RENOVATE ARMORY - WATERFORD

2650 WATKINS LAKE ROAD, WATERFORD TWP, MI 48328

MICHIGAN DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
PROJECT NO. 2690023043

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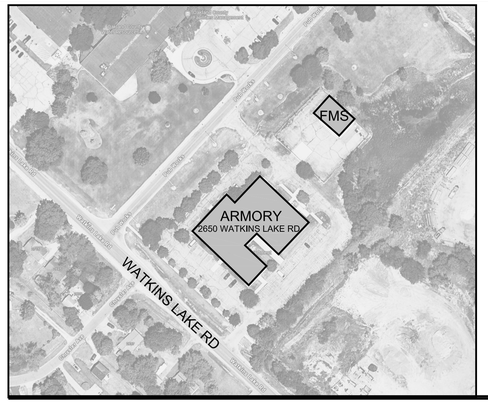
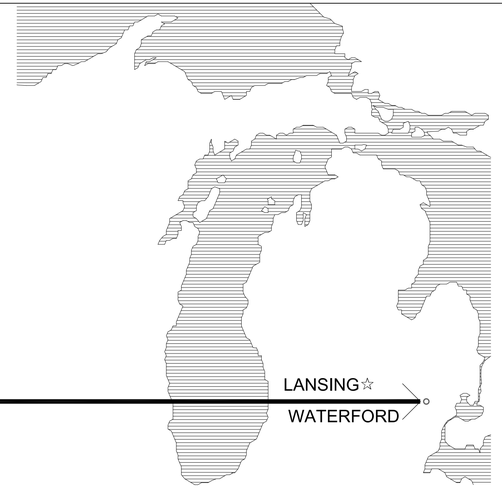


AERIAL PHOTO OF PROJECT



VICINITY MAP

GENERAL NOTES

1. BIDS FOR CONSTRUCTION OF ALL WORK SHOWN ON THE PLANS ARE SOLICITED ON A LUMP SUM BASIS. NO SEPARATE PAYMENT OR ADJUSTMENTS TO THE LUMP SUM BID WILL BE MADE UNLESS SPECIFICALLY INDICATED ON THE PLANS AND IN THE PROPOSAL OR WHEN ADDITIONAL WORK IS AUTHORIZED IN WRITING BY THE ENGINEER.

2. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND SHALL IMMEDIATELY NOTIFY THE DMVA ARCHITECT AND INSPECTOR OF ANY DEVIATION FROM THESE DRAWINGS.

3. THE CONTRACTOR AND HIS SUBCONTRACTORS AND/OR SUPPLIERS ARE RESPONSIBLE FOR VISITING THE SITE PRIOR TO BIDDING TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.

4. THE CONTRACTOR SHALL HAVE A KNOWLEDGEABLE REPRESENTATIVE ON SITE AT ALL TIMES DURING WORK UNDER THIS CONTRACT. THIS REPRESENTATIVE SHALL HAVE ON SITE, HIS OWN COPY OF THE CONTRACT SPECIFICATIONS, DRAWINGS AND DMVA APPROVED SHOP DRAWINGS.

5. PRIOR TO THE START OF CONSTRUCTION, CONTRACTOR TO VERIFY CONDITION OF EXISTING CONSTRUCTION. DOCUMENT ANY EXISTING CONDITION THAT COULD BE MISCONTRUED AS DAMAGED DURING NEW CONSTRUCTION. NOTIFY DMVA OF EXISTING CONDITIONS IN WRITING PRIOR TO THE COMMENCEMENT OF WORK.

6. WHERE NEW CONSTRUCTION ABUTS EXISTING CONSTRUCTION AND APPEARS TO ALIGN FLUSH WITH EXISTING CONSTRUCTION, THE NEW CONSTRUCTION SHALL ALIGN AND BE FLUSH WITH NO VISIBLE JOINT, UNLESS THE MATERIALS OR SUBSTRATES DIFFER; THEN AND EXPANSION JOINT SHALL BE INSTALLED.

7. DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS.

8. ALL WORK MUST COMPLY WITH THE DRAWINGS AND SPECIFICATIONS. ANY REVISIONS REQUIRED DUE TO FIELD CONDITIONS MUST BE REVIEWED AND APPROVED BY DMVA PROJECT DESIGNER AND DMVA INSPECTOR PRIOR TO CONSTRUCTION.

9. DISCREPANCIES FOUND BETWEEN THE SPECIFICATIONS AND THE DRAWINGS SHALL BE SUBMITTED TO DMVA IN THE FORM OF AN RFI FOR CLARIFICATION PRIOR TO ANY WORK INVOLVING THE DISCREPANCY.

CONTACT INFORMATION

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STATE OF MICHIGAN
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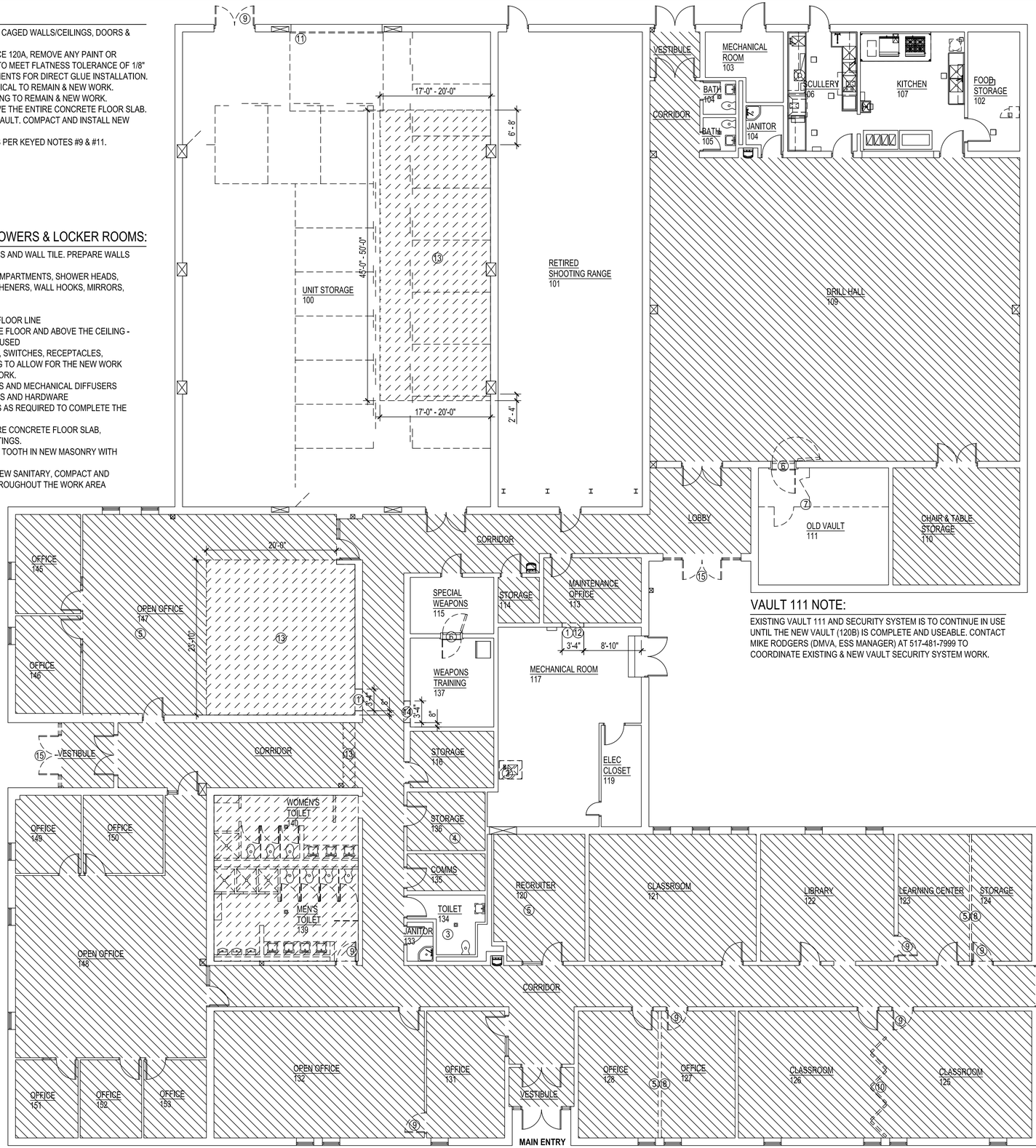
DEMOLITION NOTES AT UNIT STORAGE:

1. WITHIN THE UNIT STORAGE AREA DEMO ALL WELDED WIRE CAGED WALLS/CEILINGS, DOORS & RELATED HARDWARE/FASTENERS, TYPICAL.
2. AT THE FLOOR WITHIN THE WORK AREA OF THE NEW OFFICE 120A, REMOVE ANY PAINT OR ADHESIVE AND SMOOTH SLAB. PATCH SURFACE AS NEEDED TO MEET FLATNESS TOLERANCE OF 1/8" IN 10'-0". PREPARE PER CARPET MANUFACTURER'S REQUIREMENTS FOR DIRECT GLUE INSTALLATION.
3. SEE ELECTRICAL FOR EXTENT OF DEMO, EXISTING ELECTRICAL TO REMAIN & NEW WORK.
4. SEE MECHANICAL FOR EXTENT OF DEMOLITION, ANY DUCTING TO REMAIN & NEW WORK.
5. WITHIN THE NEW VAULT WORK AREA, SAWCUT AND REMOVE THE ENTIRE CONCRETE FLOOR SLAB.
6. EXCAVATE EXISTING SOILS AS NEEDED TO INSTALL NEW VAULT. COMPACT AND INSTALL NEW CONCRETE FOOTING, SLAB AND CONCRETE FLOOR.
7. REMOVE EXTERIOR DOUBLE DOORS & OVERHEAD DOOR AS PER KEYED NOTES #9 & #11.
8. EMPTY

DEMOLITION NOTES AT NEW/EXISTING SHOWERS & LOCKER ROOMS:

1. AT PERIMETER WALLS TO REMAIN, DEMO ANY FALSE WALLS AND WALL TILE. PREPARE WALLS FOR NEW WORK.
2. WITHIN THE WORK AREA, DEMO ALL EXISTING SHOWER COMPARTMENTS, SHOWER HEADS, SHOWER CONTROLS & VALVES, SOAP DISPENSERS, AIR FRESHENERS, WALL HOOKS, MIRRORS, AND ANY OTHER ITEMS ON THE WALLS
3. DEMO BENCHES AND LOCKERS
4. REMOVE EXISTING PLUMBING PIPING, ABOVE AND BELOW FLOOR LINE
4. REMOVE ALL PLUMBING SEWER PIPING BELOW / INSIDE THE FLOOR AND ABOVE THE CEILING - INCLUDING ANY VENT AND REVENT PIPING THAT WON'T BE REUSED
4. WITHIN THE WORK AREA, DEMO ALL ELECTRICAL LIGHTING, SWITCHES, RECEPTACLES, EMERGENCY LIGHTING FIXTURES, AND ALL CONDUIT & WIRING TO ALLOW FOR THE NEW WORK TO BE COMPLETED. SEE ELECTRICAL FOR EXTENT OF NEW WORK.
5. DEMO CEILING IN WORK AREAS INCLUDING ACCESS PANELS AND MECHANICAL DIFFUSERS
6. WITHIN THE WORK AREAS, DEMO INTERIOR DOORS, FRAMES AND HARDWARE
7. WITHIN THE WORK AREA DEMO CMU WALLS AND FOOTINGS AS REQUIRED TO COMPLETE THE WORK
8. WITHIN THE WORK AREA, SAWCUT AND REMOVE THE ENTIRE CONCRETE FLOOR SLAB, INCLUDING PARTITION FOOTINGS OR OLD/ABANDONDED FOOTINGS.
9. REMOVE MASONRY BLOCK AT NEW OPENINGS AS NEEDED. TOOTH IN NEW MASONRY WITH EXISTING AT NEW WALLS.
10. EXCAVATE EXISTING SOILS AS NEEDED TO INSTALL THE NEW SANITARY, COMPACT AND INSTALL NEW CONCRETE FOOTING, SLAB AND FLOOR TILE THROUGHOUT THE WORK AREA



1 AD1.0 WATERFORD ARMORY DEMOLITION FLOOR PLAN
SCALE: 1/8" = 1'-0"

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VAULT 111 NOTE:

EXISTING VAULT 111 AND SECURITY SYSTEM IS TO CONTINUE IN USE UNTIL THE NEW VAULT (120B) IS COMPLETE AND USEABLE. CONTACT MIKE RODGERS (DMVA, ESS MANAGER) AT 517-481-7999 TO COORDINATE EXISTING & NEW VAULT SECURITY SYSTEM WORK.

DEMOLITION NOTES SCULLERY, KITCHEN & FOOD STORAGE:

1. WITHIN THE SCULLERY, KITCHEN & FOOD STORAGE ROOMS THE CEILING IS TO BE ENTIRELY REMOVED. THE HOOD IN THE KITCHEN IS TO REMAIN BUT BOTH HOODS IN THE SCULLERY, ALL LIGHTING/LOW-VOLTAGE, AND MECHANICAL ARE TO BE DEMOLISHED. SEE ELECTRICAL AND MECHANICAL FOR ADD'L DEMO WORK INFO.
2. THE ICE MAKER IN FOOD STORAGE 102 IS TO BE DISCARDED. CONTRACTOR TO DEMO ELECTRICAL CIRCUIT AND ANY ASSOCIATED CONDUIT BACK TO THE PANEL. CONTRACTOR TO REMOVE & CAP PLUMBING CONNECTIONS IN A PROFESSIONAL MANNER LEAVING THE WALL MOUNTED FILTER & SHUT-OFF.
3. IN KITCHEN 107 THE POTATO PEELER, STAND & ASSOCIATED DISPOSAL ARE TO BE DISCARDED. CONTRACTOR TO DEMO RELATED ELECTRICAL CONNECTION/CIRCUITS BACK TO THE PANEL. CONTRACTOR TO REMOVE & CAP PLUMBING CONNECTIONS IN A PROFESSIONAL MANNER.
4. IN KITCHEN 107 THE FRYER IS TO DISCONNECTED AND DISCARDED. CONTRACTOR TO DISCONNECT/CAP NATURAL GAR SERVICE AND ANY ELECTRICAL CONNECTION IN A PROFESSIONAL MANNER.
5. IN SCULLERY 106 THE DISHWASHER AND RELATED BELOW COUNTER WATER HEATER ARE TO BE DISCONNECTED AND DISCARDED. CONTRACTOR TO REMOVE/CAP ELECTRICAL CIRCUIT BACK TO THE SUB-PANEL LOCATED BELOW/BEHIND THE UNIT. CONTRACTOR TO DEMO & CAP PLUMBING CONNECTIONS IN A PROFESSIONAL MANNER. THE S.S. COUNTER ON BOTH SIDES OF THE REMOVED D.W. ARE TO REMAIN.
6. SEE MECHANICAL AND ELECTRICAL DEMOLITION SHEETS FOR ADDITIONAL INFORMATION REGARDING THE EXTENT OF DEMOLITION WORK REQUIRED.

KEYED NOTES:

1. NEW OPENINGS IN EXISTING LOAD BEARING CMU WALLS. CONTRACTOR SHALL MAINTAIN THE STRUCTURAL INTEGRITY OF THE BUILDING AT ALL TIMES.SEE PLANS & DOOR SCHEDULE FOR ADDITIONAL INFORMATION.
2. DEMO CHIMNEY IN ITS ENTIRETY FROM FLOOR SURFACE AND UP THROUGH THE ROOF. LEVEL FINISHED SURFACE TO BE FLUSH WITH ADJACENT SLAB. INFILL ROOF OPENING & PREP FOR NEW ROOF
3. PREPARE BATHROOM 134 TO BECOME LACTATION 112 BY REMOVING THE TOILET & FLUSH VALVE, S.S. GRAB BARS, TOILET PAPER HOLDER & WALL-HUNG SINK. AT THE TOILET, CAP & PATCH HOLES IN A TIDY & PROFESSIONAL MANNER ASSUMING THE REUSE OF THE TILE FLOOR & WALLS. PREPARE SINK FOR NEW. PAPER TOWEL HOLDER, MIRROR AND SOAP DISPENSER TO REMAIN.
4. SPECIAL PRECAUTION IS TO BE TAKEN IN ADVANCE OF ANY DEMOLITION/CONSTRUCTION SO THE EXISTING ELECTRONIC/ELECTRICAL EQUIPMENT & MECHANICAL DUCTING IS PROTECTED FROM DUST.
5. SUSPENDED CEILING TO BE DEMOLISHED. SEE ELECTRICAL & MECHANICAL FOR ADD'L DEMO INFO. AT CEILING. PREPARE FOR NEW SUSPENDED CEILING.
6. DEMO VAULT DOORS AND THE DOOR FRAME. CONTRACTOR TO REMOVE OR CUT FLUSH ANY FASTENERS, PATCH ANY HOLES/SPALLING TO MATCH ADJACENT & PREPARE FOR NEW WORK
7. WITHIN THE OLD VAULT, DEMO ALL WELDED WIRE CAGED WALLS, DOORS & RELATED HARDWARE/FASTENERS, TYPICAL.
8. DEMO CMU WALL AND PREPARE FOR NEW WORK AS PER THESE DOCUMENTS.
9. DEMO DOOR AND PREPARE FOR NEW WORK AS PER THESE DOCUMENTS.
10. DEMO FOLDING PARTITION. PARTITION TRACK AT CEILING & SUSPENDED CEILING IS TO REMAIN.
11. DEMO OVERHEAD DOOR AND PREPARE FOR NEW WORK AS PER THESE DOCUMENTS.
12. REMOVE PLYWOOD AND 2X FRAMING AS REQUIRED TO INSTALL NEW DOOR IN EXISTING CMU WALL. PROTECT AND RETAIN PLYWOOD PANELING TO RIGHT OF NEW OPENING FOR REUSE. COORDINATE REMOVAL OF WALL-MOUNTED EQUIPMENT WITH MECHANICAL AND ELECTRICAL DEMOLITION DRAWINGS. PATCH AND REPAIR ADJACENT SURFACES TO MATCH EXISTING WHERE DISTURBED.
13. SAW CUT EXISTING CONCRETE SLAB TO PROVIDE STRAIGHT, CLEAN EDGES AT ALL AREAS OF SLAB REMOVAL. ALIGN CUTS WITH ROOM GEOMETRY OR CONTROL JOINTS WHERE POSSIBLE. CUTS SHALL BE SUITABLE FOR DIRECTLY ADJACENT FINISHES, INCLUDING EXPOSED AND POLISHED CONCRETE. AVOID IRREGULAR OR RAGGED EDGES.
14. NEW OPENINGS IN EXISTING 12" POURED CONCRETE VAULT WALL. DEMO CONTRACTOR SHOULD ASSUME REBAR. SEE PLANS & DOOR SCHEDULE FOR ADDITIONAL INFORMATION.
15. DEMO DOOR AND PREPARE FOR NEW WORK AS PER EXTERIOR ELEVATIONS FOUND AT A/A7.2.

SALVAGE NOTES:

1. DMVA & WATERFORD MAINTENANCE PERSONNEL WILL REMOVE LOOSE ITEMS THEY WISH TO KEEP IN ADVANCE OF THE CONTRACTOR BEING ONSITE. COORDINATE WITH DOUG SHILLING SPECIFIC ITEMS.
2. DMVA DOES NOT WANT ANY OF THE OTHER BUILDING MATERIALS BEING DEMOLISHED. THESE MATERIALS WILL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.
3. CONTRACTOR TO REMOVE AND HAND OVER TO DMVA ANY DESIRED BATHROOM ACCESSORIES: PAPER TOWEL DISPENSERS & HAND SOAP DISPENSERS.
4. REMOVE AND SALVAGE BUILDING SIGNAGE. HAND OVER TO DMVA

GENERAL NOTES:

1. ROOM NAMES & NUMBERS ON DEMOLITION PLANS ARE NOT THE PROPOSED NAMES & NUMBERS.
2. SEE ADDITIONAL DEMOLITION INFORMATION ON MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS.
3. CONTRACTOR TO VERIFY EXISTING CONDITIONS AND PROMPTLY NOTIFY DMVA OF ANY DISCREPANCIES
4. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL FOR ALL ITEMS TO BE REMOVED.
5. CONTRACTOR SHALL MAINTAIN THE STRUCTURAL INTEGRITY OF THE BUILDING AT ALL TIMES.
6. CONTRACTOR TO KEEP EXITS AND EGRESS PATH OF TRAVEL CLEAR OF DEBRIS AT ALL TIMES.
7. THROUGHOUT THE ARMORY, AND IN ADVANCE OF PAINTING, THE CONTRACTOR IS TO REMOVE ALL WALL ANCHORS & MISC. SCREWS, ETC. WALL SURFACES ARE TO BE SMOOTH SO FILL OPENINGS IN SURFACES TO MATCH ADJACENT IN PREPARATION OF PAINTING.
8. THE CONTRACTOR IS TO PROTECT THE UNAFFECTED AND OCCUPIED AREAS OF THE BUILDING FROM DUST; PARTICULARLY WHEN POLISHING CONCRETE. SEE SPECIFICATIONS FOR ADD'L INFORMATION.
9. FIELD VERIFY CONDITIONS AND EXTENTS OF FRAMING AND FINISHES TO BE REMOVED. NOTIFY ARCHITECT OF ANY CONFLICTS PRIOR TO DEMOLITION.

LEGEND:

APPROXIMATE AREA OF CONCRETE SLAB AND FOOTING TO BE REMOVED. VERIFY EXTENT OF REMOVAL WITH DMVA PRIOR TO REMOVAL AND AFTER REVIEWING 1/A2.0 & 1/A2.1, PLUMBING, ELEC., MECH. & DISCUSSIONS WITH DMVA.

AREA OF EXISTING FLOORING (CARPET & 12x12 TILE), RUBBER BASE AND ALL ASSOCIATED ADHESIVE / MASTIC TO BE REMOVED.

WALLS, FIXTURES AND/OR DOORS TO BE REMOVED. PREPARE FOR NEW WORK

(#) KEYED NOTE

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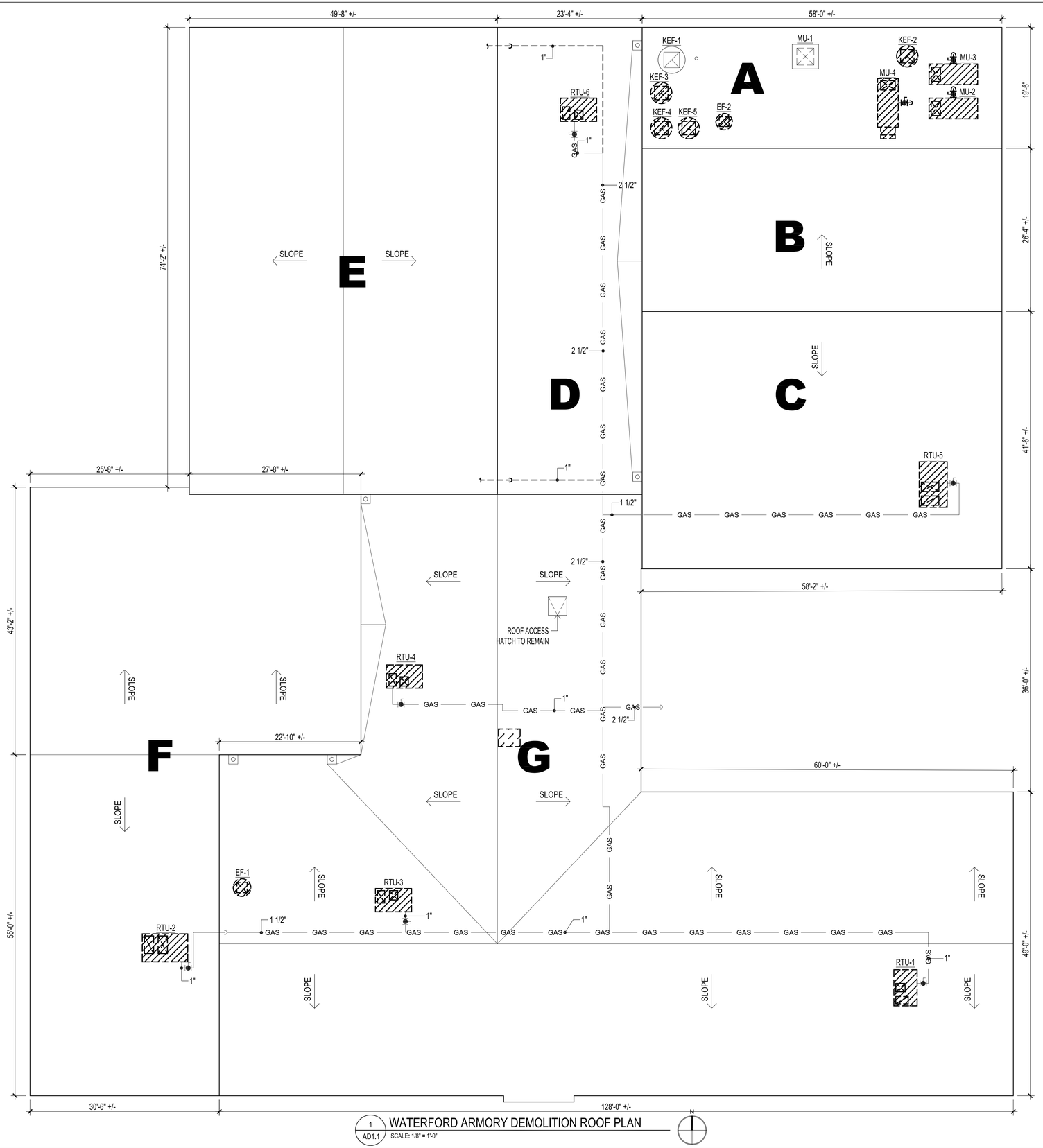
SHEET AD1.0



1 AD1.1 WATERFORD ARMORY DEMOLITION ROOF PLAN

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

ROOF PLAN DEMO NOTES:

ROOF A:

DEMOLISH BUILT UP ROOF MEMBRANE, 1-1/2" RIGID INSULATION, FASICA METAL, METAL GUTTERS, AND DOWN SPOUTS.

ROOF B:

DEMOLISH BUILT UP ROOF MEMBRANE, 3" RIGID INSULATION, STANDING SEAM METAL ROOF, FASICA METAL, METAL GUTTERS, AND DOWN SPOUTS.

ROOF C:

DEMOLISH BUILT UP ROOF MEMBRANE, 3" RIGID INSULATION, STANDING SEAM METAL ROOF, FASICA METAL, METAL GUTTERS, AND DOWN SPOUTS.

ROOF D:

DEMOLISH BUILT UP ROOF MEMBRANE, 1-1/2" RIGID INSULATION, FASICA METAL, METAL GUTTERS, AND DOWN SPOUTS.

ROOF E:

DEMOLISH BUILT UP ROOF MEMBRANE, 1-1/2" RIGID INSULATION, FASICA METAL, METAL GUTTERS, AND DOWN SPOUTS.

ROOF F:

DEMOLISH BUILT UP ROOF MEMBRANE, 3" RIGID INSULATION, FASICA METAL, METAL GUTTERS, AND DOWN SPOUTS.

ROOF G:

DEMOLISH BUILT UP ROOF MEMBRANE, 1-1/2" RIGID INSULATION, FASICA METAL, METAL GUTTERS, AND DOWN SPOUTS.

ROOF PLAN DEMO AREAS:

ROOF A ABOUT: 957 SQFT
ROOF B ABOUT: 1,528 SQFT
ROOF C ABOUT: 2,408 SQFT
ROOF D ABOUT: 1,758 SQFT
ROOF E ABOUT: 3,742 SQFT
ROOF F ABOUT: 3,948 SQFT
ROOF G ABOUT: 8,591 SQFT

ABOUT: 22,932 SQFT TOTAL

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SHEET AD1.1

ROOF PLAN DEMO NOTES:

ROOF A:

DEMOLISH BUILT UP ROOF MEMBRANE, 1-1/2" RIGID INSULATION, FASICA METAL, METAL GUTTERS, AND DOWN SPOUTS.

ROOF B:

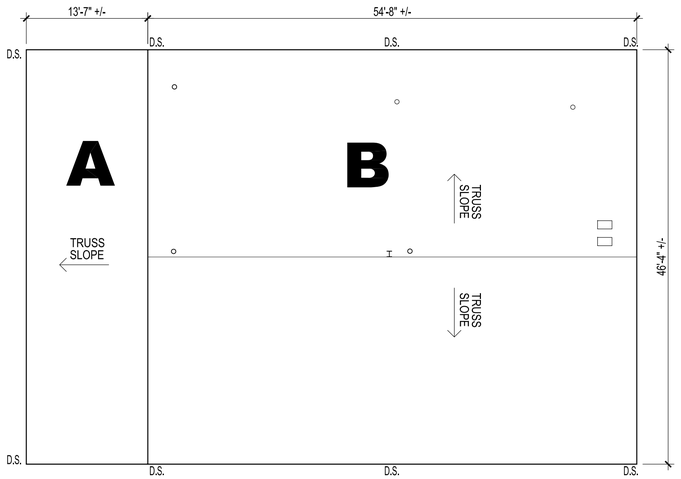
DEMOLISH BUILT UP ROOF MEMBRANE, 1-1/2" RIGID INSULATION, FASICA METAL, METAL GUTTERS, AND DOWN SPOUTS.

DEMOLITION OF ANY MECHANICAL EQUIPMENT REQUIRES DECK PATCHING, SEE SHEET M6.0 DETAIL

ROOF PLAN DEMO AREAS:

ROOF A ABOUT: 912 SQFT
ROOF B ABOUT: 2,533 SQFT

ABOUT: 3,445 SQFT TOTAL



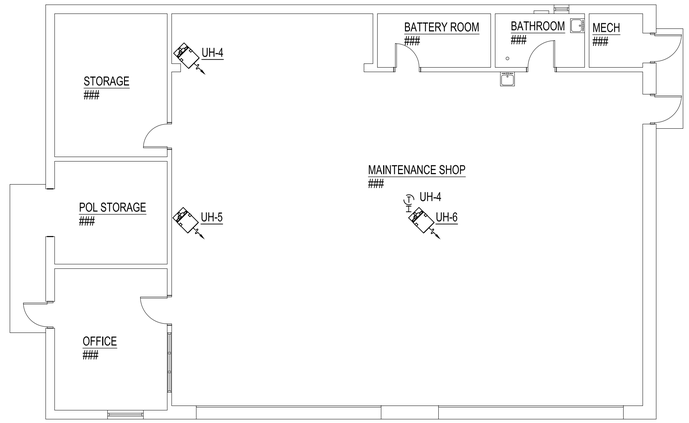
2 AD2.0 VEHICLE MAINTENANCE BUILDING DEMOLITION ROOF PLAN

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

N

VEHICLE MAINTENANCE BUILDING SALVAGE NOTES:

1. DMVA & WATERFORD MAINTENANCE PERSONNEL WILL REMOVE LOOSE ITEMS THEY WISH TO KEEP IN ADVANCE OF THE CONTRACTOR BEING ONSITE. COORDINATE WITH DOUG SHILLING SPECIFIC ITEMS.
2. DMVA DOES NOT WANT ANY OF THE OTHER BUILDING MATERIALS BEING DEMOLISHED. THESE MATERIALS WILL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.



1 AD2.0 VEHICLE MAINTENANCE BUILDING DEMOLITION PLAN

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

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LEGEND:

AREA OF DEMO WORK

EXISTING WALLS & FOOTINGS TO BE DEMOLISHED

GENERAL NOTES:

1. ROOM NAMES & NUMBERS ON DEMOLITION PLANS ARE NOT THE PROPOSED NAMES & NUMBERS.
2. SEE ADDITIONAL DEMOLITION INFORMATION ON MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS.
3. CONTRACTOR TO VERIFY EXISTING CONDITIONS AND PROMPTLY NOTIFY DMVA OF ANY DISCREPANCIES
4. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL FOR ALL ITEMS TO BE REMOVED.
5. CONTRACTOR SHALL MAINTAIN THE STRUCTURAL INTEGRITY OF THE BUILDING AT ALL TIMES.
6. CONTRACTOR TO KEEP EXITS AND EGRESS PATH OF TRAVEL CLEAR OF DEBRIS AT ALL TIMES.
7. THROUGHOUT THE ARMORY, AND IN ADVANCE OF PAINTING, THE CONTRACTOR IS TO REMOVE ALL WALL ANCHORS & MISC. SCREWS, ETC. WALL SURFACES ARE TO BE SMOOTH SO FILL OPENINGS IN SURFACES TO MATCH ADJACENT IN PREPARATION OF PAINTING.
8. THE CONTRACTOR IS TO PROTECT THE UNAFFECTED AND OCCUPIED AREAS OF THE BUILDING FROM DUST. SEE SPECIFICATIONS FOR ADD'L INFORMATION.
9. FIELD VERIFY CONDITIONS AND EXTENTS OF FINISHES TO BE REMOVED. NOTIFY ARCHITECT OF ANY CONFLICTS PRIOR TO DEMOLITION.

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SHEET AD2.0

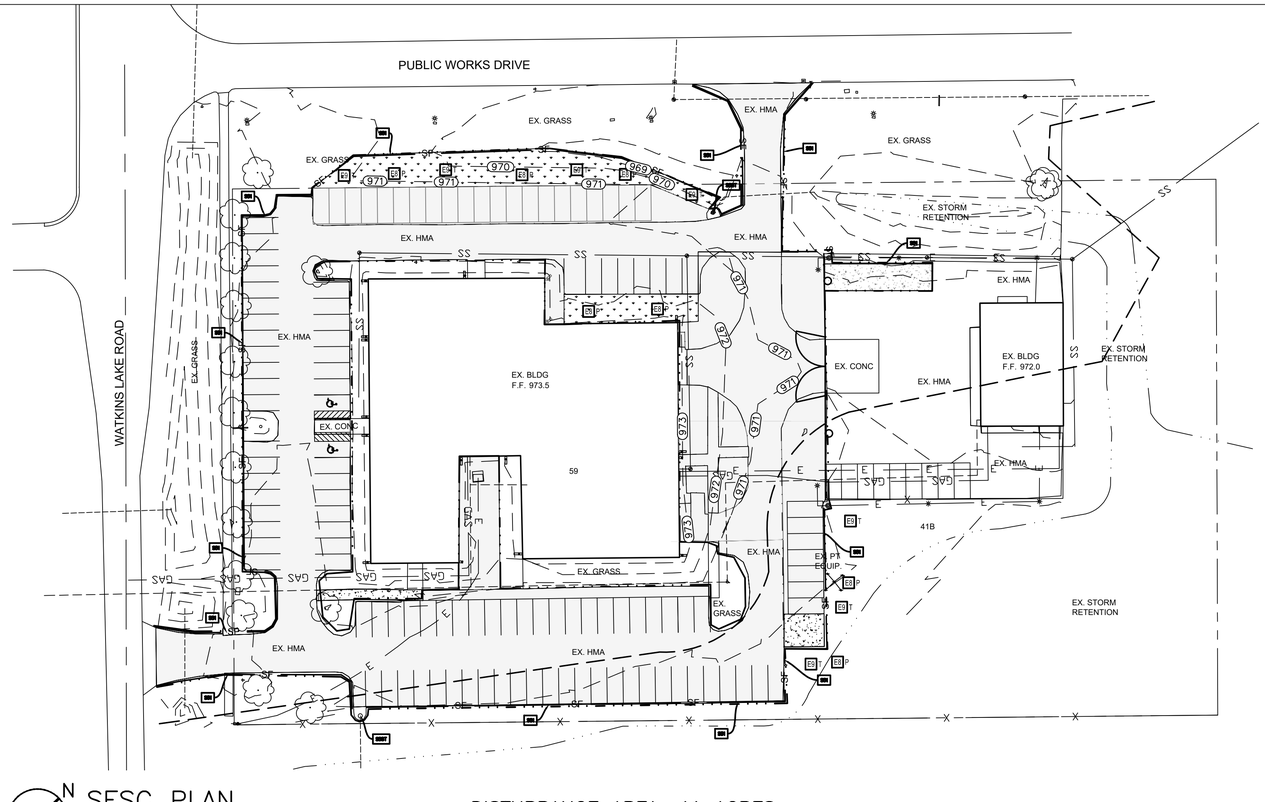
SESC NOTES

1. PURSUANT TO PART 91 OF 1994 PA 451, SOIL EROSION AND SEDIMENTATION CONTROL (SESC), AS AMENDED, THE DMVA HAS ESTABLISHED SESC PROCEDURES TO PROVIDE "EFFECTIVE SOIL EROSION AND SEDIMENTATION CONTROL, INSPECTION, ENFORCEMENT AND SEDIMENT POLLUTION ABATEMENT OR PREVENTION". AS AN AUTHORIZED PUBLIC AGENCY (APA), THE DMVA IS RESPONSIBLE FOR CONTROLLING EROSION AND OFFSITE SEDIMENTATION ON ALL DMVA CONSTRUCTION PROJECTS, AND FROM APPLICABLE MILITARY CONSTRUCTION TRAINING ACTIVITIES AT DMVA FACILITIES. THIS RESPONSIBILITY CANNOT BE TRANSFERRED TO THE DESIGNER OR CONTRACTOR. HOWEVER, THEIR CONTRACTS (AND AGREEMENTS WITH OTHER MILITARY ENTITIES) CAN INCLUDE PENALTIES FOR NON-COMPLIANCE WITH SESC PROVISIONS THAT ARE INCLUDED IN THE CONTRACT DOCUMENTS. TO ASSIST DMVA'S CONSTRUCTION & FACILITIES MANAGEMENT OFFICE (CFMO) WITH ENSURING COMPLIANCE WITH PART 91 OF 1994 PA 451, A SESC PROGRAM HAS BEEN ESTABLISHED. THE SESC PROGRAM INCORPORATES DMVA STAFF AND THE PROCEDURES IN THIS GUIDEBOOK FOR THE CONTROL OF EROSION AND SEDIMENTATION. THE SESC PROGRAM FUNCTIONS INDEPENDENT OF THE CONSTRUCTION INSPECTION SERVICES BEING PROVIDED BY THE CFMO."
2. THE DMVA, AS APA, CAN ISSUE UP TO $500 PER DAY PLUS ASSESSMENT OF ACTUAL DAMAGE COSTS FOR FAILURE TO IMPLEMENT THE SESC DESIGN AND CONSTRUCTION CONTRACTOR PREPARED AND APPROVED SESC IMPLEMENTATION PLAN. THE FINES AND FEES ARE FOR WHEN A CONTRACTOR REFUSES TO COMPLY WITH SESC REQUIREMENTS AND CORRECTIVE MEASURES CONTAINED IN THE CONSTRUCTION CONTRACT. FOR BONDED PROJECTS, THE SURETY COMPANY SHALL BE HELD RESPONSIBLE FOR THESE COSTS IN THE EVENT THE CONTRACTOR REFUSES TO PERFORM OR IS FOUND IN DEFAULT.
3. CONTRACTORS SHALL ENSURE THEIR BID INCLUDES 1) CONSTRUCTION SEQUENCING FOR SESC, 2) INSTALLATION, MAINTENANCE, AND REMOVAL OF TEMPORARY SESC CONTROL MEASURES AND 3) INSTALLATION AND MAINTENANCE OF PERMANENT SESC CONTROL MEASURES IF APPLICABLE.
4. THE CONTRACTOR SHALL REVIEW THE SESC MEASURES IN ORDER TO PREPARE AND ISSUE FOR APPROVAL AN "SESC IMPLEMENTATION PLAN", WHICH INDICATES THE CONTRACTOR'S INTENDED IMPLEMENTATION OF THE SESC PLAN FOR THE PROJECT, INCLUDING A SCHEDULE.
5. THE CONTRACTOR SHALL INSTALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES PRIOR TO OR UPON COMMENCEMENT TO EARTHWORK ACTIVITIES.
6. THE CONTRACTOR WILL PERFORM SWEEPING AS NEEDED TO REMOVE ANY SEDIMENT TRACKED OFF SITE. FREQUENCY OF SWEEPING WILL BE BASED ON SITE CONDITIONS.
7. THE CONTRACTOR WILL PERFORM DUST CONTROL AS NEEDED BASED ON SITE CONDITIONS.
8. DISTURBED AREAS THAT WILL REMAIN IDLE DURING CONSTRUCTION MUST BE TEMPORARILY STABILIZED, INCLUDING SOIL STOCKPILES,
9. THE CONTRACTOR SHALL MAINTAIN AND INSPECT SESC MEASURES THROUGHOUT THE COURSE OF THE PROJECT. AT A MINIMUM, THE CONTRACTOR SHALL INSPECT AND MAINTAIN SESC MEASURES ONCE A WEEK AND AFTER RAIN EVENTS.
10. THE CONTRACTOR SHALL CORRECT NON-CONFORMING SESC MEASURES WITHIN 24 HOURS, IF WATERS OF THE STATE ARE BEING IMPACTED OR WITHIN 48 HOURS FOR ROUTINE MAINTENANCE ITEMS. OTHER SESC MAINTENANCE SHALL BE COMPLETED AS SOON AS POSSIBLE BUT NEVER MORE THAN FIVE (5) DAYS AFTER DETECTION.
11. THE CONTRACTOR SHALL COMPLETE PERMANENT SOIL EROSION CONTROL MEASURES FOR ANY DISTURBED LAND AREA WITHIN 5 CALENDAR DAYS AFTER FINAL GRADING OR THE FINAL EARTH CHANGE HAS BEEN COMPLETED. THE CONTRACTOR SHALL MAINTAIN TEMPORARY CONTROL MEASURES UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IN PLACE AND THE AREA IS STABILIZED.
12. THE CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER PERMANENT SOIL EROSION MEASURES ARE IN PLACE AND THE AREA IS STABILIZED.
13. CONTRACTOR AND ENGINEER SHALL DISCUSS APPROPRIATE CONSTRUCTION ACCESS ROUTES DURING PRE-CONSTRUCTION MEETING. CONTRACTOR & ENGINEER SHALL MARK UP CONSTRUCTION PLAN AND AGREE TO CONSTRUCTION ACCESS ROUTES FOR ALL MATERIALS AND EQUIPMENT. CONTRACTOR SHALL NOTIFY ENGINEER PRIOR TO ANY DEVIATION FROM ROUTES.

LEGEND

- GRADING LIMITS
- SILT FENCE
- 100 EXISTING CONTOUR
- PROPOSED GRASS AREAS
- PROPOSED HMA PAVEMENT
- PROPOSED RIPRAP

811 KNOW WHAT'S BELOW. CALL BEFORE YOU DIG.



N

SESC PLAN

1" = 40'

SOIL TYPES ARE ACCORDING TO THE USDA SOIL SURVEY WEB SITE.

41B – Aquents, sandy, loamy, undulating.
59 – Urban land.

SOIL TYPE LIMIT

OWNED BY OAKLAND COUNTY. 20 YEAR LEASE. COUNTY HAS LAND DESCRIPTION

DISTURBANCE AREA .41 ACRES

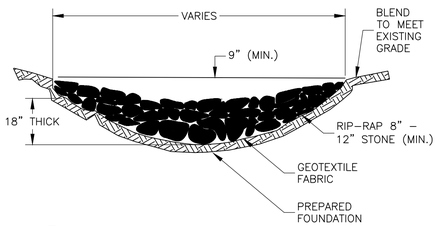
SOIL EROSION & SEDIMENTATION CONTROL OPERATION TIME SCHEDULE FOR CONSTRUCTION PHASE 1

CONSTRUCTION SEQUENCE	OCT (2025)	NOV	DEC	JAN (2026)	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
TEMPORARY EROSION CONTROL MEASURES	■											
TEMP. CONSTRUCTION ROADS	■											
STRIP & STOCKPILE TOPSOIL		■										
ROUGH GRADE SEDIMENT CONTROL							■	■				
STORM DRAINAGE REQUIREMENTS								■				
FINISH GRADING									■			
PERMANENT EROSION CONTROL MEASURES										■		

KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED	QUANTITY
EROSION CONTROLS				
E8	PERMANENT SEEDING		Stabilization method utilized on sites where earth change has been completed (final grading attained). See specifications for requirements.	665 SYD
E9	MULCH BLANKETS		On exposed slopes, newly seeded areas, new ditch bottoms, or areas subject to erosion.	390 SYD
E12	RIPRAP		Use along shorelines, waterways, or where concentrated flows occur. Slows velocity, reduces sediment load, and reduces erosion.	NA
SEDIMENT CONTROLS				
S51	SILT FENCE		Use adjacent to critical areas, to prevent sediment laden sheet flow from entering these areas.	1366'
S58	INLET PROTECTION FABRIC DROP		Use at stormwater inlets, especially at construction sites.	2

E6T "T" NOTES TEMPORARY EROSION CONTROL MEASURE

E8P "P" NOTES PERMANENT EROSION CONTROL MEASURE



E12 RIPRAP DETAIL

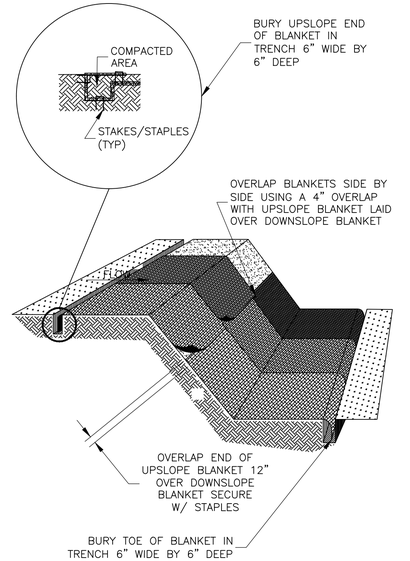
NOT TO SCALE

RIPRAP NOTES

1. RIPRAP MIXTURE SHALL BE AN EVEN MIXTURE OF STONE SIZES BASED ON THE AVERAGE, OR D_{50}. THIS MEANS 50% OF THE STONE, BY SIZE, WILL BE LARGER THAN THE DIAMETER SPECIFIED, AND 50% WILL BE SMALLER THAN THE SIZE SPECIFIED. THE DIAMETER OF THE LARGEST STONE SHOULD NOT BE MORE THAN 1.5 TIMES THE D_{50} STONE SIZE. THE D_{50} SIZE SHALL BE 13 INCHES AS SHOWN BELOW.
2. ROCK SHALL BE PLACED SO THAT LARGER ROCKS ARE UNIFORMLY DISTRIBUTED AND IN CONTACT WITH ONE ANOTHER. SMALLER ROCKS SHOULD FILL THE VOIDS.
3. THE AREA UNDER REVIEW FOR RIPRAP PLACEMENT MUST BE SHAPED AND CONTOURED APPROPRIATELY BY GRADING PRIOR TO MATERIAL PLACEMENT.
4. NON-WOVEN GEOTEXTILE FABRIC SHALL BE INSTALLED PRIOR TO RIPRAP PLACEMENT, WITH UPPER END AND TOE END OF FABRIC BURIED OR ANCHORED TO PREVENT MOVEMENT.
5. RIPRAP PLACEMENT SHALL BE STARTED AT A STABILIZED LOCATION AND ENDED AT A STABILIZED OR CONTOURED POINT.
6. MATERIAL SELECTED FOR RIPRAP SHALL BE HARD, ANGULAR, AND RESISTANT TO WEATHERING.

SIZE OF TYPICAL RIPRAP STONES

WEIGHT (LBS)	AVERAGE DIAMETER D50 (IN)	TYPICAL SHAPE LENGTH(IN)	WIDTH(IN)
100	13	21	7

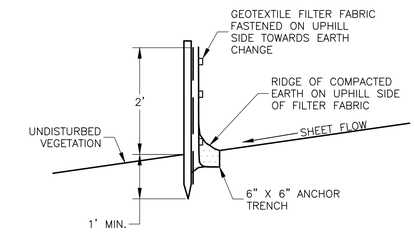


E9 MULCH BLANKET

NOT TO SCALE

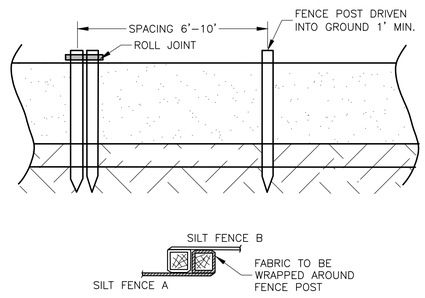
MULCH BLANKET NOTES

1. PREPARE SUBGRADE TO PROPER GRADE AND COMPACTION REQUIREMENTS.
2. REMOVE RUTS, ROOTS, SOIL CLODS, OR OTHER DEBRIS FROM SURFACE SUBJECT TO MULCH BLANKET INSTALLATION.
3. SPREAD SEED.
4. PLACE MULCH BLANKET PARALLEL TO FLOW AND ANCHOR SECURELY.
5. WHEN BLANKETS ARE USED IN FLOWING DITCH, BLANKETS SHOULD NOT OVERLAP IN DITCH CENTER PARALLEL TO FLOW.
6. STAPLES INSTALLED/SECURED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
7. INSTALL BLANKET AT TOP OF SLOPE, FIRST ANCHORING TOE IN TRENCH 6" WIDE X 6" DEEP, PROGRESSING DOWN-SLOPE OR DOWN-GRADIENT WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH.
8. APPLY SEED TO COMPACTED SOIL AND FOLD THE 12" PORTION OF THE BLANKET OVER COMPACTED AREA AND SECURE WITH A ROW OF STAPLES/STAKES PLACED 12" APART ACROSS THE WIDTH OF THE BLANKET.
9. UNROLL THE BLANKETS DOWN OR HORIZONTALLY ACROSS THE SLOPE.
10. OVERLAP BLANKET EDGES BY A MINIMUM OF 4" AND BLANKET ENDS BY A MINIMUM OF 12". OVERLAPS SHOULD BE IN THE DIRECTION OF EXPECTED FLOW WITH THE UP-SLOPE BLANKET PLACED OVER THE DOWN-SLOPE BLANKET EDGE.
11. SECURE DOWN-SLOPE END OF BLANKET WITH STAPLES/STAKES AND TRENCH IN.
12. CHECK AFTER A RAIN EVENT TO ENSURE THE BLANKET IS STILL IN PLACE.
13. KEEP ERODED SOIL, VEHICULAR AND PEDESTRIAN TRAFFIC, AND CONCENTRATED RUNOFF AWAY FROM THE BLANKETED AREA.



S51 SILT FENCE

NOT TO SCALE



ROLL JOINTS

SILT FENCE NOTES

1. INSTALL PARALLEL TO A CONTOUR.
2. SILT FENCE SHALL BE MADE OF WOVEN GEOTEXTILE FABRIC.
3. DIG A 6" TRENCH ALONG THE AREA WHERE THE FENCE IS TO BE INSTALLED.
4. PLACE 6" OF THE SILT FENCE BOTTOM FLAP INTO THE TRENCH.
5. BACKFILL THE TRENCH WITH SOIL AND COMPACT THE SOIL ON BOTH SIDES. CREATE A SMALL RIDGE ON THE UP-SLOPE SIDE OF THE FENCE.
6. INSTALL WOODEN STAKES 6 – 10' APART AND DRIVE INTO THE GROUND A MINIMUM OF 12".
7. STAPLE THE GEOTEXTILE FABRIC TO THE WOODEN STAKES.
8. JOIN SECTIONS OF SILT FENCE BY WRAPPING ENDS TOGETHER (SEE DRAWING).
9. INSPECT FREQUENTLY AND IMMEDIATELY AFTER EACH STORM EVENT. CHECK SEVERAL TIMES DURING PROLONGED STORM EVENTS. IF NECESSARY, REPAIR IMMEDIATELY.
10. IF THE SEDIMENT HAS REACHED 1/3 THE HEIGHT OF THE FENCE, THE SOIL SHALL BE REMOVED AND DISPOSED OF IN A STABLE UPLAND SITE.
11. THE FENCE SHALL BE RE-INSTALLED IF WATER IS SEEPINGUNDERNEATH IT OR IF THE FENCE HAS BECOME INEFFECTIVE.
12. SILT FENCE SHALL BE REMOVED ONCE VEGETATION IS ESTABLISHED AND UP-SLOPE AREA HAS STABILIZED.

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DESIGN AND CONSTRUCTION DIVISION
ADAM LACH, RA, DIRECTOR

RENOVATE ARMORY - WATERFORD

DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
2650 WATKINS LAKE RD., WATERFORD TWP, MI 48328

DESIGNED	KMM
DRAWN	KMM
CHECKED	BAB
APPROVED	
DATE	23 JAN 2025
ISSUED FOR	PRELIMINARY ■ CONSTRUCTION □ FINAL RECORD □
IDENTIFICATION NO.	PROJECT 2690023043 INDEX CODE
SHEET	SESC PLAN C1

PUBLIC WORKS DRIVE

WATKINS LAKE ROAD

EX. GRASS

EX. HMA

EX. CONC

EX. BLDG
F.F. 973.5

EX. BLDG
F.F. 972.0

EX. STORM
RETENTION

EX.
GRASS

EX. PT
EQUIP.

REMOVE TREE, TYP.

REMOVE SIGN

REMOVE PARKING
BLOCKS, TYP.

REMOVE LIGHT POLE

REMOVE FENCE AND
GATE ON THIS SIDE
ONLY

S51

S58T

E8 P

E9 T

DEMO PLAN

1" = 20'

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

LEGEND

- EXISTING FENCE
- PROPERTY LINE
- STORM DETENTION AREA
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND GAS LINE
- UNDERGROUND WATER LINE
- UNDERGROUND SANITARY SEWER
- UNDERGROUND STORM SEWER
- DEMOLISH AND DISPOSE OF ITEM
- GRADING LIMITS
- SILT FENCE, 1366' TOTAL
- EXISTING CONTOUR
- REMOVE CHAIN LINK FENCE, 138' TOTAL
- EXISTING SIGN
- EXISTING LIGHT
- CLEAR AND GRUB, REMOVE TOPSOIL, STOCKPILE. GRADE FOR NEW PAVEMENT CROSS SECTION – 1940 SY
- MILL AND PULVERIZE ENTIRE DEPTH OF ASPHALT INCLUDING CURB, USE FOR FILL IF NEEDED AND REGRADE OF NEW LOT – 4913 SY TOTAL
- DEMOLISH AND REMOVE CONCRETE – 145 SY TOTAL

* SOME AREAS HAVE MULTIPLE AREA TYPES FOR WORK

NOTE:
REMOVE 25 CONCRETE JERSEY BARRIERS LOCATED THROUGHOUT THE SITE.

811
KNOW WHAT'S BELOW.
CALL BEFORE YOU DIG.

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SHEET: DEMO PLAN
C2

PUBLIC WORKS DRIVE

WATKINS LAKE ROAD

489 SY OF NEW ASPHALT PAVEMENT
F C5

EX. GRASS

EX. HMA

CLEAN OUT STRUCTURE AND PIPE, REPAIR AS NEEDED, TYP.

PROVIDE A ROLLED 6" X 6" ASPHALT CURB ALONG ENTIRE LENGTH, TYP.

NEW POV PARKING 21 SPOTS

NEW 22' WIDE SLIDING VEHICLE GATE
B C6

PROVIDE AND INSTALL NEW END FENCE POST TO TIE EXISTING FENCE AND TO NEW FENCE

EX. STORM RETENTION

NEW LOADING RAMP
A C5

NEW MOVEABLE LOADING RAMP

POV PARKING 8 SPOTS

REPLACE EXISTING ROLLED 6" X 6" ASPHALT CURBS , TYP.

A C6
NEW 120 LF OF 6' CHAIN LINK FENCE WITH ANTI-CLIMB

MILITARY PARKING

POV PARKING 26 SPOTS

POV PARKING 16 SPOTS

NEW BARRIER FREE SIGN, 2 TOTAL
B C5

F C5
41 SY OF NEW ASPHALT PAVEMENT

EX. BLDG
F.F. 973.5

EX. CONC

NEW 170 LF OF 6' CHAIN LINK FENCE WITH ANTI-CLIMB
A C6

EX. BLDG
F.F. 972.0

EX. STORM RETENTION

POV PARKING 92 SPOTS EXISTING
POV PARKING 37 SPOTS NEW
POV PARKING 129 SPOTS TOTAL

186 SY OF NEW ASPHALT PAVEMENT
F C5

NEW 22' WIDE SLIDING VEHICLE GATE
B C6

CONCRETE SPLASH BLOCK, 15 TOTAL
D C5

NEW POV PARKING 6 SPOTS

931 SY OF NEW ASPHALT PAVEMENT, TYP. THROUGHOUT AREA
F C5

REPLACE EXISTING ROLLED 6" X 6" ASPHALT CURBS , TYP.

39 SY 4" CONCRETE SIDEWALK
E C5

EX. PT EQUIP.

NEW POV PARKING 7 SPOTS

46 SY OF NEW 8" CONCRETE SLAB
C C6

NEW 42 LF OF 6' CHAIN LINK FENCE
A C6

NEW DUMPSTER

PROVIDE AND INSTALL NEW 6' CHAIN LINK FENCING WITHOUT BARBED WIRE, WITH PRIVACY STRIPS

4,913 SY OF ASPHALT PAVEMENT REPAVING
G C5

POV PARKING 22 SPOTS

CLEAN OUT STRUCTURE AND PIPE, REPAIR AS NEEDED, TYP.

N

SITE PLAN

1" = 20'

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

LEGEND

- PROPOSED GRASS AREAS, 665 SY TOTAL
- PROPOSED HMA PAVEMENT, 6550 SY TOTAL
- PROPOSED CONCRETE, 245 SY TOTAL
- PROPOSED FENCE, 332 LF TOTAL
- EXISTING FENCE
- PROPERTY LINE
- STORM DETENTION AREA
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND GAS LINE
- UNDERGROUND WATER LINE
- UNDERGROUND SANITARY SEWER
- UNDERGROUND STORM SEWER
- PROPOSED SIGN, 2 TOTAL
- PROPOSED EXT. LIGHT WITH POLE, 2 TOTAL
- CONTROL POINT
- DETAIL # 1/5 DETAIL CALLOUT SHEET SHOWN

811
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SHEET
SITE PLAN
C3

PUBLIC WORKS DRIVE

WATKINS LAKE ROAD

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EX. GRASS

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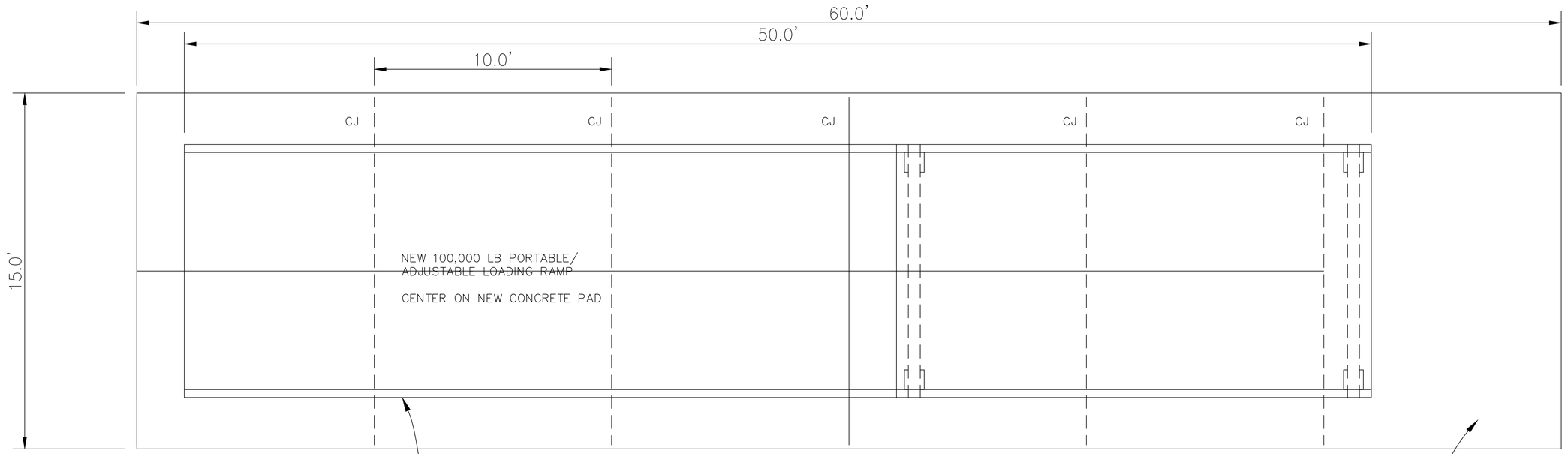
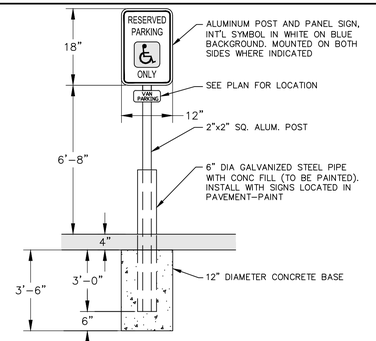


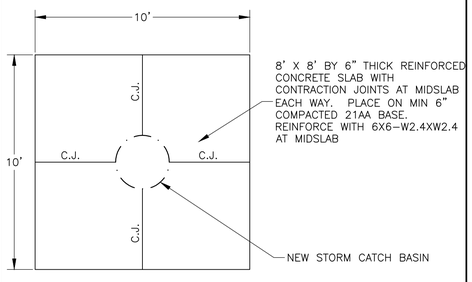
A LOADING RAMP LAYOUT

NOT TO SCALE



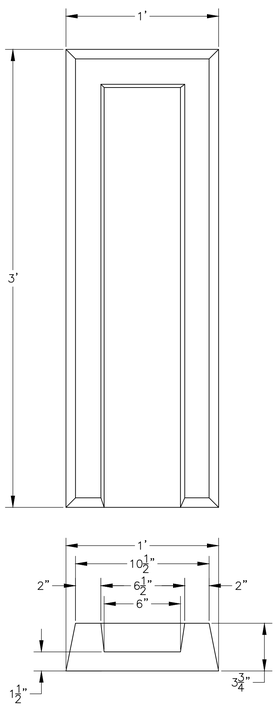
B BARRIER FREE PARKING

N.T.S.



