U.S. DEPARTMENT OF AGRICULTURE | AGRICULTURAL RESEARCH SERVICE

SOLVENT STORAGE BUILDING & STEAM TUNNEL REPAIRS

EASTERN REGIONAL RESEARCH CENTER (ERRC) | WYNDMOOR, PA

A-E CONTRACT NUMBER: 12305B21D0013
A-E ORDER NUMBER: 1232SA25F0323

100% SUBMITTAL

APRIL 2, 2026

ARCHITECTURAL GENERAL NOTES

00 - PROCUREMENT AND CONTRACTING

0.1 **REVIEW BY ALL PARTIES:** CONTRACTOR SHALL ENSURE THAT ALL SUBCONTRACTORS AND SUPPLIERS REVIEW AND ABIDE BY THE TERMS OF THESE GENERAL NOTES FOR CONTRACT COMPLIANCE.

0.2 **RELATIONSHIP TO CONSTRUCTION DOCUMENTS:** GENERAL NOTES ARE MEANT TO COMPLEMENT AND/OR EMPHASIZE INFORMATION PRESENTED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER WHERE A CONFLICT ARISES BETWEEN THE DRAWING NOTES AND REMAINING CONTRACT DOCUMENTS DURING BIDDING AND FOR THE DURATION OF THE PROJECT. IF A CONFLICT ARISES DURING BIDDING THAT CANNOT BE LEGALLY CLARIFIED BY THE CONTRACTING OFFICER, THE CONTRACTOR SHALL BASE THE BID ON THE MOST EXPENSIVE COMBINATION OF QUALITY AND QUANTITY OF WORK INDICATED.

0.3 **KEYED NOTES:** WHERE PROVIDED, NUMBERED NOTES ARE KEYED ON THE DRAWINGS TO DEMONSTRATE AN EXAMPLE OF A PARTICULAR CONDITION AT THE TIME OF DRAWING PREPARATION AND ARE NOT INCLUSIVE OF ALL INSTANCES OF THAT CONDITION. THEREFORE, KEYED NOTES SHALL ALSO APPLY AS GENERAL NOTES FOR SITUATIONS OF THE SAME CONDITION.

01 - GENERAL REQUIREMENTS

1.1. **FIELD CONDITIONS DURING BIDDING:** CONTRACTOR IS RECOMMENDED TO VISIT THE SITE TO OBSERVE THE EXISTING FIELD CONDITIONS DURING BIDDING TO ENSURE THAT ALL CONDITIONS ARE ACCOUNTED. KNOWN OMISSIONS AND ERRORS BY THE CONTRACTOR OR A SUBCONTRACTOR SHALL BE BROUGHT TO THE CONTRACTING OFFICER'S ATTENTION FOR CLARIFICATION.

1.2. **PUBLIC SAFETY:** THE CONTRACTOR SHALL COORDINATE WITH THE JURISDICTION HAVING AUTHORITY TO ENSURE PUBLIC SAFETY AROUND THE CONSTRUCTION LIMITS AT ALL TIMES.

1.3. **DIMENSIONS:** CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS.

1.4. **ANGLES:** ALL ANGLES ARE 45 AND 90 DEGREES, UNLESS NOTED OTHERWISE.

1.5. **CONSTRUCTION LIMITS:** THE CONTRACTOR SHALL KEEP THEIR EMPLOYEES WITHIN THE DEFINED, CONTROLLED CONSTRUCTION LIMITS AT ALL TIMES. THE CONTRACTOR SHALL KEEP THE CONTRACTING OFFICER INFORMED OF ANY OCCASIONS WHEN WORKERS NEED TO BE OUTSIDE THE CONSTRUCTION LIMITS.

02 - EXISTING CONDITIONS

2.1. **VERIFY EXISTING CONDITIONS:** THE CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS AS THEY RELATE TO THE CONSTRUCTION DOCUMENTS AND REPORT ANY AND ALL DISCREPANCIES TO THE CONTRACTING OFFICER IN WRITING WITHIN 24 HOURS.

2.2. **SITE DEMOLITION:** THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OR MODIFICATION OF ANY AND ALL EXISTING CONDITIONS REQUIRED TO ACCOMPLISH THE WORK.

05 - METALS

5.1. **DISSIMILAR METALS:** THE CONTRACTOR IS REQUIRED TO MAINTAIN SEPARATION OF DISSIMILAR METALS, SO AS NOT TO CAUSE GALVANIC CORROSION. NOTIFY THE CONTRACTING OFFICER IMMEDIATELY IF THE CONTRACTOR IS AWARE OF A CONDITION WHERE DISSIMILAR METALS ARE BEING USED.

5.2. **STEEL FINISH:** ALL STEEL EXPOSED TO EXTERIOR WEATHER CONDITIONS SHALL BE GALVANIZED AND PAINTED.

5.3. **EXTERIOR FASTENERS:** USE HOT DIP GALVANIZED OR STAINLESS STEEL FASTENERS AT ALL EXTERIOR CONDITIONS. CONTRACTOR SHALL CONFIRM THAT ALL FASTENERS SUIT LOAD AND CONDITIONS.

06 - WOOD & PLASTICS

6.1. **TREATED WOOD:** ALL WOOD IN CONTACT WITH MASONRY, CONCRETE, OR STEEL SHALL BE PRESSURE PRESERVATIVE TREATED (PT); SEE SPECIFICATIONS AND DRAWINGS.

07 - THERMAL PROTECTION

7.1. **MOLD AND MILDEW PLAN:** THE CONTRACTOR SHALL PROVIDE A COMPLETE PHOTOGRAPHIC RECORD OF THE ENTIRE INSTALLATION PROCESS AND COMPLETED INSTALLATION OF EACH ROOF AREA REQUIRED FOR THIS WORK. ALL PHOTOGRAPHS SHALL BE DATE-STAMPED WITH LOCATIONS NOTED ON THE AS-BUILT SET OF DRAWINGS. PHOTOGRAPHIC COVERAGE SHALL INCLUDE AT LEAST 50% OF EACH INSTALLED ROOF AREA.

7.2. **WATER TESTING OF ROOF DRAINS:** THE CONTRACTOR SHALL PERFORM WATER TESTING OF ROOF DRAINS IN ACCORDANCE WITH THE MEMBRANE ROOFING SPECIFICATIONS AND SHALL PERFORM WATER TESTING OF THE ROOF DRAIN PIPING IN ACCORDANCE WITH SECTION 312 OF THE INTERNATIONAL PLUMBING CODE. ANY DEFICIENCIES IN THE ROOF DRAIN ASSEMBLY OR DRAINAGE PIPING SHALL BE CORRECTED AND RE-TESTED.

7.3. **ROOF PENETRATIONS:** WHERE PLUMBING, MECHANICAL, ELECTRICAL DEVICES, AND EQUIPMENT PENETRATE ROOF, PROVIDE FLASHING CAPS, ROOFING MASTIC AND MEMBRANES AS REQUIRED TO MAKE PENETRATIONS THOROUGHLY WATERTIGHT. USE MATERIALS COMPATIBLE WITH ROOF MATERIAL. PROTECT VENTS FROM ULTRAVIOLET LIGHT AS RECOMMENDED BY MANUFACTURER. AT MINIMUM, WHEN DETAILS AND ROOFING MANUFACTURER REQUIREMENTS ARE NOT AVAILABLE, COMPLY WITH NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA) ROOFING DETAILS AND GUIDELINES. ALL PENETRATIONS IN ROOF CONSTRUCTION SHALL BE PERFORMED BY A QUALIFIED ROOFING CONTRACTOR AND AS PART OF THE ROOF WARRANTY.

7.4. **SHEET METAL WORK:** ALL SHEET METAL WORK, INCLUDING METAL GAUGE THICKNESS, WALL FLASHING, GUTTERS, DOWNSPOUTS, EXPANSION JOINTS, FASCIA METAL, ETC. SHALL COMPLY WITH THE STANDARDS AND RECOMMENDED PRACTICES OF THE SHEET METAL AND AIR-CONDITIONING CONTRACTORS NATIONAL ASSOCIATION. (SMACNA).

7.5. **METAL FLASHING FINISH:** ALL METAL WALL FLASHING, EDGE STRIPS, EXTERIOR TRIM, DOWNSPOUTS, AND GUTTERS SHALL BE FACTORY FINISHED AND COMPATIBLE WITH SPECIFIED ROOFING SYSTEM (WHERE APPLICABLE).

7.6. **JOINT SEALANTS:** PROVIDE CAULKING AND/OR SEALANT AT ALL CRACKS AND INTERSECTIONS OF MATERIALS WHERE WEATHER-TIGHTNESS OR INSECT CONTROL IS NEEDED OR WHERE APPEARANCE IS IMPORTANT. THE INTENT IS A NEAT, WEATHER-TIGHT, FINISHED PROJECT AT ALL LOCATIONS AFFECTED BY THIS WORK.

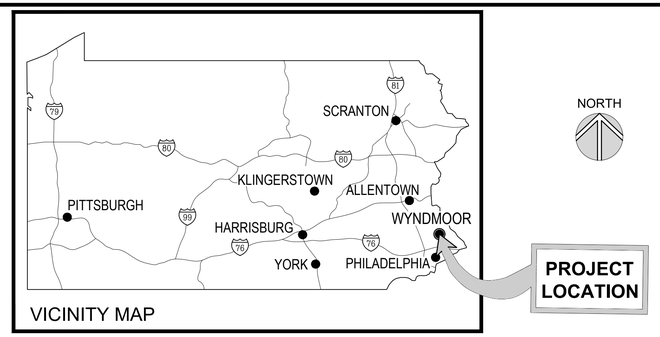
7.7. **SEALANT COLORS:** ALL EXTERIOR SEALANT COLORS SHALL MATCH THE ADJACENT SURFACE.

09 - FINISHES

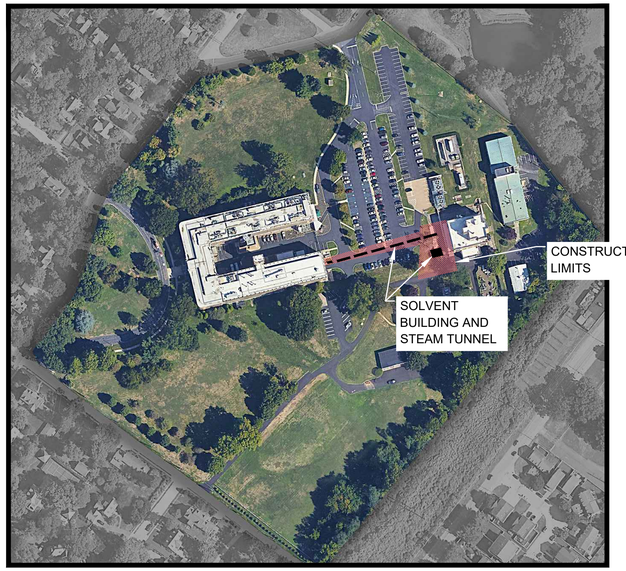
9.1. **PAINT:** ALL SURFACES IN THE PROJECT THAT ARE NOT PRE-FINISHED AND ARE PAINTABLE IN NATURE SHALL BE PAINTED. SEE SPECIFICATIONS FOR PAINTING REQUIREMENTS.

32 - EXTERIOR IMPROVEMENTS

32.1. **REPAIRS TO DAMAGE CAUSED DURING CONSTRUCTION:** THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A CLEAN SITE AND USABLE ROADS DURING THE CONSTRUCTION PROCESS. ANY DAMAGE CAUSED BY CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR TO THE CONDITION PRIOR TO DAMAGE OCCURRING.



VICINITY MAP



ERRC MAP

NORTH

EASTERN REGIONAL RESEARCH CENTER
600 EAST MERMAID LANE
WYNDMOOR, PA 19038

BID OPTIONS - 1 THROUGH 5

1. **STEAM TUNNEL** - ENTIRE SCOPE OF THE STEAM TUNNEL, AS IDENTIFIED ON THE CIVIL DRAWINGS AND SPECS.
2. **STEAM TUNNEL** - REPLACE TRENCH DRAIN IN BASEMENT, AS IDENTIFIED ON THE CIVIL DRAWING AND SPECS.
3. **BUILDING VENTILATION** - PROVIDE TWO (2) NEW ROOFTOP VENTILATORS, INCLUDING ROOFTOP CURBS, ACTUATED DOOR LOUVERS, AND ASSOCIATED MECHANICAL AND ELECTRICAL SCOPE OF WORK. (SEE SHT. A-101)
4. **DOORS AND FRAME** - PROVIDE ONE (1) NEW PAIR OF METAL DOORS, METAL FRAME, NEW METAL ANGLE SUPPORT ABOVE DOOR HEAD, AND NEW CONCRETE CONTAINMENT CURB AT THE THRESHOLD. (SEE SHT. A-101)
5. **MASONRY REPOINTING** - REPOINT EXTERIOR WYTHE OF MASONRY WALL, WHERE EXISTING BRICK IS NOT CALLED TO BE REMOVED AND RE-LAID IN MASONRY WALLS. (ASSUME 1,600 SQFT. OF MASONRY WALLS TO BE REPOINTED). (SEE SHT. A-101)

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9	C-001	GENERAL NOTES AND ABBREVIATIONS
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USDA Agricultural Research Service

USDA AGRICULTURAL RESEARCH SERVICE
EASTERN REGIONAL RESEARCH CENTER
SOLVENT STORAGE BUILDING & STEAM TUNNEL
WYNDMOOR, PA

COVER SHEET AND GENERAL NOTES

PROJECT NO.	AGRICULTURAL RESEARCH SERVICE	SHEET
12305B21D0013	600 MERMAID LANE WYNDMOOR, PA	G-001
DATE 04/02/2026		1 OF 22

J:\Vantiesburn\2025 Jobs\3525 USDA Solvent Storage Building Envelope and Steam Tunnel\07 Working Folder\Arch_Drawings_Working Drawings\USDA Solvent Storage Building.dwg
Apr 01, 2026 - 5:29pm

3525 - EXTERIOR PHOTO OF EAST ELEVATION (FRONT)

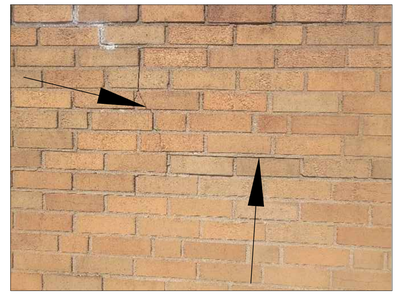
3525 - EXTERIOR PHOTO OF WEST ELEVATION

3525 - EXTERIOR PHOTO OF NORTH ELEVATION

3525 - EXTERIOR PHOTO OF SOUTH ELEVATION

3525 - EXTERIOR PHOTO OF BRICK PROTRUDING FROM FACE OF COPING

3525 - EXTERIOR PHOTO OF BRICK PROTRUDING FROM FACE OF COPING



3525 - CRACKS IN BRICK AND DETERIORATED MORTAR

3525 - DETERIORATED CONCRETE WITH FAILING MORTAR REPAIR

3525 - SPALLED CONCRETE KNEE WALL WITH EXPOSED REINFORCING

3525 - EXPOSED WATERPROOFING ON NORTH ELEVATION

3525 - ASPHALT BERM AT DOOR (NO THRESHOLD)

3525 - CORRODED STEEL LINTEL AND DETERIORATED PERIMETER SEALANT (SURFACE APPLIED SEALANT PREVENTING WALL FROM WEEPING)

3525 - OVERVIEW OF SILICONE COATED COPPER ROOFING

3525 - LOW VENT CURB HEIGHT AND RESTRICTED DRAINAGE AT CURB

3525 - EXPOSED PARAPET END

3525 - COPPER FLASHING BELOW COPING NOT RECESSED IN ADJACENT MASONRY

GENERAL NOTES

MASONRY REPOINTING

REPOINT ALL THE MORTAR JOINTS IN THE EXTERIOR WYTHE OF THE MASONRY WALLS. REPOINTING IS THE PROCESS OF REMOVING DETERIORATED MORTAR AND REPLACEMENT WITH FRESH MORTAR. REPOINTING SHOULD BE CONDUCTED FOLLOWING INDUSTRY STANDARDS SUCH AS ASTM E2260 "STANDARD GUIDE FOR REPOINTING HISTORIC MASONRY" WHICH PROVIDES INFORMATION ON PROPER REPOINTING PROCEDURES, AND THE BRICK INDUSTRY ASSOCIATION, "BRICK BRIEF, JULY 2005 - REPOINTING (TUCKPOINTING) BRICK MASONRY".

THE STRENGTH, COMPOSITION AND COLOR OF THE EXISTING MORTAR MUST BE CONSIDERED WHEN SELECTING THE REPOINTING MORTAR.

1. STRENGTH - THE COMPRESSIVE STRENGTH OF THE REPOINTING MORTAR MUST BE SIMILAR TO OR WEAKER THAT THE COMPRESSIVE STRENGTH OF THE ORIGINAL MORTAR. ANALYZE A SAMPLE OF THE ORIGINAL MORTAR BY PETROGRAPHIC OR CHEMICAL ANALYSIS, USING ASTM C 1324, "STANDARD TEST METHOD FOR EXAMINATION AND ANALYSIS OF HARDENED MASONRY MORTAR".
2. COMPOSITION - THE PROPORTIONS OF PORTLAND CEMENT AND LIME FOR TYPES "N" AND "O" MORTARS MUST BE IN ACORDANCE WITH ASTM C 270, "STANDARD SPECIFICATION FOR MORTAR FOR UNIT MASONRY".
3. COLOR - THE COLOR OF THE SAND USED INFLUENCES THE MORTAR COLOR. CONTACT LOCAL SAND SUPPLIERS TO MATCH SAND COLOR.
4. ADDITIVES - THE USE OF CHEMICAL ADDITIVES IN REPOINTING MORTAR MIX MUST BE AVOIDED.

PRIOR TO REMOVING ANY MASONRY OR MORTAR, SHORE UP THE WALLS AS NECESSARY TO PREVENT ANY SHIFTING AND/OR COLLAPSE OF MASONRY.
IN REGIONS SUBJECT TO "FREEZE-THAW" CYCLES, THE MORTAR SHOULD HAVE THE CAPACITY TO TRANSMIT MORE WATER VAPOR THAN THE MASONRY UNIT.

THE REPOINTING PROCESS GENERALLY REQUIRES REMOVAL OF THE EXISTING MORTAR TO A DEPTH NO LESS THAN 2-1/2 TIMES THE JOINT WIDTH BUT NOT LESS THAN 3/4". IF AFTER REMOVING TO THE MINIMUM DEPTH, SOUND MORTAR IS NOT DISCOVERED, ADDITIONAL REMOVAL IS REQUIRED UNTIL SOUND MORTAR IS FOUND.

THE MORTAR JOINT REMOVAL MUST BE PERFORMED BY PERSONNEL SKILLED IN REPOINTING USING POINTING CHISSELS OR GRINDERS TO REMOVE THE MORTAR AND TO PREVENT DAMAGE TO THE SURROUNDING MASONRY. AFTER REMOVAL, THE NEW MORTAR IS APPLIED IN 1/4" LIFTS TO THE PREPARED JOINTS AND TOOLED TO COMPACT THE MORTAR. PROVIDE A CONCAVE JOINT TO THE MORTAR BETWEEN THE BRICKS. APPLY THE MORTAR IN LIFTS AND MOISTEN THE MASONRY TO REDUCE SHRINKAGE OF THE MORTAR, WHICH OCCURS AS THE MORTAR DRIES. PROTECT THE MASONRY FROM DRYING TOO QUICKLY BY MISTING OR USING WET BURLAP TO COVER AREAS THAT ARE IN DIRECT SUNLIGHT. APPLY A CLEAR PENETRATING SILOXANE SEALER TO THE WALL SURFACES TO REDUCE THE ABSORBTION OF THE BRICK.

CONCRETE FOUNDATION REPAIR

REPAIR THE SPALLS AND DELAMINATIONS AT THE EXPOSED CONCRETE FOUNDATION. REPAIRS MUST BE PERFORMED FOLLOWING THE AMERICAL CONCRETE INSTITUTE (ACI) CONCRETE REPAIR PROCEDURES. VERTICAL REPAIRS MUST BE PERFORMED USING A POLYMER MODIFIED REPAIR MORTAR FOLLOWING THE ACI FIELD GUIDE TO CONCRETE REPAIR APPLICATION PROCEDURES FOR VERTICAL AND OVERHEAD SPALL REPAIR BY HAND APPLICATION (ACI RAP BULLETIN 6). EXPOSED STEEL REINFORCING MUST BE PROPERLY CLEANED AND A ZINC RICH PROTECTIVE COATING APPLIED. A BONDING AGENT MUST BE APPLIED FOR ALL PATCHES.

MORTAR FOR REPAIR OF VERTICAL CONCRETE: TWO COMPONENT, POLYMER MODIFIED, PORTLAND CEMENT, NON-SAG MORTAR SUITABLE FOR VERTICAL AND OVERHEAD SURFACES WITH A PENETRATING CORROSION INHIBITOR (SIKATOP 123 PLUS, AS MANUFACTURED BY SIKA CORPORATION).
BONDING AGENT: THREE COMPONENT, SOLVENT FREE, MOISTURE-TOLERANT, EPOXY MODIFIED CEMENTITIOUS PRODUCT SPECIALLY FORMULATED AS A BONDING AGENT AND ANTI-CORROSION COATING (ARMATEC 110 EPOCEM AS MANUFACTURED BY SIKA CORPORATION).

EXECUTION FOR CONCRETE REPAIR:

1. REMOVE DETERIORATED CONCRETE, DIRT, OIL, GREASE AND BOND INHIBITING MATERIALS FROM SURFACE. BE SURE REPAIR AREA IS NOT LASS THAN 1/8 INCH IN DEPTH. COMPLETE PREPARATION WORK BY HIGH PRESSURE WATER BLAST, SCABBLER, OR OTHER APPROPRIATE MECHANICAL MEANS TO OBTAIN AN EXPOSED AGGREGATE SURFACE WITH A MINIMUM SURFACE PROFILE OF +/- 1/16 INCH (CSP-5); +/- 1/8 INCH (CSP-6). SATURATE SURFACE WITH CLEAN WATER. ENSURE SUBSTRATE IS SATURATED SURFACE DRY (SSD) WITH NO STANDING WATER DURING APPLICATION.
2. REINFORCING STEEL:
   PREPARE STEEL REINFORCEMENT BY MECHANICAL CLEANING TO REMOVE TRACES OF RUST. WHERE CORROSION HAS OCCURRED DUE TO THE PRESENCE OF CHLORIDES, HIGH PRESSURE WASH THE STEEL WITH CLEAN WATER AFTER MECHANICAL CLEANING. FOR PRIMING OF REINFORCING STEEL, USE SPECIFIED BONDING AGENT.
3. PRIMING CONCRETE SUBSTRATE:
   PRIME THE PREPARED SUBSTRATE WITH A BRUSH OR SPRAY APPLIED COAT, WITH SPECIFIED BONDING AGENT.

CONCRETE COATING: SIKAGUARD 550W, AS MANUFACTURED BY SIKA CORPORATION OR PROVIDE EQUAL. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION.
ADHESION TESTING: IF ADHESION OF COATING PRODUCT IS QUESTIONABLE, INCORPORATE ADHESION TESTING METHOD FOR CONCRETE (ASTM D72340).
AREAS OF EXPOSED RUST STAINS MUST BE PROPERLY CLEANED PRIOR TO INSTALLATION OF COATING

PRIOR TO APPLYING THE COATING TO THE CONCRETE FOUNDATION, THE CRACKS IN THE EXISTING STRUCTURE MUST BE REPAIRED FOLLOWING THE COATING SYSTEM MANUFACTURER'S RECOMMENDATIONS WHICH TYPICALLY REQUIRE ROUTING AND SEALING, APPLYING A SPECIAL FILLER, DOUBLE COATING THE CRACKS OR A COMBINATION OF THE METHODS DEPENDING ON THE CRACK SIZE.

WALL MOUNTED CONDUIT AND EQUIPMENT MUST BE TEMPORARILY REMOVED TO ALLOW THE MASONRY WALL TO BE REPOINTED. AFTER REPOINTING IS COMPLETE, THE CONDUIT AND EQUIPMENT MUST BE RE-INSTALLED AND THE PENETRATIONS SEALED.

ABANDONED WALL ANCHORS MUST BE REMOVED AND THE RESULTING HOLES MUST BE REPAIRED WITH MORTAR OR SEALANT APPLIED TO COVER THE HOLES (COLOR OF MORTAR OR SEALANT MUST MATCH COLOR OF BRICK).

REMOVE THE EXISTING SEALANT AT THE PERIMETER OF ALL PENETRATIONS IN THE MASONRY WALLS (INCLUDING DOORS AND FRAMES, LIGHTNING PROTECTION CABLE, CONDUIT, ETC.) AND REPLACE WITH NEW SEALANT AND BACKER ROD.

REMOVE THE BRICK ABOVE THE EXISTING DOORS AND FRAME AND PROVIDE A NEW SELF-ADHERING MEMBRANE FLASHING AND A COPPER, OR STAINLESS STEEL, DRIP EDGE SET IN SEALANT. THE SELF-ADHERING MEMBRANE FLASHING MUST TERMINATE IN THE MIDDLE BRICK WYTHE. (SEE NOTE 6 ON THE SHEET KEYED NOTES FOR REPLACEMENT OF THE STEEL LINTEL ABOVE THE DOOR FRAME.)

CLEAR THE BELOW GRADE STORM DRAIN LINES AT THE DROP INLET ADJACENT TO THE RETAINING WALL AT THE NORTH ELEVATION, AND THE DROP INLET AT THE SOUTHEAST CORNER OF THE STRUCTURE. THE PIPES MUST BE SCOPED TO CONFIRM THEY ARE CLEAR AND IN GOOD CONDITION. COVER AND ABANDON THE EXISTING PIPE AT THE NORTHEAST CORNER OF THE STRUCTURE.

