SHEET LIST - VOLUME 1

SHEET NUMBER	SHEET NAME	REV	DATE
GENERAL			
G-001.1	COVER SHEET - VOLUME 1		
G-002.1	SHEET INDEX - VOLUME 1	1	05/29/2025
G-003	GENERAL NOTES, ABBREVIATIONS		
G-004	CODE ANALYSIS		
G-005	FPLS CODE REVIEW FORM		
G-101	CODE COMPLIANCE SITE PLAN		
G-102	LIFE SAFETY PLAN		
G-103	FIRE BARRIER DETAIL		
CIVIL			
GI101	PROJECT LOCATION MAPS		
GC101	HAUL ROUTE PLAN		
GC102	PROPOSED PROJECT STAGING AREAS AND FENCING		
GR101	SITE PHOTO LOCATIONS		
GR102	SITE PHOTOS		
VF101	OVERALL EXISTING CONDITIONS PLAN		
VF102	EXISTING CONDITIONS PLAN		
VF103	EXISTING CONDITIONS PLAN		
VF104	SURVEY CONTROL PLAN		
VF601	EXISTING STORM AND SANITARY STRUCTURE TABLES		
VS101	STAKING PLAN		
BB101	BORING PLAN		
BB102	BORING LOGS		
BB103	BORING LOGS		
BB104	BORING LOSS		
BB105	BORING LOGS		
CD101	OVERALL SITE DEMOLITION PLAN		
CD102	SITE DEMOLITION PLAN		
CD103	SITE DEMOLITION PLAN		
CS101	AERIAL SITE PLAN		
CG101	OVERALL SITE GRADING PLAN	1	05/29/2025
CG102	SITE GRADING PLAN	1	05/29/2025
CG103	SITE GRADING PROFILES	1	05/29/2025
CG104	STORMWATER DRY POND PLAN AND PROFILE	1	05/29/2025
CG105	OVERALL EROSION CONTROL PLAN	1	05/29/2025
CG106	EROSION CONTROL PLAN	1	05/29/2025
CG501	EROSION CONTROL DETAILS		
CG502	EROSION CONTROL DETAILS		
CG503	EROSION CONTROL DETAILS		
CG504	EROSION CONTROL DETAILS		
CG505	EROSION CONTROL DETAILS	1	05/29/2025
CG601	STORMWATER CALCULATIONS	1	05/29/2025
CP101	OVERALL SITE PLAN		
CP102	SITE PLAN	1	05/29/2025
CP103	SITE PLAN		
CP501	SITE DETAILS		
CP502	SITE DETAILS		
CU101	OVERALL SITE UTILITY PLAN	1	05/29/2025
CU102	SITE UTILITY PLAN	1	05/29/2025
CU121	SANITARY SEWER PLAN AND PROFILE	1	05/29/2025
CU141	STORM DRAIN PLAN AND PROFILE	1	05/29/2025
CU142	STORM DRAIN PLAN AND PROFILE	1	05/29/2025
CU501	SITE UTILITY DETAILS		
CU502	SITE UTILITY DETAILS	1	05/29/2025
CU503	SITE UTILITY DETAILS		
LS101	LANDSCAPE SITE PLAN		
LS501	LANDSCAPE DETAILS		

1 REVISED IN ACCORDANCE WITH AMENDMENT 0001

STATE OF MICHIGAN
LAURIE L WHITNEY
ARCHITECT
No. 1301069394
LICENSED ARCHITECT
9.20.24

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE	APPR.
1	REVISED IN ACCORDANCE WITH AMENDMENT 0001	05/29/2025	

Plot Date: 5/29/2025 1:49:27 PM File Path: Autodesk Docs://1550044 USACE Detroit Arsenal MUMT JV_R2022/1550044_ARCH_R22.rvt