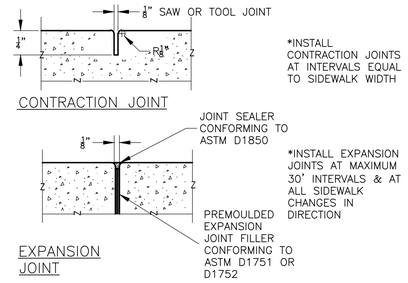
C CATCH BASIN SLAB

NOT TO SCALE



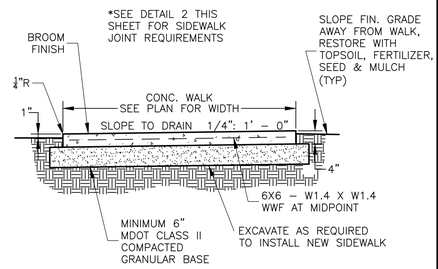
D CONCRETE SPLASH BLOCK

NOT TO SCALE



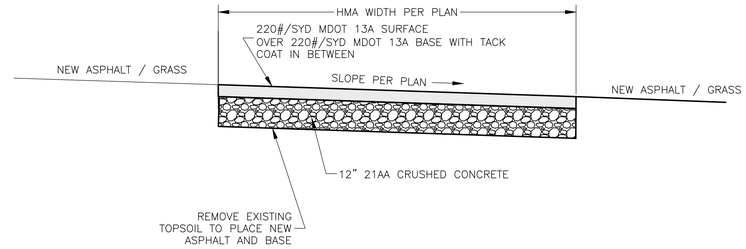
2 CONC. SIDEWALK JOINTS

NOT TO SCALE



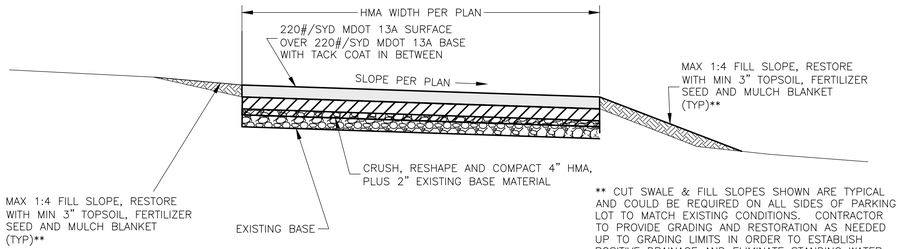
E CONCRETE SIDEWALK

NOT TO SCALE



F PARKING LOT NEW

N.T.S.



G PARKING LOT REPAVING

N.T.S.

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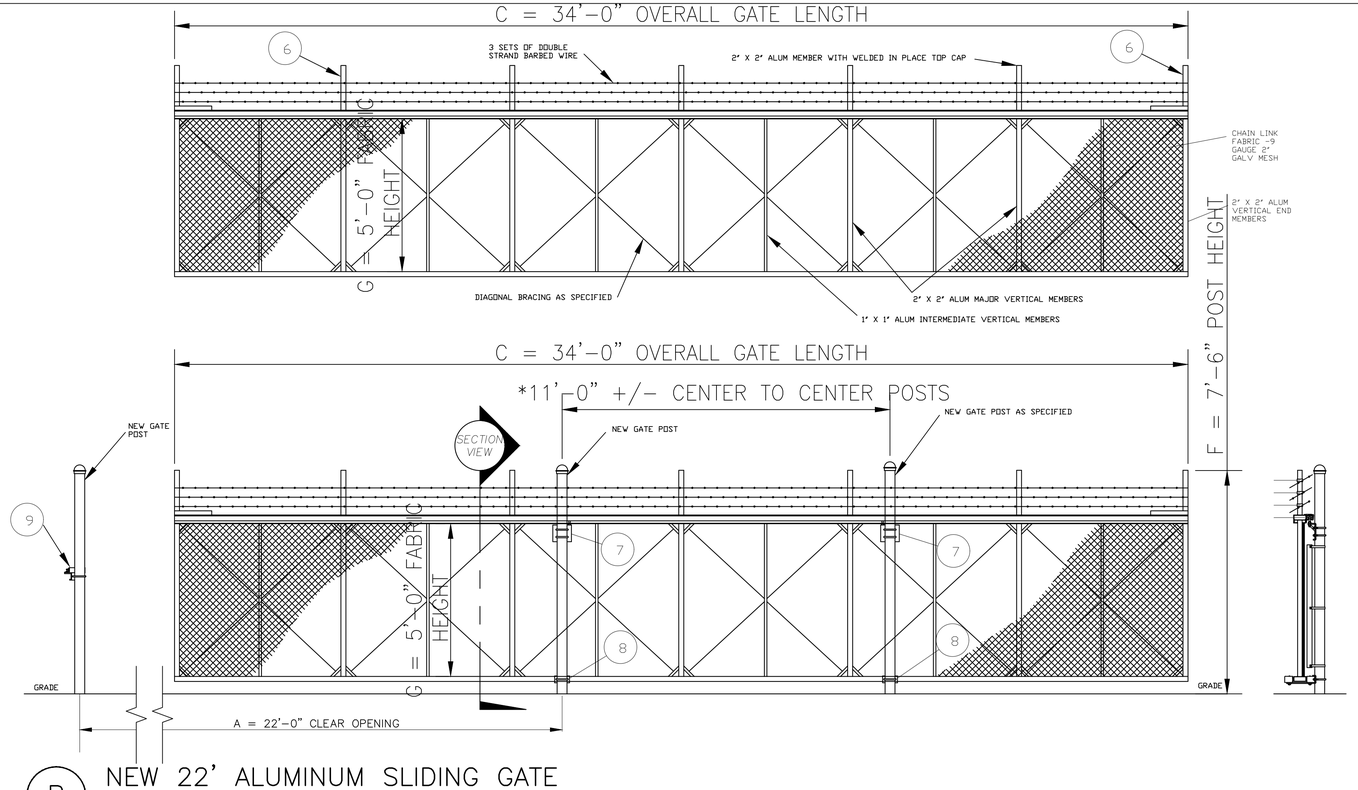
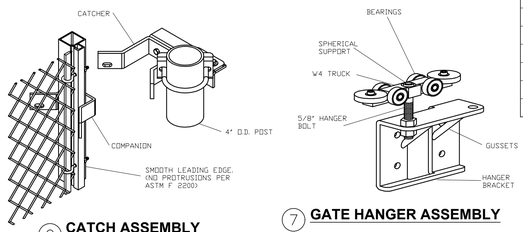


B NEW 22' ALUMINUM SLIDING GATE

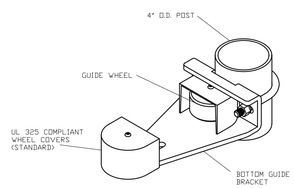
NOT TO SCALE

GATE CRITICAL DIMENSION CHART			
MARK	DESCRIPTION	FORMULA	DIM.
A	CLEAR OPENING	A	22'-0"
*B	COUNTERBALANCE POST SPACING C/C	(A/2)-11"	-
C	OVERALL GATE LENGTH	A x 1.5	34'-0"
*D	COUNTERBALANCE LENGTH	A x 0.5	-
E	NOMINAL GATE HEIGHT	E	6'-0"
F	POST HEIGHT (W BARB ARMS)	E + 1'-6"	7'-6"
G	FABRIC HEIGHT	E - 1'-0"	5'-0"

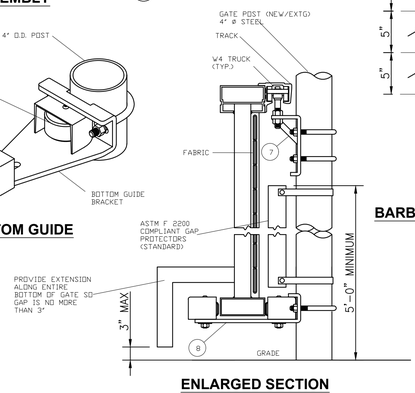


9 **CATCH ASSEMBLY**

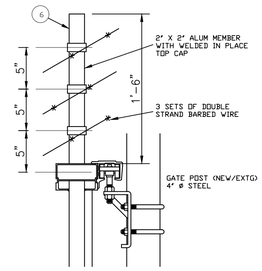
7 **GATE HANGER ASSEMBLY**



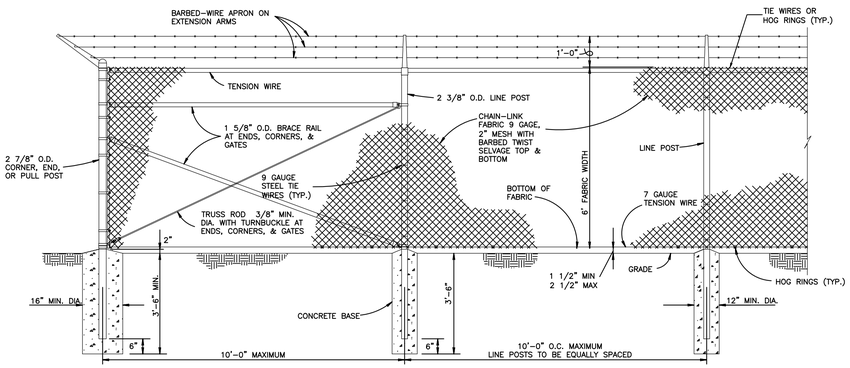
8 **BOTTOM GUIDE**



ENLARGED SECTION



BARB ARM & ANTI-CLIMB

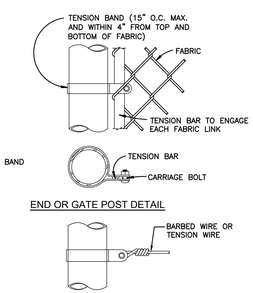


A 6' SECURITY FENCE DETAIL

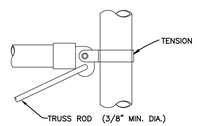
NOT TO SCALE

** THE CONTRACTOR SHALL INSTALL GSA PERIMETER SIGNS PROVIDED BY DMVA FOR ALL NEW FENCING AND GATES. THE CONTRACTOR SHALL INSTALL SIGNS ON THE SECURE SIDE OF THE FENCING WITH NOMENCLATURE SHOWN TO THE ROAD SIDE OF THE FENCING. THE SIGNS SHALL BE POSTED AT INTERVALS OF NO MORE THAN 100 FEET AND ON ALL NEW GATES. FASTEN WITH HOG RINGS ON 4 CORNERS.

GSA SAFETY SIGN
NONREFLECTORIZED SIGN INCLUDES A RED, WHITE AND BLUE SHIELD ON A CREAM BACKGROUND
GSA NUMBER 9905-00-559-2971



TRUSS ROD AND BAND



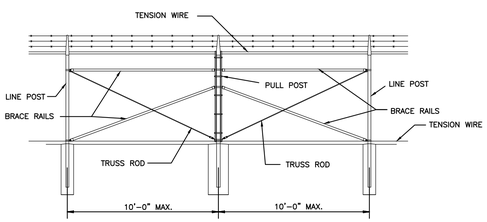
ROUND POST

BRACE RAIL CLAMP DETAILS

END OR GATE POST DETAIL

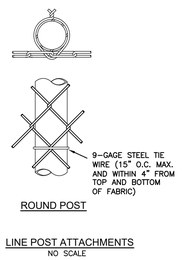
TENSION BAND DETAIL

FASTENING DETAILS
NO SCALE



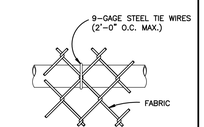
BRACE PANEL DETAIL
NO SCALE

NOTE:
PROVIDE BRACE PANEL WHENEVER STRAIGHT RUNS EXCEED 660 FEET.

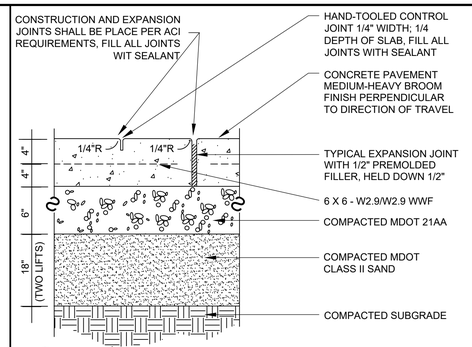


ROUND POST

LINE POST ATTACHMENTS
NO SCALE



TOP OR BRACE RAIL ATTACHMENT



C CONCRETE PAVEMENT DETAIL

NOT TO SCALE

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ADAM LACH, RA, DIRECTOR

RENOVATE ARMORY - WATERFORD

DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
2650 WATKINS LAKE RD., WATERFORD TWP, MI 48328

DESIGNED	KMM
DRAWN	KMM
CHECKED	BAB
APPROVED	
DATE	23 JAN 2025
ISSUED FOR	■ PRELIMINARY ☐ CONSTRUCTION ☐ FINAL RECORD
IDENTIFICATION NO.	PROJECT 2690023043
	INDEX CODE
SHEET	FENCE/MISC DETAILS

C6

PUBLIC WORKS DRIVE

WATKINS LAKE ROAD

EX. GRASS

EX. HMA

EX. GRASS

CLEAN OUT STRUCTURE AND PIPE, REPAIR AS NEEDED, TYP.

PROVIDE A ROLLED 6" X 6" ASPHALT CURB ALONG ENTIRE LENGTH, TYP.

EX. GRASS

EX. HMA

EX. HMA

REPLACE EXISTING ROLLED 6" X 6" ASPHALT CURBS , TYP.

EX. HMA

EX. BLDG
F.F. 973.5

EX. CONC

REPLACE EXISTING ROLLED 6" X 6" ASPHALT CURBS , TYP.

EX. GRASS

EX. HMA

EX. HMA

EX. GRASS

CLEAN OUT STRUCTURE AND PIPE, REPAIR AS NEEDED, TYP.

PROVIDE AND INSTALL NEW END FENCE POST TO TIE EXISTING FENCE AND TO NEW FENCE

EX. GRASS

MOVEABLE LOADING RAMP
DEDUCTIVE ALTERNATE 2

EX. STORM
RETENTION

EX. HMA

FENCE CHANGES
DEDUCTIVE
ALTERNATE 2

EX. CONC

EX. HMA

EX. BLDG
F.F. 972.0

EX. STORM
RETENTION

EX. HMA

EX. PT
EQUIP.

PAVEMENT MARKINGS
DEDUCTIVE ALTERNATE 2

EX. STORM
RETENTION

PROVIDE AND INSTALL NEW 6' CHAIN LINK FENCING WITHOUT BARBED WIRE, WITH PRIVACY STRIPS

DUMPSTER FENCE
DEDUCTIVE ALTERNATE 2

N

ALTERNATE PLAN

1" = 20'

0 20' 40'

SCALE: 1" = 20'

ALTERNATE SCHEDULE

1. STATE THE AMOUNT TO BE DEDUCTED FROM THE BASE PROPOSAL SUM TO REMOVE THE MATERIAL/LABOR AND PARTS/PIECES ASSOCIATED WITH MILLING AND PAVING OF THE EXISTING PAVING AS SHOWN ON SHEET C7.

2. STATE THE AMOUNT TO BE DEDUCTED FROM THE BASE PROPOSAL SUM TO REMOVE THE MATERIAL/LABOR AND PARTS/PIECES ASSOCIATED WITH ALL OF THE REMAINING EXTERIOR WORK AS SHOWN ON SHEET C11.

811
KNOW WHAT'S BELOW.
CALL BEFORE YOU DIG.

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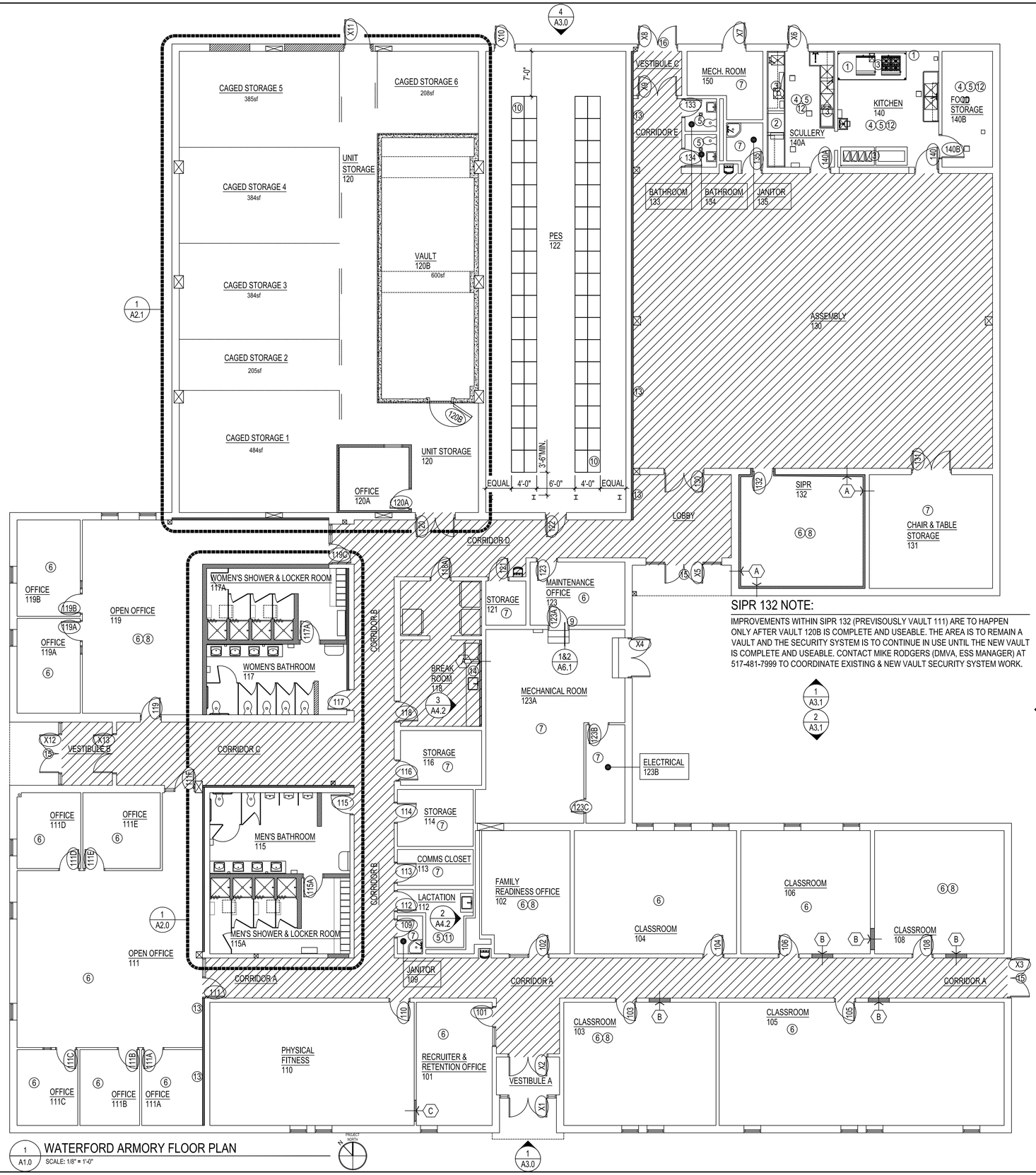
SHEET
ALTERNATE PLAN
C7



SIPR 132 NOTE:

IMPROVEMENTS WITHIN SIPR 132 (PREVISOUSLY VAULT 111) ARE TO HAPPEN ONLY AFTER VAULT 120B IS COMPLETE AND USEABLE. THE AREA IS TO REMAIN A VAULT AND THE SECURITY SYSTEM IS TO CONTINUE IN USE UNTIL THE NEW VAULT IS COMPLETE AND USEABLE. CONTACT MIKE RODGERS (DMVA, ESS MANAGER) AT 517-481-7999 TO COORDINATE EXISTING & NEW VAULT SECURITY SYSTEM WORK.

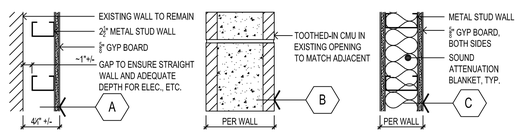
GENERAL NOTES:

1. ROOM NAMES & NUMBERS ON DEMOLITION PLANS ARE NOT THE PROPOSED NAMES & NUMBERS.
2. SEE ADDITIONAL DEMOLITION INFORMATION ON MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS.
3. CONTRACTOR TO VERIFY EXISTING CONDITIONS AND PROMPTLY NOTIFY DMVA OF ANY DISCREPANCIES
4. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL FOR ALL ITEMS TO BE REMOVED.
5. CONTRACTOR SHALL MAINTAIN THE STRUCTURAL INTEGRITY OF THE BUILDING AT ALL TIMES.
6. CONTRACTOR TO KEEP EXITS AND EGRESS PATH OF TRAVEL CLEAR OF DEBRIS AT ALL TIMES.
7. THROUGHOUT THE ARMORY, AND IN ADVANCE OF PAINTING, THE CONTRACTOR IS TO REMOVE ALL WALL ANCHORS & MISC. SCREWS, ETC. WALL SURFACES ARE TO BE SMOOTH SO FILL OPENINGS IN SURFACES TO MATCH ADJACENT IN PREPARATION OF PAINTING.
8. CONTRACTOR IS TO PROTECT THE UNAFFECTED AND OCCUPIED AREAS OF THE BUILDING FROM THE DUST IN ADVANCE OF CONCRETE FLOOR POLISHING. SEE SPECIFICATIONS FOR ADD'L INFORMATION.
9. SEE FINISH SCHEDULE FOR ADD'L INFO.
10. ALL EXISTING INTERIOR DOORS & FRAMES AS WELL AS NEW DOORS & FRAMES ARE TO BE PAINTED.
11. ALL EXISTING EXTERIOR DOORS & FRAMES ARE TO BE PAINTED TO MATCH NEW ALUMINUM EXT. DOORS

FLOOR PLAN KEY NOTES:

1. CONTRACTOR TO HAVE KITCHEN HOOD SERVICED AND ANSUL SYSTEM MODIFIED/SERVICED TO ENSURE PROPER OPERATION WITH REVISED KITCHEN EQUIPMENT CONFIGURATION.
2. AT THE REMOVED DISHWASHER, BETWEEN THE SLOT DRAINS, THE CONTRACTOR IS TO HAVE NEW S.S. COUNTERTOP INSTALLED TO MATCH ADJACENT SO THERE IS NO GAP AND INSTEAD CONTINUOUS COUNTER.
3. CONTRACTOR TO HAVE ALL KITCHEN EQUIPMENT PROFESSIONALLY CLEANED AND SERVICED TO ENSURE PROPER FUNCTION. THIS INCLUDES: HOOD, STOVES/OVENS, BELOW COUNTER WATER HEATERS, DISPOSALS & WARMING TRAYS.
4. ALL NEW RIGID CEILING PER DETAIL 2/A6.0 TYPICAL
5. CLEAN EXISTING TILE FLOOR & WALLS TO REMOVE GREASE, RESIDUE, AND STAINING. PREP EXISTING METAL FLOOR DRAINS (10"x10") IN PLACE: MECHANICALLY REMOVE LOOSE RUST AND SCALE, CLEAN WITH DEGREASER, AND APPLY RUST-INHIBITIVE PRIMER FOLLOWED BY DURABLE ENAMEL OR EPOXY TOPCOAT. PROTECT ADJACENT SURFACES DURING PREP AND PAINTING. COORDINATE COLOR WITH ARCHITECT.
6. FOLLOWING ABATEMENT, AT AREAS TO RECEIVE NEW CARPET, REMOVE ANY REMAINING ADHESIVE AND SMOOTH SLAB. PATCH SURFACE AS NEEDED TO MEET FLATNESS TOLERANCE OF 1/8" IN 10'-0". PREPARE PER CARPET MANUFACTURER'S REQUIREMENTS FOR DIRECT GLUE INSTALLATION.
7. EXISTING CONCRETE FLOOR TO BE POWER-WASHED AND CLEANED. PATCH SURFACE AS NEEDED TO MEET FLATNESS TOLERANCE OF 1/8" IN 10'-0". PREPARE, PROVIDE & INSTALL NEW CONCRETE FLOOR SEALER.
8. NEW SUSPENDED CEILING IN THIS ROOM. SEE ELECTRICAL & MECHANICAL FOR ADD'L INFO.
9. AT NEW OPENING, VERTICAL CELLS ADJACENT TO OPENING SHALL BE GROUTED SOLID FROM FOUNDATION TO LINTEL, TYPICAL BOTH SIDES. SEE PLANS & DOOR SCHEDULE FOR ADDITIONAL INFORMATION.
10. CONTRACTOR TO PROVIDE AND INSTALL 68 NEW DOUBLE-TIER (24"D x 48"W x 78"H), SO 136 INDIVIDUAL, TA-50 STORAGE LOCKERS AS PER SPECIFICATION SECTION 105113.
11. AT NEW LACATION ROOM 112 WALL MOUNTED SOAP & PAPER TOWEL DISPENSERS ARE TO REMAIN. THE MIRROR IS ALSO TO REMAIN AND MAY NEED TO BE RAISED ABOVE THE NEW COUNTER BACK SPLASH. REMOVE FLOOR-MOUNTED TOILET. CAP SANITARY LINE FLUSH WITH SLAB. REMOVE FLANGE, BOLTS, AND PATCH HOLES FLUSH WITH FLOOR. CLEAN TOILET OUTLINE; IF STAINING REMAINS, PROVIDE TILE PATCH OR SURFACE REPAIR FOR CLEAN, UNIFORM APPEARANCE. FLOOR DRAIN TO REMAIN. SEE #/A4.#
12. CLEAN EXISTING GLAZED CMU TO REMOVE STAINING, MORTAR RESIDUE, DUST, AND SURFACE CONTAMINANTS. APPLY CLEAR SEALER COMPATIBLE WITH EXISTING GLAZED CMU TO PROTECT SURFACE AND PROMOTE UNIFORM APPEARANCE. SEALER TO BE APPROVED BY ARCHITECT PRIOR TO APPLICATION. PROTECT SURFACES DURING REMAINDER OF CONSTRUCTION.
13. EXISTING BRICK TO REMAIN. CLEAN EXISTING BRICK OF BIOLOGICAL STAINING (ALGAE/MILDEW) USING LOW-PRESSURE WATER (<500 PSI) AND A DILUTED BLEACH SOLUTION (1:4 BLEACH:WATER) APPLIED WITH BRUSH OR SPRAYER. AVOID DRYING ON SURFACE. SCRUB WITH SOFT-BRISTLE BRUSH. RINSE THOROUGHLY. PROTECT ADJACENT MATERIALS. DO NOT USE ABRASIVE CLEANERS OR HIGH-PRESSURE WASHING. APPLY CLEAR, BREATHABLE PENETRATING SEALER COMPATIBLE WITH MASONRY TO REDUCE DUSTING AND PROTECT SURFACE. SEALER TO BE APPROVED BY ARCHITECT PRIOR TO APPLICATION. DO NOT PAINT.
14. MODIFY ACOUSTIC CEILING TILES & GRID IN THIS ROOM. SEE ELECTRICAL & MECHANICAL FOR ADD'L INFO.
15. CONTRTACTOR TO PROVIDE AND INSTALL NEW EXTERIOR DOORS AND FRAMES X3, X5, & X12. SEE DOOR SCHEDULE (A7.0), SHEET A7.2 & SPEC SECTION 081116 FOR ADDITIONAL INFORMATION.
16. EXISTING PAIR OF DOORS TO REMAIN. CONTRACTOR TO PROVIDE AND INSTALL A NEW ASTRAGAL THAT WORKS WITH EXISTING DOORS AND REUSE OF HARDWARE.

WALL TYPES: A1.0



WALL TYPES NOTES:
1. SEE PLANS, FINISH SCHEDULE & INTERIOR ELEVATIONS FOR ADD'L WALL FINISH INFORMATION.

LEGEND:

- AREA OF LEVEL 3 CONCRETE POLISHING. SEE FINISH SCHEDULE FOR ADD'L INFO.
- DASHED LINE IS AN ITEM OF NOTE OVERHEAD
- EXISTING BRICK & CMU WALL
- NEW WALL
- (A) WALL TYPES
- (###) DOOR TAG. SEE DOOR SCHEDULE SHEET A/7.0
- (#) KEYED NOTE

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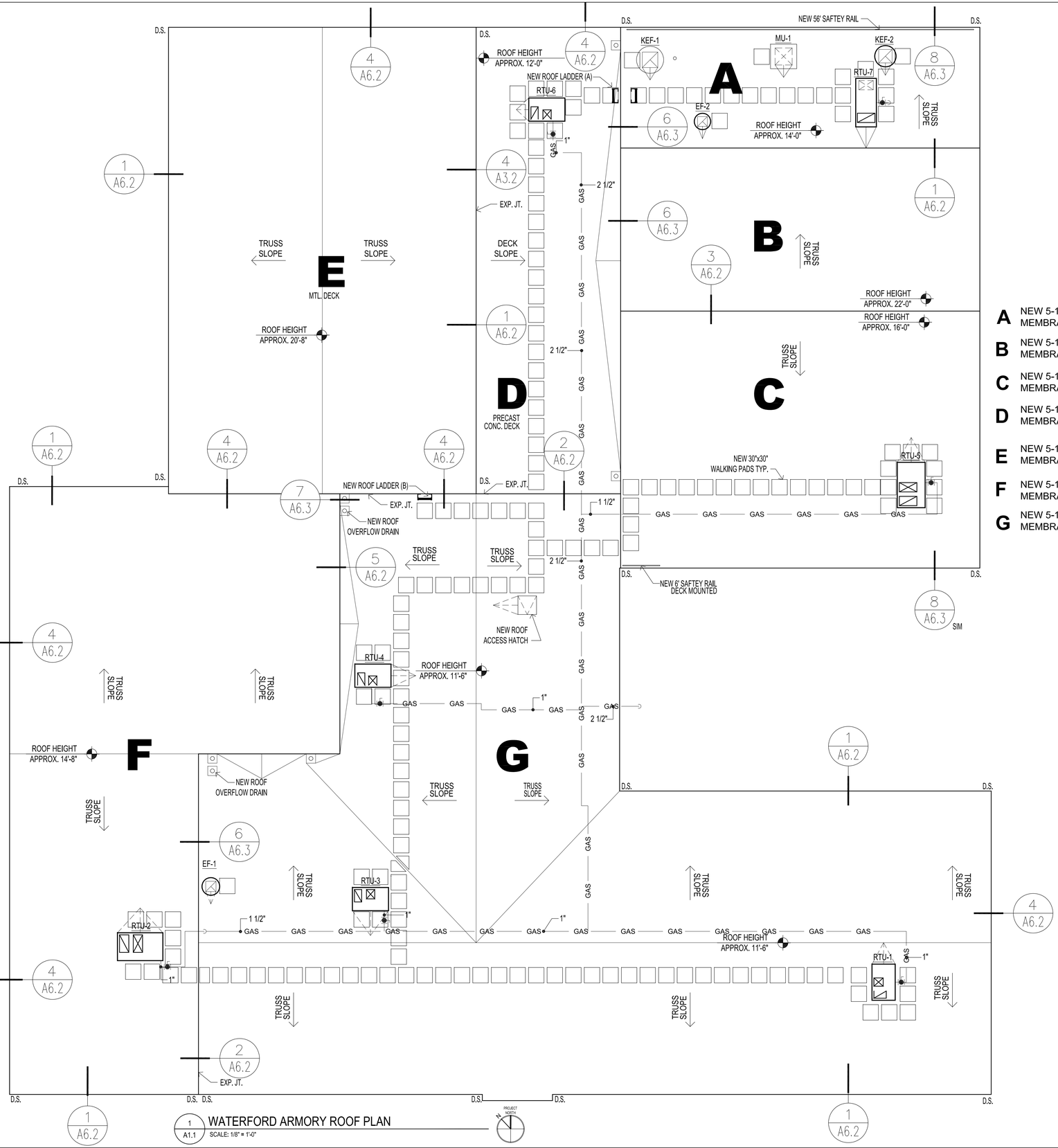
SHEET A1.0



1 A1.1 WATERFORD ARMORY ROOF PLAN

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

ROOF PLAN KEY NOTES:

1. ALL DOWNSPOUTS REQUIRE A SPLASH PAD. SEE SHEET C5 DETAIL D. THIS INCLUDES DOWNSPOUTS THAT EMPTY ON TO AN ADJACENT ROOF.
2. ROOF WALKING PADS WILL BE PLACED IN FRONT OF ALL ACCESS DOORS OF THE RTU'S AND ONE PAD WILL BE PLACED NEXT TO EACH EXHAUST FAN. A WALKING PAD WILL BE PLACED UNDER EACH ROOF DOWNSPOUT BEFORE SPLASH PAD INSTALLATION.
3. COORDINATE INSTALLATION OF ROOF DRAINS WITH PLUMBER TO ACHIVE 2.5" OF INSULATION UNDER EACH ROOF DRAIN. PATCHED IN ROOF DRAINS WILL NOT BE ACCEPTED.
4. ALL PIPE VENTS NEED TO BE EXTENDED 8" ABOVE ROOF MEMBRANE BEFORE FLASHING

A NEW 5-1/2" FULLY ADHERED POLYISOCYANURATE INSULATION, NEW 60 MIL PVC OR EPDM FULLY ADHERED MEMBRANE, NEW FASCIA METAL, NEW WALKING PADS, NEW METAL GUTTER AND METAL DOWNSPOUTS

B NEW 5-1/2" FULLY ADHERED POLYISOCYANURATE INSULATION, NEW 60 MIL PVC OR EPDM FULLY ADHERED MEMBRANE, NEW FASCIA METAL, NEW METAL GUTTERS, AND NEW METAL DOWNSPOUTS

C NEW 5-1/2" FULLY ADHERED POLYISOCYANURATE INSULATION, NEW 60 MIL PVC OR EPDM FULLY ADHERED MEMBRANE, NEW FASCIA METAL, NEW WALKING PADS, NEW METAL GUTTERS AND METAL DOWNSPOUTS

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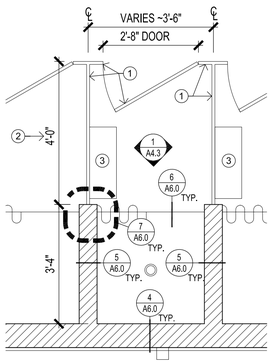
SHEET A1.1

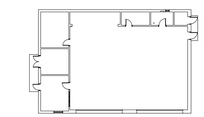


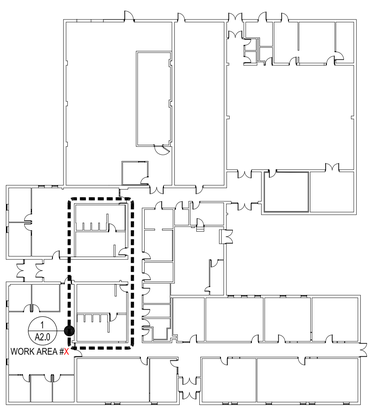
2 A2.0 TYPICAL SHOWER & CHANGING AREA PLAN

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

KEYED NOTES 2/A2.0:

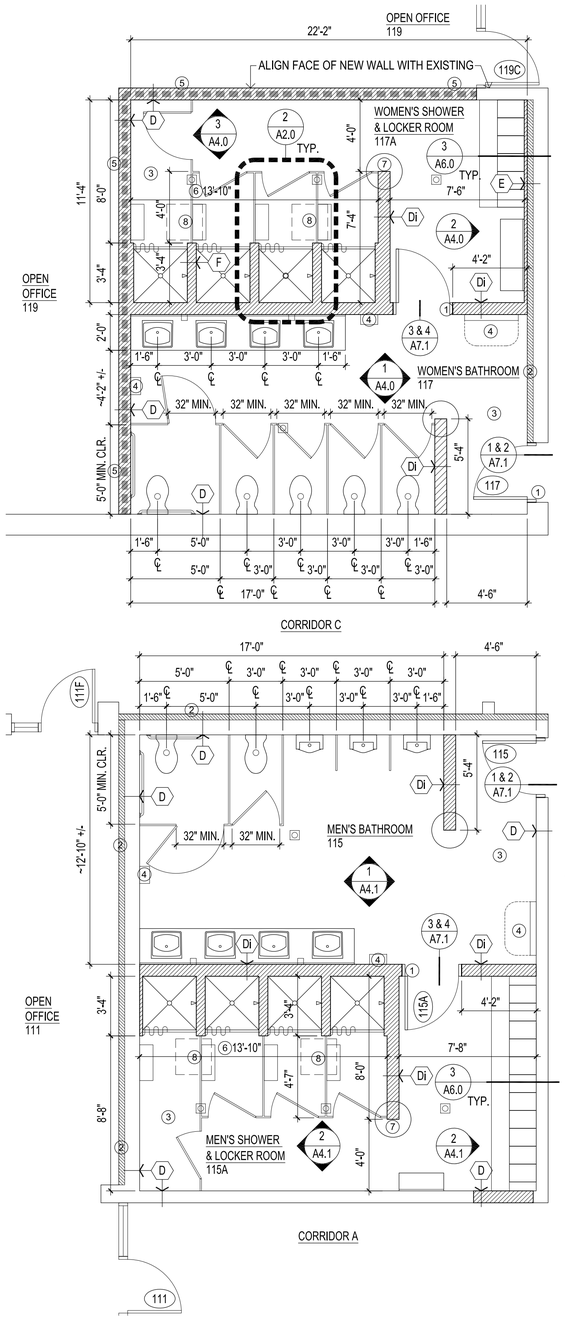
1. PHENOLIC RESIN DRESSING COMPARTMENT AND CHANGING STALLS, SEE SPECIFICATIONS
2. THIS DIMENSION ~4'-7" AT TYPICAL MEN'S SHOWER CHANGING STALL AS PER PLAN 1/A2.0
3. 2' FLOOR MOUNTED BENCH TYPICAL EACH SHOWER STALL, SEE SPECIFICATIONS. COORDINATE LOCATION WITH DMVA PRIOR TO INSTALLATION.





KEY PLAN

NOT TO SCALE



1 A2.0 MEN'S & WOMEN'S BATHROOM, SHOWER & LOCKER ROOM PLAN

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

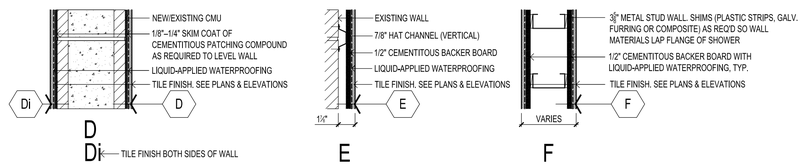
KEYED NOTES 1/A2.0:

1. VERTICAL CELLS ADJACENT TO OPENING SHALL BE GROUTED SOLID FROM FOUNDATION TO LINTEL, TYPICAL BOTH SIDES. SEE PLANS & DOOR SCHEDULE FOR ADDITIONAL INFORMATION.
2. EXISTING BRICK TO REMAIN. CLEAN EXISTING BRICK OF BIOLOGICAL STAINING (ALGAE/MILDEW) USING LOW-PRESSURE WATER (<500 PSI) AND A DILUTED BLEACH SOLUTION (1:4 BLEACH:WATER) APPLIED WITH BRUSH OR SPRAYER. AVOID DRYING ON SURFACE. SCRUB WITH SOFT-BRISTLE BRUSH. RINSE THOROUGHLY. PROTECT ADJACENT MATERIALS. DO NOT USE ABRASIVE CLEANERS OR HIGH-PRESSURE WASHING. APPLY CLEAR, BREATHABLE PENETRATING SEALER COMPATIBLE WITH MASONRY TO REDUCE DUSTING AND PROTECT SURFACE. SEALER TO BE APPROVED BY ARCHITECT PRIOR TO APPLICATION. DO NOT PAINT.
3. NEW CONCRETE FLOOR AND FLOOR TILE THROUGHOUT BATHROOM, SHOWER & LOCKER ROOMS. SEE SPECIFICATIONS FOR ADD'L INFORMATION. SEE INTERIOR ELEVATIONS FOR EXTENT OF NEW WALL TILE
4. BATHROOM ACCESSORIES. SEE INTERIOR ELEVATIONS AND SPECIFICATIONS FOR ADD'L INFO.
5. THIS WALL TO BE CONSTRUCTED TO THE UNDERSIDE OF THE ROOF DECK. TOOTH-IN NEW CMU WITH ADJACENT WALL CMU. SEE DETAIL 1/A6.0 FOR ADD'L INFO.
6. THE 13'-10" DIMENSION INCLUDES APPROXIMATELY 1" OF 'EXTRA' (BETWEEN OUTER CMU WALLS) TO ACCOMMODATE THE VARIED THICKNESS OF WALL ASSEMBLIES TO ENSURE ALL WALL TILE OVERLAPS THE FLANGES OF THE SHOWER INSERTS. THE INTENT IS FOR EACH METAL FRAMED WALL BETWEEN SHOWER UNITS TO BE OF EQUAL THICKNESS. CONTRACTOR IS TO LAYOUT & FRAME THESE WALLS SO THE 'EXTRA' IS EQUAL AT EACH END (AS SHOWN IN THE DRAWINGS) OR BIASED TO ONE SIDE. SEE DETAILS 4, 5 & 7 FOR ADDITIONAL INFORMATION.
7. BULLNOSE CMU WALL ONLY AT OUTER CORNER. INNER CORNER, WITH 90 DEGREE CORNER, TO RECEIVE PHENOLIC PARTITION.
8. 24"x24" ACCESS HATCH FOR SHOWER VALVES AT CEILING (2 AT EACH SHOWER ROOM, 4 TOTAL). CONTRACTOR TO COORDINATE LOCATION OF ACCESS HATCHES WITH PLUMBING WORK AND SHOWER PARTITION LOCATIONS TO ENSURE THEY OPEN AND PROVIDE FREE & CLEAR LADDER ACCESS. CONTRACTOR TO PROVIDE & INSTALL UP TO 4 TOTAL ADDITIONAL 24"x24" ACCESS HATCHES FOR ELECTRICAL JUNCTION BOXES HIDDEN ABOVE THE EXISTING CEILING THAT WILL REQUIRE ACCESS FOR CODE APPROVAL. TO BE CLEAR, THAT IS 8 HATCHES TOTAL.

NOTES AT BATHROOMS, SHOWERS & LOCKER ROOM PLAN:

1. PREP ALL WALL SURFACES TO RECEIVE TILE AS FOLLOWS:
   - EXISTING PAINTED CMU: REMOVE PAINT BY GRINDING TO EXPOSE RAW MASONRY. REMOVE ALL LOOSE OR PEELING PAINT; MECHANICALLY ABRADE OR GRIND TO EXPOSE SOUND MASONRY SUBSTRATE WHERE MULTIPLE LAYERS OF PAINT ARE PRESENT TO ENSURE ADHESION. FILL VOIDS AND PROVIDE SMOOTH, SOUND SURFACE.
   - BRICK: CLEAN OF DUST AND EFFLORESCENCE; SKIM COAT TO FLATTEN AS NEEDED
   - NEW CMU: CLEAN SURFACE TO REMOVE DUST OR SLURRY. FILL VOIDS AND PROVIDE SMOOTH, SOUND SURFACE.
   - METAL STUD WALLS: INSTALL CEMENT BACKER BOARD FLUSH WITH SHOWER INSERT, TAPE AND TREAT JOINTS WITH THINSET AND MESH
2. APPLY LIQUID-APPLIED WATERPROOFING MEMBRANE TO ALL WALLS IN WET AREAS (SHOWER ROOMS 115A & 117A). ENSURE CONTINUOUS BONDED WATERPROOFING ACROSS ALL SUBSTRATES.
3. SET TILE USING POLYMER-MODIFIED THINSET MORTAR (ANSI A118.4 OR A118.15)
4. SEE INTERIOR ELEVATIONS FOR ADDITIONAL DIMENSIONAL REQUIREMENTS / CLEARANCES AT PLUMBING FIXTURES AND FOR BATHROOM ACCESSORIES
5. SEE DETAILS 2/A6.0 & 4/A6.0 FOR CEILING ASSEMBLY INFORMATION
6. PLAN DIMENSIONS ARE TO FACE OF CONCRETE MASONRY UNLESS OTHERWISE NOTED
7. SEE FINISH SCHEDULE, INTERIOR ELEVATIONS, AND DETAILS

WALL TYPES: A2.0



WALL TYPES NOTES:

1. SEE PLANS, FINISH SCHEDULE & INTERIOR ELEVATIONS FOR ADD'L WALL FINISH INFORMATION.

LEGEND:

- EXISTING BRICK & CMU WALL
- NEW WALLS. SEE WALL TYPES FOR ADD'L INFO.
- THICKENED SLAB. SEE DETAIL 1/A6.0
- LOCATION OF BULLNOSE CMU AT INTERIOR OF BUILDING.
- ### DOOR TAG. SEE DOOR SCHEDULE SHEET A/7.0
- DASHED LINE CEILING ITEM OVERHEAD
- (#) KEYED NOTE
- (A) WALL TYPE

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RENOVATE ARMORY - WATERFORD

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APPROVED	
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PROJECT	2690023043
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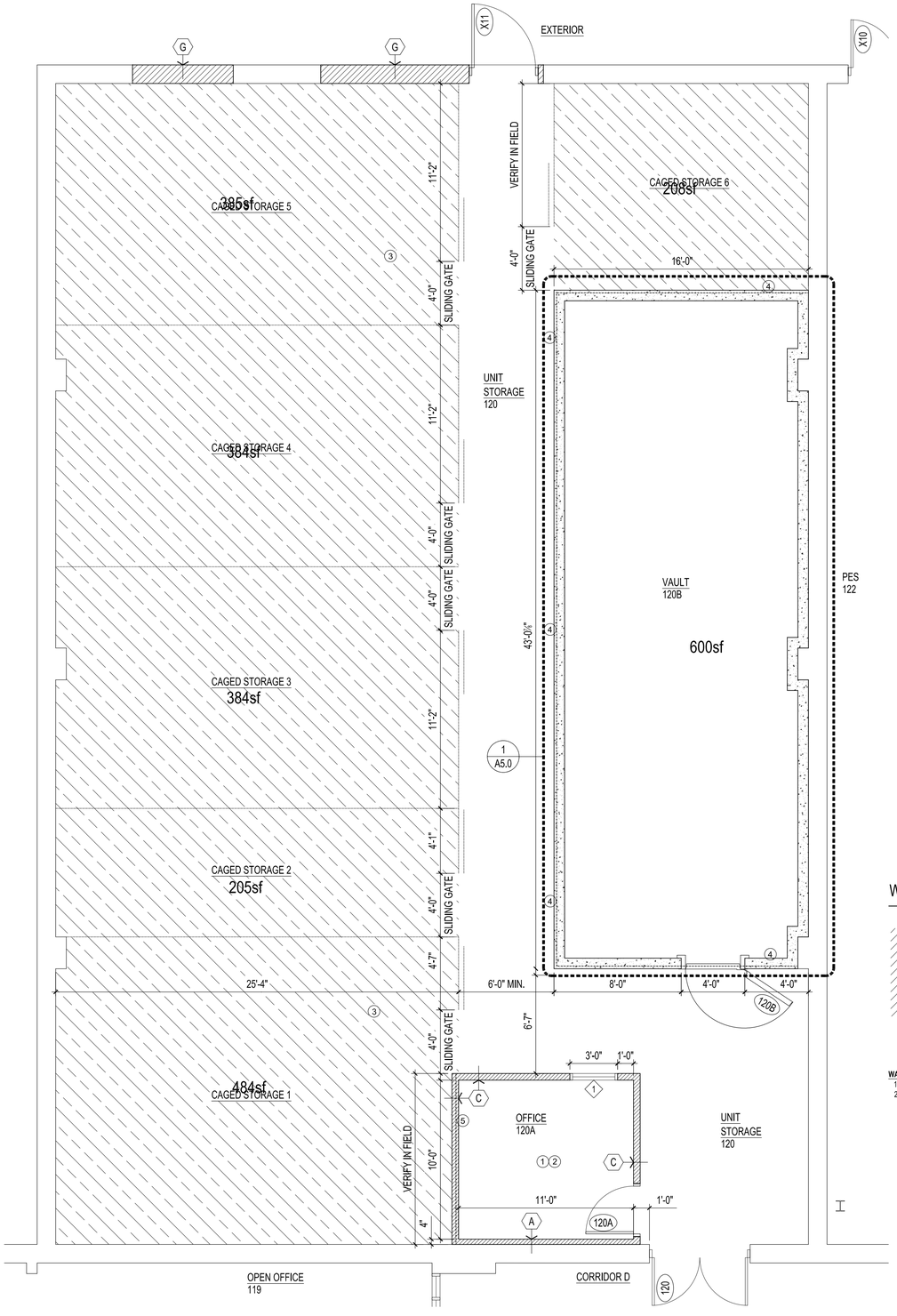
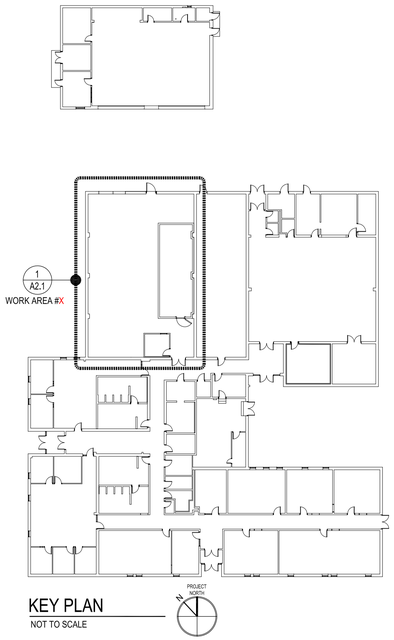
SHEET	A2.0



1 A2.1 UNIT STORAGE PLAN
SCALE: 1/4" = 1'-0"



KEY PLAN
NOT TO SCALE

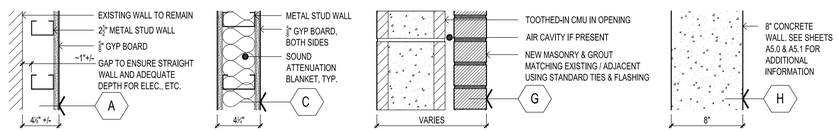
KEYED NOTES:

1. OFFICE 120A TO HAVE A HARD CEILING PER DETAIL 2/A6.0 TYPICAL
2. OFFICE 120A TO RECEIVE NEW CARPET, REMOVE ANY ADHESIVE ON THE CONCRETAND SMOOTH SLAB. PATCH SURFACE AS NEEDED TO MEET FLATNESS TOLERANCE OF 1/8" IN 10'-0". PREPARE PER CARPET MANUFACTURER'S REQUIREMENTS FOR DIRECT GLUE INSTALLATION.
3. EXISTING CONCRETE FLOOR TO BE POWER-WASHED AND CLEANED. PATCH SURFACE AS NEEDED TO MEET FLATNESS TOLERANCE OF 1/8" IN 10'-0".
4. PROVIDE AND INSTALL METAL CAGING TO IN-FILL FROM TOP OF VAULT TO THE UNDERSIDE OF THE EXISTING ROOF TRUSSES OVERHEAD. MAINTAIN A MAX. GAP 3" OR LESS AROUND ALL OBJECTS. CONTRACTOR TO COORDINATE & FIELD VERIFY EXISTING CONDITIONS TO ENSURE GAP COMPLIANCE.
5. PROVIDE AND INSTALL METAL CAGING IN-FILL FROM TOP OF OFFICE 120A WALL TO THE UNDERSIDE OF THE EXISTING ROOF TRUSSES OVERHEAD. MAINTAIN A MAX. GAP 3" OR LESS AROUND ALL OBJECTS. CONTRACTOR TO COORDINATE & FIELD VERIFY EXISTING CONDITIONS TO ENSURE GAP COMPLIANCE.
6. EMPTY

NOTES AT UNIT STORAGE, NEW OFFICE & VAULT PLAN:

1. SEE INTERIOR ELEVATIONS FOR ADDITIONAL DIMENSIONAL REQUIREMENTS / CLEARANCES AT PLUMBING FIXTURES AND FOR BATHROOM ACCESSORIES
2. MAXIMUM GAP IN METAL CAGING IS NOT TO EXCEED 3" AT WALLS, FLOOR, CEILING AND ANY OBSTRUCTIONS, TYPICAL.
3. PLAN DIMENSIONS ARE TO FACE OF CONCRETE MASONRY UNLESS OTHERWISE NOTED
4. SEE FINISH SCHEDULE, INTERIOR ELEVATIONS, AND DETAILS

WALL TYPES: A2.1



WALL TYPES NOTES:
1. SEE PLANS, FINISH SCHEDULE & INTERIOR ELEVATIONS FOR ADD'L WALL FINISH INFORMATION.
2. CONSTRUCT WALLS OF OFFICE 120A TO 10'-0" ABOVE FINISHED FLOOR

LEGEND:

- NEW WALLS. SEE WALL TYPES FOR ADD'L INFO.
- METAL CAGING PARTITIONS & SLIDING GATES
- HORIZONTAL METAL CAGING AS 'CEILING' AT THESE AREAS. HANG TIGHT TO BOTTOM CHORD OF TRUSSES, TYPICAL
- DASHED LINE CEILING ITEM OVERHEAD
- ### DOOR TAG. SEE DOOR SCHEDULE SHEET A/7.0
- # KEYED NOTE
- A WALL TYPES
- VIF CONTRACTOR TO VERIFY-IN-FIELD ACTUAL DIMENSION
- # WINDOW TYPE. SEE SHEET A/7.1 FOR ADD'L INFO.

