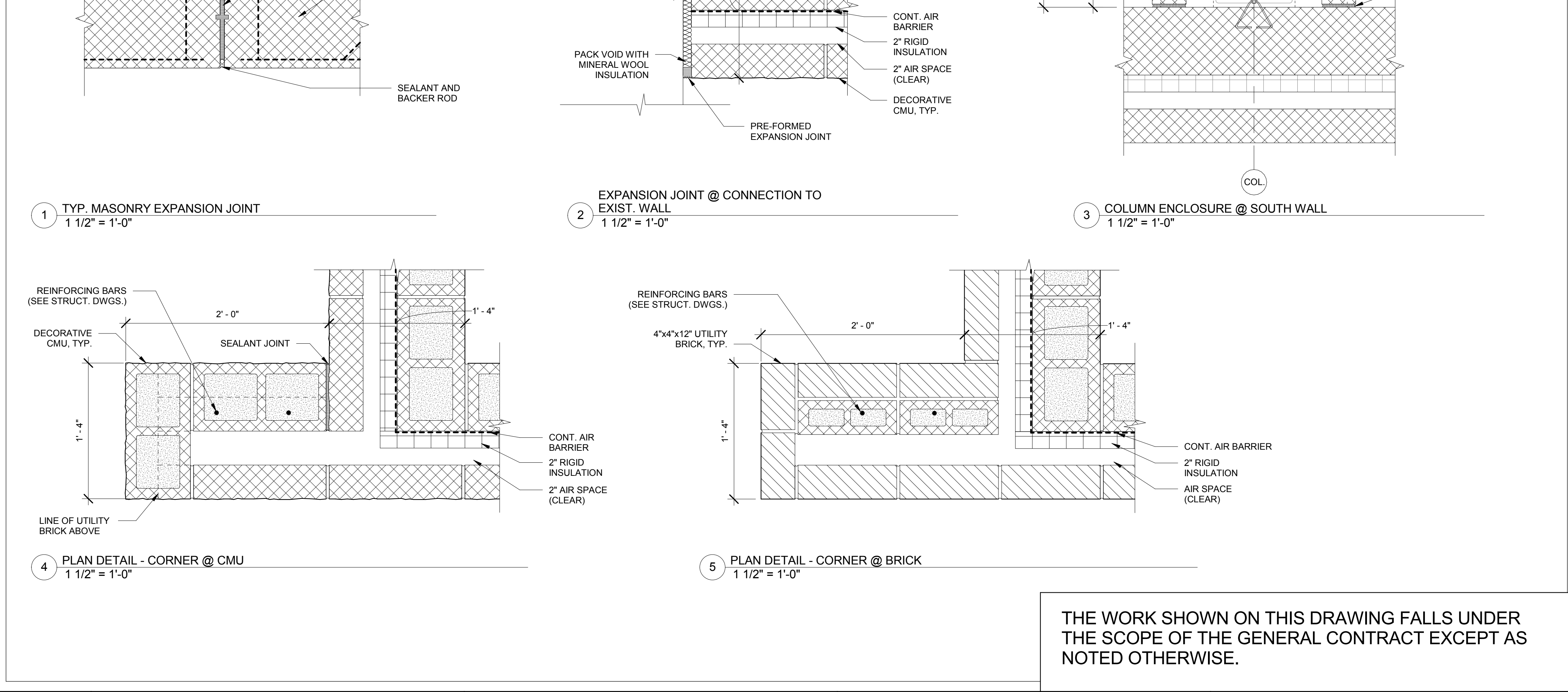
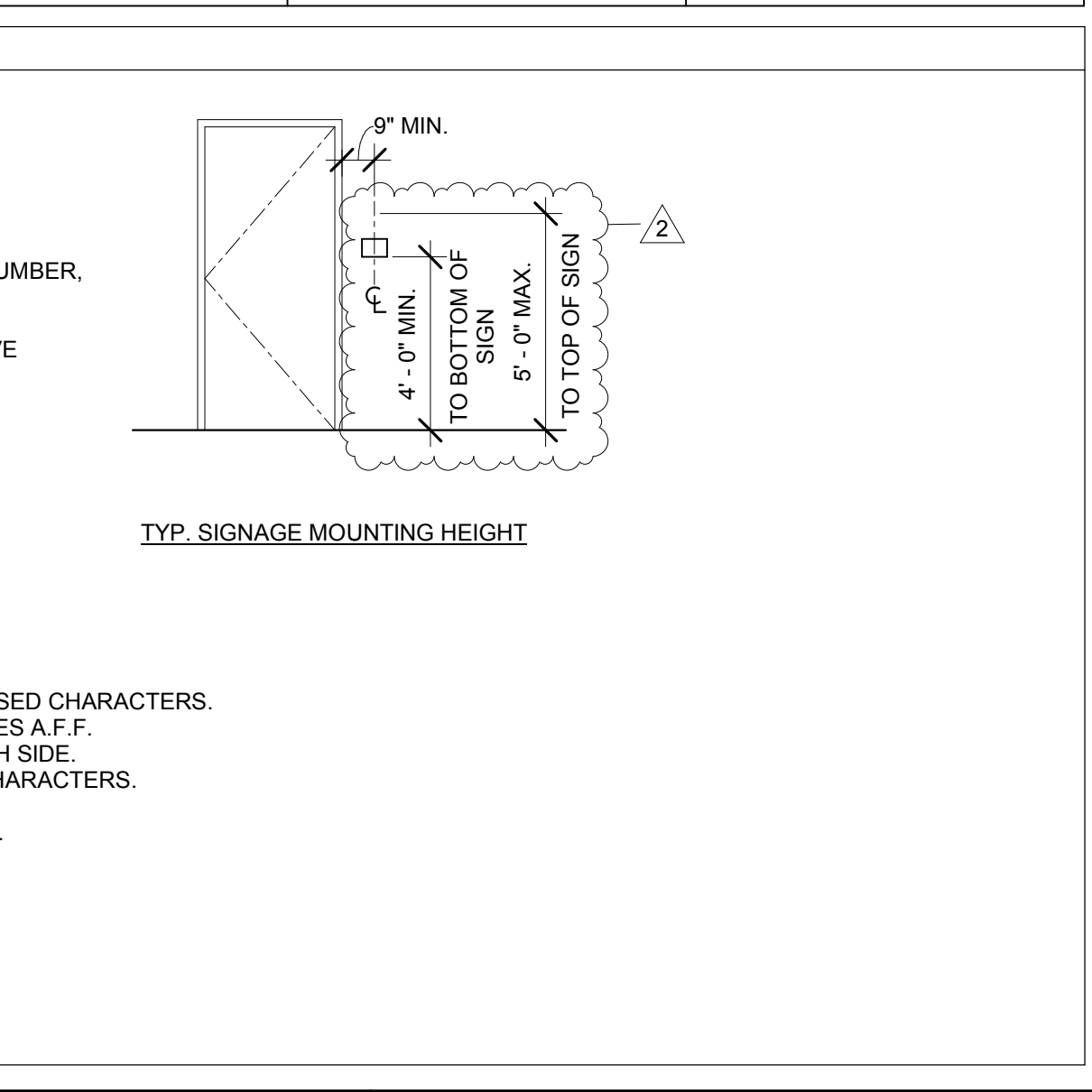


MATERIALS LEGEND	
	EARTH, COMPACTED FILL
	EARTH, UNDISTURBED
	CRUSHED ROCK GRAVEL
	CONCRETE, CAST STONE
	CONCRETE MASONRY
	BRICK
	RIGID INSULATION
	WOOD BLOCKING OR SHIM
	WOOD FRAMING, CONTINUOUS
	PLYWOOD
	WOOD - FINISHED
	PLASTER OR GYPSUM BOARD
	SOLID SURFACE



FINISH SCHEDULE			
ROOM	FLOOR	BASE	WALLS
101	CONC. SEALED	RUBBER COVE	P-1
102	CONC. SEALED	RUBBER COVE	P-1
103	CONC. SEALED	RUBBER COVE	P-1

INTERIOR PARTITION SCHEDULE			
ROOM	FLOOR	BASE	WALLS
101	CONC. SEALED	RUBBER COVE	P-1
102	CONC. SEALED	RUBBER COVE	P-1
103	CONC. SEALED	RUBBER COVE	P-1



THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE GENERAL CONTRACT EXCEPT AS NOTED OTHERWISE.

ENTECH ENGINEERING
1800.825.1372
www.entecheng.com

ZIMMERMAN STUDIO
ARCHITECTURE - PROJECT MANAGEMENT

**COUNTY OF BERKS
BERKS HEIM
BOILER PROJECT**
ARCHITECTURAL LEGENDS, ABBREVIATIONS, SCHEDULES AND DETAILS

NO.	DATE	REV.	DESCRIPTION
1	08/18/20	1	ISSUED FOR CONSTRUCTION
2	08/07/20	1	ISSUED FOR PERMITTING
3	01/30/20	0	ISSUED FOR BIDDING
4		0	ISSUED FOR REVISION

SCALE: As indicated
PREPARED BY: RNP
CHECKED BY: SED
APPROVED BY: SED
PROJECT NO: 4177.009
DRAWING NO: A-701

GENERAL SHEET NOTES

1. INSTALL FIELD LOCATED PIPING TO ALLOW ACCESS FOR OPERATION AND MAINTENANCE AND TO AVOID TRIPPING HAZARDS.
2. LOCATIONS OF VENT PENETRATIONS SHALL BE REVIEWED, COORDINATED AND APPROVED BY THE ROOFING CONTRACTOR TO AVOID THE STANDING SEAMS.
3. DOMESTIC WATER PIPING SHALL BE HARD COPPER TUBE, ASTM B 88, TYPE L, BELOW GRADE SANITARY PIPING SHALL BE CAST IRON SOIL PIPE, HUB AND SPIGOT, ASTM A 74 WITH NEOPRENE GASKETS RATED FOR 212F. REFER TO THE PLUMBING SPECIFICATIONS FOR ADDITIONAL INFORMATION.

NEW WORK KEYNOTES

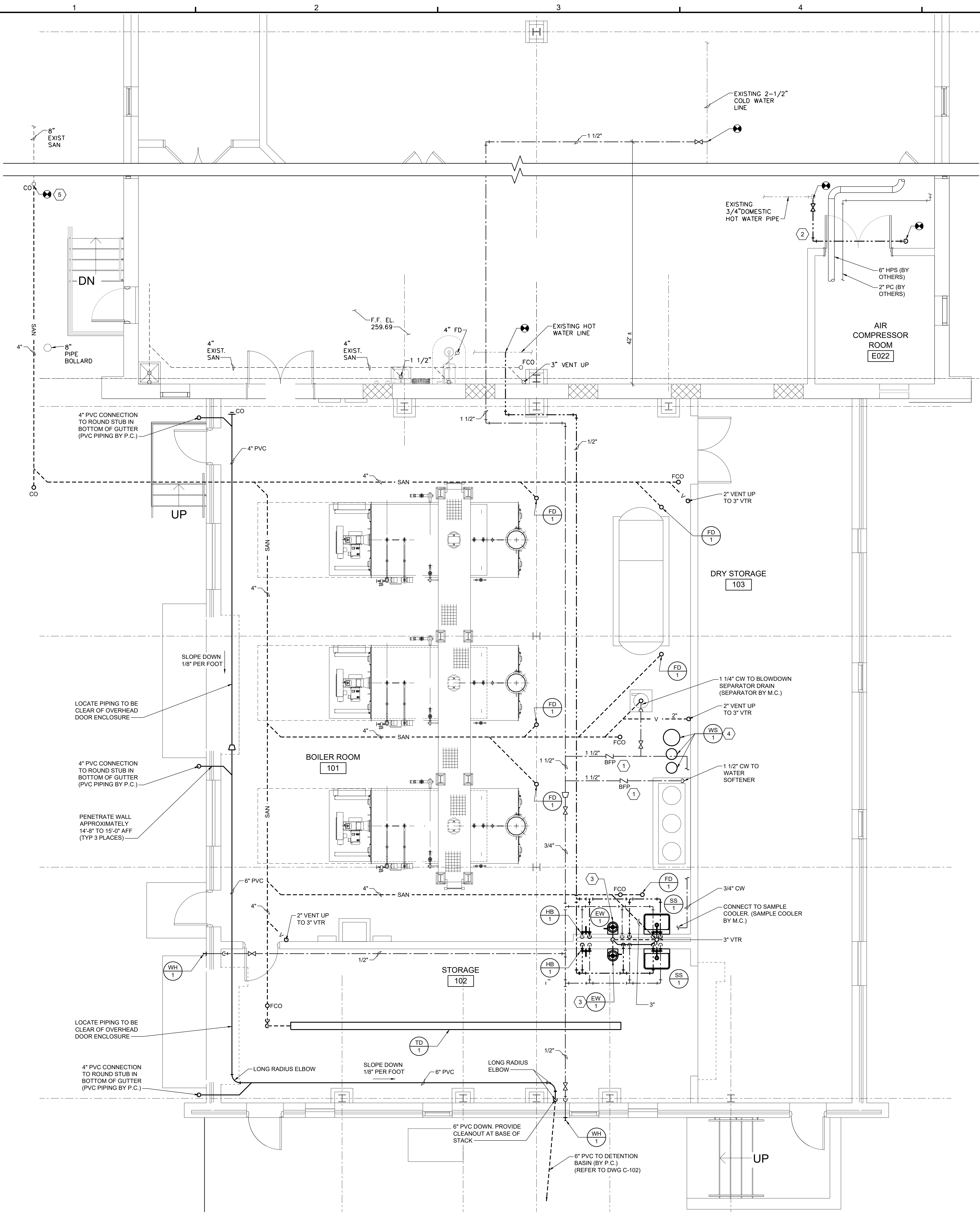
1. PROVIDE REDUCED PRESSURE BACKFLOW PREVENTER WITH ISOLATION VALVES, AIR GAP FITTING AND DRAIN. PIPE DRAIN TO NEAREST FLOOR DRAIN.
2. CONTRACTOR SHALL RELOCATE EXISTING 3/4" DOMESTIC HOT WATER PIPE APPROXIMATELY 24" LOWER AS REQUIRED TO PROVIDE CLEARANCE FOR NEW STEAM AND CONDENSATE PIPING. INSULATE PIPING MODIFICATION TO MATCH ADJACENT.
3. WALL MOUNT THERMOSTATIC MIXING VALVE ABOVE EYEWASH.
4. PROVIDE WATER SOFTENER WITH PIPING AS SHOWN ON DRAWING M-601.
5. EXTEND EXISTING SANITARY LATERAL. PROVIDE REDUCERS AND ADAPTERS AS NEEDED FOR CONNECTION TO EXISTING PIPING.

DATE	ISSUED FOR	BY	REV.	DATE
08/16/20	CONSTRUCTION	MAF	2	
08/17/20	PERMITTING	MAF	1	
01/03/20	ISSUED FOR BIDDING	MAF	0	
	ISSUED FOR REVISION	MAF		

COUNTY OF BERKS
 BERKS HEIM
 BERN TOWNSHIP
 BOILER PROJECT
 PLUMBING PLAN

SCALE	AS NOTED
PREPARED BY:	SME
CHECKED BY:	MDR
APPROVED BY:	MAF
PROJECT NO.	4177.009
DRAWING NO.	

P-101



PLUMBING FIXTURE SCHEDULE

ITEM NO.	DESCRIPTION	MOUNTING HEIGHT	PIPING CONNECTIONS				BASIS OF DESIGN		NOTES
			SAN	VENT	CW	HW	MANUFACTURER	MODEL	
SS-1	SERVICE SINK	28"	3"	2"	1/2"	1/2"	KOHLER	K-6716	1,6
EW-1	EYE WASH, WALL MOUNTED	36"	1 1/4"	--	1/2"	1/2"	GUARDIAN	G1750	2,6
HB-1	FAUCET, HW, CW	36"	--	--	1/2"	1/2"	KOHLER	K-8907	5,6
WH-1	WALL HYDRANT, FREEZE PROOF	24"	--	--	1/2"	--	JOSAM	71300-52	3,6
FD-1	FLOOR DRAIN, LARGE STRAINER	-1/2"	4"	--	--	--	JOSAM	30000-10A	--
TD-1	TRENCH DRAIN	-1/2"	4"	--	--	--	JOSAM	PRO-PLUS 200	4,6

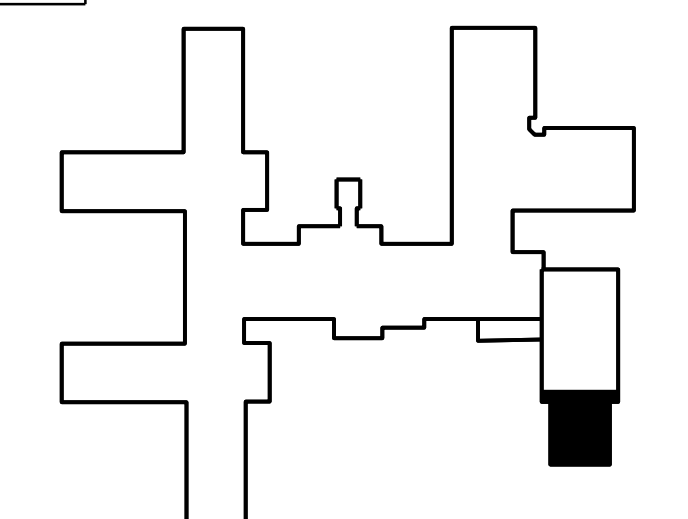
- NOTES:
1. PROVIDE SERVICE SINK FAUCET K-8905, STRAINER AND 3" P-TRAP.
 2. PROVIDE THERMOSTATIC MIXING VALVE, GUARDIAN MODEL G360LF AND EMERGENCY EYEWASH SIGN.
 3. PROVIDE WALL BOX WITH VACUUM BREAKER AND BRONZE FACE.
 4. PROVIDE CAST IRON GRATE AND END OUTLET.
 5. PROVIDE WALL MOUNTED HOSE RACK ADJACENT TO HOSE BIB.
 6. PROVIDE BASIS OF DESIGN OR APPROVED EQUAL.

WATER SOFTENER SCHEDULE

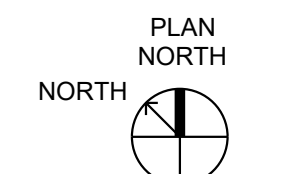
ITEM NO.	TYPE	FLOW (GPM)	MAX. PRESS. DROP (PSI)	RESIN (CF)	SALT STORAGE (LBS.)	HARDNESS (GR./GAL.)		BASIS OF DESIGN		NOTES
						INCOMING	LEAVING	MANUFACTURER	MODEL	
WS-1	DUPLEX	28	15	2X2	300	--	--	MARLO	MAT 60M-1-1/2	1

- NOTES:
1. PROVIDE BASIS OF DESIGN OR APPROVED EQUAL.

SCHEDULE WORK IN OCCUPIED SPACES AFTER 3 PM.