THE SOLVENT STORAGE BUILDING CURRENTLY HAS A FLOOR DRAIN THAT HAS BEEN TEMPORARILY COVERED. (SEE SHEET KEYED NOTE 17.) IN ACCORDANCE WITH NFPA 30, IGNITABLE LIQUIDS ARE PROHIBITED FROM BEING RELEASED INTO SEWERS OR STORM DRAINS TO PREVENT ENVIRONMENTAL CONTAMINATION AND FIRE HAZARDS. THE DESIGN TEAM HAS BEEN INFORMED BY THE USDA REPRESENTATIVE THAT THE FLOOR DRAIN DOES CONNECT TO AN UNDERGROUND STORM DRAINAGE SYSTEM. THEREFORE, THE FLOOR DRAIN IN THE BUILDING MUST BE PERMANENTLY SEALED. IF DRAINAGE OF THE BUILDING IS NECESSARY FOR OPERATIONAL OR MAINTENANCE PURPOSES, THEN ALTERNATIVE SOLUTIONS MUST BE IMPLEMENTED, SUCH AS A SELF-CONTAINED SUMP OR A DRAINAGE SYSTEM THAT COMPLIES WITH HAZARDOUS WASTE CONTAINMENT REGULATIONS.

THE VENTILATION SYSTEM FOR THE SOLVENT STORAGE BUILDING CONSISTS OF TWO (2) WIND-DRIVEN VENTILATORS AND LOUVERS IN THE THE PAIR OF EXISTING METAL DOORS. PER NFPA 30: FLAMABLE AND COMBUSTIBLE LIQUIDS CODE, VENTILATION MUST ENSURE CONTINUOUS AIR MOVEMENT TO PREVENT THE ACCUMULATION OF FLAMMABLE VAPORS. WHILE THE NATURAL VENTILATION SYSTEM MAY MEET THE INTENT OF MAINTAINING AIRFLOW, POWERED VENTILATION IS REQUIRED TO ACHIEVE RELIABLE AND CONSISTENT VENTILATION. POWER VENTILATORS MUST EXHAUST AIR AT A MINIMUM OF 1 CFM PER SQUARE FOOT OF FLOOR AREA. THIS BUILDING HAS 432 SQUARE FEET, THEREFORE A MINIMUM EXHAUST RATE OF 432 CFM IS REQUIRED. THE LOUVERS IN THE NEW METAL DOORS MUST ALSO BE DESIGNED AND SIZED ACCORDINGLY. ADDITIONALLY, THE POWERED VENTILATORS MUST BE EXPLOSION-PROOF AND PROPERLY POSITIONED TO MAXIMIZE AIR FLOW WHILE MINIMIZING THE RISK OF VAPOR CONCENTRATION IN DEAD ZONES. (NOTE: IN-TAKE VENTILATION AT A LOW LEVEL IS REQUIRED BY CURRENT CODE.)

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NO.	DATE	BY	DESCRIPTION

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JOB # 3525	REAL PROPERTY XXX

USDA Agricultural Research Service

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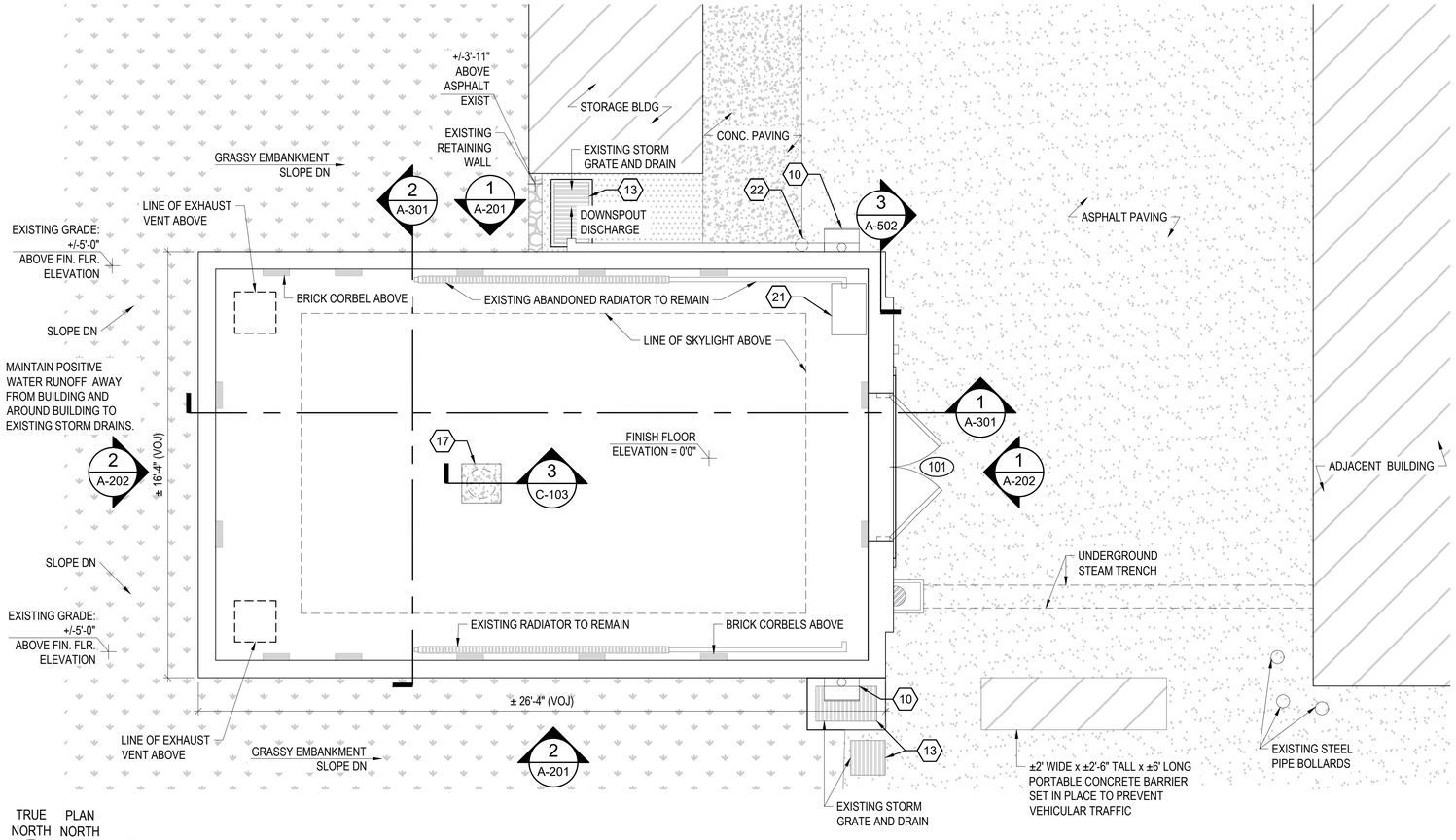
EASTERN REGIONAL RESEARCH CENTER
SOLVENT STORAGE BUILDING & STEAM TUNNEL
WYNDMOOR, PA

GENERAL NOTES

PROJECT NO. 12305B21D0013
DATE 04/02/2026
AGRICULTURAL RESEARCH SERVICE
600 MERMAID LANE
WYNDMOOR, PA
SHEET G-002
2 OF 22

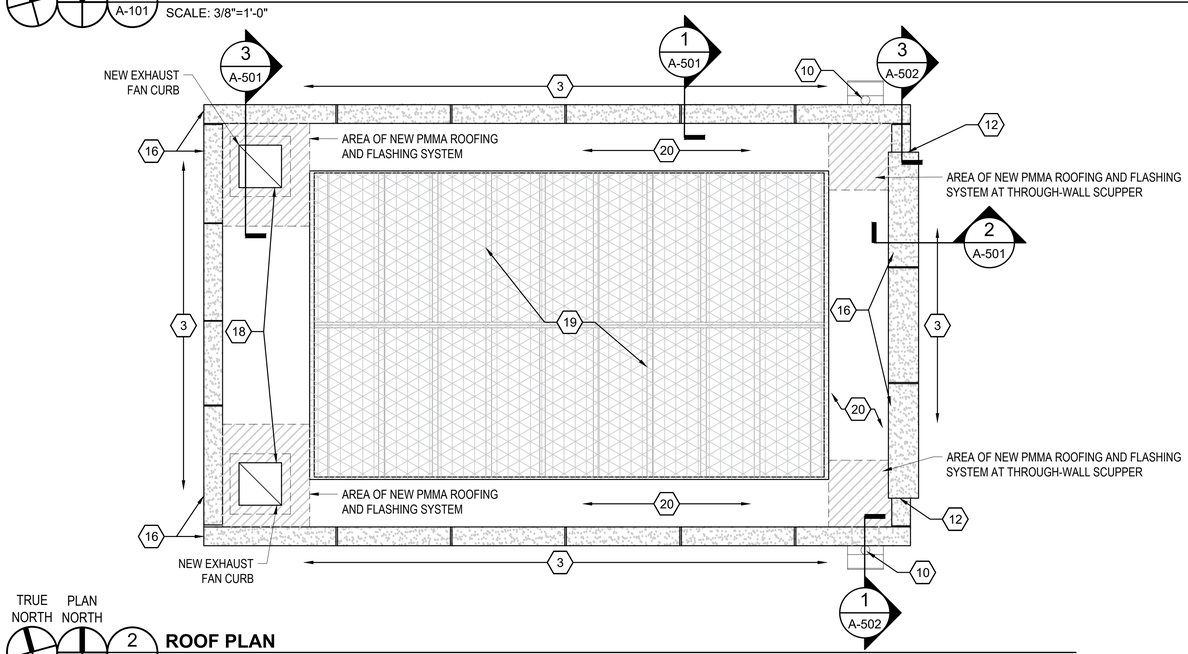
J:\Northeastern\2025 Jobs\3525 USDA Solvent Storage Building Envelope and Steam Tunnel\07 Working Folder\Arch_Drawings_Working Drawings\USDA Solvent Storage Building.dwg
Apr 01, 2026 - 5:30pm



TRUE NORTH PLAN NORTH

1 A-101 **FLOOR PLAN / PARTIAL SITE PLAN**

SCALE: 3/8"=1'-0"



TRUE NORTH PLAN NORTH

2 A-101 **ROOF PLAN**

SCALE: 3/8"=1'-0"

SHEET KEYED NOTES (ALL SHEET KEYED NOTES TO BE INCLUDE IN BASE BID, UNLESS OTHERWISE NOTED BELOW.)

1. REPAIR SPALLED AND DELAMINATED CONCRETE AT CONCRETE FOUNDATION. CLEAN AND COAT EXPOSED METAL CONCRETE REINFORCING.
2. EXISTING CRACK IN BRICK AND MORTAR. REPAIR CRACK AND REPOINT MORTAR JOINT. REPLACE DAMAGED BRICK.
3. PROVIDE NEW FLASHING BETWEEN TOP ROW OF BRICK AND STONE COPING.
4. REMOVE TOP 12 COURSES OF BRICK ON NORTH ELEVATION, TOP 9 COURSES OF BRICK ON SOUTH ELEVATION, TOP FIVE (5) COURSES OF BRICK ON THE WEST ELEVATION, AND TOP 9 COURSES OF BRICK ON TALL PARAPET WALL AND TOP (5) COURSES OF BRICK ON SHORT PARAPET WALL ON EAST ELEVATION. SAVE, CLEAN AND RE-LAY EXISTING BRICK. INSTALL APPROPRIATE FLASHING AND WEEP HOLES. (SEE DETAIL 2/A-501). REPLACE DAMAGED BRICK ON NORTH, SOUTH AND WEST WALLS WITH EXISTING BRICK FROM EAST WALL TO MAINTAIN CONSISTENT APPEARANCE. MATCH REQUIRED NEW BRICK (COLOR AND COMPRESSIVE STRENGTH) TO EXISTING BRICK.
5. **BID OPTION #4** - REMOVE EXISTING DOORS AND DOOR FRAME AND DISPOSE OF PROPERLY. (NOTE: THESE DOORS CONTAIN ASBESTOS (SEALED), THEREFORE THEY MUST BE DISPOSED OF IN AN APPROVED HAZARDOUS MATERIALS FACILITY.)
   PROVIDE NEW PAINTED GALVANIZED DOORS (WITH LOUVERS), DOOR FRAME AND HARDWARE. CONNECT NEW MECHANICALLY ACTUATED DAMPERS TO NEW DOOR LOUVERS AND TIE INTO EXHAUST SYSTEM CONTROLS PER MECHANICAL/ELECTRICAL DRAWINGS. NEW DOOR ASSEMBLY WILL SIT ON TOP OF NEW CONTAINMENT CURB. (SEE DOOR SCHEDULE AND DETAILS.)
6. **BID OPTION #4** - REMOVE EXISTING DETERIORATED STEEL LINTEL OVER EXISTING METAL DOORS AND FRAME. PROVIDE A NEW HOT DIPPED GALVANIZED STEEL LINTEL, MINIMUM 12" BEARING ON EACH SIDE OF LINTEL.
7. **BID OPTION #4** - REMOVE EXISTING ASPHALT BERM BELOW EXISTING METAL DOORS. PROVIDE NEW REINFORCED CONCRETE CURB BELOW DOORS AND FRAME. TIE INTO EXISTING CONCRETE CURB AND PROVIDE WATERSTOP IN THE COLD JOINT.
8. THE EXISTING VERTICAL AND HORIZONTAL JOINTS BETWEEN THE MASONRY WALL AND CONCRETE FOUNDATION WALL HAS FAILED. RAKE THE MORTAR, CLEAN THE JOINT AND PROVIDE A BACKER ROD AND SILICONE SEALANT.
9. **BID OPTION #5** - REPOINT THE BALANCE OF EXISTING MORTAR JOINTS IN THE EXTERIOR FACE OF THE MASONRY WALLS THAT HAVE NOT BEEN ADDRESSED IN THE BASE BID, IN ACCORDANCE WITH ASTM E2260 STANDARD GUIDE FOR REPOINTING HISTORIC MASONRY".
10. REMOVE EXISTING THROUGH-WALL ROOF DRAINS. PROVIDE NEW THROUGH-WALL COPPER SCUPPER, COPPER CONDUCTOR HEADS AND DOWNSPOUTS, PROPERLY ATTACHED TO THE MASONRY WALLS.(SEE DETAIL). DISCHARGE INTO THE EXISTING GRATED SUBSURFACE DRAINS.
11. THOROUGHLY REMOVE THE EXPOSED WATERPROOFING (BLACK) FROM THE CONCRETE FOUNDATION WALLS. PROPERLY CLEAN THE EXTERIOR FACE OF THE CONCRETE FOUNDATION WALLS AND APPLY A PRIMER AND PROTECTIVE ELASTOMERIC COATING SYSTEM THAT HAS A HIGH VAPOR PERMEABILITY (>10 perms) AND IS SUITABLE FOR CAST IN PLACE CONCRETE. THE SELECTED PRODUCT SHOULD BE TESTED FOR ADHESION AND COMPATIBILITY TO THE SUBSTRATE.
12. TUCK PARAPET FLASHING FROM LOWER PARAPET WALL +/- 2" IN MORTAR JOINT OF ADJACENT TALLER PARAPET WALL AT EAST ELEVATION (SEE DETAIL 3/A-502)
13. CLEAR THE BELOW GRADE STORM DRAIN LINES AT THE STORM DRAIN DROP INLETS ON THE NORTH AND SOUTH SIDES OF THE BUILDING VISUALLY SCOPE THE DRAIN LINES TO CONFIRM THEY ARE CLEAR AND IN GOOD WORKING CONDITION.
14. REMOVE EXISTING SEALANT AROUND LIGHTNING PROTECTION CABLE AND PROVIDE NEW SEALANT AND BACKER ROD ON NORTH ELEVATION.
15. REMOVE ADANDONED ANCHORS AND SEALANT AROUND THE PERIMETER OF ALL PENETRATIONS, AND PROVIDE NEW SEALANT AND BACKER ROD.
16. REPLACE THE EXISTING STONE COPING WITH A NEW COPING THAT OVERHANGS THE MASONRY WALL ON EACH SIDE BY 1" MIN. AND HAS A FORMED DRIP IN THE UNDERSIDE EDGE ON BOTH SIDES. AFTER REMOVING THE EXISTING STONE COPING, REPLACE THE EXISTING COPPER FLASHING WITH NEW PLEATED COPPER COUNTER FLASHING AND A NEW SELF-ADHERING THROUGH WALL FLASHING MEMBRANE THAT IS STEPPED INTO THE EXTERIOR WYTHE OF BRICK TWO COURSES BELOW THE BOTTOM OF THE COPING. ATTACH THE COPPER COUNTER FLASHING TO THE FLASHING MEMBRANE AND PROVIDE WEEPS ABOVE THE FLASHING AT 24" ON CENTER. (SEE DETAIL 1/A-501 & 2/A-501).
17. REMOVE EXISTING FLOOR DRAIN AND COVER. SAW CUT CONCRETE FLOOR SLAB (1'-6" X 1'-6"). CUT DRAIN PIPE TO 12" BELOW CONCRETE SLAB AND PERMANENTLY CAP. INSTALL NEW STEEL REINFORCED CONCRETE SLAB AND TROWEL SMOOTH TO MATCH EXISTING FINISH SEE CIVIL FOR FOR DETAIL.
18. **BID OPTION #3** - REMOVE EXISTING EXHAUST VENTS AND ROOF CURB. PROVIDE NEW 8" HIGH CURB, MECHANICAL EXHAUST FAN, DUCTWORK, VENT AND RAIN HOOD. NEW MECHANICAL FAN CURB SIZE IS 1'-7" X 1'-7" X 8" HIGH, WITH A ROOF OPENING OF 1'-3 1/2" X 1'-3 1/2". MEASURE EXISTING HOLE IN CONCRETE ROOF SLAB AND MAKE NECESSARY ADJUSTMENTS. SEE MECHANICAL AND ELECTRICAL SHEETS.
19. EXISTING SKYLIGHT TO REMAIN. PROTECT THROUGHOUT ENTIRE CONSTRUCTION PERIOD.
20. EXISTING FLAT SEAM COPPER ROOF PANELS WITH SOLDERED SEAMS AND COVERED WITH A SILICONE COATING SYSTEM TO REMAIN. PROTECT THROUGHOUT ENTIRE CONSTRUCTION PERIOD. REPAIR AND/OR REPLACE AS NECESSARY TO COMPLETE BASE BID WORK.
21. EXISTING STEEL COVER PLATE, FROM ABANDONED UNDERGROUND STEAM LINE. REMOVE COVER PLATE AND PROVIDE AN 8" HIGH PERIMETER BOX CONSTRUCTED OF WELDED STEEL ANGLES, SEALED TO CONCRETE FLOOR, WITH A 1" DRAIN LINE TO EXTERIOR OF BUILDING. (SEE DETAIL 4/C-103)
22. EXISTING SUBSURFACE DRAIN LINE, COVER AND ABANDON.

LEGEND

	VENTILATOR		SPALL / DELAMINATION
	CRACK IN BRICK / MORTAR		EXPOSED WATERPROOFING
L.P.	LIGHTNING PROTECTION CABLE		CONCRETE WALL
	SCUPPER DRAIN		DIRT / EARTH
A	ABANDONED ANCHOR		STONE WALL
		∅	CONDUIT PENETRATION

THE Johnson - M² Adams PPM P.A.
ARCHITECTS/ENGINEERS PLANNING SURVEYING MANAGEMENT
P.O. BOX 915, GREENWOOD, MISSISSIPPI - (662) 455-4443

NO.	DATE	BY	DESCRIPTION

REVISIONS

USDA Agricultural Research Service

USDA AGRICULTURAL RESEARCH SERVICE
EASTERN REGIONAL RESEARCH CENTER
SOLVENT STORAGE BUILDING & STEAM TUNNEL
WYNDMOOR, PA

FLOOR PLAN

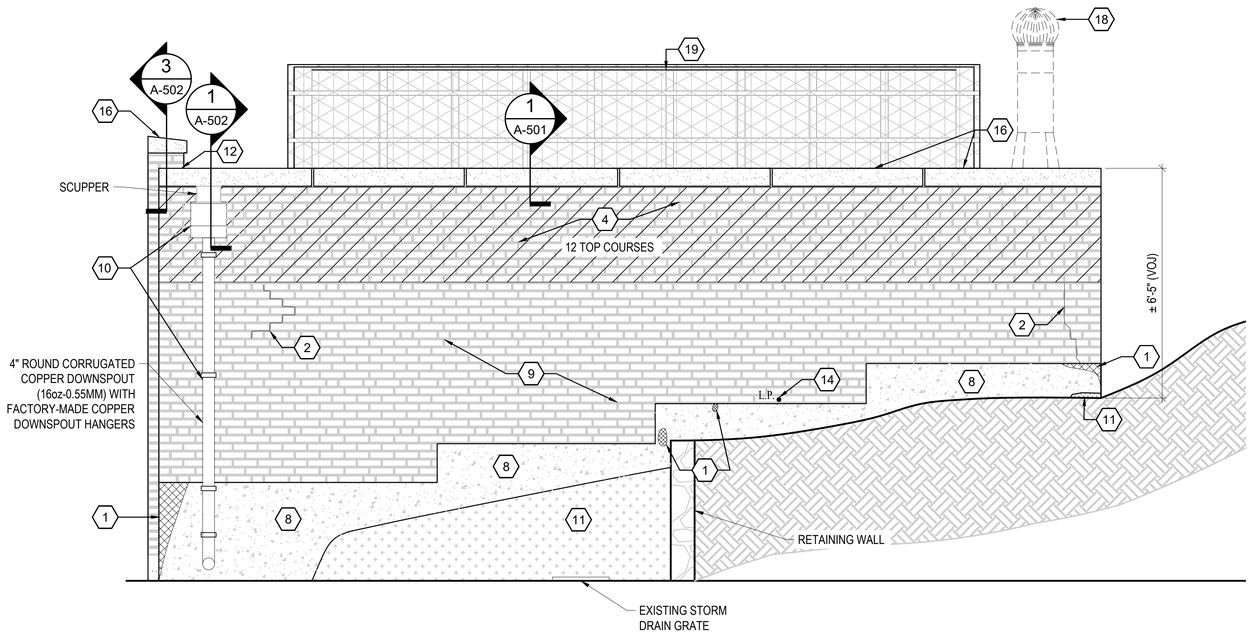
A-E FIRM	USDA
PROJECT MANAGER C.R.	EPM XXX
DESIGNER E.S.	PPM XXX
CHECKED BY T.B.	SAFETY & HEALTH XXX
JOB # 3525	REAL PROPERTY XXX

PROJECT NO. 12305B21D0013
DATE 04/02/2026

AGRICULTURAL RESEARCH SERVICE
600 MERMAID LANE
WYNDMOOR, PA

SHEET A-101
3 OF 22

J:\Hottlebacra\2025_Jobs\3525 USDA Solvent Storage Building Envelope and Steam Tunnel\07 Working Folder\Arch_Drawings_Working Drawings\USDA Solvent Storage Building.dwg
Apr 13, 2026 - 8:47am



1 / A-201 **NORTH ELEVATION**
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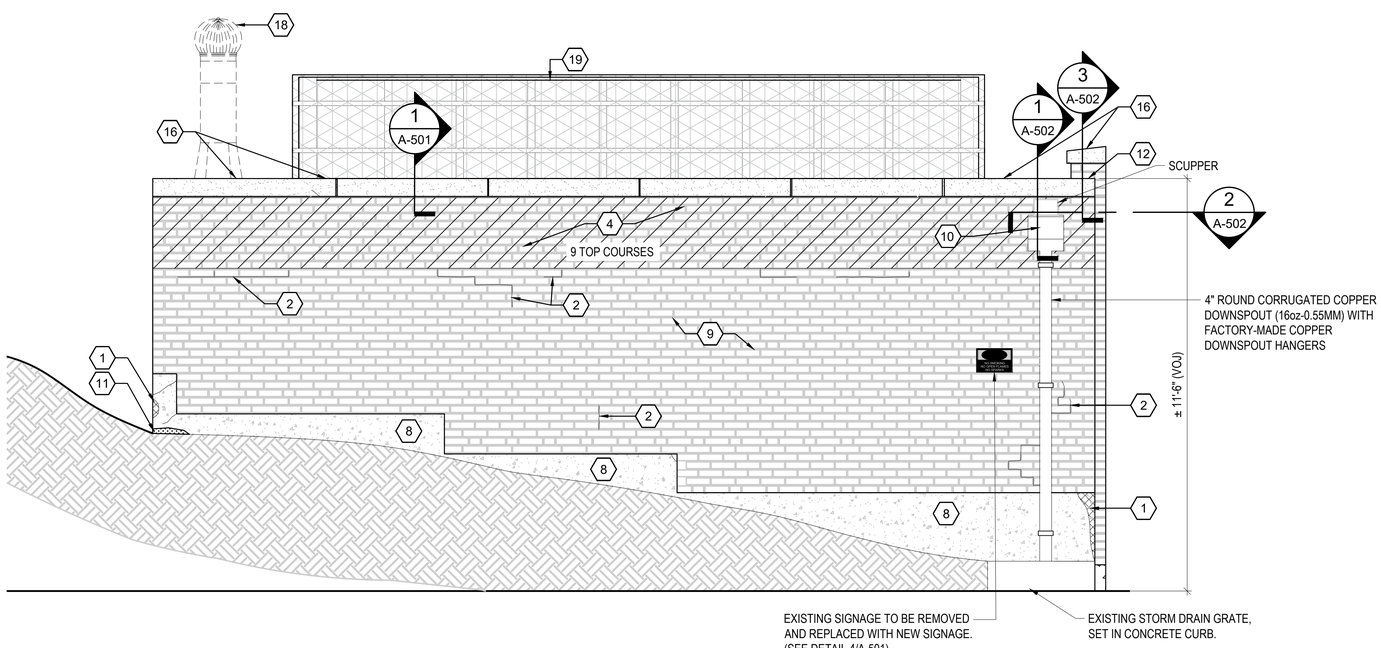