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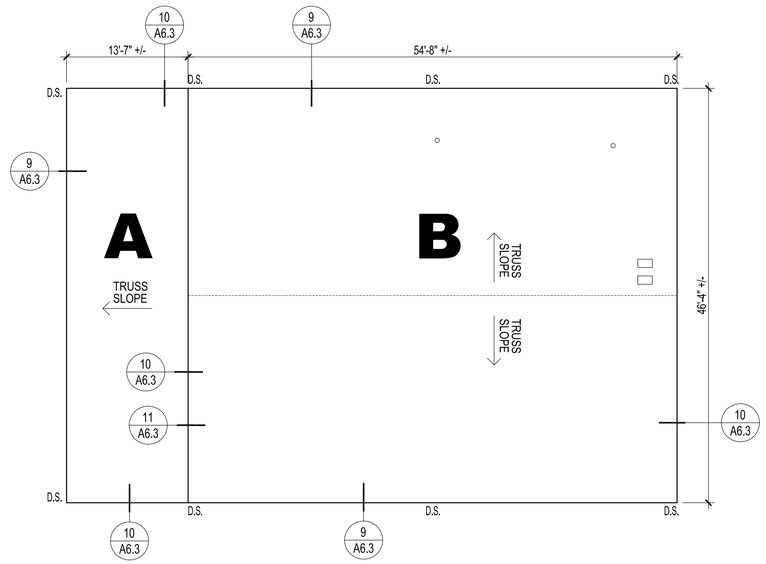
SHEET A2.1



2 A2.2 VEHICLE MAINTENANCE BUILDING ROOF PLAN

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

N

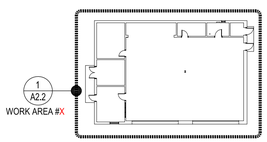
LEGEND:

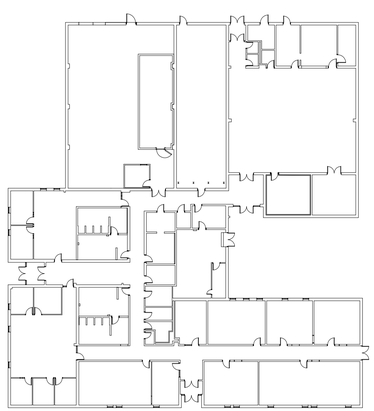
(#) KEYED NOTE

NEW ROOF KEYED NOTES:

A INSTALL 60 MIL EPDM OR PVC FULLY ADHERED MEMBRANE, 5-1/2" FULLY ADHERED POLYISO INSULATION, NEW METAL FASCIA, NEW GUTTERS, AND NEW DOWN SPOUTS

B INSTALL 60 MIL EPDM OR PVC FULLY ADHERED MEMBRANE, 5-1/2" FULLY ADHERED POLYISO INSULATION, NEW METAL FASCIA, NEW GUTTERS, AND NEW DOWN SPOUTS



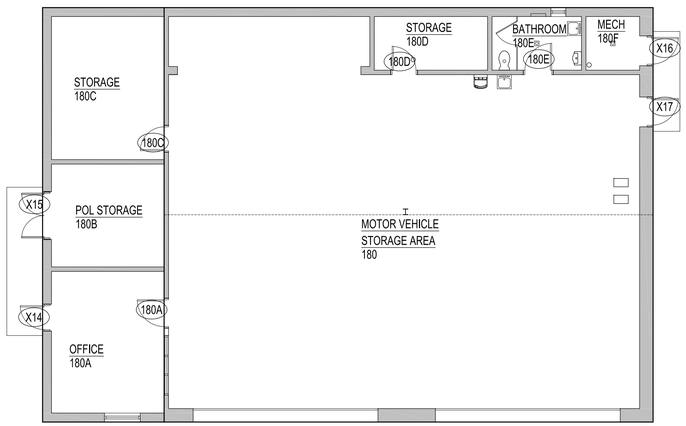


KEY PLAN

NOT TO SCALE

PROJECT NORTH

N



1 A2.2 VEHICLE MAINTENANCE BUILDING FLOOR PLAN

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

N

LEGEND:

(###) DOOR TAG. SEE DOOR SCHEDULE SHEET A7.0

(#) KEYED NOTE

KEYED NOTES:

(1) EMPTY

NOTES AT VEHICLE MAINTENANCE BUILDING:

1. EMPTY

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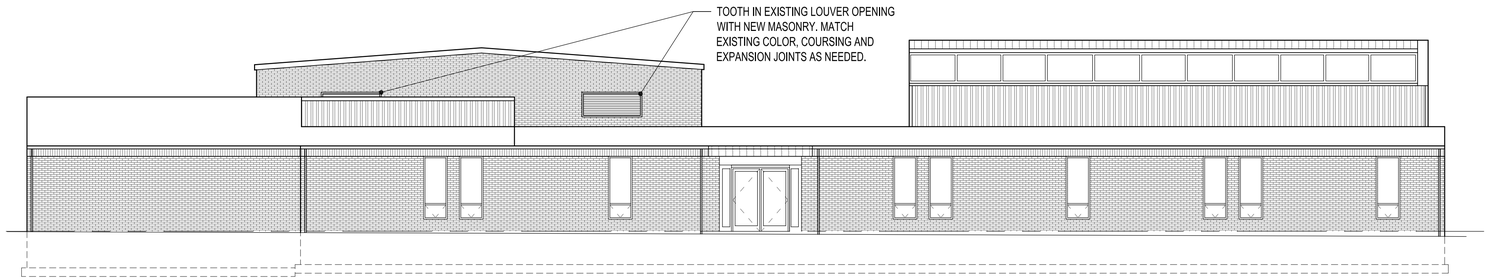
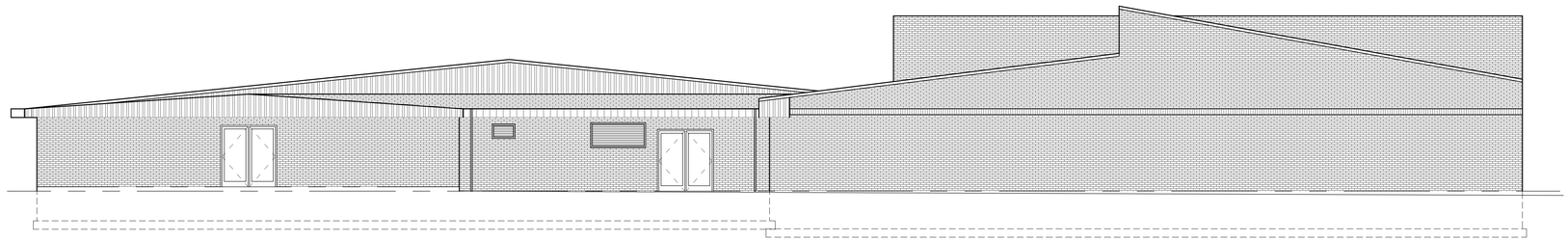
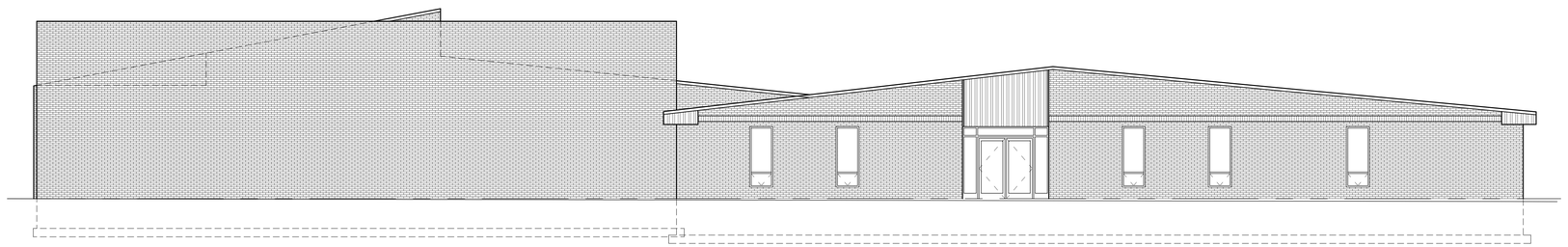
SHEET A2.2



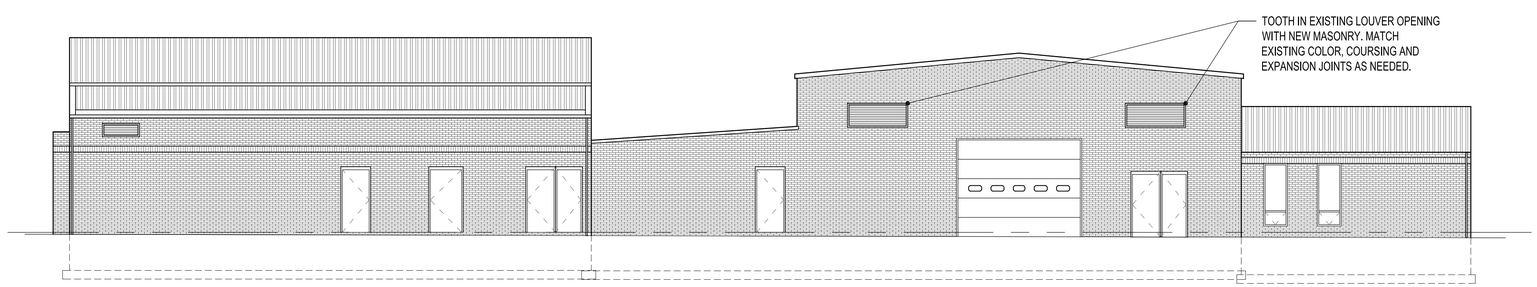
1 A3.0 WATERFORD ARMORY: SOUTH EXTERIOR ELEVATION
SCALE: 1/8" = 1'-0"



2 A1.0 WATERFORD ARMORY: EAST EXTERIOR ELEVATION
SCALE: 1/8" = 1'-0"



3 A1.0 WATERFORD ARMORY: WEST EXTERIOR ELEVATION
SCALE: 1/8" = 1'-0"



4 A3.0 WATERFORD ARMORY: NORTH EXTERIOR ELEVATION
SCALE: 1/8" = 1'-0"

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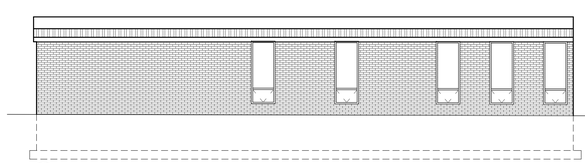
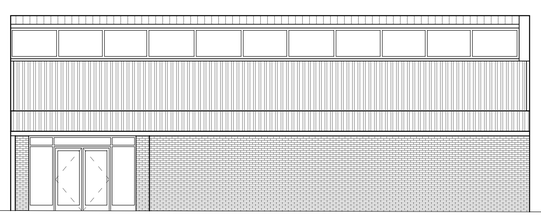
SHEET A3.0



2 A3.1 WATERFORD ARMORY: COURTYARD-SOUTH EXTERIOR ELEVATION
SCALE: 1/8" = 1'-0"



1 A3.1 WATERFORD ARMORY: COURTYARD-NORTH EXTERIOR ELEVATION
SCALE: 1/8" = 1'-0"

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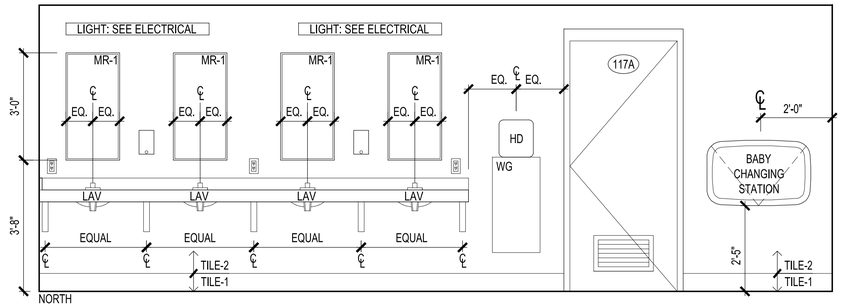

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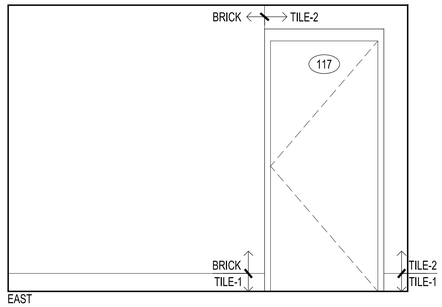

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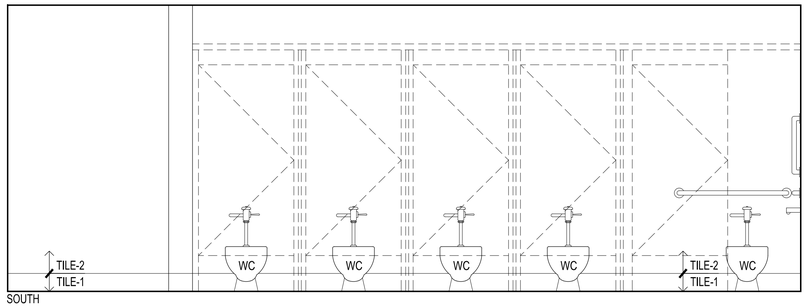
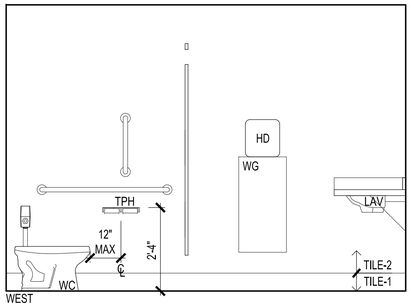


SOUTH

1 A4.0 INTERIOR ELEVATION - WOMEN'S BATHROOM 117

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

FINISH NOTES AT INTERIOR OF BATHROOM, SHOWER & LOCKER ROOMS
1. ALL WALL SURFACES, UNLESS NOTED OTHERWISE, ARE TO BE TILED FLOOR-TO-CEILING
2. ALL FLOOR SURFACES TO RECEIVE TILE



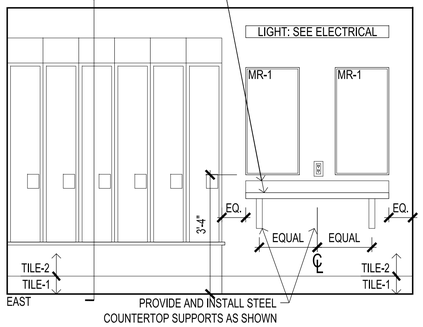
WEST

1 A4.0 INTERIOR ELEVATION - WOMEN'S BATHROOM 117

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

FINISH NOTES AT INTERIOR OF BATHROOM, SHOWER & LOCKER ROOMS
1. ALL WALL SURFACES, UNLESS NOTED OTHERWISE, ARE TO BE TILED FLOOR-TO-CEILING
2. ALL FLOOR SURFACES TO RECEIVE TILE

16"x48" SOLID SURFACE COUNTERTOP. CONTRACTOR TO PROVIDE AND INSTALL MATCHING 4" SOLID SURFACE BACK- SPLASH

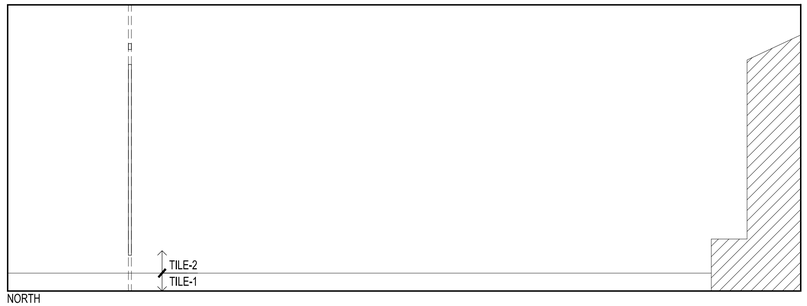


EAST

2 A4.0 INTERIOR ELEVATION - WOMEN'S SHOWER & LOCKER 117A

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

FINISH NOTES AT INTERIOR OF BATHROOM, SHOWER & LOCKER ROOMS
1. ALL WALL SURFACES, UNLESS NOTED OTHERWISE, ARE TO BE TILED FLOOR-TO-CEILING
2. ALL FLOOR SURFACES TO RECEIVE TILE

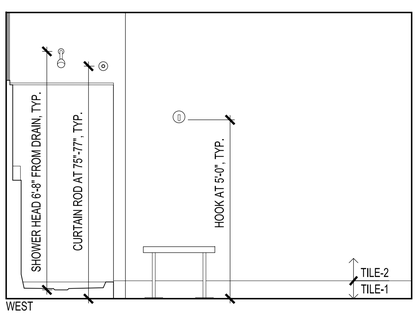


NORTH

3 A4.0 INTERIOR ELEVATION - WOMEN'S SHOWER & LOCKER 117A

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

FINISH NOTES AT INTERIOR OF BATHROOM, SHOWER & LOCKER ROOMS
1. ALL WALL SURFACES, UNLESS NOTED OTHERWISE, ARE TO BE TILED FLOOR-TO-CEILING
2. ALL FLOOR SURFACES TO RECEIVE TILE



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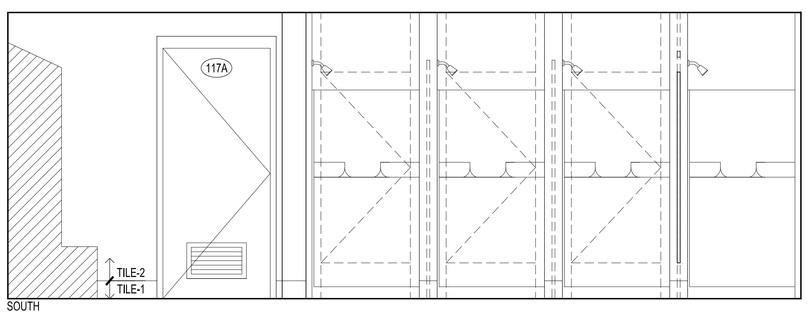

SOUTH

3 A4.0 INTERIOR ELEVATION - WOMEN'S SHOWER & LOCKER 117A

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

FINISH NOTES AT INTERIOR OF BATHROOM, SHOWER & LOCKER ROOMS
1. ALL WALL SURFACES, UNLESS NOTED OTHERWISE, ARE TO BE TILED FLOOR-TO-CEILING
2. ALL FLOOR SURFACES TO RECEIVE TILE

GENERAL NOTES:

1. SEE PLANS FOR ADDITIONAL DIMENSIONAL INFORMATION
2. SEE ELECTRICAL DRAWINGS FOR POWER LAYOUT
3. SEE PLUMBING FOR WATER SUPPLY/WASTE LAYOUT & REQUIREMENTS
4. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS PRIOR TO SUBMITTING/PURCHASING ANY KITCHEN EQUIPMENT
5. PROVIDE AND INSTALL CONTINUOUS METAL TILE TERMINATION EDGE. BASIS-OF-DESIGN AT ALL WALL TILE INSIDE AND OUTSIDE CORNERS IS SCHLUTER QUADEC.

LEGEND:

MR-1	18"x36" MIRROR	HD	HAND DRYER
LAV	LAVATORY (SINK)	WG	S.S. HAND DRYER WALL GUARD
UR	URINAL	PTD	PAPER TOWEL DISPENER
WC	WATER CLOSET (TOILET)	TPH	TOILET PAPER HOLDER
TILE-1	BASE TILE 6"x12"		
TILE-2	FIELD TILE 12"x24"		

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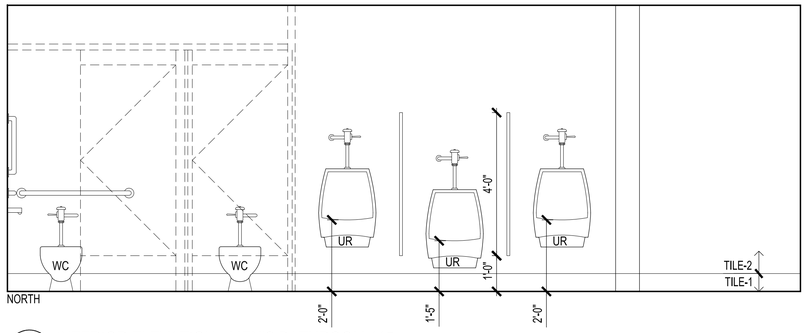

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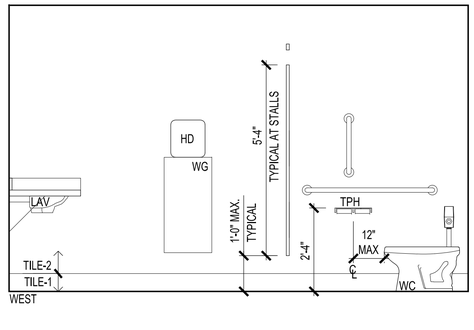

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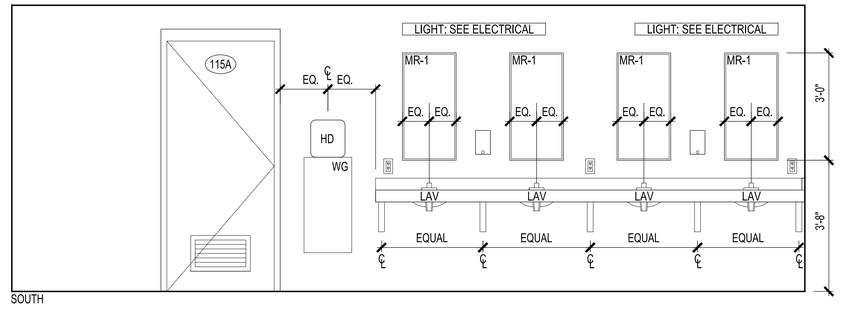
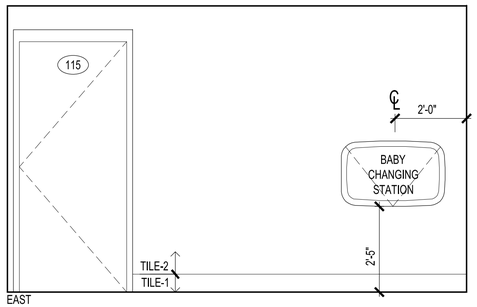


SOUTH

1 / A4.1 INTERIOR ELEVATION - MEN'S BATHROOM 115

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

FINISH NOTES AT INTERIOR OF BATHROOM, SHOWER & LOCKER ROOMS
1. ALL WALL SURFACES, UNLESS NOTED OTHERWISE, ARE TO BE TILED FLOOR-TO-CEILING
2. ALL FLOOR SURFACES TO RECEIVE TILE

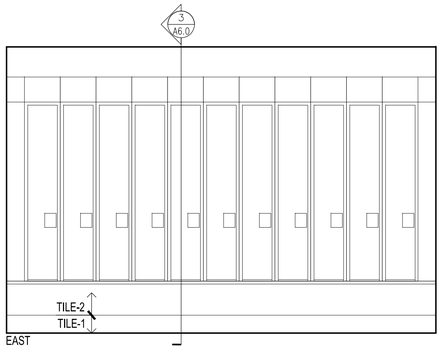


EAST

1 / A4.1 INTERIOR ELEVATION - MEN'S BATHROOM 115

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

FINISH NOTES AT INTERIOR OF BATHROOM, SHOWER & LOCKER ROOMS
1. ALL WALL SURFACES, UNLESS NOTED OTHERWISE, ARE TO BE TILED FLOOR-TO-CEILING
2. ALL FLOOR SURFACES TO RECEIVE TILE

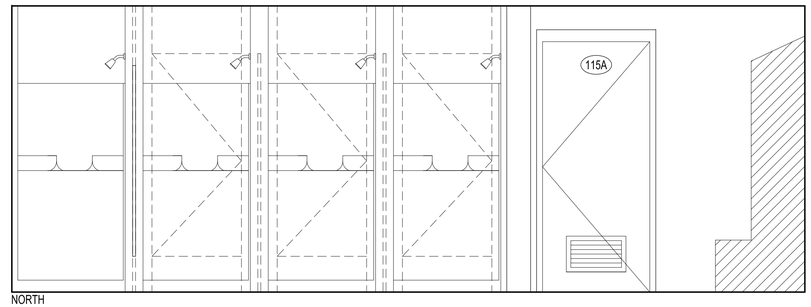


EAST

2 / A4.1 INTERIOR ELEVATION - MEN'S SHOWER & LOCKER 115A

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

FINISH NOTES AT INTERIOR OF BATHROOM, SHOWER & LOCKER ROOMS
1. ALL WALL SURFACES, UNLESS NOTED OTHERWISE, ARE TO BE TILED FLOOR-TO-CEILING
2. ALL FLOOR SURFACES TO RECEIVE TILE

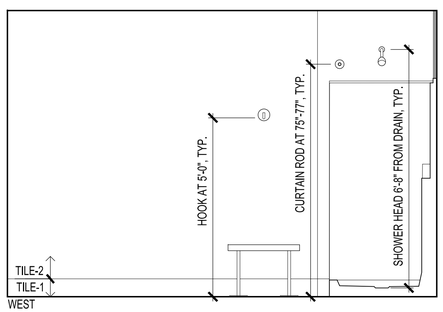


NORTH

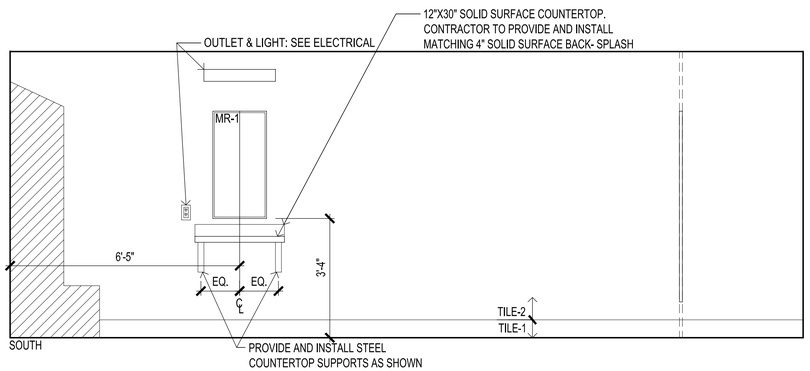
3 / A4.1 INTERIOR ELEVATION - MEN'S SHOWER & LOCKER 115A

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

FINISH NOTES AT INTERIOR OF BATHROOM, SHOWER & LOCKER ROOMS
1. ALL WALL SURFACES, UNLESS NOTED OTHERWISE, ARE TO BE TILED FLOOR-TO-CEILING
2. ALL FLOOR SURFACES TO RECEIVE TILE



WEST



SOUTH

3 / A4.1 INTERIOR ELEVATION - MEN'S SHOWER & LOCKER 115A

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

FINISH NOTES AT INTERIOR OF BATHROOM, SHOWER & LOCKER ROOMS
1. ALL WALL SURFACES, UNLESS NOTED OTHERWISE, ARE TO BE TILED FLOOR-TO-CEILING
2. ALL FLOOR SURFACES TO RECEIVE TILE

GENERAL NOTES:

1. SEE PLANS FOR ADDITIONAL DIMENSIONAL INFORMATION
2. SEE ELECTRICAL DRAWINGS FOR POWER LAYOUT
3. SEE PLUMBING FOR WATER SUPPLY/WASTE LAYOUT & REQUIREMENTS
4. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS PRIOR TO SUBMITTING/PURCHASING ANY KITCHEN EQUIPMENT
5. PROVIDE AND INSTALL CONTINUOUS METAL TILE TERMINATION EDGE. BASIS-OF-DESIGN AT ALL WALL TILE INSIDE AND OUTSIDE CORNERS IS SCHLUTER QUADEC.

LEGEND:

MR-1	18"x36" MIRROR	HD	HAND DRYER
LAV	LAVATORY (SINK)	WG	S.S. HAND DRYER WALL GUARD
UR	URINAL	PTD	PAPER TOWEL DISPENSER
WC	WATER CLOSET (TOILET)	TPH	TOILET PAPER HOLDER
TILE-1	BASE TILE 6"x12"		
TILE-2	FIELD TILE 12"x24"		

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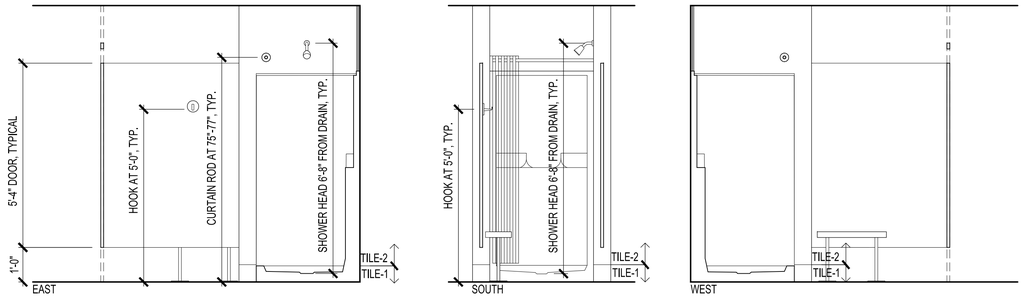
DESIGN AND CONSTRUCTION DIVISION
ADAM LACH, RA, DIRECTOR

RENOVATE ARMORY - WATERFORD

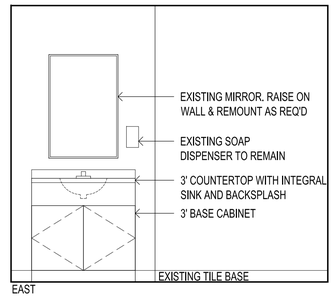
DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
2650 WATKINS LAKE RD., WATERFORD TWP, MI 48328

DESIGNED		JDJ
DRAWN		JDJ
CHECKED		
APPROVED		
DATE		9 JULY 2025
ISSUED FOR	PRELIMINARY	■
	CONSTRUCTION	■
	FINAL RECORD	□
IDENTIFICATION NO.	PROJECT	2690023043
	INDEX CODE	INDEX CODE
SHEET		A4.1



1 / A4.3 INTERIOR ELEVATION - TYPICAL SHOWER & CHANGING AREA

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



2 / A4.2 INTERIOR ELEVATION - LACTATION 112

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

GENERAL NOTES:

1. SEE PLANS FOR ADDITIONAL DIMENSIONAL INFORMATION
2. SEE ELECTRICAL DRAWINGS FOR POWER LAYOUT
3. SEE PLUMBING FOR WATER SUPPLY/WASTE LAYOUT & REQUIREMENTS
4. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS PRIOR TO SUBMITTING/PURCHASING ANY KITCHEN EQUIPMENT
5. PROVIDE AND INSTALL CONTINUOUS METAL TILE TERMINATION EDGE. BASIS-OF-DESIGN AT ALL WALL TILE INSIDE AND OUTSIDE CORNERS IS SCHLUTER QUADEC.

LEGEND:

MR-1	18"x36" MIRROR	HD	HAND DRYER
LAV	LAVATORY (SINK)	WG	S.S. HAND DRYER WALL GUARD
UR	URINAL	PTD	PAPER TOWEL DISPENSER
WC	WATER CLOSET (TOILET)	TPH	TOILET PAPER HOLDER
TILE-1	BASE TILE 6"x12"		
TILE-2	FIELD TILE 12"x24"		

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ISSUED FOR	DATE
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PROJECT 2690023043
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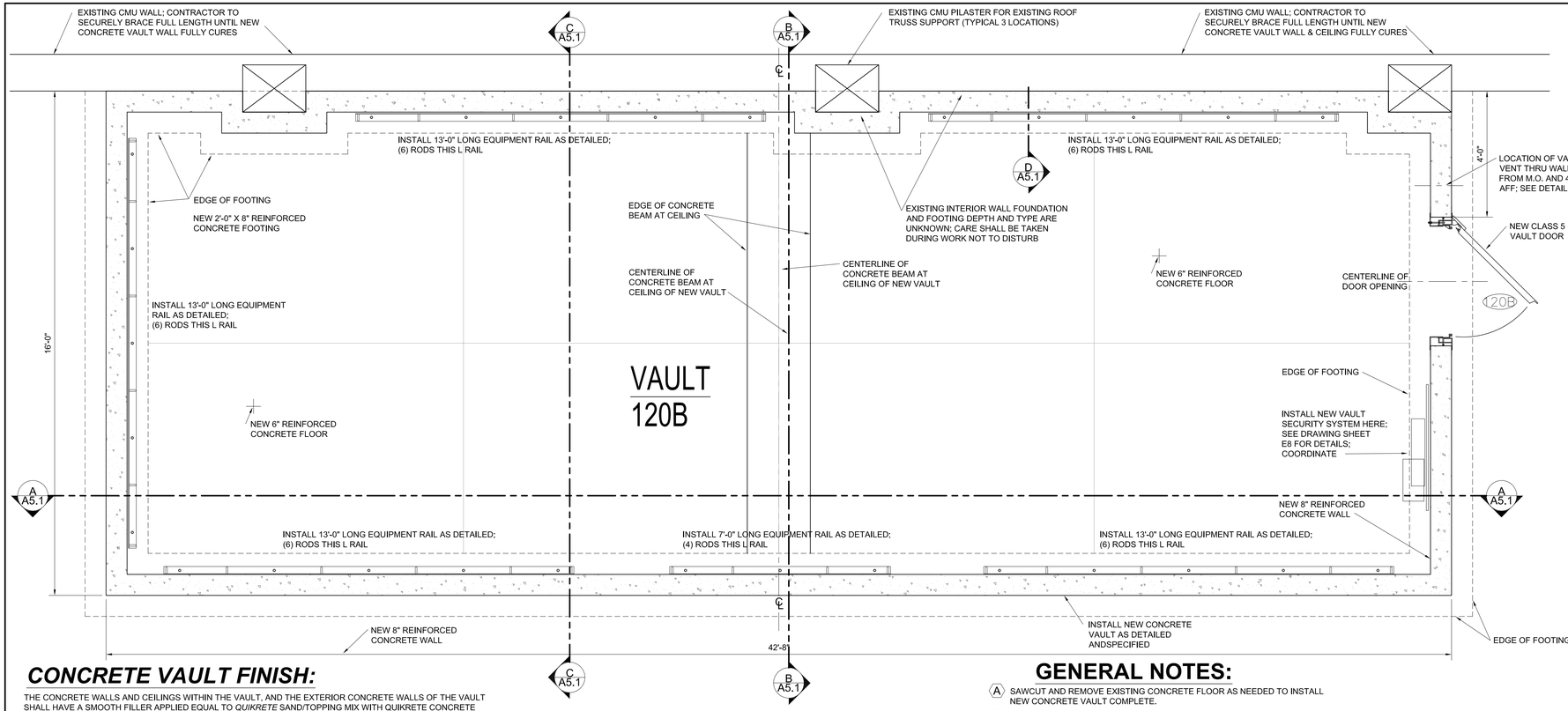
SHEET A4.2



VAULT CONSTRUCTION NOTES:

FOUNDATIONS

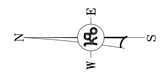
1. FOUNDATIONS SHALL BEAR ON FIRM UNDISTURBED SOIL WITH A SAFE BEARING CAPACITY OF 4000 PSF. IF SOIL CAPACITY IN NOT FOUND FOOTINGS SHALL BE ENLARGED OR LOWERED AT THE DIRECTION OF THE ENGINEER. CONTRACTOR SHALL PROVIDE GEOTECHNICAL ENGINEER TO VERIFY SOIL BEARING CAPACITY AND SUITABILITY IN THE FIELD.

REINFORCED CONCRETE

1. ALL FORMING SHALL BE TRUE AND STRAIGHT IN ACCORDANCE WITH ACI STANDARDS.
2. CONCRETE MIXING SHALL COMPLY WITH ASTM C94.
3. CONCRETE SHALL HAVE MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, 4" MAXIMUM SLUMP, 6% AIR CONTENT AND MAXIMUM 1" AGGREGATE SIZE. ALL CONCRETE SHALL BE REGULAR WEIGHT, 145 POUNDS PER CUBIC FOOT.
4. CONCRETE SHALL NOT BE DROPPED THROUGH REINFORCING STEEL IN A MANNER THAT CAUSES SEGREGATION OF AGGREGATES. USE HOPPERS, CHUTES OR TRUNKS OF VERYING LENGTHS SO THAT FREE UNCONFINED FALL SHALL NOT EXCEED 5'.
5. REBAR: ALL REINFORCING STEEL SHALL BE NEW STOCK DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60.
6. REINFORCING STEEL SHALL BE FABRICATED AND PLACED IN ACCORDANCE WITH A.C.I. 315.
7. SPLICES SHALL HAVE A LAP LENGTH OF 36 BAR DIAMETERS, BUT NOT LESS THAN 24 INCHES. SPLICES IN ADJACENT BARS SHALL NOT BE LESS THAN 5 FOOT APART.
8. ALL REINFORCING STEEL SHALL BE SECURELY WIRED AND PROPERLY SUPPORTED ABOVE THE GROUND AND AWAY FROM FORMS.
9. COVER: IF NOT OTHERWISE NOTED, MINIMUM CLEAR COVER SHALL BE 2 INCH FOR SLABS AND WALLS NOT EXPOSED TO EARTH, 1 ½ INCH FOR BEAMS, COLUMNS, TIES AND STIRRUPS.
10. REINFORCED CONCRETE WALLS AND FOOTINGS SHALL HAVE CORNER BARS AT ALL INTERSECTIONS OF THE SAME SIZE AND SPACING AS THE MAIN HORIZONTAL STEEL.
11. PROVIDE 2- #5 BARS EACH SIDE OF ALL OPENINGS, AND 2 - #5 X 4'-0" DIAGONAL BARS AT CORNERS OF OPENINGS.
12. CONTRACTOR SHALL PROVIDE TESTING COMPANY TO PERFORM QUALITY CONTROL TESTING AS SPECIFIED.

CONCRETE VAULT FINISH:

THE CONCRETE WALLS AND CEILINGS WITHIN THE VAULT, AND THE EXTERIOR CONCRETE WALLS OF THE VAULT SHALL HAVE A SMOOTH FILLER APPLIED EQUAL TO *QUIKRETE* SAND/TOPPING MIX WITH QUIKRETE CONCRETE ACRYLIC FORTIFIER RESIN ADMIXTURE. THIS SYSTEM SHALL BE APPLIED TO THE ENTIRE CONCRETE SURFACE TO FILL ALL VOIDS AND REMOVE ALL BLEMISHES. PRIOR TO THIS APPLICATION, PREP THE WALLS AND CEILINGS AS NEEDED AND RECOMMENDED BY THE FILLER/SEALER MANUFACTURER(*QUIKRETE*).
UPON THE CURING OF THIS APPLICATION, THE CONCRETE WALLS AND CEILINGS WITHIN THE VAULT, AND THE EXTERIOR CONCRETE WALLS OF THE VAULT SHALL BE PAINTED FOLLOWING THE PAINTING SPECIFICATIONS.



1 A5.0 **VAULT FLOOR PLAN ENLARGEMENT**
SCALE 1/2" = 1'-0"

GENERAL NOTES:

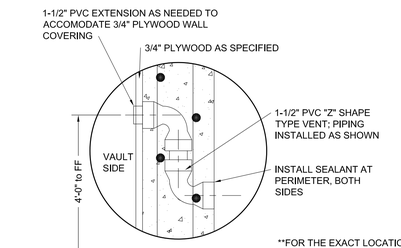
A. SAWCUT AND REMOVE EXISTING CONCRETE FLOOR AS NEEDED TO INSTALL NEW CONCRETE VAULT COMPLETE.

B. COORDINATE WITH ELECTRICAL FOR THE LOCATION OF A NEW RIGID CONDUIT(S) TO BE INSTALLED IN THE NEW VAULT; COORDINATE ANY CORE DRILLING THROUGH THE REINFORCED CONCRETE WALL WILL AS NEEDED.

C. COORDINATE WITH MECHANICAL AND PLUMBING FOR NEW HUMIDIFIER; REFERENCE NOTE 5 ON DRAWING SHEET M4.0. .

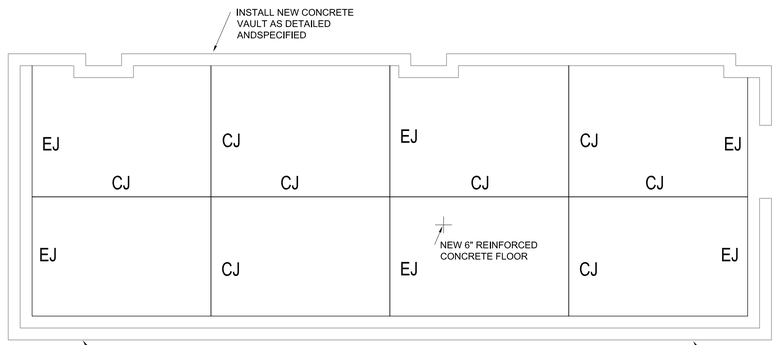
D. COORDINATE WITH THE SPECIFIED NEW WIRE MESH PARTITIONS TO BE INSTALLED AT THE PERIMETER OF, ON TOP OF, THE NEW CONCRETE VAULT CEILING. TO BE INSTALLED FROM TOP OF THE VAULT TO THE BOTTOM OF THE EXISTING ROOF TRUSSES.

E. COORDINATE WITH THE MECHANICAL FOR THE LOCATION OF THE (2) DUCT OPENINGS THROUGH THE CONCRETE CEILING.

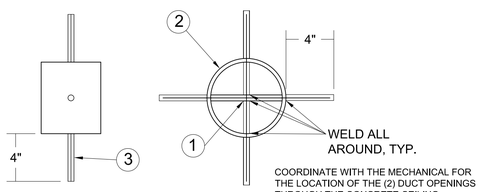


**FOR THE EXACT LOCATION OF THESE ITEMS, SEE VAULT FLOOR PLAN

6 A5.0 **VAULT VENT DETAIL**
SCALE 1-1/2" = 1'-0"



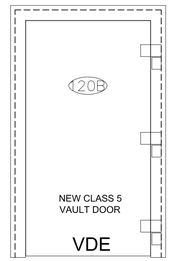
2 A5.0 **NEW CONCRETE FLOOR PLAN**
SCALE 1/4" = 1'-0"



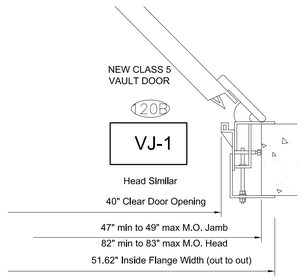
COORDINATE WITH THE MECHANICAL FOR THE LOCATION OF THE (2) DUCT OPENINGS THROUGH THE CONCRETE CEILING.

1. (2) 3/8" Ø HARDEN STEEL BARS BOTH WAYS CENTERED IN OPENING, WELD ALL AROUND TO PIPE AND TO CROSS BARS
2. 6" DIA. SCH 40 X 5" PIPE
3. 3/8" Ø HARDEN STEEL BARS X 4" WELD TO PIPE AND THEN WELD TO REINFORCING IN WALL; 4 TOTAL
4. BACK PRIME ALL SURFACES PRIOR TO INSTALLING
5. FINISH PAINT FOLLOWING SCHEDULE

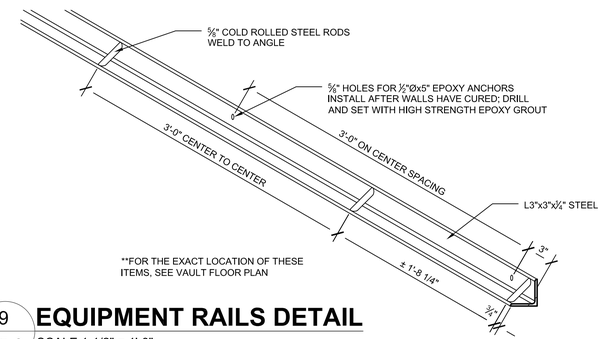
5 A5.0 **DUCT OPENING DETAIL**
SCALE 2" = 1'-0"



7 A5.0 **VAULT DOOR ELEVATION**
SCALE 1/2" = 1'-0"

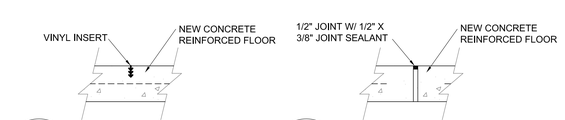


8 A5.0 **VAULT DOOR JAMB DETAIL**
SCALE 1-1/2" = 1'-0"



**FOR THE EXACT LOCATION OF THESE ITEMS, SEE VAULT FLOOR PLAN

9 A5.0 **EQUIPMENT RAILS DETAIL**
SCALE 1-1/2" = 1'-0"



3 A5.0 **CONTROL JOINT (CJ)**
SCALE 1 1/2" = 1'-0"

4 A5.0 **EXPANSION JOINT (EJ)**
SCALE 1 1/2" = 1'-0"

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IDENTIFICATION NO.	PROJECT 2650023043
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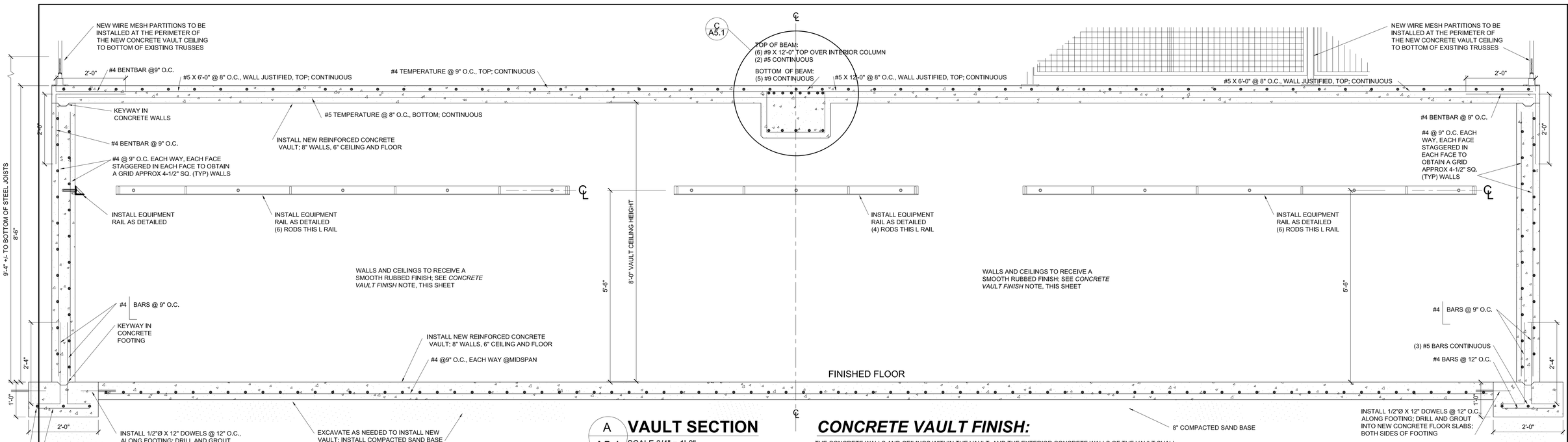
SHEET	A5.0



A A5.1 **VAULT SECTION**
SCALE 3/4" = 1'-0"

CONCRETE VAULT FINISH:

THE CONCRETE WALLS AND CEILINGS WITHIN THE VAULT, AND THE EXTERIOR CONCRETE WALLS OF THE VAULT SHALL HAVE A SMOOTH FILLER APPLIED EQUAL TO *QUIKRETE* SAND/TOPPING MIX WITH QUIKRETE CONCRETE ACRYLIC FORTIFIER RESIN ADMIXTURE. THIS SYSTEM SHALL BE APPLIED TO THE ENTIRE CONCRETE SURFACE TO FILL ALL VOIDS AND REMOVE ALL BLEMISHES. PRIOR TO THIS APPLICATION, PREP THE WALLS AND CEILINGS AS NEEDED AND RECOMMENDED BY THE FILLER/SEALER MANUFACTURER(*QUIKRETE*).
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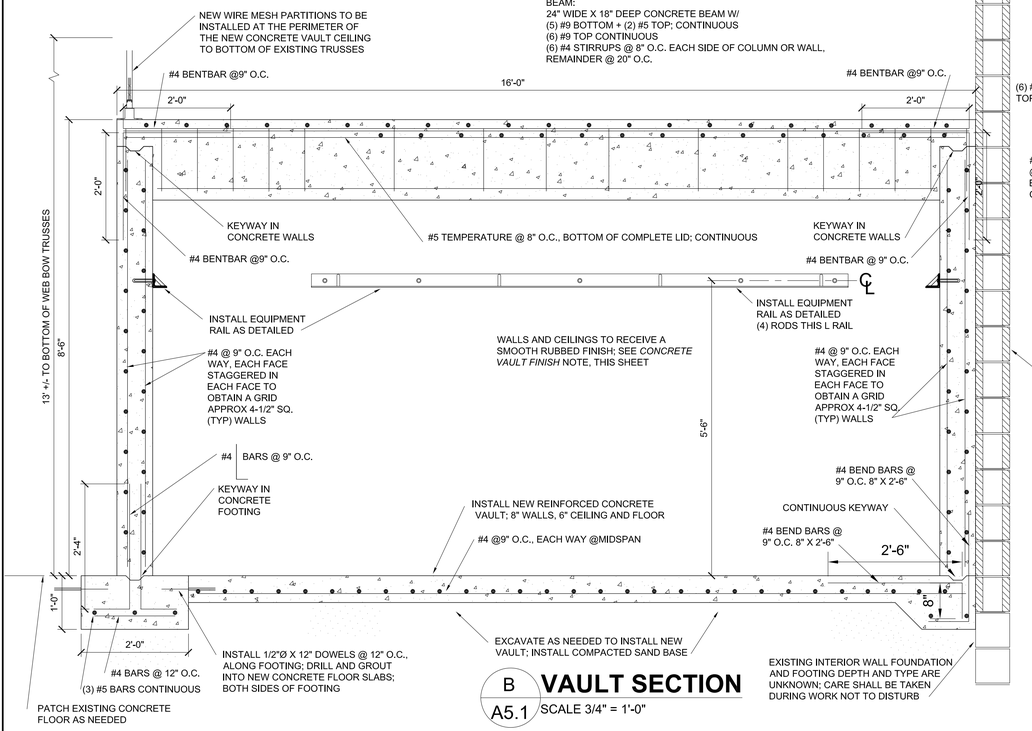
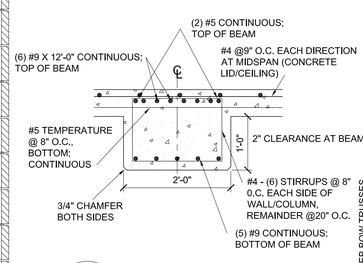
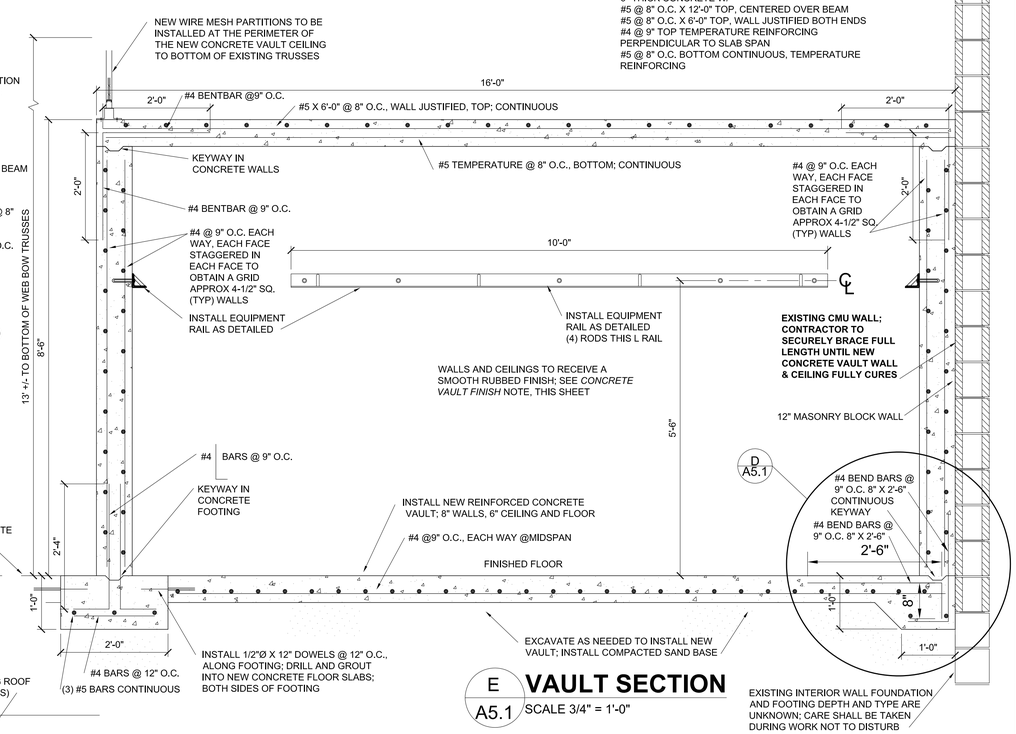


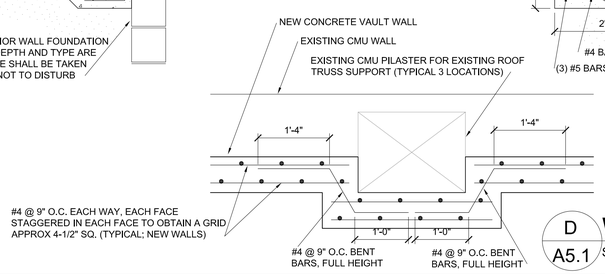
B A5.1 **VAULT SECTION**
SCALE 3/4" = 1'-0"



C A5.1 **BEAM RESTEEL**
SCALE 3/4" = 1'-0" (CROSS SECTION)



E A5.1 **VAULT SECTION**
SCALE 3/4" = 1'-0"



D A5.1 **WALL SECTION AT EXTG PILASTER**
SCALE 3/4" = 1'-0" RESTEEL ENLARGEMENT

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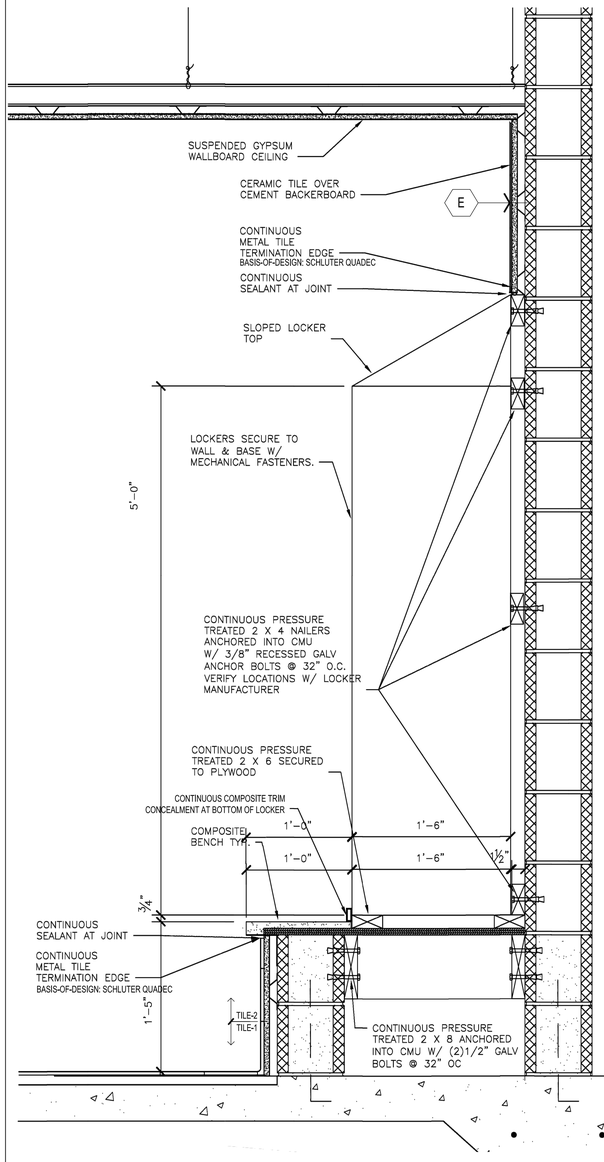
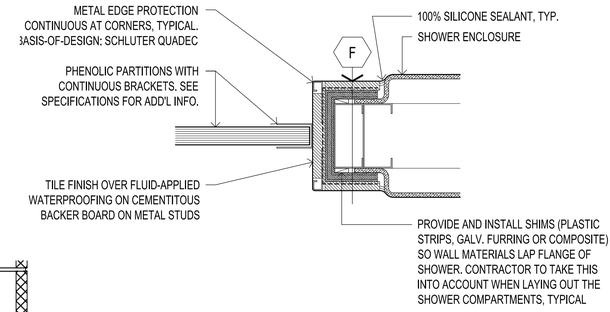
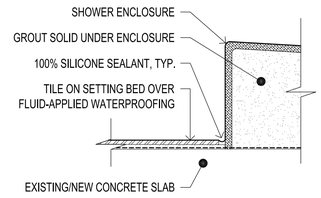


3 A6.0 LOCKER ROOM SECTION DETAIL AT BENCH / LOCKER
SCALE: 1 1/2" = 1'-0" DTLS.DWG

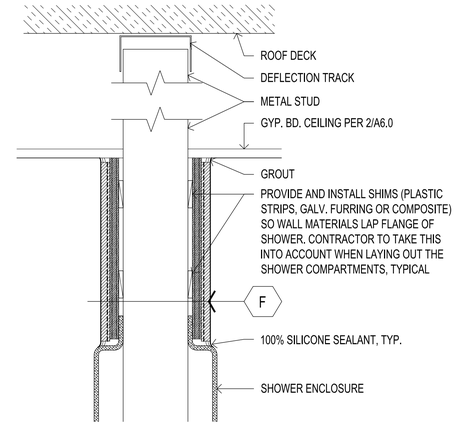


7 A6.0 SHOWER ENCLOSURE: WALL DETAIL
SCALE: 3" = 1'-0"

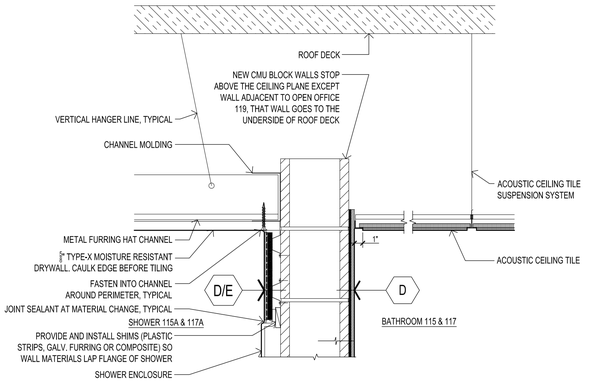


NOTE AT SLAB: PREPARE CONCRETE SUBSTRATE TO RECEIVE TILE FINISH. CLEAN SURFACE OF DUST, DEBRIS, AND CONTAMINANTS. APPLY LIQUID-APPLIED WATERPROOFING MEMBRANE TO ENTIRE FLOOR AREA ADJACENT TO SHOWER PER ANSI A118.10. SET TILE USING POLYMER-MODIFIED THINSET MORTAR (ANSI A118.4 OR A118.15). ENSURE CONTINUOUS BONDED WATERPROOFING ACROSS ALL SURFACES AND AT TRANSITIONS.

6 A6.0 SHOWER ENCLOSURE: FLOOR DETAIL
SCALE: 3" = 1'-0"

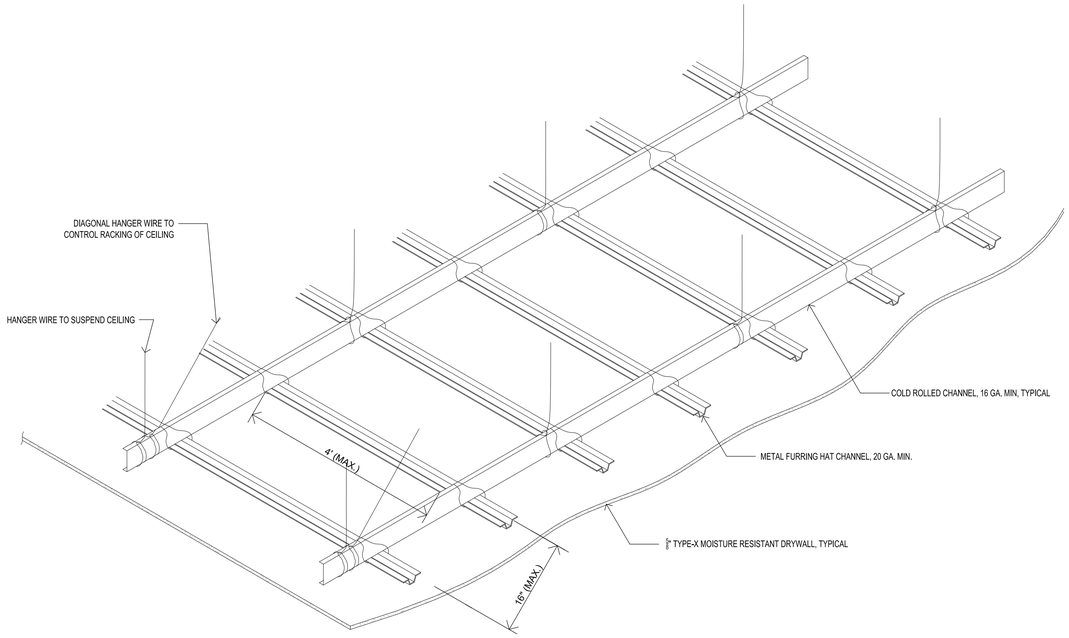


5 A6.0 SHOWER ENCLOSURE: SIDE WALL & CEILING DETAIL AT MTL STUD FRAMING
SCALE: 3" = 1'-0"

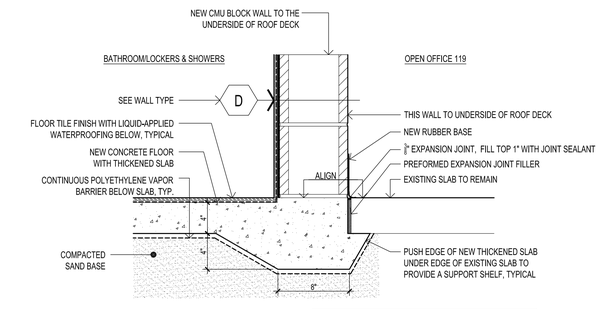


NOTE: AT CONTRACTOR'S DISCRETION IF THEY USE WALL TYPE 'D' OR 'E' AT WALL BETWEEN TOP OF SHOWER INSERT AND CEILING. THE INTENT IS FOR THE TILE TO OVERLAP THE SHOWER FLANGE. COORDINATE DETAILS WITH DMVA.