KEY PLAN

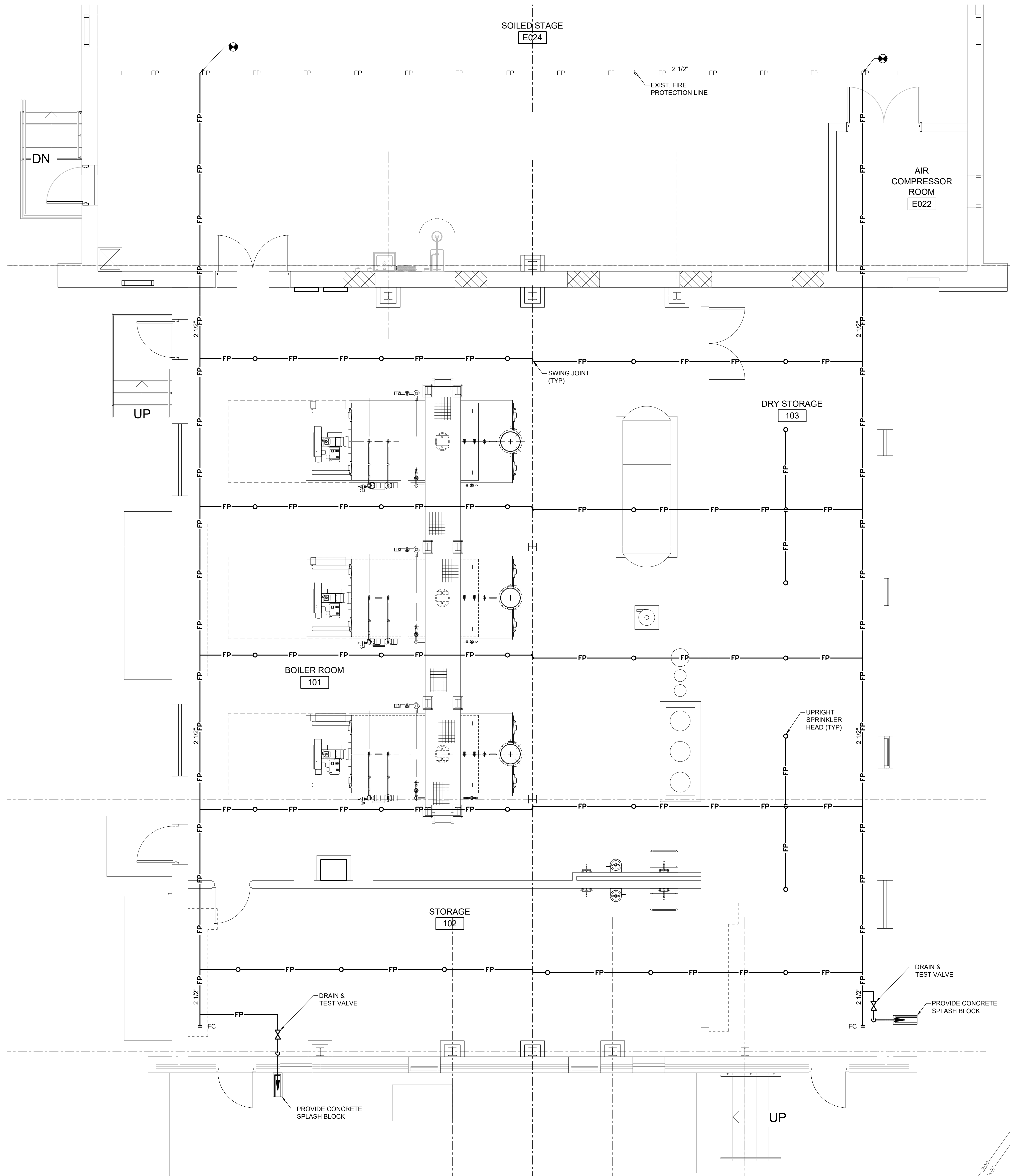


1 BOILER ADDITION - PLUMBING PLAN
 Scale: 1/4" = 1'-0"
 0 2' 4'

THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE PLUMBING CONTRACT EXCEPT AS NOTED OTHERWISE.

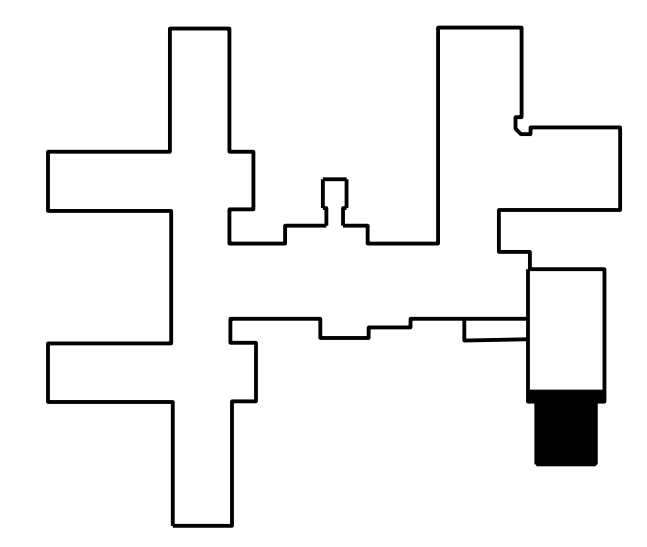
GENERAL FIRE PROTECTION NOTES

1. THE SPRINKLER INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 13, STATE AUTHORITIES HAVING JURISDICTION, AND THE OWNERS INSURANCE UNDERWRITER.
2. PIPING SHOWN IS GENERALLY DIAGRAMMATIC AND INDICATES THE WORK TO BE PERFORMED. NOT ALL FITTINGS AND OFFSETS ARE SHOWN. FOLLOW DRAWINGS AS CLOSELY AS FIELD CONDITIONS ALLOW.
3. SPRINKLER HEADS SHALL BE STANDARD ORIFICE UPRIGHT TYPE, 210 DEGREES F.
4. ALL SPRINKLER SYSTEMS IN THIS BUILDING SHALL BE WET PIPE SYSTEMS.
5. PROVIDE ALL MISCELLANEOUS STEEL SHAPES, HANGER RODS, STRAPS, ETC. REQUIRED FOR ALL FIRE PROTECTION SYSTEM INSTALLATIONS.
6. ALL CUTTING AND PATCHING REQUIRED TO ACCOMMODATE THE FIRE PROTECTION WORK SHALL BE PROVIDED UNDER THE FIRE PROTECTION SPECIFICATIONS.
7. CONCRETE AND MASONRY WALL PENETRATIONS REQUIRED FOR NEW PIPING SHALL BE CORE DRILLED WHERE POSSIBLE. PROVIDE SLEEVED PENETRATIONS SEALED AIRTIGHT AND WEATHERTIGHT WITH FIRE RATED SEALANT.
8. PROVIDE FLUSHING CONNECTIONS IN ACCORDANCE WITH NFPA 13.
9. SPRINKLER SYSTEM SHALL BE FULLY DRAINABLE BY MULTIPLE DRAIN LOCATIONS.
10. PROVIDE INSPECTION TEST AS REQUIRED BY NFPA 13.



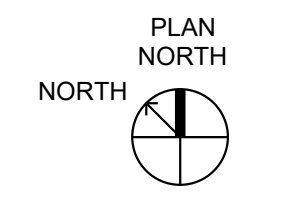
PROVIDE SHOP DRAWINGS AND SPRINKLER SYSTEM DESIGN INCLUDING HYDRAULIC CALCULATIONS, PREPARED ACCORDING TO NFPA13. SIZE WET PIPE SPRINKLER SYSTEM BASED ON ORDINARY HAZARD (GROUP 1) PROVIDING 0.15 GPM/SF OVER 1500 SF. BASE CALCULATIONS ON RESULT OF FIRE FLOW TEST TO BE PERFORMED BY CONTRACTOR.

SCHEDULE WORK IN OCCUPIED SPACES AFTER 3 PM.



KEY PLAN

1 BOILER ADDITION - SPRINKLER PLAN
Scale: 1/4" = 1'0"
0 2 4 8



THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE PLUMBING CONTRACT EXCEPT AS NOTED OTHERWISE.

DATE	REV.	DESCRIPTION
01/15/20	2	ISSUED FOR CONSTRUCTION
08/17/21	2	ISSUED FOR PERMITTING
01/18/20	0	ISSUED FOR BIDDING
		ISSUED FOR REVISION

COUNTY OF BERKS
BERKS HEIM
BERN TOWNSHIP
BOILER PROJECT
FIRE PROTECTION
SPRINKLER PLAN

SCALE: AS NOTED
PREPARED BY: SMF
CHECKED BY: MDR
APPROVED BY: MAF
PROJECT NO: 4177.008
DRAWING NO:

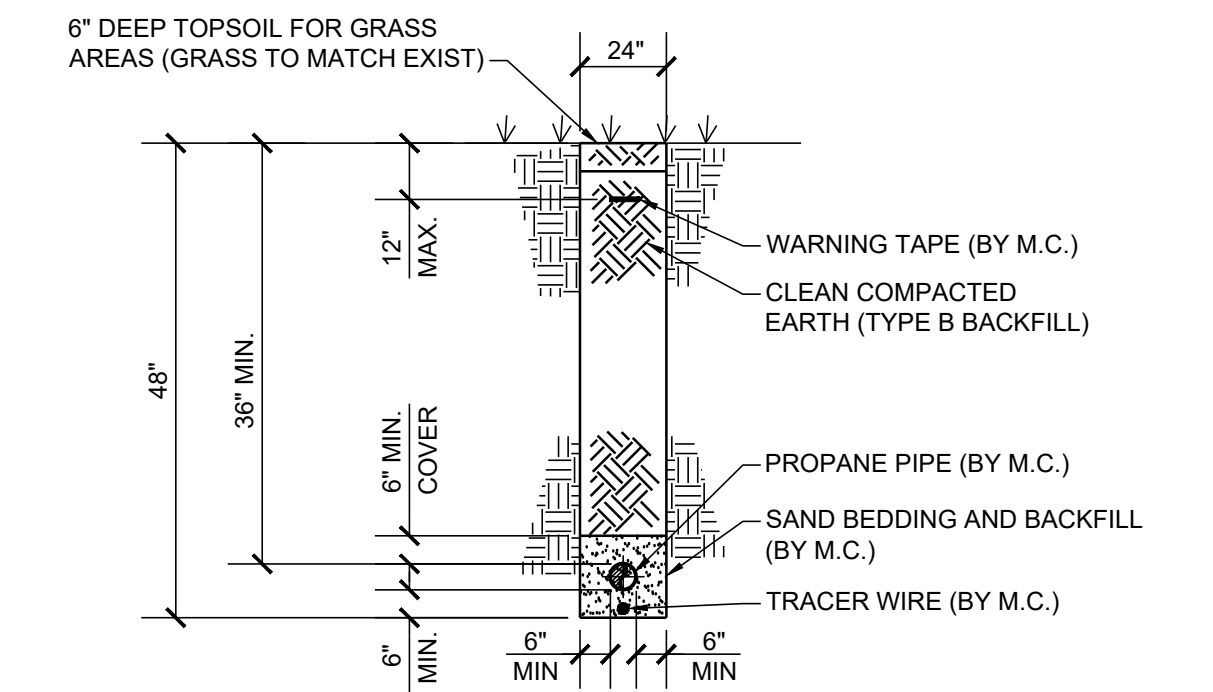
FP-101

GENERAL NOTES

1. PROVIDE HOT WORK PERMITS FOR WELDING IN OCCUPIED SPACES.
2. SCHEDULE PIPING INSTALLATIONS IN OCCUPIED SPACES AFTER 3 PM.
3. FINISH PAINT ALL IRON AND STEEL SURFACES LOCATED ABOVE GRADE. CLEAN, PRIME AND FINISH PAINT. COLOR AS SELECTED BY OWNER.
4. REFER TO DETAILS ON DRAWING M-501 FOR PIPE SUPPORT TYPES.

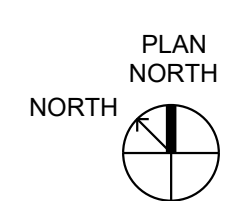
SHEET KEYNOTES

1. INSTALL STEAM PIPING AT THIS LOCATION TO ALLOW FOR 3" OF MOVEMENT FOR EXPANSION AND CONTRACTION INCLUDING SPACE AFTER PIPING INSULATION HAS BEEN INSTALLED.
2. PROVIDE INITIAL PROPANE TANK FILL WITH 8000 GALLONS OF LIQUID PROPANE. SUBSEQUENT TANK FILLS BY OWNER.
3. PROVIDE DRIP LEG AND TRAP ASSEMBLY PER DETAIL 10 ON DRAWING M-501. CONNECT TRAP DISCHARGE PIPING TO EXISTING HP CONDENSATE LINE EMPTYING INTO VENTED RECEIVER FOR PRESSURE POWER PUMP UNIT IN THIS AREA.
4. RELOCATE 1/2" STEEL COMPRESSED AIR LINE AS REQUIRED TO ACCOMMODATE NEW PIPING.
5. PROVIDE SHUT-OFF VALVE AND 3" ANODELESS RISER.



1 TYPICAL GAS PIPING EXCAVATION BACKFILL & SURFACE RESTORATION DETAIL FOR GRASS AREAS
Scale: N.T.S.

1 PARTIAL GROUND FLOOR PLAN
Scale: 1/16" = 1'-0"
0 8' 16' 32'



SCHEDULE WORK IN OCCUPIED SPACES AFTER 3 PM.

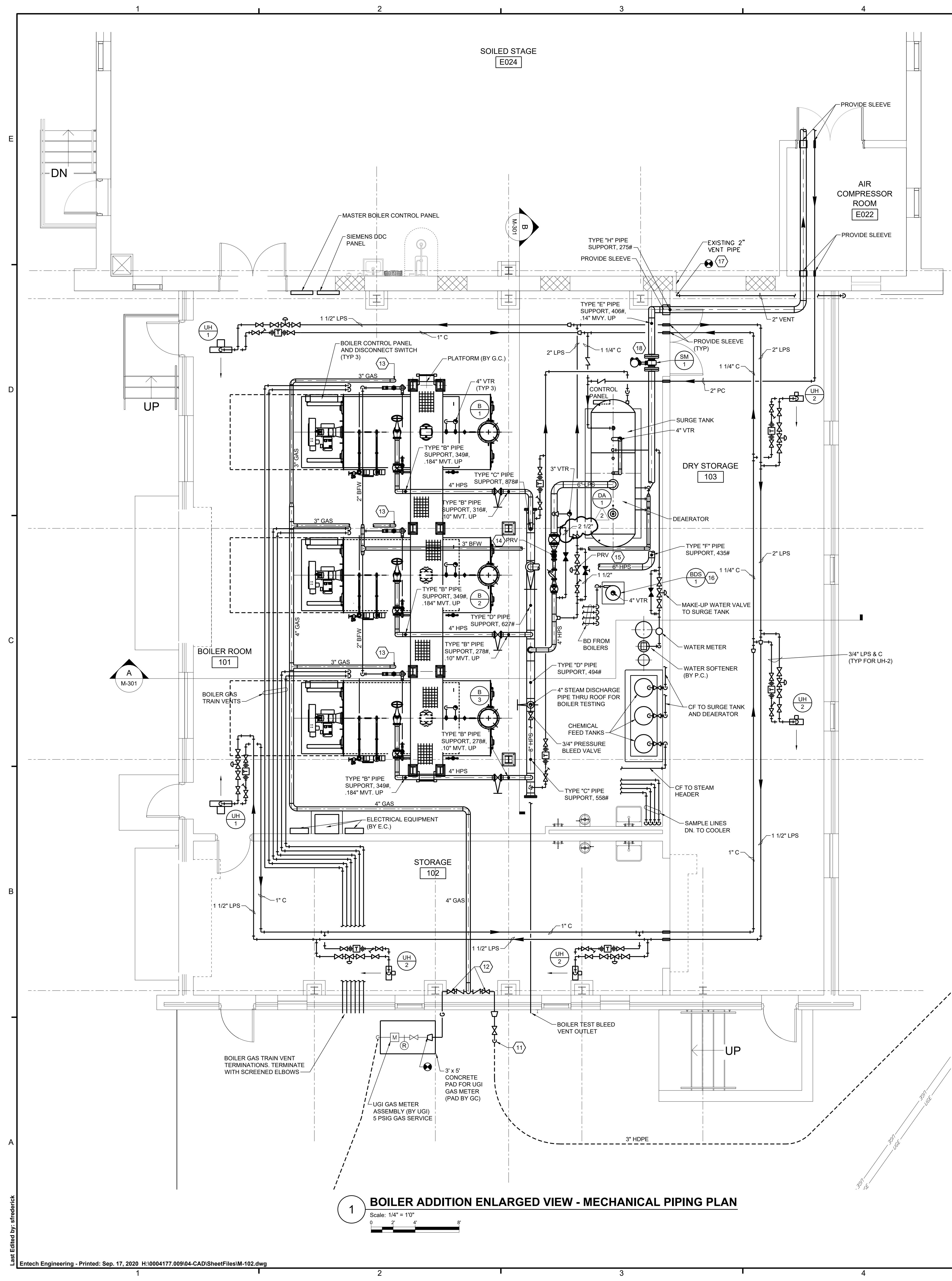
THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE MECHANICAL CONTRACT EXCEPT AS NOTED OTHERWISE.

DATE	REV.	DESCRIPTION
05/16/20	2	ISSUED FOR CONSTRUCTION
08/17/20	1	ISSUED FOR PERMITTING
01/30/20	0	ISSUED FOR BIDDING
		ISSUED FOR REVISION

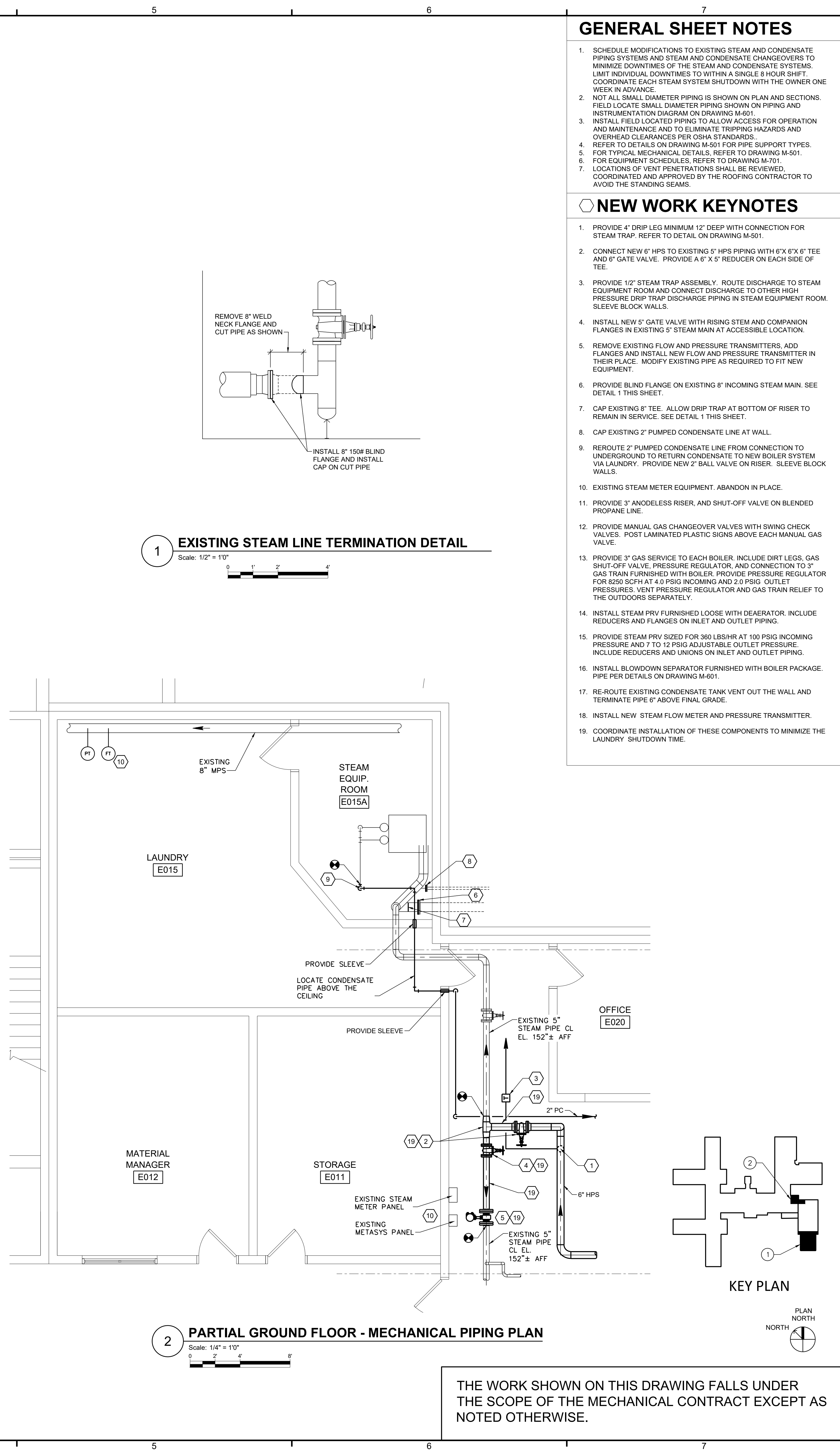
COUNTY OF BERKS
BERKS HEIM
BERN TOWNSHIP
BOILER PROJECT
MECHANICAL
PARTIAL SITE PLAN

SCALE:	AS NOTED
PREPARED BY:	SMF
CHECKED BY:	MDR
APPROVED BY:	MAF
PROJECT NO:	4177.009
DRAWING NO:	