2 / A-201 **SOUTH ELEVATION**
SCALE: 1/2"=1'-0"

SHEET KEYED NOTES

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2. EXISTING CRACK IN BRICK AND MORTAR. REPAIR CRACK AND REPOINT MORTAR JOINT. REPLACE DAMAGED BRICK.
3. PROVIDE NEW FLASHING BETWEEN TOP ROW OF BRICK AND STONE COPING.
4. REMOVE TOP 12 COURSES OF BRICK ON NORTH ELEVATION, TOP 9 COURSES OF BRICK ON SOUTH ELEVATION, TOP FIVE (5) COURSES OF BRICK ON THE WEST ELEVATION, AND TOP 9 COURSES OF BRICK ON TALL PARAPET WALL AND TOP (5) COURSES OF BRICK ON SHORT PARAPET WALL ON EAST ELEVATION. SAVE, CLEAN AND RE-LAY EXISTING BRICK. INSTALL APPROPRIATE FLASHING AND WEEP HOLES. (SEE DETAIL 2/A-501). REPLACE DAMAGED BRICK ON NORTH, SOUTH AND WEST WALLS WITH EXISTING BRICK FROM EAST WALL TO MAINTAIN CONSISTENT APPEARANCE. MATCH REQUIRED NEW BRICK (COLOR AND COMPRESSIVE STRENGTH) TO EXISTING BRICK.
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   PROVIDE NEW PAINTED GALVANIZED DOORS (WITH LOUVERS), DOOR FRAME AND HARDWARE. CONNECT NEW MECHANICALLY ACTUATED DAMPERS TO NEW DOOR LOUVERS AND TIE INTO EXHAUST SYSTEM CONTROLS PER MECHANICAL/ELECTRICAL DRAWINGS. NEW DOOR ASSEMBLY WILL SIT ON TOP OF NEW CONTAINMENT CURB. (SEE DOOR SCHEDULE AND DETAILS.)
6. **BID OPTION #4** - REMOVE EXISTING DETERIORATED STEEL LINTEL OVER EXISTING METAL DOORS AND FRAME. PROVIDE A NEW HOT DIPPED GALVANIZED STEEL LINTEL, MINIMUM 12" BEARING ON EACH SIDE OF LINTEL.
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LEGEND

	VENTILATOR		SPALL / DELAMINATION
	CRACK IN BRICK / MORTAR		EXPOSED WATERPROOFING
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	SCUPPER DRAIN		DIRT / EARTH
A	ABANDONED ANCHOR		STONE WALL
		∅	CONDUIT PENETRATION

THE Johnson + Mc Adams PC
ARCHITECT/ENGINEERS PLANNING SURVEYING MANAGEMENT
P.O. BOX 515, GREENWOOD, MISSISSIPPI - (662) 453-4843

NO.	DATE	BY	DESCRIPTION

REVISIONS

A-E FIRM	USDA
PROJECT MANAGER C.R.	EPM XXX
DESIGNER E.S.	PPM XXX
CHECKED BY T.B.	SAFETY & HEALTH XXX
JOB # 3525	REAL PROPERTY XXX

USDA Agricultural Research Service

USDA AGRICULTURAL RESEARCH SERVICE
EASTERN REGIONAL RESEARCH CENTER
SOLVENT STORAGE BUILDING & STEAM TUNNEL
WYNDMOOR, PA

BUILDING ELEVATIONS

PROJECT NO. 12305B21D0013	AGRICULTURAL RESEARCH SERVICE	SHEET A-201
DATE 04/02/2026	600 MERMAID LANE WYNDMOOR, PA	4 OF 22

J:\hotliseburg\2025 Jobs\3525 USDA Solvent Storage Building Envelope and Steam Tunnel\07 Working Folder\Arch_Drawings_Working Drawings\USDA Solvent Storage Building.dwg
Apr 13, 2026 - 8:46am

DOOR AND FRAME SCHEDULE

OPENING	OPENING SIZE		DOOR		FRAME			DETAILS		
DOOR #	WIDTH	HEIGHT	MAT.	FINISH	MAT.	FINISH	DEPTH	HEAD	JAMB	SILL
101	2'-8"(PAIR)	6'-4"	GALV. METAL	PAINT	GALV. METAL	PAINT	5-3/4"	4/A-202	5/A-202	5/A-501

NOTE: DUE TO NEW CONCRETE CONTAINMENT CURB, CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS IN FIELD PRIOR TO ORDERING MATERIALS.

DOOR HARDWARE SCHEDULE

HARDWARE SET #1

3 EA. LEAF, HINGES, FULL MORTISE	MCKINNEY MPB91 4-1/2" X 4-1/2" US32D
1 EA. LEAF, PANIC PUSH BAR LOCKSET	SARGENT 8800 SERIES, W/ CYLINDER LEVER TRIM
1 EA. LEAF, SURFACE CLOSER	DC3210 689 A4 M54
1 EA. THRESHOLD	PEMKO 2005AT X 72" (CUT TO FIT OPENING)
1 EA. GASKETING	PEMCO 303AV X 72" X 84" (CUT TO FIT OPENING)

NOTE:
SUBSTITUTIONS ARE PERMISSIBLE FOR PRODUCTS OF EQUAL SPECIFICATION TO THOSE INDICATED ABOVE. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING MANUFACTURER'S PRODUCT DATA SHOWING PRODUCT IS EQUAL.

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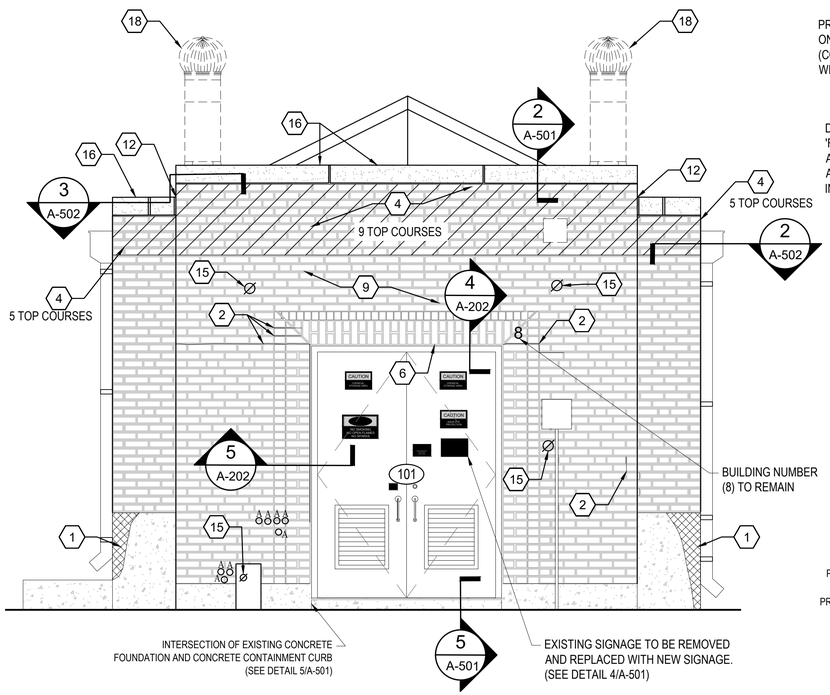
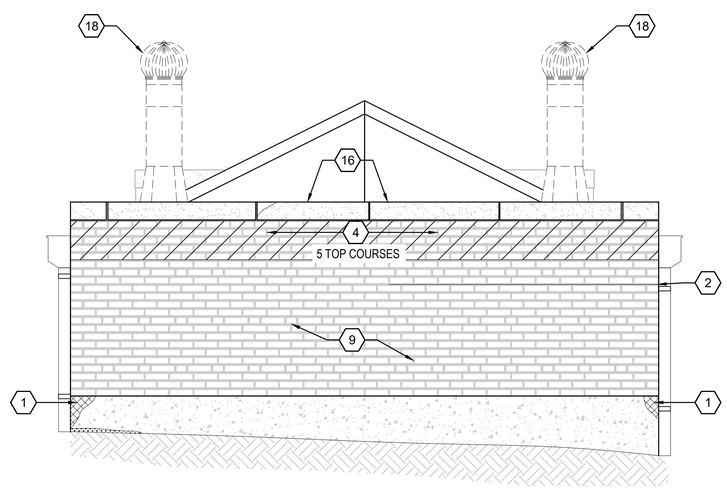


1 A-202 EAST ELEVATION
SCALE: 1/2"=1'-0"



2 A-202 WEST ELEVATION
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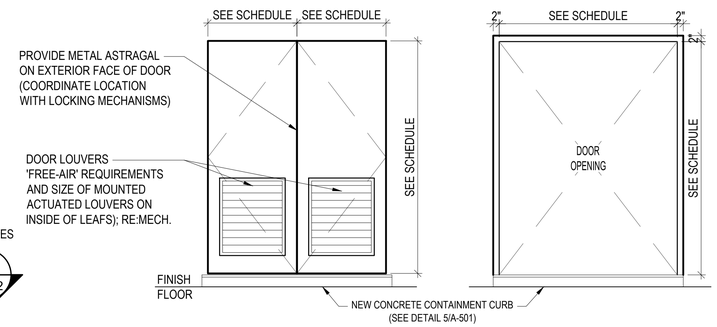
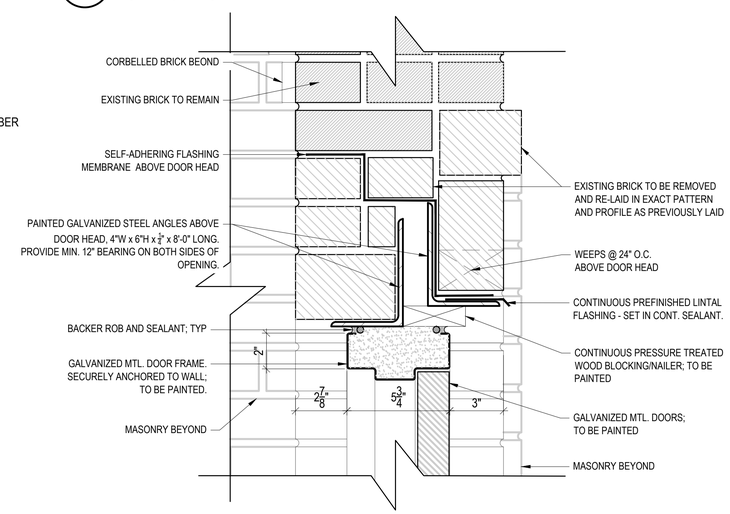
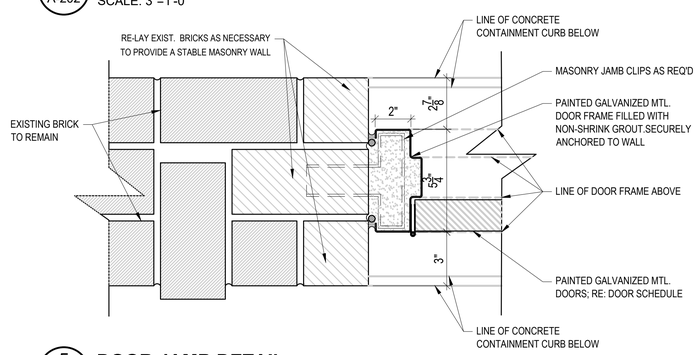


3 A-202 DOOR/FRAME ELEVATIONS
SCALE: 1/2"=1'-0"



4 A-202 DOOR HEAD DETAIL
SCALE: 3"=1'-0"



5 A-202 DOOR JAMB DETAIL
SCALE: 3"=1'-0"

LEGEND

	VENTILATOR		SPALL / DELAMINATION
	CRACK IN BRICK / MORTAR		EXPOSED WATERPROOFING
L.P.	LIGHTNING PROTECTION CABLE		CONCRETE WALL
	SCUPPER DRAIN		DIRT / EARTH
A	ABANDONED ANCHOR		STONE WALL
		∅	CONDUIT PENETRATION

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NO.	DATE	BY	DESCRIPTION

REVISIONS

A-E FIRM	USDA
PROJECT MANAGER C.R.	EPM XXX
DESIGNER E.S.	PPM XXX
CHECKED BY T.B.	SAFETY & HEALTH XXX
JOB # 3525	REAL PROPERTY XXX

USDA Agricultural Research Service

USDA AGRICULTURAL RESEARCH SERVICE
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SOLVENT STORAGE BUILDING & STEAM TUNNEL
WYNDMOOR, PA

BUILDING ELEVATIONS

PROJECT NO. 12305B21D0013	AGRICULTURAL RESEARCH SERVICE	SHEET A-202
DATE 04/02/2026	600 MERMAID LANE WYNDMOOR, PA	5 OF 22

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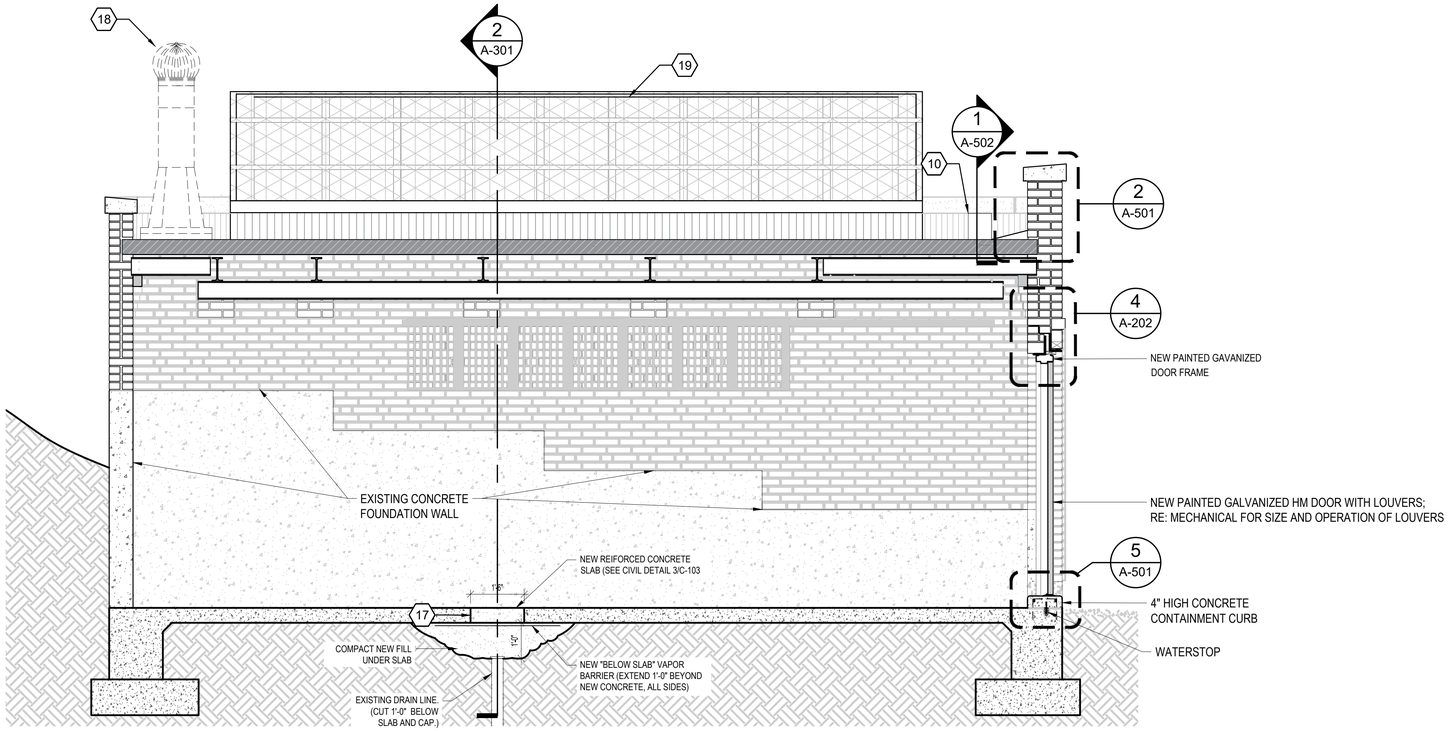
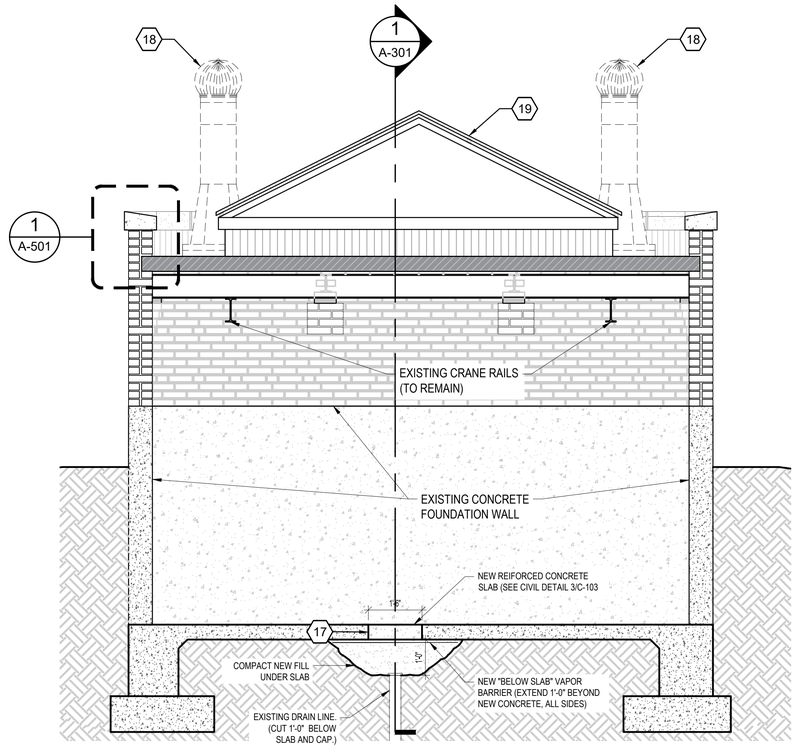


1 A-301 **BUILDING SECTION (EAST / WEST)**

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



2 A-301 **BUILDING SECTION (NORTH / SOUTH)**

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

SHEET KEYED NOTES (ALL SHEET KEYED NOTES TO BE INCLUDE IN BASE BID, UNLESS OTHERWISE NOTED BELOW.)

1. REPAIR SPALLED AND DELAMINATED CONCRETE AT CONCRETE FOUNDATION. CLEAN AND COAT EXPOSED METAL CONCRETE REINFORCING.
2. EXISTING CRACK IN BRICK AND MORTAR. REPAIR CRACK AND REPOINT MORTAR JOINT. REPLACE DAMAGED BRICK.
3. PROVIDE NEW FLASHING BETWEEN TOP ROW OF BRICK AND STONE COPING.
4. REMOVE TOP 12 COURSES OF BRICK ON NORTH ELEVATION, TOP 9 COURSES OF BRICK ON SOUTH ELEVATION, TOP FIVE (5) COURSES OF BRICK ON THE WEST ELEVATION, AND TOP 9 COURSES OF BRICK ON TALL PARAPET WALL AND TOP (5) COURSES OF BRICK ON SHORT PARAPET WALL ON EAST ELEVATION. SAVE, CLEAN AND RE-LAY EXISTING BRICK. INSTALL APPROPRIATE FLASHING AND WEEP HOLES. (SEE DETAIL 2/A-501). REPLACE DAMAGED BRICK ON NORTH, SOUTH AND WEST WALLS WITH EXISTING BRICK FROM EAST WALL TO MAINTAIN CONSISTENT APPEARANCE. MATCH REQUIRED NEW BRICK (COLOR AND COMPRESSIVE STRENGTH) TO EXISTING BRICK.
5. **BID OPTION #4** - REMOVE EXISTING DOORS AND DOOR FRAME AND DISPOSE OF PROPERLY. (NOTE: THESE DOORS CONTAIN ASBESTOS (SEALED), THEREFORE THEY MUST BE DISPOSED OF IN AN APPROVED HAZARDOUS MATERIALS FACILITY.)
   PROVIDE NEW PAINTED GALVANIZED DOORS (WITH LOUVERS), DOOR FRAME AND HARDWARE. CONNECT NEW MECHANICALLY ACTUATED DAMPERS TO NEW DOOR LOUVERS AND TIE INTO EXHAUST SYSTEM CONTROLS PER MECHANICAL/ELECTRICAL DRAWINGS. NEW DOOR ASSEMBLY WILL SIT ON TOP OF NEW CONTAINMENT CURB. (SEE DOOR SCHEDULE AND DETAILS.)
6. **BID OPTION #4** - REMOVE EXISTING DETERIORATED STEEL LINTEL OVER EXISTING METAL DOORS AND FRAME. PROVIDE A NEW HOT DIPPED GALVANIZED STEEL LINTEL, MINIMUM 12" BEARING ON EACH SIDE OF LINTEL.
7. **BID OPTION #4** - REMOVE EXISTING ASPHALT BERM BELOW EXISTING METAL DOORS. PROVIDE NEW REINFORCED CONCRETE CURB BELOW DOORS AND FRAME. TIE INTO EXISTING CONCRETE CURB AND PROVIDE WATERSTOP IN THE COLD JOINT.
8. THE EXISTING VERTICAL AND HORIZONTAL JOINTS BETWEEN THE MASONRY WALL AND CONCRETE FOUNDATION WALL HAS FAILED. RAKE THE MORTAR, CLEAN THE JOINT AND PROVIDE A BACKER ROD AND SILICONE SEALANT.
9. **BID OPTION #5** - REPOINT THE BALANCE OF EXISTING MORTAR JOINTS IN THE EXTERIOR FACE OF THE MASONRY WALLS THAT HAVE NOT BEEN ADDRESSED IN THE BASE BID, IN ACCORDANCE WITH ASTM E2260 STANDARD GUIDE FOR REPOINTING HISTORIC MASONRY".
10. REMOVE EXISTING THROUGH-WALL ROOF DRAINS. PROVIDE NEW THROUGH-WALL COPPER SCUPPER, COPPER CONDUCTOR HEADS AND DOWNSPOUTS, PROPERLY ATTACHED TO THE MASONRY WALLS.(SEE DETAIL). DISCHARGE INTO THE EXISTING GRATED SUBSURFACE DRAINS.
11. THOROUGHLY REMOVE THE EXPOSED WATERPROOFING (BLACK) FROM THE CONCRETE FOUNDATION WALLS. PROPERLY CLEAN THE EXTERIOR FACE OF THE CONCRETE FOUNDATION WALLS AND APPLY A PRIMER AND PROTECTIVE ELASTOMERIC COATING SYSTEM THAT HAS A HIGH VAPOR PERMEABILITY (>10 perms) AND IS SUITABLE FOR CAST IN PLACE CONCRETE. THE SELECTED PRODUCT SHOULD BE TESTED FOR ADHESION AND COMPATIBILITY TO THE SUBSTRATE.
12. TUCK PARAPET FLASHING FROM LOWER PARAPET WALL +/- 2" IN MORTAR JOINT OF ADJACENT TALLER PARAPET WALL AT EAST ELEVATION (SEE DETAIL 3/A-502)
13. CLEAR THE BELOW GRADE STORM DRAIN LINES AT THE STORM DRAIN DROP INLETS ON THE NORTH AND SOUTH SIDES OF THE BUILDING VISUALLY SCOPE THE DRAIN LINES TO CONFIRM THEY ARE CLEAR AND IN GOOD WORKING CONDITION.
14. REMOVE EXISTING SEALANT AROUND LIGHTNING PROTECTION CABLE AND PROVIDE NEW SEALANT AND BACKER ROD ON NORTH ELEVATION.
15. REMOVE ADANDONED ANCHORS AND SEALANT AROUND THE PERIMETER OF ALL PENETRATIONS, AND PROVIDE NEW SEALANT AND BACKER ROD.
16. REPLACE THE EXISTING STONE COPING WITH A NEW COPING THAT OVERHANGS THE MASONRY WALL ON EACH SIDE BY 1" MIN. AND HAS A FORMED DRIP IN THE UNDERSIDE EDGE ON BOTH SIDES. AFTER REMOVING THE EXISTING STONE COPING, REPLACE THE EXISTING COPPER FLASHING WITH NEW PLEATED COPPER COUNTER FLASHING AND A NEW SELF-ADHERING THROUGH WALL FLASHING MEMBRANE THAT IS STEPPED INTO THE EXTERIOR WYTHE OF BRICK TWO COURSES BELOW THE BOTTOM OF THE COPING. ATTACH THE COPPER COUNTER FLASHING TO THE FLASHING MEMBRANE AND PROVIDE WEEPS ABOVE THE FLASHING AT 24" ON CENTER. (SEE DETAIL 1/A-501 & 2/A-501).
17. REMOVE EXISTING FLOOR DRAIN AND COVER. SAW CUT CONCRETE FLOOR SLAB (1'-6" X 1'-6"). CUT DRAIN PIPE TO 12" BELOW CONCRETE SLAB AND PERMANENTLY CAP. INSTALL NEW STEEL REINFORCED CONCRETE SLAB AND TROWEL SMOOTH TO MATCH EXISTING FINISH SEE CIVIL FOR FOR DETAIL.
18. **BID OPTION #3** - REMOVE EXISTING EXHAUST VENTS AND ROOF CURB. PROVIDE NEW 8" HIGH CURB, MECHANICAL EXHAUST FAN, DUCTWORK, VENT AND RAIN HOOD. NEW MECHANICAL FAN CURB SIZE IS 1'-7" X 1'-7" X 8" HIGH, WITH A ROOF OPENING OF 1'-3 1/2" X 1'-3 1/2". MEASURE EXISTING HOLE IN CONCRETE ROOF SLAB AND MAKE NECESSARY ADJUSTMENTS. SEE MECHANICAL AND ELECTRICAL SHEETS.
19. EXISTING SKYLIGHT TO REMAIN. PROTECT THROUGHOUT ENTIRE CONSTRUCTION PERIOD.
20. EXISTING FLAT SEAM COPPER ROOF PANELS WITH SOLDERED SEAMS AND COVERED WITH A SILICONE COATING SYSTEM TO REMAIN. PROTECT THROUGHOUT ENTIRE CONSTRUCTION PERIOD. REPAIR AND/OR REPLACE AS NECESSARY TO COMPLETE BASE BID WORK.
21. EXISTING STEEL COVER PLATE, FROM ABANDONED UNDERGROUND STEAM LINE. REMOVE COVER PLATE AND PROVIDE AN 8" HIGH PERIMETER BOX CONSTRUCTED OF WELDED STEEL ANGLES, SEALED TO CONCRETE FLOOR, WITH A 1" DRAIN LINE TO EXTERIOR OF BUILDING. (SEE DETAIL 4/C-103)
22. EXISTING SUBSURFACE DRAIN LINE, COVER AND ABANDON.