4 A6.0 SHOWER ENCLOSURE: REAR CMU WALL CEILING DETAIL
SCALE: 1 1/2" = 1'-0" DTLS.DWG



2 A6.0 HARD CEILING DETAIL
SCALE: 1 1/2" = 1'-0" DTLS.DWG



NOTE: ALIGN FINISHED FLOOR HEIGHT OF NEW FLOORS WITH EXISTING. SEE DETAIL 1/A7.1: DOOR THRESHOLD DETAIL. FOR ADD'L INFORMATION ABOUT FLOOR FINISH & FLOOR LEVEL

1 A6.0 TYPICAL FLOOR SLAB & THICKENED FOOTING DETAIL
SCALE: 1 1/2" = 1'-0" DTLS.DWG

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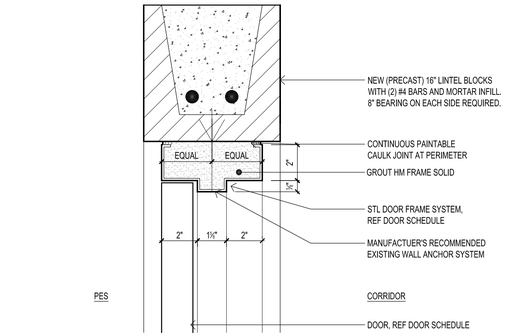
ADAM LACH, RA, DIRECTOR

RENOVATE ARMORY - WATERFORD

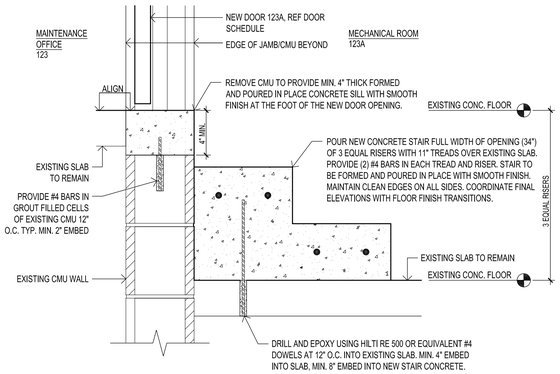
DEPARTMENT OF MILITARY AFFAIRS
2650 WATKINS LAKE RD., WATERFORD TWP, MI 48328

DESIGNED	JDJ
DRAWN	JDJ
CHECKED	
APPROVED	
DATE	9 JULY 2025
ISSUED FOR	■ PRELIMINARY ■ CONSTRUCTION □ FINAL RECORD
IDENTIFICATION NO.	
PROJECT	2690023043
INDEX CODE	
INDEX CODE	
SHEET	A6.0



2 A6.1 INTERIOR SECTION DETAIL: LINTEL AT DOOR HEAD

SCALE: 3" = 1'-0" DTLS.DWG



1 A6.1 TYPICAL FLOOR SLAB & THICKENED FOOTING DETAILS

SCALE: 1 1/2" = 1'-0" DTLS.DWG

STATE OF MICHIGAN
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PROJECT	26900230343
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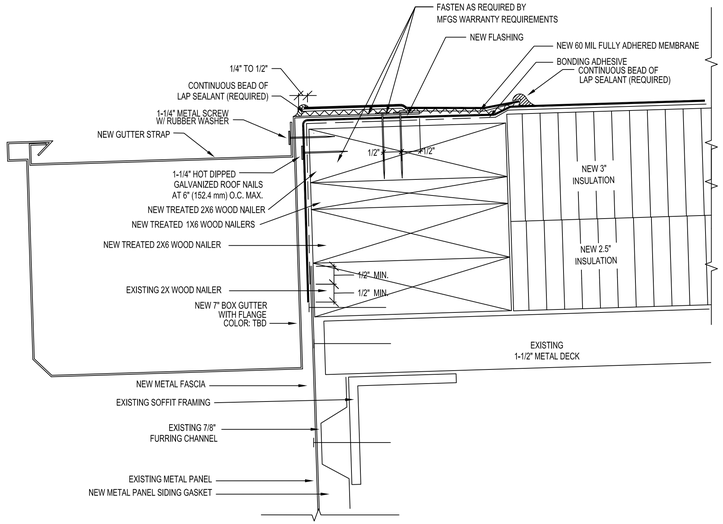
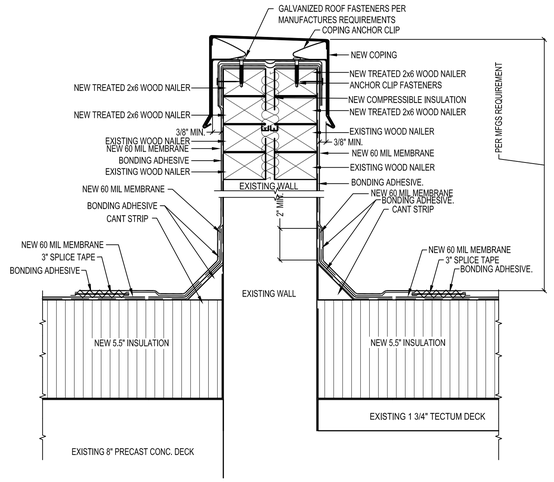
INDEX CODE	
SHEET	A6.1



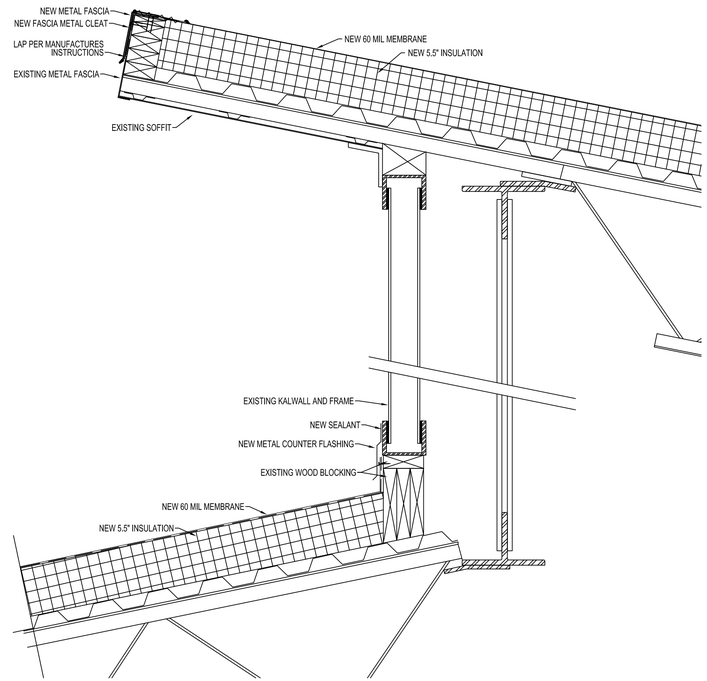
1 A1.1 GUTTER EDGE DETAIL

SCALE: 6" = 1'-0"



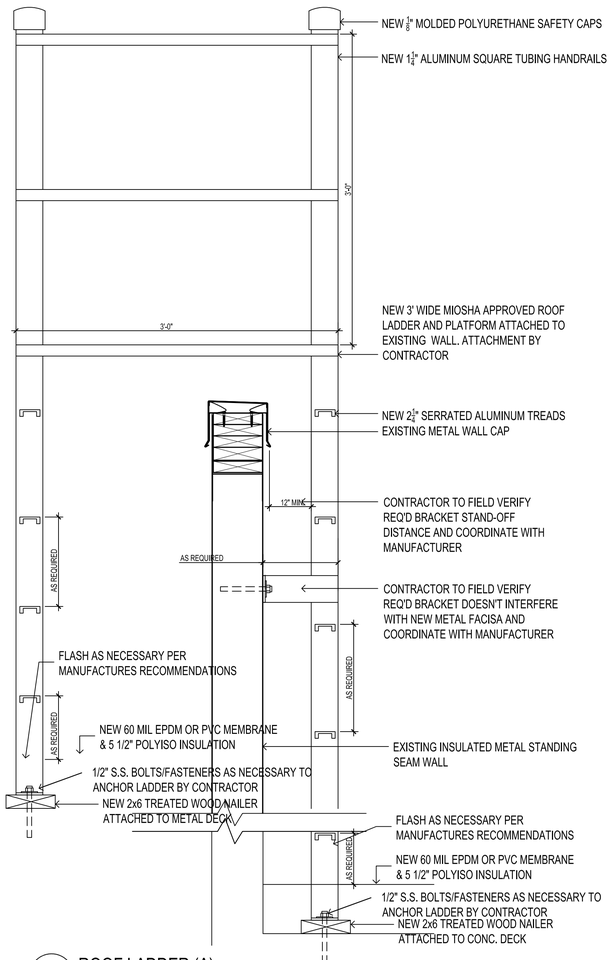
2 A1.1 EXPANSION JOINT DETAIL

SCALE: 3" = 1'-0"



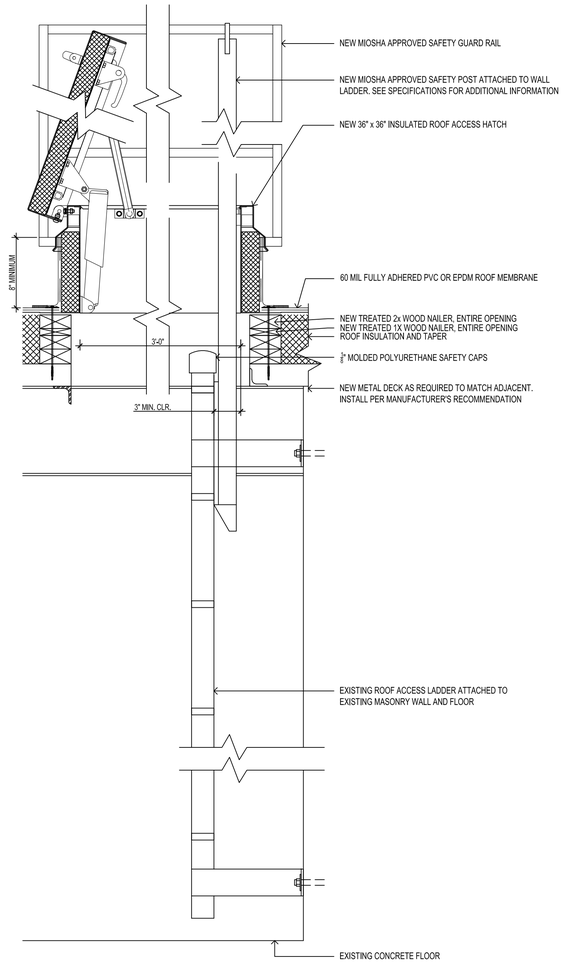
3 A1.1 DRILL HALL DETAIL

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



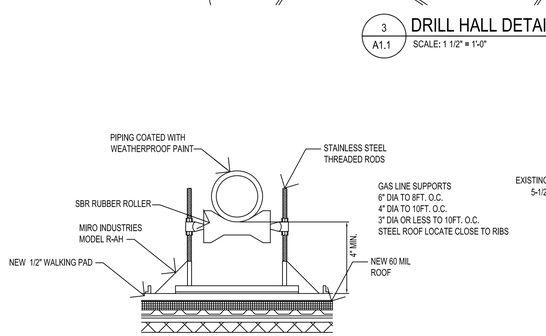
A1.1 ROOF LADDER (A)

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



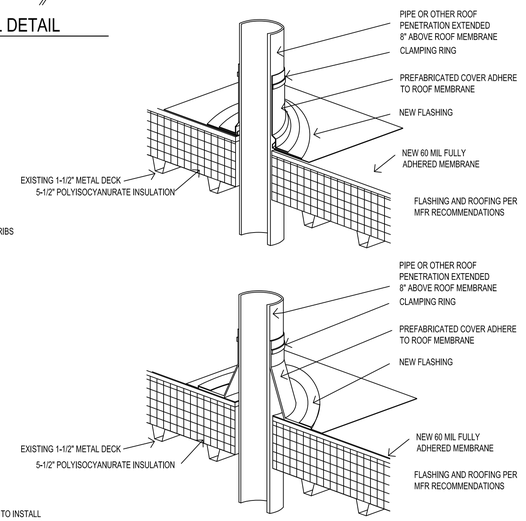
A1.1 NEW ROOF HATCH AND LADDER DETAIL

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



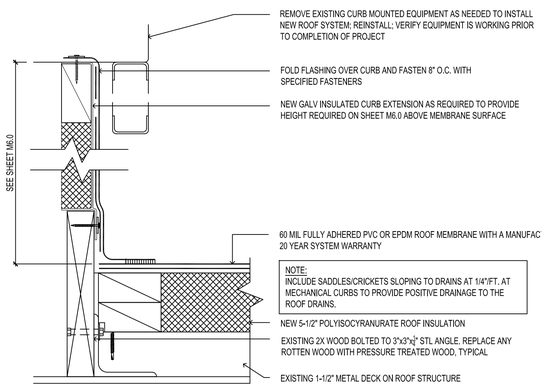
A1.1 TYP. ROOF PIPE SUPPORT DETAIL

SCALE: 3" = 1'-0"



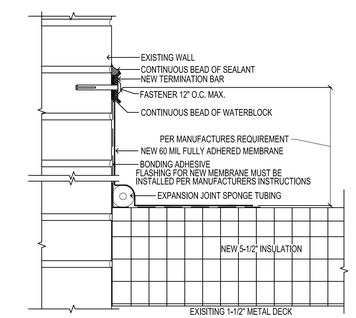
A1.1 A2.2 PIPE PENETRATION DETAIL

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



A1.1 M6.0 NEW EQUIPMENT CURBS

SCALE: 3" = 1'-0"



4 A1.1 EDGE TERMINATIONS

SCALE: 3" = 1'-0"

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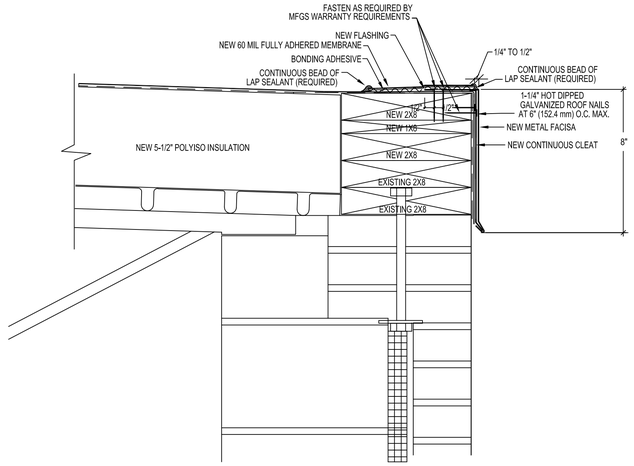
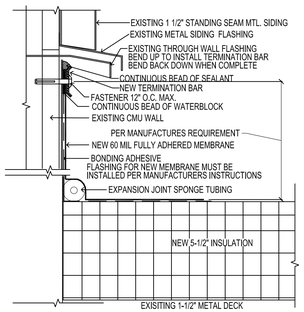
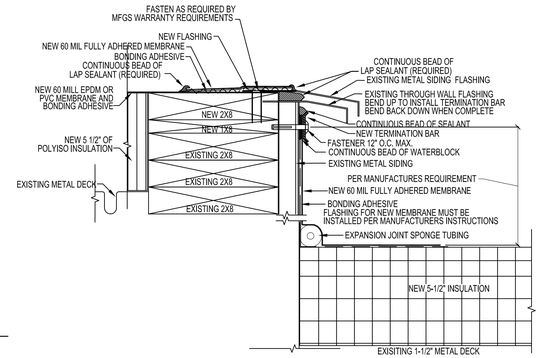
PROJECT	269023043
INDEX CODE	
INDEX CODE	
SHEET	A6.2



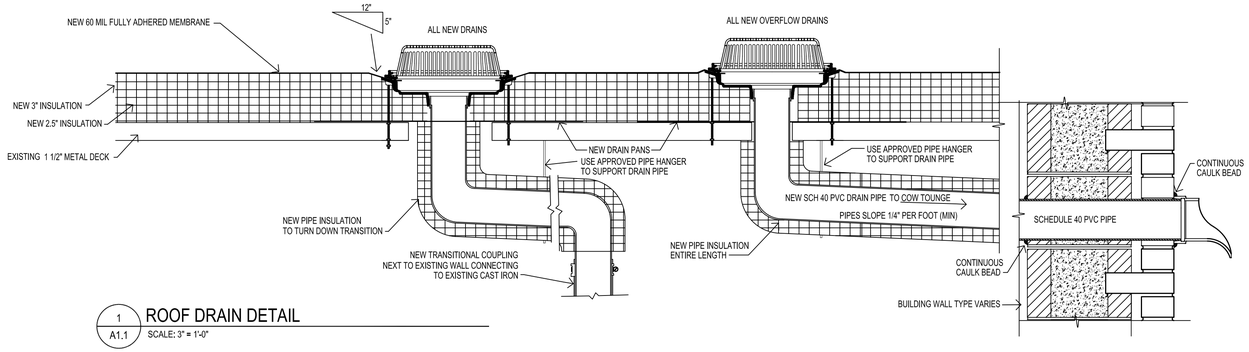
5 A1.1 FASCIA EDGE DETAIL W/O GUTTER
SCALE: 3" = 1'-0"



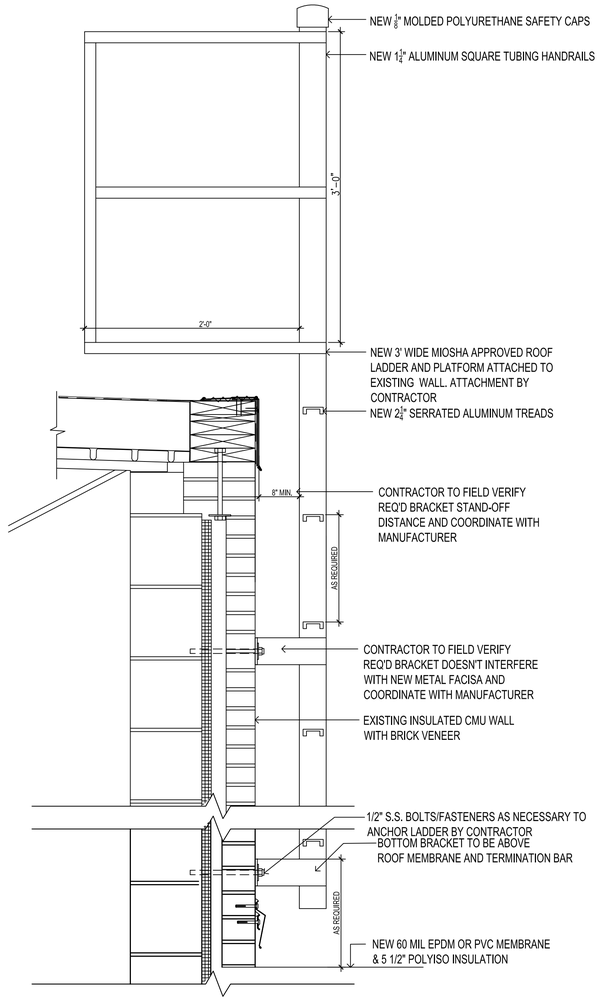
6 A1.1 EDGE TERMINATIONS
SCALE: 3" = 1'-0"



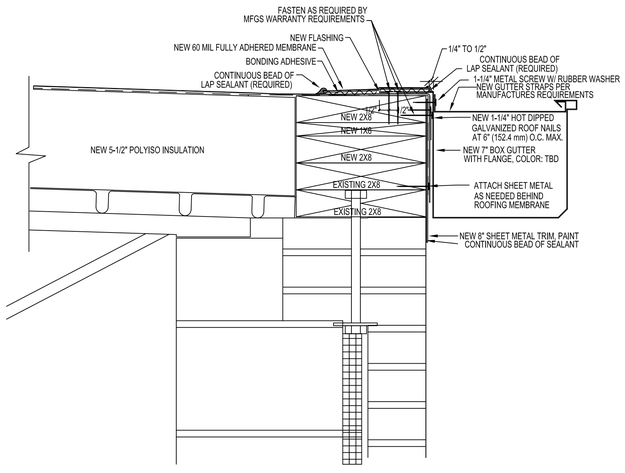
7 A1.1 METAL SIDING SCUPPER DETAIL
SCALE: 3" = 1'-0"



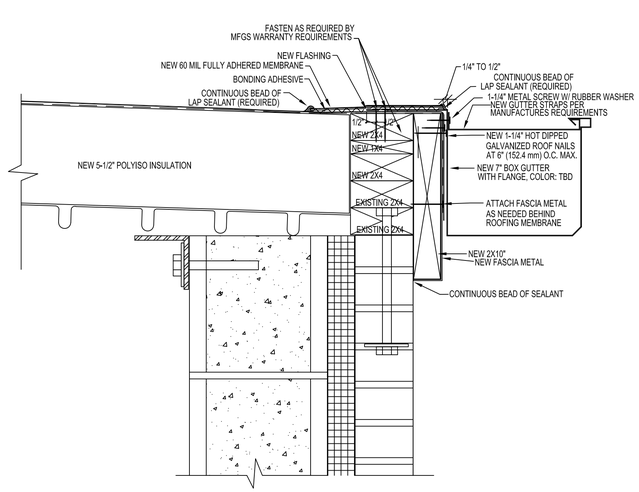
1 A1.1 ROOF DRAIN DETAIL
SCALE: 3" = 1'-0"



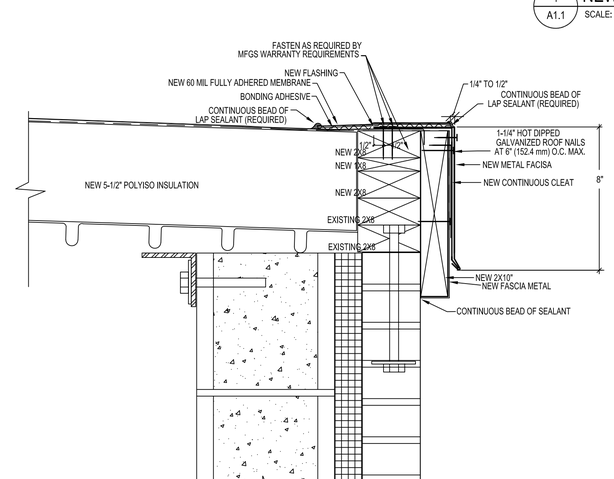
1 A1.1 NEW ROOF LADDER (B)
SCALE: 1 1/2" = 1'-0"



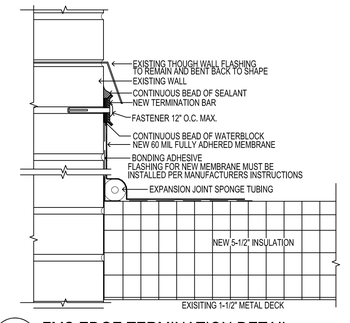
8 A1.1 FASCIA EDGE DETAIL WITH GUTTER
SCALE: 3" = 1'-0"



9 A2.2 FMS FASCIA EDGE DETAIL WITH GUTTER
SCALE: 3" = 1'-0"



10 A2.2 FMS FASCIA EDGE DETAIL NO GUTTER
SCALE: 3" = 1'-0"



11 A2.2 FMS EDGE TERMINATION DETAIL
SCALE: 3" = 1'-0"

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IDENTIFICATION NO.	
PROJECT	265002/3043
INDEX CODE	
INDEX CODE	
SHEET	A6.3

DOOR SCHEDULE

LOCATION					EXISTING		FRAMES				DETAILS			DOORS					HARDWARE			REMARKS
NUMBER	FROM	TO	QTY.	HAND	OR NEW	LABEL	GAUGE	ELEV	DEPTH	WALL TYPE	HEAD	JAMB	SILL	GAUGE	TYPE	SIZE	CORE	FINISH	HDWE. GRP			
X1	EXTERIOR	VESTIBULE A	1	PR	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD	1			NEW HARDWARE IN EXISTING DOORS
X2	VESTIBULE A	CORRIDOR A	1	PR	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD	-			
X3	EXTERIOR	CORRIDOR A	1	PR	NEW	-	0.125"	7-2"	4.5"	MASONRY	3/A7.2	9/A7.2	13/A7.2	0.10"	FG	3'-0" X 7'-0"	INSUL	ALUM	1			SEE A/A7.2 FOR ADD'L INFO.
X4	EXTERIOR	MECH ROOM 123A	1	PR	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD	-			
X5	EXTERIOR	LOBBY	1	PR	NEW	-	0.125"	8'-0"	4.5"	MASONRY	2/A7.2	7&8/A7.2	13&14/A7.2	0.10"	FG	3'-0" X 7'-0"	INSUL	ALUM	1			SEE A/A7.2 FOR ADD'L INFO.
X6	EXTERIOR	SCULLERY 140A	1	R.H.R.	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD	-			
X7	EXTERIOR	MECH ROOM 150	1	L.H.R.	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD	-			
X8	EXTERIOR	VESTIBULE C	1	PR	NEW	-	-	-	-	-	-	-	-	-	F	3'-0" X 7'-0"	-	STL	-			PROVIDE AND INSTALL NEW ASTRAGAL
X9	VESTIBULE C	CORRIDOR E	1	PR	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD	-			
X10	EXTERIOR	PES 122	1	R.H.R.	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD	-			
X11	EXTERIOR	UNIT STORAGE 120	1	R.H.R.	NEW	-	12	8'-4"	6"	MASONRY	-	-	-	12	F	4'-0" X 8'-0"	SSC	PTD	2			TOP OF DOOR TO HAVE INVERTED TOP
X12	EXTERIOR	VESTIBULE B	1	PR	NEW	-	0.125"	8'-2"	4.5"	MASONRY	1/A7.2	7&8/A7.2	13&14/A7.2	0.10"	FG	3'-0" X 7'-0"	INSUL	ALUM	1			SEE A/A7.2 FOR ADD'L INFO.
X13	VESTIBULE B	CORRIDOR C	1	PR	EXISTING	-	-	-	-	-	-	-	-	-				PTD				
X14	EXTERIOR	OFFICE 180A	1	L.H.R.	EXISTING	-	-	-	-	-	-	-	-	-				PTD				
X15	EXTERIOR	POL STORAGE	1	PR	EXISTING	-	-	-	-	-	-	-	-	-				PTD				
X16	EXTERIOR	MECH 180F	1	R.H.R.	EXISTING	-	-	-	-	-	-	-	-	-				PTD				
X17	EXTERIOR	M.V.S.A.180	1	R.H.R.	EXISTING	-	-	-	-	-	-	-	-	-				PTD				
101	CORRIDOR A	R&R OFFICE 101	1	R.H.	EXISTING	-	-	-	-	-	-	-	-	-				PTD				
102	CORRIDOR A	FAMILY R. 102	1	R.H.	EXISTING	-	-	-	-	-	-	-	-	-				PTD				
103	CORRIDOR A	CLASSROOM 103	1	L.H.	EXISTING	-	-	-	-	-	-	-	-	-				PTD				
104	CORRIDOR A	CLASSROOM 104	1	R.H.	EXISTING	-	-	-	-	-	-	-	-	-				PTD				
105	CORRIDOR A	CLASSROOM 105	1	L.H.	EXISTING	-	-	-	-	-	-	-	-	-				PTD				
106	CORRIDOR A	CLASSROOM 106	1	L.H.	EXISTING	-	-	-	-	-	-	-	-	-				PTD				
108	CORRIDOR A	CLASSROOM 108	1	R.H.	EXISTING	-	-	-	-	-	-	-	-	-				PTD				
109	CORRIDOR B	JANITOR 109	1	L.H.	EXISTING	-	-	-	-	-	-	-	-	-				PTD				
110	CORRIDOR A	P.T. 110	1	L.H.	EXISTING	-	-	-	-	-	-	-	-	-				PTD				
111	CORRIDOR A	OPEN OFFICE 111	1	L.H.R.	EXISTING	-	-	-	-	-	-	-	-	-				PTD				
111A	OPEN OFFICE 111	OFFICE 111A	1	R.H.	EXISTING	-	-	-	-	-	-	-	-	-				PTD				
111B	OPEN OFFICE 111	OFFICE 111B	1	L.H.	EXISTING	-	-	-	-	-	-	-	-	-				PTD				
111C	OPEN OFFICE 111	OFFICE 111C	1	L.H.	EXISTING	-	-	-	-	-	-	-	-	-				PTD				
111D	OPEN OFFICE 111	OFFICE 111D	1	R.H.	EXISTING	-	-	-	-	-	-	-	-	-				PTD				
111E	OPEN OFFICE 111	OFFICE 111E	1	L.H.	EXISTING	-	-	-	-	-	-	-	-	-				PTD				
111F	CORRIDOR C	OPEN OFFICE 111	1	L.H.R.	EXISTING	-	-	-	-	-	-	-	-	-				PTD				
112	CORRIDOR B	LACTATION 112	1	R.H.	EXISTING	-	-	-	-	-	-	-	-	-				PTD				
113	CORRIDOR B	COMMS CLST 113	1	L.H.	EXISTING	-	-	-	-	-	-	-	-	-				PTD				
114	CORRIDOR B	STORAGE 114	1	L.H.	EXISTING	-	-	-	-	-	-	-	-	-				PTD				
115	CORRIDOR B	MEN'S 115	1	R.H.	NEW	-	16	7'-4"	8-3/8"	MASONRY	2/A7.1	2/A7.1	1/A7.1	16	F	3'-0" X 7'-0"	SDC	PTD	3			
115A	MEN'S 115	SHOWER 115A	1	R.H.	NEW	-	16	7'-4"	7-3/4"	MASONRY	4/A7.1	4/A7.1	3/A7.1	16	F	3'-0" X 7'-0"	SDC	PTD	3			
116	CORRIDOR B	STORAGE 116	1	R.H.	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD				
117	CORRIDOR B	WOMEN'S 117	1	L.H.	NEW	-	16	7'-4"	12-3/8"	MASONRY	2/A7.1	2/A7.1	1/A7.1	16	F	3'-0" X 7'-0"	SDC	PTD	3			
117A	WOMEN'S 117	SHOWER 117A	1	L.H.	NEW	-	16	7'-4"	7-3/4"	MASONRY	4/A7.1	4/A7.1	3/A7.1	16	F	3'-0" X 7'-0"	SDC	PTD	3			
118	CORRIDOR B	BREAK RM 118	1	R.H.	NEW	-	16	7'-4"	VIF	CONCRETE	-	-	-	16	F	3'-0" X 7'-0"	SDC	PTD	4			
118A	CORRIDOR D	BREAK RM 118	1	L.H.R.	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD				
119	CORRIDOR C	OPEN OFFICE 119	1	R.H.	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD				
119A	OPEN OFFICE 119	OFFICE 119A	1	R.H.	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD				
119B	OPEN OFFICE 119	OFFICE 119B	1	L.H.	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD				
119C	CORRIDOR D	OPEN OFFICE 119	1	L.H.R.	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD				
120	CORRIDOR D	UNIT STORAGE 120	1	PR	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD				
120A	UNIT STORAGE 120	OFFICE 120A	1	R.H.	NEW	-	16	7'-4"	VIF				-	-	-	-	-	PTD	5			
120B	UNIT STORAGE 120	VAULT 120B	1	R.H.R.	NEW	-	SEE SPEC SECTION 111000 - VAULT DOOR				8/A5.0	8/A5.0	-	SEE SPEC SECTION 111000				PTD	-			
121	CORRIDOR D	STORAGE 121	1	L.H.R.	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD	-			
122	CORRIDOR D	PES 122	1	L.H.R.	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD	-			
123	CORRIDOR D	MAINTENACE 123	1	R.H.	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD	-			
123A	MAINTENANCE 123	MECH ROOM 123A	1	R.H.R.	NEW	90 MIN	16	7'-4"	7-3/4"	MASONRY	2/A6.1	2/A6.1	1/A6.1	16	F	3'-0" X 7'-0"	INSUL	PTD	6			
123B	MECH ROOM 123A	ELECTRICAL 123B	1	R.H.	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD	-			
123C	MECH ROOM 123A	ELECTRICAL 123B	1	R.H.R.	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD	-			
130	LOBBY	ASSEMBLY 130	1	PR	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD	-			
131	ASSEMBLY 130	CHAIR & TABLE 131	1	PR	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD	-			
132	ASSEMBLY 130	SIPR 132	1	R.H.	NEW	-	16	7'-4"	VIF	VIF	-	-	-	16	7	3'-0" X 7'-0"	SDC	PTD	7			
133	CORRIDOR E	BATHROOM 133	1	L.H.	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD	-			
134	CORRIDOR E	BATHROOM 134	1	R.H.	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD	-			
135	ASSEMBLY 130	JANTIOR 135	1	R.H.	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD	-			
140	ASSEMBLY 130	KITCHEN 140	1	R.H.	EXISTING	-	-	-	-	-	-	-	-	-	-	3'-6" X 7'-8"	-	PTD	-			
140A	ASSEMBLY 130	SCULLERY 140A	1	R.H.	EXISTING	-	-	-	-	-	-	-	-	-	-	3'-0" x 7'-8"	-	PTD	-			
140B	KITCHEN 140	FOOD STORAGE 140B	1	R.H.	EXISTING	90 MIN	-	-	-	-	-	-	-	-	-	3'-6" X 7'-8"	-	PTD	-			
180A	M.V.S.A. 180	OFFICE 180A	1	R.H.	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD	-			
180C	M.V.S.A. 180	STORAGE 180C	1	L.H.	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD	-			
180D	M.V.S.A. 180	STORAGE 180D	1	L.H.	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD	-			
180E	M.V.S.A. 180	BATHROOM 180E	1	R.H.	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	PTD	-			

LEGEND

MTLSTD	METAL STUD
ALUM	ALUMINUM
CLR	CLEAR
PTD	PAINT
STL	STEEL
WD	WOOD
GLASS	GLASS
SDC	SOUND DEADENING CORE
SSC	STEEL STIFFENED CORE
INSUL	POLYISO INSULATION
NA	NOT APPLICABLE
SS	STAINLESS STEEL
PR	PAIR (DOUBLE DOOR)
HDWE. GRP	HARDWARE GROUP
VIF	VERIFY IN FIELD

GENERAL NOTES

1. DOOR UNDERCUTS TO BE 1/4" MINIMUM TO 1/2" MAXIMUM ABOVE SURFACE OF FINISH MATERIAL U.N.O., GENERAL CONTRACTOR TO COORDINATE
2. ALL NEW AND EXISTING INTERIOR AND EXTERIOR DOORS AND FRAMES ARE TO BE PAINTED WITH THE EXCEPTION OF NEW ALUMINUM DOORS AND FRAMES

DOORS & DOOR FRAME NOTES:

1. ALL EXISTING AND NEW DOOR FRAMES AND DOORS ARE TO BE PAINTED TO MATCH EXISTING/REMAINDER OF THE BUILDING.
2. ALL EXISTING EXTERIOR DOORS TO REMAIN ARE TO BE RE-PAINTED, RECEIVE NEW DOOR SEALS COMPARABLE & COMPATIBLE FOR USE ON THE EXISTING DOORS.
3. EMPTY

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RENOVATE ARMORY - WATERFORD

DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
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DRAWN	JDJ
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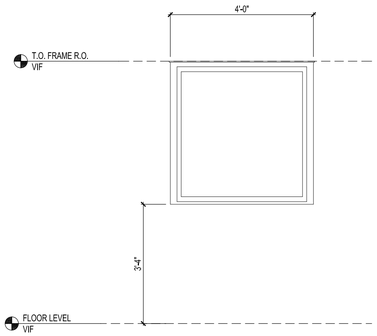
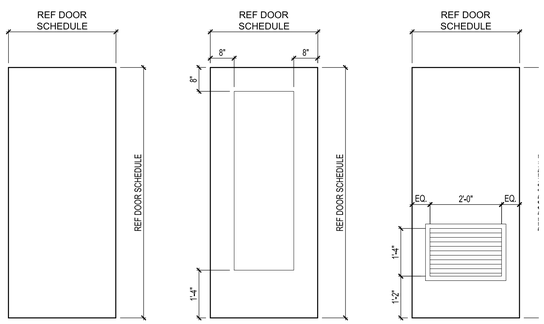
SHEET	A7.0

WINDOW FRAME TYPES

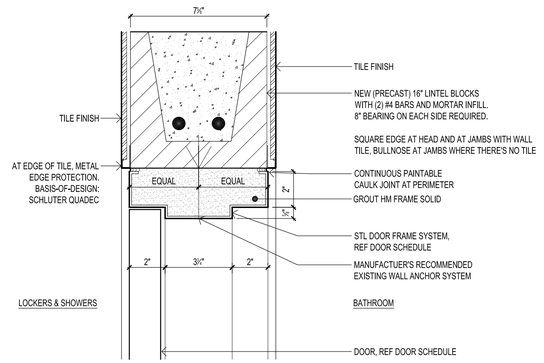


1 WINDOW TYPE 1
(FIN 1)

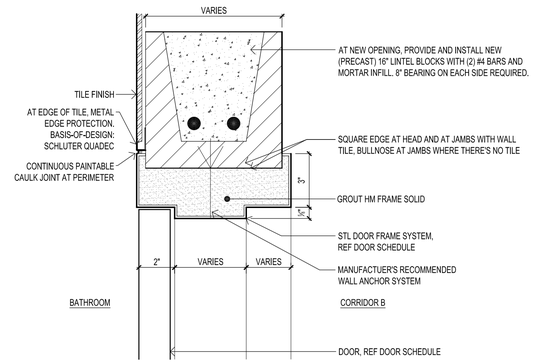
DOOR TYPES



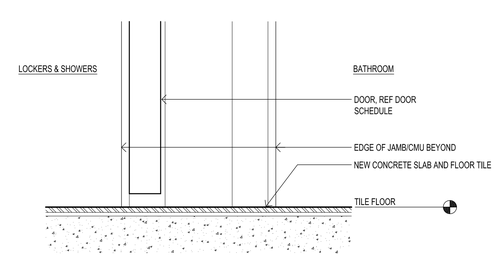
F FG L



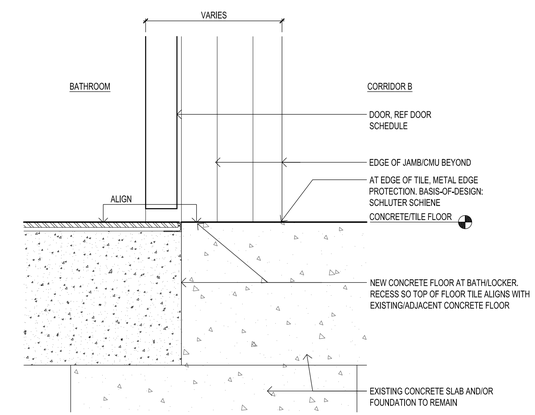
4 A7.1 INTERIOR SECTION DETAIL: LINTEL AT DOOR HEAD & JAMB
SCALE: 3" = 1'-0" DTLS.DWG



2 A7.1 INTERIOR SECTION DETAIL: LINTEL AT DOOR HEAD & JAMB
SCALE: 3" = 1'-0" DTLS.DWG



3 A7.1 INTERIOR SECTION DETAIL AT DOOR THRESHOLD
SCALE: 3" = 1'-0" DTLS.DWG



1 A7.1 INTERIOR SECTION DETAIL AT DOOR THRESHOLD
SCALE: 3" = 1'-0" DTLS.DWG

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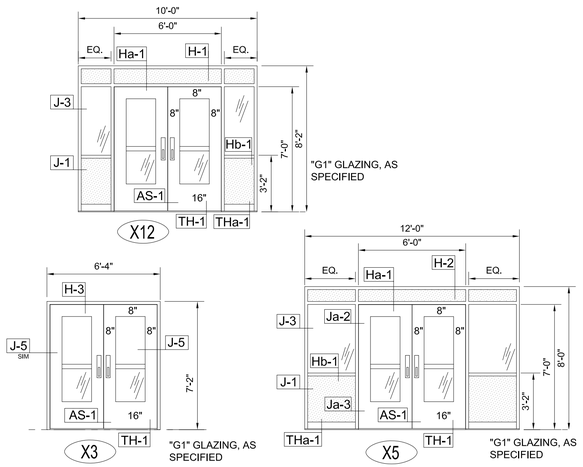
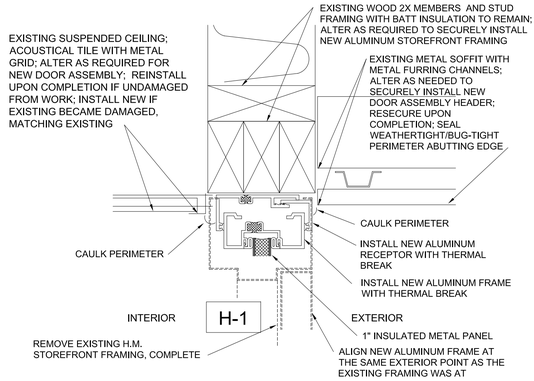


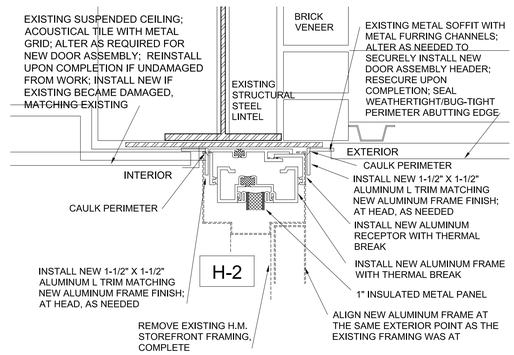
A NEW ALUMINUM DOOR ELEVATIONS

A7.2 SCALE 1/4" = 1'-0"



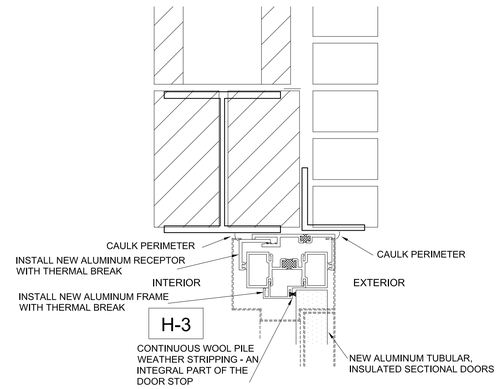
1 HEAD DETAIL

A7.2 SCALE: 3" = 1'-0"



2 HEAD DETAIL

A7.2 SCALE: 3" = 1'-0"



3 HEAD DETAIL

A7.2 SCALE: 3" = 1'-0"

GENERAL NOTES:

CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING DIMENSIONS AND OPENING HEAD, JAMB AND THRESHOLD CONDITIONS/CONSTRUCTION MAKE-UP.

REMOVE THE SPECIFIED EXISTING DOORS AND FRAMES COMPLETE. INSTALL NEW DOORS AND FRAMES IN THE EXISTING OPENINGS, IN APPROXIMATELY THE SAME LOCATION, LINING UP THE EXTERIOR DOOR FRAME LINE WITH THE EXISTING.

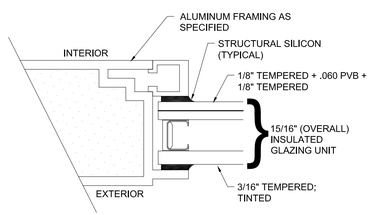
PAINTING OF THE ADJACENT/ABUTTING SURFACES AT THE DOOR OPENINGS THAT HAVE PAINTING AS A FINISH, WILL BE REQUIRED TO BE PAINTED; TOUCH UP AND BLENDING OR THE ENTIRE WALL/CEILING WILL BE REQUIRED TO BE PAINTED IF BLENDING DOES NOT FINISH EFFECTIVELY.

PATCHING OF THE ADJACENT/ABUTTING SURFACES WILL BE REQUIRED IF DAMAGE OCCURS DURING WORK.

AT NEW ALUMINUM DOOR ENTRANCES, INSTALL NEW 1-1/2" X 1-1/2" ALUMINUM TRIM L'S FROM ALUMINUM DOOR COMPANY, MATCHING NEW DOOR AND FRAME FINISH AS NEEDED AT THE PERIMETER HEAD AND JAMBS, INTERIOR AND EXTERIOR SIDES (AS SOME DETAILS SHOW BELOW).

4 HEAD DETAILS

A7.2 SCALE: 3" = 1'-0"



6 DOOR ASTRAGAL DETAIL

SCALE: 3" = 1'-0"

7 JAMB DETAIL

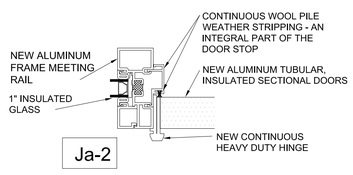
A7.2 SCALE: 3" = 1'-0"

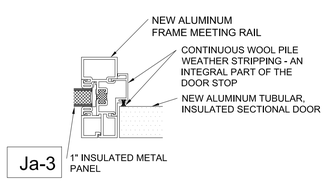
8 JAMB DETAIL

A7.2 SCALE: 3" = 1'-0"

9 JAMB DETAIL

A7.2 SCALE: 3" = 1'-0"



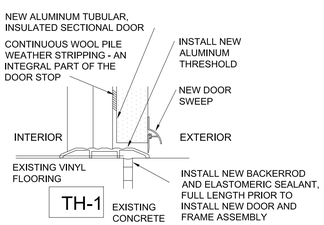


10 GLAZING "G1" DETAIL

A7.2 FULL SCALE
(EXTERIOR DOORS & WINDOWS)

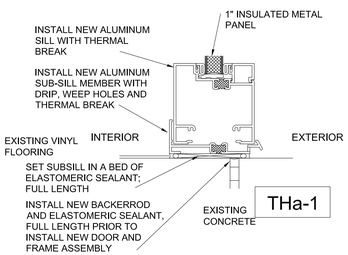
11 JAMB DETAILS

A7.2 SCALE: 3" = 1'-0"



13 THRESHOLD DETAIL

A7.2 SCALE: 3" = 1'-0"



14 THRESHOLD DETAIL

A7.2 SCALE: 3" = 1'-0"

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RM. NUMBER	RM. NAME	FLOOR		BASE*		WALLS**												CEILINGS		REMARKS***
						NORTH			EAST			SOUTH			WEST					
		MAT'L	FIN	MAT'L	FIN	MAT'L	FIN	ACC	MAT'L	FIN	ACC	MAT'L	FIN	ACC	MAT'L	FIN	ACC	MAT'L	FIN	
	VESTIBULE A	CONC	(E) CT	(N) RB	-	CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		(E) ACT	-	EXISTING TILE & GROUT TO BE CLEANED
	CORRIDOR A	CONC	(N) POL	(N) RB	-	CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		(E) ACT	-	
101	RECRUITER & RETENTION	CONC	(N) CPT	(N) RB	-	CMU	(N) PTD		CMU	(N) PTD		GBD	(N) PTD		GBD	(N) PTD		(E) ACT	-	
102	FAMILY READINESS OFFICE	CONC	(N) CPT	(N) RB	-	CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		GBD	(N) PTD		(N) ACT	-	
103	CLASSROOM	CONC	(N) CPT	(N) RB	-	CMU	(N) PTD		CMU	(N) PTD		GBD	(N) PTD		GBD	(N) PTD		(N) ACT	-	
104	CLASSROOM	CONC	(N) CPT	(N) RB	-	GBD	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		(E) ACT	-	
105	CLASSROOM	CONC	(N) CPT	(N) RB	-	CMU	(N) PTD		GBD	(N) PTD		GBD	(N) PTD		CMU	(N) PTD		(E) ACT	-	
106	CLASSROOM	CONC	(N) CPT	(N) RB	-	GBD	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		(E) ACT	-	
108	CLASSROOM	CONC	(N) CPT	(N) RB	-	GBD	(N) PTD		GBD	(N) PTD		GBD	(N) PTD		CMU	(N) PTD		(N) ACT	-	
109	JANITOR	CONC	SC	-	-	CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		(E)GBD	(N) PTD	
110	PHYSICAL FITNESS	CONC	RUBBER	(N) RB	-	CMU	(N) PTD		GBD	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		(E) ACT	-	
	CORRIDOR B	CONC	(N) POL	(N) RB	-	CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		(E) ACT	-	
111	OPEN OFFICE	CONC	(N) CPT	(N) RB	-	CMU	(N) PTD		BRICK	CS		CMU	(N) PTD		CMU	(N) PTD		(E) ACT	-	SEE NOTE #13, A1.0 FOR BRICK FINISH INFO.
111A	OFFICE	CONC	(N) CPT	(N) RB	-	GBD	(N) PTD		BRICK	CS		GBD	(N) PTD		GBD	(N) PTD		(E) ACT	-	SEE NOTE #13, A1.0 FOR BRICK FINISH INFO.
111B	OFFICE	CONC	(N) CPT	(N) RB	-	GBD	(N) PTD		GBD	(N) PTD		GBD	(N) PTD		GBD	(N) PTD		(E) ACT	-	
111C	OFFICE	CONC	(N) CPT	(N) RB	-	GBD	(N) PTD		GBD	(N) PTD		GBD	(N) PTD		GBD	(N) PTD		(E) ACT	-	
111D	OFFICE	CONC	(N) CPT	(N) RB	-	GBD	(N) PTD		GBD	(N) PTD		GBD	(N) PTD		GBD	(N) PTD		(E) ACT	-	
111E	OFFICE	CONC	(N) CPT	(N) RB	-	GBD	(N) PTD		GBD	(N) PTD		GBD	(N) PTD		GBD	(N) PTD		(E) ACT	-	
112	LACTATION	CONC	(E) CT	(E) CT	-	CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		(E) ACT	-	
113	COMMS CLOSET	CONC	SC	(N) RB	-	CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		(E) ACT	-	
114	STORAGE	CONC	SC	(N) RB	-	CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		(E) ACT	-	
115	MEN'S BATHROOM	CONC	(N) CT	(N) CT	-	CMU	(N) CT		CMU	(N) CT		CMU	(N) CT		CMU	(N) CT		(N) ACT	-	
115A	MEN'S SHOWER & LOCKER	CONC	(N) CT	(N) CT	-	CMU	(N) CT		CMU	(N) CT		CMU	(N) CT		CMU	(N) CT		(N) GBD	(N) PTD	
	CORRIDOR C	CONC	(N) POL	(N) RB	-	CMU	(N) PTD		CMU	(N) PTD		BRICK	SC		CMU	(N) PTD		(E) ACT	-	SEE NOTE #2, 1/A2.0 FOR BRICK FINISH INFO.,(N)PTD
	VESTIBULE B	CONC	(N) POL	(N) RB	-	CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		(E) ACT	-	
116	STORAGE	CONC	SC	(N) RB		CMU	(N) PTD		CONC	(N) PTD		CONC	(N) PTD		CONC	(N) PTD		(E) ACT	-	
117	WOMEN'S BATHROOM	CONC	(N) CT	(N) CT	-	CMU	(N) CT		BRICK	CS		CMU	(N) CT		CMU	(N) CT		(N) ACT	-	SEE NOTE #2, 1/A2.0 FOR BRICK FINISH INFO.
117A	WOMEN'S SHOWER & LOCKER	CONC	(N) CT	(N) CT	-	CMU	(N) CT		BRICK	(N) CT		CMU	(N) CT		CMU	(N) CT		(N) GBD	(N) PTD	
118	BREAK ROOM	CONC	(N) POL	(N) RB	-	CMU	(N) PTD		GBD/CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		(E) ACT	-	
119	OPEN OFFICE	CONC	(N) CPT	(N) RB	-	GBD/BRICK	(N) PTD		CMU	(N) PTD		CMU/GBD	(N) PTD		GBD	(N) PTD		(N) ACT	-	
119A	OFFICE	CONC	(N) CPT	(N) RB	-	GBD	(N) PTD		GBD	(N) PTD		GBD	(N) PTD		GBD	(N) PTD		(E) ACT	-	
119B	OFFICE	CONC	(N) CPT	(N) RB	-	GBD	(N) PTD		GBD	(N) PTD		GBD	(N) PTD		GBD	(N) PTD		(E) ACT	-	
	CORRIDOR D	CONC	(N) POL	(N) RB	-	CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		(E) ACT	-	
120	UNIT STORAGE	CONC	SC	-	-	CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		-	(N) PTD	PAINT EXISTING TRUSSES & CEILING STRUCTURE
120A	OFFICE	CONC	(N) CPT	(N) RB	-	GBD	(N) PTD		GBD	(N) PTD		GBD	(N) PTD		GBD	(N) PTD		(N) GBD	(N) PTD	INSTALL RB AT EXTERIOR/PERIMETER OF OFFICE
120B	VAULT	CONC	SC	-	-	CONC	(N) PTD		CONC	(N) PTD		CONC	(N) PTD		CONC	(N) PTD		CONC	(N) PTD	
121	STORAGE	CONC	SC	(N) RB	-	CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		(E) ACT	-	
122	PERSONAL EQUIPMENT	CONC	SC	(N) RB	-	CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CONC	(N) PTD	
123	MAINTENANCE OFFICE	CONC	CPT	(N) RB	-	CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		(E) ACT	-	
123A	MECHANICAL ROOM	CONC	SC	-	-	CMU	(E) PTD		CMU	(E) PTD		CMU	(E) PTD		CMU	(E) PTD		-	-	
123B	ELECTRICAL	CONC	SC	-	-	GBD	(E) PTD		GBD	(E) PTD		GBD	(E) PTD		GBD	(E) PTD		-	-	
	LOBBY	CONC	(N) POL	(N) RB	-	CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		BRICK	CS		(E) ACT	-	SEE NOTE #13, A1.0 FOR BRICK FINISH INFO.
130	ASSEMBLY	CONC	(N) POL	(N) RB	-	CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		BRICK	CS		(E) ACT	-	SEE NOTE #13, A1.0 FOR BRICK FINISH INFO.
131	CHAIR & TABLE STORAGE	CONC	SC	(N) RB	-	CMU	(N) PTD		GBD	(N) PTD		GBD	(N) PTD		GBD	(N) PTD		(E) ACT	-	
132	SIPR	CONC	CPT	(N) RB	-	GBD	(N) PTD		GBD	(N) PTD		GBD	(N) PTD		GBD	(N) PTD		(N) ACT	-	
133	BATHROOM	CONC	(E) CT	(E) CT	-	CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		(E) ACT	-	
134	BATHROOM	CONC	(E) CT	(E) CT	-	CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		(E) ACT	-	
135	JANITOR	CONC	SC	-	-	CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		(E) ACT	-	PROVIDE & INSTALL NEW ACT TILES IN (E) GRID
	CORRIDOR E	CONC	(N) POL	(N) RB	-	CMU	(N) PT		CMU	(N) PT		CMU	(N) PT		BRICK	CS		(E) ACT	-	SEE NOTE #13, A1.0 FOR BRICK FINISH INFO.
	VESTIBULE C	CONC	(N) POL	(N) RB	-	CMU	(N) PT		CMU	(N) PT		CMU	(N) PT		BRICK	CS		(E) ACT	-	SEE NOTE #13, A1.0 FOR BRICK FINISH INFO.
140	KITCHEN	CONC	(E) CT	(E) CT	-	GCMU	CS		GCMU	CS		GCMU	CS		GCMU	CS		(N) GBD		SEE A1.0 FOR CLEANING NOTES
140A	SCULLERY	CONC	(E) CT	(E) CT	-	GCMU	CS		GCMU	CS		GCMU	CS		GCMU	CS		(N) GBD		SEE A1.0 FOR CLEANING NOTES
140B	FOOD STORAGE	CONC	(E) CT	(E) CT	-	GCMU	CS		GCMU	CS		GCMU	CS		GCMU	CS		(N) GBD		SEE A1.0 FOR CLEANING NOTES
150	MECHANICAL ROOM	CONC	SC	-	-	CMU	(E) PTD		CMU	(E) PTD		CMU	(E) PTD		CMU	(E) PTD		-	-	
180	MOTOR VEHICLE STORAGE	CONC	SC	-	-	CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		-	(N) PTD	PAINT EXISTING TRUSSES & CEILING STRUCTURE
180A	OFFICE	CONC	SC	(N) RB	-	CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD				
180B	POL STORAGE	CONC	SC	-	-	CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD				
180C	STORAGE	CONC	SC	-	-	CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD				
180D	BATTERY ROOM	CONC	SC	-	-	CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CMU	(N) PTD		CONC	(N) PTD	
180E	BATHROOM	CONC	(N) VCT	(N) RB	-	CMU	(N) PT		CMU	(N) PT		CMU	(N) PT		CMU	(N) PT		CONC	(N) PTD	
180F	MECHANICAL	CONC	SC	-	-	CMU	(E) PTD		CMU	(E) PTD		CMU	(E) PTD		CMU	(E) PTD		CONC	(E) PTD	

MATERIAL		PREFIX	
CONC	CONCRETE FLOOR	(E)	EXISTING
CMU	CONCRETE MASONRY UNITS	(N)	NEW
GBD	GYPSUM BOARD		
RB	RUBBER BASE		
ACT	ACOUSTICAL CEILING TILE		
GCMU	GLAZED CMU		
FINISH			
VCT	VINYL TILE		
PTD	PAINT (SEE SPEC)		
POL	LEVEL 3 POLISHED CONC		
CPT	CARPET		
SC	SEALED CONCRETE		
CT	CERAMIC TILE		

STATE OF MICHIGAN
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RENOVATE ARMORY - WATERFORD

DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
2650 WATKINS LAKE RD., WATERFORD TWP, MI 48328

DESIGNED JDJ
DRAWN JDJ
CHECKED
APPROVED

DATE
3 JULY 2025

ISSUED FOR
PRELIMINARY ■
CONSTRUCTION ■
FINAL RECORD □

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PROJECT 2690023043
INDEX CODE
INDEX CODE

SHEET
A9.0

MECHANICAL DEMO PLAN NOTES:

1. REMOVE EXISTING EXHAUST FAN EF-3 & EF-4 AND ALL ASSOCIATED DUCT. COORDINATE WITH ELECTRICAL TO DISCONNECT ELECTRICAL CIRCUIT
2. REMOVED EXISTING INTAKE LOUVERS, ASSOCIATED DUCTWORK AND COMPONENTS. COORDINATE WITH GC TO FILL IN EXISTING OPENING.
3. REMOVED EXISTING EXHAUST LOUVERS, ASSOCIATED DUCTWORK AND COMPONENTS. COORDINATE WITH GC TO FILL IN EXISTING OPENING.
4. REMOVE DUCT AS SHOWN ON PLAN. CAP & SEAL DUCT OPENINGS AS REQUIRED BASED ON NEW MECHANICAL HVAC PLAN ON SHEET M4.0. CAP AND FIRE CAULK ANY FIREWALL DUCT PENETRATIONS, REFER TO ARCHITECTURAL SHEETS FOR FIREWALL LOCATIONS.
5. REMOVE EXISTING GAS FIRED UNIT HEATER UH-2 & UH-3 & SUPPORTS. REMOVE GAS PIPE BRANCH TO EACH UNIT HEATER, CUT AND CAP AT GAS MAIN. REMOVE COMBUSTION AIR INTAKE AND EXHAUST VENT PIPING. COORDINATE WITH GC TO FILL IN EXISTING OPENINGS/PENETRATIONS. COORDINATE WITH ELECTRICAL CONTRACTOR TO DISCONNECT ELECTRICAL CIRCUIT.
6. REMOVE AND MODIFY SUPPLY DUCT AS REQUIRED TO INSTALL NEW VAV TERMINAL UNITS. REFER TO NEW HVAC PLAN ON SHEET M3.0 FOR LOCATIONS.
7. REMOVE EXISTING ELECTRIC WALL HEATER IN THIS LOCATION. COORDINATE WITH ELECTRICAL CONTRACTOR TO DISCONNECT FROM ELECTRICAL CIRCUIT.
8. REMOVE EXISTING ELECTRIC UNIT HEATER IN THIS LOCATION. COORDINATE WITH ELECTRICAL CONTRACTOR TO DISCONNECT FROM ELECTRICAL CIRCUIT.
9. REMOVE AND REINSTALL ALL SUPPLY DIFFUSERS, RETURN GRILLES, AND ANY SUPPLY OR RETURN DUCT REQUIRED TO INSTALL CEILING AT NEW HEIGHT BY THE GENERAL CONTRACTOR IN THIS ROOM. MODIFY ANY DUCT AS REQUIRED TO ACCOMMODATE NEW CEILING HEIGHT.

GENERAL MECHANICAL DEMO NOTES:

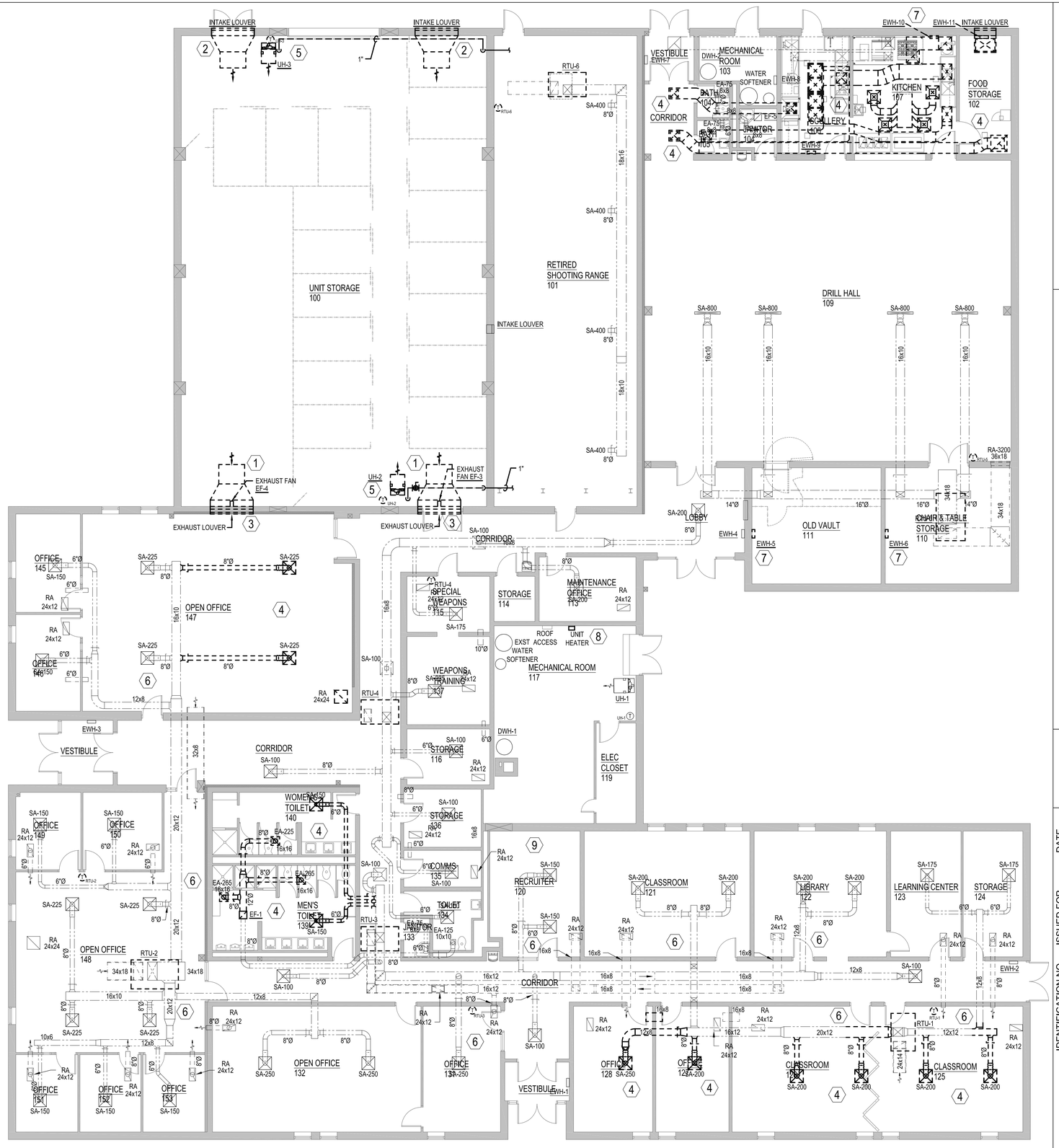
1. CONTRACTOR TO PROVIDE PROPER DUST CONTROL MEASURES PER SPECIFICATIONS.
2. CONTRACTOR TO MAINTAIN A CLEAN WORKSPACE AT THE END OF EACH DAY PER SPECIFICATIONS.
3. DURING DEMOLITION, KEEP ALL ROOF AND EXTERIOR WALL PENETRATIONS SEALED OFF FROM EXTERIOR.