M-101



1 BOILER ADDITION ENLARGED VIEW - MECHANICAL PIPING PLAN
 Scale: 1/4" = 10"
 0 2 4 6



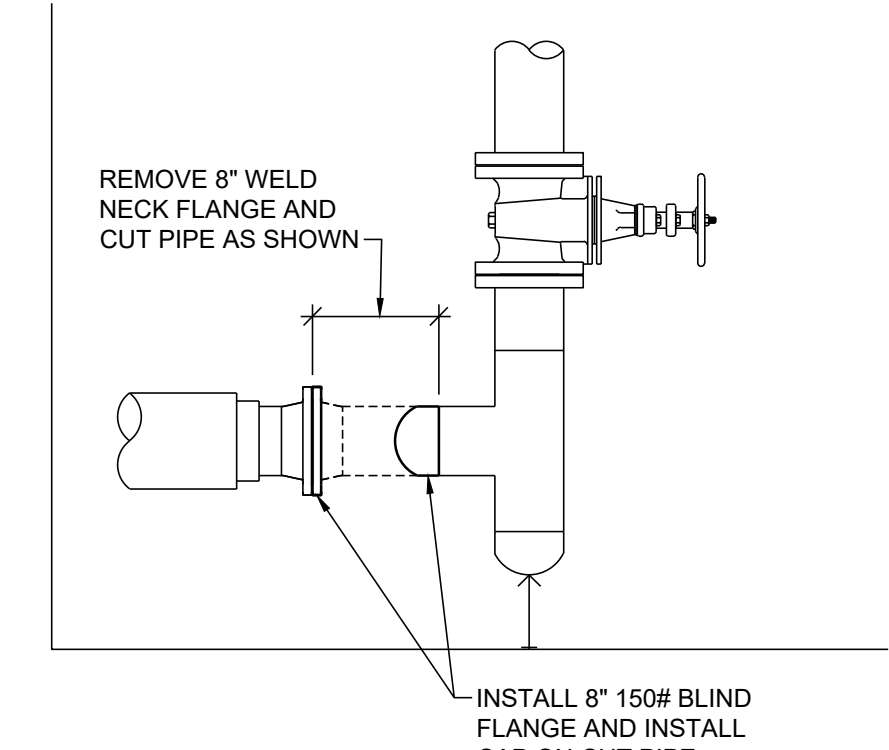
2 PARTIAL GROUND FLOOR - MECHANICAL PIPING PLAN
 Scale: 1/4" = 10"
 0 2 4 6

GENERAL SHEET NOTES

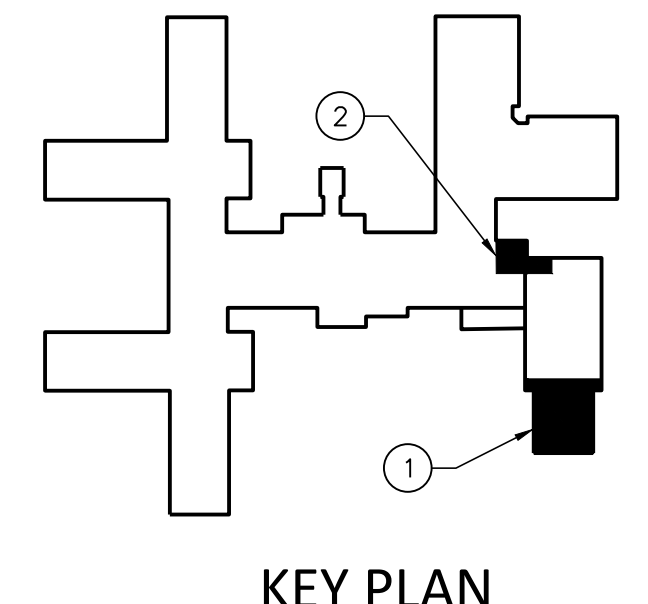
- SCHEDULE MODIFICATIONS TO EXISTING STEAM AND CONDENSATE PIPING SYSTEMS AND STEAM AND CONDENSATE CHANGEOVERS TO MINIMIZE DOWNTIMES OF THE STEAM AND CONDENSATE SYSTEMS. LIMIT INDIVIDUAL DOWNTIMES TO WITHIN A SINGLE 8 HOUR SHIFT. COORDINATE EACH STEAM SYSTEM SHUTDOWN WITH THE OWNER ONE WEEK IN ADVANCE.
- NOT ALL SMALL DIAMETER PIPING IS SHOWN ON PLAN AND SECTIONS. FIELD LOCATE SMALL DIAMETER PIPING SHOWN ON PIPING AND INSTRUMENTATION DIAGRAM ON DRAWING M-501.
- INSTALL FIELD LOCATED PIPING TO ALLOW ACCESS FOR OPERATION AND MAINTENANCE AND TO ELIMINATE TRIPPING HAZARDS AND OVERHEAD CLEARANCES PER OSHA STANDARDS.
- REFER TO DETAILS ON DRAWING M-501 FOR PIPE SUPPORT TYPES.
- FOR TYPICAL MECHANICAL DETAILS, REFER TO DRAWING M-501.
- FOR EQUIPMENT SCHEDULES, REFER TO DRAWING M-701.
- LOCATIONS OF VENT PENETRATIONS SHALL BE REVIEWED, COORDINATED AND APPROVED BY THE ROOFING CONTRACTOR TO AVOID THE STANDING SEAMS.

NEW WORK KEYNOTES

- PROVIDE 4" DRIP LEGS MINIMUM 12" DEEP WITH CONNECTION FOR STEAM TRAP. REFER TO DETAIL ON DRAWING M-501.
- CONNECT NEW 6" HPS TO EXISTING 5" HPS PIPING WITH 6" X 6" X 6" TEE AND 6" GATE VALVE. PROVIDE A 6" X 5" REDUCER ON EACH SIDE OF TEE.
- PROVIDE 1/2" STEAM TRAP ASSEMBLY. ROUTE DISCHARGE TO STEAM EQUIPMENT ROOM AND CONNECT DISCHARGE TO OTHER HIGH PRESSURE DRIP TRAP DISCHARGE PIPING IN STEAM EQUIPMENT ROOM. SLEEVE BLOCK WALLS.
- INSTALL NEW 5" GATE VALVE WITH RISING STEM AND COMPANION FLANGES IN EXISTING 5" STEAM MAIN AT ACCESSIBLE LOCATION.
- REMOVE EXISTING FLOW AND PRESSURE TRANSMITTERS. ADD FLANGES AND INSTALL NEW FLOW AND PRESSURE TRANSMITTER IN THEIR PLACE. MODIFY EXISTING PIPE AS REQUIRED TO FIT NEW EQUIPMENT.
- PROVIDE BLIND FLANGE ON EXISTING 9" INCOMING STEAM MAIN. SEE DETAIL 1 THIS SHEET.
- CAP EXISTING 8" TEE. ALLOW DRIP TRAP AT BOTTOM OF RISER TO REMAIN IN SERVICE. SEE DETAIL 1 THIS SHEET.
- CAP EXISTING 2" PUMPED CONDENSATE LINE AT WALL.
- REROUTE 2" PUMPED CONDENSATE LINE FROM CONNECTION TO UNDERGROUND TO RETURN CONDENSATE TO NEW BOILER SYSTEM VIA LAUNDRY. PROVIDE NEW 2" BALL VALVE ON RISER. SLEEVE BLOCK WALLS.
- EXISTING STEAM METER EQUIPMENT. ABANDON IN PLACE.
- PROVIDE 3" ANODELESS RISER, AND SHUT-OFF VALVE ON BLENDED PROPANE LINE.
- PROVIDE MANUAL GAS CHANGEOVER VALVES WITH SWING CHECK VALVES. POST LAMINATED PLASTIC SIGNS ABOVE EACH MANUAL GAS VALVE.
- PROVIDE 3" GAS SERVICE TO EACH BOILER. INCLUDE DIRT LEGS, GAS SHUT-OFF VALVE, PRESSURE REGULATOR, AND CONNECTION TO 3" GAS TRAIN FURNISHED WITH BOILER. PROVIDE PRESSURE REGULATOR FOR 8250 SCFH AT 4.0 PSIG INCOMING AND 2.0 PSIG OUTLET PRESSURES. VENT PRESSURE REGULATOR AND GAS TRAIN RELIEF TO THE OUTDOORS SEPARATELY.
- INSTALL STEAM PRV FURNISHED LOOSE WITH DEAERATOR. INCLUDE REDUCERS AND FLANGES ON INLET AND OUTLET PIPING.
- PROVIDE STEAM PRV SIZED FOR 360 LBS/HR AT 100 PSIG INCOMING PRESSURE AND 7 TO 12 PSIG ADJUSTABLE OUTLET PRESSURE. INCLUDE REDUCERS AND UNIONS ON INLET AND OUTLET PIPING.
- INSTALL BLOWDOWN SEPARATOR FURNISHED WITH BOILER PACKAGE. PIPE PER DETAILS ON DRAWING M-601.
- RE-ROUTE EXISTING CONDENSATE TANK VENT OUT THE WALL AND TERMINATE PIPE 6" ABOVE FINAL GRADE.
- INSTALL NEW STEAM FLOW METER AND PRESSURE TRANSMITTER.
- COORDINATE INSTALLATION OF THESE COMPONENTS TO MINIMIZE THE LAUNDRY SHUTDOWN TIME.



1 EXISTING STEAM LINE TERMINATION DETAIL
 Scale: 1/2" = 10"
 0 1 2 4



KEY PLAN
 PLAN NORTH

THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE MECHANICAL CONTRACT EXCEPT AS NOTED OTHERWISE.

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NO.	DATE	REV.	ISSUED FOR
1	08/19/20	0	ISSUED FOR CONSTRUCTION
2	08/07/20	1	ISSUED FOR PERMITTING
3	01/20/20	0	ISSUED FOR BIDDING
4		0	ISSUED FOR REVISION

COUNTY OF BERKS
 BERKS HEIM
 BERN TOWNSHIP
 BOILER PROJECT
 MECHANICAL
 PIPING PLANS

SCALE: AS NOTED	PROJECT NO: 4177.009
PREPARED BY: SMF	DRAWING NO:
CHECKED BY: MDR	
APPROVED BY: MAF	

M-102

Last Edited by: sferberck
 Entech Engineering - Printed: Sep. 17, 2020 H:\0004177.009\04-CAD\SheetFiles\M-102.dwg

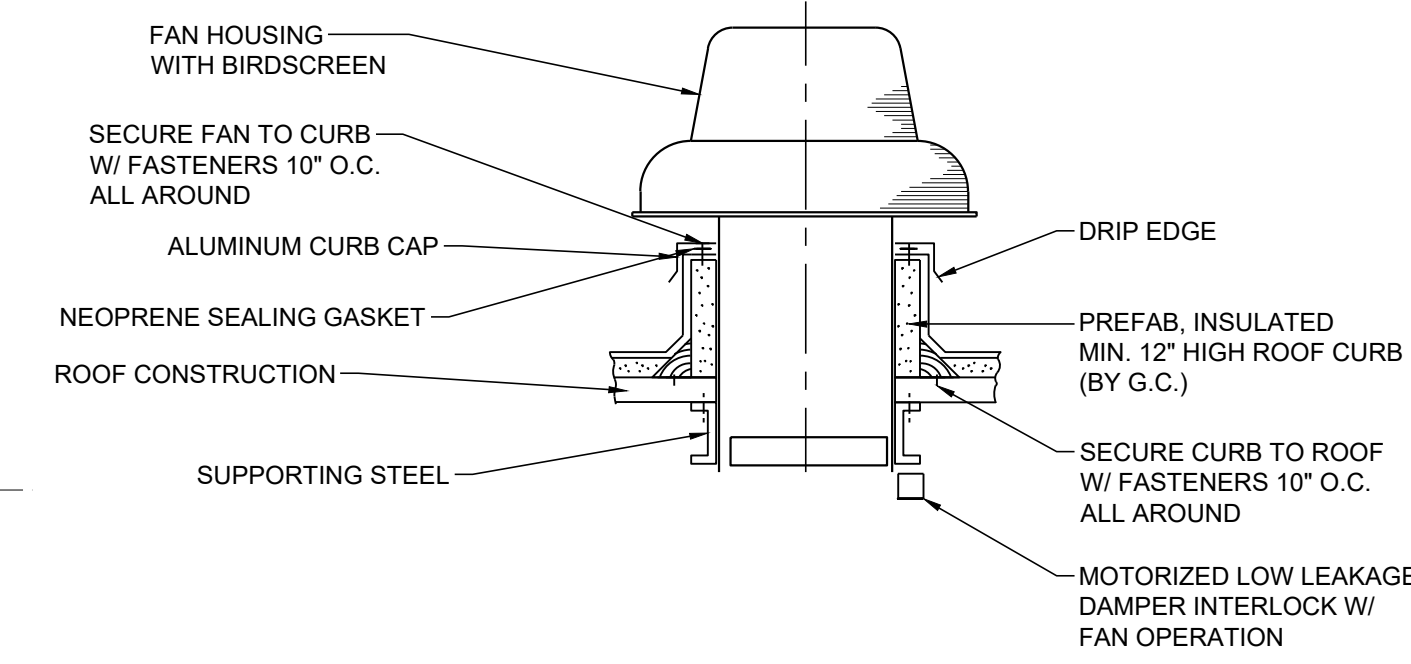
GENERAL SHEET NOTES

1. DUCTWORK AND SHEET METAL SLEEVES SHALL BE CONSTRUCTED OF GALVANIZED STEEL IN ACCORDANCE WITH SMACNA.
2. FOR TYPICAL MECHANICAL DETAILS, REFER TO DRAWING M-501.
3. FOR EQUIPMENT SCHEDULES, REFER TO DRAWING M-701.

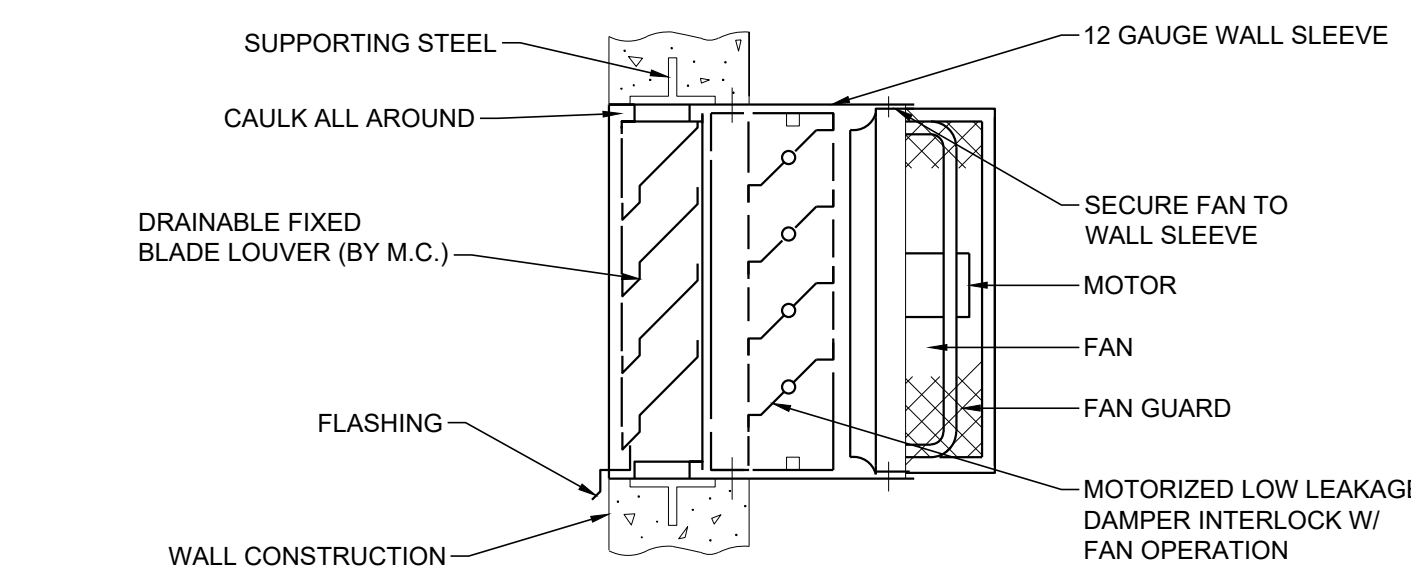
NEW WORK KEYNOTES

1. SIEMENS ADJUSTABLE DDC THERMOSTAT. INTERLOCK FOR UNIT HEATER AND EXHAUST FAN OPERATIONS.
2. ADJUST OPENING SIZE TO ACCOMMODATE LOUVER AND SLEEVE.

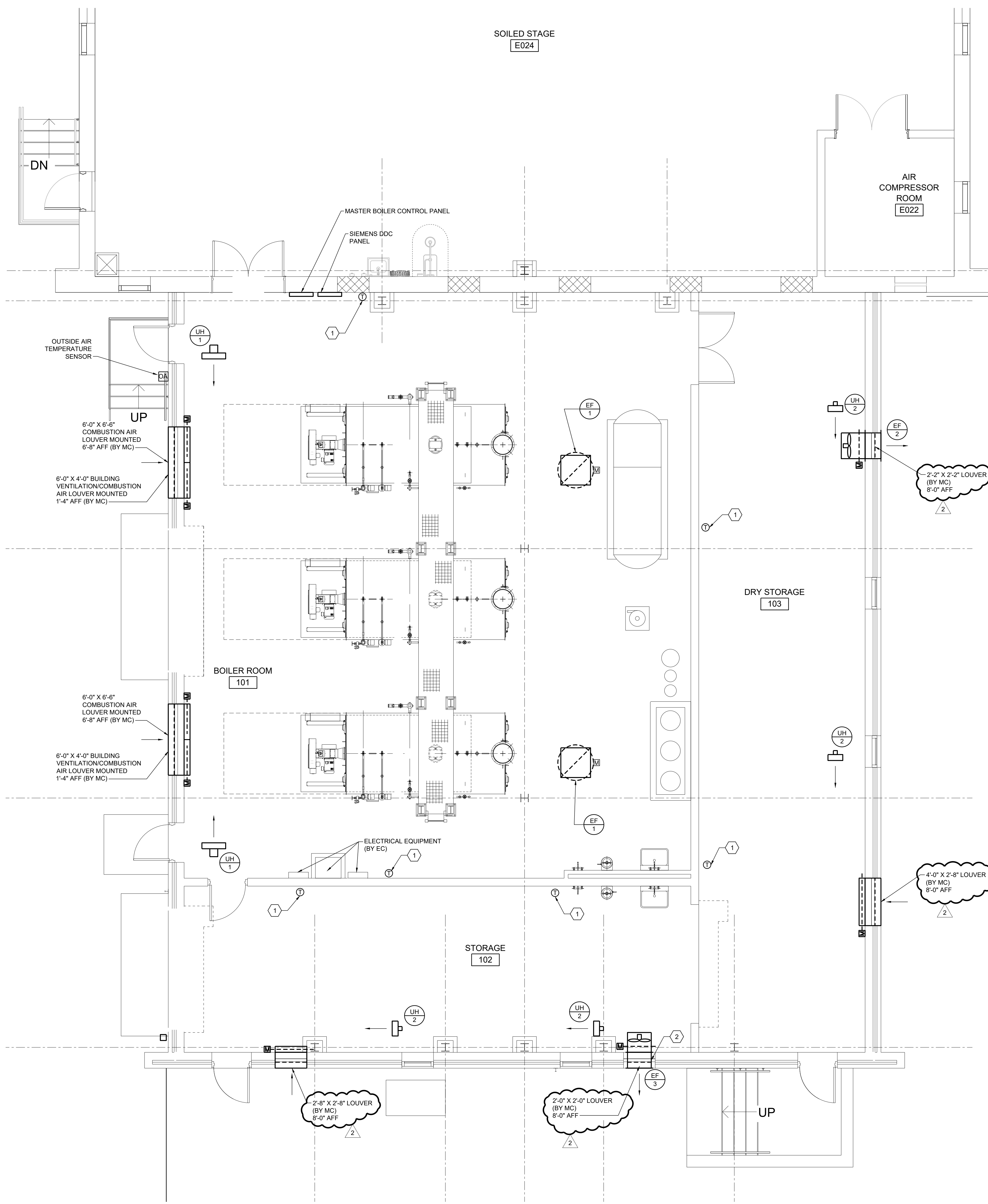
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ROOF MOUNTED EXHAUST FAN DETAIL
NO SCALE



PROPELLER FAN DETAIL



1 BOILER ADDITION - MECHANICAL VENTILATION PLAN
Scale: 1/4" = 1'-0"
0 2 4 8'

THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE MECHANICAL CONTRACT EXCEPT AS NOTED OTHERWISE.