LEGEND

	VENTILATOR		SPALL / DELAMINATION
	CRACK IN BRICK / MORTAR		EXPOSED WATERPROOFING
L.P.	LIGHTNING PROTECTION CABLE		CONCRETE WALL
	SCUPPER DRAIN		DIRT / EARTH
A	ABANDONED ANCHOR		STONE WALL
		∅	CONDUIT PENETRATION

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NO.	DATE	BY	DESCRIPTION

REVISIONS

A-E FIRM	USDA
PROJECT MANAGER C.R.	EPM XXX
DESIGNER E.S.	PPM XXX
CHECKED BY T.B.	SAFETY & HEALTH XXX
JOB # 3525	REAL PROPERTY XXX

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WYNDMOOR, PA

BUILDING SECTIONS

PROJECT NO.	AGRICULTURAL RESEARCH SERVICE	SHEET
12305B21D0013	600 MERMAID LANE WYNDMOOR, PA	A-301
DATE 04/02/2026		6 OF 22

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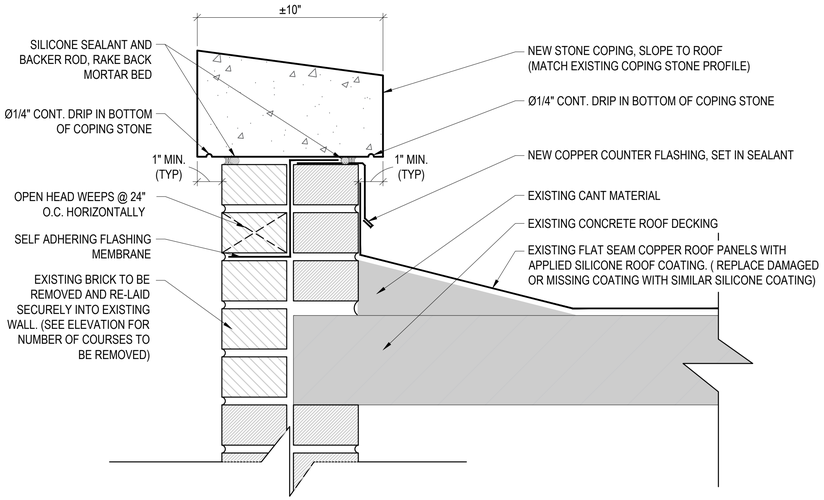
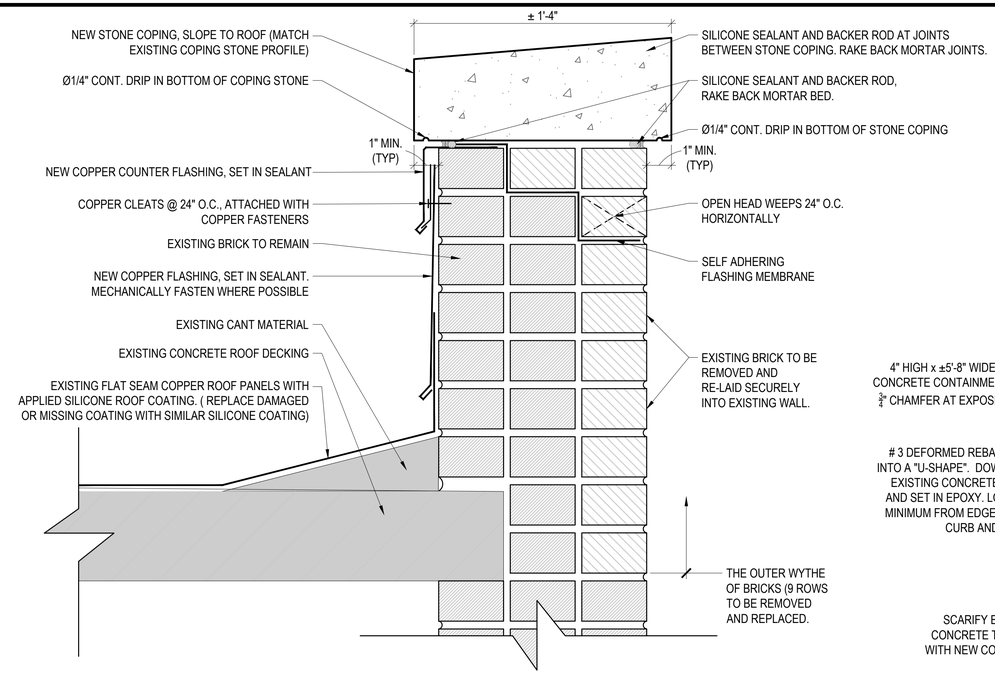


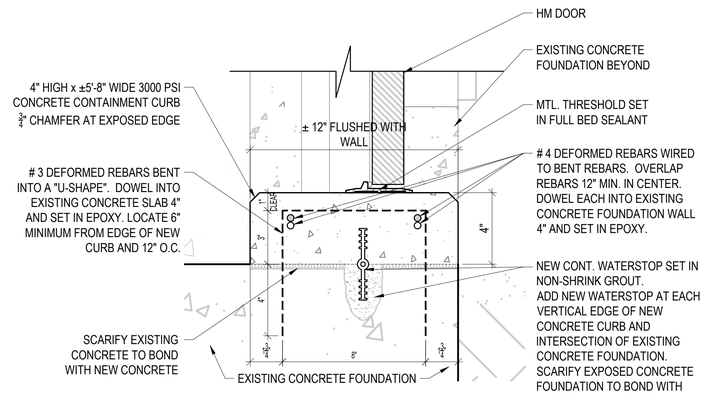
1 A-501 LOWER PARAPET WALL FLASHING DETAIL

SCALE: 3"=1'-0"



2 A-501 HIGHER PARAPET WALL FLASHING DETAIL

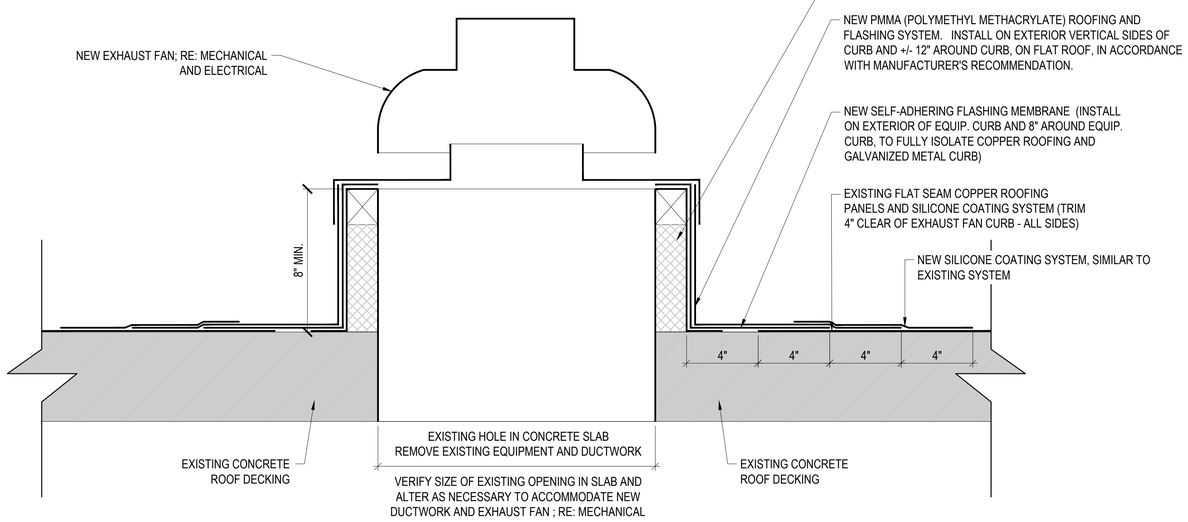
SCALE: 3"=1'-0"



5 A-501 CONCRETE CONTAINMENT CURB DETAIL

SCALE: 3"=1'-0"

NOTE: CONTRACTOR TO INCLUDE 100 SQFT. OF NEW SILICONE ROOF COATING IN BASE BID PRICE. NEW SILICONE ROOF COATING TO MATCH EXISTING COATING ON EXISTING COPPER ROOF PANELS. LOCATIONS INCLUDE AREAS AROUND EQUIPMENT CURBS, SCUPPERS, EXISTING ROOF CANTS AND VERTICAL COPPER PANELS, AND ALL AREAS WHERE EXISTING COATING IS DAMAGED OR COMPROMISED.



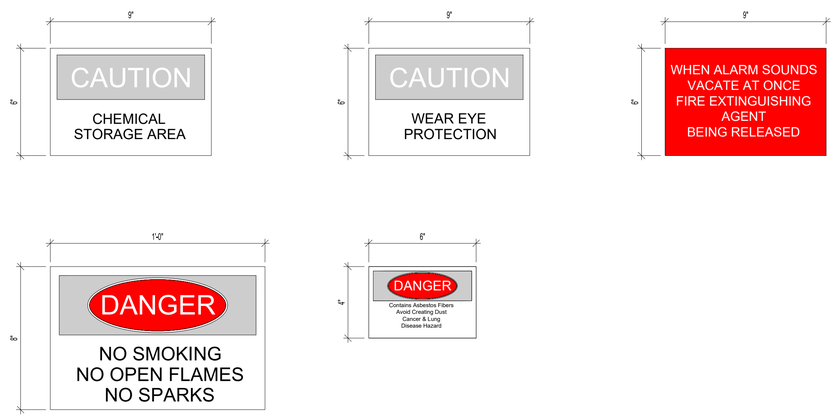
3 A-501 ROOFTOP EQUIPMENT CURB DETAIL

SCALE: 3"=1'-0"

NOTE: NEW PMMA (POLYMETHYL METHACRYLATE) ROOFING AND FLASHING SYSTEM, COMPATIBLE WITH COPPER SURFACES. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION. PRODUCT IS A LIQUID-APPLIED SYSTEM COMBINED WITH REINFORCING POLYESTER FLEECE TO PRODUCE A SEAMLESS, MONOLITHIC MEMBRANE SYSTEM, WELL-SUITED FOR DIFFICULT-TO- ACCESS AREAS AND COMPLEX FLASHING CONDITIONS. SYSTEM OFFERS HIGH ADHESION TO METAL (INCLUDING COPPER), ACCOMMODATES EXPANSION AND CONTRACTION OF SUBSTRATES AND IS UV-RESISTANT.

NOTE: ORDER OF ROOF FLASHING REPAIR WORK

1. STRIP SILICONE COATING SYSTEM FROM COPPER ROOF PANELS, +/- 12" CLEAR OF GALV. EXHAUST FAN CURB - ALL SIDES.
2. TRIM COPPER PANELS +/- 4" TO CLEAR GALV. EXHAUST FAN CURB - ALL SIDES.
3. INSTALL NEW SELF-ADHERING FLASHING MEMBRANE.
4. INSTALL NEW PMMA ROOFING AND FLASHING SYSTEM
5. INSTALL NEW SILICONE COATING SYSTEM, SIMILAR TO EXIST. COATING SYSTEM, OVERLAP EXISTING COPPER PANELS AND NEW PMMA FLASHING SYSTEM A MINIMUM OF 4" OVER EACH MATERIAL, TO ENSURE A WATERTIGHT CONDITION.)



NOTE: PROVIDE NEW METAL PAINTED SIGNAGE (AS SHOWN ABOVE), THAT MATCHES EXISITING SIGNAGE MOUNTED TO DOUBLE DOORS ON EAST ELEVATION AND MASONRY WALL ON SOUTH ELEVATION. INSTALL NEW SIGNAGE AFTER DOORS HAVE BEEN PAINTED AND MASONRY HAS BEEN REPOINTED AND SEALED. (SEE PHOTOS ON SHT. G-002.)

4 A-501 BUILDING SIGNAGE

SCALE: 3"=1'-0"

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NO.	DATE	BY	DESCRIPTION

REVISIONS

REGISTERED ARCHITECT CHRIS L. ROBINSON 3104 STATE OF MISSISSIPPI
04-02-2026

A-E FIRM	USDA
PROJECT MANAGER C.R.	EPM XXX
DESIGNER E.S.	PPM XXX
CHECKED BY T.B.	SAFETY & HEALTH XXX
JOB # 3525	REAL PROPERTY XXX

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SOLVENT STORAGE BUILDING & STEAM TUNNEL
WYNDMOOR, PA

BUILDING DETAILS

PROJECT NO. 12305B21D0013	AGRICULTURAL RESEARCH SERVICE	SHEET A-501
DATE 04/02/2026	600 MERMAID LANE WYNDMOOR, PA	7 OF 22

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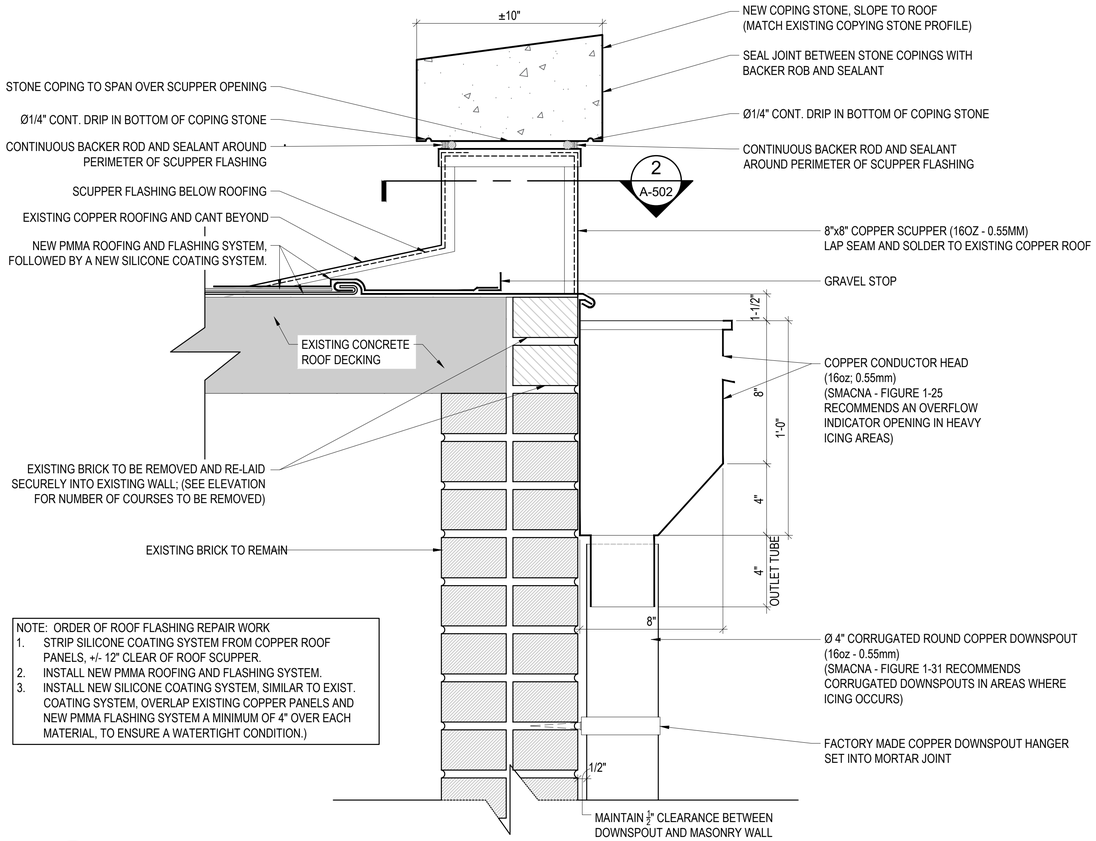
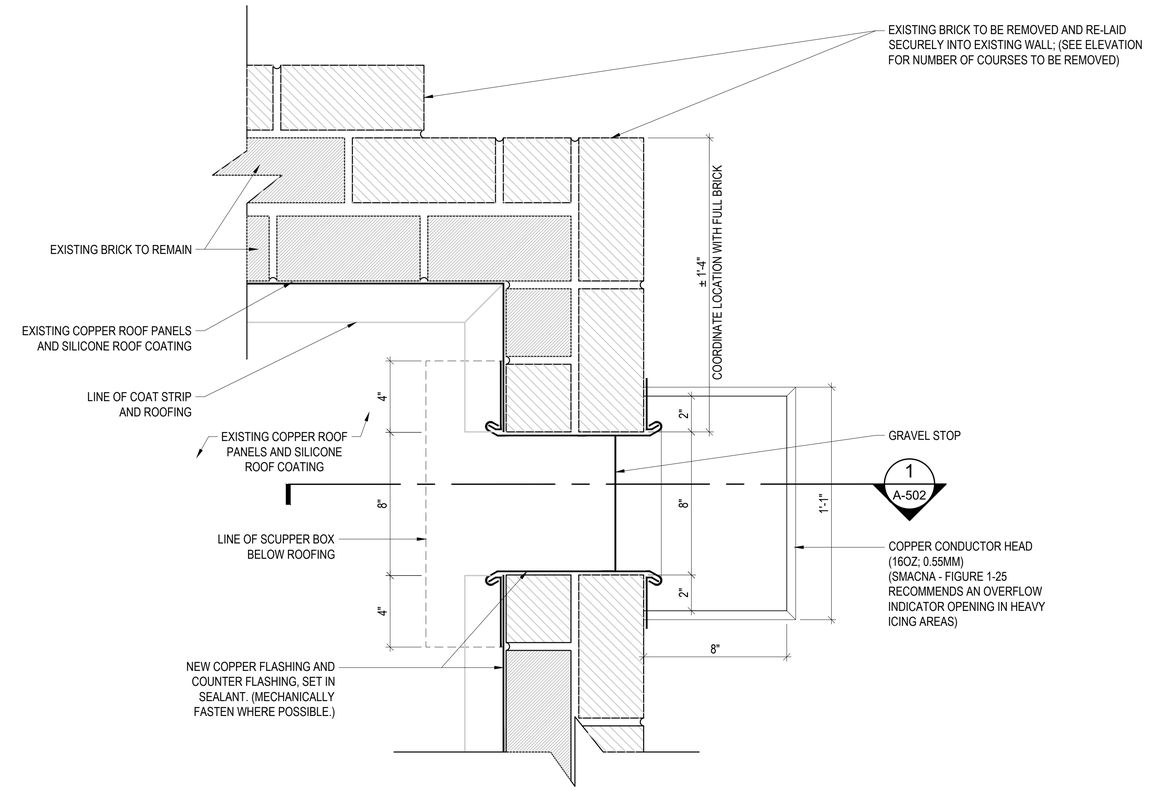
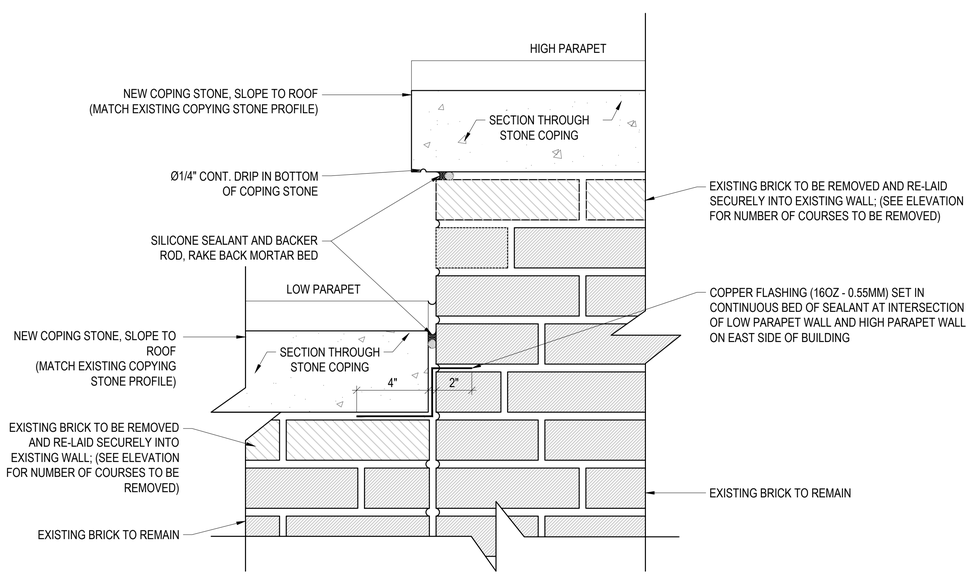


NOTE: ORDER OF ROOF FLASHING REPAIR WORK
1. STRIP SILICONE COATING SYSTEM FROM COPPER ROOF PANELS, +/- 12" CLEAR OF ROOF SCUPPER.
2. INSTALL NEW PMMA ROOFING AND FLASHING SYSTEM.
3. INSTALL NEW SILICONE COATING SYSTEM, SIMILAR TO EXIST. COATING SYSTEM, OVERLAP EXISTING COPPER PANELS AND NEW PMMA FLASHING SYSTEM A MINIMUM OF 4" OVER EACH MATERIAL, TO ENSURE A WATERTIGHT CONDITION.)

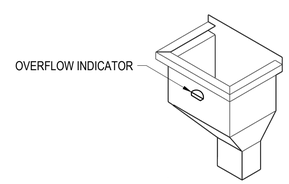
1 A-502 ROOF SCUPPER FLASHING DETAIL
SCALE: 3"=1'-0"



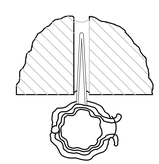
2 A-502 PLAN / SECTION ROOF SCUPPER DETAIL
SCALE: 3"=1'-0"



3 A-502 INTERSECTION OF LOW AND HIGH PARAPET WALL DETAIL
SCALE: 3"=1'-0"

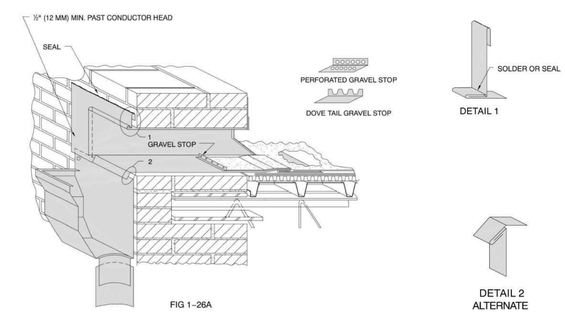


SMACNA FIGURE 1-25F - TYPICAL CONDUCTOR HEAD (PROVIDE OVERFLOW INDICATOR AS SHOWN)



SMACNA FIGURE 1-34E - FACTORY-MADE COPPER DOWN SPOUT HANGER FOR CORRUGATED COPPER DOWNSPOUT

NOTE: DOWN SPOUT OF 10'-0" OR LESS IN LENGTH SHALL HAVE TWO HANGERS. LONGER DOWN SPOUTS SHALL HAVE FACTORY-MADE HANGERS AT 8'-0" MAX. INTERVALS.