GENERAL NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS. ANY DISCREPANCIES BROUGHT TO THE OWNER'S ATTENTION.
2. PRIOR TO THE START OF CONSTRUCTION, CONTRACTOR TO VERIFY CONDITION OF EXISTING CONSTRUCTION. DOCUMENT ANY EXISTING CONDITION THAT COULD BE MISCONSTRUED AS DAMAGED DURING NEW CONSTRUCTION. NOTIFY THE GOVERNMENT OF EXISTING CONDITIONS IN WRITING PRIOR TO THE COMMENCEMENT OF WORK.
3. WHERE NEW CONSTRUCTION ABUTS EXISTING CONSTRUCTION AND APPEARS TO ALIGN FLUSH WITH EXISTING CONSTRUCTION, THE NEW CONSTRUCTION SHALL ALIGN AND BE FLUSH WITH NO VISIBLE JOINT, UNLESS THE MATERIALS OR SUBSTRATES DIFFER; THEN, AN EXPANSION JOINT SHALL BE INSTALLED.
4. DRAWINGS ARE NOT TO BE SCALED FOR ANY DIMENSIONS.
5. ALL WORK MUST COMPLY WITH THE DRAWINGS AND SPECIFICATIONS, ANY REVISIONS REQUIRED DUE TO FIELD CONDITIONS MUST BE REVIEWED AND APPROVED BY THE PROJECT MANAGER PRIOR TO CONSTRUCTION.
6. COORDINATE NEW AND RELOCATE ANY EXISTING CONDUITS, ETC. TO ACCOMMODATE LIGHT FIXTURES, HVAC ACCESSORIES AND VARIOUS DEVICES.
7. PROVIDE ADDITIONAL WIRING, CONDUIT AND ACCESSORIES FOR DEVICES TO BE RELOCATED. AT NO ADDITIONAL COST.
8. ALL WALL MOUNTED DEVICES SHALL BE FULLY CONCEALED UNLESS NOTED OTHERWISE.
9. BIDS FOR CONSTRUCTION OF ALL WORK SHOWN ON THE PLANS ARE SOLICITED ON A LUMP SUM BASIS. NO SEPARATE PAYMENT OR ADJUSTMENTS TO THE LUMP SUM BID WILL BE MADE UNLESS SPECIFICALLY INDICATED ON THE PLANS AND IN THE PROPOSAL OR WHEN ADDITIONAL WORK IS AUTHORIZED IN WRITING BY THE ENGINEER.
10. THE CONTRACTOR SHALL HAVE A KNOWLEDGEABLE REPRESENTATIVE ON SITE AT ALL TIMES DURING WORK UNDER THIS CONTRACT. THIS REPRESENTATIVE SHALL HAVE ON SITE, HIS OWN COPY OF THE CONTRACT SPECIFICATIONS, DRAWINGS AND DMVA APPROVED SHOP DRAWINGS.
11. CONTRACTOR TO SCHEDULE AND COORDINATE ALL SHUT-DOWNS WITH ARMORY PERSONNEL.
12. CONTRACTOR TO FOLLOW SPECIFICATION FOR RECYCLING PROCEDURES.
13. ALL PUMPS LOCATED IN THE BOILER/MECHANICAL ROOM MUST BE ACCESSIBLE FROM THE GROUND WITHOUT THE USE OF A LADDER.

LEGEND

- MECHANICAL DEMO
- EXISTING SUPPLY DUCT
- EXISTING RETURN DUCT
- EXISTING EXHAUST DUCT
- NEW SUPPLY DUCT
- NEW RETURN DUCT
- NEW EXHAUST DUCT
- NEW HOT WATER HEATING SUPPLY
- NEW HOT WATER HEATING RETURN
- EXISTING HOT WATER HEATING SUPPLY
- EXISTING HOT WATER HEATING RETURN
- EXST GAS PIPE
- GAS PIPE DEMO
- NEW GAS PIPE
- EXST DDC COMMUNICATION WIRE
- R1 800 / — EXST/NEW RETURN AIR GRILLE
- S1 800 / — EXST/NEW SUPPLY AIR DIFFUSER
- E1 800 / — EXST/NEW EXHAUST AIR DIFFUSER
- / — EXST/NEW BALANCE DAMPER



1 M1.0 ARMORY MECHANICAL HVAC DEMO PLAN
SCALE: 1/8" = 1'-0"

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RENOVATE ARMORY - WATERFORD

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2650 WATKINS LAKE RD., WATERFORD TWP, MI 48328

DESIGNED	BOK
DRAWN	BOK
CHECKED	KMM
APPROVED	BAB

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PROJECT 269002303
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SHEET
MECHANICAL DEMO PLAN
M1.0

ROOF MECHANICAL DEMO PLAN NOTES:

1. DISCONNECT & REMOVE EXISTING GAS PIPING TO EXISTING ROOF TOP UNITS RTU-1,2,3,4,5, & 6 AS REQUIRED TO CONNECT TO NEW ROOF TOP UNITS.
2. REMOVE EXISTING ROOF TOP UNITS RTU-1,2,3,4,5, & 6 AND ALL CORRESPONDING COMPONENTS. DISCONNECT SUPPLY AND RETURN DUCT AS REQUIRED TO EXTEND TO NEW ROOF TOP UNITS. COORDINATE WITH NEW RTU MANUFACTURER TO PREPARE FOR NEW CURB OR CONVERSION CURB AS REQUIRED. COORDINATE WITH ELECTRICAL CONTRACTOR TO DISCONNECT ALL ELECTRICAL CONNECTIONS TO EXISTING ROOF TOP UNIT.
3. REMOVE RTU-1,2,3,4,5, & 6 ROOF CURBS. MODIFY EXISTING ROOF OPENING AS REQUIRED TO INSTALL NEW RTU-1,2,3,4,5, & 6 ROOF CURBS. REMOVE EXISTING SUPPORT STEEL AS REQUIRED TO INSTALL NEW SUPPORT STEEL PER DETAIL ON SHEET M6.0. COORDINATE WITH RTU & CURB MANUFACTURER'S AS REQUIRED.
4. REMOVE EXISTING DDC CONTROLS, THERMOSTATS AND CONTROL WIRING AS REQUIRED ON ALL EQUIPMENT BEING REMOVED.
5. REMOVE EXISTING EXISTING EXHAUST FAN EF-1. COORDINATE WITH ELECTRICAL TO DISCONNECT FROM ELECTRICAL CIRCUIT.
6. REMOVE EXISTING EXISTING EXHAUST FAN EF-2. COORDINATE WITH ELECTRICAL TO DISCONNECT FROM ELECTRICAL CIRCUIT.
7. DISCONNECT & REMOVE EXISTING GAS PIPING TO EXISTING MAKE-UP AIR UNITS MAU-2 & 3. REMOVE GAS PIPE BRANCH TO EACH UNIT, CUT AND CAP AT GAS MAIN.
8. DISCONNECT EXISTING GAS PIPING TO EXISTING MAKE-UP AIR UNIT MAU-4. RELOCATE GAS PIPE AS REQUIRED TO CONNECT TO NEW ROOF TOP UNIT RTU-7.
9. REMOVED EXISTING MAKE-UP AIR UNIT MAU-2,3 & 4 AND ALL CORRESPONDING COMPONENTS. DISCONNECT AND REMOVED SUPPLY AND RETURN DUCT AS SHOWN ON PLANS. COORDINATE WITH ELECTRICAL CONTRACTOR TO DISCONNECT ALL ELECTRICAL CONNECTIONS TO EXISTING ROOF TOP UNIT.
10. REMOVE EXISTING KITCHEN EXHAUST FAN KEF-2,3,4 & 5 AND ASSOCIATED ROOF CURB. COORDINATE WITH ELECTRICAL TO DISCONNECT FROM ELECTRICAL CIRCUIT. PATCH ROOF OPENING AS REQUIRED, REFER TO DETAIL ON SHEET M6.0.
11. REMOVE GAS PIPING FEEDING REMOVED UNIT HEATERS IN THIS LOCATION, CAP @ MAIN.

LEGEND

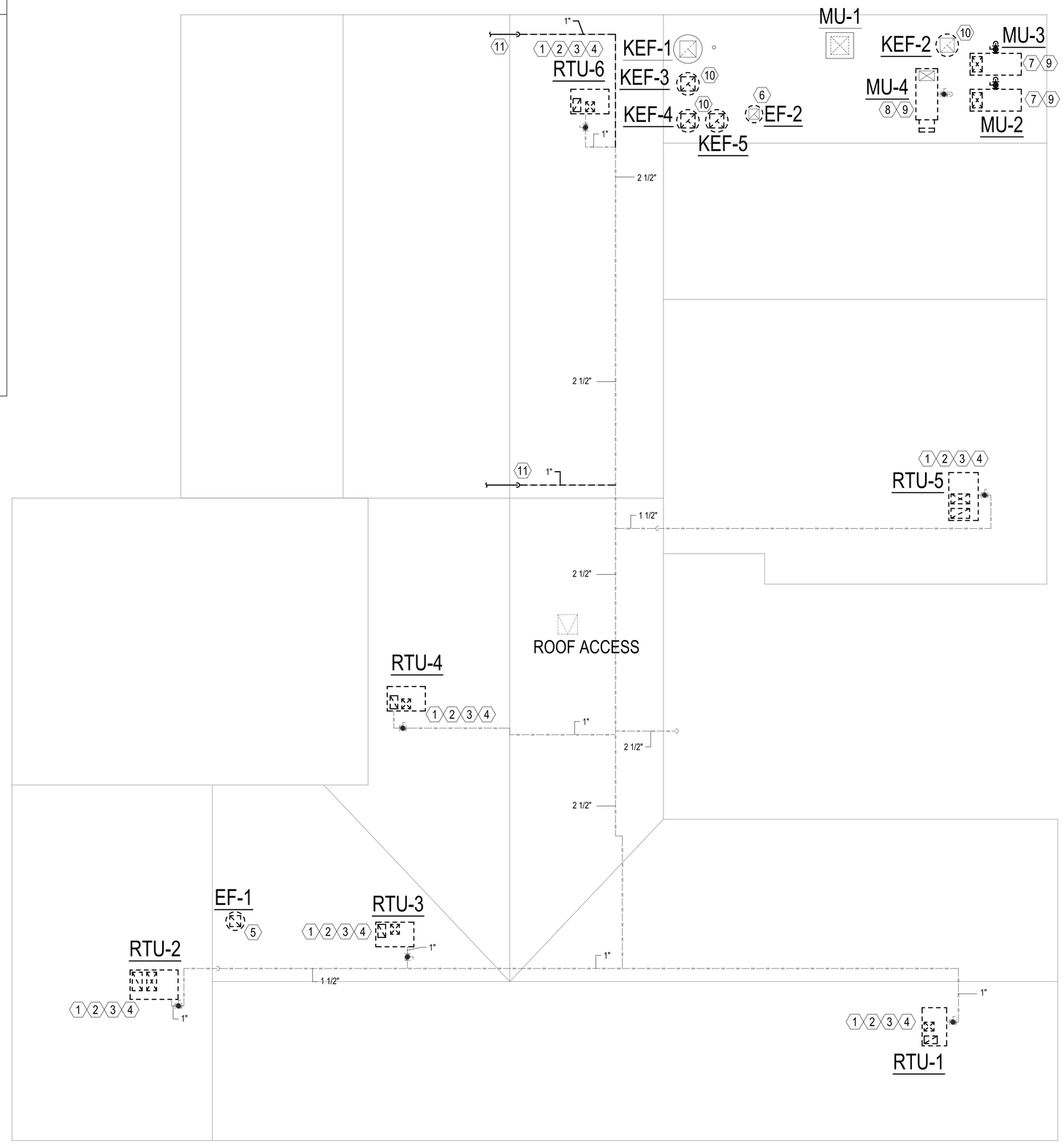
- MECHANICAL DEMO
- EXISTING SUPPLY DUCT
- EXISTING RETURN DUCT
- EXISTING EXHAUST DUCT
- NEW SUPPLY DUCT
- NEW RETURN DUCT
- NEW EXHAUST DUCT
- NEW HOT WATER HEATING SUPPLY
- NEW HOT WATER HEATING RETURN
- EXISTING HOT WATER HEATING SUPPLY
- EXISTING HOT WATER HEATING RETURN
- EXST GAS PIPE
- GAS PIPE DEMO
- NEW GAS PIPE
- EXST DDC COMMUNICATION WIRE
- R1 800 / — EXST/NEW RETURN AIR GRILLE
- S1 800 / — EXST/NEW SUPPLY AIR DIFFUSER
- E1 800 / — EXST/NEW EXHAUST AIR DIFFUSER
- / — EXST/NEW BALANCE DAMPER

GENERAL MECHANICAL DEMO NOTES:

1. CONTRACTOR TO PROVIDE PROPER DUST CONTROL MEASURES PER SPECIFICATIONS.
2. CONTRACTOR TO MAINTAIN A CLEAN WORKSPACE AT THE END OF EACH DAY PER SPECIFICATIONS.
3. DURING DEMOLITION, KEEP ALL ROOF AND EXTERIOR WALL PENETRATIONS SEALED OFF FROM EXTERIOR.

GENERAL NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS. ANY DISCREPANCIES BROUGHT TO THE OWNER'S ATTENTION.
2. PRIOR TO THE START OF CONSTRUCTION, CONTRACTOR TO VERIFY CONDITION OF EXISTING CONSTRUCTION. DOCUMENT ANY EXISTING CONDITION THAT COULD BE MISCONSTRUED AS DAMAGED DURING NEW CONSTRUCTION. NOTIFY THE GOVERNMENT OF EXISTING CONDITIONS IN WRITING PRIOR TO THE COMMENCEMENT OF WORK.
3. WHERE NEW CONSTRUCTION ABUTS EXISTING CONSTRUCTION AND APPEARS TO ALIGN FLUSH WITH EXISTING CONSTRUCTION, THE NEW CONSTRUCTION SHALL ALIGN AND BE FLUSH WITH NO VISIBLE JOINT, UNLESS THE MATERIALS OR SUBSTRATES DIFFER; THEN, AN EXPANSION JOINT SHALL BE INSTALLED.
4. DRAWINGS ARE NOT TO BE SCALED FOR ANY DIMENSIONS.
5. ALL WORK MUST COMPLY WITH THE DRAWINGS AND SPECIFICATIONS, ANY REVISIONS REQUIRED DUE TO FIELD CONDITIONS MUST BE REVIEWED AND APPROVED BY THE PROJECT MANAGER PRIOR TO CONSTRUCTION.
6. COORDINATE NEW AND RELOCATE ANY EXISTING CONDUITS, ETC. TO ACCOMMODATE LIGHT FIXTURES, HVAC ACCESSORIES AND VARIOUS DEVICES.
7. PROVIDE ADDITIONAL WIRING, CONDUIT AND ACCESSORIES FOR DEVICES TO BE RELOCATED, AT NO ADDITIONAL COST.
8. ALL WALL MOUNTED DEVICES SHALL BE FULLY CONCEALED UNLESS NOTED OTHERWISE.
9. BIDS FOR CONSTRUCTION OF ALL WORK SHOWN ON THE PLANS ARE SOLICITED ON A LUMP SUM BASIS. NO SEPARATE PAYMENT OR ADJUSTMENTS TO THE LUMP SUM BID WILL BE MADE UNLESS SPECIFICALLY INDICATED ON THE PLANS AND IN THE PROPOSAL OR WHEN ADDITIONAL WORK IS AUTHORIZED IN WRITING BY THE ENGINEER.
10. THE CONTRACTOR SHALL HAVE A KNOWLEDGEABLE REPRESENTATIVE ON SITE AT ALL TIMES DURING WORK UNDER THIS CONTRACT. THIS REPRESENTATIVE SHALL HAVE ON SITE, HIS OWN COPY OF THE CONTRACT SPECIFICATIONS, DRAWINGS AND DMVA APPROVED SHOP DRAWINGS.
11. CONTRACTOR TO SCHEDULE AND COORDINATE ALL SHUT-DOWNS WITH ARMORY PERSONNEL.
12. CONTRACTOR TO FOLLOW SPECIFICATION FOR RECYCLING PROCEDURES.
13. ALL PUMPS LOCATED IN THE BOILER/MECHANICAL ROOM MUST BE ACCESSIBLE FROM THE GROUND WITHOUT THE USE OF A LADDER.



1 M2.0 ROOF MECHANICAL HVAC DEMO PLAN
SCALE: 1/8" = 1'-0"

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2650 WATKINS LAKE RD., WATERFORD TWP, MI 48328

DESIGNED	BOK
DRAWN	BOK
CHECKED	KMM
APPROVED	BAB

ISSUED FOR	DATE
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CONSTRUCTION ■	29 AUG 2024
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PROJECT 2690023043
INDEX CODE

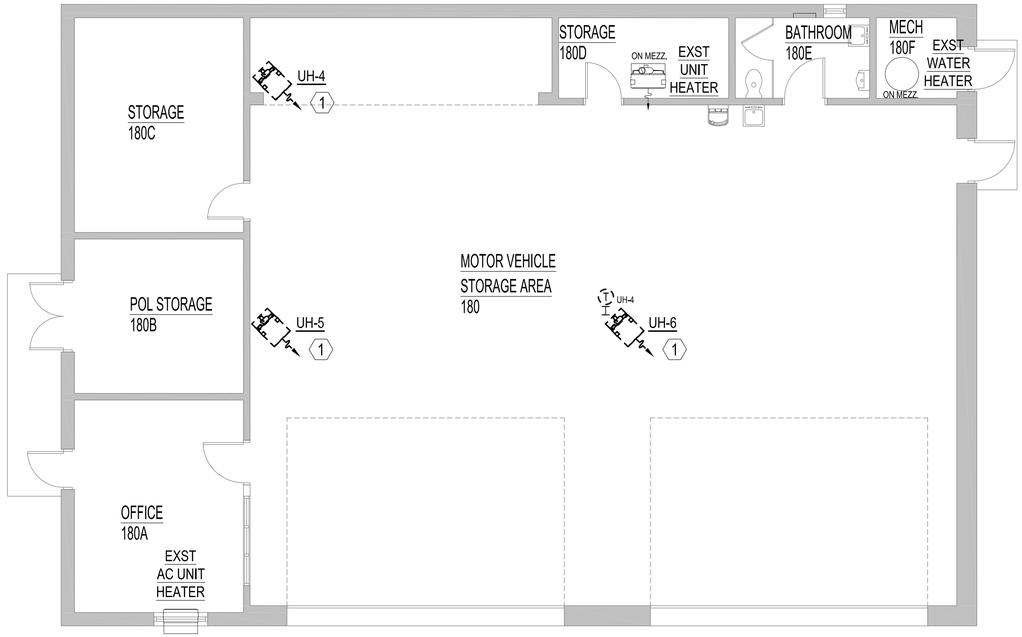
SHEET
MECHANICAL ROOF DEMO PLAN
M2.0

MVSB MECHANICAL DEMO PLAN NOTES:

1. REMOVE EXISTING GAS FIRED UNIT HEATER UH-4, UH-5 & UH-6 & SUPPORTS. REMOVE GAS PIPE BRANCH TO EACH UNIT HEATER, CUT AND CAP AT GAS MAIN. COORDINATE WITH ELECTRICAL CONTRACTOR TO DISCONNECT ELECTRICAL CIRCUIT.
2. REMOVE EXISTING COMBUSTION AIR INTAKE AND EXHAUST VENT PIPING FOR UNIT HEATERS UH-4, UH-5 & UH-6. COORDINATE WITH GC TO FILL IN EXISTING OPENINGS/PENETRATIONS.

LEGEND

- MECHANICAL DEMO
- EXISTING SUPPLY DUCT
- EXISTING RETURN DUCT
- EXISTING EXHAUST DUCT
- NEW SUPPLY DUCT
- NEW RETURN DUCT
- NEW EXHAUST DUCT
- NEW HOT WATER HEATING SUPPLY
- NEW HOT WATER HEATING RETURN
- EXISTING HOT WATER HEATING SUPPLY
- EXISTING HOT WATER HEATING RETURN
- EXST GAS PIPE
- GAS PIPE DEMO
- NEW GAS PIPE
- EXST DDC COMMUNICATION WIRE
- R1 800 / — EXST/NEW RETURN AIR GRILLE
- S1 800 / — EXST/NEW SUPPLY AIR DIFFUSER
- E1 800 / — EXST/NEW EXHAUST AIR DIFFUSER
- / — EXST/NEW BALANCE DAMPER



1 / M3.0 MVSB MECHANICAL HVAC DEMO PLAN
SCALE: 3/16" = 1'-0"

2 / M3.0 MVSB ROOF MECHANICAL HVAC DEMO PLAN
SCALE: 3/16" = 1'-0"

GENERAL MECHANICAL DEMO NOTES:

1. CONTRACTOR TO PROVIDE PROPER DUST CONTROL MEASURES PER SPECIFICATIONS.
2. CONTRACTOR TO MAINTAIN A CLEAN WORKSPACE AT THE END OF EACH DAY PER SPECIFICATIONS.
3. DURING DEMOLITION, KEEP ALL ROOF AND EXTERIOR WALL PENETRATIONS SEALED OFF FROM EXTERIOR.

GENERAL NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS. ANY DISCREPANCIES BROUGHT TO THE OWNER'S ATTENTION.
2. PRIOR TO THE START OF CONSTRUCTION, CONTRACTOR TO VERIFY CONDITION OF EXISTING CONSTRUCTION. DOCUMENT ANY EXISTING CONDITION THAT COULD BE MISCONSTRUED AS DAMAGED DURING NEW CONSTRUCTION. NOTIFY THE GOVERNMENT OF EXISTING CONDITIONS IN WRITING PRIOR TO THE COMMENCEMENT OF WORK.
3. WHERE NEW CONSTRUCTION ABUTS EXISTING CONSTRUCTION AND APPEARS TO ALIGN FLUSH WITH EXISTING CONSTRUCTION, THE NEW CONSTRUCTION SHALL ALIGN AND BE FLUSH WITH NO VISIBLE JOINT, UNLESS THE MATERIALS OR SUBSTRATES DIFFER; THEN, AN EXPANSION JOINT SHALL BE INSTALLED.
4. DRAWINGS ARE NOT TO BE SCALED FOR ANY DIMENSIONS.
5. ALL WORK MUST COMPLY WITH THE DRAWINGS AND SPECIFICATIONS, ANY REVISIONS REQUIRED DUE TO FIELD CONDITIONS MUST BE REVIEWED AND APPROVED BY THE PROJECT MANAGER PRIOR TO CONSTRUCTION.
6. COORDINATE NEW AND RELOCATE ANY EXISTING CONDUITS, ETC. TO ACCOMMODATE LIGHT FIXTURES, HVAC ACCESSORIES AND VARIOUS DEVICES.
7. PROVIDE ADDITIONAL WIRING, CONDUIT AND ACCESSORIES FOR DEVICES TO BE RELOCATED, AT NO ADDITIONAL COST.
8. ALL WALL MOUNTED DEVICES SHALL BE FULLY CONCEALED UNLESS NOTED OTHERWISE.
9. BIDS FOR CONSTRUCTION OF ALL WORK SHOWN ON THE PLANS ARE SOLICITED ON A LUMP SUM BASIS. NO SEPARATE PAYMENT OR ADJUSTMENTS TO THE LUMP SUM BID WILL BE MADE UNLESS SPECIFICALLY INDICATED ON THE PLANS AND IN THE PROPOSAL OR WHEN ADDITIONAL WORK IS AUTHORIZED IN WRITING BY THE ENGINEER.
10. THE CONTRACTOR SHALL HAVE A KNOWLEDGEABLE REPRESENTATIVE ON SITE AT ALL TIMES DURING WORK UNDER THIS CONTRACT. THIS REPRESENTATIVE SHALL HAVE ON SITE, HIS OWN COPY OF THE CONTRACT SPECIFICATIONS, DRAWINGS AND DMVA APPROVED SHOP DRAWINGS.
11. CONTRACTOR TO SCHEDULE AND COORDINATE ALL SHUT-DOWNS WITH ARMORY PERSONNEL.
12. CONTRACTOR TO FOLLOW SPECIFICATION FOR RECYCLING PROCEDURES.
13. ALL PUMPS LOCATED IN THE BOILER/MECHANICAL ROOM MUST BE ACCESSIBLE FROM THE GROUND WITHOUT THE USE OF A LADDER.

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SHEET
MVSB MECHANICAL DEMO PLAN

M3.0

MECHANICAL HVAC PLAN NOTES:

1. INSTALL NEW EXHAUST FANS EF-1, EF-2, EF-3, EF-4 & EF-5 THRU NEW ROOF PENETRATION PER MANUFACTURER'S RECOMMENDATIONS, SEE SCHEDULE ON SHEET M7.0. INSTALL NEW EXHAUST DUCT UP AND CONNECT TO NEW 24" TALL INSULATED ROOF CURB. COORDINATE WITH ROOFING CONTRACTOR TO INSTALL NEW CURB. COORDINATE WITH ELECTRICAL AND DDC CONTRACTOR TO RUN NEW WIRES THRU CURB. PROVIDE STARTUP SHEET WITH CLOSEOUT DOCUMENTS.
2. INSTALL NEW SUPPLY & RETURN DUCT TRANSITIONS TO NEW SUPPLY & RETURN DUCT AS SHOWN. ALL DUCT TO BE HARD, NO FLEXIBLE DUCT ALLOWED. INSTALL BALANCE DAMPERS ON EACH BRANCH. COORDINATE WITH CAGING CONTRACTOR FOR FINAL DUCT LOCATION TO AVOID ANY CAGING INTERFERENCE.
3. COORDINATE WITH GC TO INSTALL NEW 6"OD SUPPLY & RETURN AIR DUCT INTO NEW VAULT.
4. INSTALL NEW DEHUMIDIFICATION UNIT DHU-1 IN SUPPLY ROOM VAULTS PER MANUFACTURER'S RECOMMENDATIONS. UNITS TO BE SUSPENDED FROM VAULT CEILING ~12". INSTALL WITH PROPERLY SIZED DRAIN PAN. ROUTE CONDENSATE DRAIN TO NEW CONDENSATE PUMP, SECURE TO WALL. INSTALL DRAIN LINE FROM DRAIN PAN AND CONNECT TO UNIT CONDENSATE LINE.
5. INSTALL NEW CONDENSATE PUMP P-1 FOR NEW DEHUMIDIFICATION UNIT IN VAULT. MOUNT TO NEW SS SHELF. ROUTE NEW COPPER CONDENSATE PIPING THRU VAULT WALL ABOVE CEILING IN CORRIDOR E TO JANITOR'S CLOSET RM 135 PER PLANS. COORDINATE WITH ELECTRICAL TO CONNECT TO NEW ELECTRICAL CIRCUIT.
6. EXTEND & MODIFY EXISTING SUPPLY, RETURN & EXHAUST DUCT AS REQUIRED PER PLAN.
7. EXTEND & MODIFY EXISTING SUPPLY & RETURN DUCT TO CONNECT TO NEW ROOF TOP UNIT IN THIS LOCATION.
8. INSTALL NEW TERMINAL UNITS AS SHOWN, SEE SCHEDULE ON SHEET M7.0. EXTEND & MODIFY DUCT AS REQUIRED TO CONNECT TO NEW VAV BOX. COORDINATE WITH DDC CONTRACTOR TO BALANCE NEW VAV SYSTEM.
9. INSTALL NEW RETURN GRILLES & SUPPLY DUCT IN THIS LOCATION. COORDINATE WITH GC TO REMOVE BLOCK WALL AS REQUIRED TO INSTALL NEW DUCT.

GENERAL MECHANICAL NOTES:

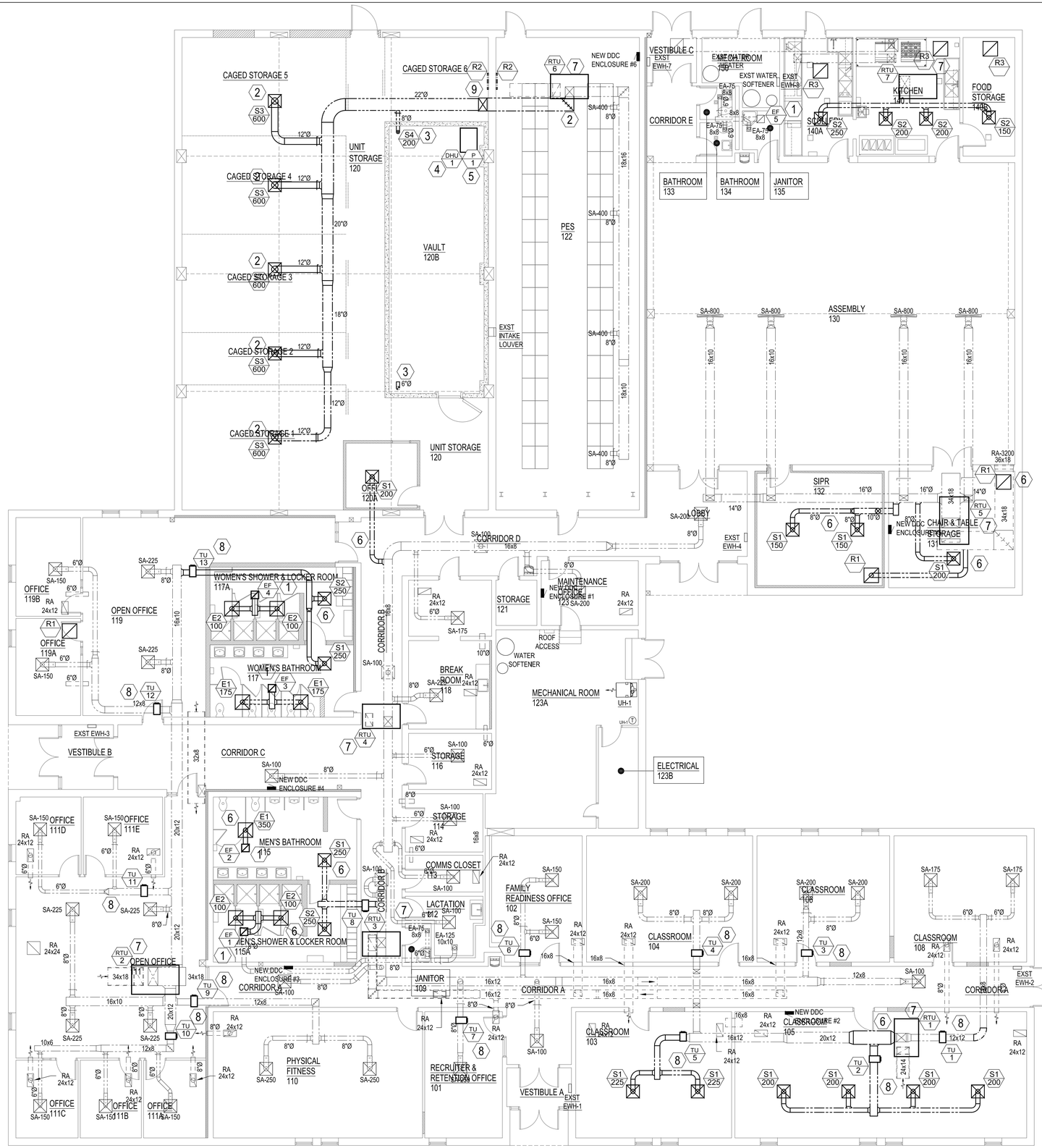
1. FIRE CAULK ALL PENETRATIONS THRU MECHANICAL ROOM AND CORRIDOR WALLS.
2. PERFORM TEST AND BALANCE PER SPECIFICATIONS.
3. CONTRACTOR TO COORDINATE ALL NEW EQUIPMENT STARTUP AND TESTING.
4. PROVIDE ALL TRAINING PER SPECIFICATIONS.
5. ALL SUPPLY & RETURN PIPING TO BE INSULATED, SEE SPECIFICATIONS.
6. PROVIDE ACCESS TO ALL REQUIRED PIPING EQUIPMENT. INSTALL ACCESS PANELS AS REQUIRED.
7. THESE DRAWINGS ARE DIAGRAMMATIC, AND REPRESENT THE GENERAL INTENT AND ARRANGEMENT OF SYSTEMS. THEY ARE NOT TO BE CONSIDERED FABRICATION/COORDINATION/SHOP DRAWINGS. COORDINATION WITH OTHER TRADES IS REQUIRED. PROVIDE THE ADDITIONAL FITTINGS AND OFFSETS THAT WILL BE REQUIRED TO COMPLETE EACH SYSTEM AND TO AVOID INTERFERENCES WITH ALL OTHER SYSTEMS INCLUDING THE STRUCTURE, SHEET METAL, OTHER PIPING SYSTEMS, ELECTRICAL CONDUITS, BUS DUCTS, CABLE TRAY, LIGHT FIXTURES, ETC. AND/OR OTHER SPACE CONSTRAINTS.

GENERAL NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS. ANY DISCREPANCIES BROUGHT TO THE OWNER'S ATTENTION.
2. PRIOR TO THE START OF CONSTRUCTION, CONTRACTOR TO VERIFY CONDITION OF EXISTING CONSTRUCTION. DOCUMENT ANY EXISTING CONDITION THAT COULD BE MISCONSTRUED AS DAMAGED DURING NEW CONSTRUCTION. NOTIFY THE GOVERNMENT OF EXISTING CONDITIONS IN WRITING PRIOR TO THE COMMENCEMENT OF WORK.
3. WHERE NEW CONSTRUCTION ABUTS EXISTING CONSTRUCTION AND APPEARS TO ALIGN FLUSH WITH EXISTING CONSTRUCTION, THE NEW CONSTRUCTION SHALL ALIGN AND BE FLUSH WITH NO VISIBLE JOINT, UNLESS THE MATERIALS OR SUBSTRATES DIFFER; THEN, AN EXPANSION JOINT SHALL BE INSTALLED.
4. DRAWINGS ARE NOT TO BE SCALED FOR ANY DIMENSIONS.
5. ALL WORK MUST COMPLY WITH THE DRAWINGS AND SPECIFICATIONS, ANY REVISIONS REQUIRED DUE TO FIELD CONDITIONS MUST BE REVIEWED AND APPROVED BY THE PROJECT MANAGER PRIOR TO CONSTRUCTION.
6. COORDINATE NEW AND RELOCATE ANY EXISTING CONDUITS, ETC. TO ACCOMMODATE LIGHT FIXTURES, HVAC ACCESSORIES AND VARIOUS DEVICES.
7. PROVIDE ADDITIONAL WIRING, CONDUIT AND ACCESSORIES FOR DEVICES TO BE RELOCATED. AT NO ADDITIONAL COST.
8. ALL WALL MOUNTED DEVICES SHALL BE FULLY CONCEALED UNLESS NOTED OTHERWISE.
9. BIDS FOR CONSTRUCTION OF ALL WORK SHOWN ON THE PLANS ARE SOLICITED ON A LUMP SUM BASIS. NO SEPARATE PAYMENT OR ADJUSTMENTS TO THE LUMP SUM BID WILL BE MADE UNLESS SPECIFICALLY INDICATED ON THE PLANS AND IN THE PROPOSAL OR WHEN ADDITIONAL WORK IS AUTHORIZED IN WRITING BY THE ENGINEER.
10. THE CONTRACTOR SHALL HAVE A KNOWLEDGEABLE REPRESENTATIVE ON SITE AT ALL TIMES DURING WORK UNDER THIS CONTRACT. THIS REPRESENTATIVE SHALL HAVE ON SITE, HIS OWN COPY OF THE CONTRACT SPECIFICATIONS, DRAWINGS AND DMVA APPROVED SHOP DRAWINGS.
11. CONTRACTOR TO SCHEDULE AND COORDINATE ALL SHUT-DOWNS WITH ARMORY PERSONNEL.
12. CONTRACTOR TO FOLLOW SPECIFICATION FOR RECYCLING PROCEDURES.
13. ALL PUMPS LOCATED IN THE BOILER/MECHANICAL ROOM MUST BE ACCESSIBLE FROM THE GROUND WITHOUT THE USE OF A LADDER.

LEGEND

- MECHANICAL DEMO
- EXISTING SUPPLY DUCT
- EXISTING RETURN DUCT
- EXISTING EXHAUST DUCT
- NEW SUPPLY DUCT
- NEW RETURN DUCT
- NEW EXHAUST DUCT
- NEW HOT WATER HEATING SUPPLY
- NEW HOT WATER HEATING RETURN
- EXISTING HOT WATER HEATING SUPPLY
- EXISTING HOT WATER HEATING RETURN
- EXST GAS PIPE
- GAS PIPE DEMO
- NEW GAS PIPE
- EXST DDC COMMUNICATION WIRE
- R1 800 / — EXST/NEW RETURN AIR GRILLE
- S1 800 / — EXST/NEW SUPPLY AIR DIFFUSER
- E1 800 / — EXST/NEW EXHAUST AIR DIFFUSER
- / — EXST/NEW BALANCE DAMPER



1 M4.0 ARMORY MECHANICAL HVAC PLAN
SCALE: 1/8" = 1'-0"

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DESIGN AND CONSTRUCTION DIVISION
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RENOVATE ARMORY - WATERFORD

DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
2650 WATKINS LAKE RD., WATERFORD TWP, MI 48328

DESIGNED	BOK
DRAWN	BOK
CHECKED	KMM
APPROVED	BAB

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- CONSTRUCTION ■ — 29 AUG 2024
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PROJECT 2690023043
INDEX CODE

SHEET
MECHANICAL HVAC PLAN
M4.0

ROOF MECHANICAL HVAC PLAN NOTES:

1. INSTALL NEW ROOF TOP UNIT RTU-1,2,3,4,5,6 & 7 PER MANUFACTURER'S RECOMMENDATIONS, SEE SCHEDULE ON SHEET M7.0. INSTALL NEW 18" ROOF CURB W/ 1-1/2" INSULATION. INSTALL NEW RTU SUPPORT STEEL, SEE DETAIL ON SHEET M6.0. COORDINATE WITH ELECTRICAL & DDC CONTRACTORS TO ROUTE ALL NEW RTU CONDUIT THRU NEW ROOF CURB AND NOT IN SUPPLY OR RETURN AIR PLENUM. CONTRACTOR IS RESPONSIBLE TO COORDINATE RTU STARTUP, TEST AND CHECK WITH MANUFACTURER AND DMVA ENGINEERING. PROVIDE ON-SITE RTU OPERATION AND MAINTENANCE TRAINING FOR MAINTENANCE STAFF.
2. INSTALL NEW GAS PIPE FROM EXISTING GAS PIPE BRANCH TO NEW RTU-1,2,3,4,5,6 & 7 AS REQUIRED. INSTALL NEW GAS SHUTOFF VALVE, REGULATOR, UNION, AND 6" DIRT LEG. REFER TO DETAIL ON SHEET M6.0. PAINT ALL NEW & EXISTING GAS PIPING SAFETY YELLOW. INSTALL GAS PIPING PER NATIONAL FUEL GAS CODE. REROUTE GAS PIPING AS REQUIRED FOR FULL ACCESS TO ALL RTU SERVICE DOORS.
3. INSTALL NEW SUPPLY & RETURN DUCT TRANSITIONS TO SUPPLY & RETURN DUCT. MODIFY AND EXTEND DUCT AS REQUIRED.

LEGEND

- MECHANICAL DEMO
- EXISTING SUPPLY DUCT
- EXISTING RETURN DUCT
- EXISTING EXHAUST DUCT
- NEW SUPPLY DUCT
- NEW RETURN DUCT
- NEW EXHAUST DUCT
- NEW HOT WATER HEATING SUPPLY
- NEW HOT WATER HEATING RETURN
- EXISTING HOT WATER HEATING SUPPLY
- EXISTING HOT WATER HEATING RETURN
- EXST GAS PIPE
- GAS PIPE DEMO
- NEW GAS PIPE
- EXST DDC COMMUNICATION WIRE
- R1 / 800 — EXST/NEW RETURN AIR GRILLE
- S1 / 800 — EXST/NEW SUPPLY AIR DIFFUSER
- E1 / 800 — EXST/NEW EXHAUST AIR DIFFUSER
- EXST/NEW BALANCE DAMPER

GENERAL MECHANICAL NOTES:

1. FIRE CAULK ALL PENETRATIONS THRU MECHANICAL ROOM AND CORRIDOR WALLS.
2. PERFORM TEST AND BALANCE PER SPECIFICATIONS.
3. CONTRACTOR TO COORDINATE ALL NEW EQUIPMENT STARTUP AND TESTING.
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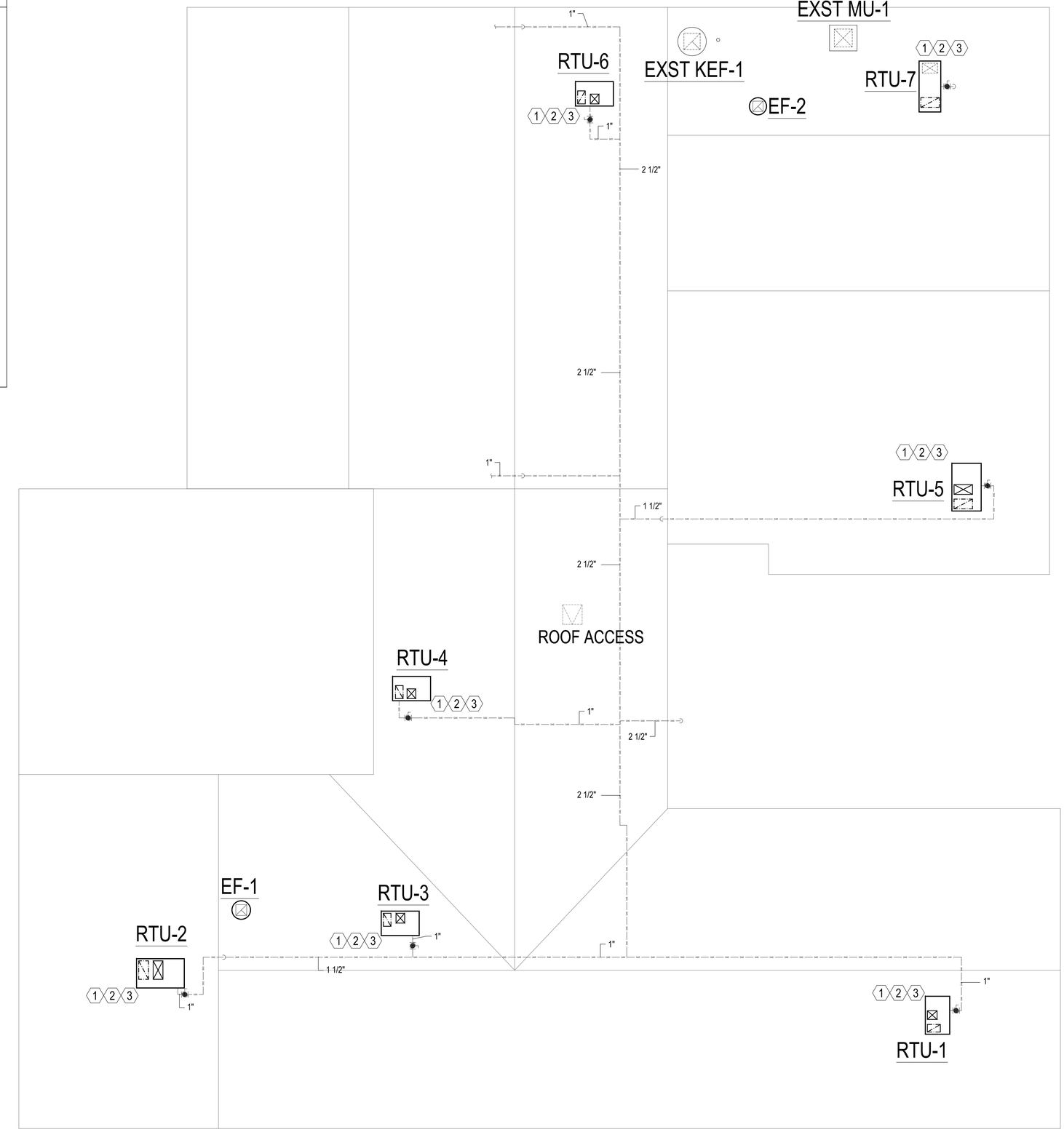

1 M5.0 ROOF MECHANICAL HVAC PLAN
SCALE: 1/8" = 1'-0"

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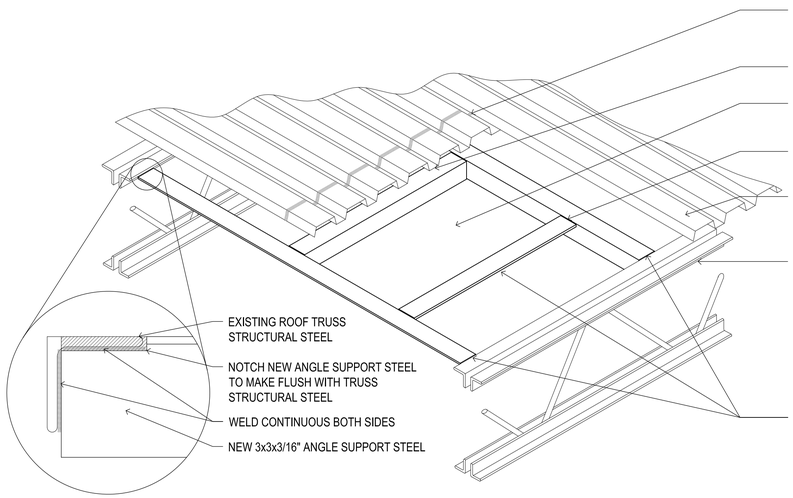
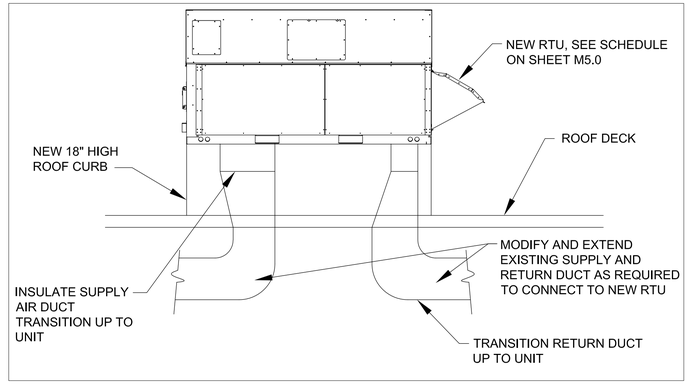
SHEET
MECHANICAL ROOF DEMO PLAN

M5.0



1 M6.0 RTU SUPPORT STEEL DETAIL
SCALE: N.T.S.



2 M6.0 RTU ELEVATION DETAIL
SCALE: NO SCALE

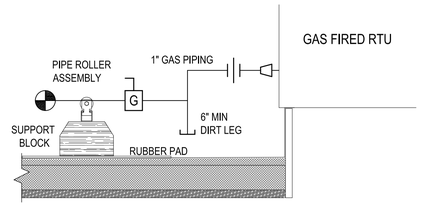
1. COORDINATE WITH RTU MANUFACTURER AND ROOFING CONTRACTOR TO INSTALL NEW CURB AS REQUIRED.
2. COORDINATE WITH ELECTRICAL & CURB MANUFACTURER TO ALLOW SPACE FOR NEW ELECTRICAL CIRCUIT AND DDC CONTROL CONDUIT UP TO UNIT. ALL CONDUITS TO BE INSIDE CURB. NO EXTERIOR PENETRATIONS ALLOWED.
3. INSTALL NEW DUCT TRANSITIONS TO EACH NEW UNIT AS REQUIRED. MODIFY EXISTING DUCT AS REQUIRED TO INSTALL NEW TRANSITIONS.

RTU GAS PIPING DETAIL NOTES:

1. DELETE REDUCERS AT UNIT IF UNIT CONNECTION IS SAME AS PIPE SIZE.
2. INSTALL MINIMUM 6" DIRT LEG PIPED PER DETAIL.
3. INSTALL GAS PIPE SUPPORT W/ PIPE ROLLER ASSEMBLY. INSTALL ROD RISER AS REQUIRED.
4. INSTALL RUBBER PAD UNDER EACH PIPE SUPPORT BLOCK.
5. PAINT ALL NEW GAS PIPE SAFETY YELLOW.

LEGEND

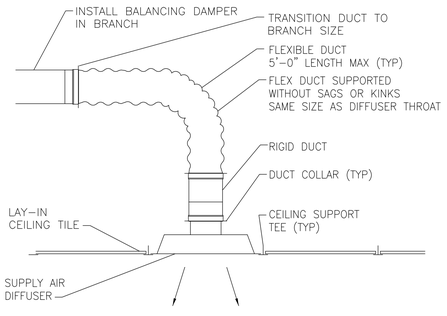
- NEUTRALIZING KIT
- SHUTOFF VALVE
- UNION
- REDUCER AS REQUIRED
- PUMP
- PRESSURE GAUGE
- PRESSURE RELIEF/SAFETY VALVE
- MANUAL AIR VENT @ HIGH POINT
- TEMPERATURE GAUGE
- TEMP SENSOR BY DDC CONTRACTOR
- CALIBRATED BALANCING VALVE
- GAS VALVE
- END CAP
- 2-WAY CONTROL VALVE
- 3-WAY CONTROL VALVE
- ACTUATOR BY DDC CONTRACTOR
- DRAIN VALVE W/ CAP
- CHECK VALVE
- STRAINER w/ BLOW OFF VALVE
- POINT OF NEW CONNECTION
- EXISTING EQPM & PIPING
- NEW PIPING
- NEW EQUIPMENT



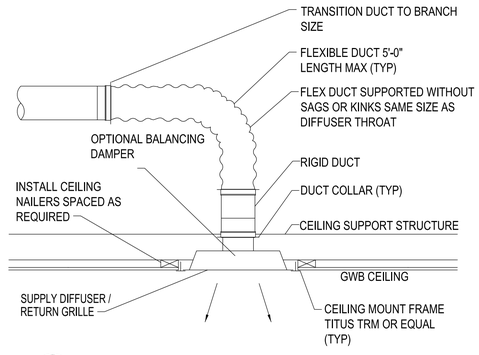
3 M6.0 RTU GAS PIPING DETAIL
SCALE: NO SCALE

7 M6.0 RTU-6 ELEVATION DETAIL
SCALE: NO SCALE

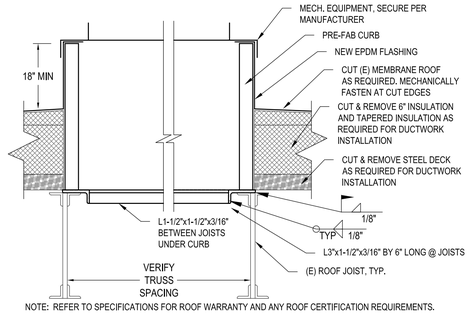
1. COORDINATE WITH RTU MANUFACTURER AND ROOFING CONTRACTOR TO INSTALL NEW CURB AS REQUIRED.
2. COORDINATE WITH ELECTRICAL & CURB MANUFACTURER TO ALLOW SPACE FOR NEW ELECTRICAL CIRCUIT AND DDC CONTROL CONDUIT UP TO UNIT. ALL CONDUITS TO BE INSIDE CURB. NO EXTERIOR PENETRATIONS ALLOWED.
3. INSTALL NEW DUCT TRANSITIONS TO EACH NEW UNIT AS REQUIRED. MODIFY EXISTING DUCT AS REQUIRED TO INSTALL NEW TRANSITIONS.



4 M6.0 SUPPLY DIFFUSER S1 DETAIL
SCALE: NO SCALE



5 M6.0 SUPPLY DIFFUSER S2 / RETURN GRILLE R2 DETAIL
SCALE: NO SCALE



NOTE: REFER TO SPECIFICATIONS FOR ROOF WARRANTY AND ANY ROOF CERTIFICATION REQUIREMENTS.

6 M6.0 EXHAUST FAN ROOF CURB DETAIL
SCALE: NO SCALE

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SHEET
MECHANICAL DETAILS
M6.0

ROOF TOP UNIT SCHEDULE

MARK	BASIS OF DESIGN	E.S.P.	T.S.P.	FAN CFM	FAN OA CFM	VOLTAGE	MCA	MOP	COMPRESSOR QTY	COMPRESSOR TYPE	COMPRESSOR VOLTAGE	COOLING COIL TYPE	EAT DB (F)	EAT WB (F)	LAT DB (F)	LAT WB (F)	FACE VEL.	FACE AREA	MAX FIN/IN	MBH	HEATING CAPACITY EDB(F)	LDB(F)	TOTAL MBH (OUTPUT)	GAS TYPE	STAGES	TURN-DOWN	REMARKS
RTU-1	AAON RNA-008	1.25"	2.05"	2000	1070	208/3/60	47	70	1	D. SCROLL	208V-3Ø	DX	82.5	68.2	55.2	53.5	235.1 fpm	8.5 FT2	14	91.0	32.6	88.5	121.5	NAT.	4	4.3:1	SEE NOTES BELOW, **SS HEAT EXCHANGER**
RTU-2	AAON RNA-009	1.50"	2.43"	3350	410	208/3/60	49	60	2	D. SCROLL	208V-3Ø	DX	76.7	63.5	57.2	54.1	229.7 fpm	14.6 FT2	14	96.0	61.4	104.8	158.0	NAT.	4	4.3:1	SEE NOTES BELOW, ALUMINIZED HEAT EXCHANGER
RTU-3	AAON RQA-005	1.25"	2.49"	1975	298	208/3/60	33	50	1	D. SCROLL	208V-3Ø	DX	77.1	63.8	55.9	53.9	376.2 fpm	5.3 FT2	14	60.7	59.4	97.1	81.0	NAT.	4	4.3:1	SEE NOTES BELOW, ALUMINIZED HEAT EXCHANGER
RTU-4	AAON RQA-005	1.00"	2.06"	1700	228	208/3/60	33	50	1	D. SCROLL	208V-3Ø	DX	76.9	63.6	53.6	52.0	323.8 fpm	5.3 FT2	14	59.0	60.6	104.4	81.0	NAT.	4	4.3:1	SEE NOTES BELOW, ALUMINIZED HEAT EXCHANGER
RTU-5	AAON RNA-011	1.50"	2.58"	3700	870	208/3/60	52	70	2	D. SCROLL	208V-3Ø	DX	78.3	64.8	56.0	54.0	253.7 fpm	14.6 FT2	14	123.5	53.5	112.4	236.9	NAT.	4	4.3:1	SEE NOTES BELOW, ALUMINIZED HEAT EXCHANGER
RTU-6	AAON RNA-009	1.50"	2.70"	4800	562	208/3/60	32	50	HEATING ONLY												61.8	107.2	236.9	NAT.	4	4.3:1	24" CURB, SEE NOTES BELOW, ALUMINIZED HEAT EXCHANGER
RTU-7	AAON RQA-002	1.25"	1.88"	800	152	208/3/60	15	20	1	TWO STEP	208V-3Ø	DX	77.7	64.3	56.9	54.4	152.4 fpm	5.3 FT2	14	24.6	56.7	112.5	48.6	NAT.	4	4.3:1	SEE NOTES BELOW, ALUMINIZED HEAT EXCHANGER

NOTES:
1. RTU TO BE DDC READY
2. RTU CONTROLLER TO BE INSTALLED BY DDC CONTRACTOR
3. RTU TO INCLUDE FACTORY INSTALLED DUCT SMOKE DETECTOR.
4. RTU TO INCLUDE FACTORY MOUNTED GFCI CONVIENENCE RECEPTACLE
5. PROVIDE NEW 18" ROOF CURB WHERE SHOWN. PROVIDE DUCT DROPS AND/OR PARTITIONS WHERE NEEDED
6. PROVIDE 2" 30% EFFICIENT FILTERS
7. PROVIDE INSULATED SIDE WALLS FOR ALL UNITS
8. PROVIDE R-454B REFRIGERANT FOR UNITS WITH COOLING
9. PROVIDE PREMIUM EFFICIENCY MOTORS
10. PROVIDE DIGITAL SCROLL COMPRESSOR
11. PROVIDE ECONOMIZER
12. PROVIDE FACTORY MOUNTED VFD DRIVE
13. UNIT TO HAVE HINGE DOORS & TWIST HANDLE ENTRY
14. FACTORY INSTALLED NON-FUSED DISCONNECT

EXHAUST FAN SCHEDULE

MARK	LOCATION	SERVING	SELECTION BASED ON 0.375 SP MFR	MODEL	CFM	RPM	MOTOR PHASE	VOLTAGE	HERTZ	HP	CURB SIZE	ROOF OPENING	NOTES
EF-1	ROOF	MENS LATRINE	GREENHECK	G-090	350	1300	1	120	60	1/25	17 x 17	13.5 x 13.5	DIRECT DRIVE, NOTES 1,2,3,4,5
EF-2	ROOF	MENS SHOWER ROOM	GREENHECK	G-090	400	1550	1	120	60	1/15	17 x 17	13.5 x 13.5	DIRECT DRIVE, NOTES 1,2,3,4,5
EF-3	ROOF	WOMENS LATRINE	GREENHECK	G-090	350	1300	1	120	60	1/25	17 x 17	13.5 x 13.5	DIRECT DRIVE, NOTES 1,2,3,4,5
EF-4	ROOF	WOMENS SHOWER ROOM	GREENHECK	G-080	200	1550	1	120	60	1/20	17 x 17	13.5 x 13.5	DIRECT DRIVE, NOTES 1,2,3,4,5
EF-5	ROOF	KITCHEN AREA LATRINES	GREENHECK	G-080	190	1550	1	120	60	1/20	17 x 17	13.5 x 13.5	DIRECT DRIVE, NOTES 1,2,3,4,5

NOTES: 1. NEW 24" TALL ROOF CURB
2. VARI-SPEED FAN CONTROLLER
3. NEW BACKDRAFT DAMPER
4. NEMA RATED DISCONNECT SWITCH
5. BIRD SCREEN

PUMP SCHEDULE

MARK	BASIS OF DESIGN	SERVICE	GPH	HEAD FT	HP	ELECTRICAL VOLTS	PH	HZ	NOTES
P-1	LITTLE GIANT - VCMA-20ULST	DEHUMIDIFIER CONDESATE	48	10	1/30	115	1	60	

TERMINAL UNIT SCHEDULE

MARK	MANUFACTURER	MODEL	UNIT SIZE	MAX (PRIMARY CFM)	MIN (PRIMARY CFM)	INLET SP (IN. WG)	DOWNSTREAM SP (IN. WG)	MIN OPER PD (IN.WG)	NOTES
TU-1	PRICE	SDV	6	350	140	0.52	0.25	0.44	SEE NOTES 1 & 2
TU-2	PRICE	SDV	10	800	320	0.52	0.25	0.44	SEE NOTES 1 & 2
TU-3	PRICE	SDV	8	400	160	0.52	0.25	0.44	SEE NOTES 1 & 2
TU-4	PRICE	SDV	8	400	160	0.52	0.25	0.44	SEE NOTES 1 & 2
TU-5	PRICE	SDV	8	450	180	0.52	0.25	0.44	SEE NOTES 1 & 2
TU-6	PRICE	SDV	5	150	60	0.52	0.25	0.44	SEE NOTES 1 & 2
TU-7	PRICE	SDV	6	250	100	0.52	0.25	0.44	SEE NOTES 1 & 2
TU-8	PRICE	SDV	8	500	200	0.52	0.25	0.44	SEE NOTES 1 & 2
TU-9	PRICE	SDV	8	500	200	0.52	0.25	0.44	SEE NOTES 1 & 2
TU-10	PRICE	SDV	8	450	180	0.52	0.25	0.44	SEE NOTES 1 & 2
TU-11	PRICE	SDV	6	300	120	0.52	0.25	0.44	SEE NOTES 1 & 2
TU-12	PRICE	SDV	6	300	120	0.52	0.25	0.44	SEE NOTES 1 & 2
TU-13	PRICE	SDV	8	500	200	0.52	0.25	0.44	SEE NOTES 1 & 2

NOTES: 1. VAV CONTROLLER/ACTUATOR PROVIDED BY DDC CONTRACTOR.
2. TRANSITION DUCT AS REQUIRED TO CONNECT TO NEW TERMINAL UNIT.