NO.	DATE	REV.	DESCRIPTION
1	01/20/20	0	ISSUED FOR PERMITTING
2	08/07/20	1	ISSUED FOR CONSTRUCTION
3	01/20/20	0	ISSUED FOR BIDDING

COUNTY OF BERKS
BERKS HEIM
BERN TOWNSHIP
BOILER PROJECT
MECHANICAL
VENTILATION PLAN

SCALE: AS NOTED
PREPARED BY: SMF
CHECKED BY: MDR
APPROVED BY: MAF
PROJECT NO: 4177.009
DRAWING NO:

M-103

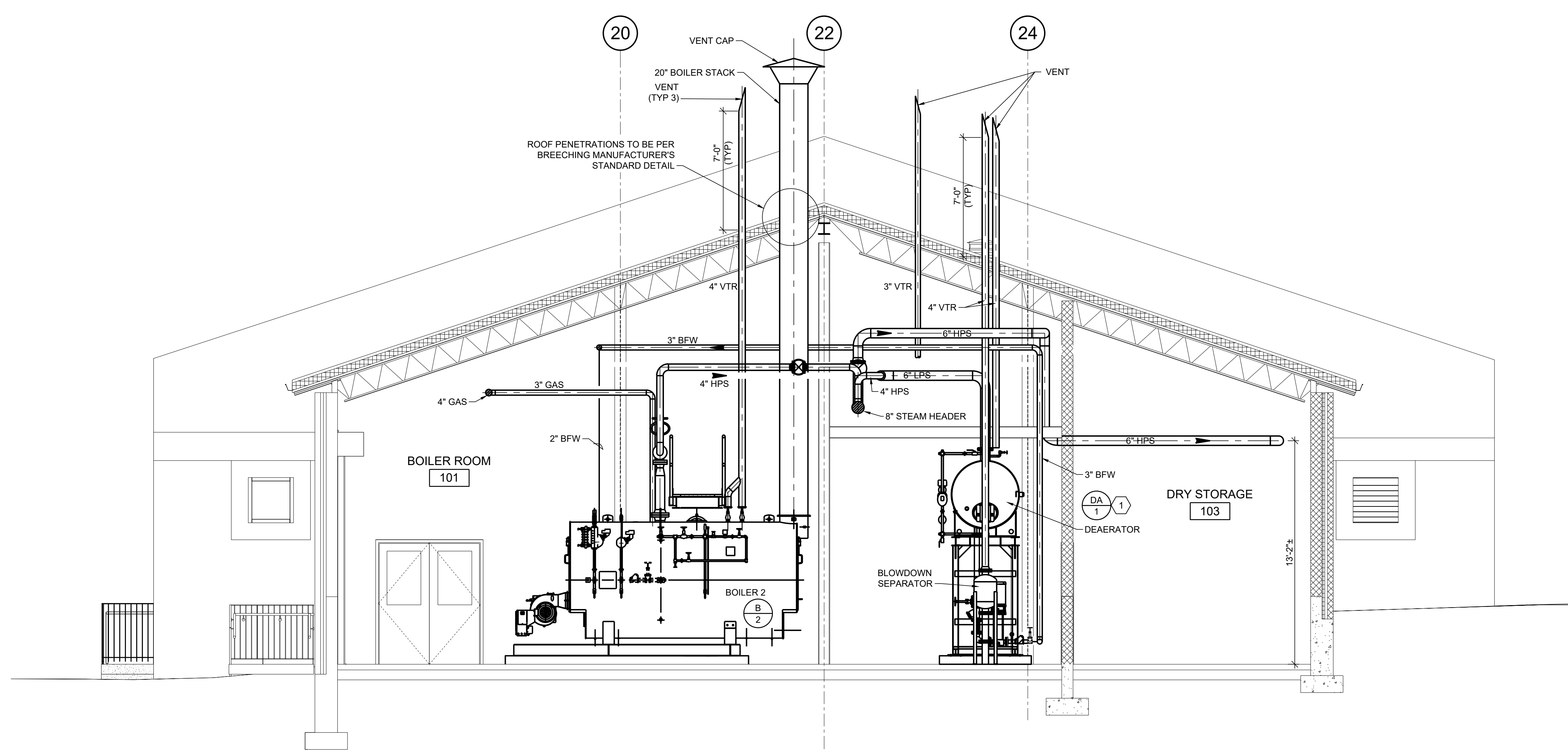
Last Edited by: entech

GENERAL SHEET NOTES

- NOT ALL SMALL DIAMETER PIPING IS SHOWN ON PLAN AND SECTIONS. FIELD LOCATE SMALL DIAMETER PIPING SHOWN ON PIPING AND INSTRUMENTATION DIAGRAM ON DRAWING M-601.
- INSTALL FIELD LOCATED PIPING TO ALLOW ACCESS FOR OPERATION AND MAINTENANCE AND TO ELIMINATE TRIPPING HAZARDS AND OVERHEAD CLEARANCES PER OSHA STANDARDS.
- FOR TYPICAL MECHANICAL DETAILS, REFER TO DRAWING M-501.
- FOR EQUIPMENT SCHEDULES, REFER TO DRAWING M-701.
- LOCATIONS OF VENT PENETRATIONS SHALL BE REVIEWED AND COORDINATED WITH THE ROOFING CONTRACTOR TO AVOID THE STANDING SEAMS.

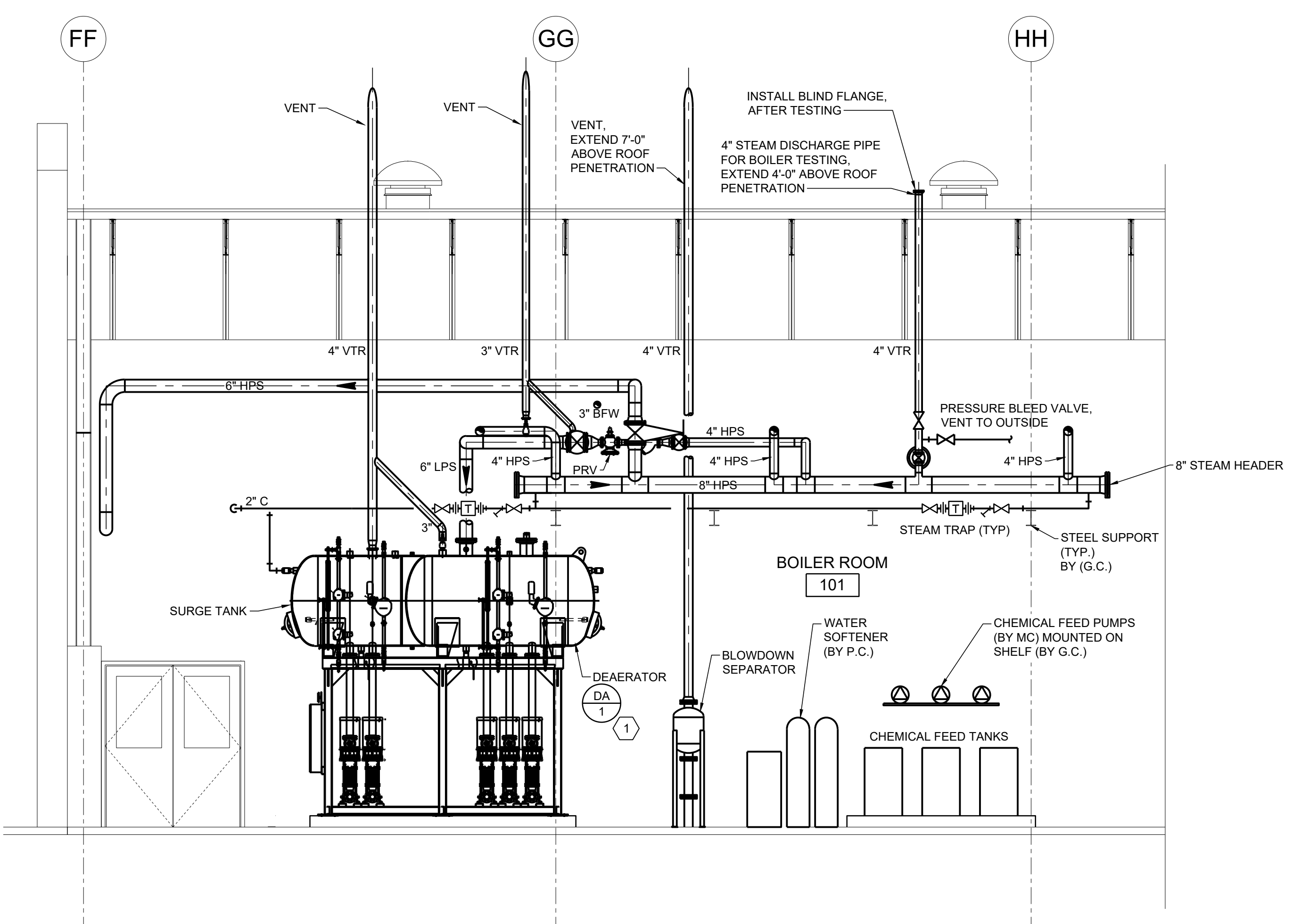
NEW WORK KEYNOTES

- DEAERATOR/FEEDWATER TANK ASSEMBLY SHIPS IN TWO PARTS AND MUST BE ASSEMBLED IN THE FIELD.



A BOILER ADDITION SECTION

Scale: 1/4" = 10"
0 2 4 6 8



B BOILER ADDITION SECTION

Scale: 1/4" = 10"
0 2 4 6 8

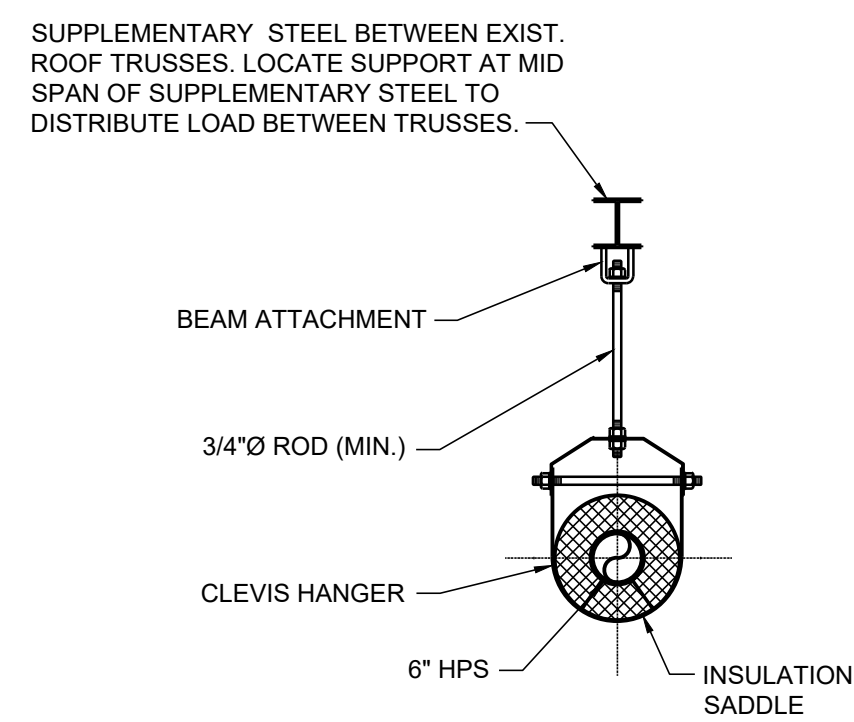
DATE	REV.	ISSUED FOR
08/18/20	2	ISSUED FOR CONSTRUCTION
08/07/20	1	ISSUED FOR PERMITTING
01/20/20	0	ISSUED FOR BIDDING

COUNTY OF BERKS
BERKS HEIM
BERN TOWNSHIP
BOILER PROJECT
MECHANICAL SECTIONS

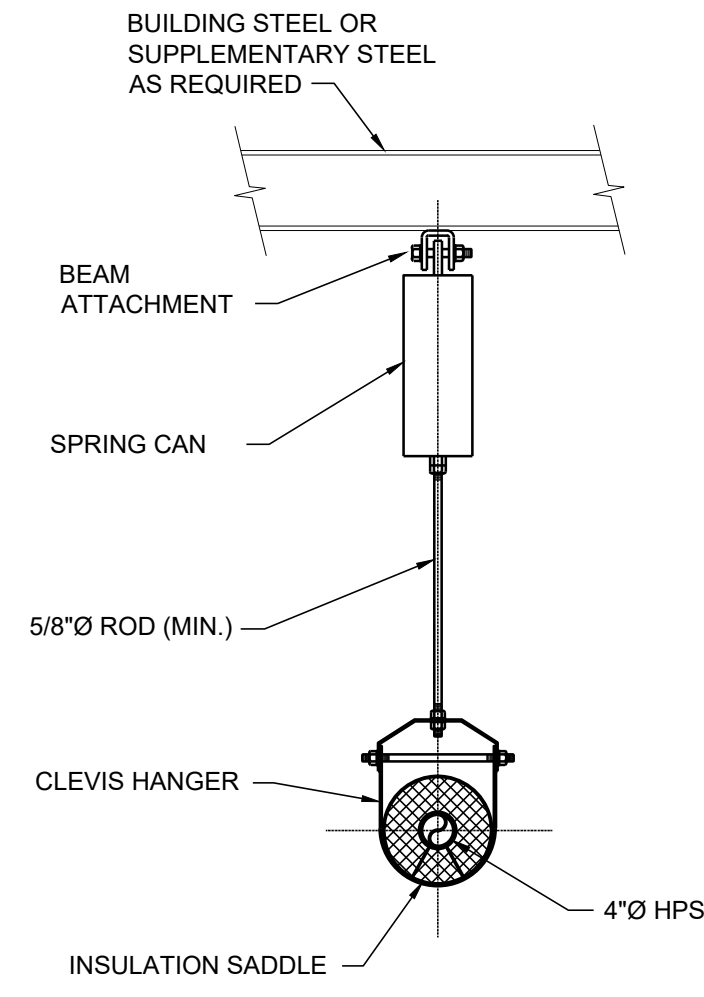
SCALE: AS NOTED
PREPARED BY: SMF
CHECKED BY: MDR
APPROVED BY: MAF
PROJECT NO: 4177.009
DRAWING NO:

THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE MECHANICAL CONTRACT EXCEPT AS NOTED OTHERWISE.

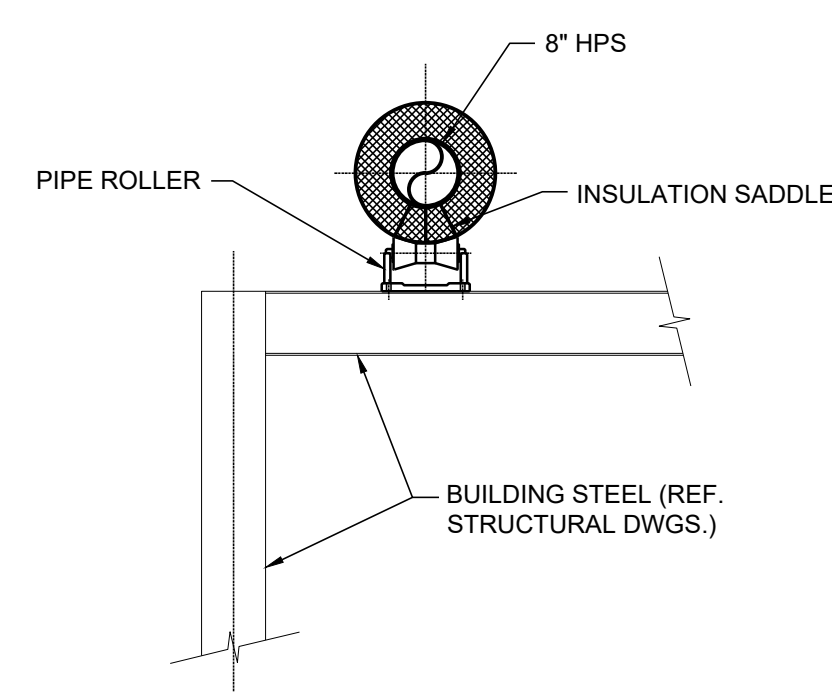
M-301



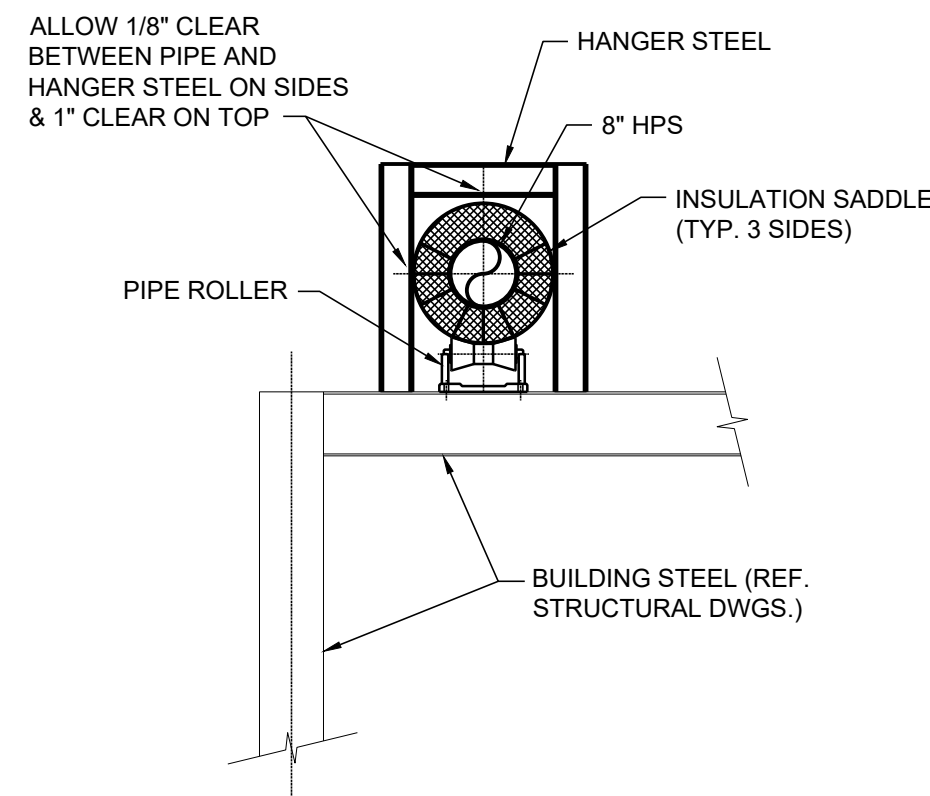
1 TYPE "A" PIPE SUPPORT DETAIL
Scale: NONE



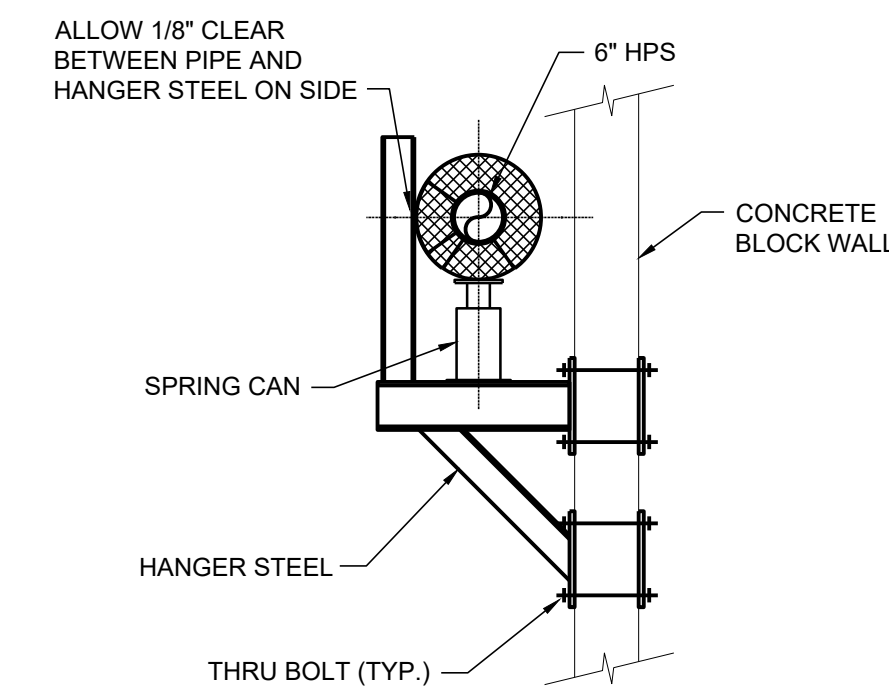
2 TYPE "B" PIPE SUPPORT DETAIL
Scale: NONE