SMACNA FIGURE 1-26A - TYPICAL SCUPPER IN PARAPET WALL

REGISTERED ARCHITECT CHRIS L. ROBINSON 3104 STATE OF MISSISSIPPI
04-02-2026

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SOLVENT STORAGE BUILDING & STEAM TUNNEL
WYNDMOOR, PA

BUILDING DETAILS

A-E FIRM	USDA
PROJECT MANAGER C.R.	EPM XXX
DESIGNER E.S.	PPM XXX
CHECKED BY T.B.	SAFETY & HEALTH XXX
JOB # 3525	REAL PROPERTY XXX

PROJECT NO. 12305B21D0013
DATE 04/02/2026
AGRICULTURAL RESEARCH SERVICE
600 MERMAID LANE
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8 OF 22

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Apr 01, 2026 - 5:33pm

1 C-001 VICINITY MAP
SCALE: NTS

NORTH

EXISTING LEGEND

W	WATER LINE
FM	FORCE MAIN
SD	STORM DRAIN
OHE	OVERHEAD ELECTRICAL
UE	UNDERGROUND ELECTRICAL
X	FENCE
G	GAS LINE
SS	SANITARY SEWER
COM	COMMUNICATION LINE
	POWER POLE
	STORM DRAIN INLET
	FIRE HYDRANT
MH	MANHOLE
WV	WATER VALVE
GV	GAS VALVE
PIV	POST INDICATOR VALVE
	BARRICADE
	STREET LIGHT

TRAFFIC CONTROL NOTES

1. THE PARKING LOT AND ASSOCIATED ACCESS DRIVES MUST REMAIN OPERATIONAL FOR USDA PERSONNEL AND AUTHORIZED VISITORS AT ALL TIMES UNLESS OTHERWISE APPROVED IN WRITING BY THE CONTRACTING OFFICER. FULL CLOSURE OF THE PARKING LOT IS NOT PERMITTED.
2. THE CONTRACTOR MUST PREPARE AND SUBMIT A SITE-SPECIFIC TRAFFIC CONTROL PLAN (TCP) FOR REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF DEMOLITION AND CONSTRUCTION ACTIVITIES. NO WORK IMPACTING VEHICULAR OR PEDESTRIAN CIRCULATION MUST BEGIN UNTIL THE TCP IS APPROVED.
3. ALL TRAFFIC CONTROL DEVICES, SIGNAGE, PAVEMENT MARKINGS, CHANNELIZATION DEVICES, AND TEMPORARY BARRIERS MUST CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
4. THE CONTRACTOR MUST FURNISH, INSTALL, MAINTAIN, RELOCATE AS NECESSARY, AND REMOVE ALL TRAFFIC CONTROL DEVICES REQUIRED TO SAFELY DIRECT VEHICULAR AND PEDESTRIAN TRAFFIC. DEVICES MUST BE MAINTAINED IN PROPER POSITION, CLEAN, AND FULLY FUNCTIONAL AT ALL TIMES, INCLUDING DURING NON-WORKING HOURS.
5. SAFE AND ADA-COMPLIANT PEDESTRIAN ACCESS MUST BE MAINTAINED AT ALL TIMES IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA). IF ACCESSIBLE PARKING SPACES ARE TEMPORARILY IMPACTED, THE CONTRACTOR MUST PROVIDE TEMPORARY ADA-COMPLIANT PARKING AND ACCESSIBLE ROUTES.
6. EMERGENCY VEHICLE ACCESS TO THE FACILITY MUST BE MAINTAINED AT ALL TIMES. FIRE LANES MUST NOT BE OBSTRUCTED.
7. THE CONTRACTOR MUST PHASE DEMOLITION AND CONSTRUCTION ACTIVITIES TO MINIMIZE DISRUPTION TO PARKING SPACES AND ACCESS DRIVES. WORK MUST BE SEQUENCED TO MAINTAIN SAFE CIRCULATION THROUGHOUT THE PROJECT DURATION.
8. THE CONTRACTOR MUST PROVIDE A MINIMUM OF SEVENTY-TWO (72) HOURS ADVANCE WRITTEN NOTICE TO THE OWNER PRIOR TO ANY TEMPORARY LANE OR PARKING SPACE CLOSURES.
9. ALL TRAFFIC CONTROL MEASURES MUST COMPLY WITH USDA FACILITY SECURITY REQUIREMENTS. THE CONTRACTOR MUST COORDINATE CLOSURES, DELIVERIES, AND TRAFFIC SHIFTS WITH FACILITY MANAGEMENT AND SECURITY PERSONNEL.
10. ANY PAVEMENT MARKINGS, SIGNAGE, OR SITE FEATURES DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES MUST BE RESTORED TO ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER.
11. ALL COSTS ASSOCIATED WITH TRAFFIC CONTROL, INCLUDING PREPARATION OF THE TRAFFIC CONTROL PLAN, DEVICES, MAINTENANCE, RELOCATION, AND REMOVAL, MUST BE INCLUDED IN THE CONTRACT SUM.

ABBREVIATIONS

DIA. OR D	DIAMETER
DR	DRIVE
EL.	ELEVATION
ETC.	ETCETERA
F.F.	FINISHED FLOOR
GA	GAUGE
GV	GATE VALVE
INV.	INVERT
MAX	MAXIMUM
MFR.	MANUFACTURER
MH	MANHOLE
MIN.	MINIMUM
O.C.	ON CENTER
OD	OUTSIDE DIAMETER
PIV	POST INDICATOR VALVE
PVMT	PAVEMENT
REQ'D	REQUIRED
RD	ROAD
SD	STORM DRAIN
SS	SANITARY SEWER
TYP.	TYPICAL

GENERAL NOTES

1. EXISTING SITE CONDITIONS SHOWN WERE DEVELOPED USING AS-BUILT DRAWINGS AND CONFIRMED WITH FIELD INVESTIGATION. THERE IS NO GUARANTEE TO ACCURACIES OF THE EXISTING CONDITIONS SHOWN. CONTRACTOR MUST FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING WORK.
2. EXISTING UTILITY LOCATIONS ARE SHOWN TO THE EXTENT THE INFORMATION WAS AVAILABLE AND RECORDED DURING FIELD INVESTIGATIONS. THERE IS NO GUARANTEE TO THE ACCURACIES OF EXISTING UTILITIES SHOWN. CONTRACTOR MUST FIELD VERIFY EXISTING UTILITIES PRIOR TO BEGINNING WORK.
3. VERIFY EXISTING CONDITIONS. WHEN SPECIFIC INFORMATION IS INCORRECT, MISSING, INCORRECT, OR IS IN CONFLICT, BRING THE CONFLICT TO THE ATTENTION OF THE C.O. PRIOR TO BEGINNING WORK.
4. COORDINATE CIVIL WORKS AND OTHER TRADES.
5. ALL DETAILS AND SECTIONS ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND MUST BE CONSTRUCTED TO APPLY TO SIMILAR SITUATIONS ELSEWHERE ON THE PROJECT EXCEPT WHERE A DETAIL SHOWS OTHERWISE.
6. PRODUCTS MUST BE INSTALLED PER MORE STRINGENT REQUIREMENTS OF THE DESIGN DOCUMENTS OR THE MANUFACTURER'S PRINTED INSTRUCTIONS FOR THE INDICATED APPLICATION. THESE INSTRUCTIONS MUST BE MAINTAINED ONSITE FOR THE DURATION OF THE PROJECT.
7. WHERE WORK DAMAGES OR DISTURBS EXISTING CONDITIONS NOT INCLUDED IN THE WORK OF THIS PROJECT, THE CONTRACTOR MUST REPAIR THE DAMAGED SYSTEM TO A LEVEL THAT MEETS OR EXCEEDS ITS LEVEL OF PERFORMANCE AND APPEARANCE AT NO COST TO THE GOVERNMENT.

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ARCHITECTS/ENGINEERS PLANNING SURVEYING MANAGEMENT
P.O. BOX 513, GREENWOOD, MISSISSIPPI - (662) 455-4943

NO.	DATE	BY	DESCRIPTION

REVISIONS

THOMAS H. TOLLSON REGISTERED PROFESSIONAL ENGINEER #10338 04/02/26 STATE OF MISSISSIPPI

A-E FIRM	USDA
PROJECT MANAGER CR	EPM XXX
DESIGNER SM	PPM XXX
CHECKED BY TT	SAFETY & HEALTH XXX
JOB # 3525	REAL PROPERTY XXX

USDA Agricultural Research Service

USDA AGRICULTURAL RESEARCH SERVICE
EASTERN REGIONAL RESEARCH CENTER
SOLVENT STORAGE BUILDING & STEAM TUNNEL
WYNDMOOR, PA

GENERAL NOTES AND ABBREVIATIONS

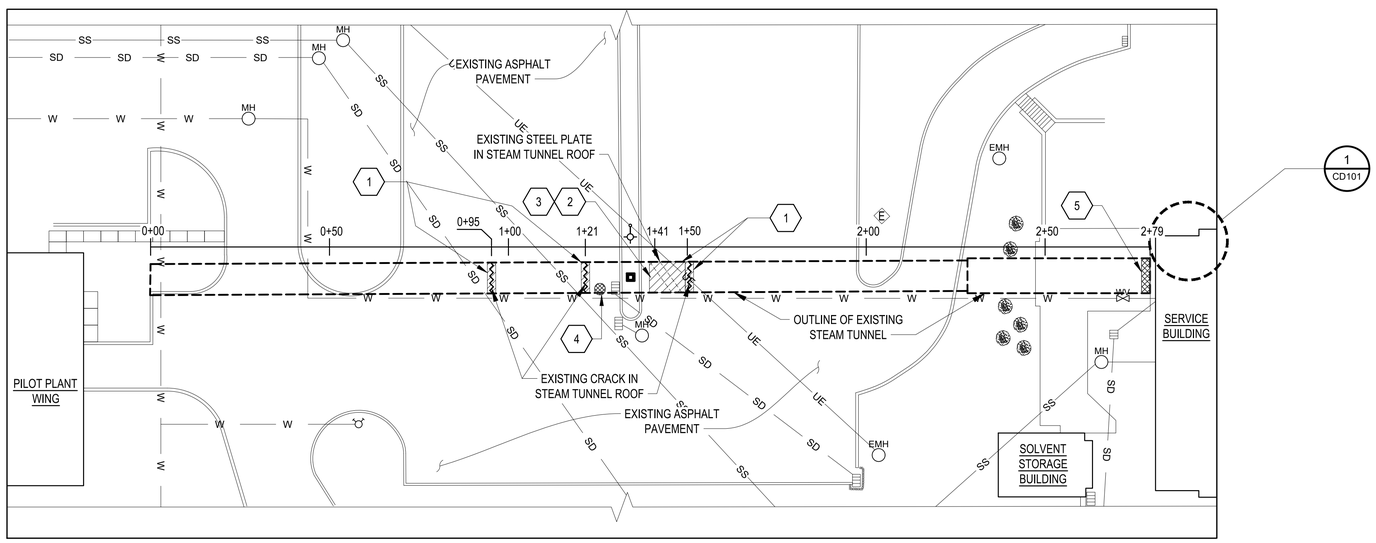
PROJECT NO. 12305B21D0013	AGRICULTURAL RESEARCH SERVICE	SHEET C-001
DATE 04/02/2026	600 MERMAID LANE WYNDMOOR, PA	X OF XX

J:\Vicksburg\2025 Jobs\3525 USDA Solvent Storage Building Envelope and Steam Tunnel\07 Working Folder\Civil\C-001.dwg
Apr 09, 2026 - 1:07pm

TEMPORARY WATER DIVERSION

1. CONTRACTOR MUST PROVIDE, INSTALL, MAINTAIN, AND REMOVE ALL TEMPORARY WATER DIVERSION SYSTEMS REQUIRED TO PREVENT WATER FLOW INTO DISTURBED AREAS.
2. TEMPORARY DIVERSION MUST BE DESIGNED TO AVOID DISTURBANCE, EXCAVATION, OR DEMOLITION OF EXISTING PARKING LOT PAVEMENT.
3. CONTRACTOR IS SOLELY RESPONSIBLE FOR MEANS AND METHODS USED TO CONTROL STORMWATER RUNOFF DURING CONSTRUCTION.
4. ALL TEMPORARY SYSTEMS MUST COMPLY WITH LOCAL STORMWATER MANAGEMENT REGULATIONS.

ALL WORK SHOWN ON THIS SHEET MUST BE INCLUDED IN THE BID OPTION 1 UNLESS OTHERWISE NOTED.



1 CD100 SITE DEMOLITION PLAN
SCALE: 1" = 20'-0"

NORTH

GENERAL NOTES

1. CONTRACTOR MUST FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING WORK.
2. EXISTING UTILITIES SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR MUST FIELD VERIFY AND LOCATE EXISTING UTILITIES PRIOR TO BEGINNING WORK.
3. EXISTING STEAM TUNNEL IS A PERMIT REQUIRED ENTRY CONFINED SPACE. ALL UTILITIES IN STEAM TUNNEL MUST REMAIN ON DURING DEMOLITION AND CONSTRUCTION.
4. SEE C-500 SERIES FOR REFERENCE DRAWINGS OF EXISTING CONDITIONS.
5. DEFECTS SHOWN ARE IN APPROXIMATE LOCATIONS. CONTRACTOR MUST FIELD VERIFY LOCATIONS PRIOR TO BEGINNING WORK.

KEYED NOTES

1. SAW CUT FULL DEPTH AND DEMOLISH EXISTING ASPHALT PAVEMENT AND EXCAVATE TO EXPOSE TOP OF STEAM TUNNEL. EXISTING PAVEMENT DEPTHS AND SOIL DEPTHS ARE UNKNOWN.
2. SAWCUT FULL DEPTH AND DEMOLISH EXISTING STEAM TUNNEL CONCRETE ROOF AS REQUIRED. REINFORCING IN THE ROOF IS UNKNOWN. DEMOLITION MUST ENCOMPASS THE EMBEDDED STEEL PLATE PLUS 12" ON EACH SIDE OF THE PLATE TERMINATION. FOR BIDDING PURPOSES ONLY THE DEMOLITION LENGTH IS 12'. CONTRACTOR MUST FIELD VERIFY DIMENSIONS.
3. DEMOLISH EXISTING STEEL PLATE. STEEL PLATE IS APPROXIMATELY 28" WIDE X 10'-6" LONG AND IS EMBEDDED INTO EXISTING CONCRETE ROOF. EXTENT OF THE PLATE EMBEDMENT INTO THE CONCRETE IS UNKNOWN.
4. REMOVE ALL SPALLED CONCRETE TO SOUND CONCRETE IN STEAM TUNNEL ROOF, SEE 1/C-102. BID OPTION 2.
5. REMOVE ALL SPALLED CONCRETE TO SOUND CONCRETE IN HEADER BEAM AND REMOVE CORRODED REINF. AS REQ'D, SEE 1/C-103. BID OPTION 2.

LEGEND

EXISTING CONCRETE CURB	
SAW CUT AND REMOVE ASPHALT PAVEMENT	
EXISTING STORM DRAIN INLET	
EXISTING MANHOLE	MH
EXISTING ELECTRICAL MANHOLE	EMH
EXISTING ELECTRICAL JUNCTION BOX	E
OUTLINE OF EXISTING STEAM TUNNEL	
EXISTING SANITARY SEWER	SS
EXISTING WATER	W
EXISTING STORM DRAIN	SD
EXISTING UNDERGROUND ELECTRICAL	UE
REMOVE SPALLED CONCRETE	

0 20' 40' 60'
SCALE: 1"=20'-0"

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P.O. BOX 515, GREENWOOD, MISSISSIPPI - (662) 455-4443

NO.	DATE	BY	DESCRIPTION

REVISIONS

THOMAS H. TOLLISON REGISTERED PROFESSIONAL ENGINEER #10338 STATE OF MISSISSIPPI 04/02/26

A-E FIRM	USDA
PROJECT MANAGER CR	EPM XXX
DESIGNER SM	PPM XXX
CHECKED BY TT	SAFETY & HEALTH XXX
JOB # 3525	REAL PROPERTY XXX

USDA Agricultural Research Service

USDA AGRICULTURAL RESEARCH SERVICE
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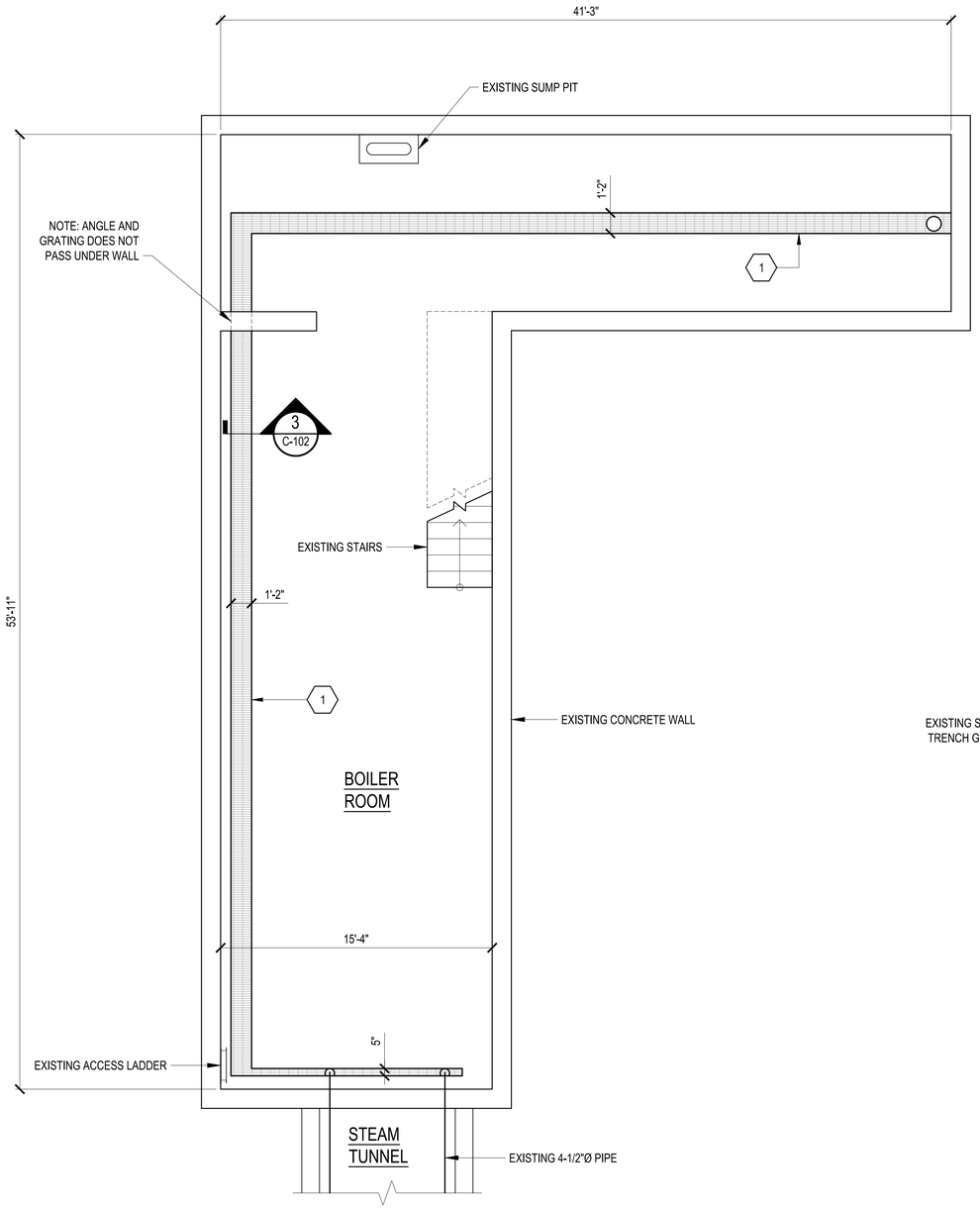
SOLVENT STORAGE BUILDING & STEAM TUNNEL
WYNDMOOR, PA

SITE DEMOLITION PLAN

PROJECT NO. 12305B21D0013	AGRICULTURAL RESEARCH SERVICE 600 MERMAID LANE WYNDMOOR, PA	SHEET CD100
DATE 04/02/2026		X OF XX

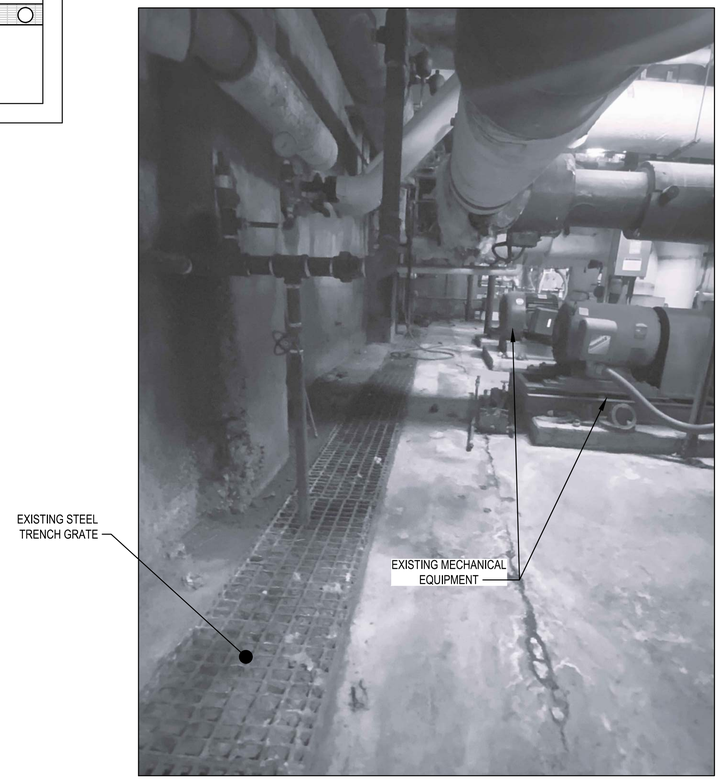
J:\Nottlebourg\2025 Jobs\3525 USDA Solvent Storage Building Envelope and Steam Tunnel\07 Working Folder\Civil\CD100.dwg
Apr 09, 2026 - 1:07pm



1 CD101 TRENCH IN BOILER ROOM
SCALE: 1/4" = 1'-0"

NORTH

ALL WORK SHOWN ON THIS SHEET MUST BE INCLUDED IN THE BID OPTION 2.



2 CD101 EXISTING EQUIPMENT TO REMAIN OPERATIONAL
SCALE: NTS

GENERAL NOTES

1. CONTRACTOR MUST FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING WORK.
2. EXISTING UTILITIES SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR MUST FIELD VERIFY AND LOCATE EXISTING UTILITIES PRIOR TO BEGINNING WORK.
3. EXISTING BOILER ROOM IS A PERMIT REQUIRED ENTRY CONFINED SPACE. ALL UTILITIES IN BOILER ROOM MUST REMAIN ON DURING DEMOLITION AND CONSTRUCTION.

KEYED NOTES

1. DEMOLISH EXISTING TRENCH DRAIN GRATE. DEMOLITION MUST INCLUDE, GRATE AND ANGLE SEAT, SEE 4/C-102. EXISTING TRENCH DRAIN IS APPROXIMATELY 102 FT LONG.

LEGEND

EXISTING TRENCH GRATE

0 2' 4' 8' 12'
SCALE: 1/4"= 1'-0"

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REVISIONS

A-E FIRM	USDA
PROJECT MANAGER CR	EPM XXX
DESIGNER SM	PPM XXX
CHECKED BY TT	SAFETY & HEALTH XXX
JOB # 3525	REAL PROPERTY XXX

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WYNDMOOR, PA

BOILER ROOM DEMOLITION PLAN

PROJECT NO. 12305B21D0013
DATE 04/02/2026
AGRICULTURAL RESEARCH SERVICE
600 MERMAID LANE
WYNDMOOR, PA
SHEET CD101
X OF XX

THOMAS H. TOLLSON
REGISTERED PROFESSIONAL ENGINEER
ENGINEER
#10338
04/02/26
STATE OF MISSISSIPPI

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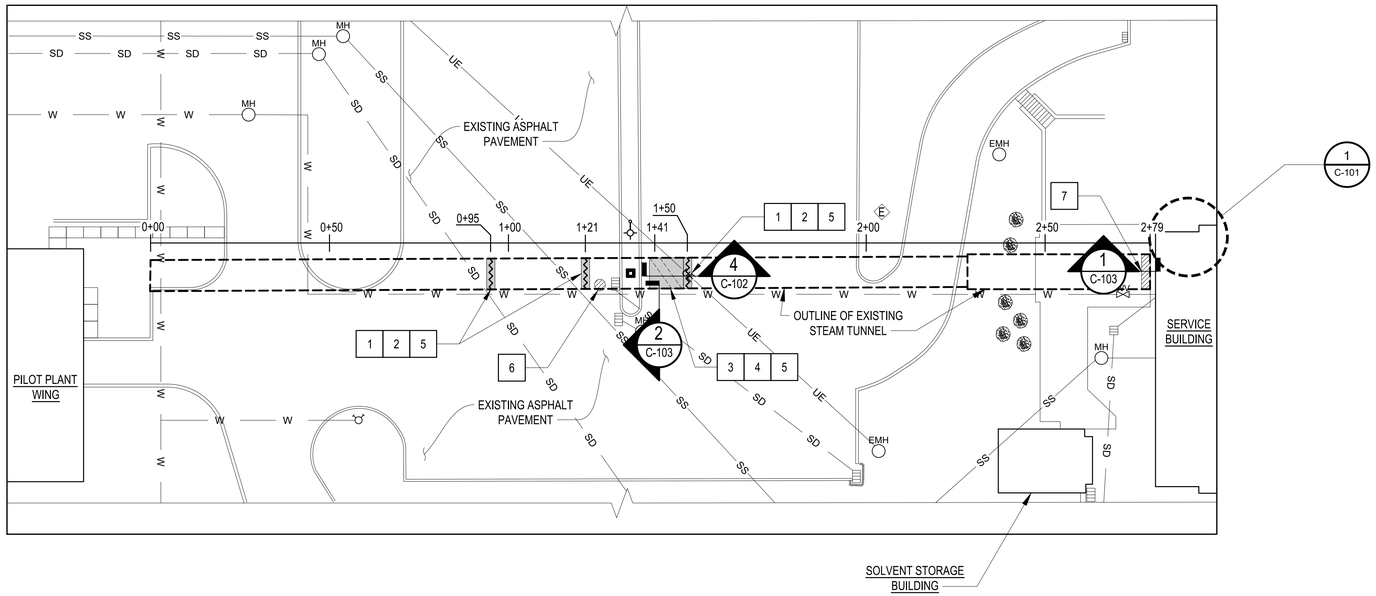
Apr 09, 2026 - 1:07pm

TEMPORARY WATER DIVERSION

1. CONTRACTOR MUST PROVIDE, INSTALL, MAINTAIN, AND REMOVE ALL TEMPORARY WATER DIVERSION SYSTEMS REQUIRED TO PREVENT WATER FLOW INTO DISTURBED AREAS.
2. TEMPORARY DIVERSION MUST BE DESIGNED TO AVOID DISTURBANCE, EXCAVATION, OR DEMOLITION OF EXISTING PARKING LOT PAVEMENT.
3. CONTRACTOR IS SOLELY RESPONSIBLE FOR MEANS AND METHODS USED TO CONTROL STORMWATER RUNOFF DURING CONSTRUCTION.
4. ALL TEMPORARY SYSTEMS MUST COMPLY WITH LOCAL STORMWATER MANAGEMENT REGULATIONS.