DEHUMIDIFIER SCHEDULE

MARK	SERVING	MFR	MODEL	CFM	WATER REMOVAL	ELECTRICAL DATA WATTS	AMPS	VOLTAGE	PH	HZ	NOTES
DHU-1	SUPPLY VAULT	QUEST	MODEL 70	150	70 Pints/Day	680	5.1A	115V	1	60	PROVIDE W/ OPTIONAL MERV 13 FILTER & HANG KIT

GRILLES, REGISTERS, DIFFUSERS, HOODS & DAMPERS

Mark No.	Type	Unit Size	Connection Size	Design CFM	Mounting	Pattern	Throw @ 50 fpm	P.D.	Material	Finish	Remarks
S1	SUPPLY DIFFUSER	24"x24"	SEE PLANS	SEE PLANS	LAY-IN	4-WAY	10'	.03	STEEL	WHITE	TITUS TMS, DAMPER IN BRANCH
S2	SUPPLY DIFFUSER	12"x12"	SEE PLANS	SEE PLANS	DRYWALL W/TRIM FRAME	4-WAY	10'	.03	ALUM.	WHITE	TITUS TMS, W/ OPTIONAL DAMPER & TRM FRAME
S3	SUPPLY DIFFUSER	22" OD	12"	SEE PLANS	DUCT MOUNTED	ROUND	16'	.03	STEEL	WHITE	TITUS TMR, DAMPER IN BRANCH, HARD DUCT - NO FLEX
S4	SUPPLY DIFFUSER	11" OD	6"	SEE PLANS	DUCT MOUNTED	ROUND	16'	.03	STEEL	WHITE	TITUS TMR, DAMPER IN BRANCH, HARD DUCT - NO FLEX
R1	CEILING RETURN	24"x24"	SEE PLANS	SEE PLANS	LAY-IN	-------	-------	-------	ALUM.	WHITE	TITUS 50F W/ SQUARE TO ROUND ADAPTER
R2	RETURN GRILLE	16"x32"	-	SEE PLANS	CMU MOUNTED	-------	-------	-------	ALUM.	WHITE	TITUS 350RL
R3	CEILING RETURN	12"x12"	SEE PLANS	SEE PLANS	DRYWALL W/TRIM FRAME	-------	-------	-------	ALUM.	WHITE	TITUS 50F W/ SQUARE TO ROUND ADAPTER, TRM FRAME & OPTIONAL DAMPER
E1	CEILING EXHAUST	24"x24"	SEE PLANS	SEE PLANS	LAY-IN	-------	-------	-------	ALUM.	WHITE	TITUS 50F W/ ADAPTER & DAMPER TITUS AG-15-AA
E2	CEILING EXHAUST	12"x12"	SEE PLANS	SEE PLANS	DRYWALL W/TRIM FRAME	-------	-------	-------	ALUM.	WHITE	TITUS 50F W/ SQUARE TO ROUND ADAPTER, TRM FRAME & DAMPER TITUS AG-15-AA

NOTE: INSTALL ADAPTERS ON ALL GRILLES, DIFFUSER & DAMPERS AS REQUIRED TO CONNECT TO DUCT

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RENOVATE ARMORY - WATERFORD

DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
2650 WATKINS LAKE RD., WATERFORD TWP, MI 48328

DESIGNED	BOK
DRAWN	BOK
CHECKED	KMM
APPROVED	BAB

IDENTIFICATION NO.	ISSUED FOR	DATE
	PRELIMINARY ■	29 AUG 2024
	CONSTRUCTION ■	29 AUG 2024
	FINAL RECORD □	

PROJECT 2690023043
INDEX CODE

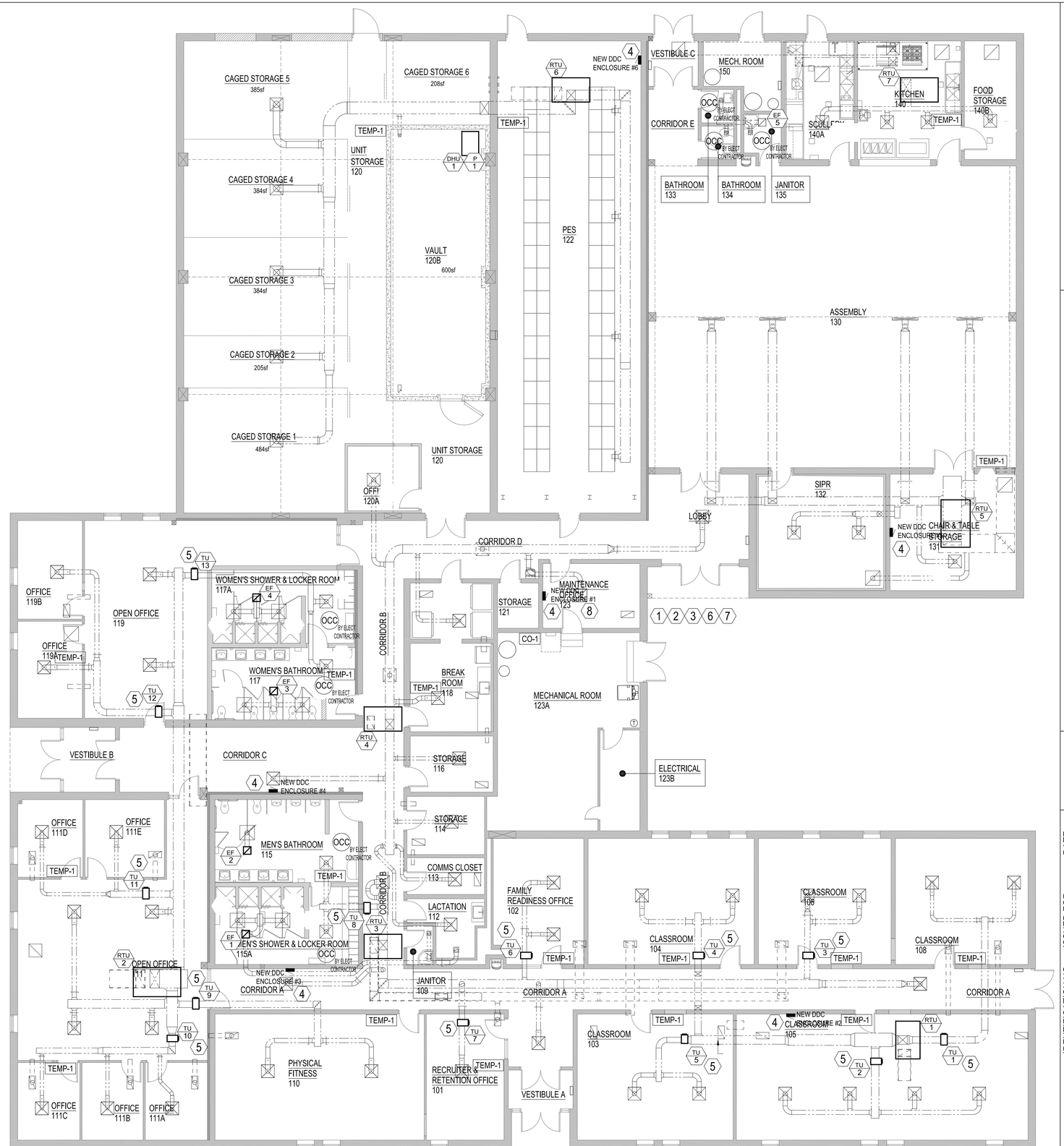
SHEET
MECHANICAL SCHEDULES
M7.0

ENERGY MANAGEMENT PLAN NOTES:

1. DDC CONTRACTOR TO REMOVE ALL DDC EQUIPMENT NO LONGER UTILIZED WITH NEW EQUIPMENT ON THIS CONTRACT. PULL OUT ALL SENSORS, SENSOR WIRES, CONTROL WIRE AND ANY ABANDONED DDC EQUIPMENT.
2. CONTRACTOR TO PROVIDE NEW DDC LONWORKS BUILDING MANAGEMENT SYSTEM WHICH WILL INCLUDE ALL NEW MECHANICAL EQUIPMENT ON THIS PROJECT. PROVIDE NEW FRONT END INTERFACE & GRAPHICS ON A NEW DDC WORKSTATION(LAPTOP). REFER TO SPECIFICATIONS FOR ALL SOFTWARE & HARDWARE REQUIREMENTS.
3. REFER DDC SCHEMATIC ON SHEET M9.0 FOR ADDITIONAL DDC POINTS & EQUIPMENT. REFER TO SHEET M4.0 & M5.0 FOR ALL MECHANICAL ROOM EQUIPMENT LOCATIONS. COORDINATE WITH MECHANICAL CONTRACTOR ON FOR FINAL EQUIPMENT LOCATIONS. COORDINATE WITH ELECTRICAL CONTRACTOR TO INSTALL MECHANICAL EQUIPMENT RELAYS & SENSORS AS REQUIRED. ALL DDC POINTS TO BE LOCATED ON AS-BUILT CONTROL DRAWINGS. SUBMIT WITH FINAL CLOSEOUT DOCUMENTS. INCLUDE A COPY IN DDC ENCLOSURE.
4. INSTALL NEW DDC ENCLOSURE IN THIS LOCATION, SIZE APPROPRIATELY. REFER TO DDC EQUIPMENT ELEVATION DETAIL ON ENERGY MANAGEMENT SHEET M9.0.
5. INSTALL NEW VAV CONTROLLERS VAV-1 THRU VAV-13 AS SHOWN ON PLANS. COORDINATE WITH MECHANICAL CONTRACTOR ON FINAL TERMINAL UNIT LOCATIONS.
6. CONTRACTOR TO DAISY CHAIN IN SERIES ALL DDC PROGRAMMABLE CONTROLLERS INCLUDING ALL DDC-1 AND VAV-1 CONTROLLERS WITH LONBUS COMMUNICATION WIRE . SEE SPECIFICATIONS FOR CORRECT WIRE TYPE.
7. INSTALL NEW TEMP SENSORS AS SHOWN. CONTRACTOR MAY USE EXISTING SURFACE MOUNTED BOX & CONDUIT FOR NEW TEMP SENSORS.
8. INSTALL CO MONITOR STROBE AND SIREN ON THIS DDC ENCLOSURE ONLY.

GENERAL ENERGY MANAGEMENT NOTES:

1. PRIOR TO ANY INSTALLATION OF DDC EQUIPMENT OR DDC WIRING, CONTRACTOR SHALL REQUEST A DDC PRECONSTRUCTION MEETING WITH DMVA ENGINEERING TO DISCUSS CONSTRUCTION SCHEDULING, PRECISE DDC EQUIPMENT LOCATIONS, STARTUPS, LABELING PROCEDURES, AND COMMISSIONING.
2. ALL DDC PROGRAMMING / SOURCE CODE INCLUDING ANY CUSTOM USER DEFINED DEVICES OR UDD ALONG WITH ANY SOFTWARE NECESSARY TO RUN THE SYSTEM TO BE TURNED OVER TO DMVA DDC TECHNICIAN UPON PROJECT COMPLETION.
3. DDC CONTRACTOR TO INCLUDE 8 HOURS OF DDC COMMISSIONING WITH IN-HOUSE DDC / MECHANICAL TECHNICIAN.
4. ROUTE ALL DDC CONTROL WIRES PER SCHEDULE AND SPECIFICATIONS.
5. REFER TO DDC SCHEMATIC THIS SHEET FOR ADDITIONAL END DEVICES NOT SHOWN ON PLANS.
6. CONTRACTOR TO INSTALL A MINIMUM 3/4" RIGID METAL CONDUIT FOR ALL DDC WIRING. INSTALL MINIMUM 1/2" FLEXIBLE METAL CONDUIT TO ALL VIBRATING EQUIPMENT, 6' MAX LENGTH. CONTRACTOR IS ALLOWED TO INSTALL J-HOOKS 4' O.C. FOR DDC CONTROL WIRING ONLY IN AREAS ABOVE A SUSPENDED CEILING. ALL CONDUIT IN WALLS TO BE STUBBED INTO CEILING SPACE.
7. CONTRACTOR SHALL PULL ALL DDC WIRING AS SHOWN ON DDC FLOOR PLAN AND DDC EQUIPMENT SCHEDULE. ALL WIRES SHALL BE LABELED WITH A LABEL MAKER APPROVED BY DMVA ENGINEERING. NO HAND WRITTEN LABELS WILL BE ALLOWED. ALL LABELS LOCATED IN ENCLOSURE ENC-1 & 2 MUST BE PLACED 6" DOWN ON WIRE ONCE INSIDE THE ENCLOSURE, DO NOT LOCATE LABEL AT THE END OF WIRE.
8. ALL INPUT/OUTPUT CONTROL WIRES TO BE LON RATED, SEE SPECIFICATIONS.
9. DDC SEQUENCE AND PROGRAMMING WILL BE COMPLETED BY A DMVA APPROVED SUBCONTRACTOR, SEE SPECIFICATIONS.
10. INSTALL TEMPERATURE SENSORS, TEMP-1, 60" AFF.
11. INSTALL OCCUPANCY SENSORS, OCC-1, 10" FROM CEILING.
12. INSTALL ALL OAT-1 ON NORTH FACING EXTERIOR WALL, MAKE WEATHERTIGHT
13. LABEL ALL DDC EQUIPMENT TO CORRESPOND TO DDC SCHEMATIC PER SPECIFICATIONS
14. PROVIDE AND INSTALL ALL END DEVICES SHOWN ON PLANS, DDC SCHEMATIC AND DETAILS.
15. COORDINATE WITH ELECTRICAL TO INSTALL NEW RELAYS. ELECTRICAL CONTRACTOR WILL INSTALL J-BOX FOR NEW RELAYS TO MOUNT ON.
16. RELAYS FOR EXHAUST FANS O BE LOCATED IN ELECTRICAL CLOSET. COORDINATE WITH ELECTRICAL.



1 M8.0 ARMORY ENERGY MANAGEMENT PLAN
SCALE: 1/8" = 1'-0"

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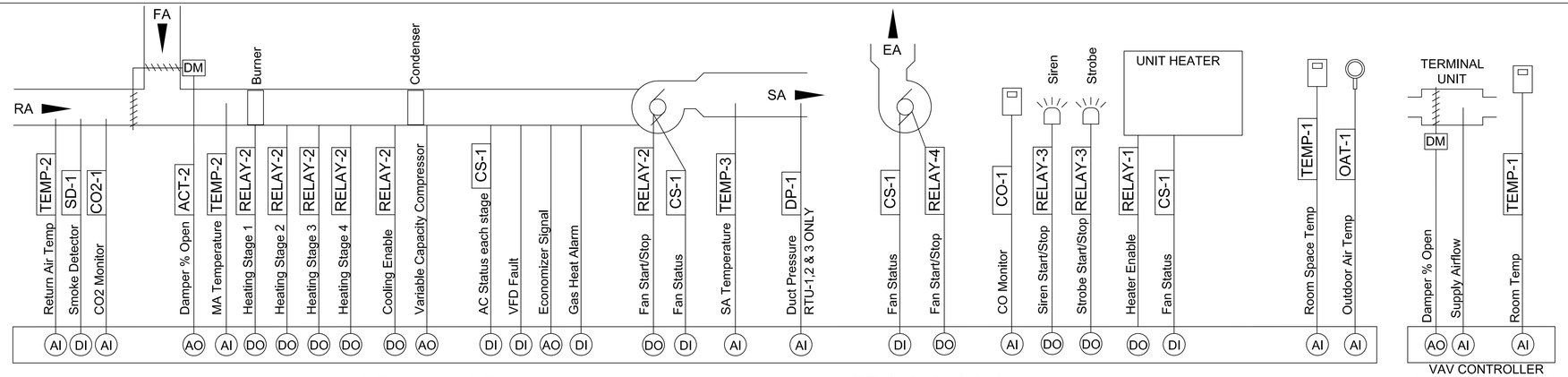
SHEET
MECHANICAL DDC PLAN
M8.0

DDC SCHEMATIC NOTES:

1. INSTALL ADDITIONAL PROGRAMMABLE CONTROLLERS & TRANSFORMERS AS REQUIRED FOR ALL MECHANICAL EQUIPMENT. PROVIDE PRELIMINARY AS-BUILT CONTROL DRAWINGS PRIOR TO CONSTRUCTION.
2. REFER TO ENERGY MANAGEMENT PLAN FOR ALL DDC SENSOR AND EQUIPMENT LOCATIONS.
3. REFER TO ENERGY MANAGEMENT SHEETS FOR ADDITIONAL BMS SEQUENCE OF OPERATIONS.
4. GAS FIRED ROOF TOP UNITS ARE THE SAME CONTROLS AS WATER COIL ROOF TOP UNITS EXCEPT FOR BURNER CONTROLS IN LIEU OF HOT WATER HEATING COIL ACTUATOR, SEE SCHEMATIC.
5. INDIVIDUAL CURRENT STATUS RELAY NOT REQUIRED IF CONTROL RELAY PROVIDES CURRENT STATUS.
6. LOCAL OCCUPANCY SWITCHES NOT CONNECTED TO BMS WILL NOT REQUIRE CURRENT STATUS SENSOR FOR EQUIPMENT IT CONTROLS.
7. ALL EQUIPMENT RUN OFF OCCUPANCY SWITCHES CONNECTED TO BMS WILL REQUIRE CURRENT STATUS SENSOR FOR EQUIPMENT IT CONTROLS.
8. INSTALL ADDITIONAL CONTROL RELAYS, CURRENT SENORS OR OTHER DDC EQUIPMENT AS REQUIRED FOR MULTI STAGE EQUIPMENT REFER TO MECHANICAL SHEETS FOR MORE DETAIL.



1 / M9.0 DDC SCHEMATIC
SCALE: NO SCALE

DDC EQUIPMENT SCHEDULE

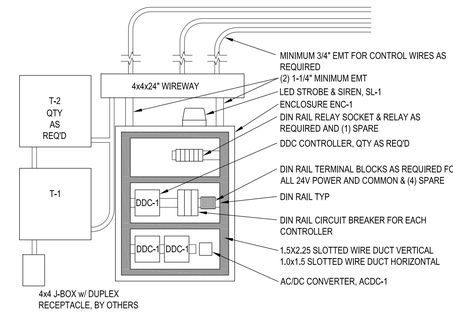
MARK	LABEL	DESCRIPTION	BASIS OF DESIGN	SERVICE	LOCATION	QTY / WIRE SIZE TO EQUIPMENT	NOTES
ENC-1	ENC-1	DDC ENCLOSURE	KELE - RET2620 or RET3626	DDC EQUIPMENT ENCLOSURE	VARIES	-	NO SUBSTITUTIONS, STANDARD BROWN
DDC-1	DDC-1	PROGRAMMABLE CONTROLLER	CIRCON - UHC-400 or SCC-410 w/ UIO-184 MODULE	DDC	DDC ENCLOSURE	-	NO SUBSTITUTIONS, NOT IN MECHANICAL EQUIPMENT
DDC-2	CATNET	CATNET INTERFACE W/ LON CARD	CATNET - CLI-FT	ENC-1	ONE PER BUILDING, ENC-1	-	NO SUBSTITUTIONS
DDC-3	WEBSERVER	CATNET WEBSERVER	CATNET - HMI CH-2	ENC-1	ONE PER BUILDING, ENC-1	-	NO SUBSTITUTIONS
DDC-4	MODBUS	INTERFACE MODBUS	CATNET - CMI-485	ENC-1	DDC ENCLOSURE	-	NO SUBSTITUTIONS
T-1	T-1-ENC#	TRANSFORMER	RIB - PSH500A-LVC or PSH300A-LVC	CONTROLLERS / END DEVICES	NEXT TO DDC ENCLOSURE ENC-1	2 CONDUCTOR / 18 GA,	100VA FOR EACH SCC-410 or UIO-184 CONTROLLER,
T-2	T-2-ENC#	VAV TRANSFORMER	RIB - PSH500A-LVC or PSH300A-LVC	VAV CONTROLLERS	VARIES	2 CONDUCTOR / 18 GA,	5 OR LESS VAV CONTROLLERS PER 100VA CIRCUIT
TEMP-1	TEMP-1-AREA	ROOM TEMPERATURE SENSOR	ACI - A/AN-R2	ROOM TEMP	SEE LAYOUT, WALL MOUNTED 60" AFF	2 CONDUCTOR / 18 GA, SHIELDED	18 INCHES, TEMP, AVERAGING
TEMP-2	TEMP-2-AHU# or RTU#	DUCT TEMPERATURE SENSOR	ACI - A/AN-D-12"-GD	DUCT AIR TEMP	SUPPLY & RETURN DUCT	2 CONDUCTOR / 18 GA, SHIELDED	18 INCHES, TEMP, AVERAGING
TEMP-3	TEMP-3-AHU# or RTU#	PIPE TEMPERATURE SENSOR	SAP - SAP-10K-3-S	BOILER WATER TEMP	BOILER PIPING	2 CONDUCTOR / 18 GA, SHIELDED	
TEMP-4	TEMP-3-AHU# or RTU#	PIPE TEMPERATURE SENSOR	ACI - A/AN-IM-##-GD, MATCH THERMOWELL LENGTH	BOILER WATER TEMP	BOILER PIPING THERMOWELL	2 CONDUCTOR / 18 GA, SHILEDED	INCLUDE ACI - A/M1", M2.5" or M4" BASED ON PIPE SIZE
HD-1	HD-1-AHU# or RTU#	DUCT HUMIDITY SENSOR	VERIS - HD2XVSX w/ (1) SPARE SENSOR HS2xxx	HUMIDITY	RETURN DUCT BEFORE FRESH AIR	2 CONDUCTOR / 18 GA, SHIELDED, 2 CONDUCTOR / 18 GA, DC PWR, USE 16 GA, ON RUNS OVER 150FT	
OAT-1	OAT-1	OUTDOOR AIR TEMP SENSOR	ACI - A/AN-O-EH	OAT	NORTH FACING BLDG EXTERIOR	2 CONDUCTOR / 18 GA, SHIELDED	
FR-1	FR-1	FREEZESTAT	ACI - FS-4 / ACI - FS-6, SEE SPECS	RTU/AHU	DUCT AFTER HEATING COIL	2 CONDUCTOR / 18 GA,	MANUAL RESET
CS-1	CS-1-(DEVICE NAME)	CURRENT SENSOR	ACI - A/MSCS	AHU/PUMPS/EXHAUST FANS	VARIES	2 CONDUCTOR / 18 GA,	
CO2-1	CO2-1-AHU# OR RTU#	DUCT CO2 SENSOR	ACI - A/CO2-DUCT	CO2	RETURN DUCT	4 CONDUCTOR / 18 GA, SHIELDED	
SD-1	SD-1	SMOKE DETECTOR	AIR PRODUCTS & CONTROLS - SL-2000-P	AHU/RTU	RETURN DUCT BEFORE FRESH AIR	2 CONDUCTOR / 18 GA, & 2 CONDUCTOR / 18 GA, PWR, USE 16 GA, ON RUNS OVER 150FT	
DIN RAIL	-	DIN RAIL	KELI - BAM-1000	MECHANICAL EQUIP	DDC ENCLOSURE / RTU	-	
WIRE DUCT	-	SLOTTED WIRE DUCT	IBOCO - T1E-1522W & T1E-1015W	MECHANICAL EQUIP	DDC ENCLOSURE	-	
RELAY-1	(VARIES ON DEVICE)	RELAY	RIB - RIBU1S or RIBU1C	MECHANICAL EQUIP	VARIES	2 CONDUCTOR / 18 GA,	RIBU1C FOR STATUS ONLY
RELAY-2	(VARIES ON DEVICE)	DIN RAIL RELAY SPDT	VERIS - VMD1B-F24A w/ RELAY SOCKET VERIS - VBD1B-F	COMMAND RELAYS	VARIES	2 CONDUCTOR / 18 GA,	-
RELAY-3	(VARIES ON DEVICE)	DIN RAIL RELAY SPDT	VERIS - VMD4B-C w/ RELAY SOCKET VERIS - VBD4B-C	SAFETY RELAYS & FREEZESTAT	DDC ENCLOSURE	2 CONDUCTOR / 18 GA,	-
RELAY-4	(VARIES ON DEVICE)	RELAY	RIB - RIBX24SBA	24V INPUT, 120V OUTPUT MECH EQIP	VARIES	-	HAND, OFF, AUTO
VAV-#	VAV-#-RM#	VAV UNIT CONTROLLER	CIRCON - VAV-350-IMV	VAV UNIT	VARIES	LONBUS COMM / 2 CONDUCTOR / 18 GA, PWR, USE 16 GA, ON RUNS OVER 150FT	
DP-1	DP-1-AHU# or RTU#	DUCT PRESSURE SENSOR	ACI - A/DP-010-W-U-N-A-3	AHU/RTU VFD	2/3 DOWN MAIN SUPPLY DUCT	2 CONDUCTOR / 18 GA, SHIELD, 2 CONDUCTOR / 18 GA, PWR, USE 16 GA, ON RUNS OVER 150FT	
TBLCK	-	TERMINAL BLOCK	KELE - CDU4N	MECHANICAL EQUIP	DDC ENCLOSURE / RTU		
BRKR-1	-	CIRCUIT BREAKER FOR VAV CONTROLLER	CBI ELECTRIC - QL-1	VAV PROGRAMMABLE CONTROLLER	DDC ENCLOSURE / RTU		
BRKR-2	-	CIRCUIT BREAKER FOR SCC CONTROLLER	CBI ELECTRIC - QL-2	PROGRAMMABLE CONTROLLER	DDC ENCLOSURE / RTU		
ACT-1	ACT-1-(DEVICE NAME)	DAMPER ACTUATOR	KMC CONTROLS - MEP-4501 or MEP-4901	CONTROL DAMPERS	VARIES	2 CONDUCTOR / 18 GA, SHIELD, 2 CONDUCTOR / 18 GA, PWR, USE 16 GA, ON RUNS OVER 150FT	
ACT-2	ACT-2-(DEVICE NAME)	1/2" & 3/4" VALVE ACTUATOR	KMC CONTROLS - MEP-4252V	CONTROL VALVES	VARIES	2 CONDUCTOR / 18 GA, SHIELD, 2 CONDUCTOR / 18 GA, PWR, USE 16 GA, ON RUNS OVER 150FT	
ACT-3	ACT-3-(DEVICE NAME)	1" - 3" VALVE ACTUATOR	KMC CONTROLS - MEP-4552V	CONTROL VALVES	VARIES	2 CONDUCTOR / 18 GA, SHIELD, 2 CONDUCTOR / 18 GA, PWR, USE 16 GA, ON RUNS OVER 150FT	
OCC-1	OCC-1-RM#	OCCUPANY SENSOR	WATTSTOPPER - CX100	ROOM OCCUPACNY	SEE LAYOUT, WALL MOUNTED 6" FROM CEILING	2 CONDUCTOR / 18 GA, SHIELD, 2 CONDUCTOR / 18 GA, DC PWR, USE 16 GA, ON RUNS OVER 150FT	
ACDC-1	ACDC-1	AC TO DC VOLTAGE CONVERTER	IDEC - PS5R-VA24	OCCUPACNY & HUMIDITY SENSORS	DDC ENCLOSURE		

NOTES:
1. CONTRACTOR TO FURNISH AND INSTALL MATERIALS IN SCHEDULE. WIRE SHOWN TO BE PULLED INTO ENCLOSURES / MECHANICAL EQUIPMENT AND LABELED AT EACH END.
2. SUBSTITUTIONS SHALL BE REVIEWED AND APPROVED BY DMVA ENGINEERING PRIOR TO INSTALLATION.

GAS MONITORING EQUIPMENT SCHEDULE

MARK	DESCRIPTION	BASIS OF DESIGN	MOUNTING LOCATION	NOTES
CO-1	CO SENSOR & BASE	VERIS - AG01 CO SENSOR	48" AFF	WALL MOUNT, SEE NOTES 1 & 2
SL-1	LED STROBE LIGHT W/ SIREN	SECO-LARM - SL-1301-SAQ (RED)	ENCLOSURE	MOUNT ON TOP OF GAS MONITORING SYSTEM ENCLOSURE

NOTES: 1. INCLUDE (2) ADDITIONAL CO SENSORS
2. INSTALL 2 CONDUCTOR / 18 GA, SHIELD, 2 CONDUCTOR TO EACH BASE SENSOR UNIT FROM GAS CONTROLLER



2 / M9.0 DDC EQUIPMENT ENCLOSURE DETAIL
SCALE: 1" = 1'-0"

SEQUENCE OF OPERATION FOR EQUIPMENT

GENERAL

OCCUPIED MODE WILL BE INITIATED THRU THE BUILDINGS OCCUPANCY SCHEDULE, AS SET THRU THE WEB SERVER USER INTERFACE.

HEATING MODE WILL BE ALLOWED WHENEVER THE SPACE TEMPERATURE FALLS BELOW THE .

MECHANICAL COOLING AND OUTDOOR AIR DAMPERS WILL NOT BE UTILIZED WITHOUT PROOF OF SUPPLY FAN OPERATION THRU THEIR RESPECTIVE CURRENT SENSING SWITCHES.

ALL FRESH AIR INTAKE DAMPERS TO REMAIN CLOSED DURING UNOCCUPIED AND OCCUPIED MODES AND WHEN CO2 LEVELS ARE BELOW AN ACCEPTABLE SET POINT (800PPM, ADJUSTABLE) EXCEPT DURING ECONOMIZER CYCLE.

SHOULD THE DUCT MOUNT SMOKE DETECTOR SENSE PRODUCTS OF COMBUSTION, THE SUPPLY FAN WILL BE DE-ENERGIZED AND ALL DAMPERS AND VALVES WILL GO TO THEIR RESPECTIVE FAIL-SAFE POSITION.

ROOF TOP UNITS (RTU-1 thru RTU-7)

OCCUPIED HEATING MODE

DURING THIS MODE, THE SUPPLY FAN WILL RUN CONTINUOUSLY AND THE OUTDOOR AIR DAMPER WILL REMAIN CLOSED UNTIL THE RETURN AIR CARBON DIOXIDE LEVEL INCREASES TO A MAXIMUM LEVEL OF 800PPM (ADJUSTABLE) THEN MODULATING THE OUTDOOR AIR DAMPERS BETWEEN THE MINIMUM POSITION SET POINT AND 50% OPEN TO DECREASE CO2 LEVELS TO 700PPM (ADJUSTABLE).

DURING HEATING MODE THE GAS HEATING SECTION WILL BE STAGED TO MAINTAIN THE OCCUPIED HEATING SET POINT.

UNOCCUPIED HEATING MODE

DURING THIS MODE THE OUTDOOR AIR DAMPER WILL REMAIN CLOSED, THE RETURN AIR DAMPER WILL REMAIN OPEN AND THE SUPPLY FAN CYCLED AS NECESSARY.

A CALL FOR HEATING WILL CAUSE THE GAS HEATING SECTION WILL BE STAGED AND THE SUPPLY FAN TO BE ENERGIZED UNTIL THE SPACE TEMPERATURE RISES THREE (3.0) DEGREES F (ADJUSTABLE) ABOVE THE UNOCCUPIED HEATING SET POINT.

OCCUPIED COOLING MODE

DURING THIS MODE, THE SUPPLY FAN WILL RUN CONTINUOUSLY AND THE OUTDOOR AIR DAMPER WILL REMAIN CLOSED UNTIL THE RETURN AIR CARBON DIOXIDE LEVEL INCREASES TO A MAXIMUM LEVEL OF 800PPM (ADJUSTABLE) THEN MODULATING THE OUTDOOR AIR DAMPERS BETWEEN THE MINIMUM POSITION SET POINT AND 50% OPEN TO DECREASE CO2 LEVELS TO 700PPM (ADJUSTABLE).

WHEN OUTDOOR AIR CONDITIONS ARE APPROPRIATE AN ECONOMIZER CYCLE WILL BE UTILIZED FOR FREE COOLING. THE OUTDOOR AIR AND RETURN AIR DAMPERS WILL BE MODULATED UNTIL THE SPACE TEMPERATURE FALLS THREE (3.0) DEGREES F BELOW THE UNOCCUPIED COOLING SET POINT. DURING THIS MODE THE SUPPLY AIR WILL NOT BE ALLOWED TO FALL BELOW A LOW LIMIT OF 55.0 F.

WHEN OUTDOOR AIR CONDITIONS ARE NOT APPROPRIATE FOR AN ECONOMIZER CYCLE, A CALL FOR COOLING WILL CAUSE THE MECHANICAL COOLING AND SUPPLY FAN TO BE ENERGIZED UNTIL THE SPACE TEMPERATURE REACHES THE UNOCCUPIED COOLING SET POINT WITH MINIMUM ON AND OFF TIMES. THE SUPPLY FAN WILL CONTINUE TO RUN FOR A PERIOD OF THREE (3.0) MINUTES AFTER THE MECHANICAL COOLING IS DE-ENERGIZED.

UNOCCUPIED COOLING MODE

DURING THIS MODE THE OUTDOOR AIR DAMPER WILL REMAIN CLOSED, THE RETURN AIR DAMPER WILL REMAIN OPEN AND THE SUPPLY FAN CYCLED AS NECESSARY.

WHEN OUTDOOR AIR CONDITIONS ARE APPROPRIATE AN ECONOMIZER CYCLE WILL BE UTILIZED FOR FREE COOLING. THE OUTDOOR AIR AND RETURN AIR DAMPERS WILL BE MODULATED UNTIL THE SPACE TEMPERATURE FALLS THREE (3.0) DEGREES F BELOW THE UNOCCUPIED COOLING SET POINT. DURING THIS MODE THE SUPPLY AIR WILL NOT BE ALLOWED TO FALL BELOW A LOW LIMIT OF 55.0 F.

WHEN OUTDOOR AIR CONDITIONS ARE NOT APPROPRIATE FOR AN ECONOMIZER CYCLE, A CALL FOR COOLING WILL CAUSE THE MECHANICAL COOLING AND SUPPLY FAN TO BE ENERGIZED UNTIL THE SPACE TEMPERATURE FALLS THREE (3.0) DEGREES F BELOW THE UNOCCUPIED COOLING SET POINT WITH MINIMUM ON AND OFF TIMES. THE SUPPLY FAN WILL CONTINUE TO RUN FOR A PERIOD OF THREE (3.0) MINUTES AFTER THE MECHANICAL COOLING IS DE-ENERGIZED.

UNIT HEATER (UH-1)

SPACE TEMPERATURE WILL BE DIRECTLY CONTROLLED BY THE ASSOCIATED UNIT HEATER.
THE UNIT HEATER WILL ENERGIZE UNTIL THE SPACE TEMPERATURE REACHES THE HEATING SET POINT.

ZONES

EACH (13) ZONE VAV CONTROLLER WILL MODULATE ITS ASSOCIATED SUPPLY AIR DAMPER BETWEEN ITS PROGRAMMABLE MINIMUM AND MAXIMUM CFM SET POINTS TO MEET THE NEEDS OF THE SERVED SPACE.

THE ZONE VAV CONTROLLERS WILL REVERSE OPERATION BASED UPON THE AIR TEMPERATURE BEING DELIVERED BY THE RTU AND THEIR NEED TO FURNISH HEATING OR COOLING TO THEIR RESPECTIVE SPACES.

THE CORRESPONDING RTU FAN SPEED SHALL MODULATE BASED ON DUCT PRESSURE.

EXHAUST FANS (EF-1, EF-2, EF-3, EF-4 & EF-5)

EXHAUST FAN WILL BE ENABLED THRU NETWORK COMMUNICATION CONTROLLED RELAY WHENEVER THE LOCAL OCCUPANCY SENSOR IS ACTIVATED. THE EXHAUST FAN WILL CONTINUE TO RUN FOR A PERIOD OF 15 MINUTES (ADJUSTABLE) AFTER THE LOCAL OCCUPANCY SENSOR IS DE-ACTIVATED.

GAS DETECTION / EXHAUST

THE MECH ROOM IS EQUIPPED WITH ONE CARBON MONOXIDE GAS MONITOR. CO GAS LEVELS WILL BE MONITORED AT ALL TIMES. SHOULD THE CO LEVEL RISE ABOVE THE CO LEVEL ALARM SET POINT (25 PPM, ADJUSTABLE) THE RESPECTIVE AUDIO/VISUAL ALARM RELAY(S) WILL BE ENERGIZED ON THE DDC ENCLOSURE.

SPACE TEMPERATURE SET POINTS (ADJUSTABLE)

OCCUPIED COOLING: 74.0 F
OCCUPIED HEATING: 70.0 F
UNOCCUPIED COOLING: 80.0 F
UNOCCUPIED HEATING: 62.0 F

ALARMS

AN ALARM CONDITION WILL BE REPORTED TO THE WEB SERVER USER INTERFACE FOR THE FOLLOWING; ALL EQUIPMENT TYPES ARE LISTED BELOW, INCLUDE ALL EQUIPMENT LISTED ON PLANS FOR EXACT QUANTITY.

LOW SPACE TEMPERATURE (@ EACH NEW SENSOR LOCATION)
HIGH SPACE TEMPERTAURE (@ EACH NEW SENSOR LOCATION)
ROOF TOP UNIT SUPPLY FAN FAILURE
ROOF TOP UNIT FREEZE-STAT TRIPPED
ROOF TOP UNIT SMOKE DETECTOR TRIPPED
ROOF TOP UNIT LOW SUPPLY AIR TEMP
ROOF TOP UNIT COOLING FAILURE
ROOF TOP UNIT VFD FAULT
ROOF TOP UNIT GAS HEAT FAILURE
EXHAUST FAN FAILURE (@ EACH LOCATION)
UNIT HEATER UH-1 FAN FAILURE
MECH ROOM CARBON MONOXIDE HIGH LEVEL

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
PROCUREMENT AND REAL ESTATE SERVICES ADMINISTRATION
DESIGN AND CONSTRUCTION DIVISION
ADAM LACH, RA, DIRECTOR

RENOVATE ARMORY - WATERFORD
DEPARTMENT OF MILITIARY AND VETERANS AFFAIRS
2650 WATKINS LAKE RD., WATERFORD TWP, MI 48328

DESIGNED	BOK
DRAWN	BOK
CHECKED	KMM
APPROVED	BAB

ISSUED FOR	DATE
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■ CONSTRUCTION	29 AUG 2024
□ FINAL RECORD	

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PROJECT 2690023043
INDEX CODE

SHEET
DDC SCHEMATIC, SCHEDULES & SEQUENCE
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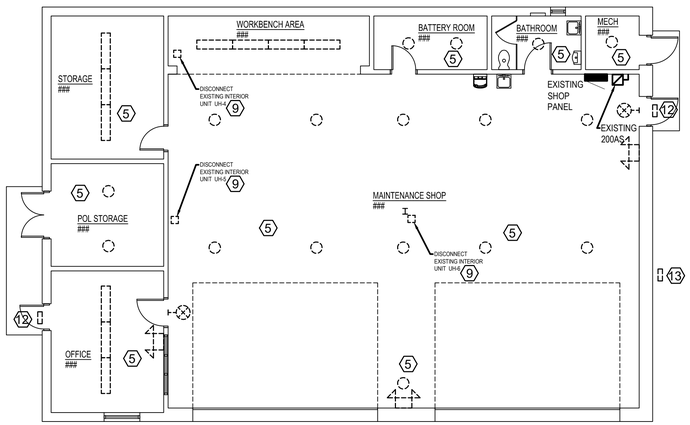


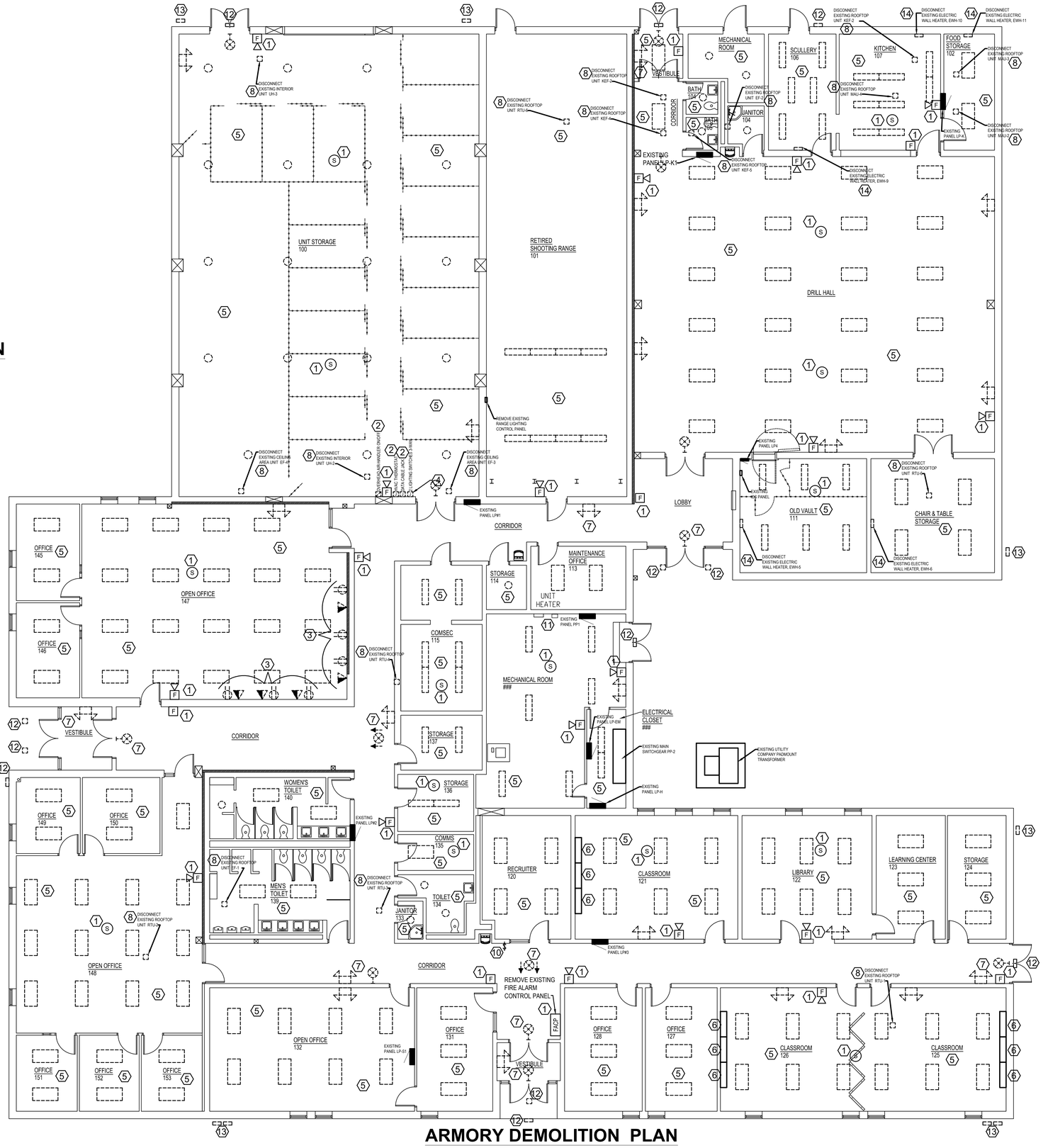
VEHICLE MAINTENANCE BUILDING ELECTRICAL DEMOLITION PLAN

SCALE 1/8" = 1'-0"

ELECTRICAL & FIRE ALARM DEMOLITION PLAN KEY NOTES ⬡:

1. REMOVE THE EXISTING FIRE ALARM SYSTEM IN ITS ENTIRETY INCLUDING THE FIRE ALARM CONTROL PANEL, FIELD DEVICES, CABLING, JUNCTION BOXES, AND RACEWAYS.
2. REMOVE THIS EXISTING DEVICE FROM THE WALL LOCATION INDICATED AND RELOCATE TO THE WALL AREA INDICATED.
3. REMOVE THESE SURFACE MOUNTED RACEWAY & RECEPTACLES, TELEPHONE AND DATA JACKS FROM THESE TWO WALLS TO MAKE WAY FOR THE NEW RESTROOM. REMOVE THE RACEWAYS AND CONDUCTORS AND CABLES BACK TO THEIR SOURCE.
4. REMOVE THESE DEVICES, DEVICE BOX, AND CONDUIT BACK TO ITS SOURCE.
5. REMOVE THE EXISTING LIGHTING FIXTURES, INCLUDING EMERGENCY AND EXIT LIGHTING FIXTURES, WITHIN THIS ROOM. COORDINATE LOCATION OF AND CONNECTION OF THE NEW LIGHTING FIXTURES WITH THE PROPOSED LIGHTING PLAN.
6. THESE BLACKBOARD ILLUMINATION LIGHTING FIXTURES AND THEIR CONTROL WALL SWITCHES SHALL REMAIN AND ARE CONVERTED TO LED IN THIS CONTRACT.
7. REMOVE THE EXISTING EMERGENCY AND EXIT LIGHTING FIXTURES IN THESE CORRIDORS. COORDINATE THE LOCATION OF AND CONNECTION OF THE NEW EMERGENCY AND EXIT LIGHTING FIXTURES WITH THE PROPOSED LIGHTING PLAN.
8. DISCONNECT EXISTING ROOF TOP MECHANICAL UNITS RTU-1 THROUGH RTU-6, EF-1, 2, 3, & 4, MAU-2, 3, & 4, AND KEF-2, 3, 4, AND 5. COORDINATE WITH THE MECHANICAL TRADES AND SHEET M2.0. WHERE NEW ROOF TOP MECHANICAL UNITS ARE TO BE INSTALLED IN REMOVED UNIT LOCATIONS, KEEP THE FEEDER CONDUCTORS AND CONDUIT FOR RECONNECTION, ALL OTHERS REMOVE CONDUIT BACK TO IT'S SOURCE. RE-LABEL BREAKER ACCORDINGLY.
9. DISCONNECT EXISTING INTERIOR UNIT HEATERS UH-4, 5, & 6 IN THE VEHICLE MAINTENANCE BUILDING.
10. REMOVE THIS LIGHT SWITCH DEVICE BOX AND OPERATE THE LIGHTING WITHIN THE NEW RECRUITER ROOM 120 VIA THE NEW OCCUPANCY SENSORS.
11. DISCONNECT EXISTING UNIT HEATER. COORDINATE WITH THE MECHANICAL TRADES AND SHEET M2.0. REMOVE REMOVE THE RACEWAYS AND CONDUCTORS AND CABLES BACK TO THEIR SOURCE.
12. REMOVE EXISTING EXTERIOR LIGHTING FIXTURES. COORDINATE LOCATION OF AND CONNECTION OF THE NEW LIGHTING FIXTURES WITH THE PROPOSED LIGHTING PLAN. REUSE EXISTING CIRCUIT. COORDINATE WITH ARCHITECTURAL TRADES FOR CHANGES IN SIDING. PATCH UNUSED OPENING WITH LIKE MATERIAL IF NEEDED.
13. REMOVE EXISTING EXTERIOR LIGHTING FIXTURES. REUSE SUPPORT CONDUIT FOR NEW FIXTURE. REUSE EXISTING CIRCUIT.
14. DISCONNECT EXISTING ELECTRIC WALL HEATER. COORDINATE WITH THE MECHANICAL TRADES AND SHEET M2.0. REMOVE THE RACEWAYS AND CONDUCTORS AND CABLES BACK TO THEIR SOURCE.

811
KNOW WHAT'S BELOW.
CALL BEFORE YOU DIG.



ARMORY DEMOLITION PLAN

SCALE 1/8" = 1'-0"

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DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
WATERFORD, MICHIGAN

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PRELIMINARY ■	10 OCT 2025	DESIGNED	ALM
CONSTRUCTION ■	05 JUL 2025	DRAWN	BAB
FINAL RECORD □		CHECKED	ALM
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PROJECT	2690023043		
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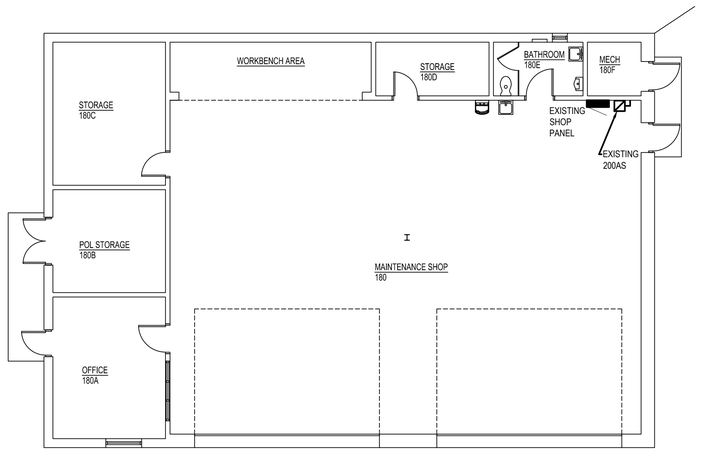
SHEET E1



PROPOSED VEHICLE MAINTENANCE BUILDING POWER PLAN

SCALE 1/8" = 1'-0"

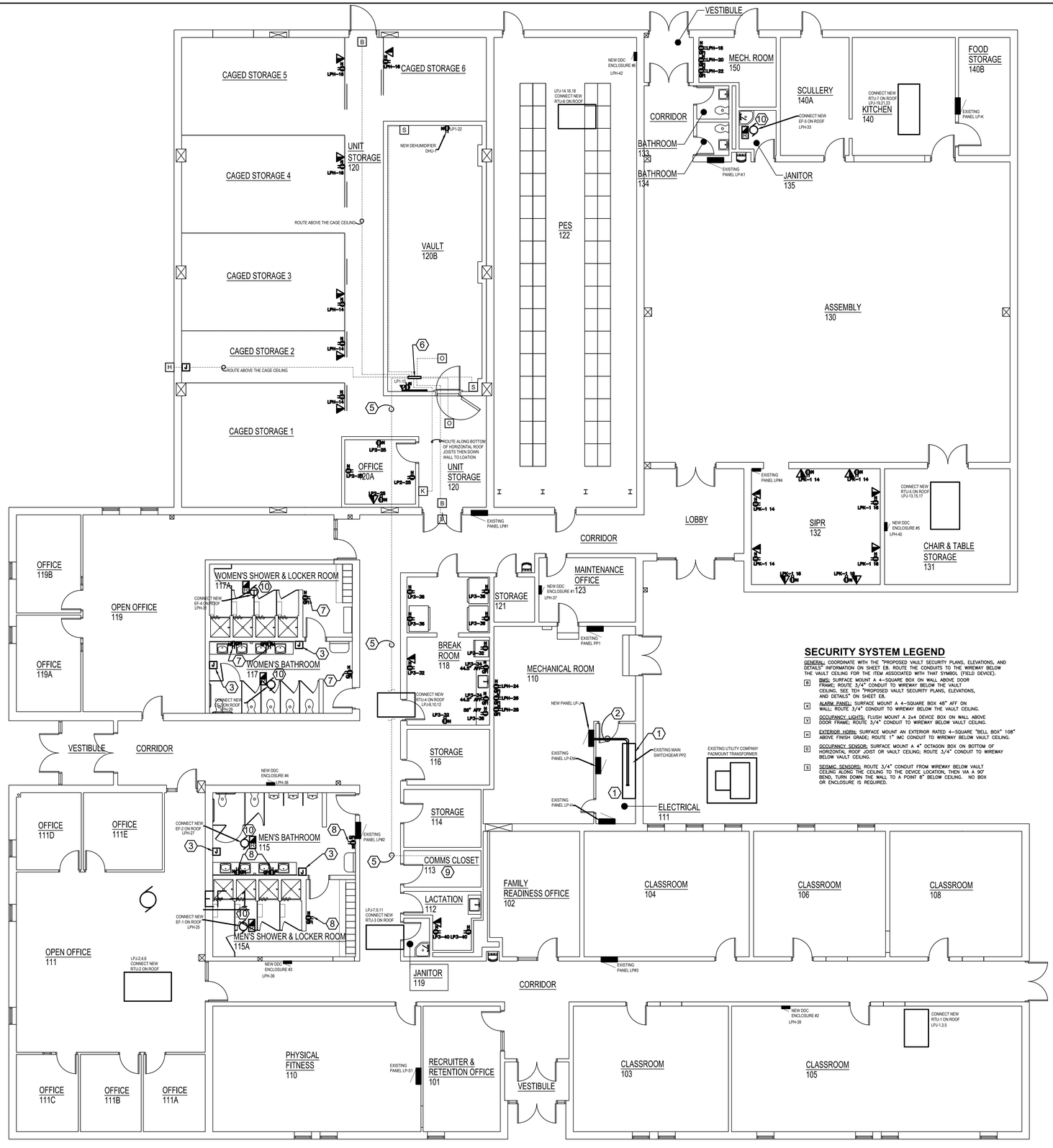
PROPOSED POWER PLAN KEY NOTES ⬡:

1. A NEW 400 AMPERE SWITCH IS REQUIRED TO BE INSTALLED IN THE MAIN SWITCHBOARD PP-2. THE FOLLOWING STEPS ARE TO BE CARRIED OUT BY THE CONTRACTOR IN PP-2:
   - A. REMOVE SWITCHES FOR LOADS RTU-1, RTU-2. RTU-3, AND THE SPARE 30A SWITCH NEXT TO THE RTU-3 SWITCH.
   - B. MOVE ALL REMAINING SWITCHES TO THE TOP OF THIS PP-2 SECTION. RECONNECT THEIR LOADS CONDUCTORS TO THE APPROPRIATE SWITCH. SPICE-ON ADDITIONAL CONDUCTOR IF NEEDED.
   - C. INSTALL A "NEW TO THIS BUILDING" 3-POLE/400 AMPERE FUSIBLE SWITCH INTO THE PP-2 SECTION.
   - D. INSTALL NEW BLANK COVER PLATES OVER OPEN SPACES AS NEEDED.
   - E. INSTALL THREE (3) NEW DUAL ELEMENT 400 AMPERE TYPE FRS IN THE NEW 3P/400A SWITCH.
2. FROM THE NEW 3P/400A SWITCH INSTALLED IN KEY NOTE #1 ABOVE, ROUTE TWO PARALLEL RUNS OF 4 #3/0 & 1 #3 GND, 2" CONDUIT OVERHEAD TO THE NEW PANEL LP-J LOCATED IN THE MECHANICAL ROOM 110.
3. INSTALL FLUSH MOUNTED JUNCTION BOX FOR NEW HAND DRYER UNIT AT 48" AFF. ROUTE NEW CIRCUIT INDICATED TO THIS JUNCTION BOX AND CONNECT THE HAND DRYER. COORDINATE EXACT HEIGHT WITH ARCHITECTURAL TRADES.
4. LOCATION OF 4'x4' FIRE RATED PLYWOOD BACKBOARD WITH THE ONE LENGTH OF WIREWAY JUST BELOW THE VAULT CEILING ABOVE THE PLYWOOD BACKBOARD. REFER TO THE "PROPOSED VAULT SECURITY PLANS, ELEVATIONS, AND DETAILS" ON SHEET E8 FOR ADDITIONAL INFORMATION.
5. PROVIDE A 1" IMC RACEWAY FROM THE EXISTING COMMS ROOM, ABOVE THE EXISTING DATA RACK, TO THE 4"x4"x20" WIREWAY THAT IS LOCATED BELOW THE NEW VAULT CEILING. ROUTE ABOVE SUSPENDED CEILING WHERE DROP CEILINGS ARE INSTALLED. THIS CONDUIT SHALL SHALL BE CONTINUOUS (NO JUNCTION BOXES ALLOWED). INSTALL TWO (2) CAT-6, 4-PAIR CABLES INSIDE THIS RACEWAY. PULL THESE CABLES INTO THE 4"x4"x20" WIREWAY LOCATED INSIDE THE VAULT ABOVE THE PLYWOOD BACKBOARD. PROVIDE ENOUGH EXTRA CABLE TO REACH THE FLOOR PLUS FIVE (5) FEET. TERMINATE BOTH ENDS OF EACH CABLE AND TEST PER SPECIFICATION.
6. 4" X 4" X 24" WIREWAY MOUNTED DIRECTLY ABOVE THE FIRE RATED PLYWOOD BACKBOARD. REFER TO KEYNOTE 4 ABOVE.
7. USE EXISTING RECEPTACLE CIRCUIT LP2-28 & 30 FOR NEW RECEPTACLES.
8. USE EXISTING RECEPTACLE CIRCUIT LP2-22 & 24 FOR NEW RECEPTACLES.
9. INSTALL NEW RACK AS SHOWN ON SHEET E6 AND PER SPECIFICATIONS. TERMINATE FIBER AND ALL NEW AND EXISTING DATA LINES TO NEW SETUP. REUSE EXISTING CABLE TRAY, WALL MOUNTED PLYWOOD BOARD, GROUNDING BAR.
10. NEW EXHAUST FAN. COORDINATE THE CONNECTION OF LOW-VOLTAGE WIRING WITH THE MECHANICAL TRADES, TO THE LOCAL LIGHTING OCCUPANCY SENSOR AUXILIARY CONTACT SET. CONNECT EXHAUST FAN TO CIRCUIT INDICATED. PROVIDE MANUAL MOTOR STARTED/RELAY.

NEW HVAC UNIT ELECTRICAL POWER CONNECTIONS & FEEDS

HVAC UNIT	UNIT LOAD		ELECTRICAL ITEM REQUIRED				NOTES
	VOLTAGE/PHASE	LOAD	ITEM(S) TO PROVIDE AND INSTALL	ITEM SIZE	FUSE SIZE	BRANCH CIRCUIT SIZE	
RTU-1	208V/3Ø	47 MCA / 70 MOP	CONDUIT AND WIRE FEEDER			4 #3 & #6GND, 1-1/2"C	1,2
RTU-2	208V/3Ø	49 MCA / 60 MOP	CONDUIT AND WIRE FEEDER			4 #4 & #8GND, 1-1/2"C	1,2
RTU-3	208V/3Ø	33 MCA / 50 MOP	CONDUIT AND WIRE FEEDER			4 #6 & #8GND, 1-1/4"C	1,2
RTU-4	208V/3Ø	33 MCA / 50 MOP	CONDUIT AND WIRE FEEDER			4 #6 & #8GND, 1-1/4"C	1,2
RTU-5	208V/3Ø	52 MCA / 70 MOP	CONDUIT AND WIRE FEEDER			4 #3 & #6GND, 1-1/2"C	1,2
RTU-6	208V/3Ø	32 MCA / 50 MOP	CONDUIT AND WIRE FEEDER			4 #6 & #8GND, 1-1/4"C	1,2
RTU-7	208V/3Ø	15 MCA / 20 MOP	CONDUIT AND WIRE FEEDER			4 #10 & #10GND, 3/4"C	1,2
EXHAUST FAN EF-1	120V/1Ø	1 A	MANUAL MOTOR STARTER AND RELAY	30A	NOTE 1	2 #12 & #12GND, 3/4"C	
EXHAUST FAN EF-2	120V/1Ø	1 A	MANUAL MOTOR STARTER AND RELAY	30A	NOTE 1	2 #12 & #12GND, 3/4"C	
EXHAUST FAN EF-3	120V/1Ø	1 A	MANUAL MOTOR STARTER AND RELAY	30A	NOTE 1	2 #12 & #12GND, 3/4"C	
EXHAUST FAN EF-4	120V/1Ø	1 A	MANUAL MOTOR STARTER AND RELAY	30A	NOTE 1	2 #12 & #12GND, 3/4"C	
EXHAUST FAN EF-5	120V/1Ø	1 A	MANUAL MOTOR STARTER AND RELAY	30A	NOTE 1	2 #12 & #12GND, 3/4"C	
DDC ENCLOSURE ENC-1 TO 6	120V/1Ø	—	DEDICATED CIRCUIT & GND	HARD CONNECTION		2 #12 & #12GND, 3/4"C	

HVAC UNIT ELECTRICAL POWER CONNECTIONS & FEEDS NOTES:
1. COORDINATE AND INSTALL THE SIZE OF FUSE RECOMMENDED BY HVAC UNIT MANUFACTURER.
2. ROUTE FEEDER FROM THE NEW PANEL J IN THE MECHANICAL ROOM TO UNIT LOCATION INDICATED.