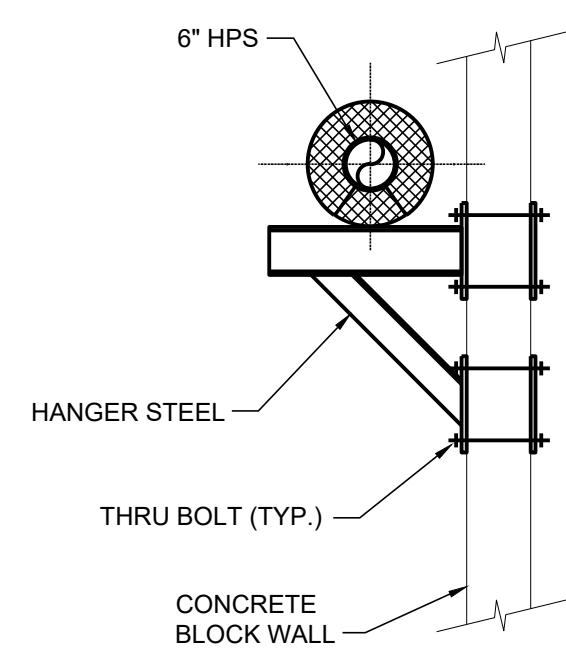
3 TYPE "C" PIPE SUPPORT DETAIL
Scale: NONE



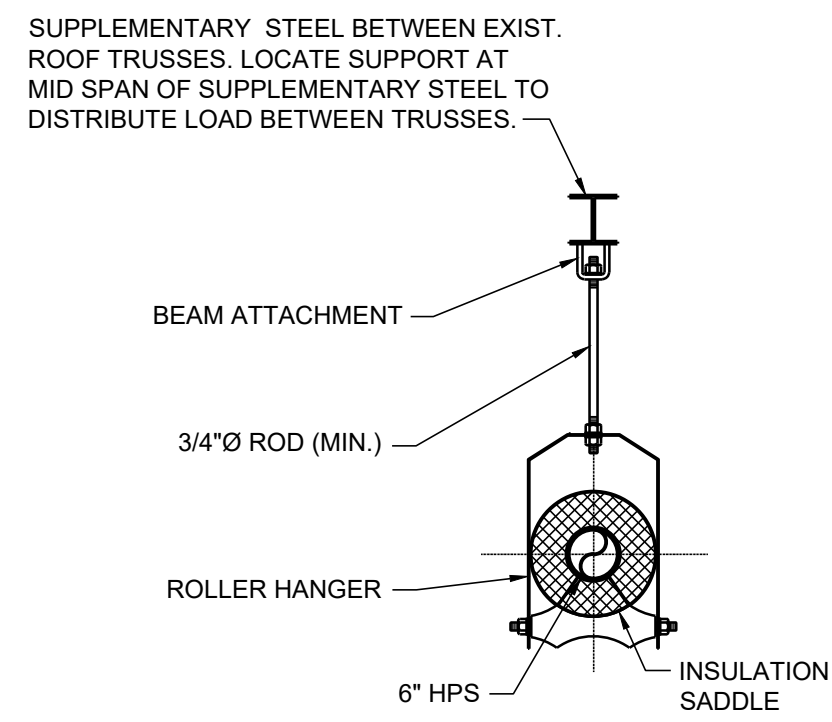
4 TYPE "D" PIPE SUPPORT DETAIL
Scale: NONE



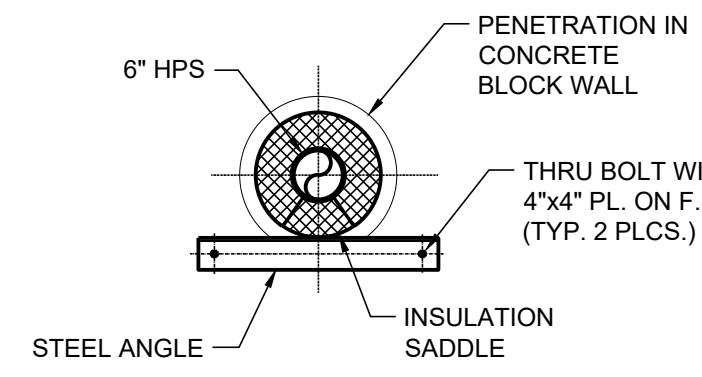
5 TYPE "E" PIPE SUPPORT DETAIL
Scale: NONE



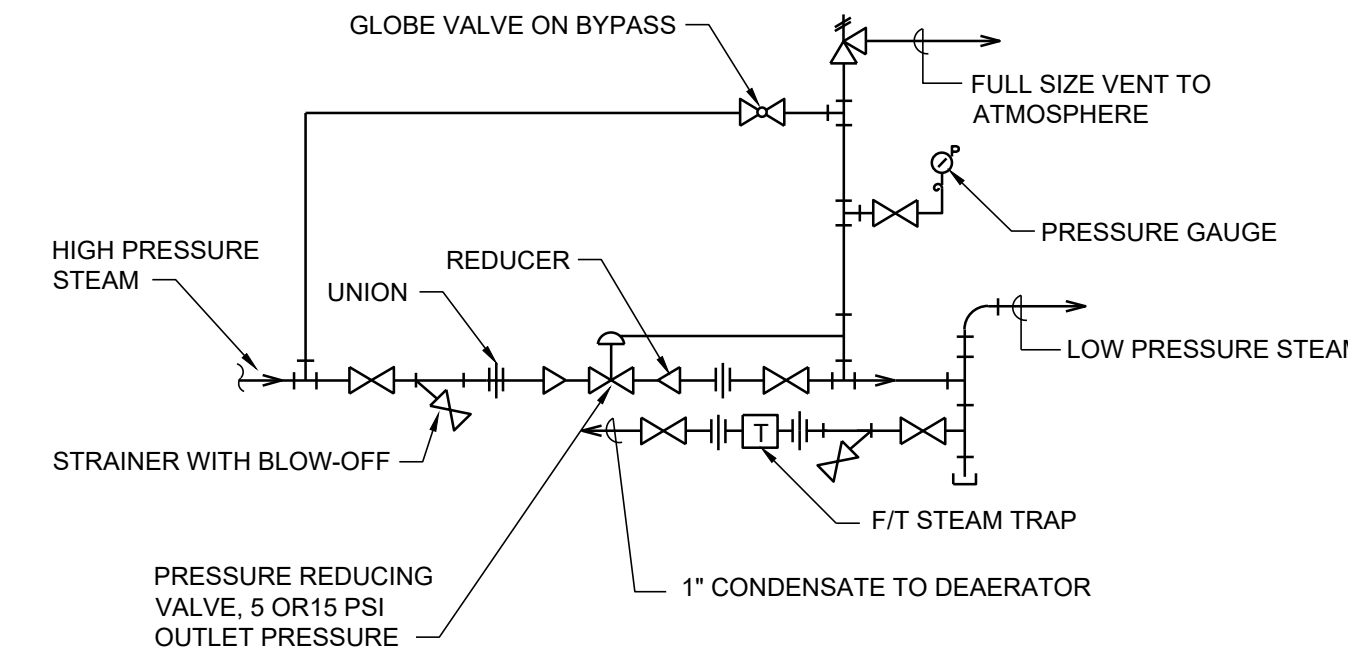
6 TYPE "F" PIPE SUPPORT DETAIL
Scale: NONE



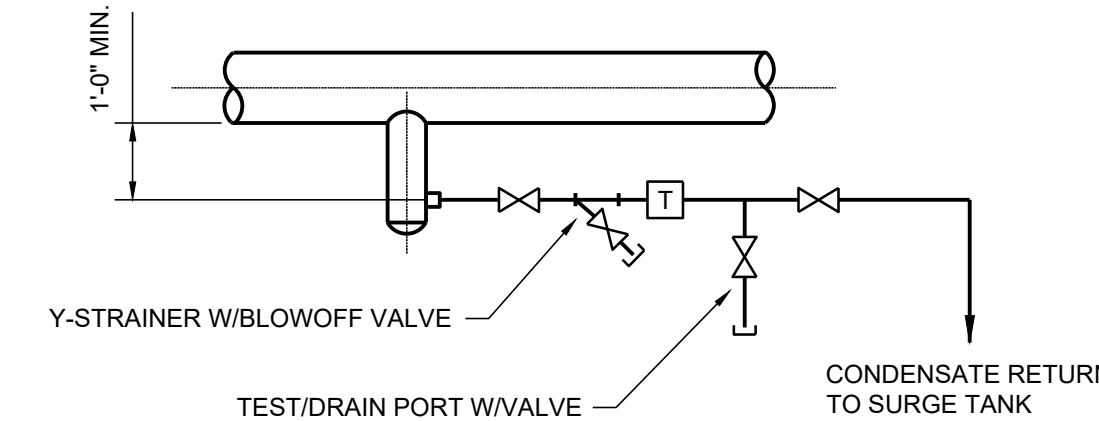
7 TYPE "G" PIPE SUPPORT DETAIL
Scale: NONE



8 TYPE "H" PIPE SUPPORT DETAIL
Scale: NONE

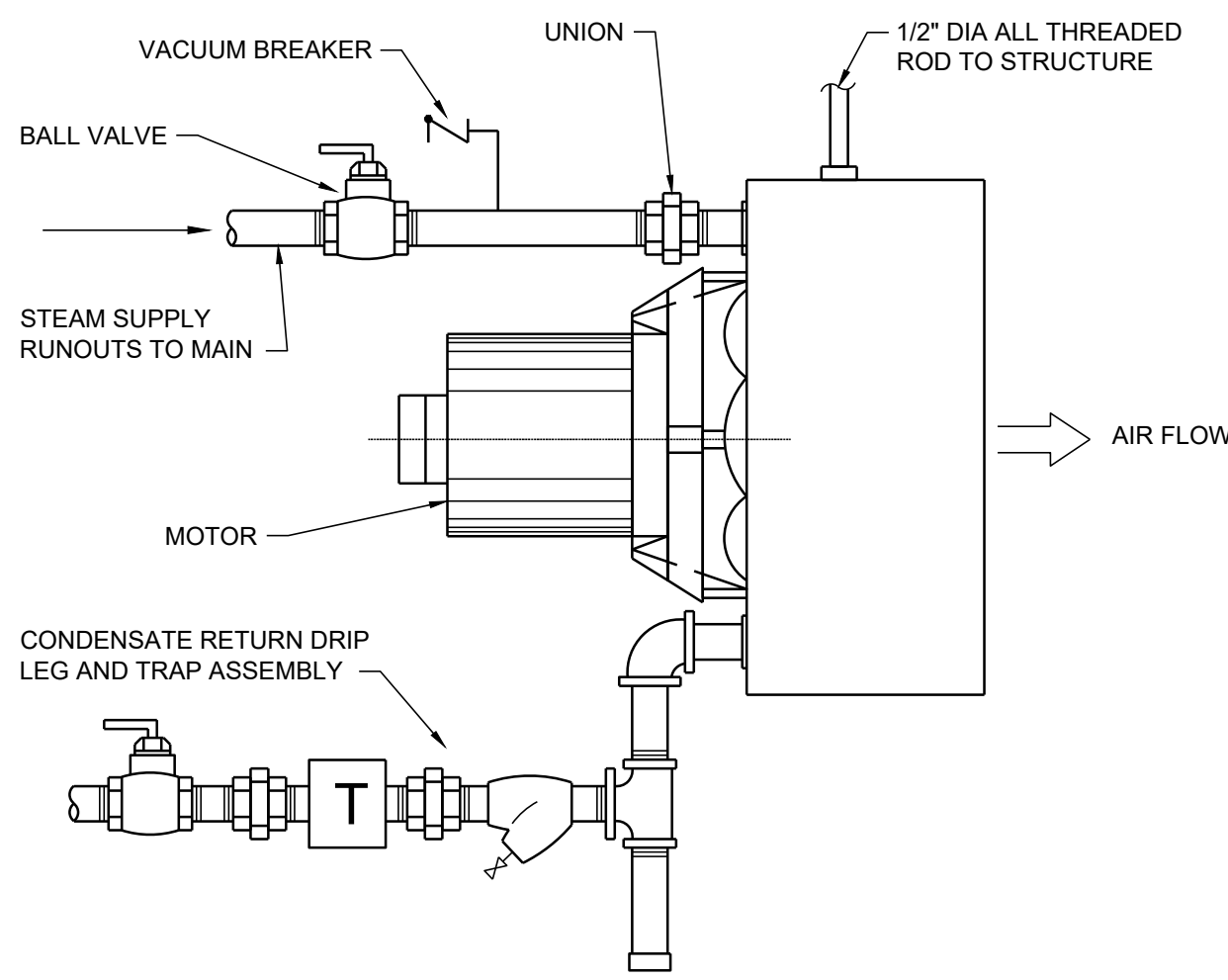


9 STEAM PRESSURE REGULATING VALVE DETAIL
Scale: NONE

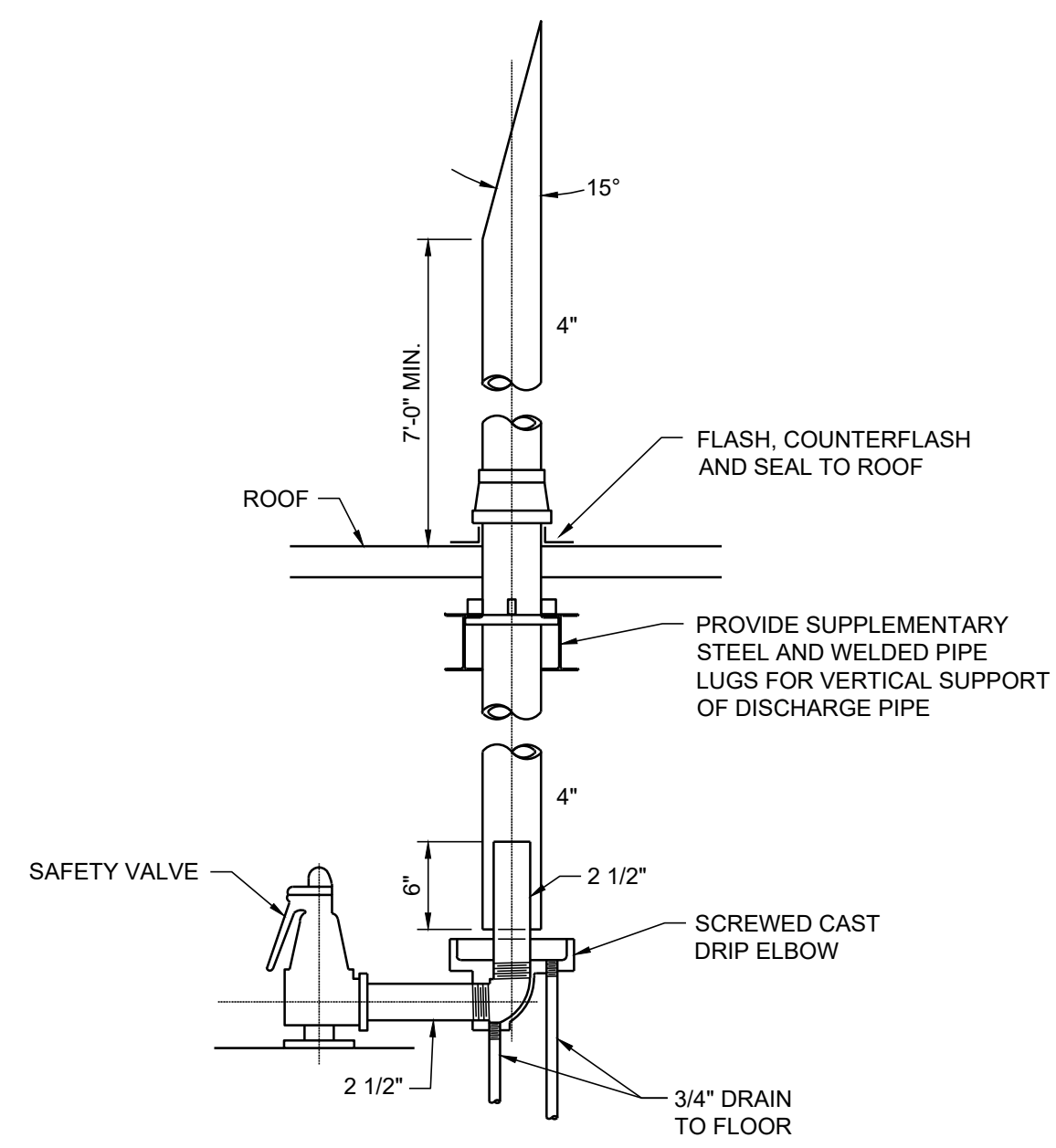


10 TYP. DRIP LEG/STEAM TRAP DETAIL
Scale: NONE

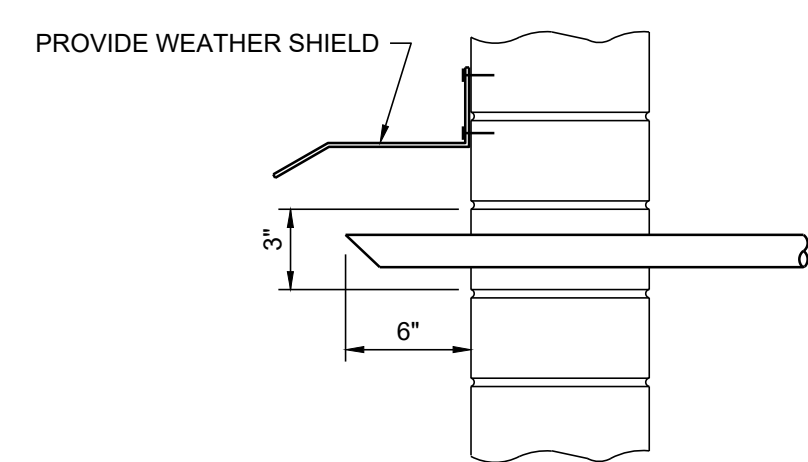
DRIP LEG SIZING	
SIZE OF MAIN	SIZE OF DRIP LEG
6"	4" MIN.



11 STEAM UNIT HEATER DETAIL
Scale: NONE



12 SAFETY VALVE DETAIL
Scale: NONE



13 GAS VENT DISCHARGE DETAIL
Scale: NONE

NO.	DATE	REV.	DESCRIPTION
1	08/18/20	0	ISSUED FOR CONSTRUCTION
2	08/07/20	1	ISSUED FOR PERMITTING
3	01/20/20	0	ISSUED FOR REVISION

COUNTY OF BERKS
BERKS HEIM
BERN TOWNSHIP
BOILER PROJECT
MECHANICAL
DETAILS

SCALE:	AS NOTED
PREPARED BY:	SMF
CHECKED BY:	MDR
APPROVED BY:	MAF
PROJECT NO.:	4177.009
DRAWING NO.:	M-501

THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE MECHANICAL CONTRACT EXCEPT AS NOTED OTHERWISE.