ALL WORK SHOWN ON THIS SHEET MUST BE INCLUDED IN THE BID OPTION 1 UNLESS OTHERWISE NOTED.



1 C-100 SITE PLAN
SCALE: 1" = 20'-0"

NORTH

GENERAL NOTES

1. CONTRACTOR MUST FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING WORK.
2. EXISTING UTILITIES SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR MUST FIELD VERIFY AND LOCATE EXISTING UTILITIES PRIOR TO BEGINNING WORK.
3. EXISTING STEAM TUNNEL IS A PERMIT REQUIRED ENTRY CONFINED SPACE. ALL UTILITIES IN STEAM TUNNEL MUST REMAIN ON DURING CONSTRUCTION.
4. SEE C-500 SERIES FOR REFERENCE DRAWINGS OF EXISTING CONDITIONS.
5. DEFECTS SHOWN ARE IN APPROXIMATE LOCATIONS. CONTRACTOR MUST FIELD VERIFY LOCATIONS PRIOR TO BEGINNING WORK.

KEYED NOTES

1. INJECT CRACK FULL DEPTH USING LOW-PRESSURE POLYURETHANE RESIN UNTIL REFUSAL AND MATERIAL IS OBSERVED AT UNDERSIDE OF ROOF. PROVIDE WATER PROOF MEMBRANE STRIP OVER TOPSIDE OF CRACK. WATERPROOF MEMBRANE MUST OVERLAP THE CRACK A MIN. OF 12" ON EACH SIDE OF THE CRACK.
2. PROVIDE WATERPROOFING, SEE 4/C-102 & 2/C-103.
3. PROVIDE STEEL PLATE TO MATCH THE EXISTING, SEE 5/C-102.
4. REPAIR CONCRETE SECTION, 4/C-102.
5. PROVIDE HOT MIX ASPHALT PATCH, SEE 2/C-102. REPLACE PARKING LOT STRIPING EFFECTED FROM REPAIR WORK.
6. PROVIDE CONCRETE SPALL REPAIR, SEE 1/C-102. BID OPTION 2.
7. REPAIR HEADER BEAM, SEE 1/C-103. BID OPTION 2.

LEGEND

- EXISTING CONCRETE CURB
- HOT MIX ASPHALT PATCH
- EXISTING STORM DRAIN INLET
- EXISTING MANHOLE (MH)
- EXISTING ELECTRICAL MANHOLE (EMH)
- EXISTING ELECTRICAL JUNCTION BOX (E)
- OUTLINE OF EXISTING STEAM TUNNEL
- EXISTING SANITARY SEWER (SS)
- EXISTING WATER (W)
- EXISTING STORM DRAIN (SD)
- EXISTING UNDERGROUND ELECTRICAL (UE)
- CONCRETE REPAIR

0 20' 40' 60'
SCALE: 1"=20'-0"

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NO.	DATE	BY	DESCRIPTION

REVISIONS

A-E FIRM	USDA
PROJECT MANAGER CR	EPM XXX
DESIGNER SM	PPM XXX
CHECKED BY TT	SAFETY & HEALTH XXX
JOB # 3525	REAL PROPERTY XXX

USDA Agricultural Research Service

USDA AGRICULTURAL RESEARCH SERVICE
EASTERN REGIONAL RESEARCH CENTER
SOLVENT STORAGE BUILDING & STEAM TUNNEL
WYNDMOOR, PA

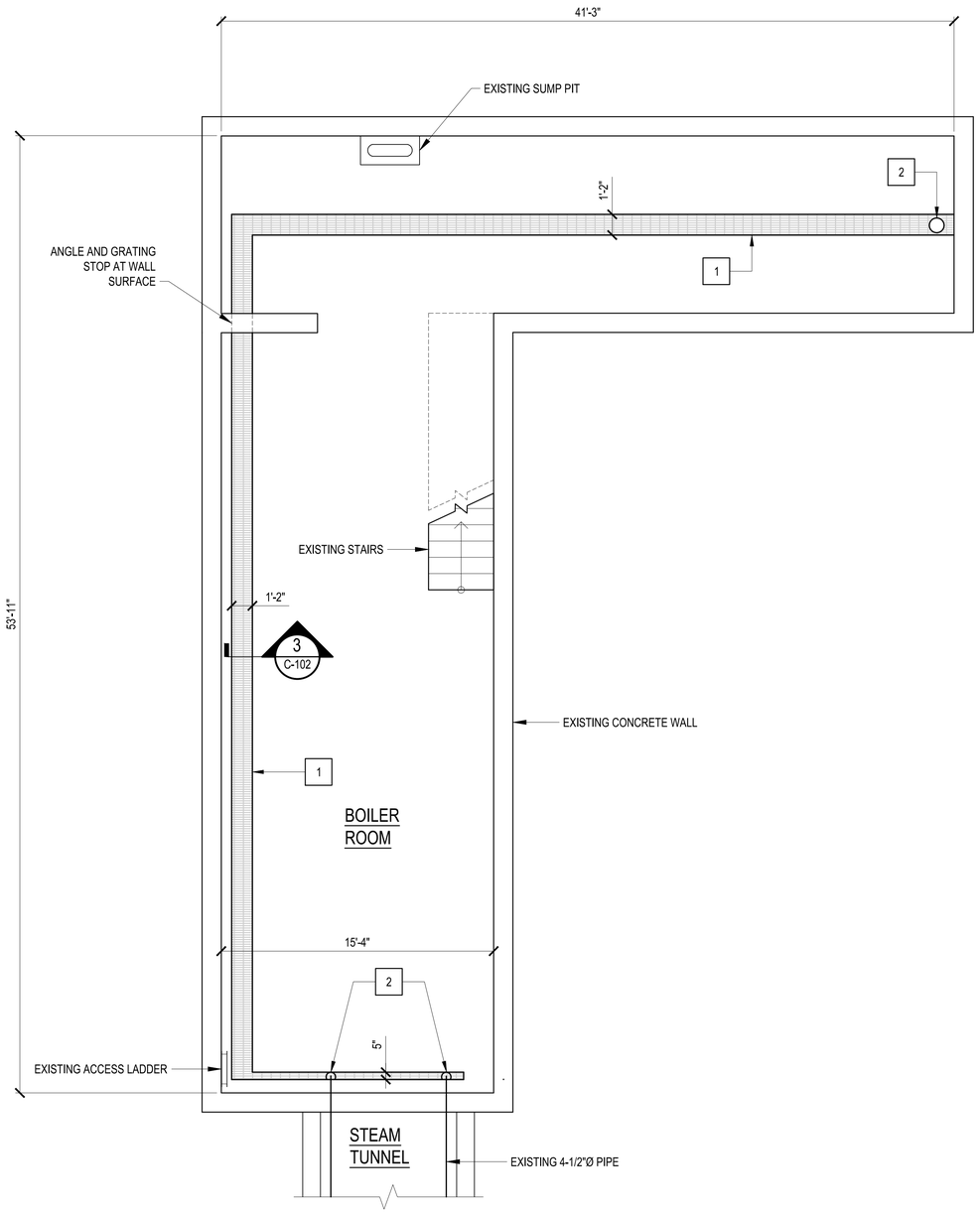
SITE PLAN

PROJECT NO. 12305B21D0013
DATE 04/02/2026
AGRICULTURAL RESEARCH SERVICE
600 MERMAID LANE
WYNDMOOR, PA
SHEET C-100
X OF XX

THOMAS H. TOLLISON REGISTERED PROFESSIONAL ENGINEER #10338 STATE OF MISSISSIPPI 04/02/26

J:\hattiesburg\2025 Jobs\3525 USDA Solvent Storage Building Envelope and Steam Tunnel\07 Working Folder\Civil\C-100.dwg
Apr 09, 2026 - 1:09pm

ALL WORK SHOWN ON THIS SHEET MUST BE INCLUDED IN THE BID OPTION 2.



1 C-101 TRENCH IN BOILER ROOM
SCALE: 1/4" = 1'-0"

NORTH

GENERAL NOTES

1. CONTRACTOR MUST FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING WORK.
2. EXISTING UTILITIES SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR MUST FIELD VERIFY AND LOCATE EXISTING UTILITIES PRIOR TO BEGINNING WORK.
3. EXISTING BOILER ROOM IS A PERMIT REQUIRED ENTRY CONFINED SPACE. ALL UTILITIES IN BOILER ROOM MUST REMAIN ON DURING CONSTRUCTION.

KEYED NOTES

1. PROVIDE FIBERGLASS TRENCH DRAIN GRATE AND FIBERGLASS ANGLE SEATS 3/C-102. TRENCH DRAIN IS APPROXIMATELY 102 FT LONG.
2. PROVIDE HOLE IN GRATING TO ALLOW FOR PIPING TO PASS THROUGH GRATE. HOLE MUST BE +1" LARGER THAN PIPE SIZE.

LEGEND

FIBERGLASS TRENCH GRATE

0 2' 4' 8' 12'
SCALE: 1/4"= 1'-0"

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P.O. BOX 313, GREENWOOD, MISSISSIPPI - (662) 455-4943

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REVISIONS

THOMAS H. TOLLISON REGISTERED PROFESSIONAL ENGINEER #10338 STATE OF MISSISSIPPI

A-E FIRM	USDA
PROJECT MANAGER CR	EPM XXX
DESIGNER SM	PPM XXX
CHECKED BY TT	SAFETY & HEALTH XXX
JOB # 3525	REAL PROPERTY XXX

USDA Agricultural Research Service

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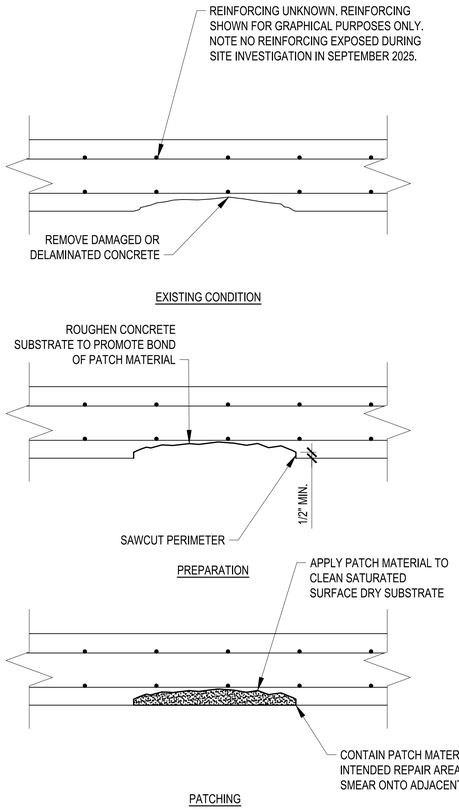
SOLVENT STORAGE BUILDING & STEAM TUNNEL
WYNDMOOR, PA

BOILER ROOM TRENCH PLAN

PROJECT NO.	AGRICULTURAL RESEARCH SERVICE	SHEET
12305B21D0013	600 MERMAID LANE WYNDMOOR, PA	C-101
DATE 04/02/2026		X OF XX

J:\Nortlleburg\2025 Jobs\3525 USDA Solvent Storage Building Envelope and Steam Tunnel\07 Working Folder\Civil\C-101.dwg
Apr 09, 2026 - 1:09pm

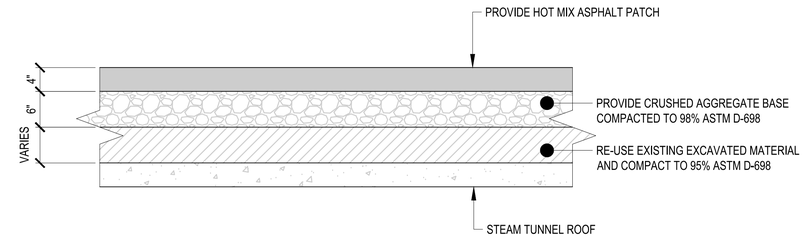


STEPS:

1. REMOVE ALL SPALLED CONCRETE DOWN TO FIRM SOUND CONCRETE (INDICATED BY A RINGING TONE WHEN TAPPED WITH A STEEL BAR). REMOVE ALL LOOSE MATERIAL AND DUST FROM THE AREA BY AIR BLASTING.
2. SAWCUT THE PERIMETER A MIN OF 1/2" AND MAX OF 1" DEEP TO AVOID FEATHERED EDGES. REPAIR MATERIAL MUST BE APPLIED IN DEPTHS NO LESS THAN 1/2".
3. IF MORE THAN 1/2 THE PERIMETER OF ANY REINFORCEMENT IS EXPOSED OF IF THE BAR EXHIBITS SIGNIFICANT CORROSION, REMOVE THE CONCRETE AROUND THE ENTIRE BAR. PROVIDE A 3/4" CLEARANCE BETWEEN THE STEEL AND SURROUNDING CONCRETE TO PERMIT ADEQUATE FLOW OF REPAIR MATERIAL.
4. IF CORRODED REINFORCING IS ENCOUNTERED, CLEAN REINF. TO SSPC -SP10. IF SECTION LOSS <10% SECTION LOSS, APPLY CORROSION INHIBITING PRIMER AND PROCEED TO PATCH REPAIR. IF SECTION LOSS >25%, CUT OUT DETERIORATED SEGMENT AND PROVIDE NEW BAR SPLICED TO EXISTING REINF. WITH A MECHANICAL COUPLER THEN PROCEED WITH PATCH REPAIR.
5. THOROUGHLY CLEAN THE AREA BY AIR JET TO REMOVE ALL RESIDUAL FINES. CAREFULLY CHECK THAT NO TRACE OF OIL, GREASE, OR MATERIALS THAT WOULD PREVENT THE CONCRETE FROM BONDING ARE PRESENT.
6. IMMEDIATELY PRIOR TO PLACEMENT OF NEW CONCRETE, THE SURFACE CAVITY MUST BE COATED WITH EPOXY BINDER. APPLY THE BINDER PER MANUFACTURERS INSTRUCTIONS.
7. PLACEMENT OF CONCRETE MUST BE STARTED IMMEDIATELY UPON APPLIED BINDER BECOMING "TACKY".
8. FINISH CONCRETE TO MATCH EXISTING SURFACES. EXCESS MORTAR OR BINDER CARRIED OVER THE CONCRETE MUST BE REMOVED.

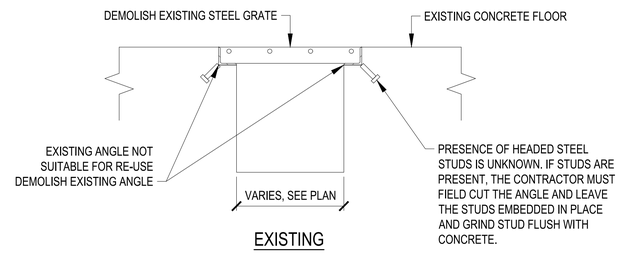
1 C-102 (SPALL) PARITIAL DEPTH REPAIR (PDR) DETAIL

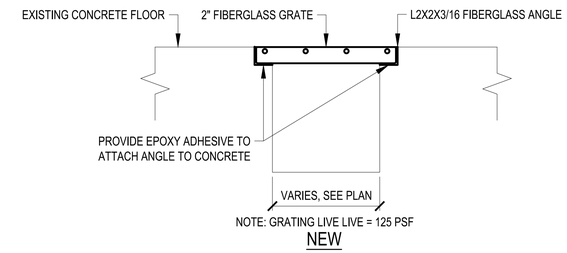
SCALE: NTS



2 C-102 PAVEMENT REPAIR

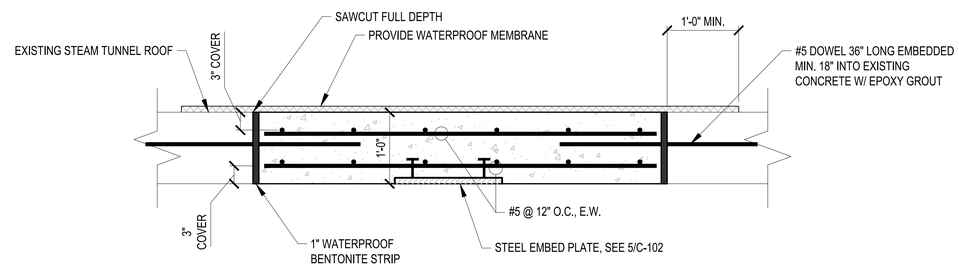
SCALE: 1" = 1'-0"





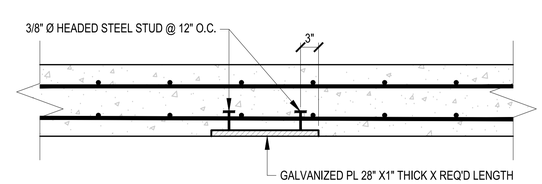
3 C-102 TRENCH GRATE

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



4 C-102 STEAM TUNNEL ROOF REPLACEMENT

SCALE: 1" = 1'-0"



5 C-102 STEAM PLATE DETAIL

SCALE: 1" = 1'-0"

THOMAS H. TOLLISON
REGISTERED PROFESSIONAL ENGINEER
#10338
04/02/26
STATE OF MISSISSIPPI

THE Johnson Adams FIRM P.A.
ARCHITECTS/ENGINEERS PLANNING SURVEYING MANAGEMENT
P.O. BOX 513, GREENWOOD, MISSISSIPPI - (662) 455-4943

NO.	DATE	BY	DESCRIPTION

REVISIONS

USDA Agricultural Research Service

USDA AGRICULTURAL RESEARCH SERVICE
EASTERN REGIONAL RESEARCH CENTER
SOLVENT STORAGE BUILDING & STEAM TUNNEL
WYNDMOOR, PA

DETAILS

A-E FIRM	USDA
PROJECT MANAGER CR	EPM XXX
DESIGNER SM	PPM XXX
CHECKED BY TT	SAFETY & HEALTH XXX
JOB # 3525	REAL PROPERTY XXX

PROJECT NO. 12305B21D0013
DATE 04/02/2026
AGRICULTURAL RESEARCH SERVICE
600 MERMAID LANE WYNDMOOR, PA
SHEET C-102
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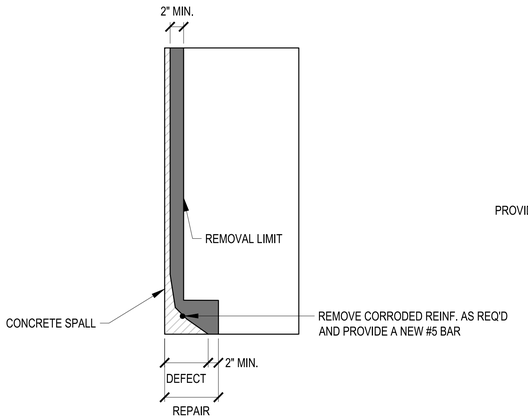
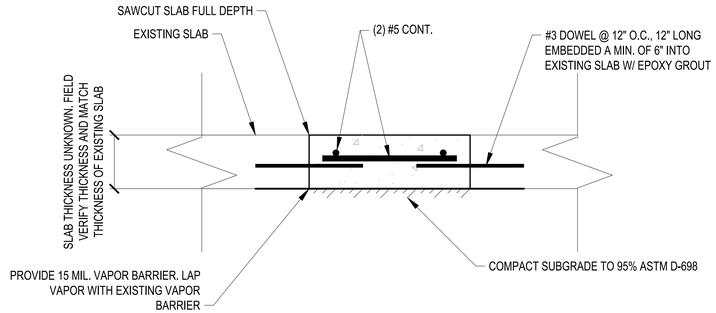
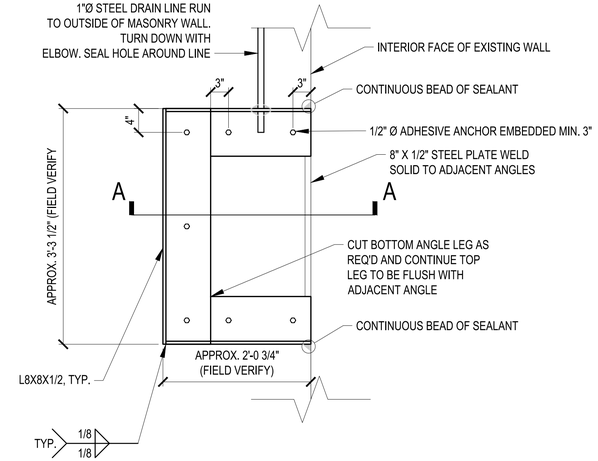


1 C-103 SPALL REPAIR DETAIL
SCALE: 1 1/2 = 1'-0"

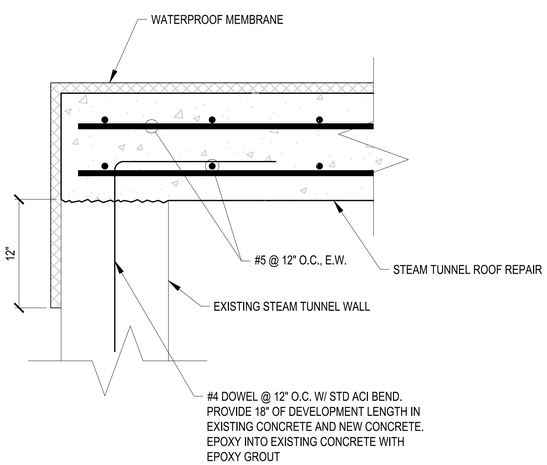


NOTE: SEE ARCH. FOR SLAB REPAIR LOCATION IN SOLVENT STORAGE BUILDING.

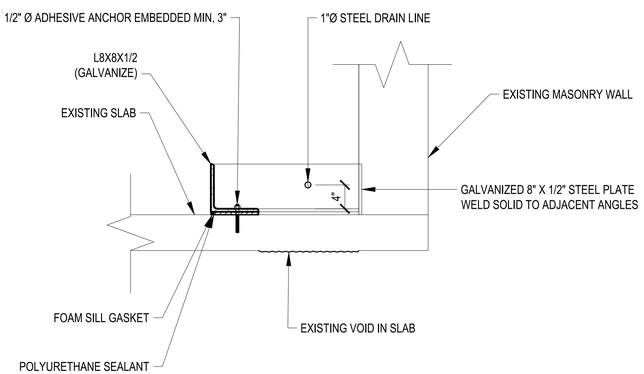
3 C-103 SOLVENT STORAGE BUILDING SLAB REPAIR
SCALE: 1 1/2" = 1'-0"



PLAN



2 C-103 WATERPROOF MEMBRANE CORNER DETAIL
SCALE: 1 1/2" = 1'-0"



SECTION A-A

NOTES:
1. SEE ARCH. FOR LOCATION AND ADDITIONAL REQUIREMENTS.
2. ALL STEEL TO BE GALVANIZED AFTER PERIMETER BOX IS CONSTRUCTED AND PRIOR TO INSTALLATION. FIELD PAINT ALL EXPOSED STEEL.

4 C-103 ANGLE PERIMETER BOX
SCALE: 1" = 1'-0"

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

0 6" 1' 2'
SCALE: 1 1/2"=1'-0"

The Johnson + Mc Adams FIRM P.A.
ARCHITECTS/ENGINEERS PLANNING SURVEYING MANAGEMENT
P.O. BOX 510, GREENWOOD, MISSISSIPPI - (662) 455-4943

NO.	DATE	BY	DESCRIPTION

REVISIONS

A-E FIRM	USDA
PROJECT MANAGER CR	EPM XXX
DESIGNER SM	PPM XXX
CHECKED BY TT	SAFETY & HEALTH XXX
JOB # 3525	REAL PROPERTY XXX

USDA Agricultural Research Service

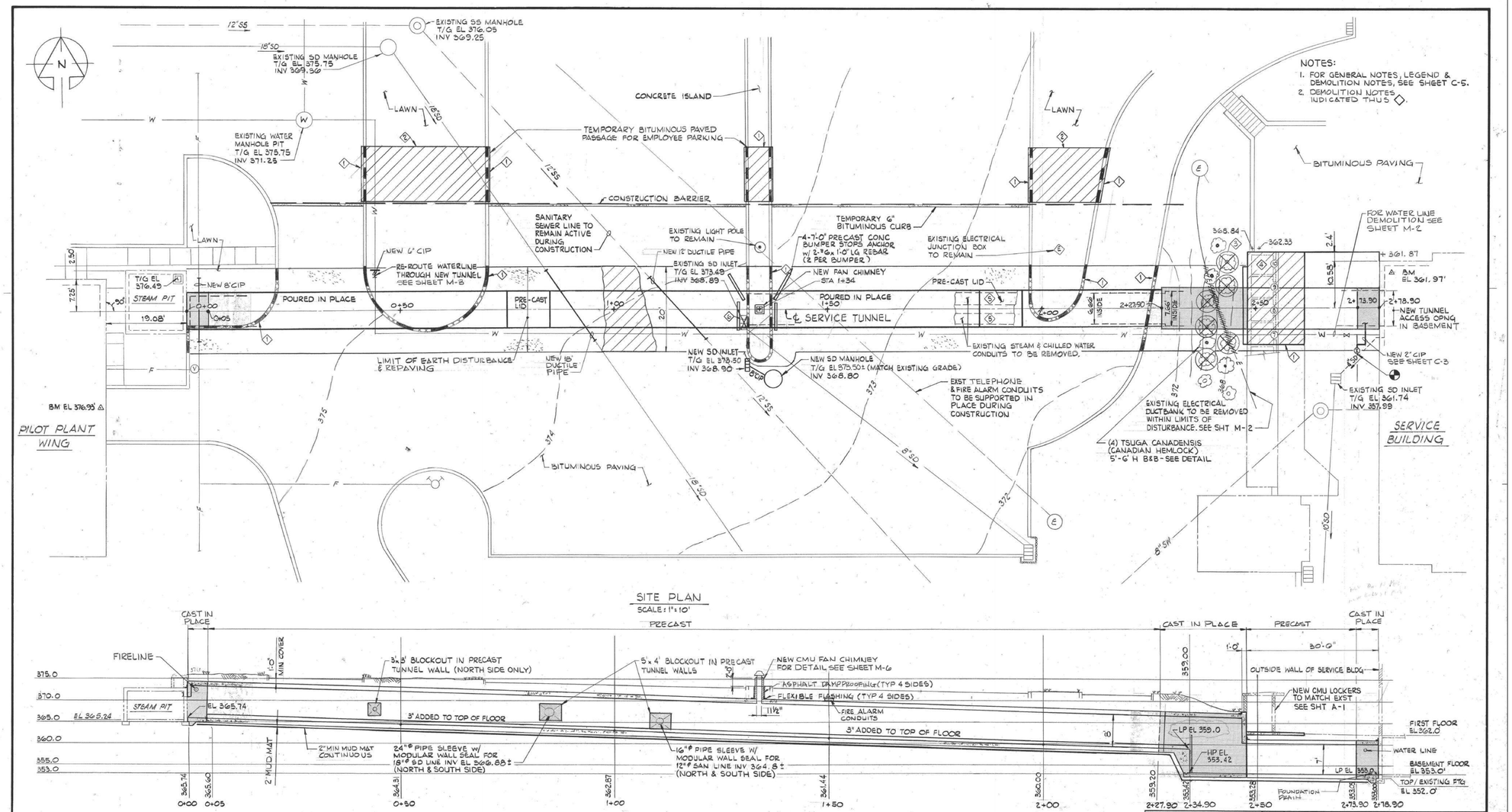
USDA AGRICULTURAL RESEARCH SERVICE
EASTERN REGIONAL RESEARCH CENTER
SOLVENT STORAGE BUILDING & STEAM TUNNEL
WYNDMOOR, PA

DETAILS

PROJECT NO.	AGRICULTURAL RESEARCH SERVICE	SHEET
12305B21D0013	600 MERMAID LANE WYNDMOOR, PA	C-103
DATE 04/02/2026		X OF XX

J:\Wellsboro\2025 Jobs\3525 USDA Solvent Storage Building Envelope and Steam Tunnel\07 Working Folder\Civil\C-103.dwg
Apr 09, 2026 - 1:08pm

EXISTING DRAWING SHOWN FOR REFERENCE ONLY. NO GUARANTEES TO ITS ACCURACY IS MADE OR IMPLIED.