SECURITY SYSTEM LEGEND

GENERAL: COORDINATE WITH THE "PROPOSED VAULT SECURITY PLANS, ELEVATIONS, AND DETAILS" INFORMATION ON SHEET E8. ROUTE THE CONDUITS TO THE WIREWAY BELOW THE VAULT CEILING FOR THE ITEM ASSOCIATED WITH THAT SYMBOL (FIELD DEVICE).

- B — BMS: SURFACE MOUNT A 4-SQUARE BOX ON WALL ABOVE DOOR FRAME; ROUTE 3/4" CONDUIT TO WIREWAY BELOW THE VAULT CEILING. SEE TEH "PROPOSED VAULT SECURITY PLANS, ELEVATIONS, AND DETAILS" ON SHEET E8.
- K — ALARM PANEL: SURFACE MOUNT A 4-SQUARE BOX 48" AFF ON WALL; ROUTE 3/4" CONDUIT TO WIREWAY BELOW VAULT CEILING.
- V — OCCUPANCY LIGHTS: FLUSH MOUNT A 2x4 DEVICE BOX ON WALL ABOVE DOOR FRAME; ROUTE 3/4" CONDUIT TO WIREWAY BELOW VAULT CEILING.
- H — EXTERIOR HORN: SURFACE MOUNT AN EXTERIOR RATED 4-SQUARE "BELL BOX" 108" ABOVE FINISH GRADE; ROUTE 1" IMC CONDUIT TO WIREWAY BELOW VAULT CEILING.
- O — OCCUPANCY SENSOR: SURFACE MOUNT A 4" OCTAGON BOX ON BOTTOM OF HORIZONTAL ROOF JOIST OR VAULT CEILING; ROUTE 3/4" CONDUIT TO WIREWAY BELOW VAULT CEILING.
- S — SEISMIC SENSORS: ROUTE 3/4" CONDUIT FROM WIREWAY BELOW VAULT CEILING ALONG THE CEILING TO THE DEVICE LOCATION, THEN VIA A 90° BEND, TURN DOWN THE WALL TO A POINT 8" BELOW CEILING. NO BOX OR ENCLOSURE IS REQUIRED.

PROPOSED ARMORY POWER PLAN

SCALE 1/8" = 1'-0"

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FACILITIES AND BUSINESS SERVICES
DESIGN AND CONSTRUCTION DIVISION
ADAM LACH, RA, DIRECTOR

RENOVATE ARMORY- WATERFORD

DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
WATERFORD, MICHIGAN

DESIGNED	ALM
DRAWN	ALM
CHECKED	BAB
APPROVED	KSM
DATE	10 OCT 2025
	05 JUL 2025
ISSUED FOR	☐ PRELIMINARY ■ CONSTRUCTION ☐ FINAL RECORD
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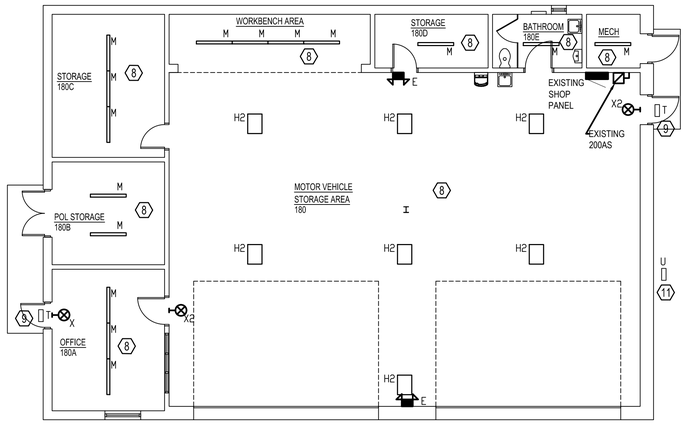


PROPOSED VEHICLE MAINTENANCE BUILDING LIGHTING PLAN

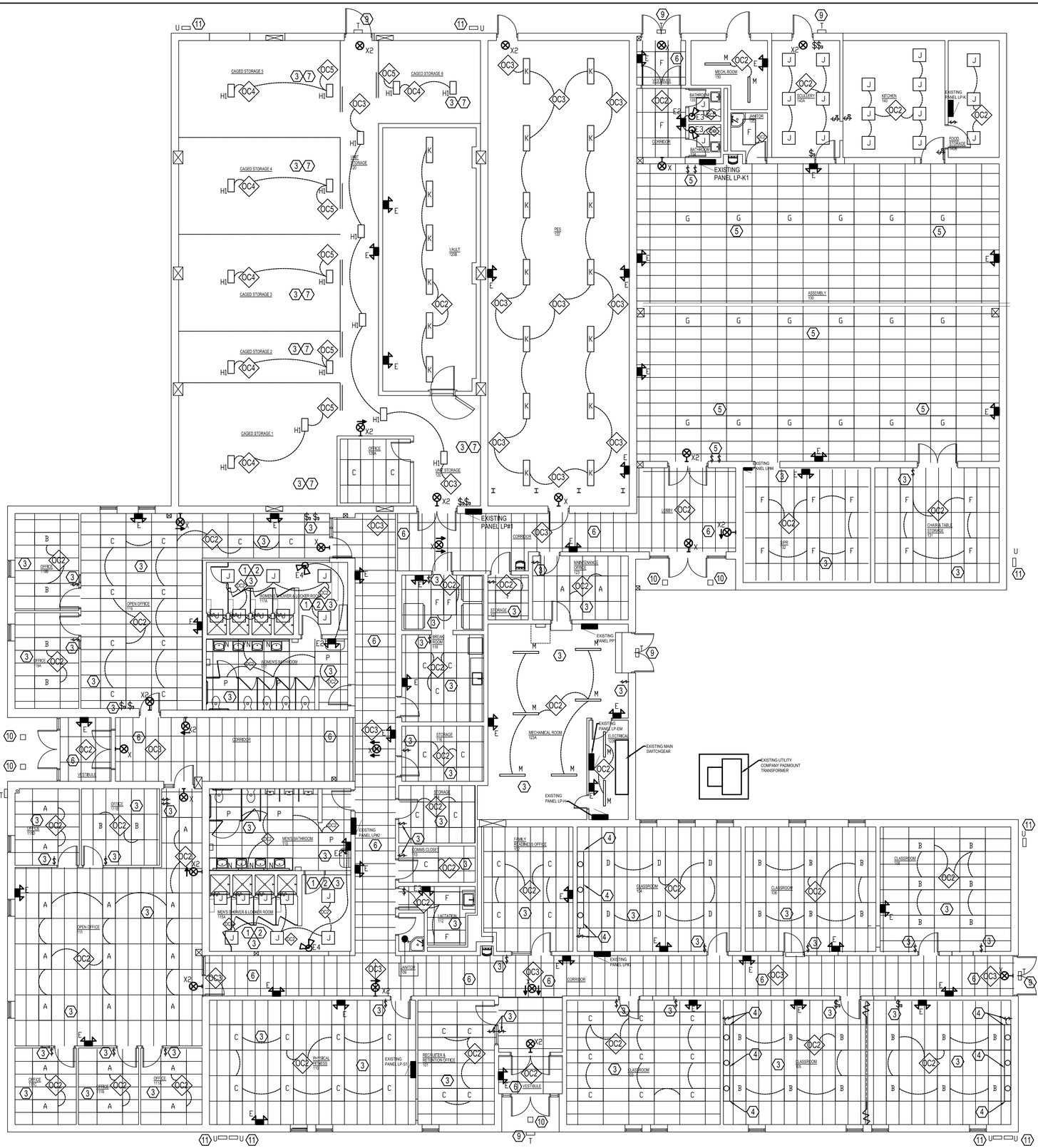
SCALE 1/8" = 1'-0"

PROPOSED ARMORY AND MAINTENANCE BLDG LIGHTING PLAN KEY NOTES ⬡:

1. FOR ELECTRICAL BRANCH CIRCUITS IN THE NEW MEN'S AND WOMEN'S SHOWER & LOCKER ROOMS, THE CONTRACTOR SHALL RELOCATED ANY EXISTING OR NEW JUNCTION BOXES REQUIRED ABOVE THE CEILING SUCH THAT THEY CAN BE REACHED FROM THE OPENING IN THE CEILINGS MADE BY NEW ACCESS DOORS.
2. COORDINATE NEW ABOVE CEILING JUNCTION BOXES IN THE NEW MEN'S AND WOMEN'S SHOWER & LOCKER ROOMS TO BE LOCATED ADJACENT TO, AND SERVICEABLE FROM, THE NEW CEILING ACCESS DOORS.
3. IN THIS ROOM, INSTALL THE NUMBER OF NEW LIGHTING FIXTURES WHERE INDICATED, CONNECT THESE NEW LIGHTING FIXTURES TO THE NEW OCCUPANCY SENSOR(S) SHOWN. CONNECT THE NEW LIGHTING FIXTURES, CONTROLLED BY THE NEW OCCUPANCY SENSOR(S) AND CONNECT TO THE EXISTING LIGHTING CIRCUIT WITHIN THIS ROOM. REMOVE THE EXISTING WALL SWITCHES FROM THEIR DEVICE BOXES ALONG WITH THE WIRING TO THEM AND RECONFIGURE THE HOT WIRING AND ROUTE DIRECTLY TO THE NEW OCCUPANCY SENSOR(S) FIRST, THEN TO THE NEW LIGHTING FIXTURES. PROVIDE AND INSTALL A NEW STAINLESS STEEL BLANK COVER PLATE AT THE OLD WALL SWITCH LOCATION(S).
4. FOR THESE 2-LAMP F40 WATT FLUORESCENT BLACKBOARD ILLUMINATION LIGHTING FIXTURES, KEEP THE WALL SWITCH AS THEIR CONTROL SWITCHING. REMOVE THE INTERNAL FLUORESCENT BALLAST ON EACH FIXTURE, INSTALL NEW TUBE SOCKETS, AND REWIRE FOR DIRECT 120VAC OPERATION. INSTALL TWO NEW 4-FOOT LED LAMPS IN EACH FIXTURE. PROVIDE LED RE-LAMP KITS BY THE MANUFACTURER OF THE BULK OF THE LIGHTING SUBMITTAL MANUFACTURER.
5. NEW TYPE G LIGHTING FIXTURES IN THE ASSEMBLY ROOM 130 SHALL REMAIN ON THE EXISTING WALL SWITCHES FOR CONTROL.
6. CORRIDORS AND THE MAINTENANCE OFFICE ROOM HAVE BEEN CONVERTED TO LED LIGHTING. CONTRACTOR ON THIS PROJECT SHALL INSTALL THE NEW OCCUPANCY SENSORS INDICATED TO CONTROL THE LIGHTING FIXTURES. WITHIN THESE AREAS, REMOVE THE EXISTING WALL SWITCHES AND REWIRE TO MAKE THE OCCUPANCY SENSORS CONTROL THE LIGHTING FIXTURES. ALL EMERGENCY LIGHTING AND EXIT FIXTURES SHOWN ARE NEW AND SHALL BE CONNECTED TO THE LOCAL LIGHTING CIRCUIT.
7. WITHIN THE CAGED STORAGE AREA, THE CAGE WILL BE INSTALLED FROM THE FLOOR TO THE HORIZONTAL STEEL ROOF JOISTS ABOVE WITH A CAGE CEILING OVER EACH SECTION. CONTRACTOR SHALL INSTALL THE NEW LIGHTING FIXTURES TO THE UNDERSIDE OF THE CAGE CEILING. THE FLOOR TO HORIZONTAL STEEL MEASUREMENT IS 12'-10" AFF. INSTALL THE OCCUPANCY SENSORS EITHER ON THE SIDE OF THE LIGHTING FIXTURE OR TO THE UNDERSIDE OF THE CAGE CEILING.
8. NEW TYPE H2 AND M LIGHTING FIXTURES IN THE MOTOR VEHICLE STORAGE AREA SHALL REMAIN ON THE EXISTING WALL SWITCHES FOR CONTROL.
9. REPLACE THE EXISTING EXTERIOR WALL PACKS WITH THE NEW ONES SHOWN. REUSE EXISTING CIRCUIT.
10. REPLACE THE EXISTING EXTERIOR 1' X 1' RECESSED LIGHTING WITH A COMPATIBLE LED SOLUTION.
11. REPLACE THE EXISTING EXTERIOR FIXTURE WITH THE NEW ONES SHOWN. REUSE EXISTING CIRCUIT. MODIFY CONDUIT AS NEEDED FOR MOUNTING. ADJUST ANGLE OF FIXTURE ACCORDINGLY.

GENERAL ELECTRICAL CONSTRUCTION NOTES (APPLIES TO ALL ELECTRICAL DRAWINGS & DETAILS):

1. SEAL ALL FIRE RATED WALL & CEILING PENETRATIONS.
2. COORDINATE LOCATIONS OF LIGHT FIXTURES WITH ALL PIPING, DUCTWORK, AND EQUIPMENT. MOUNT LIGHT FIXTURES TO ALLOW THE GREATEST POSSIBLE HEADROOM.
3. UNLESS OTHERWISE NOTED OR DETAILED, INSTALL ALL CONDUCTORS IN CONDUIT.
4. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST ACCEPTED EDITION OF THE NATIONAL ELECTRICAL CODE AND ALL STATE AND LOCAL CODES.
5. PROVIDE EQUIPMENT GROUNDING CONDUCTORS IN EVERY POWER AND LIGHTING CONDUIT, ONE GROUNDING CONDUCTOR FOR EACH CIRCUIT.
6. ALL LIGHTING AND POWER CONDUCTORS SHALL BE 12 AWG MINIMUM.
7. MINIMUM CONDUIT SIZE SHALL BE 3/4" INTERNAL DIAMETER.
8. MC (METAL CLAD) CABLE SHALL NOT BE USED ON THIS PROJECT.
9. CONTRACTOR SHALL TRANSITION FROM PVC CONDUIT TO GALVANIZED RIGID METALLIC CONDUIT WHEN TURNING UP FROM BELOW A CONCRETE SLAB OR FROM BELOW GRADE TO ABOVE GRADE, WEATHER INDOORS OR OUTDOORS, BY INSTALLING A GALVANIZED METALLIC NINETY DEGREE ELBOW AND THEN CONTINUING ABOVE SLAB OR GRADE UTILIZING GALVANIZED RIGID METAL CONDUIT. THIS APPLIES TO ALL RACEWAYS FOR ALL SYSTEMS INCLUDING VOICE/DATA, UTILITY POWER AND/OR EMERGENCY POWER, LIGHTING, & COMMUNICATIONS SYSTEMS.
10. CONNECT ALL NEW EXIT LIGHTS AND EMERGENCY LIGHT UNITS TO THE LOCAL LIGHTING CIRCUIT AHEAD OF ANY SWITCHES OR OCCUPANCY SENSORS.



PROPOSED ARMORY LIGHTING PLAN

SCALE 1/8" = 1'-0"

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RENOVATE ARMORY- WATERFORD

DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
WATERFORD, MICHIGAN

DESIGNED	MLM
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APPROVED	XLM

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PROJECT 269002304 3
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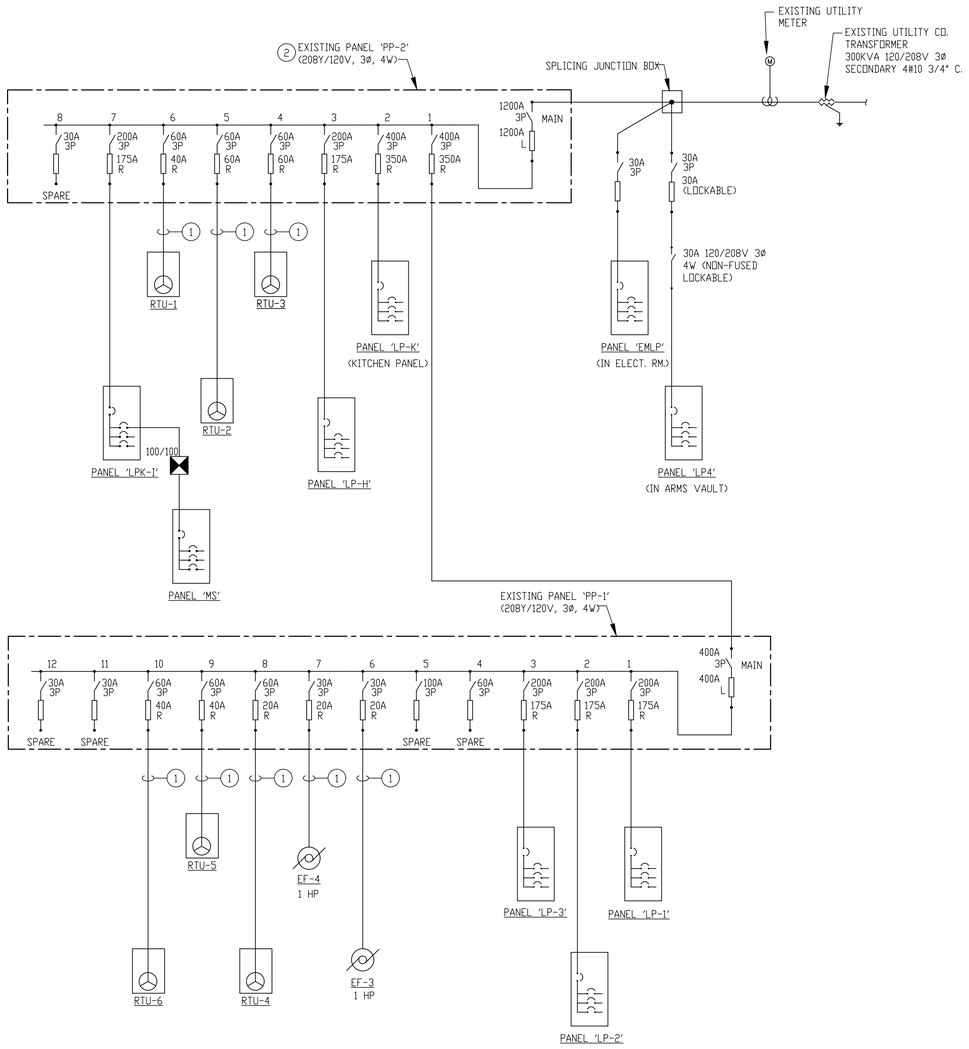
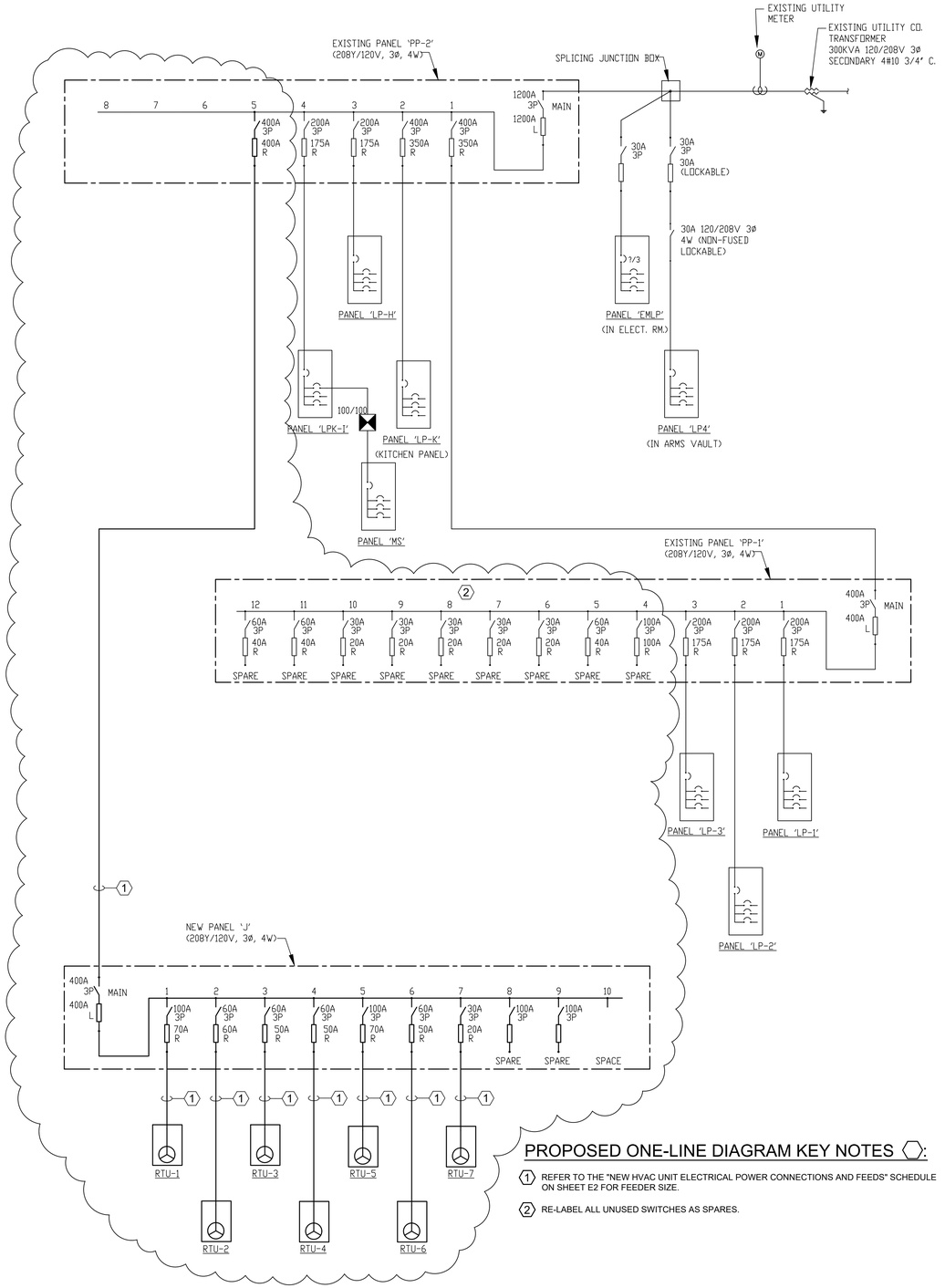


EXISTING ONE-LINE DIAGRAM

208Y/120VAC, 3ø, 4W

EXISTING ONE-LINE DIAGRAM KEY NOTES ◯:

1. DISCONNECT THIS FEEDER AND REMOVE.
2. REFER TO THE PROPOSED POWER PLAN KEY NOTES, NOTE #2 ON SHEET E2 FOR PP-2 WORK TO BE CARRIED OUT IN THIS CONTRACT.



PROPOSED ONE-LINE DIAGRAM

208Y/120VAC, 3ø, 4W

PROPOSED ONE-LINE DIAGRAM KEY NOTES ⬡:

1. REFER TO THE "NEW HVAC UNIT ELECTRICAL POWER CONNECTIONS AND FEEDS" SCHEDULE ON SHEET E2 FOR FEEDER SIZE.
2. RE-LABEL ALL UNUSED SWITCHES AS SPARES.

RENOVATE ARMORY- WATERFORD

DEPARTMENT OF MILITARY AND VETERANS AFFAIRS

WATERFORD, MICHIGAN

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DESIGNED	MLM
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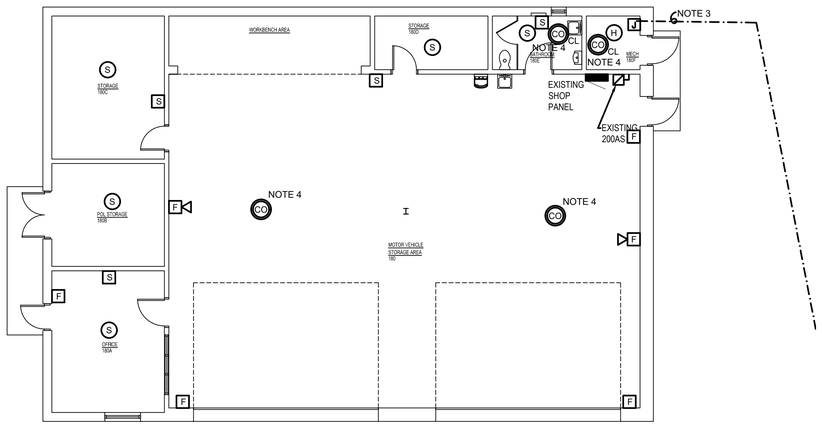


VEHICLE MAINTENANCE BUILDING PROPOSED FIRE ALARM PLAN

SCALE 1/8" = 1'-0"

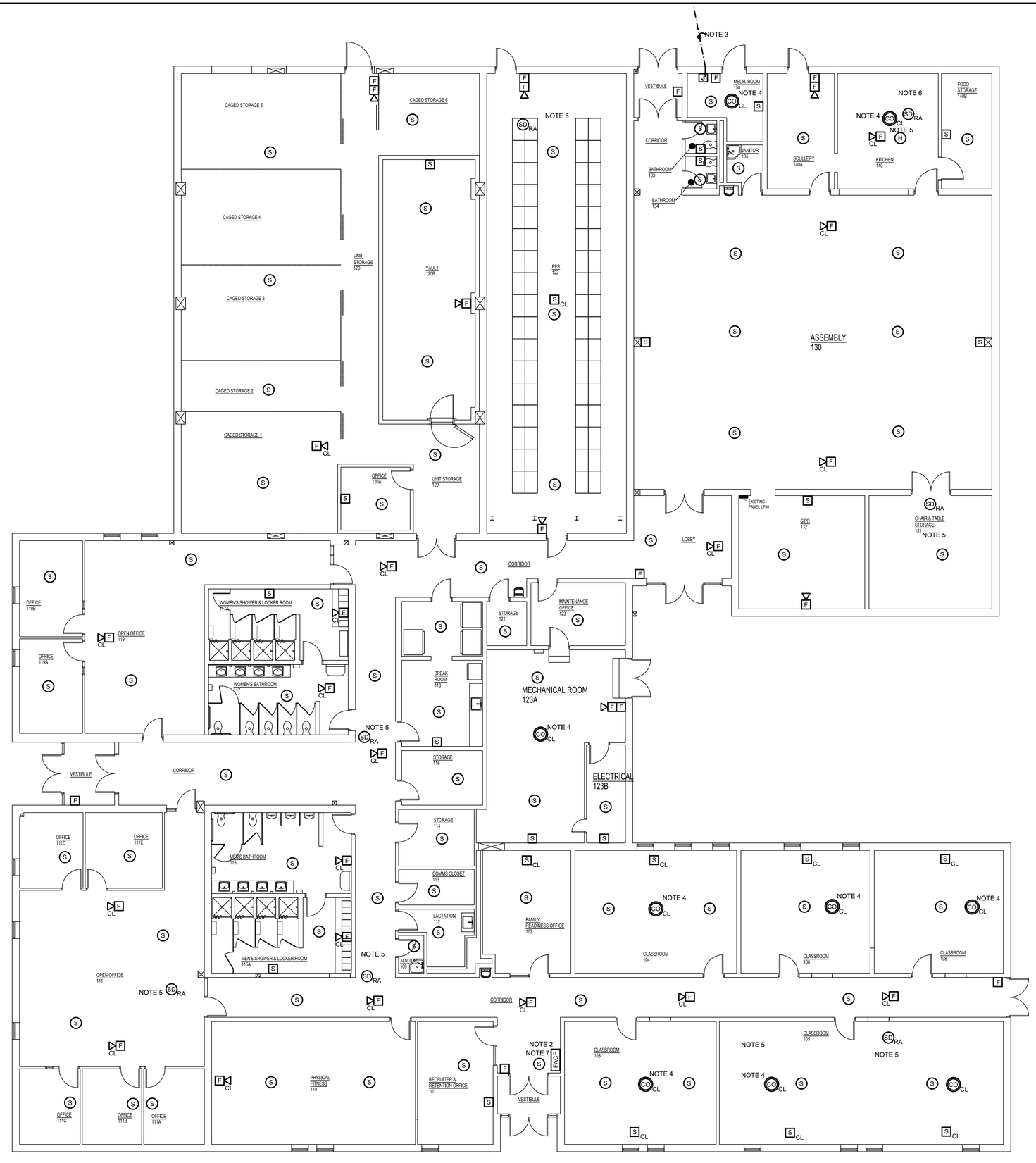
PROPOSED FIRE ALARM PLAN NOTES:

1. REMOVE THE EXISTING FIRE ALARM SYSTEM IN ITS ENTIRETY.
2. INSTALL A COMPLETELY NEW ADDRESSABLE FIRE ALARM SYSTEM. LOCATE THE NEW FIRE ALARM CONTROL PANEL IN THE SAME LOCATION AS THE EXISTING/REMOVED FIRE ALARM CONTROL PANEL. REFER TO THE FIRE ALARM SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
3. PROVIDE AND INSTALL TWO 1" RIGID METAL CONDUIT RACEWAYS UNDERGROUND FROM THE ARMORIES REAR (NORTH) MECHANICAL ROOM TO THE VEHICLE MAINTENANCE SHOP AND INTO THE LOCATION INDICATED. PULL THE NECESSARY CABLES THROUGH THESE CONDUITS TO CONNECT THE VEHICLE MAINTENANCE SHOP TO THE ARMORIES NEW FIRE ALARM CONTROL PANEL.
4. PLEASE NOTE THE ADDITION OF CARBON MONOXIDE DETECTORS AND THEIR CONNECTION TO THE FIRE ALARM SYSTEM. THESE ARE PART OF THIS CONTRACT.
5. FOR THE SEVEN (7) NEW ROOF TOP UNITS, CONNECT THEIR INTEGRAL DUCT SMOKE DETECTORS TO THE NEW FIRE ALARM SYSTEM.
6. CONNECT THE EXISTING KITCHEN VENTILATION SYSTEM'S FIRE SUPPRESSION ALARM TO THE NEW FIRE ALARM SYSTEM.
7. CONNECT NEW FIRE ALARM PANEL TO FIRE ALARM MONITORING COMMUNICATOR USING PRUDENTIAL ALARM.

811
KNOW WHAT'S BELOW.
CALL BEFORE YOU DIG.

FIRE ALARM LEGEND

S	SMOKE DETECTOR, CEILING MOUNTED
SD RA	DUCT TYPE SMOKE DETECTOR, RETURN DUCT
H	HEAT DETECTOR, CEILING MOUNTED
F	FIRE ALARM (FA) HORN/STROBE - WALL MOUNT
F F	FA MANUAL PULL STATION W/FIRE HORN/STROBE ABOVE
F CL	FIRE ALARM HORN/STROBE - CEILING MOUNT
F	FIRE ALARM MANUAL PULL STATION
S	FIRE ALARM STROBE ONLY - WALL MOUNT
S CL	FIRE ALARM STROBE ONLY - CEILING MOUNT
H	FIRE ALARM HORN ONLY
FACP	FIRE ALARM CONTROL PANEL
ARAP	FIRE ALARM REMOTE ANNUNCIATOR PANEL
TS	FIRE ALARM/WATER RISER TAMPER SWITCH
FS	FIRE ALARM/WATER RISER FLOW SWITCH
CO CL	CARBON MONOXIDE DETECTOR, CEILING MOUNTED



PROPOSED FIRE ALARM PLAN

SCALE 1/8" = 1'-0"

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
FACILITIES ADMINISTRATION - BUILDING SERVICES
DESIGN AND CONSTRUCTION DIVISION
ADAM LACH, RA, DIRECTOR

RENOVATE ARMORY- WATERFORD
DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
WATERFORD, MICHIGAN

DESIGNED	ALL	
DRAWN	ALL	
CHECKED	BAB	
APPROVED	KCM	
DATE		
10 OCT 2025		
05 JUL 2025		
ISSUED FOR		
PRELIMINARY	■	
CONSTRUCTION	■	
FINAL RECORD	□	
IDENTIFICATION NO.		
PROJECT	2690023043	
INDEX CODE	1390	
SHEET	E5	

HAND HOLE SCHEDULE

MARK	DESCRIPTION	BOX MANUFACTURER & CATALOG NUMBER	COVER MANUFACTURER & CATALOG NUMBER	REMARKS	NOTES
HH-A	PRECAST POLYMER CONCRETE ENCLOSURE NOMINAL INTERIOR DIMENSIONS: 30"W x 48"L x 48" DEEP	QUAZITE #PG3048BA48 ANSI TIER: 22	QUAZITE #PG3048HH21 ANSI TIER: 22	COVER SHALL HAVE "FIBER OPTICS" LOGO	1
HH-B	PRECAST POLYMER CONCRETE ENCLOSURE NOMINAL INTERIOR DIMENSIONS: 11"W x 18"L x 18" DEEP	QUAZITE #PG1118BA18 ANSI TIER: 22	QUAZITE #PG1118HH29 ANSI TIER: 22	COVER SHALL HAVE "LIGHTING" LOGO	1

HAND HOLE SCHEDULE NOTES:
1. CONTRACTOR MAY SUBSTITUTE HANDHOLES BY OTHER MANUFACTURERS IF EQUAL IN ALL RESPECTS. SUBMIT SHOP DRAWING FOR ALL SUBSTITUTIONS.

MINIMUM BURIAL DEPTHS BELOW GRADE*

PRIMARY ELECTRICAL	SECONDARY ELECTRICAL (INCLUDING GROUNDING)	TELEPHONE	VIDEO OR SECURITY	FIBER OPTIC
40"	36"	30"	30"	30"

*FOR ALL ELECTRICAL & COMMUNICATIONS SYSTEMS, THESE MEASUREMENTS ARE BELOW FINISHED GRADE.

LIGHTING FIXTURE SCHEDULE

MARK	DESCRIPTION	MANUFACTURER & CAT. NO.	LAMPS	MOUNTING TYPE	REMARKS	NOTES
A	LED 2X4 TROFFER	H.E. WILLIAMS, INC. #HETLG-S24-L57-850-FP-(L49)-DRV-UNV	W/UNIT 5000K	GRID MOUNT	120V OPERATION	1,2
B	LED 2X4 TROFFER	H.E. WILLIAMS, INC. #HETLG-S24-L57-850-FP-(L60)-DRV-UNV	W/UNIT 5000K	GRID MOUNT	120V OPERATION	1,2
C	LED 2X4 TROFFER	H.E. WILLIAMS, INC. #HETLG-S24-L57-850-FP-(L45)-DRV-UNV	W/UNIT 5000K	GRID MOUNT	120V OPERATION	1,2
D	LED 2X4 TROFFER	H.E. WILLIAMS, INC. #HETLG-S24-L93-850-FP-(L75)-DRV-UNV	W/UNIT 5000K	GRID MOUNT	120V OPERATION	1,2
E	EMERGENCY LIGHTING 2-HEAD UNIT	H.E. WILLIAMS, INC. #EMER/CP/AD,I/LED-WHT-D	W/UNIT	SURFACE MOUNT	120V OPERATION AND BATTERY BACK-UP	1,2
E2	EMERGENCY LIGHTING 2-HEAD DAMP LOCATION UNIT	H.E. WILLIAMS, INC. #EMER/LED-WHT-OPTIONS-SDT-RC-D-DRHL-WHT-SDT	W/UNIT	SURFACE MOUNT	120V OPERATION AND BATTERY BACK-UP AND REMOTE HEAD LIGHT	1
F	LED 2X4 TROFFER	H.E. WILLIAMS, INC. #HETLG-S24-L93-850-FA-(L85)-DRV-UNV	W/UNIT 5000K	GRID MOUNT	120V OPERATION	1,2
G	LED 2X4 TROFFER	H.E. WILLIAMS, INC. #HETLG-S24-L93-850-FA-(L85)-DIM-UNV	W/UNIT 5000K	GRID MOUNT	120V OPERATION	1,2
H1	LED COMPACT MODULAR HIGH BAY	H.E. WILLIAMS, INC. #GH-2-L120-850-FA-(L119)-GC2/Y18/10-DIM-UNV	W/UNIT 5000K 11,949 LUMENS	CABLE & BEAM CLAMP MOUNT	120V OPERATION	1,2
H2	LED COMPACT MODULAR HIGH BAY	H.E. WILLIAMS, INC. #GH-2-L240-850-FA-(L210)-GC2/Y18/10-DIM-UNV	W/UNIT 5000K 21,132 LUMENS	CABLE & BEAM CLAMP MOUNT	120V OPERATION	1,2
J	LED 2X2 FLANGE MOUNT, WET LOCATION RATED	H.E. WILLIAMS, INC. #MCTF-22-L34-850-FAFG12125-(L25)-DRV-UNV	W/UNIT 5000K	FLANGE MOUNT TO HARD PAN CEILING	120V OPERATION	1,2
K	LED SURFACE MOUNT WRAPAROUND	H.E. WILLIAMS, INC. #18-4-L90-940-AF-(L50)-DIM-UNV	W/UNIT 4000K	SURFACE MOUNT	120V OPERATION	
L	LED SURFACE MOUNT WRAPAROUND (NOT USED)	H.E. WILLIAMS, INC. #39-4-L30-950-A-(L290)-DIM-UNV	W/UNIT 5000K	SURFACE MOUNT	120V OPERATION	1,2
M	LED SURFACE MOUNT WRAPAROUND	H.E. WILLIAMS, INC. #76R-4-L72-950-(L61)-DIM-UNV	W/UNIT 5000K	CHAIN OR CABLE WITH BEAM CLAMP	120V OPERATION	1,2
N	LED SURFACE WALL MOUNT UP/DOWN	H.E. WILLIAMS, INC. #WMA-4-L40-830-AF-(L30)-DRV-UNV	W/UNIT 3000K	WALL MOUNT	120V OPERATION	1,2
P	LED 2X4 TROFFER	H.E. WILLIAMS, INC. #HETLG-S24-L57-830-FP-(L45)-DRV-UNV	W/UNIT 3000K	GRID MOUNT	120V OPERATION	1,2
R	EXTERIOR 16' POLE MOUNTED LED FIXTURE	FIXTURE: BEACON/CURRENT LIGHTING #VP-1-160L-50-5K7-4W-UNV-AAU-DBT / POLE: BEACON/CURRENT LIGHTING #RSA-B-S-16-40-B-1-B3-BLS	W/UNIT 5000K	16' POLE MOUNT	120V OPERATION	1,2
S	INTERIOR HI-BAY LED FIXTURE W/OCC SENSOR	ORION/HARRIS LIGHTING "STARTLINE GEN 2" #HHSL2-436L-UNV-850-LAFG-LD40-6BDTL201	W/UNIT 5000K	CHAIN OR PENDENT MOUNT	120V OPERATION, ORDER WITH NEW CORD	1,2
T	EXTERIOR WALL PACK WITH EMERGENCY BACKUP	H. E. WILLIAMS, INC. #VWPH-L30/750-T3-DBZ-SDGL-EM/10WC	W/UNIT 5000K	WALL MOUNT	120V OPERATION AND BATTERY BACK-UP	1,2
U	EXTERIOR BUILDING MOUNTED LED FIXTURE	FIXTURE: BEACON/CURRENT LIGHTING #VP-1-160L-50-5K7-4W-UNV-WA-DBT	W/UNIT 5000K	MOUNT TO EX. CONDUIT/WALL	120V OPERATION	1,2
V	EXTERIOR SOLAR LED ADJUSTABLE FLAGPOLE SPOTLIGHT	LUMEGEN FLG_ST_SF813 - LG-FLG-CRE-6	W/UNIT 6500K	MOUNT TO EX. FLAGPOLE	BATTERY OPERATION	
X	LED EXIT LIGHT, GREEN LETTERS WITH EMERGENCY BATTERY PACK	H.E. WILLIAMS, INC. #EXIT-G-EM-WHT-OPTIONS-SDT-D	LED W/UNIT	SURFACE MOUNT	120V OPERATION, BATTERY BACK-UP	1
X2	LED EXIT LIGHT, GREEN LETTERS WITH EMERGENCY BATTERY PACK & TWO EMERGENCY LIGHTS	H.E. WILLIAMS, INC. #EXIT/EM/LED-G-EM-WHT-OPTIONS-SDT-D	LED W/UNIT	SURFACE MOUNT	120V OPERATION, BATTERY BACK-UP	1
X3	LED EXIT LIGHT, GREEN LETTERS WITH EMERGENCY BATTERY WITH TWO LIGHT HEADS & DAMP RATED	H.E. WILLIAMS, INC. #EXIT/EM/W-SF-G-WHT-OPTIONS-SDT-D	LED W/UNIT	SURFACE MOUNT	120V OPERATION, BATTERY BACK-UP	1
X4	LED REMOTE INTERIOR EMERGENCY LIGHT UNIT, TWO HEAD UNIT	H.E. WILLIAMS, INC. #DRHL	LED W/UNIT	SURFACE MOUNT	120V OPERATION, BATTERY BACK-UP	1

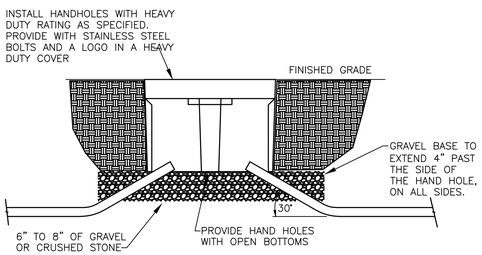
LIGHTING FIXTURE SCHEDULE NOTES:
1. CONTRACTOR MAY SUBSTITUTE LIGHTING FIXTURES BY OTHER MANUFACTURERS IF EQUAL IN ALL RESPECTS. SUBMIT SHOP DRAWING FOR ALL SUBSTITUTIONS.
2. PROVIDE INTERNAL SLOW BLOW FUSING IN EACH FIXTURE.

OCCUPANCY SENSOR SCHEDULE

MARK	MOUNTING LOCATION HEIGHT	MANUFACTURER & CAT. NO.	SENSOR TECHNOLOGY	ANGLE OF COVERAGE	NOTES
OC1	CEILING	THE WATT STOPPER #UT-300-3	ULTRASONIC	2200 SQ. FT.; 360°	1,2,3
OC2	CEILING	THE WATT STOPPER DT-300	COMBINATION PASSIVE INFRARED AND ULTRASONIC	1000 SQ. FT. 36 FT. 360°	1,2,3
OC3	CEILING - CORRIDOR	THE WATT STOPPER CX-100	PIR	2000 SQ. FT.; 55 FT. 180	1,2
OC4	CEILING AREA - LOW BAY	THE WATT STOPPER HBP-100	PASSIVE INFRARED	300 SQ. FT.; 180°	2,4
OC5	WALL - SWITCH BOX	THE WATT STOPPER #RT-100-W	PROGRAMMABLE TIMER	N/A	1,2

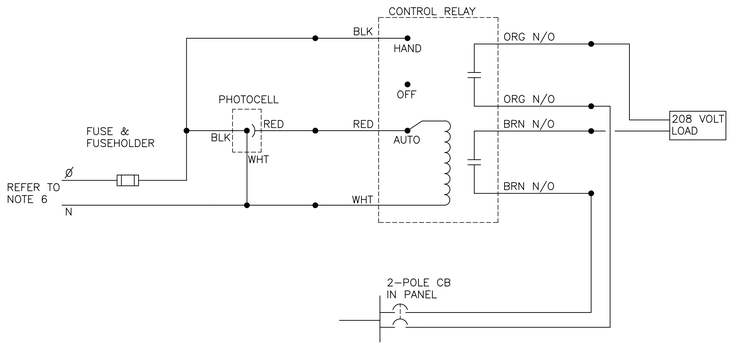
OCCUPANCY SENSOR SCHEDULE NOTES

1. PROVIDE WITH LIGHTING FIXTURE CIRCUIT CONTROL RELAY AND LOW-VOLTAGE POWER SUPPLY.
2. CONTRACTOR MAY SUBSTITUTE OCCUPANCY SENSORS BY OTHER MANUFACTURER IF EQUAL IN ALL RESPECTS. REFER TO SPECIFICATION SECTION 260923, LIGHTING CONTROL DEVICES.
3. PROVIDE WITH AN ISOLATED RELAY DRY CONTACT OUTPUT FOR INTERFACE WITH LOCAL EXHAUST FAN.
4. SET TO TIME OFF AT 20 MINUTES.



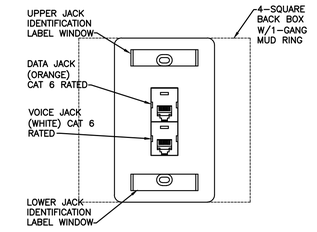
HAND HOLE INSTALLATION DETAIL

NO SCALE



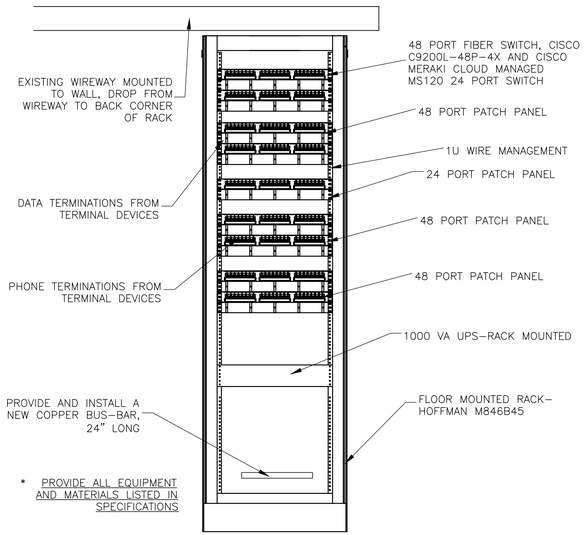
LIGHTING CONTROL CIRCUIT (LCC) DETAIL

LIGHTING CONTROL CIRCUIT (LCC) DETAIL NOTES:
A. COMPONENTS
1. PHOTOCELL: INTERMATIC #K4221C.
2. FUSE: BUSSMAN FNM/FNQ SERIES, SIZE AS REQUIRED FOR LOAD.
3. FUSE HOLDER: BUSSMAN BM SERIES, MOUNT IN CONTACTOR ENCLOSURE.
4. CONTROL RELAY: FUNCTIONAL DEVICES (www.FunctionalDevices.com, 800.888.5538) RIB #RIB01P30-S.
5. OVERALL ENCLOSURE-STEEL 4-11/16" JUNCTION BOX WITH BLANK COVER AND ID LABEL INDICATING "EXTERIOR LIGHTING CONTROL". MOUNT OVERALL ENCLOSURE 60" AFF IN LOCATION INDICATED ON THE PLANS.
6. UTILIZE OPEN CIRCUIT IN VEHICLE MAINTENANCE BUILDING'S PANEL.



DATA FACEPLATE DETAIL

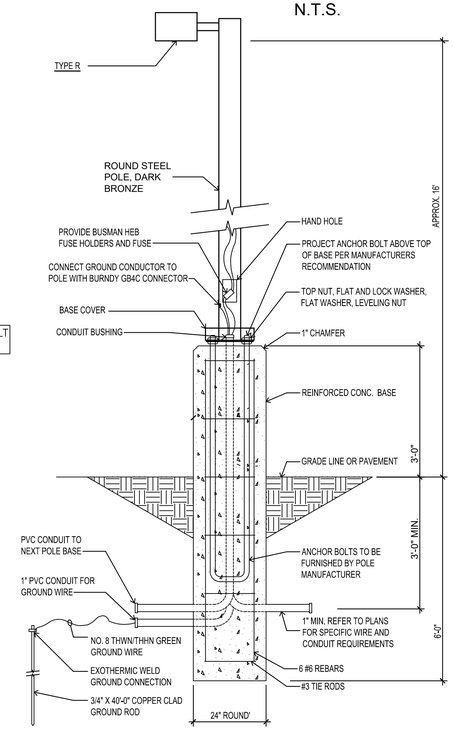
NOT TO SCALE



* PROVIDE ALL EQUIPMENT AND MATERIALS LISTED IN SPECIFICATIONS

COMM/DATA RACK

N.T.S.



LIGHTING POLE WITH BASE

N.T.S.

ELECTRICAL LEGEND

	GRID OR SURFACE MOUNTED LIGHTING FIXTURE, LETTER INDICATES TYPE.
	WALL OR CEILING MOUNTED LIGHTING FIXTURE
EX	"EX" INDICATES EXISTING-TO-REMAIN LIGHTING FIXTURE
	WALL OR CEILING MOUNTED LIGHTING FIXTURE, LETTER INDICATES TYPE.
	CEILING MOUNTED FIXTURE
	WALL MOUNTED FIXTURE
	WALL MOUNTED EMERGENCY LIGHT FIXTURE, PROVIDE NUMBER OF HEADS INDICATED IN LIGHTING FIXTURE SCHEDULE
	CEILING MOUNTED EMERGENCY LIGHT FIXTURE, PROVIDE NUMBER OF HEADS INDICATED IN LIGHTING FIXTURE SCHEDULE
	WALL/CEILING MOUNTED EXIT LIGHTING UNIT
	SINGLE-HEAD EMERGENCY LIGHT FIXTURE REMOTE CONNECTED TO UNIT INDICATED WITH #10AWG WIRE.
	DOUBLE-HEAD EMERGENCY LIGHT FIXTURE REMOTE CONNECTED TO UNIT INDICATED WITH #10AWG WIRE.
$	SINGLE POLE WALL SWITCH
$2	DOUBLE POLE WALL SWITCH
$3	3-WAY WALL SWITCH
$4	4-WAY WALL SWITCH
$T	THERMAL OVERLOAD SWITCH SUCH AS THE BUSSMAN SSU OR SSW UNIT. PROVIDE WITH BACK BOX AND CORRECTLY SIZED FUSE.
	EXISTING-TO-REMAIN 120V DUPLEX RECEPTACLE
	NEW 120V DUPLEX RECEPTACLE, CONNECT TO CIRCUIT INDICATED (MAY BE GFCI)
	TWO 120V DUPLEX RECEPTACLES IN A DOUBLE GANG BOX
	120V SIMPLEX RECEPTACLE
	120V GFI RECEPTACLE
WP	120V GFI RECEPTACLE WITH WEATHER PROOF COVER
	240V 2P RECEPTACLE
	SPECIAL RECEPTACLE OR CONNECTION - COORDINATE WITH EQUIPMENT SUPPLIER
EWC	ELECTRIC WATER COOLER GFI RECEPTACLE - MOUNT HORIZONTALLY BELOW THE WATER COOLER ON WALL. COORDINATE HEIGHT OF RECEPTACLE WITH PLUMBING TRADES.
CR	ROOF JOIST MOUNTED CABLE REEL. MOUNT SIMPLEX RECEPTACLE NEXT TO REEL UNIT, CONNECT TO CIRCUIT INDICATED.
	CABLE ANTENNA SYSTEM OUTLET (CATV) AND 120V RECEPTACLE MOUNTED AT HEIGHT INDICATED OR 20" BELOW CEILING. CONNECT RECEPTACLE TO CIRCUIT INDICATED.
	DATA JACKS (DATA DROP) LOCATION IN A DOUBLE GANG BOX WITH A SINGLE-GANG MUD RING, & TWO (2) CABLES TOTAL.
	PANELBOARD
	JUNCTION BOX
	MOTOR
	NON-FUSIBLE TYPE DISCONNECT SWITCH, SIZE AS NOTED
	FUSIBLE TYPE DISCONNECT SWITCH, SIZE AS NOTED
	COMBINATION MOTOR STARTER/DISCONNECT SWITCH, FUSIBLE TYPE. SIZE AS NOTED.
	MANUAL MOTOR STARTER WITH PROVISIONS FOR LOCKING OUT HANDLE
	MANUAL MOTOR STARTER WITH LOCK-OUT PROVISIONS AND ASSOCIATED CONTROL RELAY
	PUSH BUTTON STATION
	LIGHTING CONTACTOR AND ASSOCIATED EQUIPMENT
	OCCUPANCY SENSOR (x = REFER TO SENSOR SCHEDULE) ARROWS INDICATE SENSOR DIRECTION FOR DIRECTIONAL UNITS
	CIRCUIT CONNECTION & HOME RUN
ACT	ABOVE COUNTER TOP - MOUNT ITEM ABOVE COUNTER TOP BACKSPLASH. COORDINATE WITH GENERAL TRADES.
AFF	ABOVE FINISHED FLOOR
xxAS	AMPERE SWITCH, xx DENOTES SIZE
xxAF	AMPERE FUSE, xx DENOTES SIZE
SPA	SPEAKER - PUBLIC ADDRESS SYSTEM
HSPA	HORN SPEAKER - PUBLIC ADDRESS SYSTEM

FIRE ALARM LEGEND

	SMOKE DETECTOR, CEILING MOUNTED
DA	DUCT TYPE SMOKE DETECTOR, RETURN DUCT
	HEAT DETECTOR, CEILING MOUNTED
	FIRE ALARM (FA) HORN/STROBE - WALL MOUNT
	FA MANUAL PULL STATION W/FIRE HORN/STROBE ABOVE
	FIRE ALARM HORN/STROBE - CEILING MOUNT
	FIRE ALARM MANUAL PULL STATION
	FIRE ALARM STROBE ONLY - WALL MOUNT
CL	FIRE ALARM STROBE ONLY - CEILING MOUNT
	FIRE ALARM HORN ONLY
FACP	FIRE ALARM CONTROL PANEL
FARA	FIRE ALARM REMOTE ANNUNCIATOR PANEL
	FIRE ALARM/WATER FLOW TAMPER SWITCH

KNOW WHAT'S BELOW. CALL BEFORE YOU DIG.

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
FACILITIES AND BUSINESS SERVICES BUREAU
DESIGN AND CONSTRUCTION DIVISION
ADAM LACH, RA, DIRECTOR

RENOVATE ARMORY- WATERFORD

DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
WATERFORD, MICHIGAN

DESIGNED	MZM
DRAWN	MZM
CHECKED	BAB
APPROVED	KSM
DATE	10 OCT 2025 / 05 JUL 2025
ISSUED FOR	PRELIMINARY / CONSTRUCTION / FINAL RECORD
IDENTIFICATION NO.	
PROJECT	269002304
INDEX CODE	1390
SHEET	E6

EXISTING MAIN DISTRIBUTION PANEL PP-2

VOLTAGE RATING - 208/120V, 3-PH, 4 WIRE — BUSS AMPS - 1200A
LOCATION - ELECT ROOM #111 — MOUNTING - SURFACE
MAIN CIRCUIT BREAKER - 1200A
GE QMR

CKT. NO.	BRKR A	BRKR P	DESCRIPTION	LOAD VA	AØ VA	BØ VA	CØ VA
1					33470		
3	100	3	PANEL PP-1	96680		33970	
5							29240
7					12960		
9	200	3	PANEL LP-H	39260		12960	
11							13340
13					31342		
15	200	3	**NEW PANEL LP-J**	94026		31342	
17							31342
2					4190		
4	200	3	PANEL LPK-I	8330		3600	
6							540
8					33990		
10	30	3	LPK	96920		31430	
12							31500
14							
16	200	3	SPARE	0			
18							
			TOTALS (VA)	335216	#####	#####	#####
			TOTALS (A)	930	966	944	883

NOTES:
1. NEW CIRCUIT BREAKERS SHALL BE 65kAIC RATED.

EXISTING MAIN DISTRIBUTION PANEL PP-2

Noncontinuous Loads

Receptacle Load:	52060	VA Total	
FIRST 10,000 VA at 100% =		10,000	VA
REMAINDER OF VA at 50% =		21,030	VA
Subtotal		31,030	VA
Motor Load:	600	VA at 125% =	750 VA
Kitchen Load:	83240	VA at 65% =	54,106 VA
HVAC Load:	#####	VA at 100% =	145,596 VA
Other Loads:	12400	VA at 50% =	6,200 VA
Subtotal		206,652	VA

Continuous Loads

General Lighting	41320	VA at 125% =	51,650 VA
Total		289,332	VA

803 Amps at 208V, 3Ø

Service Calculations Based Upon the Following:
NEC Article 230.42.
Lighting: Per NEC 220.12 AND Table 220.12; NEC 220.42; and calculated at 125% as continuous load.
Fixed Electric Heating: per NEC 220.51 and calculated at 125% as continuous load per NEC 424.3(B).
Receptacles: Per NEC 220.43.
Mechanical / Motors: Per NEC 220.50, 430.24 - 430.26, 430.62, Table 430.250 and NEC 440.6, based upon the equipment served.
Elevators / Intermittent Duty Motors: Per NEC 430.22 and Table 430.22(E).
Noncoincident Loads: Per NEC 220.60 Where Electric Heating is the Largest Load when compared to Air Conditioning.
Commercial Kitchen Equipment: Per NEC 220.56 and Table 220.56.

EXISTING DISTRIBUTION PANEL PP-1

VOLTAGE RATING - 208/120V, 3-PH, 4 WIRE — BUSS AMPS - 400A
LOCATION - MECH ROOM #110 — MOUNTING - SURFACE
MAIN CIRCUIT BREAKER - 400A
SQUARE D QMB STYLE PANELBOARD

CKT. NO.	BRKR A	BRKR P	DESCRIPTION	LOAD VA	AØ VA	BØ VA	CØ VA
1					10440		
3	200	3	PANEL LP-1	30780		10990	
5							9350
7					10500		
9	200	3	PANEL LP-2	28110		10100	
11							7510
13							
15	100	3	SPARE				
17							
2					12530		
4	200	3	PANEL LP-3	37790		12880	
6							12380
8							
10	60	3	SPARE				
12							
14							
16	30	3	SPARE				
18							
			TOTALS (VA)	96680	33470	33970	29240
			TOTALS (A)	268	279	283	244

NOTES:
1. NEW CIRCUIT BREAKERS SHALL BE 65kAIC RATED.

EXISTING DISTRIBUTION PANEL PP-1

Noncontinuous Loads

Receptacle Load:	49360	VA Total	
FIRST 10,000 VA at 100% =		10,000	VA
REMAINDER OF VA at 50% =		19,680	VA
Subtotal		29,680	VA
Motor Load:	600	VA at 125% =	750 VA
Kitchen Load:	0	VA at 65% =	- VA
HVAC Load:	5000	VA at 100% =	5,000 VA
Other Loads:	8000	VA at 50% =	4,000 VA
Subtotal		9,750	VA

Continuous Loads

General Lighting	33720	VA at 125% =	42,150 VA
Total		81,580	VA

226 Amps at 208V, 3Ø

EXISTING PANEL LPH

VOLTAGE RATING - 208Y/120V, 3-PH, 4 WIRE — BUSS AMPS -200A
LOCATION - ELECTRICAL ROOM 111 — MOUNTING - SURFACE
MAIN CIRCUIT BREAKER -
SQUARE D NQOD STYLE PANELBOARD

CKT. NO.	BRKR A	BRKR P	DESCRIPTION	LOAD VA	AØ VA	BØ VA	CØ VA
1				1600	1600		
3	20	3	EWH-1 VESTIBLE A	1600		1600	
5				1600			1600
7				1600	1600		
9	20	3	EWH-3 VESTIBLE B	1600		1600	
11				1600			1600
13				1600	1600		
15	20	3	EWH-2 CORRIDOR A	1600		1600	
17				1600			1600
19				1600	1600		
21	20	3	EWH-4 LOBBY 112	1600		1600	
23				1600			1600
25	20	1	**EF-1**	180	180		
27	20	1	**EF-2**	180		180	
29	20	1	**EF-3**	180			180
31	20	1	**EF-4**	180	180		
33	20	1	**EF-5**	180		180	
35	20	1	**HAND DRYER 4**	1100			1100
37	20	1	**DDC ENCLOSURE 1**	500	500		
39	20	1	**DDC ENCLOSURE 2**	500		500	
41	20	1	**SPARE**	0			0
2				1600	1600		
4	20	3	EWH-7 VESTIBULE C	1600		1600	
6				1600			1600
8				1600	1600		
10	20	3	EWH-8 MECHANICAL 150	1600		1600	
12				1600			1600
14	20	1	**RECEPTACLE CAGE STORAGE 1, 2, 3**	540	540		
16	20	1	**RECEPTACLE CAGE STORAGE 4, 5, 6**	540		540	
18	20	1	**INSTANTANEOUS WATER HEATER 1**	180			180
20	20	1	**INSTANTANEOUS WATER HEATER 2**	180	180		
22	20	1	**INSTANTANEOUS WATER HEATER 3**	180		180	
24	20	1	**INSTANTANEOUS WATER HEATER 4**	180			180
26	20	1	**INSTANTANEOUS WATER HEATER 5**	180	180		
28	20	1	**INSTANTANEOUS WATER HEATER 6**	180		180	
30	20	1	**HAND DRYER 1**	1100			1100
32	20	1	**HAND DRYER 2**	1100	1100		
34	20	1	**HAND DRYER 3**	1100		1100	
36	20	1	**DDC ENCLOSURE 3**	500			500
38	20	1	**DDC ENCLOSURE 4**	500	500		
40	20	1	**DDC ENCLOSURE 5**	500		500	
42	20	1	**DDC ENCLOSURE 6**	500			500
			TOTALS (VA)		39260	12960	12960	13340
			TOTALS (A)		109	108	108	111

NOTES:
1. NEW CIRCUIT BREAKERS (INDICATED IN BOLD) SHALL BE 10kAIC RATED.