M-501

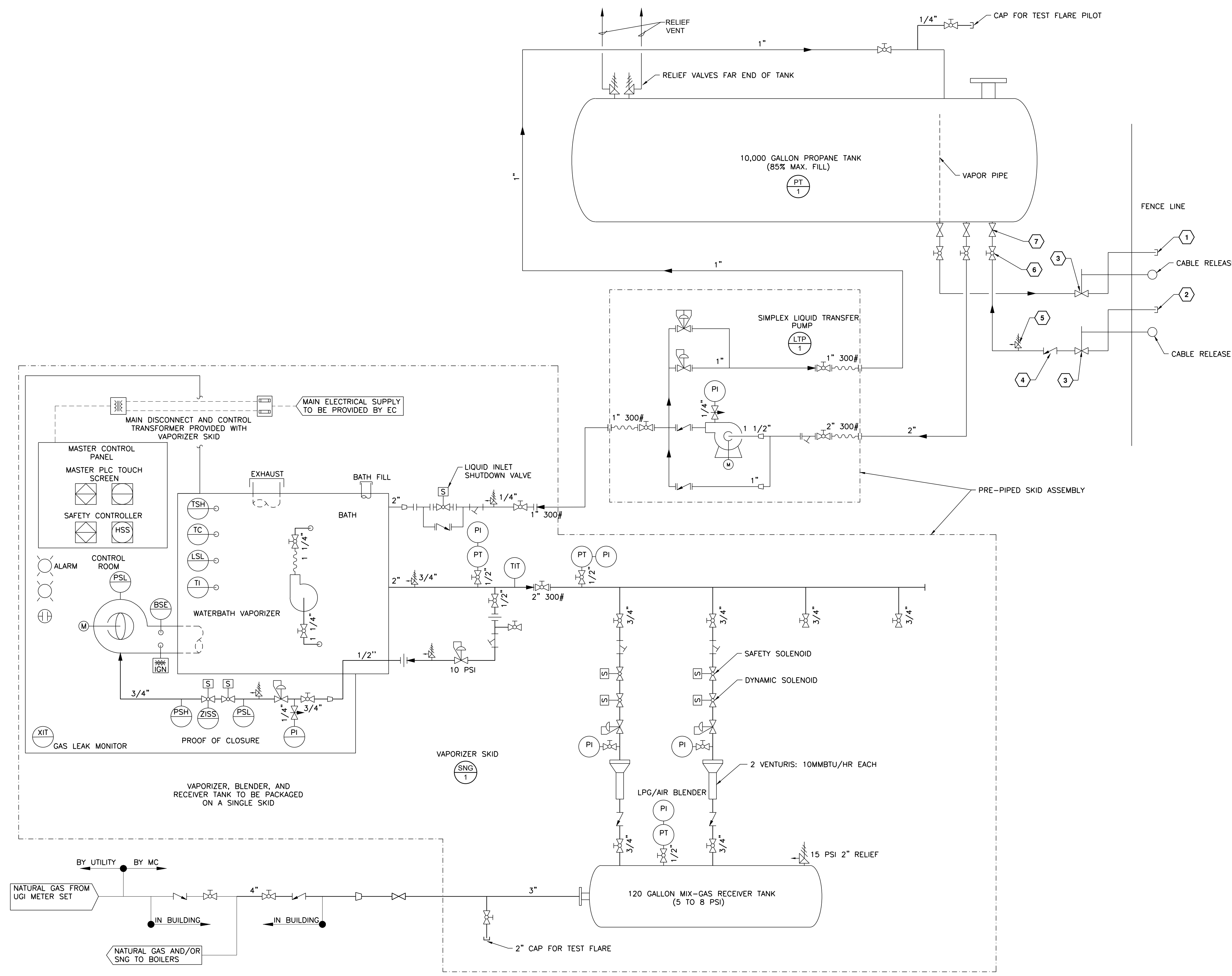
GENERAL SHEET NOTES

1. CONTRACTOR SHALL PROVIDE A COMPLETE LP SYSTEM DESIGN THAT COMPLIES WITH NFPA 58, INTERNATIONAL FIRE CODE, STATE AND LOCAL REQUIREMENTS. THE CONTRACTOR'S LP SYSTEM CONSTRUCTION DRAWINGS SHALL BE STAMPED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF PENNSYLVANIA.

PROpane TANK KEYED NOTES

1. MALE HOSE CONNECTION WITH CAP.
2. FEMALE HOSE CONNECTION WITH PLUG.
3. EMERGENCY SHUT-OFF VALVE WITH THERMAL ACTUATION AND CABLE CLOSURE (TYPE 550 SNAPPY JOE ESV OR APPROVED EQUAL).
4. BACKCHECK VALVE.
5. HYDROSTATIC RELIEF VALVE.
6. GLOBE OR ANGLE VALVE. (TYP.)
7. EXCESS FLOW OR INTERNAL VALVE. (TYP.)

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LEGEND	PI PRESSURE GAUGE	TC TEMPERATURE CONTROLLER	ZISS PROOF OF CLOSURE SWITCH WITH LOCAL INDICATION	◇ BALL VALVE	◇ BUTTERFLY VALVE	⊞ PNEUMATIC ACTUATOR	◇ PRESSURE REGULATOR (INTERNAL SENSING)
WATER/GLYCOL LINE	PT PRESSURE TRANSMITTER	LSL LOW LEVEL SWITCH	XIT GAS LEAK MONITOR	◇ CHECK VALVE	◇ RELIEF VALVE	⊞ PNEUMATIC CONTROLLER	◇ PRESSURE REGULATOR (EXTERNAL SENSING)
N2/AIR LINE	PDT DIFFERENTIAL PRESSURE TRANSMITTER	PSL LOW PRESSURE SWITCH	HSS ESD MUSHROOM BUTTON	◇ GLOBE VALVE	◇ STRAINER	⊞ ELECTRO PNEUMATIC CONTROLLER	◇ DIFFERENTIAL PRESSURE REGULATOR
MIXED GAS LINE	TI THERMOMETER	PSH HIGH PRESSURE SWITCH	HS HAND SWITCH	◇ NEEDLE VALVE	◇ DOUBLE DOOR WAFER CHECK VALVE	⊞ MANUAL ACTUATOR	
LPG VAPOR LINE	TIT TEMPERATURE TRANSMITTER WITH LOCAL INDICATION	TSH HIGH TEMPERATURE SWITCH	BSE BURNER FLAME DETECTOR	◇ PLUG VALVE	◇ GATE OR MISC. VALVE	⊞ MOTOR ACTUATOR	
LPG LIQUID LINE				◇ 3-WAY VALVE	◇ ANGLE VALVE	⊞ SOLENOID ACTUATOR	
ELECTRICAL							
PNEUMATIC SIGNAL							
STEAM LINES							

1 PROPANE FLOW DIAGRAM
Scale: NONE

THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE MECHANICAL CONTRACT EXCEPT AS NOTED OTHERWISE.

COUNTY OF BERKS
BERKS HEIM
BERN TOWNSHIP
BOILER PROJECT
MECHANICAL
PROPANE FLOW DIAGRAM

SCALE	AS NOTED
PREPARED BY	SMP
CHECKED BY	MDR
APPROVED BY	MAF
PROJECT NO.	4177.009
DRAWING NO.	

M-602

Last Edited by: amedlock

STEAM BOILER SCHEDULE															
ITEM NO.	BOILER TYPE	FUEL TYPE	NOMINAL SIZE	GROSS OUTPUT (#/HR)	MIN HEATING SURFACE AREA	FUEL TO STEAM EFFICIENCY AT FIRING RATES (NATURAL GAS)				FLUE VENT DIA	BLOWER HP	VOLTAGE	BASIS OF DESIGN		NOTES
						100%	75%	50%	25%				MANUFACTURER	MODEL	
B-1	3-PASS FIRETUBE	NATURAL GAS	200 BHP	6,900	1000 S.F.	82.7%	82.9%	83.0%	82.5%	20"	10	460/3/60	SUPERIOR	SUPER SEMINOLE X6-5-1000-S150	1,2,3,4,5,6,7,8,9,10,11,12
B-2	3-PASS FIRETUBE	NATURAL GAS	200 BHP	6,900	1000 S.F.	82.7%	82.9%	83.0%	82.5%	20"	10	460/3/60	SUPERIOR	SUPER SEMINOLE X6-5-1000-S150	1,2,3,4,5,6,7,8,9,10,11,12
B-3	3-PASS FIRETUBE	NATURAL GAS	200 BHP	6,900	1000 S.F.	82.7%	82.9%	83.0%	82.5%	20"	10	460/3/60	SUPERIOR	SUPER SEMINOLE X6-5-1000-S150	1,2,3,4,5,6,7,8,9,10,11,12

- NOTES:
- PROVIDE 150 PSIG BOILER WITH 125 PSIG ASME RELIEF VALVES. 100 PSIG OPERATING PRESSURE.
 - PROVIDE VFD BURNER CONTROL WITH TOUCHSCREEN CONTROL PANEL & BACnet/IP COMMUNICATIONS.
 - PROVIDE MODULATING LINKAGELESS BURNER CONTROL WITH 10:1 TURNDOWN.
 - PROVIDE LOCKABLE SINGLE POINT POWER WITH FUSED DISCONNECT SWITCH.
 - PROVIDE 250# NON-RETURN VALVE AND STEAM HEADER SPOOL PIECE.
 - PROVIDE FEEDWATER CONTROL VALVE.
 - PROVIDE BLOWDOWN VALVE PACKAGE.
 - FIELD INSTALLED ITEMS SHIPPED LOOSE WITH BOILER.
 - PROVIDE CSD-1 GAS TRAIN.
 - PROVIDE FACTORY START-UP AND TRAINING.
 - PROVIDE BASIS OF DESIGN OR APPROVED EQUAL.
 - COORDINATE BOILER TRIM LOCATIONS WITH PLATFORM SUPPORTS SHOWN ON DRAWING M-102 AND S-101.

EXHAUST FAN SCHEDULE													
ITEM NO.	TYPE	MOUNTING	CFM	ESP (WC)	DRIVE	FAN RPM	MOTOR RATING	VOLTAGE	BASIS OF DESIGN		NOTES		
									MANUFACTURER	MODEL			
EF-1	CENTRIFUGAL	ROOF	4500	.50"	BELT	965	1 HP	208/3/60	GREENHECK	GB-200	1,2,5,7		
EF-2	PROPELLER	WALL	3000	.625"	DIRECT	1750	1/2 HP	120/1/60	GREENHECK	SE2	2,4,5,6,7		
EF-3	PROPELLER	WALL	2000	.50"	DIRECT	1750	1/2 HP	120/1/60	GREENHECK	SE2	2,4,5,6,7		

- NOTES:
- PROVIDE SLOPED ROOF CURB.
 - PROVIDE MOTOR OPERATED DAMPER.
 - PROVIDE MOTOR SIDE GUARD.
 - PROVIDE LOCAL DISCONNECT SWITCH.
 - PROVIDE SPEED CONTROLLER.
 - PROVIDE BASIS OF DESIGN OR APPROVED EQUAL.

STEAM UNIT HEATER SCHEDULE													
ITEM NO.	TYPE	HEATING (BTUH)	EAT	STEAM COIL LBS/HR	MOTOR HP	THROW (FEET)	VOLTAGE	BASIS OF DESIGN		NOTES			
								MANUFACTURER	MODEL				
UH-1	HORIZONTAL	130,000	60	132	5 PSIG	1/3	50	120/1/60	TRANE	UHS132	1,2,3		
UH-2	HORIZONTAL	20,000	60	22	5 PSIG	1/6	24	120/1/60	TRANE	UHS024	1,2,3		

- NOTES:
- PROVIDE UNIT MOUNTED NEC DISCONNECT SWITCH.
 - PROVIDE STEAM CONTROL VALVE AND WALL MOUNTED THERMOSTAT.
 - PROVIDE BASIS OF DESIGN OR APPROVED EQUAL.

BOILER BLOWDOWN TANK SCHEDULE													
ITEM NO.	DESIGN PSIG	DIMENSIONS DIA X H	CONNECTIONS (IN INCHES)					OPERATING WEIGHT (LBS)	BASIS OF DESIGN		NOTES		
			TANK INLET	TANK OUTLET	VENT	DRAIN	MAKEUP		MANUFACTURER	MODEL			
BDS-1	150 PSIG	16" x 60"	1.25	1	4	4	1.25	420	SUPERIOR	SBDS-1630-1.2544-AC	1,2,3,4,5		

- NOTES:
- MANUFACTURER TO INCLUDE AFTER COOLER TEMPERATURE REGULATING VALVE ASSEMBLY.
 - MANUFACTURER TO INCLUDE THERMOMETER, STRAINER AND CHECK VALVE.
 - MANUFACTURER TO INCLUDE ASME SECTION VIII DIV 1 CERTIFICATION (U-1A).
 - MANUFACTURER TO INCLUDE MOUNTING STAND.
 - PROVIDE BASIS OF DESIGN OR APPROVED EQUAL.

PACKAGED BOILER FEEDWATER SYSTEM (DEAERATOR, SURGE TANK AND PUMPS)																										
ITEM NO.	STEAM PRESSURE	DIMENSIONS L x W x H	DEAERATOR					SURGE / STORAGE					MAKEUP WATER					PUMPS					BASIS OF DESIGN			REMARKS
			CAPACITY LBS/HR	GALLONS	DESIGN PRESSURE	OPERATING PRESSURE	CAPACITY	DEAERATION	TYPE	GALLONS	DESIGN PRESSURE	CAPACITY	TYPE	GPM	PRESSURE	SERVICE	QUANTITY	TYPE	HP	GPM EACH	MANUFACTURER	MODEL				
DA-1	5 PSIG	160"x49"x146"	14,000	430	50 PSIG	5 PSIG	15 MINUTES	.005 CC/LITER	SPRAY	360	0 PSIG	12.5 MINUTES	ATMOSPHERIC	27.6	50 PSIG	BOILER FEED	3	CENTRIFUGAL	5	26	480/3/60	SUPERIOR	SSD014P155-125	1,2,3,4,5,6,7,8		
																TRANSFER	2	CENTRIFUGAL	3	55						

- NOTES:
- MANUFACTURER TO INCLUDE DA STEAM INLET PRV. ALL ACCESSORY TRIM, INSULATED TANK, STAND, PRE-PIPED PUMPS AND CONTROLS IN NEMA 12 ENCLOSURE AS REQUIRED FOR A PACKAGED SYSTEM.
 - MANUFACTURER TO INCLUDE SINGLE POINT PIPING AND ELECTRICAL CONNECTIONS. WITH DISCONNECT SWITCH, NON-FUSED.
 - MANUFACTURER TO INCLUDE STAINLESS STEEL SURGE TANK.
 - MANUFACTURER TO INCLUDE SCC MAKEUP AND TRANSFER VALVE ACCESSORIES AND CONTROL PANEL WITH TOUCHSCREEN.
 - MANUFACTURER TO INCLUDE VFD'S FOR ALL PUMPS.
 - PROVIDE FACTORY START-UP AND TRAINING.
 - PROVIDE BASIS OF DESIGN OR APPROVED EQUAL.
 - FEEDWATER TANK ASSEMBLY LIKELY SHIPS IN 2 PARTS, ASSEMBLE IN FIELD.

SYNTHETIC NATURAL GAS (SNG) SYSTEM SCHEDULE															
ITEM NO.	VAPORIZER CAPACITY	WATER CAPACITY	DESIGN TEMP (VAPOR TUBE)	DESIGN PRESS. (VAPOR TUBE)	TEST PRESS. (VAPOR TUBE)	LIQUID INLET CONNECTION	BURNER TYPE/CAPACITY	VAPOR/AIR MIXER CAPACITY	NUMBER OF VENTURIS	SURGE TANK CAPACITY	MIXGAS OUTLET CONNECTION	ELECTRICAL REQUIREMENTS	BASIS OF DESIGN		NOTES
													MANUFACTURER	MODEL	
SNG-1	258 GAL/H LPG @ 0°F	165 GAL	650°F	250 PSIG	375 PSIG	1" 300# RAISED FACE FLANGE	FORCED DRAFT POWER BURNER WITH ELECTRIC BLOWER / 310,000 BTU/H	20 MILLION BTU/H (NOMINAL)	2 x 10 MMBTU/H	120 GALLON (HORIZONTAL)	3" 150# RAISED FACE FLANGE	208/1/60 25A	ALTERNATE ENERGY SYSTEMS	WB-258/HVS-20MM	1,2,3,4,5,6,7,8,9,10

- NOTES:
- VAPORIZING TUBE CONSTRUCTION SHALL CONFORM TO ASME BOILER & PRESSURE VESSEL CODE, SECTION VIII, DIVISION I, AND CONFORM TO LATEST EDITION OF NFPA #58.
 - STANDARD SAFETY FEATURES SHALL INCLUDE IGNITION FAILURE SAFETY SHUT DOWN, LOW WATER LEVEL CUTOFF, HIGH WATER BATH TEMPERATURE CUTOFF, "SMART" LIQUID CARRYOVER PROTECTION, PRESSURE RELIEF VALVE PROTECTION (VAPOR TUBE), PRESSURE RELIEF VALVE PROTECTION (BURNER TRAIN), LOW BURNER GAS PRESSURE, HIGH BURNER GAS PRESSURE, LOW VAPOR PRESSURE, HIGH VAPOR PRESSURE, LOW MIXED GAS PRESSURE, HIGH MIXED GAS PRESSURE AND PRESSURE RELIEF VALVE PROTECTION (SURGE TANK).
 - CONTROL PANEL SHALL BE PROGRAMMABLE LOGIC CONTROLLER (PLC) WITH COLOR LCD DISPLAY WITH TOUCHSCREEN OPERATOR INTERFACE.
 - PROVIDE CONTROL POWER TRANSFORMER FOR CONTROL PANEL.
 - PROVIDE UNINTERRUPTED POWER SUPPLY (UPS) FOR SNG CONTROL PANEL ON SNG SKID.
 - PROVIDE INITIAL CHARGE OF HEAT TRANSFER SOLUTION.
 - PROVIDE CONTROL ROOM HEATER WITH THERMOSTAT.
 - PROVIDE GAS LEAK MONITOR IN CONTROL ROOM WITH WARNING ALARM AND SHUT-DOWN RELAYS.
 - INCLUDE START-UP AND TRAINING FOR SNG SYSTEM.
 - PROVIDE BASIS OF DESIGN OR APPROVED EQUAL.

LPG LIQUID TRANSFER PUMP SKID PACKAGE SCHEDULE													
ITEM NO.	SKID				PUMP				BASIS OF DESIGN		NOTES		
	CAPACITY	INLET	OUTLET	HP	SPEED	VOLTAGE	PUMP TYPE	MANUFACTURER	MODEL	MANUFACTURER		MODEL	
LTP-1	300 GAL/H LPG @ 0°F	2" FLEX, FLANGED	1" FLEX, FLANGED	2	3450 RPM	208/1/60	DIRECT DRIVE	CORKEN C12	AEP-05C	ALTERNATE ENERGY SYSTEMS	AEP-05C	1,2,3,4	

- NOTES:
- PROVIDE POWER SUPPLY AND CONTACTOR FROM SNG SKID CONTROL ROOM.
 - PROVIDE AUTOMATIC START/STOP BASED ON PRESSURE IN SNG STORAGE TANK.
 - PROVIDE SAME BRAND LIQUID TRANSFER PUMP SKID AS SNG SYSTEM.
 - PROVIDE BASIS OF DESIGN OR APPROVED EQUAL.