SITE PLAN
SCALE: 1"=10'

PROFILE
SCALE: 1"=10'
FOR ENLARGED PLAN OF TUNNEL SEE SHEET C-3

GRAPHIC SCALES
1"=10'
10' 5' 0 10' 20'

NO.	DATE	BY	DESCRIPTION
1	8/18/93	RMK	RECORD DOCUMENT
0	4/10/92	RMK	ISSUED FOR BIDDING

REVISIONS

USDA Agricultural Research Service

UNDERGROUND SERVICE TUNNEL
ERRC - WYNDMOOR, PA.
SITE PLAN & PROFILE

A-E FIRM	USDA		
PROJECT MANAGER R. KONDRATH	AOE W. MOORE		
DESIGNER RK	PPM J. CREW		
CHECKED BY	SAFETY & HEALTH T. ROARK	PROJECT NO. 1240-91	NORTH ATLANTIC AREA 600 E. MERMAID LA. WYNDMOOR, PA. 19118 215-233-6562
	REAL PROPERTY E. REILLY	DATE 3-5-92	SHEET C-2 OF 17

1 / C-500 REFERENCE DRAWING
SCALE: NTS

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ARCHITECTS/ENGINEERS PLANNING SURVEYING MANAGEMENT
P.O. BOX 915, GREENWOOD, MISSISSIPPI - (662) 455-4443

NO.	DATE	BY	DESCRIPTION

REVISIONS

USDA Agricultural Research Service

USDA AGRICULTURAL RESEARCH SERVICE
EASTERN REGIONAL RESEARCH CENTER
SOLVENT STORAGE BUILDING & STEAM TUNNEL
WYNDMOOR, PA

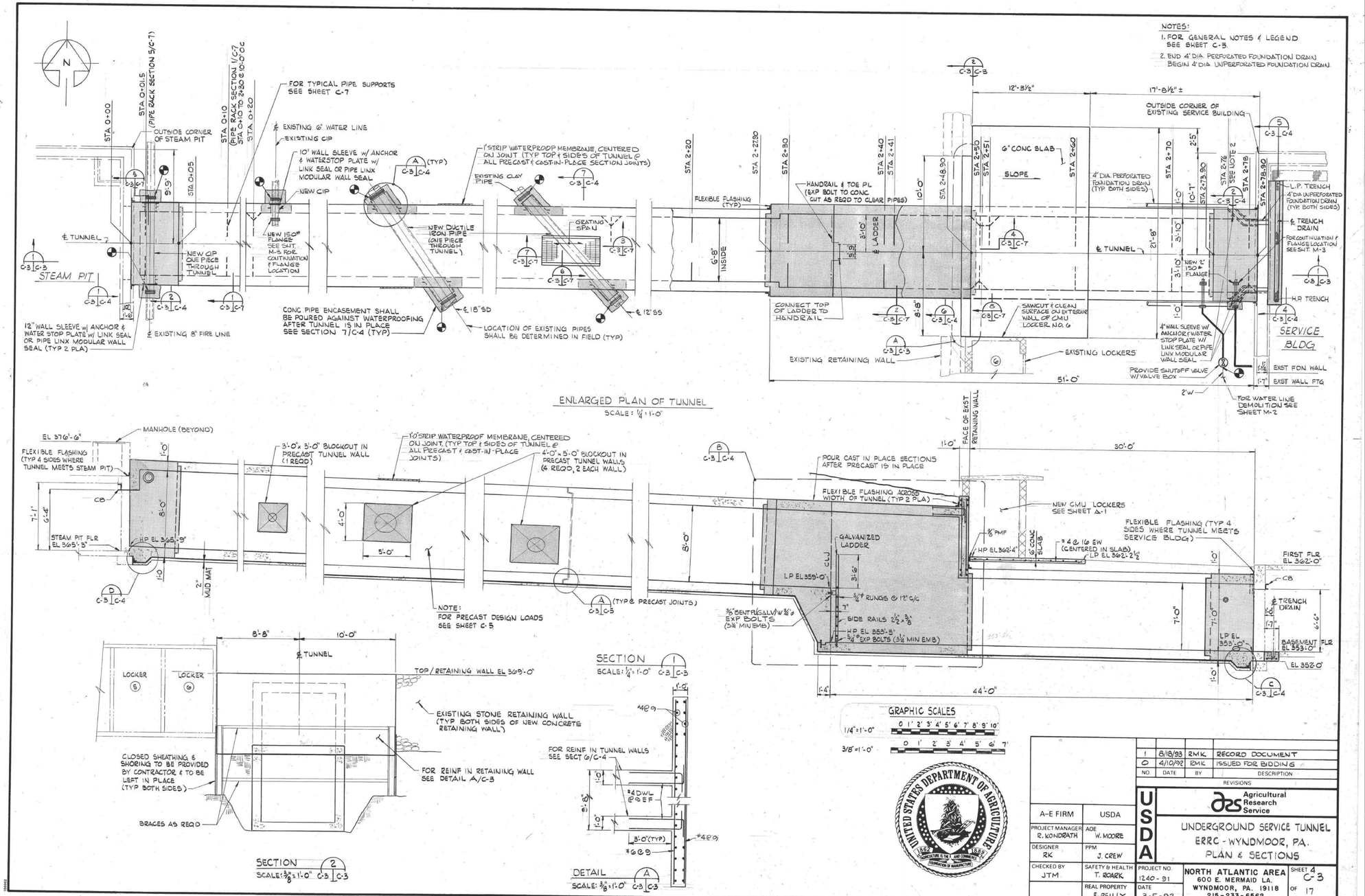
REFERENCE DRAWING

A-E FIRM	USDA		
PROJECT MANAGER CR	EPM XXX		
DESIGNER SM	PPM XXX		
CHECKED BY TT	SAFETY & HEALTH XXX	PROJECT NO. 12305B21D0013	AGRICULTURAL RESEARCH SERVICE 600 MERMAID LANE WYNDMOOR, PA
JOB # 3525	REAL PROPERTY XXX	DATE 04/02/2026	SHEET C-500 X OF XX

J:\hydtlbeburn\2025_Jobs\3525 USDA Solvent Storage Building Envelope and Steam Tunnel\07 Working Folder\Civil\C-500.dwg
Apr 09, 2026 - 1:08pm

EXISTING DRAWING SHOWN FOR REFERENCE ONLY. NO GUARANTEES TO ITS ACCURACY IS MADE OR IMPLIED.

NOTES:
1. FOR GENERAL NOTES & LEGEND SEE SHEET C-3.
2. END 4" DIA. PERFORATED FOUNDATION DRAIN. BEGIN 4" DIA. UNPERFORATED FOUNDATION DRAIN.



NO.	DATE	BY	DESCRIPTION
1	8/18/93	RMK	RECORD DOCUMENT
0	4/10/92	RMK	ISSUED FOR BIDDING

REVISIONS

A-E FIRM	USDA
PROJECT MANAGER R. KONDRATH	AOE W. MOORE
DESIGNER RK	PPM J. CREW
CHECKED BY JTM	SAFETY & HEALTH T. ROARK
	REAL PROPERTY E. REILLY

USDA — Agricultural Research Service

UNDERGROUND SERVICE TUNNEL
ERRC - WYNDMOOR, PA.
PLAN & SECTIONS

PROJECT NO. 1240-91
DATE 3-5-92

NORTH ATLANTIC AREA
600 E. MERMAID LA.
WYNDMOOR, PA. 19118
215-233-6562

SHEET C-3 OF 17

1 / C-501 REFERENCE DRAWING
SCALE: NTS

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ARCHITECTS/ENGINEERS PLANNERS SURVEYING MANAGEMENT
P.O. BOX 513, GREENWOOD, MISSISSIPPI - (662) 455-6943

NO.	DATE	BY	DESCRIPTION

REVISIONS

A-E FIRM	USDA
PROJECT MANAGER CR	EPM XXX
DESIGNER SM	PPM XXX
CHECKED BY TT	SAFETY & HEALTH XXX
JOB # 3525	REAL PROPERTY XXX

USDA Agricultural Research Service

USDA AGRICULTURAL RESEARCH SERVICE
EASTERN REGIONAL RESEARCH CENTER
SOLVENT STORAGE BUILDING & STEAM TUNNEL
WYNDMOOR, PA

REFERENCE DRAWING

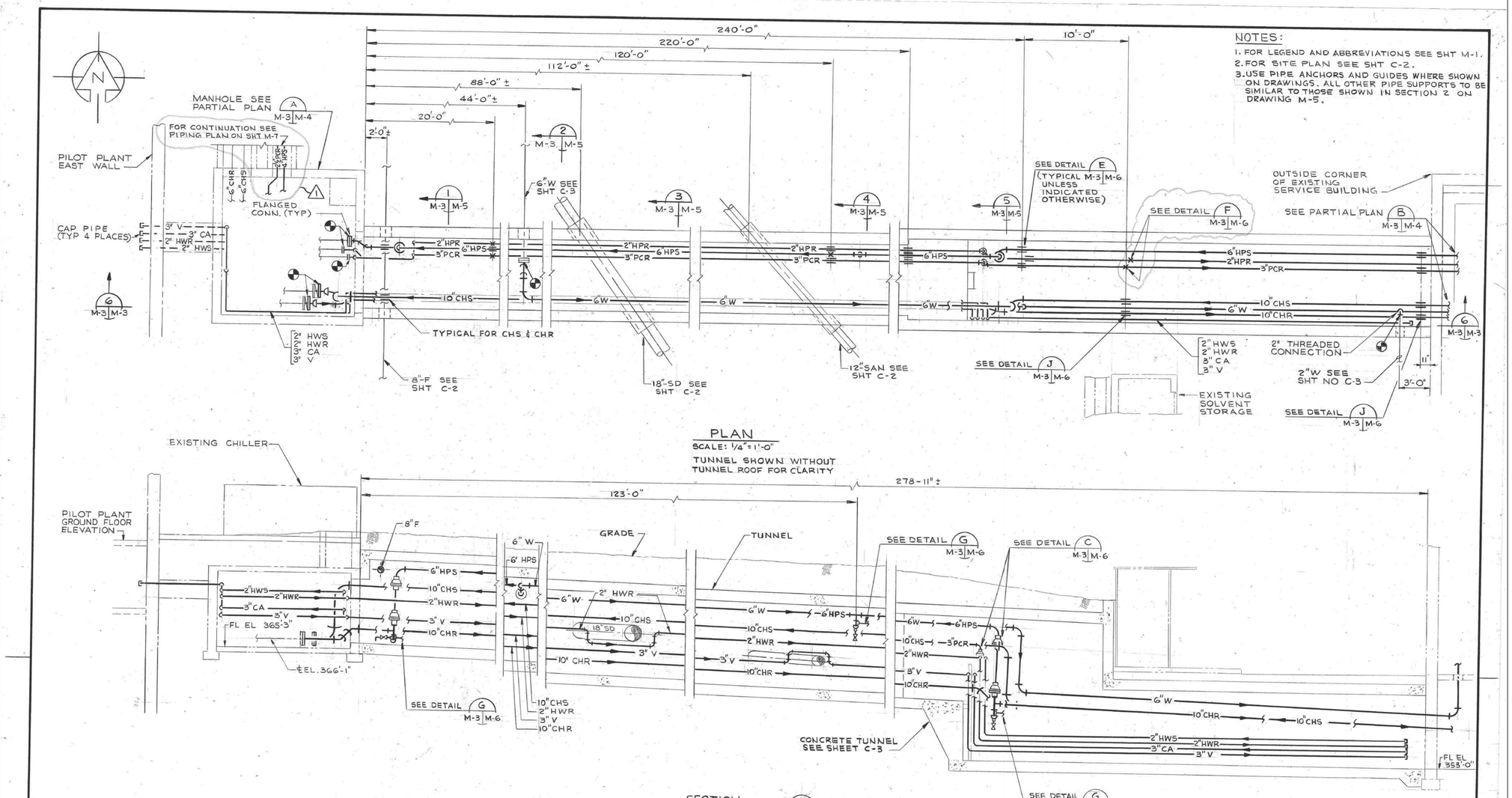
PROJECT NO. 12305B21D0013
DATE 04/02/2026
AGRICULTURAL RESEARCH SERVICE
600 MERMAID LANE
WYNDMOOR, PA
SHEET C-501
X OF XX

L:\Vicksburg\2025 Jobs\3525 USDA Solvent Storage Building Envelope and Steam Tunnel\07 Working Folder\Civil\C-501.dwg
Apr 09, 2026 - 1:08pm

EXISTING DRAWING SHOWN FOR REFERENCE ONLY. NO GUARANTEES TO ITS ACCURACY IS MADE OR IMPLIED.

NOTES:

1. FOR LEGEND AND ABBREVIATIONS SEE SHT M-1.
2. FOR SITE PLAN SEE SHT C-2.
3. USE PIPE ANCHORS AND GUIDES WHERE SHOWN ON DRAWINGS. ALL OTHER PIPE SUPPORTS TO BE SIMILAR TO THOSE SHOWN IN SECTION 2 ON DRAWING M-5.



PLAN
SCALE: 1/4" = 1'-0"
TUNNEL SHOWN WITHOUT TUNNEL ROOF FOR CLARITY

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

GRAPHIC SCALES
1/4" = 1'-0"
0 1' 2' 3' 4' 5' 6' 7' 8' 9' 10'

NO.	DATE	BY	DESCRIPTION
2	8/18/93	RMK	RECORD DOCUMENT
1	5/1/92	RMK	ADDENDUM 1
0	4/10/92	RMK	ISSUED FOR BIDDING

REVISIONS

A-E FIRM	USDA
PROJECT MANAGER	R. KONDRATH
AOE	W. MOORE
DESIGNER	EHH/JSC
PPM	J. CREW
CHECKED BY	J. MCQUATE
SAFETY & HEALTH	T. ROARK
REAL PROPERTY	E. REILLY
PROJECT NO.	1240-91
DATE	4/10/92

USDA Agricultural Research Service

UNDERGROUND SERVICE TUNNEL
ERRC-WYNDMOOR, PA.
PLAN & SECTION

NORTH ATLANTIC AREA
600 E. MERMAID LA.
WYNDMOOR, PA. 19118
215-233-6562

SHEET M-3 OF 17

1 C-502 REFERENCE DRAWING
SCALE: NTS

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ARCHITECTS/ENGINEERS PLANNING SURVEYING MANAGEMENT
P.O. BOX 513, GREENWOOD, MISSISSIPPI - (662) 455-6943

NO.	DATE	BY	DESCRIPTION

REVISIONS

A-E FIRM	USDA
PROJECT MANAGER	CR
EPM	XXX
DESIGNER	SM
PPM	XXX
CHECKED BY	TT
SAFETY & HEALTH	XXX
JOB #	3525
REAL PROPERTY	XXX

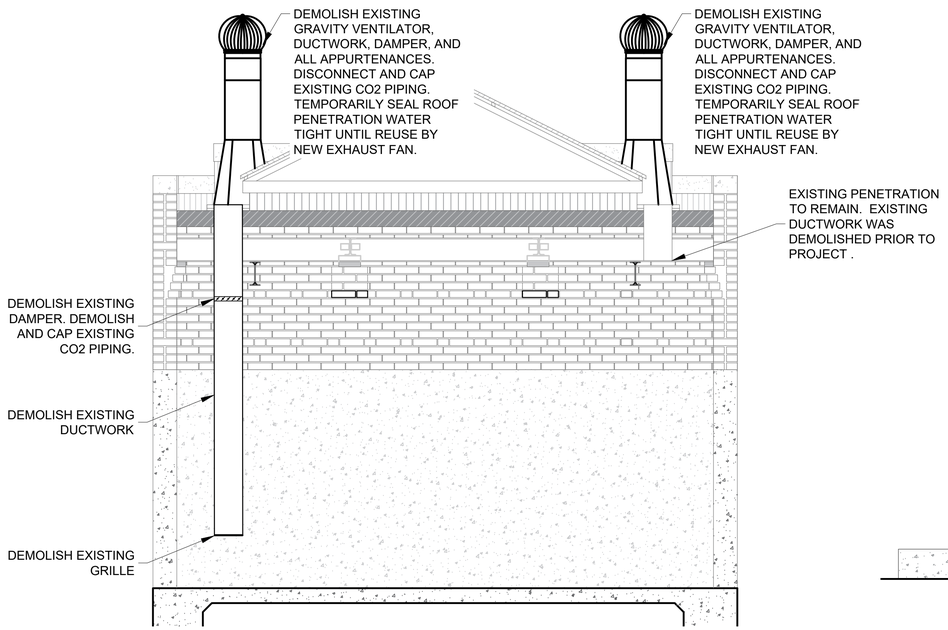
USDA Agricultural Research Service

USDA AGRICULTURAL RESEARCH SERVICE
EASTERN REGIONAL RESEARCH CENTER
SOLVENT STORAGE BUILDING & STEAM TUNNEL
WYNDMOOR, PA

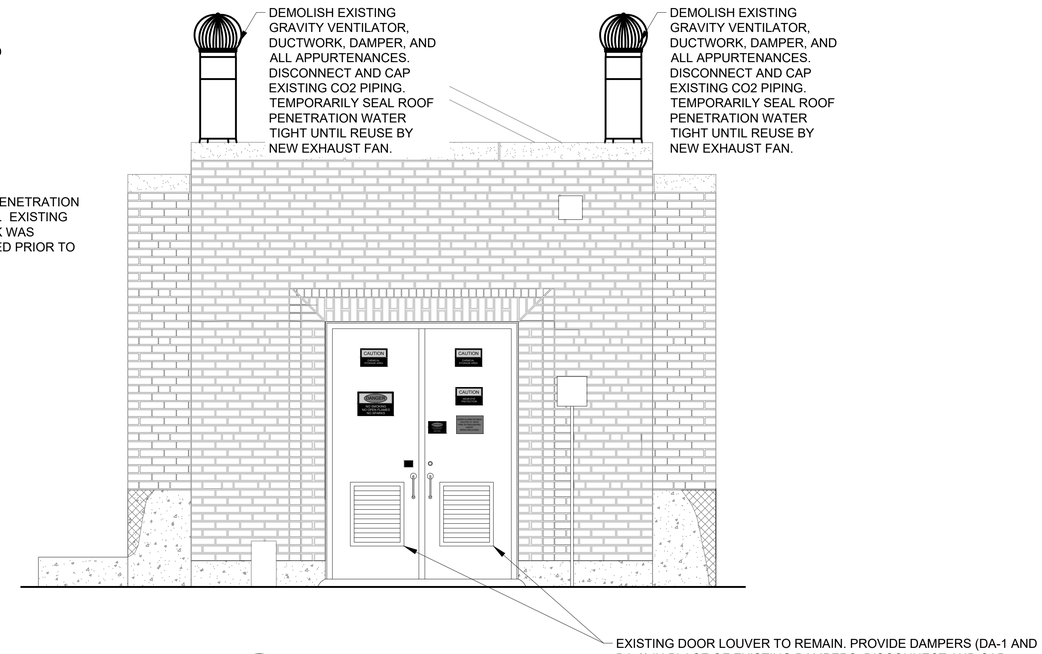
REFERENCE DRAWING

PROJECT NO.	AGRICULTURAL RESEARCH SERVICE	SHEET
12305B21D0013	600 MERMAID LANE WYNDMOOR, PA	C-502
DATE 04/02/2026		X OF XX

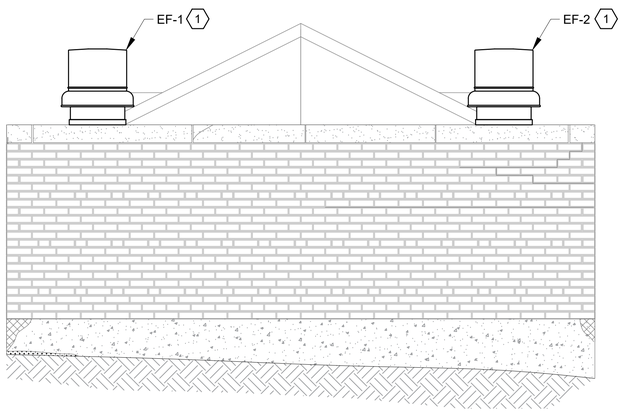
J:\Vettlesburg\2025 Jobs\3525 USDA Solvent Storage Building Envelope and Steam Tunnel\07 Working Folder\Civil\C-502.dwg
Apr 09, 2026 - 1:08pm



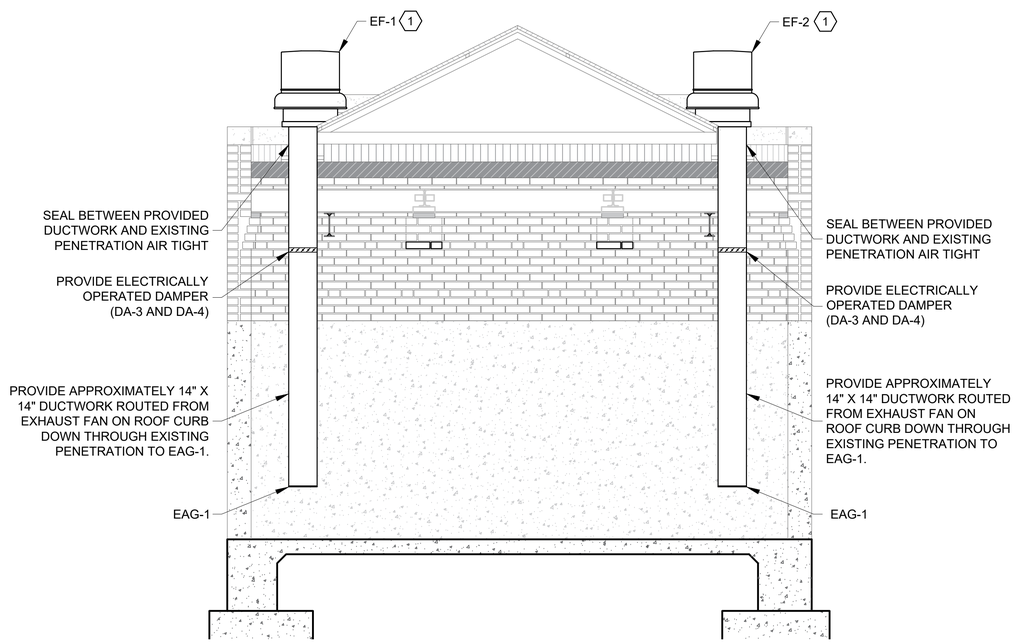
1 M-101 **HVAC DEMOLITION PLAN**
SCALE: 1/2"=1'-0"



2 M-101 **EAST ELEVATION**
SCALE: 1/2"=1'-0"



3 M-101 **HVAC NEW WORK PLAN**
SCALE: 1/2"=1'-0"



4 M-101 **BUILDING SECTION**
SCALE: 1/2"=1'-0"

0 1' 2' 4' 8'
SCALE: 1/2"=1'-0"

GENERAL NOTES

1. THIS BUILDING IS PROTECTED BY AN EXISTING CO2 FIRE SUPPRESSION SYSTEM CONTROLLED BY AN RP-1002 EXTINGUISHING AGENT RELEASE PANEL. ANY WORK INVOLVING THE CO2 FIRE SUPPRESSION SYSTEM, INCLUDING BUT NOT LIMITED TO THE ADDITION OF PROGRAM RELAYS, INTERFACE MODULES, CONTROL WIRING, LOGIC CHANGES, OR INTERLOCKS ASSOCIATED WITH NEW VENTILATION ISOLATION DAMPERS, MUST BE PERFORMED BY A CONTRACTOR THAT IS FACTORY TRAINED, FACTORY AUTHORIZED, AND CERTIFIED BY THE SYSTEM MANUFACTURER. THE FIRE SUPPRESSION CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE LISTING, APPROVALS, AND FULL OPERATIONAL INTEGRITY OF THE EXISTING CO2 SYSTEM.
2. PROVIDE UL 555 AND UL 555S LISTED FIRE AND SMOKE RATED ISOLATION DAMPERS AT DOOR LOUVERS AND EXHAUST DUCTWORK. DAMPERS SHALL HAVE A MINIMUM 1.5-HOUR FIRE RESISTANCE RATING AND A UL 555S LEAKAGE CLASS I RATING. DAMPERS SHALL BE EQUIPPED WITH ELECTRIC SPRING-RETURN ACTUATORS AND SHALL BE FAIL-CLOSED UPON LOSS OF POWER, WITH AUXILIARY END SWITCHES PROVIDED FOR DAMPER POSITION FEEDBACK. DAMPERS SHALL BE INTERLOCKED WITH THE RP-1002 EXTINGUISHING AGENT RELEASE PANEL PROGRAM RELAY SUCH THAT, UPON ACTIVATION OF THE PRE-DISCHARGE/TIME-DELAY SIGNAL, ALL ISOLATION DAMPERS CLOSE AND POSITIVE PROOF-OF-CLOSURE IS REPORTED BACK TO THE RELEASING PANEL.
3. PRIOR TO DEMOLITION OR REMOVAL OF ANY EXISTING PNEUMATICALLY ACTUATED DAMPERS, THE FIRE CONTRACTOR SHALL VERIFY THAT THE CO2 SYSTEM IS DEPRESSURIZED AND IN A SAFE, NON-DISCHARGE CONDITION. ALL EXISTING CO2 ACTUATION PIPING SERVING THE DAMPERS TO BE REMOVED SHALL BE PROPERLY DISCONNECTED AND CAPPED BY A FACTORY AUTHORIZED FIRE SUPPRESSION CONTRACTOR. NO DEMOLITION WORK SHALL COMMENCE UNTIL THE CO2 SYSTEM IS SAFELY ISOLATED AND VERIFIED.