EXISTING PANEL LPK-1

VOLTAGE RATING - 208Y/120V, 3-PH, 4 WIRE — BUSS AMPS - 225A
LOCATION - ASSEMBLY ROOM 107 — MOUNTING - SURFACE
MAIN CIRCUIT BREAKER -
SQUARE D NQOD STYLE PANELBOARD

CKT. NO.	BRKR A	BRKR P	DESCRIPTION	LOAD VA	AØ VA	BØ VA	CØ VA
1	20	1	LIGHTING RM 109	1250	1250		
3	20	1	LIGHTING RM 109	1250		1250	
5	20	1	SPARE	0			0
7	30	1	4 RECEPTACLES	720	720		
9	20	1	SPARE	0		0	
11	20	1	SPARE	0			0
13	20	1	2 RECEPTACLES	360	360		
15	20	1	1 RECEPTACLES	180		180	
17	20	1	1 RECEPTACLES	180			180
19	20	1	1 RECEPTACLES	180	180		
21	20	1	CH #5	250		250	
23	20	1	SPARE	0			0
25			SPACE	100	100		
27			SPACE	0		0	
29			SPACE	0			0
31				0	0		
33				0		0	
35				0			0
37				0	0		
39				0		0	
41				0			0
2	30	1	LIGHTING	500	500		
4	20	1	LIGHTING	1200		1200	
6	20	1	SPARE	0			0
8	20	1	6 RECEPTACLES	1080	1080		
10	20	1	4 RECEPTACLES	720		720	
12	20	1	2 RECEPTACLES	360			360
14	20	1	SPARE	0	0		
16	20	1	SPARE	0		0	
18	20	1	SPARE	0			0
20	20	1	SPARE	0	0		
22			SPACE	0		0	
24			SPACE	0			0
26				0	0		
28				0		0	
30				0			0
32				0	0		
34				0		0	
36				0			0
38				0	0		
40				0		0	
42				0			0
			TOTALS (VA)		8330	4190	3600	540
			TOTALS (A)		23	35	30	5

NOTES:
1. NEW CIRCUIT BREAKERS (INDICATED IN BOLD) SHALL BE 10kAIC RATED.

EXISTING PANEL LPK

VOLTAGE RATING - 208Y/120V, 3-PH, 4 WIRE — BUSS AMPS -400A
LOCATION - FOOD STORAGE ROOM 106 — MOUNTING - SURFACE
MAIN CIRCUIT BREAKER -
SQUARE D NQOD STYLE PANELBOARD

CKT. NO.	BRKR A	BRKR P	DESCRIPTION	LOAD VA	AØ VA	BØ VA	CØ VA
1	20	1	OVERHEAD LIGHTING	1240	1240		
3	20	1	FAN RE3 AND MU3	820		820	
5	20	1	FAN RE2 AND MU2	820			820
7				2960	2960		
9	50	3	GARBAGE DISPOSAL #10	2960		2960	
11				2960			2960
13				7660	7660		
15	80	3	DISWASHER #9	7660		7660	
17				7660			7660
19				1200	1200		
21	20	3	MU-1	1200		1200	
23				1200			1200
25				3000	3000		
27	40	3	BOOSTER HEATER #18	3000		3000	
29				3000			3000
31				5000	5000		
33	60	3	BOOSTER HEATER #19	5000		5000	
35				5000			5000
37			HOOD EXHAUST SYSTEM	2600	2600		
39	30	3	RE#1	2600		2600	
41				2600			2600
2	30	1	MIXING MACHINE #29	1370	1370		
4	20	1	FROZEN FOOD CAB #34	1130		1130	
6	20	1	VEGETABLE PEELER #27	1170			1170
8	20	1	ICE MACHINE #35	1840	1840		
10	20	1	COLD FOOD #20 CAN OPENER #32	1170		1170	
12	20	1	SPARE	0			0
14	20	1	SPARE	0	0		
16	20	1	REFRIGERATOR #37	790		790	
18	20	1	3/4 HP	790			790
20	20	1	CONTROL CIRCUIT	200	200		
22	20		HOOD FIRE SYSTEM #41	100		100	
24	20		RE #4 AND DAMPER	900			900
26	25		PEELER DISPOSER #27	1920	1920		
28				2600		2600	
30	30	3	COFFEE MAKER #4	2600			2600
32				2600	2600		
34	20		SPARE	0		0	
36	20		IGNITION CIRCUITS 21, 23, 24, 25	400			400
38				2400	2400		
40	30	3	RE-7 AND MU-4	2400		2400	
42				2400			2400
			TOTALS (VA)		96920	33990	31430	31500
			TOTALS (A)		269	283	262	263

NOTES:
1. NEW CIRCUIT BREAKERS (INDICATED IN BOLD) SHALL BE 10kAIC RATED.

NEW PANEL LP-J

VOLTAGE RATING - 208Y/120V, 3-PH, 4 WIRE — BUSS AMPS -400A
LOCATION - ELECTRICAL ROOM 110 — MOUNTING - SURFACE
MAIN SWITCH SIZE - 3P/400A
SQUARE D QMB STYLE PANELBOARD

CKT. NO.	BRKR A	BRKR P	DESCRIPTION	LOAD VA	AØ VA	BØ VA	CØ VA
1				5644	5644		
3	100	3	RTU-1	5644		5644	
5				5644			5644
7				3963	3963		
9	60	3	RTU-3	3963		3963	
11				3963			3963
13				6244	6244		
15	100	3	RTU-5	6244		6244	
17				6244			6244
19				1801	1801		
21	30	3	RTU-7	1801		1801	
23				1801			1801
25				0	0		
27	60	3	SPARE	0		0	
29				0			0
31				0	0		
33	100	3	SPARE	0		0	
35				0			0
37				0	0		
39				0		0	
41				0			0
2				5884	5884		
4	60	3	RTU-2	5884		5884	
6				5884			5884
8				3963	3963		
10	60	3	RTU-4	3963		3963	
12				3963			3963
14				3843	3843		
16	60	3	RTU-6	3843		3843	
18				3843			3843
20				0	0		
22	30	3	SPARE	0		0	
24				0			0
26				0	0		
28	60	3	SPARE	0		0	
30				0			0
32				0	0		
34	100	3	SPARE	0		0	
36				0			0
38				0	0		
40				0		0	
42				0			0
			TOTALS (VA)	94026	31342	31342	31342
			TOTALS (A)	261	261	261	261

PANEL NOTES:
1. PROVIDE WITH INSULATED GROUNDING BAR.
2. PROVIDE WITH SOLID NEUTRAL BAR.
3. PROVIDE PANEL ENCLOSURE WITH A DOOR WITHIN DOOR TRIM COVER OPTION.

EXISTING PANEL LP1

VOLTAGE RATING - 208Y/120V, 3-PH, 4 WIRE — BUSS AMPS - 100A
LOCATION - CORRIDOR — MOUNTING - SURFACE
MAIN CIRCUIT BREAKER -
SQUARE D NQOD STYLE PANELBOARD

CKT. NO.	BRKR A	BRKR P	DESCRIPTION	LOAD VA	AØ VA	BØ VA	CØ VA
1	20	1	LIGHTING	800	800		
3	20	1	LIGHTING	600		600	
5	20	1	LIGHTING	500			500
7	30	1	LIGHTING	1400	1400		
9	20	1	LIGHTING	1400		1400	
11	20	1	LIGHTING	1200			1200
13	20	1	LIGHTING	800	800		
15	20	1	GAS FIRED HEATERS	350		350	
17	20	1	EXISTING EF2	600			600
19	20	1	4 RECEPTACLES	720	720		
21	20	1	2 RECEPTACLES	360		360	
23	20	1	5 RECEPTACLES	900			900
25	20	1	HV-1, HV-2 CONTROL	100	100		
27	20	1	5 RECEPTACLES	900		900	
29	20	1	5 RECEPTACLES	900			900
31	20	1	5 RECEPTACLES	900	900		
33	20	1	5 RECEPTACLES	900		900	
35	20	1	5 RECEPTACLES	900			900
37	20	1	SPARE	0	0		
39	20	1	SPARE	0		0	
41	20	1	SPARE	0			0
2	30	1	LIGHTING	1200	1200		
4	20	1	LIGHTING	1200		1200	
6	20	1	LIGHTING EXTERIOR	450			450
8	20	1	LIGHTING RIFLE RANGE	1000	1000		
10	20	1	LIGHTING RIFLE RANGE	1000		1000	
12	20	1	LIGHTING RM 110	600			600
14	20	1	WATER COOLER	200	200		
16	20	1	6 RECEPTACLES	1080		1080	
18	20	1	5 RECEPTACLES	900			900
20	20	1	SCRUBBER	1600	1600		
22	20	1	SCRUBBER	1600		1600	
24	20	1	LIGHTING RM 109	1200			1200
26	20	1	LIGHTING RM 109	1200	1200		
28	20	1	POWER SUPPLY	1000		1000	
30	20	2	TELEPHONE SERVICE	1000			1000
32				100	100		
34	20	1	PUMP P2	600		600	
36	20	1	POWER RIFLE RANGE CONTROL PANEL	200			200
38	20	1		420	420		
40	20	1	SPARE	0		0	
42	30	1	SPARE	0			0
			TOTALS (VA)		30780	10440	10990	9350
			TOTALS (A)		85	87	92	78

NOTES:
1. NEW CIRCUIT BREAKERS (INDICATED IN BOLD) SHALL BE 10kAIC RATED.

EXISTING PANEL LP2

VOLTAGE RATING - 208Y/120V, 3-PH, 4 WIRE — BUSS AMPS - 200A
LOCATION - CORRIDOR — MOUNTING - SURFACE
MAIN CIRCUIT BREAKER -
SQUARE D NQOD STYLE PANELBOARD

CKT. NO.	BRKR A	BRKR P	DESCRIPTION	LOAD VA	AØ VA	BØ VA	CØ VA
1	20	1	LIGHTING	900	900		
3	20	1	LIGHTING	400		400	
5	20	1	LIGHTING	600			600
7	30	1	LIGHTING	1120	1120		
9	20	1	BOILER CONTROL	200		200	
11	20	1	SPARE	0			0
13	20	1	SPARE	0	0		
15	20	1	SPARE	0		0	
17	20	1	CH #3	250			250
19	20	1	6 RECEPTACLES	1080	1080		
21	20	1	6 RECEPTACLES	1080		1080	
23	20	1	6 RECEPTACLES	1080			1080
25	20	1	**OFFICE 120A RECEPTACLES**	720	720		
27	20	1	4 RECEPTACLES	720		720	
29	20	1	4 RECEPTACLES	720			720
31	20	1	SPARE	0	0		
33	20	1	SPARE	0		0	
35	20	1	2 RECEPTACLES UNIT HEATER	360			360
37	20	1	4 RECEPTACLES	720	720		
39	20	1	REPRODUCTION	1000		1000	
41	20	1	SPARE	0			0
2	30	1	LIGHTING	800	800		
4	20	1	LIGHTING	1200		1200	
6	20	1	LIGHTING	1200			1200
8	20	1	BOILER ROOM	300	300		
10	20	1	BOILER ROOM	300		300	
12	20	1	SPARE	0			0
14	20	1	6 RECEPTACLES	1080	1080		
16	20	1	5 RECEPTACLES	900		900	
18	20	1	5 RECEPTACLES	900			900
20	20	1	5 RECEPTACLES	900	900		
22	20	1	3 RECEPTACLES	540		540	
24	20	1	3 RECEPTACLES	1200			1200
26	20	1	4 RECEPTACLES	720	720		
28	20	1	6 RECEPTACLES	1080		1080	
30	20	2	SPARE	0			0
32	20		6 RECEPTACLES	1080	1080		
34	20	1	SCRUBBER	1600		1600	
36	20	1	HOT WATER HEATER	1200			1200
38	20	1	6 RECEPTACLES	1080	1080		
40	20	1	6 RECEPTACLES	1080		1080	
42	30	1	SPARE	0			0
			TOTALS (VA)		28110	10500	10100	7510
			TOTALS (A)		78	88	84	63

NOTES:
1. NEW CIRCUIT BREAKERS (INDICATED IN BOLD) SHALL BE 10kAIC RATED.

EXISTING PANEL LP3

VOLTAGE RATING - 208Y/120V, 3-PH, 4 WIRE — BUSS AMPS - 200A
LOCATION - CORRIDOR — MOUNTING - SURFACE
MAIN CIRCUIT BREAKER -
SQUARE D NQOD STYLE PANELBOARD

CKT. NO.	BRKR A	BRKR P	DESCRIPTION	LOAD VA	AØ VA	BØ VA	CØ VA
1	20	1	LIGHTING	1200	1200		
3	20	1	LIGHTING	1200		1200	
5	20	1	LIGHTING	800			800
7	30	1	LIGHTING	600	600		
9	20	1	LIGHTING	1600		1600	
11	20	1	LIGHTING	1200			1200
13	20	1	6 RECEPTACLES	1200	1200		
15	20	1	SCRUBBER	1800		1800	
17	20	1	SCRUBBER	1800			1800
19	20	1	4 RECEPTACLES	720	720		
21	20	1	4 RECEPTACLES	720		720	
23	20	1	4 RECEPTACLES	720			720
25	20	1	SPARE	0	0		
27	20	1	6 RECEPTACLES	720		720	
29	20	1	PLUG HOLD	1200			1200
31	20	1	PLUG HOLD	1200	1200		
33	20	1	7 RECEPTACLES	1260		1260	
35	20	1	CH #2	400			400
37	20	1	SPARE	0	0		
39	20	1	SPARE	0		0	
41	20	1	SPARE	0			0
2	30	1	LIGHTING	1200	1200		
4	20	1	LIGHTING	1200		1200	
6	20	1	LIGHTING	1200			1200
8	20	1	LIGHTING	1550	1550		
10	20	1	EF-4	600		600	
12	20	1	EWC	1000			1000
14	20	1	PLUGMOLD	1200	1200		
16	20	1	6 RECEPTACLES	1080		1080	
18	20	1	6 RECEPTACLES	1080			1080
20	20	1	4 RECEPTACLES	720	720		
22	20	1	5 RECEPTACLES	900		900	
24	20	1	5 RECEPTACLES	900			900
26	20	1	4 RECEPTACLES	720	720		
28	20	1	6 RECEPTACLES	1080		1080	
30	20	1	6 RECEPTACLES	1080			1080
32	20	1	**BREAK ROOM 118 RECEPTACLES**	720	720		
34	20	1	**BREAK ROOM 118 RECEPTACLES**	360		360	
36	20	1	**BREAK ROOM 118 RECEPTACLES**	1000			1000
38	20	1	**BREAK ROOM 118 RECEPTACLES**	1500	1500		
40	20	1	**LACTACTION ROOM 112 RECEPTACLES**	360		360	
42	30	1	SPARE	0			0
			TOTALS (VA)		37790	12530	12880	12380
			TOTALS (A)		105	104	107	103

NOTES:
1. NEW CIRCUIT BREAKERS (INDICATED IN BOLD) SHALL BE 10kAIC RATED.

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
FACILITIES ADMINISTRATION & BUSINESS SERVICES
DESIGN AND CONSTRUCTION DIVISION
ADAM LACH, RA, DIRECTOR

RENOVATE ARMORY- WATERFORD

DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
WATERFORD, MICHIGAN

DESIGNED	ALL
DRAWN	ALL
CHECKED	B.A.B.
APPROVED	ALL

ISSUED FOR	DATE
PRELIMINARY ■	10 OCT 2025
CONSTRUCTION ■	05 JUL 2025
FINAL RECORD □	

IDENTIFICATION NO.	
PROJECT	269002304 3
INDEX CODE	1390

SHEET E6.1

PUBLIC WORKS DRIVE

WATKINS LAKE ROAD

EX. GRASS

EX. HMA

EX. BLDG
F.F. 973.5

EX. CONC

EX. BLDG
F.F. 972.0

EX. STORM
RETENTION

EX. PT
EQUIP.

EX. HMA

EX. GRASS

EX. HMA

EX. HMA

EX. GRASS

EX. HMA

EX. HMA

EX. GRASS

EX. STORM
RETENTION

EX. HMA

EX. HMA

EX. HMA

EX. GRASS

EX. STORM
RETENTION

ELECTRICAL DEMOLITION AND NEW PLAN NOTES: (#)

(1) REMOVE THE EXISTING POLE AND LIGHTING FIXTURE SAVING THE POLE FOR REINSTALLATION IN THE NEW LOCATION INDICATED. THIS HAPPENS IN TWO (2) LOCATIONS.

(2) REMOVE THE CIRCUIT BETWEEN THE POLE TO BE REMOVED AND THE NEXT POLE. HAND DIG BETWEEN THESE POLES, ROLL-UP THE BRANCH CIRCUIT AND REINSTALL THE BRANCH CIRCUIT ONCE THE NEW POLE BASE IS INSTALLED, SEE DETAIL ON SHEET E6. REINSTALL THE EXISTING LIGHTING POLE AT EACH LOCATION AFTER INSTALLING THE NEW POLE-TOP LIGHTING FIXTURES; TWO NEW FIXTURES FOR EACH POLE RELOCATED. NEW POLE-TOP LIGHTING FIXTURES ARE REQUIRED FOR ALL SIX (6) POLES INDICATED.

(3) REMOVE THE LIGHTING FIXTURE FROM EXISTING POLE. INSTALL NEW FIXTURE INDICATED ON SHEET E6.

(4) ADD LCC TO EXISTING EXTERIOR SITE LIGHTING CIRCUIT. SEE SHEET E6 FOR DETAILS.

(5) INSTALL NEW FIXTURE INDICATED ON SHEET E6. ADJUST PER MANUFACTURERS RECOMMENDATIONS.

N

PARTIAL SITE ELECTRICAL DEMOLITION AND NEW WORK PLAN

SCALE 1" = 20'-0"

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

811
KNOW WHAT'S BELOW.
CALL BEFORE YOU
DIG.

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
FACILITIES AND BUSINESS SERVICES ADMINISTRATION
DESIGN AND CONSTRUCTION DIVISION
ADAM LACH, RA, DIRECTOR

RENOVATE ARMORY– WATERFORD

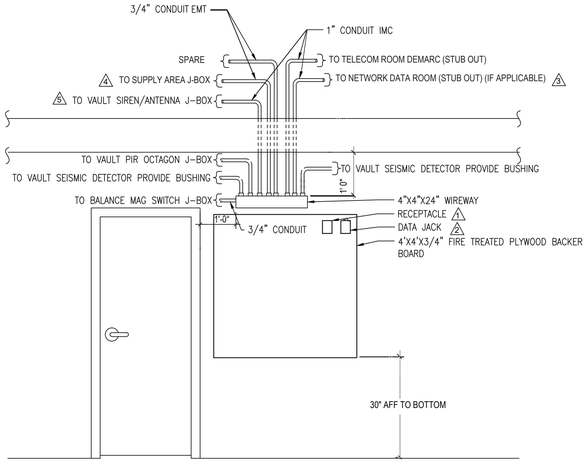
DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
WATERFORD, MICHIGAN

DESIGNED	MLM
DRAWN	MLM
CHECKED	BAB
APPROVED	KLM

ISSUED FOR	DATE
PRELIMINARY ■	10 OCT 2025
CONSTRUCTION ■	05 JUL 2025
FINAL RECORD □	

IDENTIFICATION NO.
PROJECT 2690023043
INDEX CODE 1390

SHEET E7



VAULT EQUIPMENT ARRANGEMENT AND ELEVATION (SECURE SIDE)

NOTES:

A SECURITY DEVICES AND ASSOCIATED WIRING SHALL BE PROVIDED BY DMVA IDS PERSONNEL OR TECHINICIAN.

B PROVIDE SECURITY SYSTEM CONDUIT, REACEWAYS, AND BUSHING TERMINATIONS AT APPROXIMATE LOCATIONS INDICATED. COORDINATE EXACT LOCATIONS AND REQUIREMENTS WITH DMVA IDS PERSONNEL OR TECHINICIAN. TELECOMMUNICATIONS, POWER, AND OTHER SYSTEMS BY ELECTRICAL CONTRACTOR.

CONDUIT SPECIFIC TO VAULT IDS

C DATA TRANSMISSION LINES THAT ARE LOCATED INSIDE THE PROTECTED AREA SHALL BE INSTALLED IN ELECTRIC METAL TUBING (EMT). THE EMT COUPLING AND CONNECTORS WILL BE COMPRESSION TYPE.

E WHEN DATA TRANSIMISSION LINES EXIT THE PROTECTED AREA BUT ARE STILL LOCATED INTERIOR TO THE BUILDING, THEY SHALL BE ENCLOSED IN INTERMEDIATE METAL CONDUIT (IMC). THE IMC COUPLING AND CONNECTORS WILL BE THREADED TYPE.

F WHEN TRANSMISSION LINES EXIT THE BUILDING, THEY WILL BE ENCLOSED IN RIGID METAL CONDUIT. THE RIGID COUPLING AND CONNECTORS WILL BE THREADED TYPE.

KEY NOTES:

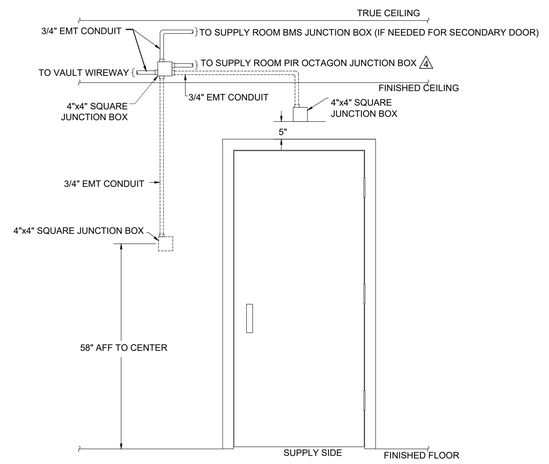
1 DEDICATED 120 VAC/20A CIRCUIT CONNECTED TO EMERGENCY POWER CIRCUIT (IF AVAILABLE). AC POWER PROVIDED BY STATE. PRINT PANEL AND CIRCUIT BREAKER INFORMATION ON COVER.

2 DATE JACK (GENERAL) SHALL NOT ROUTE THROUGH IDS WIREWAY.

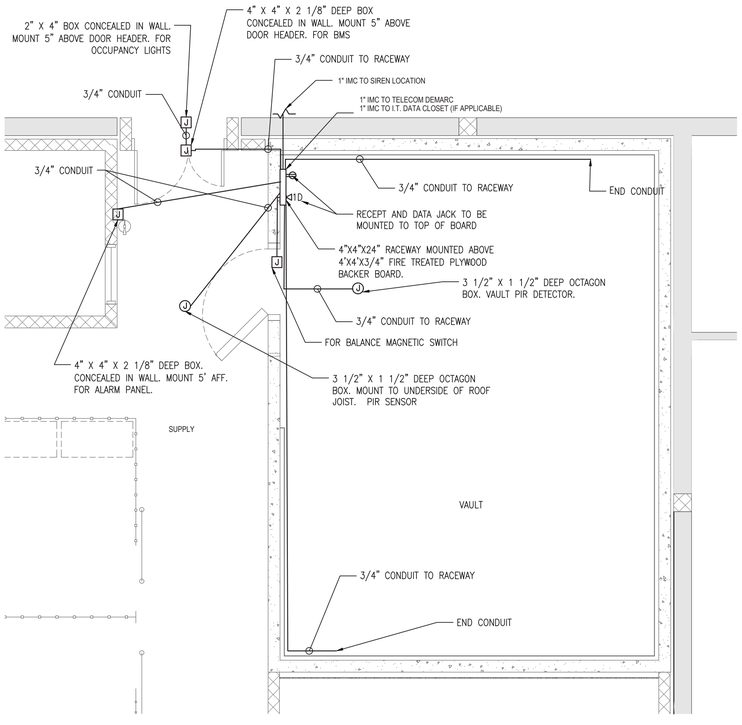
3 CONDUIT SHOULD ONLY BE ADDED IF DEMARK AND NETWORK SWITCH ARE NOT COLLOCATED.

4 CONDUIT TO SUPPLY AREA JUNCTION BOX MAY ROUTE THROUGH MOTION/PROXIMITY SENSOR OCTAGON BOX LOCATED IN SUPPLY AREA TO REDUCE CONDUIT INFRASTRUCTURE

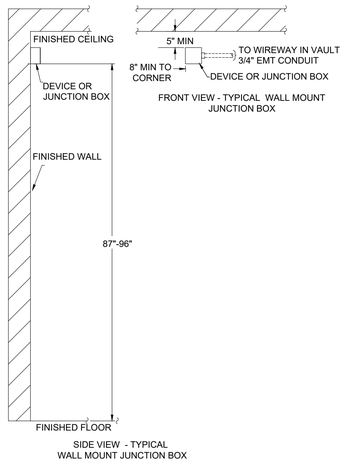
5 CONDUIT TO SIREN / ANTENNA JUNCTION BOX ABOVE VAULT. PIPING TO CONTINUE TO SIREN LOCATION COODINATED WITH DMVA IDS PERSONNEL OR TECHNICIAN.

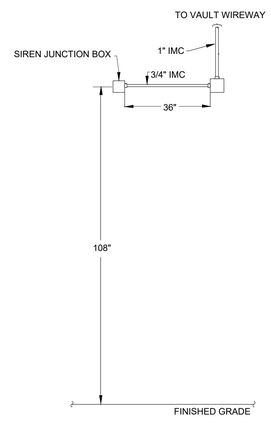


SUPPLY EQUIPMENT ARRANGEMENT AND ELEVATION



TYPICAL VAULT LAYOUT OVERVIEW





PROPOSED VAULT SECURITY PLANS, ELEVATIONS, AND DETAILS

NO SCALE

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT, AND BUDGET
FACILITIES BUSINESS SERVICES ADMINISTRATION
DESIGN AND CONSTRUCTION DIVISION
ADAM LACH, RA, DIRECTOR

RENOVATE ARMORY- WATERFORD
DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
WATERFORD, MICHIGAN

DESIGNED	MLL
DRAWN	MLL
CHECKED	BAB
APPROVED	KSL

DATE	
10 OCT 2025	
05 JUL 2025	

ISSUED FOR	
PRELIMINARY	■
CONSTRUCTION	■
FINAL RECORD	□

IDENTIFICATION NO.	
PROJECT	2690023043
INDEX CODE	1390

SHEET E8

PLUMBING DEMO NOTES:

1. REMOVE ALL PLUMBING FIXTURES FROM EXISTING MEN'S RESTROOM WALL. REMOVE WATER LEADS FROM WALL AND CEILING AND CAP AT HALLWAY LEG. REMOVE SANITARY LEAD AND CAP LEG AT MAIN HALLWAY LEG.
2. REMOVE SHOWERS, PARTITIONS, WATER CLOSETS AND ALL ASSOCIATED PARTS AND PIECES FROM EXISTING MEN'S RESTROOM. REMOVE WATER LEADS FROM WALL AND CEILING AND CAP AT HALLWAY LEG. REMOVE SANITARY LEAD AND CAP LEG AT MAIN HALLWAY LEG. (LEAVE EXISTING COLD WATER THAT SUPPLIES EXTERIOR WALL HYDRANT ON WEST SIDE OF BUILDING.)
3. REMOVE SHOWERS, PARTITIONS, WATER CLOSETS AND ALL ASSOCIATED PARTS AND PIECES FROM EXISTING WOMEN'S RESTROOM. REMOVE WATER LEADS FROM WALL AND CEILING AND CAP AT HALLWAY LEG. REMOVE SANITARY LEAD AND CAP LEG AT MAIN HALLWAY LEG. (LEAVE EXISTING COLD WATER THAT SUPPLIES EXTERIOR WALL HYDRANT ON WEST SIDE OF BUILDING.)
4. SAWCUT AND REMOVE EXISTING CONCRETE FLOOR IN EXISTING RESTROOMS.
5. SAWCUT AND REMOVE EXISTING CONCRETE FLOOR IN CORRIDOR FOR NEW SANITARY LINE TO NEW WOMEN'S RESTROOM. COORDINATE NEW CONCRETE WITH ARCHITECTURAL SHEETS.
6. SAWCUT AND REMOVE CONCRETE FOR NEW WOMEN'S RESTROOM AREA AS SHOWN.
7. REMOVE ALL PLUMBING FIXTURES AND REMOVE SANITARY LINE TO MAIN. STUB EXISTING WATER CLOSET LEAD BELOW FLOOR. PREPARE EXISTING WATER AND SANITARY FOR NEW LAVATORY.
8. SAWCUT AND REMOVE CONCRETE AS REQUIRED TO INSTALL NEW FLOOR DRAIN IN CORNER OF ROOM. TAP EXISTING SANITARY LINE BEHIND WALL, BELOW GRADE.
9. SAWCUT AND REMOVE EXISTING FLOOR DRAIN AND CONCRETE AS NEEDED TO INSTALL NEW SANITARY LINE TO NEW BREAK ROOM SINK.
10. DISCONNECT AND REMOVE EXISTING HOT WATER HEATER. PREPARE PIPING FOR NEW INSTANTANEOUS WATER HEATERS. (MULTIPLE LOCATIONS)

PLUMBING NOTES:

1) INSTALL ALL PIPING IN WALLS WHERE POSSIBLE. DISCUSS ANY PIPING THAT MAY BE EXPOSED WITH THE ARCHITECT AND BUILDING INSPECTOR PRIOR TO DOING THE WORK.

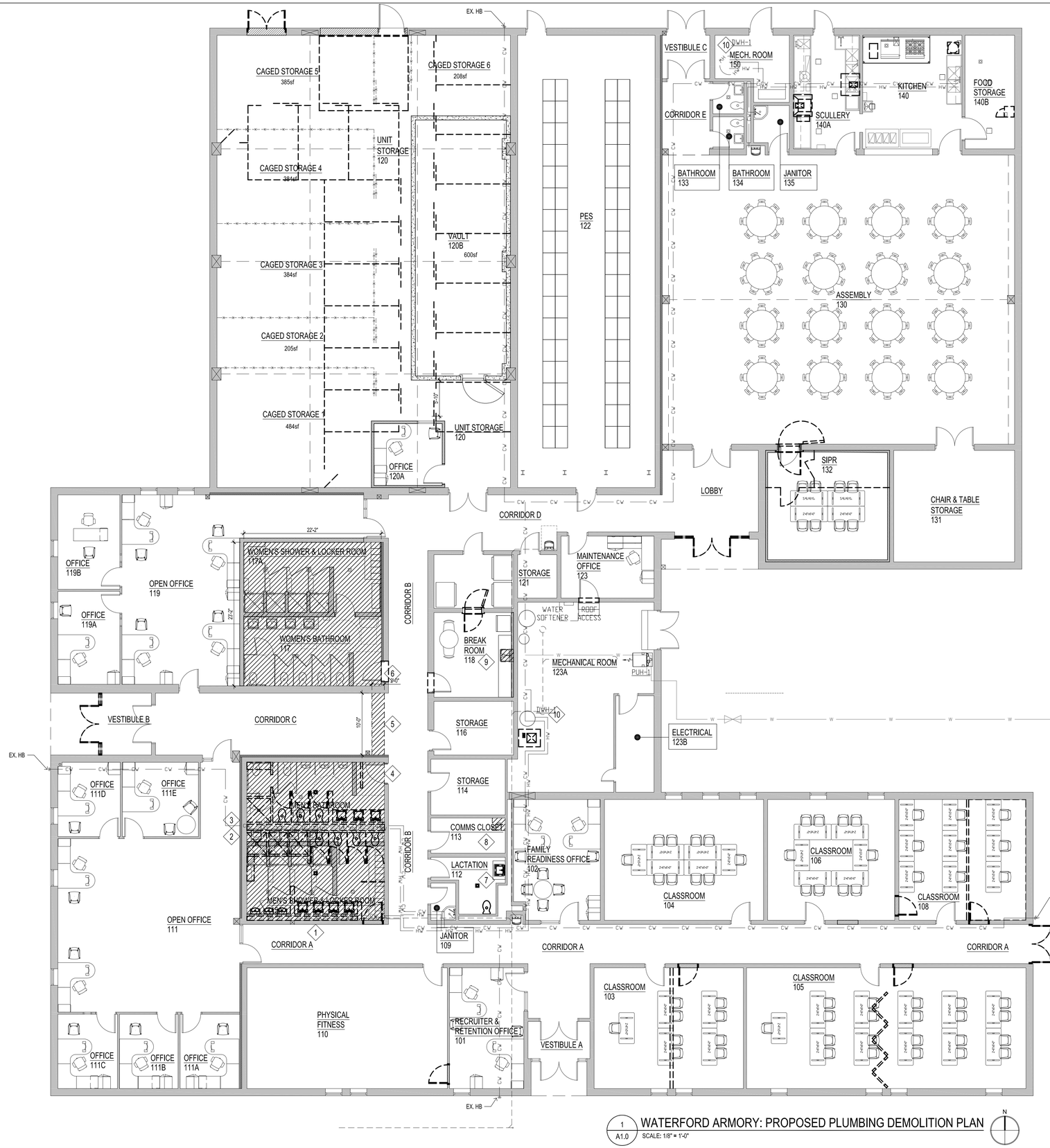
2) PLUMBING CONTRACTOR TO INSURE ALL COMPONENTS IN ACCORDANCE WITH ANSI/NSF61, SECTION 9, AS TO "LEAD FREE" CONTENT.

3) ALL ISOLATION VALVES LOCATED ABOVE THE CEILING IN AREAS WITH NON REMOVABLE CEILING CONSTRUCTION SHALL BE ACCOMPANIED BY AN ADJOINING HAND ACCESS, WITH LABEL, IDENTIFYING THE EQUIPMENT SERVICE.

4) SPRINKLER FLUSH VALVES SHALL EITHER HAVE HAND OPERATING HANDLE REMOVED OR HANDLE LOCKED IN THE CLOSED POSITION. KEY TO THE OWNER.

PLUMBING FIXTURE SCHEDULE:

MARK	FIXTURE ITEM	WASTE	VENT	TRAP	CW	HW	QUANTITY
HB	HOSE BIB-(EX. TO REMAIN)		-	-	-	-	-
WC	WATER CLOSET	4"	4"	-	1"	-	7
UR	URINAL	2"	2"	-	1"	-	3
LAV	LAVATORY*	1 1/4"	1 1/2"	1 1/4"	3/8"	3/8"	8
SS	SERVICE SINK (FLOOR)	-	-	-	-	-	-
EWC/BF	ELECTRIC WATER COOLER	-	-	-	-	-	-
FD	FLOOR DRAIN	3"	2"	3"	-	-	8
PTD**	PAPER TOWEL DISPENSER	-	-	-	-	-	9
SND	SANITARY NAPKIN DISP.	-	-	-	-	-	5
TPD	TISSUE PAPER DISPENSER	-	-	-	-	-	15
RH	ROBE HOOK	-	-	-	-	-	14
B1	BENCH	VERIFY LENGTHS AND QUANTITIES W/PLAN VIEWS					
MRWS	MIRROR WITH SHELF	VERIFY LENGTHS AND QUANTITIES W/PLAN VIEWS					
*	VERIFY CONNECTION SIZE WITH SPECIFICATIONS						
**	COORDINATE WITH ARCHITECTURAL SHEETS						



1 / A1.0 WATERFORD ARMORY: PROPOSED PLUMBING DEMOLITION PLAN

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

N

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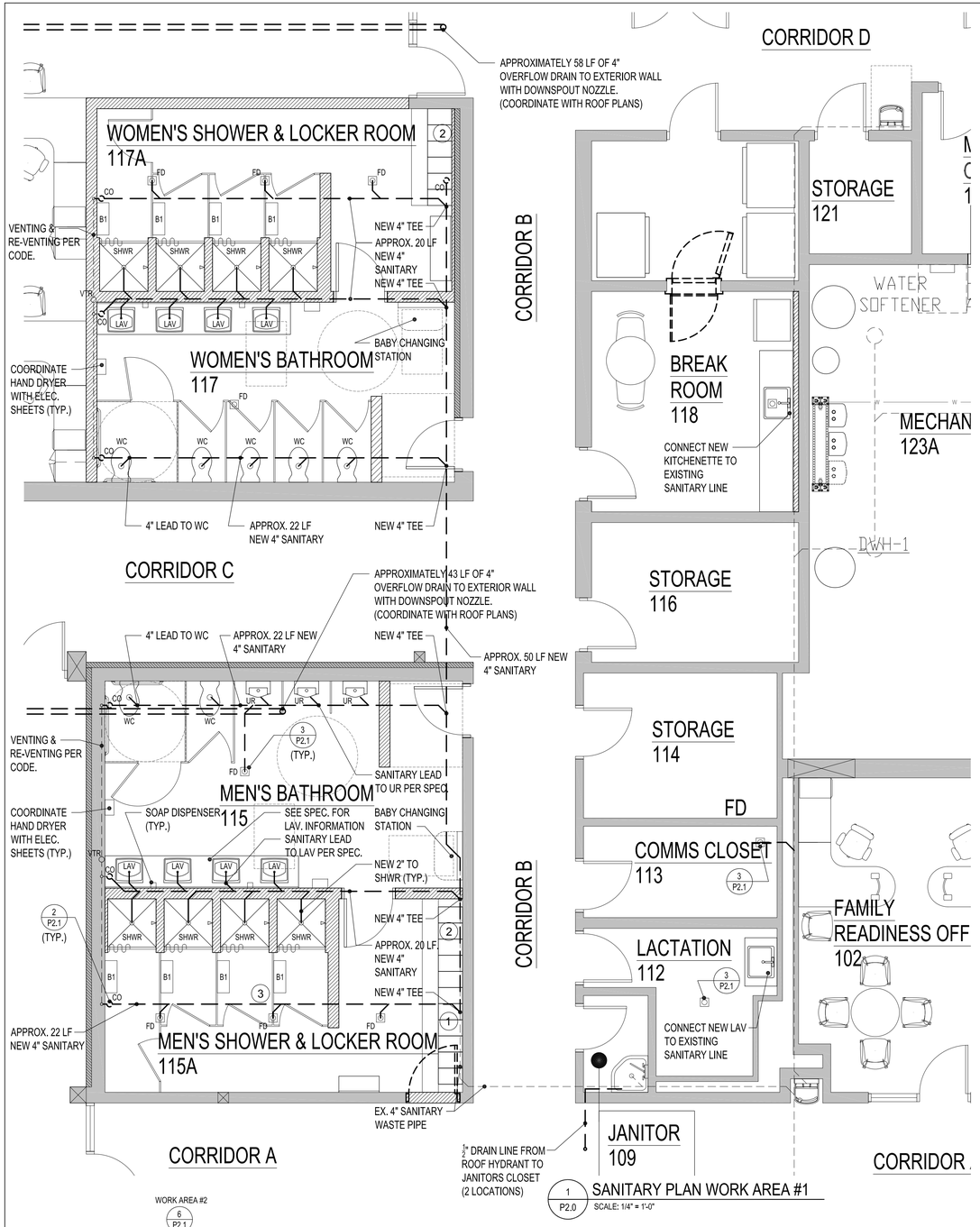
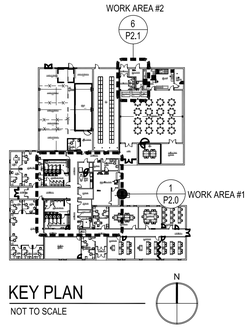
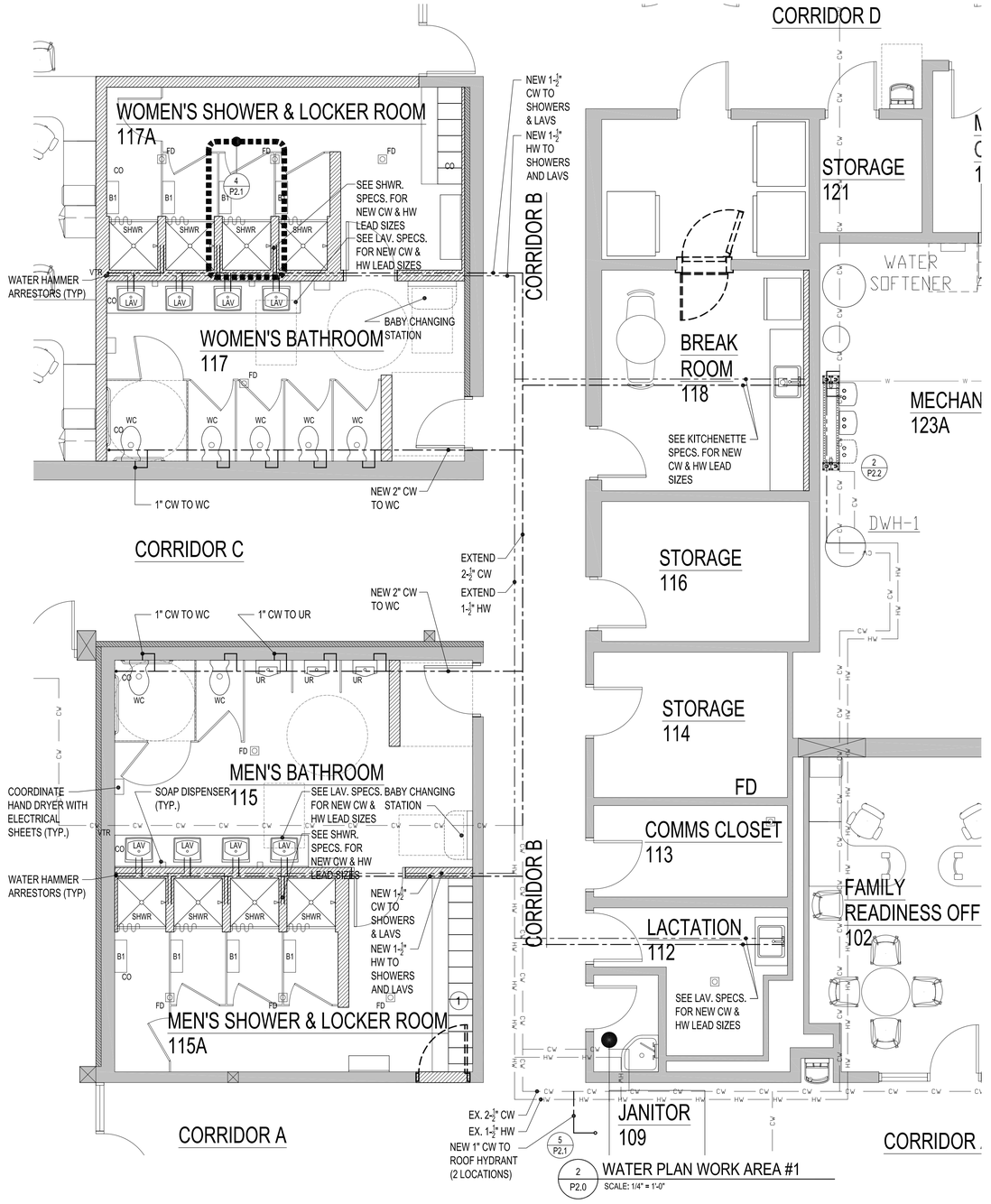




KEY PLAN
NOT TO SCALE

KEYED SANITARY NOTES:

1. TAP EXISTING 4" SANITARY WITH NEW 4" SANITARY
2. COORDINATE WITH PROJECT SPECIFICATIONS FOR LOCKERS
3. COORDINATE FLOOR DRAIN INSTALL TO LINE UP WITH PARTITION WALLS



GENERAL NOTES:

1. SEE CONTRACT SPECIFICATIONS TO VERIFY ALL SANITARY/WATER LEADS TO ALL FIXTURES. BRING ANY DISCREPANCIES TO THE ATTENTION OF THE PROJECT ARCHITECT AND INSPECTOR.
2. INSTALL MIXING VALVES AT ALL LAVS AND SHWRS PER MANUFACTURERS RECOMMENDATIONS.
3. INSTALL SHUTOFF VALVES FOR EACH CW AND HW LEG.
4. INSTALL ACCESS DOOR IF VALVES NOT ACCESSIBLE THROUGH HALLWAY CEILING TILES.
5. REPLACE ALL ROOF DRAINS PER DETAIL SHEET A-6.3
6. ALL THROUGH ROOF VENT PIPES TO BE EXTENDED A MINIMUM OF 8" ABOVE ROOF MEMBRANE.

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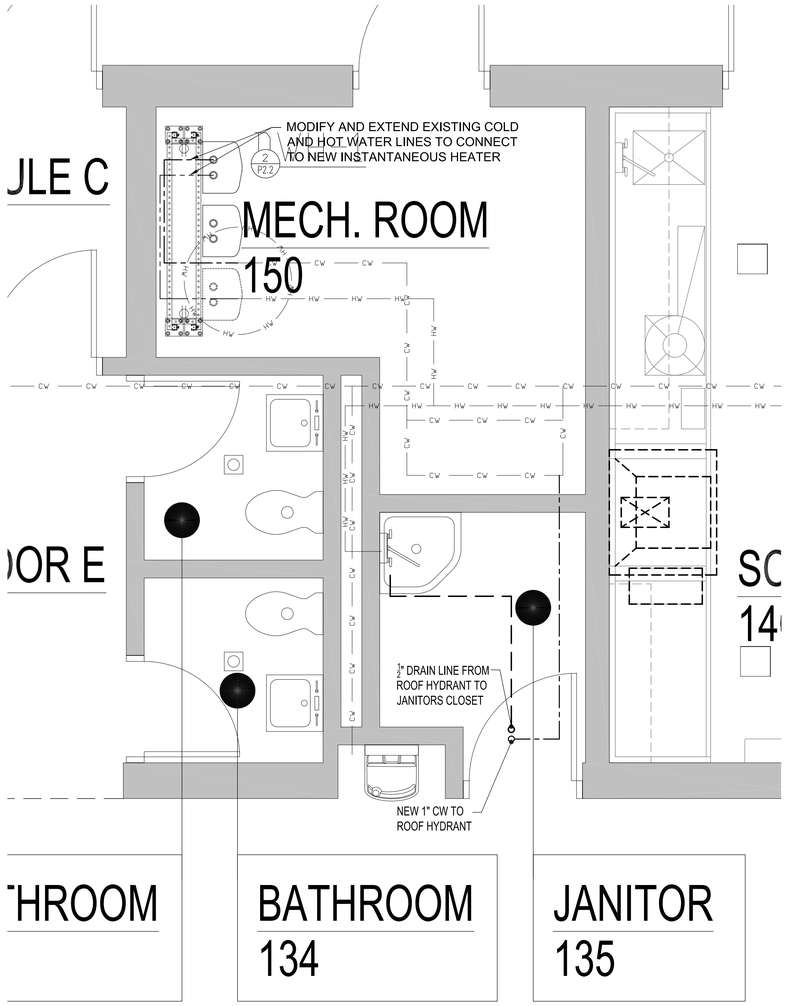
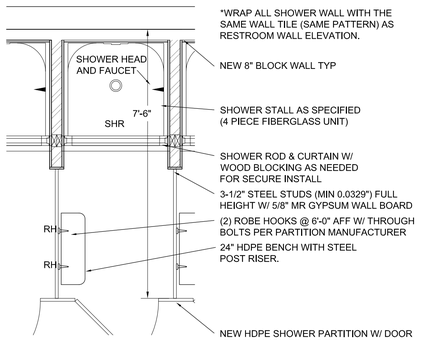


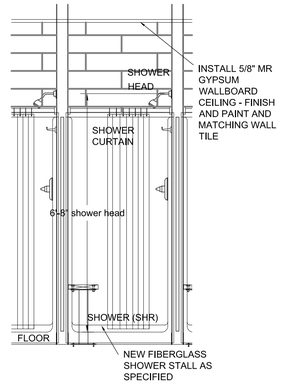
6 P2.1 SANITARY & WATER PLAN WORK AREA #2

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



NEW SHOWER STALL PLAN

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

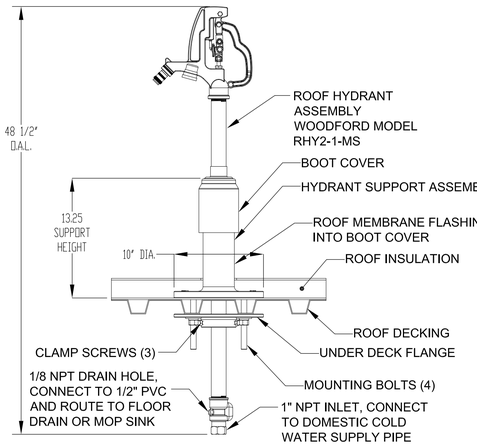


NEW SHOWER STALL ELEVATION

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

4 P2.1 SHOWER STALL DETAILS

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



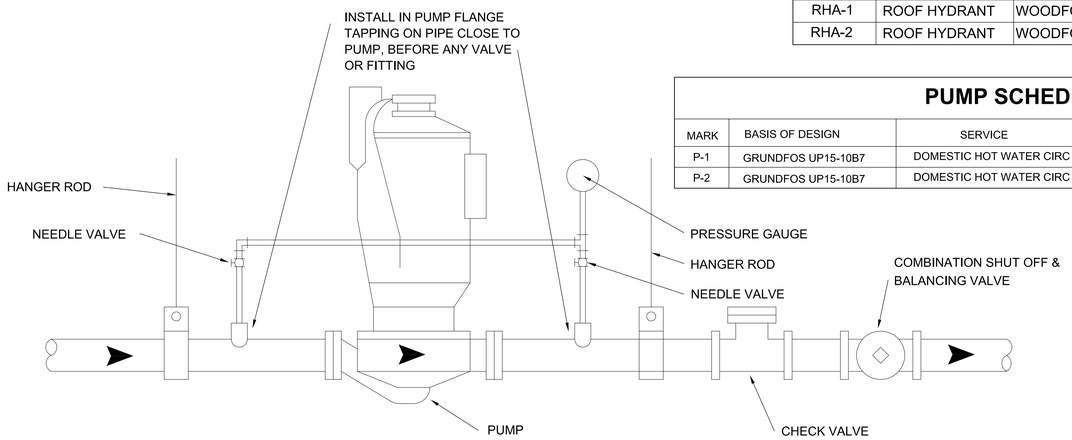
5 P2.1 ROOF HYDRANT DETAIL

SCALE: N.T.S.

INSTALL NEW ROOF HYDRANT ASSEMBLY RHA-1 & RHA-2 ABOVE JANITOR'S CLOSET IN THIS LOCATION PER MANUFACTURER'S RECOMMENDATIONS, SEE SCHEDULE ON THIS SHEET CONNECT TO EXISTING COLD WATER PIPING AS REQUIRED.

ROOF HYDRANT ASSEMBLY SCHEDULE

MARK	DESCRIPTION	BASIS OF DESIGN	TYPE	CONNECTION SIZE	NOTES
RHA-1	ROOF HYDRANT	WOODFORD - RHY2-1-MS	FREEZE PROOF	1" COLD WATER	FACTORY DUAL CHECK BACKFLOW PREVENTER
RHA-2	ROOF HYDRANT	WOODFORD - RHY2-1-MS	FREEZE PROOF	1" COLD WATER	FACTORY DUAL CHECK BACKFLOW PREVENTER

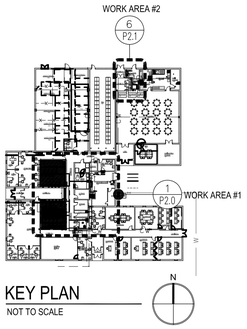


HOT WATER RECIRCULATION PUMP DETAIL

SCALE: N/A

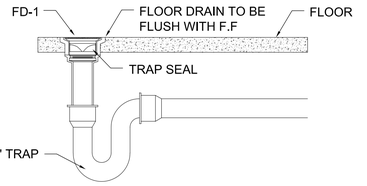
PUMP SCHEDULE

MARK	BASIS OF DESIGN	SERVICE	GPM	HEAD FT	HP	ELECTRICAL VOLTS	PH	HZ	NOTES
P-1	GRUNDFOS UP15-10B7	DOMESTIC HOT WATER CIRC PUMP	2	5	1/25	115	1	60	BRONZE, 3/4" SWEAT, ISOLATION VALVES EACH SIDE OF PUMP
P-2	GRUNDFOS UP15-10B7	DOMESTIC HOT WATER CIRC PUMP	2	5	1/25	115	1	60	BRONZE, 3/4" SWEAT, ISOLATION VALVES EACH SIDE OF PUMP



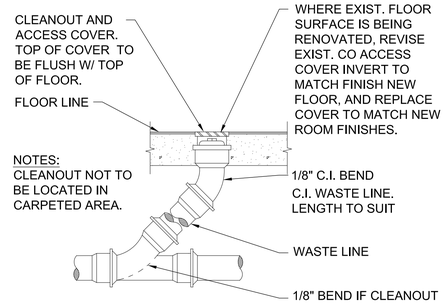
KEY PLAN

NOT TO SCALE



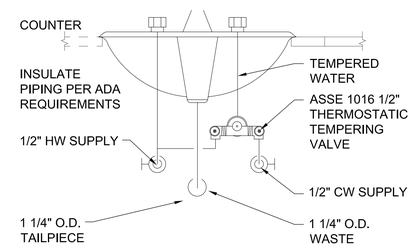
3 P2.1 FLOOR DRAIN DETAIL

SCALE: N/A



2 P2.1 FLOOR CLEANOUT DETAIL

SCALE: N/A



1 P2.1 LAVATORY TEMPERING VALVE INSTALLATION

SCALE: N/A

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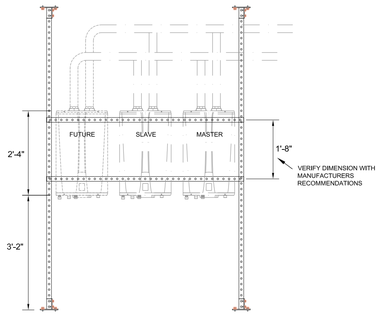
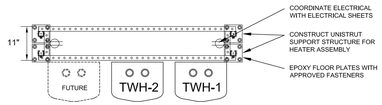
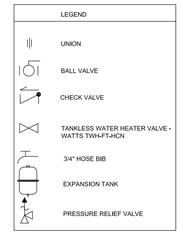
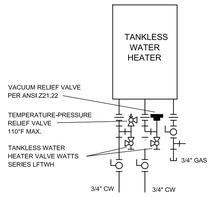


UNISTRUT ELEVATION VIEW

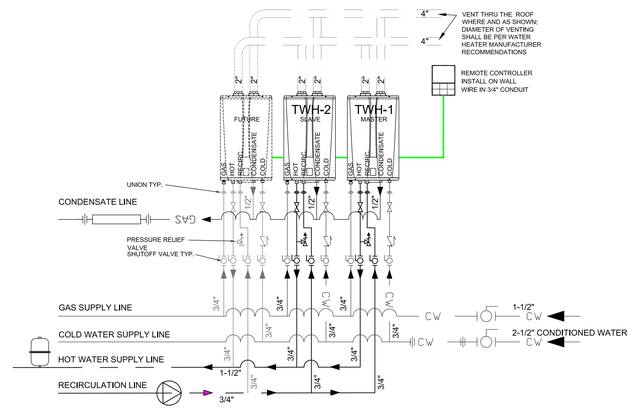


UNISTRUT PLAN VIEW





*PIPING SHOWN FOLLOWS THE BASIS OF DESIGN - MANUFACTURER'S RECOMMENDED INSTALLATION INSTRUCTIONS



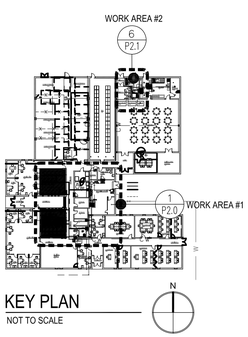
FRONT VIEW

2 / P2.2 INSTANTANEOUS WATER HEATER DETAIL

SCALE: N/A

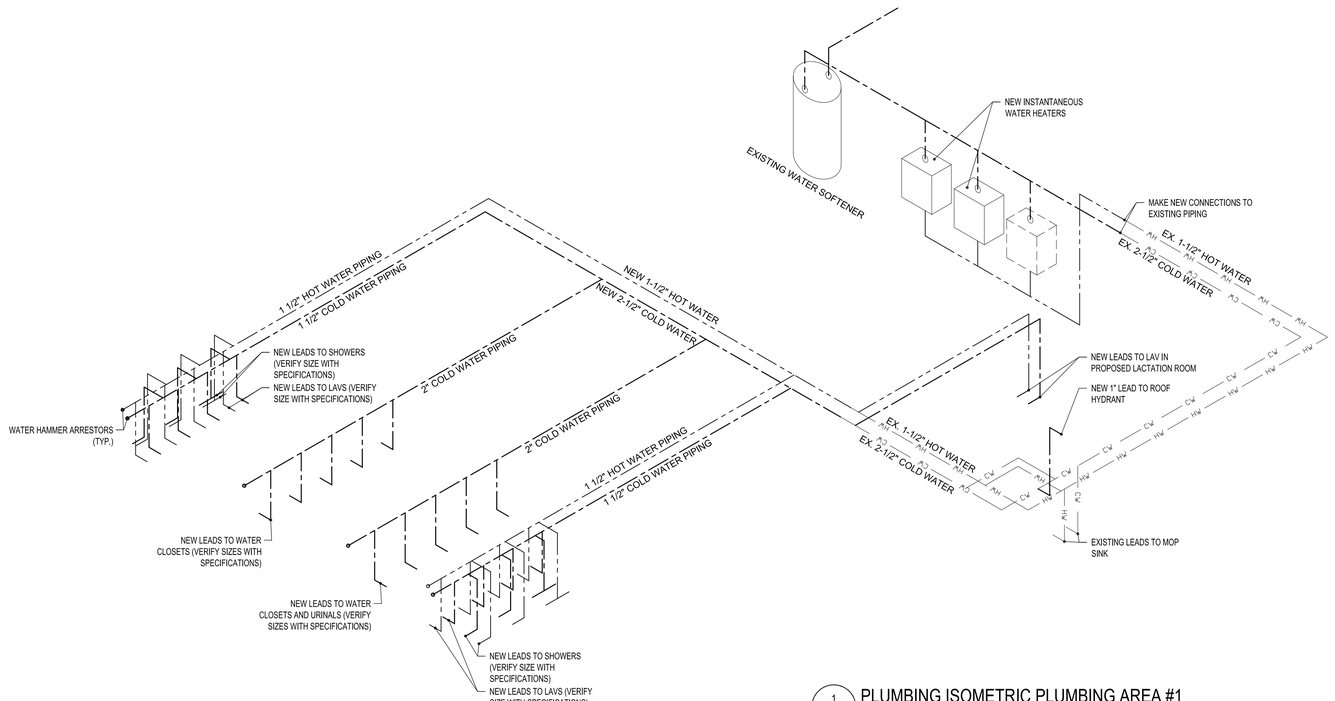
TANKLESS WATER HEATER SCHEDULE

MARK	SELECTION BASED ON		INPUT (MBH)	E.W.T °F	L.W.T. °F	GPM	HEAT EXCHANGER	WEIGHT (LBS)	MOUNTING	ELECTRICAL DATA				REMARKS
	MFR	MODEL								WATTS	VOLTAGE	PH	HZ	
TWH-1	NAVIEN	NPE-240A	199	50	117	5.6	S.S.	82	WALL	200	115V	1	60	READY LINK CABLES
TWH-2	NAVIEN	NPE-240A	199	50	117	5.6	S.S.	82	WALL	200	115V	1	60	READY LINK CABLES



KEY PLAN

NOT TO SCALE



1 / P2.2 PLUMBING ISOMETRIC PLUMBING AREA #1

SCALE: N/A

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