MECHANICAL / HVAC SYMBOL LEGEND

	ITEM TO DEMOLISH VALVE		MOTOR OPERATED DAMPER
	BALL VALVE		CENTRIFUGAL PUMP
	BUTTERFLY VALVE		HIGH PRESSURE STEAM
	THREE WAY VALVE		MEDIUM PRESSURE STEAM
	ANGLE VALVE		LOW PRESSURE STEAM
	GLOBE VALVE		HIGH PRESSURE CONDENSATE
	PLUG VALVE		MEDIUM PRESSURE CONDENSATE
	BALANCING VALVE		LOW PRESSURE CONDENSATE
	MOTOR OPERATED VALVE		MAKE-UP WATER
	MOTOR OPERATED THREE-WAY VALVE		VENT PIPING
	CHECK VALVE		NATURAL GAS
	STRAINER		LP GAS
	STRAINER W/ BLOW OFF		EQUIPMENT DESIGNATION
	RELIEF VALVE		CONNECTION TO EXISTING POINT OF DISCONNECTION
	AIR VENT - MANUAL		AIR FLOW
	AIR VENT, AUTOMATIC		G.C.
	PRESSURE GAUGE W/ GAUGE COCK		E.C.
	THERMOMETER		M.C.
	PIPING FLEXIBLE CONNECTION		P.C.
	REDUCER		
	UNION		
	THERMOSTAT		
	OUTSIDE AIR SENSOR		
	PIPING UP		
	PIPING DOWN		
	PHOTO ORIENTATION		

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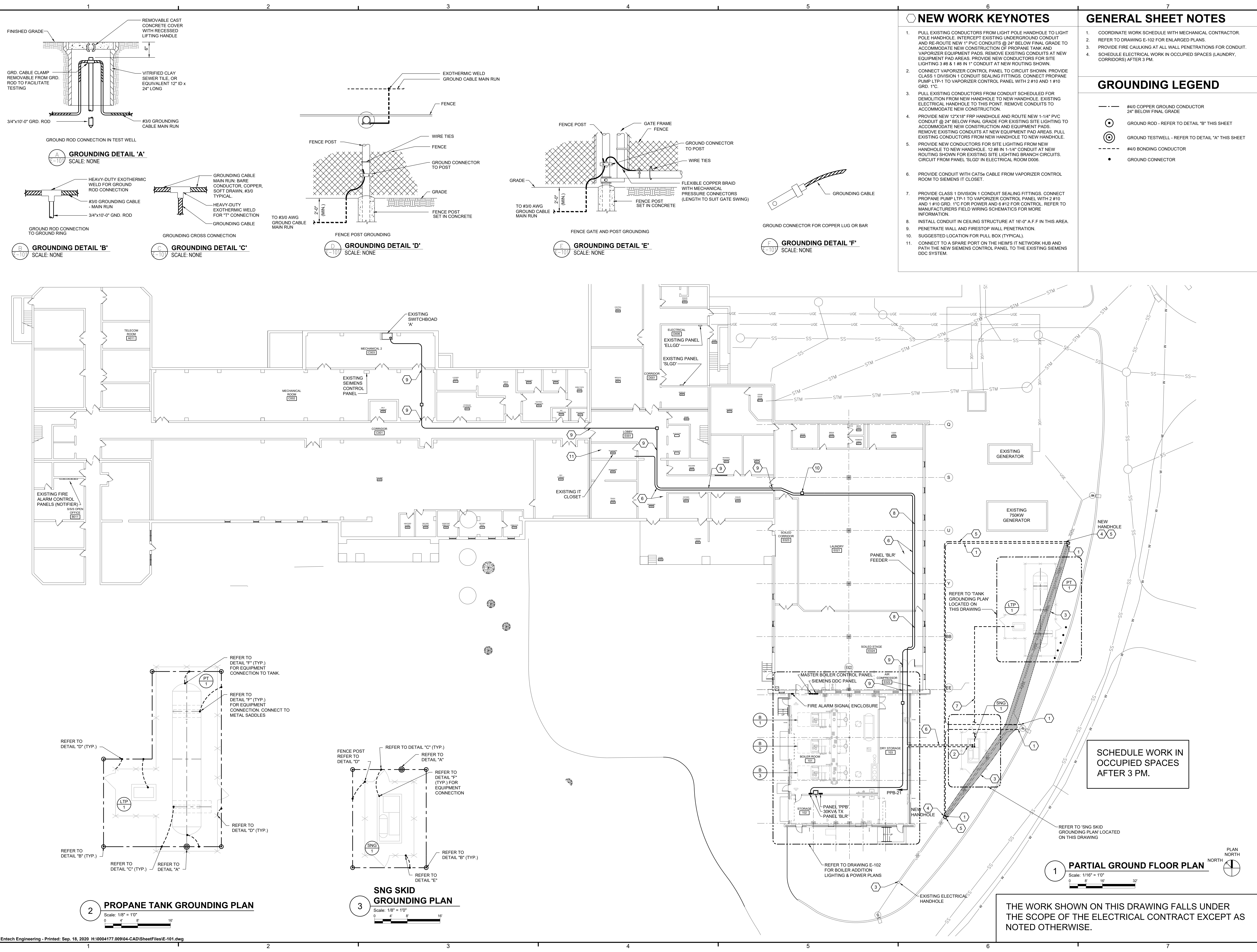
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08/16/20	2	1	0	0
08/07/20	1	0	0	0
07/30/20	0	0	0	0

COUNTY OF BERKS
BERKS HEIM
BERN TOWNSHIP
BOILER PROJECT
MECHANICAL
LEGEND, SCHEDULES AND DETAILS

SCALE	AS NOTED
PREPARED BY	SMF
CHECKED BY	MDR
APPROVED BY	MAF
PROJECT NO.	4177.009
DRAWING NO.	

THE PROJECT SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE MECHANICAL CONTRACT EXCEPT AS NOTED OTHERWISE.

M-701



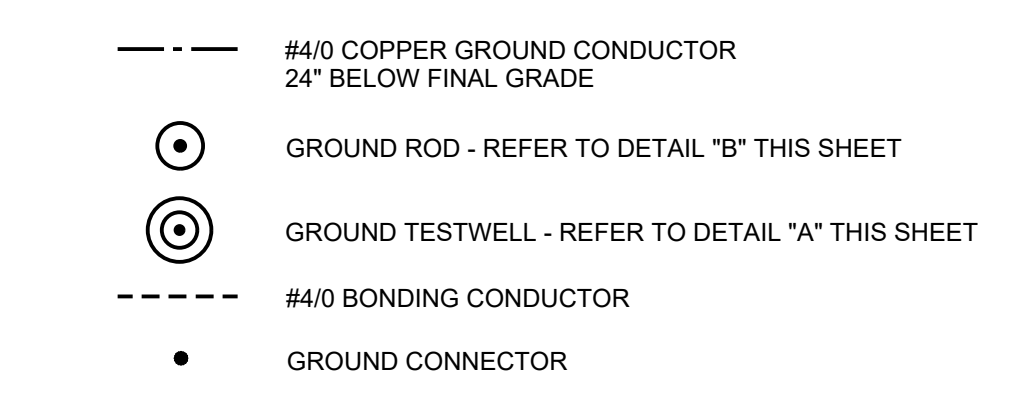
NEW WORK KEYNOTES

- PULL EXISTING CONDUCTORS FROM LIGHT POLE HANDHOLE TO LIGHT POLE HANDHOLE. INTERCEPT EXISTING UNDERGROUND CONDUIT AND RE-ROUTE NEW 1" PVC CONDUITS @ 24" BELOW FINAL GRADE TO ACCOMMODATE NEW CONSTRUCTION OF PROPANE TANK AND VAPORIZER EQUIPMENT PADS. REMOVE EXISTING CONDUITS AT NEW EQUIPMENT PAD AREAS. PROVIDE NEW CONDUCTORS FOR SITE LIGHTING 3 #8 & 1 #8 IN 1" CONDUIT AT NEW ROUTING SHOWN.
- CONNECT VAPORIZER CONTROL PANEL TO CIRCUIT SHOWN. PROVIDE CLASS 1 DIVISION 1 CONDUIT SEALING FITTINGS. CONNECT PROPANE PUMP LTP-1 TO VAPORIZER CONTROL PANEL WITH 2 #10 AND 1 #10 GRD. 1" C.
- PULL EXISTING CONDUCTORS FROM CONDUIT SCHEDULED FOR DEMOLITION FROM NEW HANDHOLE TO NEW HANDHOLE. EXISTING ELECTRICAL HANDHOLE TO THIS POINT. REMOVE CONDUITS TO ACCOMMODATE NEW CONSTRUCTION.
- PROVIDE NEW 12"X18" FRP HANDHOLE AND ROUTE NEW 1-1/4" PVC CONDUIT @ 24" BELOW FINAL GRADE FOR EXISTING SITE LIGHTING TO ACCOMMODATE NEW CONSTRUCTION AND EQUIPMENT PADS. REMOVE EXISTING CONDUITS AT NEW EQUIPMENT PAD AREAS. PULL EXISTING CONDUCTORS FROM NEW HANDHOLE TO NEW HANDHOLE.
- PROVIDE NEW CONDUCTORS FOR SITE LIGHTING FROM NEW HANDHOLE TO NEW HANDHOLE. 12 #8 IN 1-1/4" CONDUIT AT NEW ROUTING SHOWN FOR EXISTING SITE LIGHTING BRANCH CIRCUITS. CIRCUIT FROM PANEL 'SLGD' IN ELECTRICAL ROOM D006.
- PROVIDE CONDUIT WITH CAT5e CABLE FROM VAPORIZER CONTROL ROOM TO SIEMENS IT CLOSET.
- PROVIDE CLASS 1 DIVISION 1 CONDUIT SEALING FITTINGS. CONNECT PROPANE PUMP LTP-1 TO VAPORIZER CONTROL PANEL WITH 2 #10 AND 1 #10 GRD. 1" C FOR POWER AND 6 #12 FOR CONTROL. REFER TO MANUFACTURERS FIELD WIRING SCHEMATICS FOR MORE INFORMATION.
- INSTALL CONDUIT IN CEILING STRUCTURE AT 16'-0" A.F.F. IN THIS AREA.
- PENETRATE WALL AND FIRESTOP WALL PENETRATION.
- SUGGESTED LOCATION FOR PULL BOX (TYPICAL).
- CONNECT TO A SPARE PORT ON THE HEIM'S IT NETWORK HUB AND PATH THE NEW SIEMENS CONTROL PANEL TO THE EXISTING SIEMENS DDC SYSTEM.

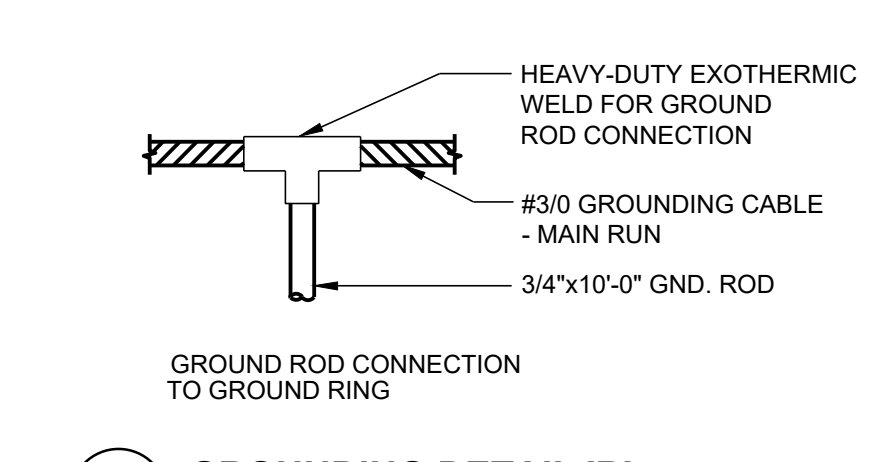
GENERAL SHEET NOTES

- COORDINATE WORK SCHEDULE WITH MECHANICAL CONTRACTOR.
- REFER TO DRAWING E-102 FOR ENLARGED PLANS.
- PROVIDE FIRE CAULKING AT ALL WALL PENETRATIONS FOR CONDUIT.
- SCHEDULE ELECTRICAL WORK IN OCCUPIED SPACES (LAUNDRY, CORRIDORS) AFTER 3 PM.

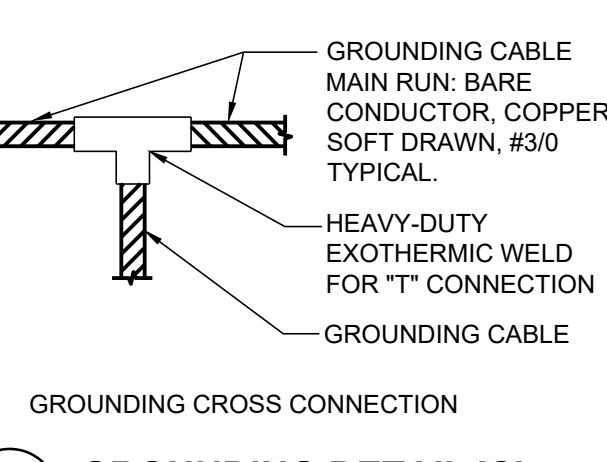
GROUNDING LEGEND



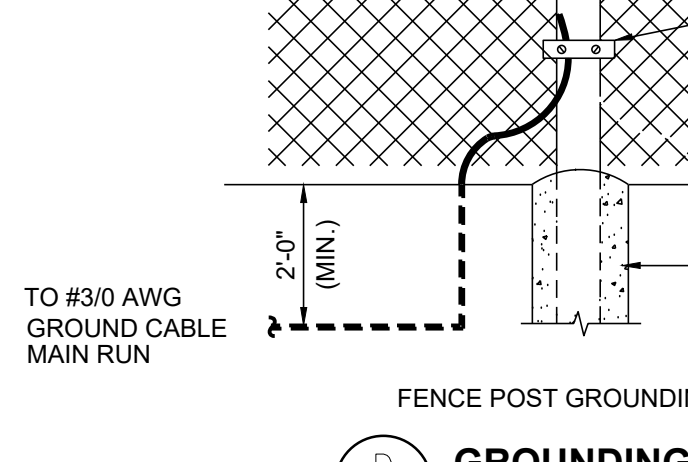
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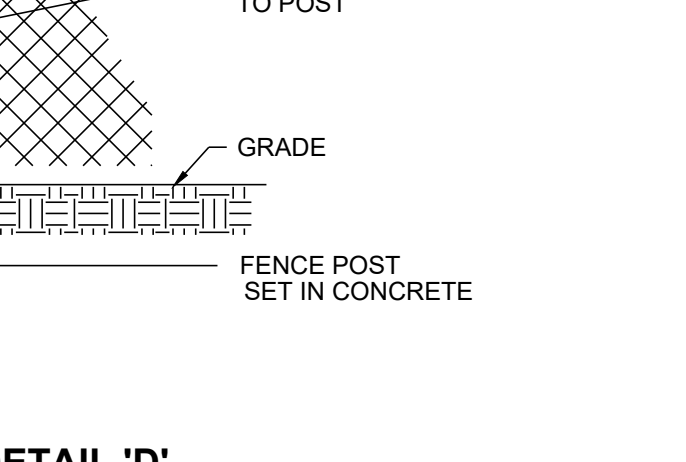
GROUNDING DETAIL 'B'
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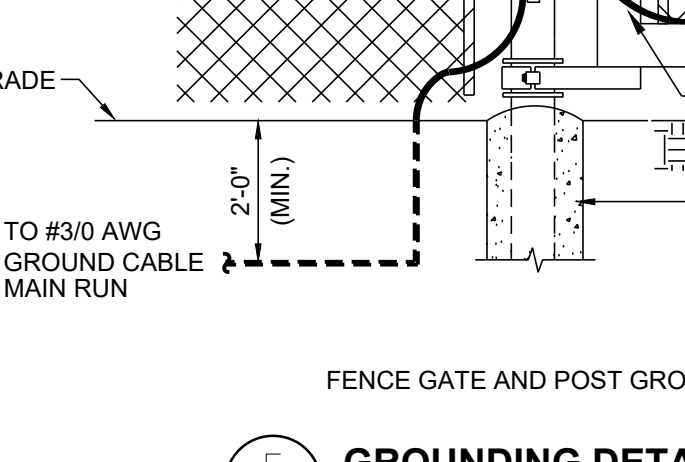
GROUNDING DETAIL 'C'
SCALE: NONE



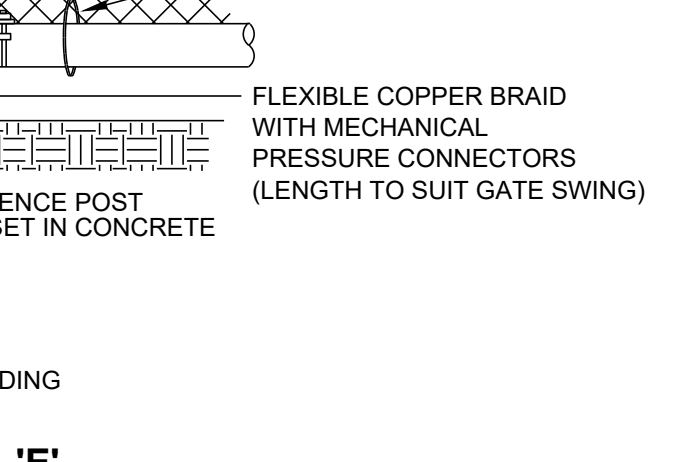
GROUNDING DETAIL 'D'
SCALE: NONE



GROUNDING DETAIL 'E'
SCALE: NONE



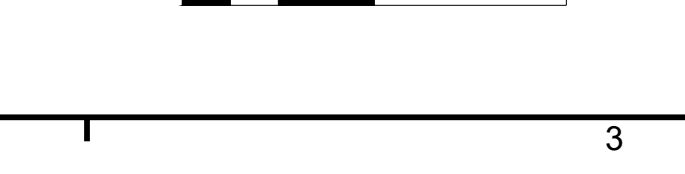
GROUNDING DETAIL 'F'
SCALE: NONE



2 PROPANE TANK GROUNDING PLAN
Scale: 1/8" = 1'0"

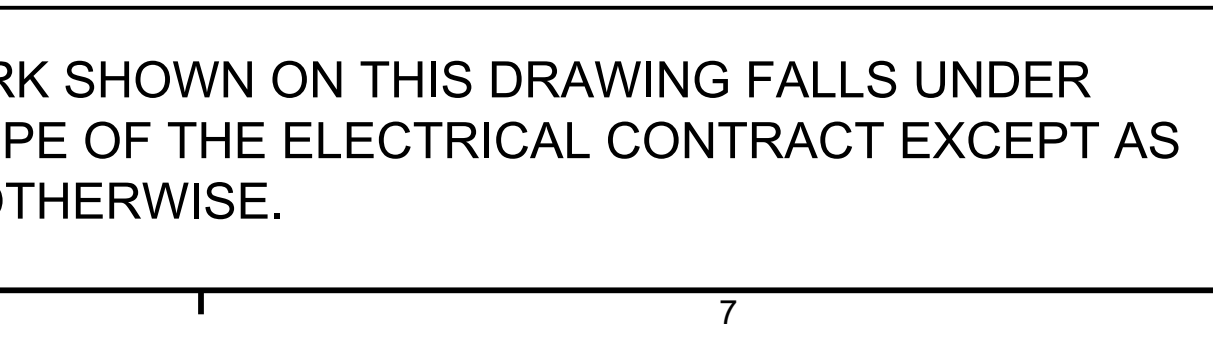


3 SNG SKID GROUNDING PLAN
Scale: 1/8" = 1'0"



SCHEDULE WORK IN OCCUPIED SPACES AFTER 3 PM.

1 PARTIAL GROUND FLOOR PLAN
Scale: 1/16" = 1'0"



THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE ELECTRICAL CONTRACT EXCEPT AS NOTED OTHERWISE.