(X) KEYED NOTES

1. PROVIDE ROOF-MOUNTED EXHAUST FAN ON MANUFACTURER PROVIDED ROOF CURB. TEST, ADJUST, AND BALANCE THE EXHAUST SYSTEM UNTIL MEASURED FLOW RATES OF AIR ARE WITHIN PLUS OR MINUS 5 PERCENT OF THE DESIGN FLOW RATES AS SPECIFIED OR INDICATED ON THE DRAWINGS. PROVIDE WITH APPROXIMATELY 14" X 14" DUCTWORK DOWN FROM EXHAUST FAN THROUGH EXISTING PENETRATION TO APPROXIMATELY 2'-0" ABOVE FINISHED FLOOR AND PROVIDE EAG-1. CONTRACTOR MUST FIELD VERIFY EXACT PENETRATION DIMENSIONS PRIOR TO ORDERING EQUIPMENT OR MATERIALS, AND MUST CREATE AIR TIGHT SEAL BETWEEN EXISTING PENETRATION AND PROVIDED DUCTWORK.

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P.O. BOX 515, GREENWOOD, MISSISSIPPI - (662) 455-4543

NO.	DATE	BY	DESCRIPTION

REVISIONS

A-E FIRM	USDA
PROJECT MANAGER C.R.	EPM XXX
DESIGNER S.E.	PPM XXX
CHECKED BY T.B.	SAFETY & HEALTH XXX
JOB # 3525	REAL PROPERTY XXX

DANIEL M. ENGLE
LICENSED PROFESSIONAL ENGINEER
ENGINEER
04/02/26
STATE OF MISSISSIPPI

USDA Agricultural Research Service

USDA AGRICULTURAL RESEARCH SERVICE
EASTERN REGIONAL RESEARCH CENTER
SOLVENT STORAGE BUILDING & STEAM TUNNEL
WYNDMOOR, PA

HVAC PLANS

PROJECT NO. 12305B21D0013	AGRICULTURAL RESEARCH SERVICE	SHEET M-101
DATE 04/02/2026	600 MERMAID LANE WYNDMOOR, PA	19 OF 22

J:\Westlesburn\2025 Jobs\3525 USDA Solvent Storage Building Envelope and Steam Tunnel\07 Working Folder\Mech\M-101.dwg
Apr 02, 2026 - 8:01am

EXHAUST FAN SCHEDULE

MARK	BASIS OF DESIGN	LOCATION	FAN DATA						ELEC. DATA						OPER. WEIGHT (LBS)	REMARKS
			CFM	S.P.	DRIVE	FAN TYPE	RPM	MAX SONES	POWER HP	VOLTS/ PHASE	FLA	MCA	MOP	SCCR		
EF-1	GREENHECK GB-097-6	ROOF	220	0.5	BELT	EXHAUST	1462	7.6	1/6	115/1	4.4	5.5	15	5 KA	57	ALL
EF-2	GREENHECK GB-097-6	ROOF	220	0.5	BELT	EXHAUST	1462	7.6	1/6	115/1	4.4	5.5	15	5 KA	57	ALL

NOTES:
1. FUME EXHAUST SYSTEM IS TO BE SPARK B RESISTANT.
2. PROVIDE FAN WITH MANUFACTURER PROVIDED ROOF CURB.
3. PROVIDE WITH UNIT MOUNTED INTEGRAL ELECTRICAL DISCONNECT FROM THE MANUFACTURER.
4. INTERLOCK WITH THE EXISTING FIRE ALARM SYSTEM, PROVIDED DAMPERS, AND PROVIDED DOOR LOUVER DAMPERS. EXHAUST FANS MUST BE DEACTIVATED AND DAMPERS MUST BE COMPLETELY CLOSED PRIOR TO THE BEGINNING OF FLOW FROM THE CO2 SYSTEM.

MOTORIZED DAMPER SCHEDULE

MARK	BASIS OF DESIGN	WIDTH (INCHES)	HEIGHT (INCHES)	ACTUATOR		REMARKS
				OPER.	TYPE	
DA-1	GREENHECK OFSD-211	20	24	SPRING RETURN	120 VAC	1,2
DA-2	GREENHECK OFSD-211	20	24	SPRING RETURN	120 VAC	1,2
DA-3	GREENHECK OFSD-211	14	14	SPRING RETURN	120 VAC	ALL
DA-4	GREENHECK OFSD-211	14	14	SPRING RETURN	120 VAC	ALL

NOTES:
1. PROVIDE UL 555 MOTORIZED DAMPER TO MATCH EXISTING DIMENSIONS AND ALLOW FOR SEAMLESS TRANSITION TO EXISTING LOUVER.
2. INTERLOCK WITH THE EXISTING FIRE ALARM SYSTEM AND PROVIDED EXHAUST FANS.
3. DAMPER TO BE LOCATED IN DUCTWORK BELOW PROVIDED EXHAUST FAN.

EXHAUST GRILLE SCHEDULE

MARK	TYPE	USE			PANEL SIZE IN.	NECK SIZE IN.	MAX CFM	MAX PD IN. WC	FINISH	PATTERN	MAX. NOISE CRITERIA (NC)	REMARKS
		S	R	E								
EAG-1	CEILING MOUNTED			X	14X14	14X14	360	0.025	MATCH CEILING	PERF.	10	SEE NOTES

NOTES:
1. SUBMIT FINISH/FRAME STYLE OF ALL DEVICES FOR REVIEW.
2. PROVIDE WITH ALUMINUM CONSTRUCTION.

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P.O. BOX 910, GREENWOOD, MISSISSIPPI - (662) 453-4443

NO.	DATE	BY	DESCRIPTION

REVISIONS

A-E FIRM	USDA
PROJECT MANAGER C.R.	EPM XXX
DESIGNER S.E.	PPM XXX
CHECKED BY T.B.	SAFETY & HEALTH XXX
JOB # 3525	REAL PROPERTY XXX

SAMUEL M. EAGLE
LICENSED PROFESSIONAL ENGINEER
04/02/26
STATE OF MISSISSIPPI

USDA

USDA Agricultural Research Service

USDA AGRICULTURAL RESEARCH SERVICE
EASTERN REGIONAL RESEARCH CENTER
SOLVENT STORAGE BUILDING & STEAM TUNNEL
WYNDMOOR, PA

MECHANICAL SCHEDULES

PROJECT NO.	AGRICULTURAL RESEARCH SERVICE	SHEET
12305B21D0013	600 MERMAID LANE WYNDMOOR, PA	M-601
DATE 04/02/2026		20 OF 22

J:\Yeatlibrary\2025 Jobs\3525 USDA Solvent Storage Building Envelope and Steam Tunnel\07 Working Folder\Mech\M-601.dwg
Apr 02, 2026 - 8:01am

GENERAL SYMBOLS LEGEND

SYMBOL / KEY	DESCRIPTION
	WALL MOUNTED JUNCTION BOX.
	ELECTRICAL PANEL
W/E	NON-FUSED DISCONNECT SWITCH. "W/E" INDICATES DISCONNECT INTEGRAL TO EQUIPMENT.
J	EXPLOSION-PROOF RATED JUNCTION BOX UL LISTED FOR CLASS 1, DIVISION 1 LOCATION.
	MOTOR
	CIRCUITRY RUN IN STRAIGHT LINE SEGMENTS SIGNIFIES EXPOSED SURFACE-MOUNTED RACEWAY.
	CIRCUITRY ROUTED BELOW GRADE.

MASTER NOTES - ELECTRICAL:

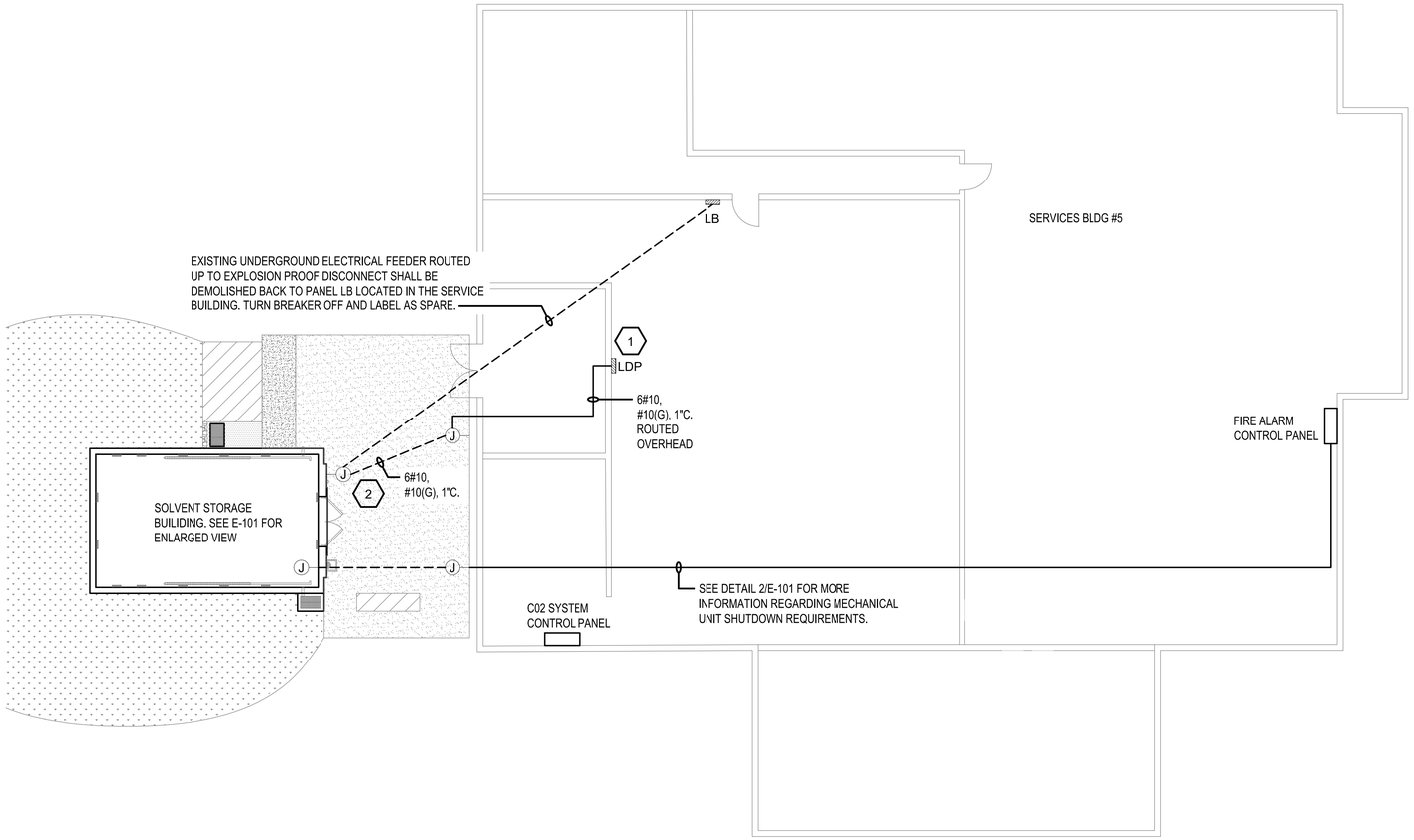
1. THE CONTRACTOR SHALL ABIDE BY ALL FEDERAL, STATE, AND/OR LOCAL CODES. IF A DISCREPANCY BETWEEN CODES OCCURS, THE MOST STRINGENT SHALL PREVAIL.
2. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO THE COMMENCEMENT OF ANY WORK. SHOULD DISCREPANCIES BE DISCOVERED, THE CONTRACTOR SHALL VERIFY INTENT WITH THE ENGINEER/OWNER BEFORE PROCEEDING.
3. COORDINATE LOCATIONS OF ALL ROOF MOUNTED DEVICES WITH OTHER TRADES PRIOR TO INSTALLATION.

GENERAL NOTES

A. ALL EQUIPMENT LOCATED ON THE EXTERIOR AND INTERIOR OF THE SOLVENT STORAGE BUILDING IS WITHIN A CLASS 1, DIVISION 1 LOCATION. ALL EQUIPMENT, MOTORS, FANS, JUNCTION BOXES, CONDUIT, AND FITTINGS SHALL BE LISTED AND LABELED FOR CLASS 1, DIVISION 1 PER NEC ARTICLE 501.

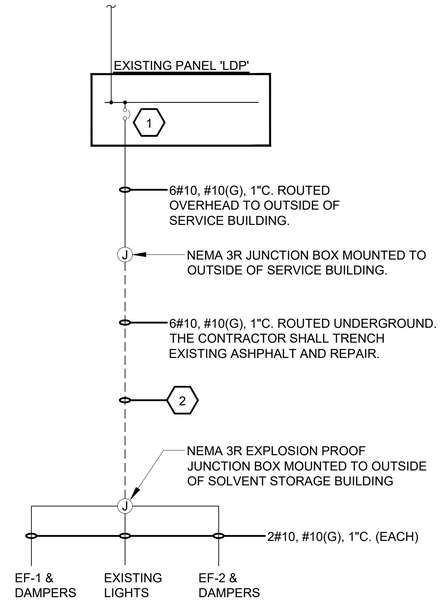
KEYED NOTES

1. REPLACE EXISTING 30/2 BREAKER (CKT 13,15) WITH (2) 20/1 BREAKERS TO FEED EXHAUST FANS LOCATED AT SOLVENT STORAGE BUILDING. UTILIZE SPARE 20/1 (CKT 17) TO REFEED EXISTING LIGHTS AT SOLVENT STORAGE BUILDING.
2. PROVIDE CONDUIT FITTINGS, AND ACCESSORIES FOR A CLASS 1, DIVISION 1 HAZARDOUS LOCATION IN ACCORDANCE WITH NEC ARTICLE 500 AND 501. PROVIDE EXPLOSION PROOF CONDUIT SEALS WITHIN 18 INCHES OF EQUIPMENT ENCLOSURES. ALL CONDUIT LOCATED ABOVE GRADE SHALL BE GALVANIZED RIGID STEEL.



TRUE NORTH PLAN NORTH

1 / E-100 **SITE PLAN**
SCALE: 1/8"=1'-0"



2 / E-100 **SINGLE LINE DIAGRAM**
SCALE: 1/8"=1'-0"

BRADEN T. DUKE
ENGINEER
35781
STATE OF MISSISSIPPI
4-2-2026

The Johnson - Mc Adams FIRM P.A.
ARCHITECTS/ENGINEERS PLANNING SURVEYING MANAGEMENT
P.O. BOX 915, GREENWOOD, MISSISSIPPI - (662) 455-4943

NO.	DATE	BY	DESCRIPTION

REVISIONS

A-E FIRM	USDA
PROJECT MANAGER C.R.	EPM XXX
DESIGNER B.T.D.	PPM XXX
CHECKED BY B.T.D.	SAFETY & HEALTH XXX
JOB # 3525	REAL PROPERTY XXX

USDA Agricultural Research Service

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EASTERN REGIONAL RESEARCH CENTER
SOLVENT STORAGE BUILDING & STEAM TUNNEL
WYNDMOOR, PA

ELECTRICAL PLAN

PROJECT NO. 12305B21D0013	AGRICULTURAL RESEARCH SERVICE	SHEET E-100
DATE 04/02/2026	600 MERMAID LANE WYNDMOOR, PA	21 OF 22

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Apr 02, 2026 - 7:45am

GENERAL SYMBOLS LEGEND

SYMBOL / KEY	DESCRIPTION
J	WALL MOUNTED JUNCTION BOX.
▽	WEATHERHEAD
W/E	NON-FUSED DISCONNECT SWITCH. "W/E" INDICATES DISCONNECT INTEGRAL TO EQUIPMENT.
J	EXPLOSION-PROOF RATED JUNCTION BOX UL LISTED FOR CLASS 1, DIVISION 1 LOCATION.
	MOTOR
	CIRCUITRY RUN IN STRAIGHT LINE SEGMENTS SIGNIFIES EXPOSED SURFACE-MOUNTED RACEWAY.
	CIRCUITRY ROUTED BELOW GRADE.

MASTER NOTES - ELECTRICAL:

1. THE CONTRACTOR SHALL ABIDE BY ALL FEDERAL, STATE, AND/OR LOCAL CODES. IF A DISCREPANCY BETWEEN CODES OCCURS, THE MOST STRINGENT SHALL PREVAIL.
2. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO THE COMMENCEMENT OF ANY WORK. SHOULD DISCREPANCIES BE DISCOVERED, THE CONTRACTOR SHALL VERIFY INTENT WITH THE ENGINEER/OWNER BEFORE PROCEEDING.
3. COORDINATE LOCATIONS OF ALL ROOF MOUNTED DEVICES WITH OTHER TRADES PRIOR TO INSTALLATION.

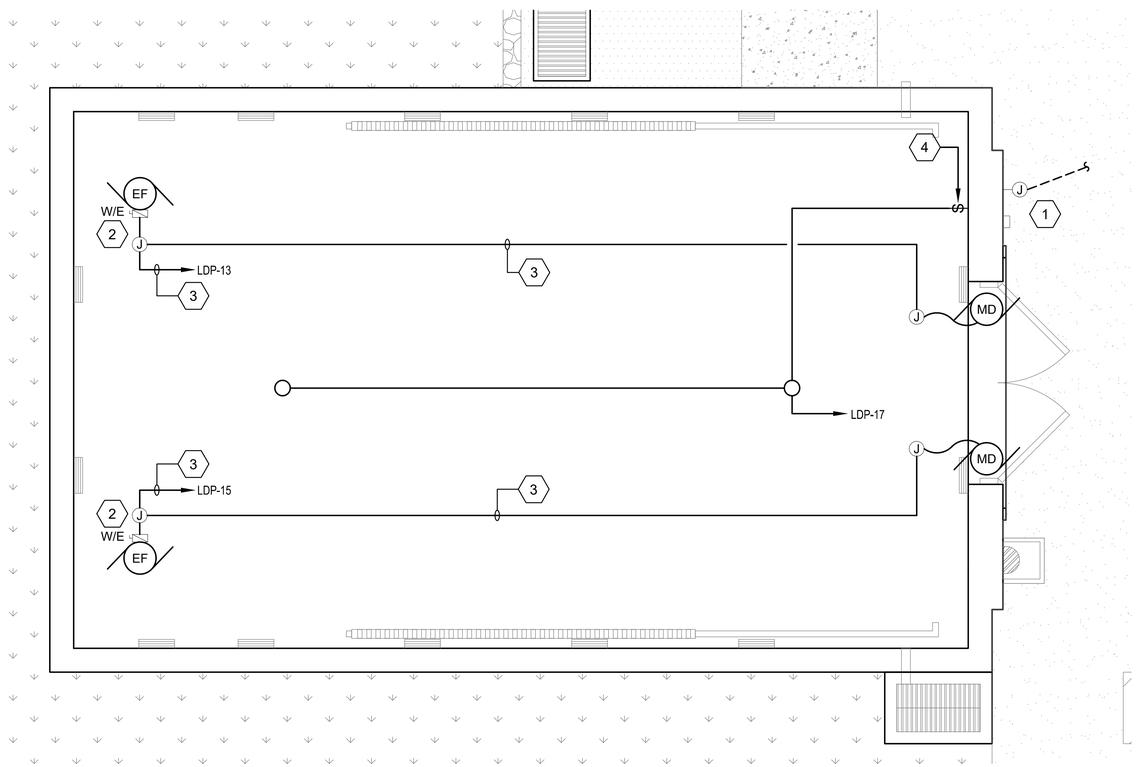
GENERAL NOTES

A. THIS INSTALLATION IS WITHIN A CLASS 1, DIVISION 1 LOCATION. ALL EQUIPMENT, MOTORS, FANS, JUNCTION BOXES, CONDUIT, AND FITTINGS SHALL BE LISTED AND LABELED FOR CLASS 1, DIVISION 1 PER NEC ARTICLE 501.

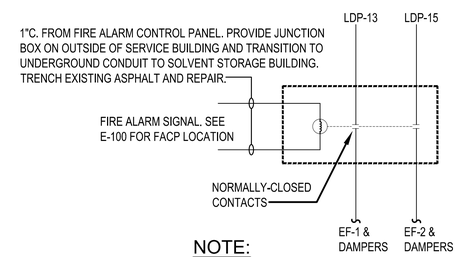
B. INSTALL LISTED EXPLOSION-PROOF SEALED FITTINGS WITHIN 18" OF EXHAUST FAN CONDUIT ENTRY PER NEC ARTICLE 501.

KEYED NOTES

1. EXISTING UNDERGROUND ELECTRICAL FEEDER ROUTED UP TO EXPLOSION PROOF DISCONNECT SHALL BE DEMOLISHED BACK TO PANEL LB LOCATED IN THE SERVICE BUILDING. TURN BREAKER OFF AND LABEL AS SPARE. SEE E-100 FOR LOCATION. PROVIDE NEW FEEDER AND CONDUIT TO SOLVENT STORAGE BUILDING PER DETAILS ON SHEET E-100. REFEED EXISTING SOLVENT STORAGE BUILDING CIRCUITS FROM PANEL LDP.
2. STUB CONDUIT UP INTO EXHAUST FAN CONDUIT CHASE. COORDINATE WORK WITH THE MECHANICAL CONTRACTOR PRIOR TO INSTALLATION.
3. 2#10, #10(G), 3/4" GRS CONDUIT. CONDUIT SHALL BE ROUTED THROUGH MASONRY WALL AND PROPERLY SUPPORTED TO UNDERSIDE OF CONCRETE ROOF DECK. ALL CONDUCTORS SHALL BE XHHW-2.
4. EXISTING LIGHTS, EXPLOSION PROOF SWITCH, AND ASSOCIATED CONDUIT SHALL REMAIN. EXISTING CIRCUIT SHALL BE REFED FROM PANEL LDP-17.



1 E-101 **POWER PLAN**
SCALE: 1/2"=1'-0"



NOTE:

PROVIDE FIRE ALARM CONTROL MODULE FOR SHUTDOWN OF EXHAUST FANS AND MOTOR-OPERATED DAMPERS SERVING CLASS 1, DIVISION 1 AREA. INTERLOCK SHALL BE FAIL-SAFE UTILIZING NORMALLY CLOSED CONTACTS THAT OPEN UPON C02 FIRE SUPPRESSION SYSTEM OR LOSS OF CONTROL POWER. POWER CONTACTS SHALL BE MOTOR-RATED, MINIMUM 1/2 HP AT 120VAC.

COORDINATE EXACT REQUIREMENTS WITH FIRE ALARM MANUFACTURER PRIOR TO ROUGH-IN.

2 E-101 **EF & DAMPER SHUTOFF DETAIL**
SCALE: NONE

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STATE OF MISSISSIPPI
4-2-2026

THE Johnson - Mc Adams FIRM P.A.
ARCHITECTS/ENGINEERS PLANNING SURVEYING MANAGEMENT
P.O. BOX 515, GREENWOOD, MISSISSIPPI - (662) 455-4543

NO.	DATE	BY	DESCRIPTION

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WYNDMOOR, PA

ENLARGED ELECTRICAL PLAN

A-E FIRM	USDA
PROJECT MANAGER C.R.	EPM XXX
DESIGNER B.T.D.	PPM XXX
CHECKED BY B.T.D.	SAFETY & HEALTH XXX
JOB # 3525	REAL PROPERTY XXX

PROJECT NO. 12305B21D0013
DATE 04/02/2026
AGRICULTURAL RESEARCH SERVICE
600 MERMAID LANE
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SHEET E-101
22 OF 22

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