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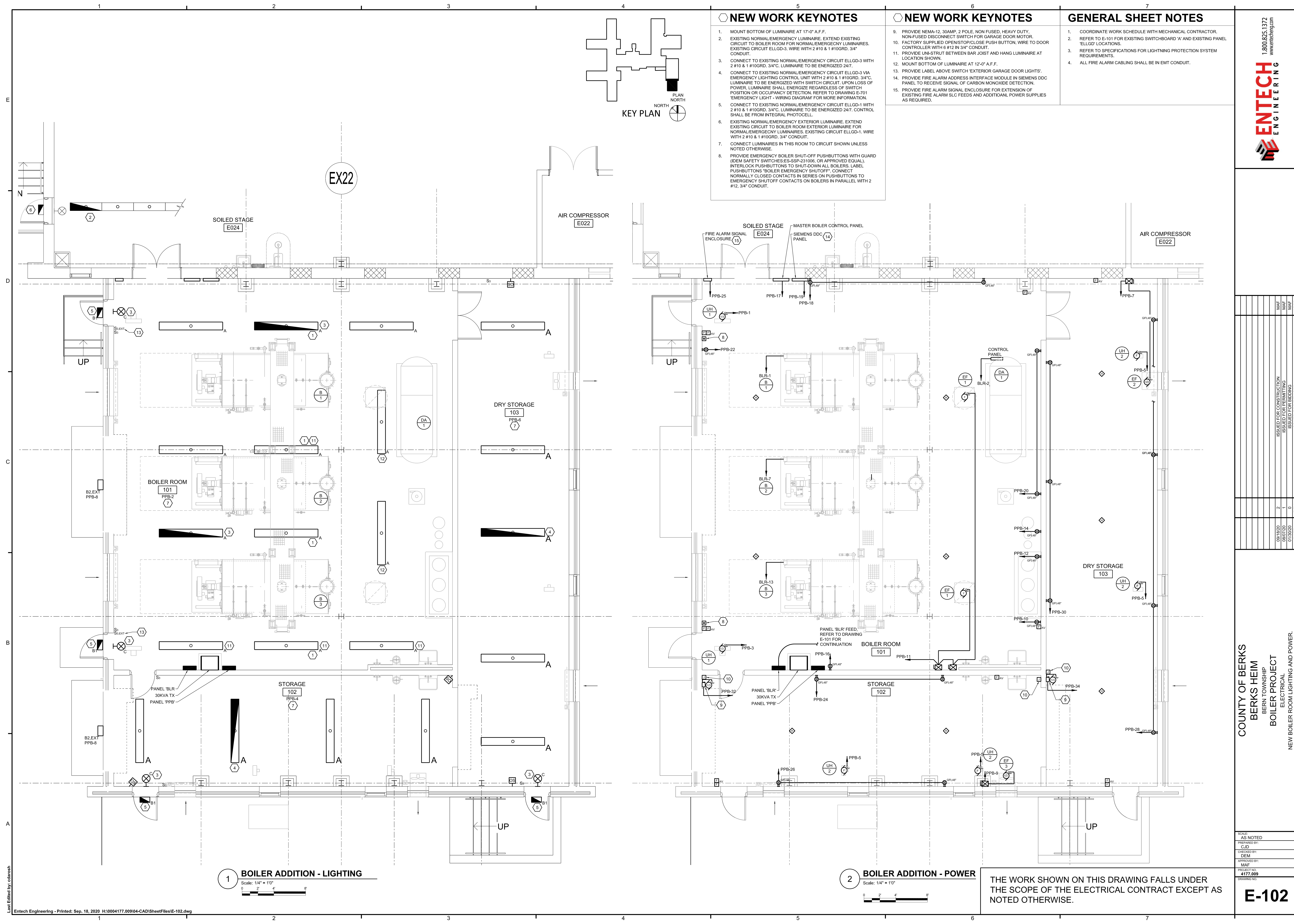
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08/07/20	2	1	0	0
01/20/20	1	0	0	0

COUNTY OF BERKS
BERKS HEIM
BERN TOWNSHIP
BOILER PROJECT
ELECTRICAL
PARTIAL SITE PLAN

SCALE: AS NOTED
PREPARED BY: CJD
CHECKED BY: DEM
DESIGNED BY: MAF
APPROVED BY: MAF

PROJECT NO: 4177.009
DRAWING NO:

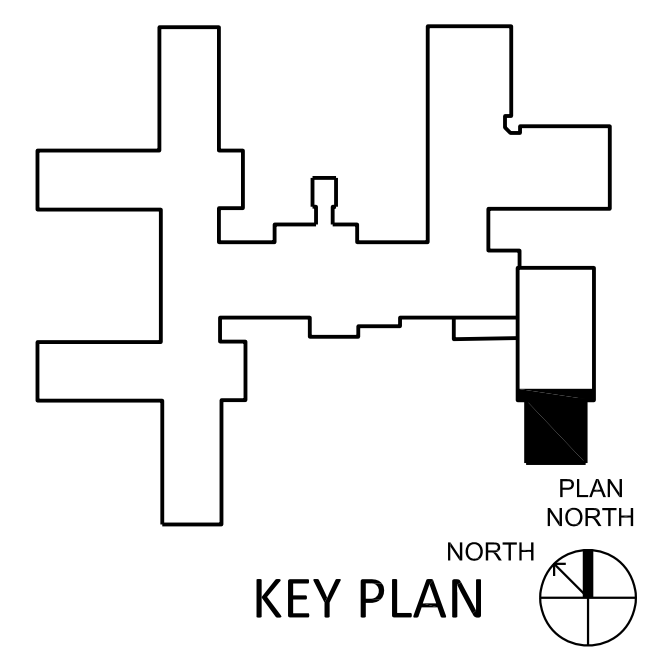
E-101



- ### NEW WORK KEYNOTES
1. MOUNT BOTTOM OF LUMINAIRE AT 17'-0" A.F.F.
 2. EXISTING NORMAL/EMERGENCY LUMINAIRE. EXTEND EXISTING CIRCUIT TO BOILER ROOM FOR NORMAL/EMERGENCY LUMINAIRES. EXISTING CIRCUIT ELLGD-3. WIRE WITH 2 #10 & 1 #10GRD. 3/4" CONDUIT.
 3. CONNECT TO EXISTING NORMAL/EMERGENCY CIRCUIT ELLGD-3 WITH 2 #10 & 1 #10GRD. 3/4" C. LUMINAIRE TO BE ENERGIZED 24/7.
 4. CONNECT TO EXISTING NORMAL/EMERGENCY CIRCUIT ELLGD-3 VIA EMERGENCY LIGHTING CONTROL UNIT WITH 2 #10 & 1 #10GRD. 3/4" C. LUMINAIRE TO BE ENERGIZED WITH SWITCH CIRCUIT. UPON LOSS OF POWER, LUMINAIRE SHALL ENERGIZE REGARDLESS OF SWITCH POSITION OR OCCUPANCY DETECTION. REFER TO DRAWING E-701 'EMERGENCY LIGHT - WIRING DIAGRAM' FOR MORE INFORMATION.
 5. CONNECT TO EXISTING NORMAL/EMERGENCY CIRCUIT ELLGD-1 WITH 2 #10 & 1 #10GRD. 3/4" C. LUMINAIRE TO BE ENERGIZED 24/7. CONTROL SHALL BE FROM INTEGRAL PHOTOCELL.
 6. EXISTING NORMAL/EMERGENCY EXTERIOR LUMINAIRE. EXTEND EXISTING CIRCUIT TO BOILER ROOM EXTERIOR LUMINAIRE FOR NORMAL/EMERGENCY LUMINAIRES. EXISTING CIRCUIT ELLGD-1. WIRE WITH 2 #10 & 1 #10GRD. 3/4" CONDUIT.
 7. CONNECT LUMINAIRES IN THIS ROOM TO CIRCUIT SHOWN UNLESS NOTED OTHERWISE.
 8. PROVIDE EMERGENCY BOILER SHUT-OFF PUSHBUTTONS WITH GUARD (IDEM SAFETY SWITCHES ES-SSP-231006, OR APPROVED EQUAL). INTERLOCK PUSHBUTTONS TO SHUT-DOWN ALL BOILERS. LABEL PUSHBUTTONS 'BOILER EMERGENCY SHUT-OFF'. CONNECT NORMALLY CLOSED CONTACTS IN SERIES ON PUSHBUTTONS TO EMERGENCY SHUT-OFF CONTACTS ON BOILERS IN PARALLEL WITH 2 #12, 3/4" CONDUIT.

- ### NEW WORK KEYNOTES
9. PROVIDE NEMA-12, 30AMP, 2 POLE, NON FUSED, HEAVY DUTY, NON-FUSED DISCONNECT SWITCH FOR GARAGE DOOR MOTOR.
 10. FACTORY SUPPLIED OPEN/STOP/CLOSE PUSH BUTTON, WIRE TO DOOR CONTROLLER WITH 6 #12 IN 3/4" CONDUIT.
 11. PROVIDE UNI-STRUT BETWEEN BAR JOIST AND HANG LUMINAIRE AT LOCATION SHOWN.
 12. MOUNT BOTTOM OF LUMINAIRE AT 12'-0" A.F.F.
 13. PROVIDE LABEL ABOVE SWITCH 'EXTERIOR GARAGE DOOR LIGHTS'.
 14. PROVIDE FIRE ALARM ADDRESS INTERFACE MODULE IN SIEMENS DDC PANEL TO RECEIVE SIGNAL OF CARBON MONOXIDE DETECTION.
 15. PROVIDE FIRE ALARM SIGNAL ENCLOSURE FOR EXTENSION OF EXISTING FIRE ALARM SLC FEEDS AND ADDITIONAL POWER SUPPLIES AS REQUIRED.

- ### GENERAL SHEET NOTES
1. COORDINATE WORK SCHEDULE WITH MECHANICAL CONTRACTOR.
 2. REFER TO E-101 FOR EXISTING SWITCHBOARD 'A' AND EXISTING PANEL 'ELLGD' LOCATIONS.
 3. REFER TO SPECIFICATIONS FOR LIGHTNING PROTECTION SYSTEM REQUIREMENTS.
 4. ALL FIRE ALARM CABLING SHALL BE IN EMT CONDUIT.



1 BOILER ADDITION - LIGHTING
Scale: 1/4" = 1'0"

2 BOILER ADDITION - POWER
Scale: 1/4" = 1'0"

THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE ELECTRICAL CONTRACT EXCEPT AS NOTED OTHERWISE.

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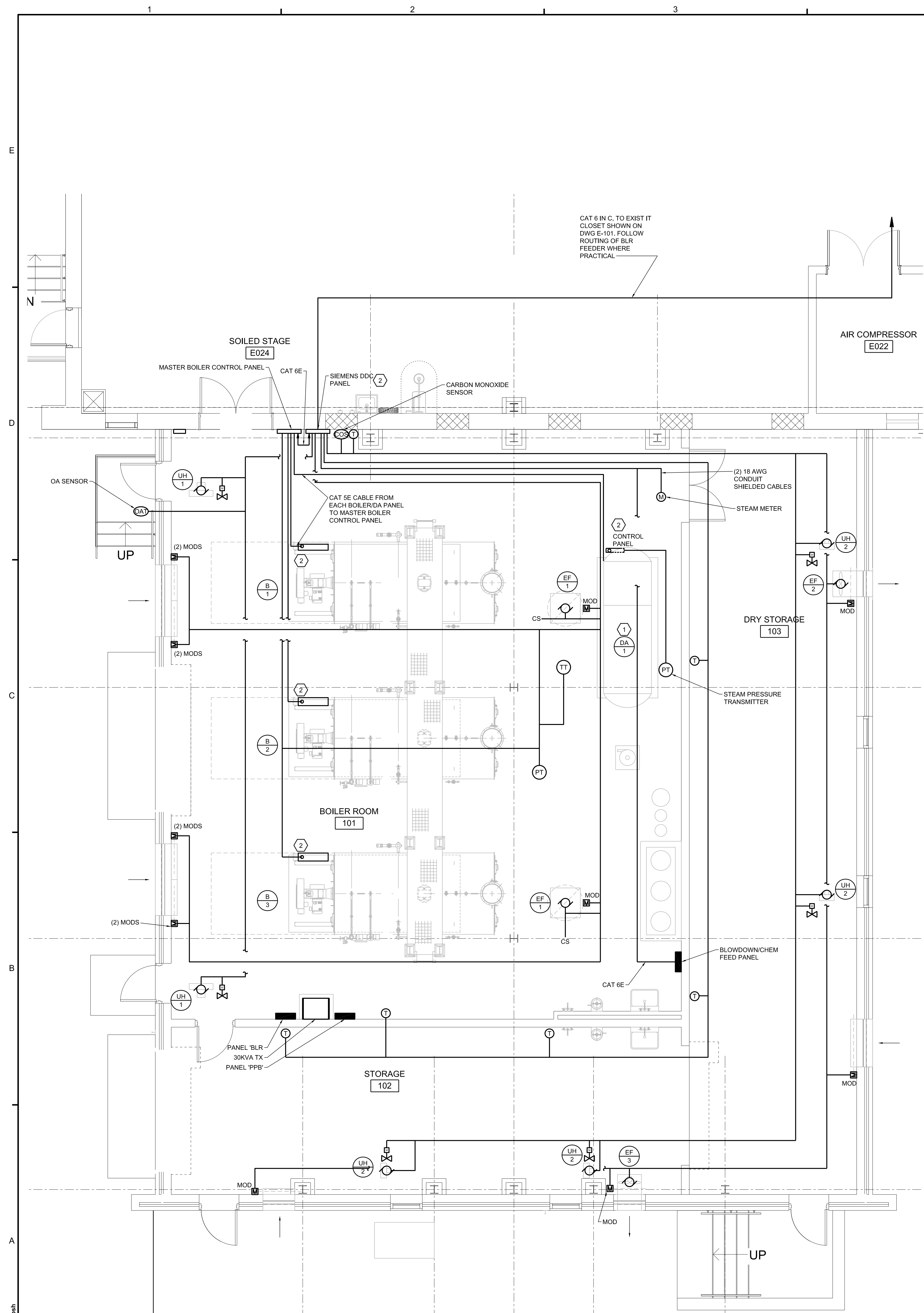
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01/20/20	0	ISSUED FOR BIDDING
		ISSUED FOR REVISION

COUNTY OF BERKS
BERKS HEIM
BERN TOWNSHIP
BOILER PROJECT
ELECTRICAL
NEW BOILER ROOM LIGHTING AND POWER.

SCALE:	AS NOTED
PREPARED BY:	CJD
CHECKED BY:	DEM
APPROVED BY:	MAF
PROJECT NO:	4177.009
DRAWING NO:	E-102

E-102

Last Edited by: cadmooh
Entech Engineering - Printed: Sep. 18, 2020 H:\0004177.009\04-CAD\SheetFiles\E-102.dwg



NEW WORK KEYNOTES

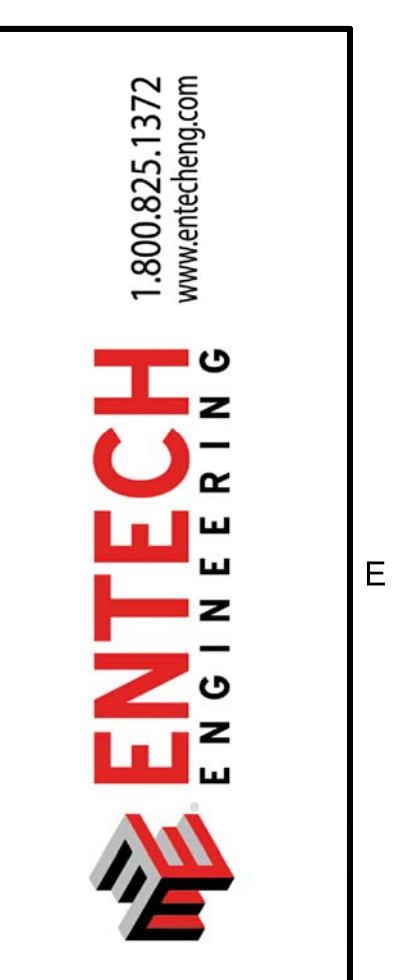
1. DEAERATOR ASSEMBLY WILL SHIP IN TWO PIECES. PROVIDE CONDUIT AND WIRING CONNECTIONS. FOR FIELD WIRING OF DEAERATOR ASSEMBLY AND TRIM SHIPPED LOOSE. IN ACCORDANCE WITH DEAERATOR SHOP DRAWINGS FURNISHED BY M.C. DEAERATOR AND TRIM WILL BE FURNISHED AND MOUNTED BY M.C. PROVIDE A \$2,000 ALLOWANCE IN THE ELECTRICAL CONTRACT BID PRICE FOR WIRING AND CONDUIT CONNECTIONS. ALLOWANCE SHALL COVER BOTH MATERIALS AND LABOR.
2. PROVIDE 3/4" CONDUIT WITH CAT 5E CABLING FROM CONTROL PANEL TO MASTER BOILER CONTROL PANEL.

GENERAL SHEET NOTES

1. COORDINATE WORK SCHEDULE WITH MECHANICAL CONTRACTOR.
2. PROVIDE CONTROL CONDUIT AND CABLING BETWEEN ALL CONTROL DEVICES AND CONTROL PANELS INCLUDED ON THE DDC SYSTEM POINT LIST ON DRAWING M-701. CONTROL DEVICES AND CONTROL PANELS WILL BE FURNISHED AND MOUNTED BY M.C. PROVIDE ALL TRIM WIRING AND CONDUIT INCLUDING, BUT LIMITED TO THE FOLLOWING AND AS SHOWN ON DRAWING M-601.
 - FROM EACH BOILER'S CONTROLLER TO ITS ASSOCIATED CONTROL VALVE.
 - FROM THE MASTER STEAM PRESSURE TRANSMITTER TO THE BOILER MASTER CONTROL PANEL.
 - BETWEEN THE BLOWDOWN MONITORING CHEMICAL FEED CONTROLLER AND 3 ASSOCIATED SOLENOID VALVES.
 - BETWEEN CONDUCTIVITY SENSORS AND BLOWDOWN MONITORING CHEMICAL FEED MONITOR CONTROLLER.
 - BETWEEN MAKE-UP WATER FLOW METER AND BLOWDOWN MONITORING CHEMICAL FEED MONITOR CONTROLLER.
 - FROM PRESSURE SENSOR IN BW PIPE TO FEEDWATER CONTROLLER.
 - FROM THE 2 STEAM FLOW METERS.
3. EXCEPT AS OTHERWISE NOTED, PROVIDE 18 AWG 2-CONDUCTOR SHIELDED PLENUM RATED CABLE FROM EACH DEVICE TO CONTROL PANEL.
4. FOR BIDDING PURPOSES, ASSUME 1" CONTROL CONDUIT SERVING MULTIPLE POINTS AND 3/4" BRANCH CONDUITS TO INDIVIDUAL POINTS.
5. COORDINATE CONTROL WIRING REQUIREMENTS WITH CONTROL WIRING SHOP DRAWINGS TO BE FURNISHED BY SIEMENS.
6. INSTALL CONDUIT AND CONTROL WIRING IN ACCORDANCE WITH THE DIVISION 26 SPECIFICATIONS SECTIONS.
7. CONNECT THE NEW STEAM METER LOCATED AT THE OPPOSITE END OF THE LAUNDRY TO THE SIEMENS DDC SYSTEM.

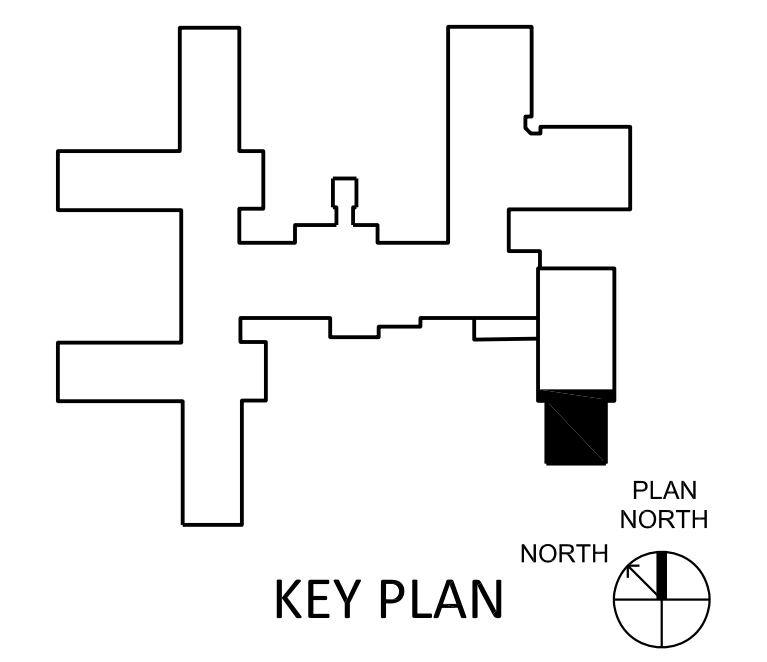
DDC LEGEND

- THERMOSTAT
- CONTROL VALVE
- MOTOR
- CS CURRENT SWITCH
- MOD MOTOR OPERATED DAMPER
- PT STEAM PRESSURE TRANSMITTER
- TT TEMPERATURE TRANSMITTER



NO.	DATE	REV.	DESCRIPTION
1	08/07/20	1	ISSUED FOR CONSTRUCTION
2	08/07/20	1	ISSUED FOR PERMITTING
3	01/20/20	0	ISSUED FOR BIDDING
4	01/20/20	0	ISSUED FOR REVISION

COUNTY OF BERKS
 BERKS HEIM
 BERN TOWNSHIP
 BOILER PROJECT
 ELECTRICAL
 NEW BOILER ROOM CONTROL WIRING



1 BOILER ADDITION - CONTROL CABLING
 Scale: 1/4" = 1'0"

THE WORK SHOWN ON THIS DRAWING FALLS UNDER THE SCOPE OF THE ELECTRICAL CONTRACT EXCEPT AS NOTED OTHERWISE.

Last Edited by: cadmoach