ISSUE DATE: SEPTEMBER 20, 2024
SOLICITATION NO.: -
CONTRACT NO.: -

DESIGN BY: D. RIDENOUR
DRAWN BY: R. DICKMAN
CHECKED BY: L. WHITNEY
SUBMITTED BY: M. STETLER
SIZE: ANSI D

DR

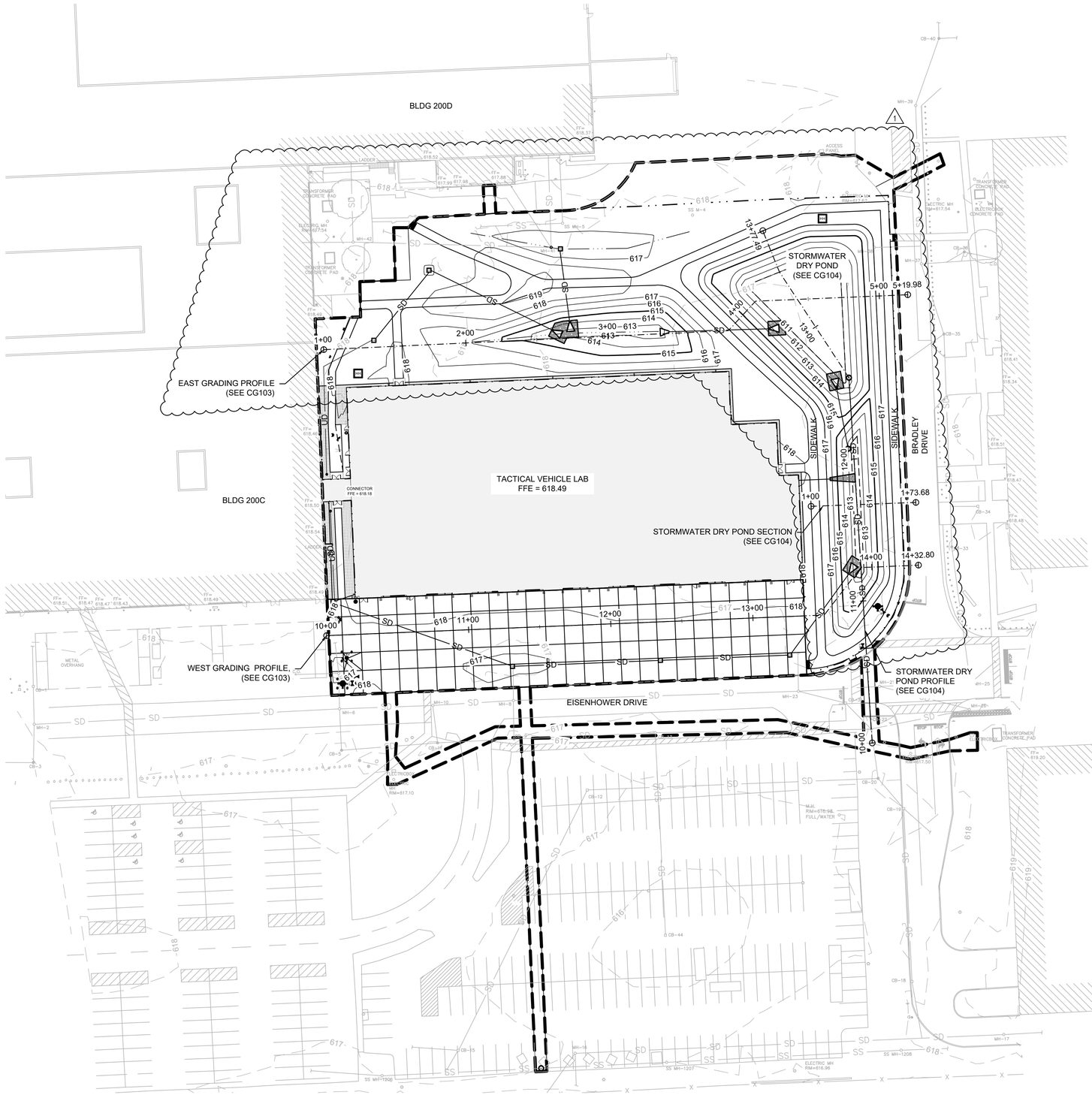
U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR MARTIN LUTHER JR PL
LOUISVILLE, KENTUCKY

BENHAM | Mead & Hunt | JOINT VENTURE TEAM

DETROIT ARSENAL, MI
MANNED / UNMANNED TACTICAL VEHICLE LAB
FY 2025
P2#: 506474
00 - GENERAL
SHEET INDEX - VOLUME 1

SHEET ID
G-002.1

CERTIFIED FINAL SUBMITTAL W912QR25R0052_Plans-0001



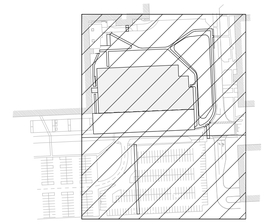
A1 OVERALL SITE GRADING PLAN
SCALE: 1"=40'-0"

GENERAL SHEET NOTES

1. FOR SITE SLOPES, SEE CG102.
2. FOR SITE PROFILES, SEE CG103.
3. FOR POND PROFILES, SEE CG104.

SHEET LEGEND

- EXISTING CONTOUR LINES
- PROPOSED CONTOUR LINES
- GRADING LIMITS
- FINISHED / PROPOSED SPOT ELEVATION
- FINISHED / PROPOSED SLOPE (3:1, 2%)



KEY PLAN

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE
1	REVISED IN ACCORDANCE WITH AMENDMENT 0001	05/29/2025

File Path: X:\324620\0222857.011\TECH\CAD\506474_CG101.DWG

Plot Date: 5/23/2025

ISSUE DATE: SEPTEMBER 20, 2024
SOLICITATION NO.:
CONTRACT NO.:

DESIGN BY: A. ANDERSON, P.E.
DRAWN BY: C. JONES
CHECKED BY: A. ANDERSON, P.E.
SUBMITTED BY: M. BUTLER
SIZE: ANSI D
M&H PROJECT NO.: R324620-222857.01

U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR MARTIN LUTHER JR PL
LOUISVILLE, KENTUCKY 40202

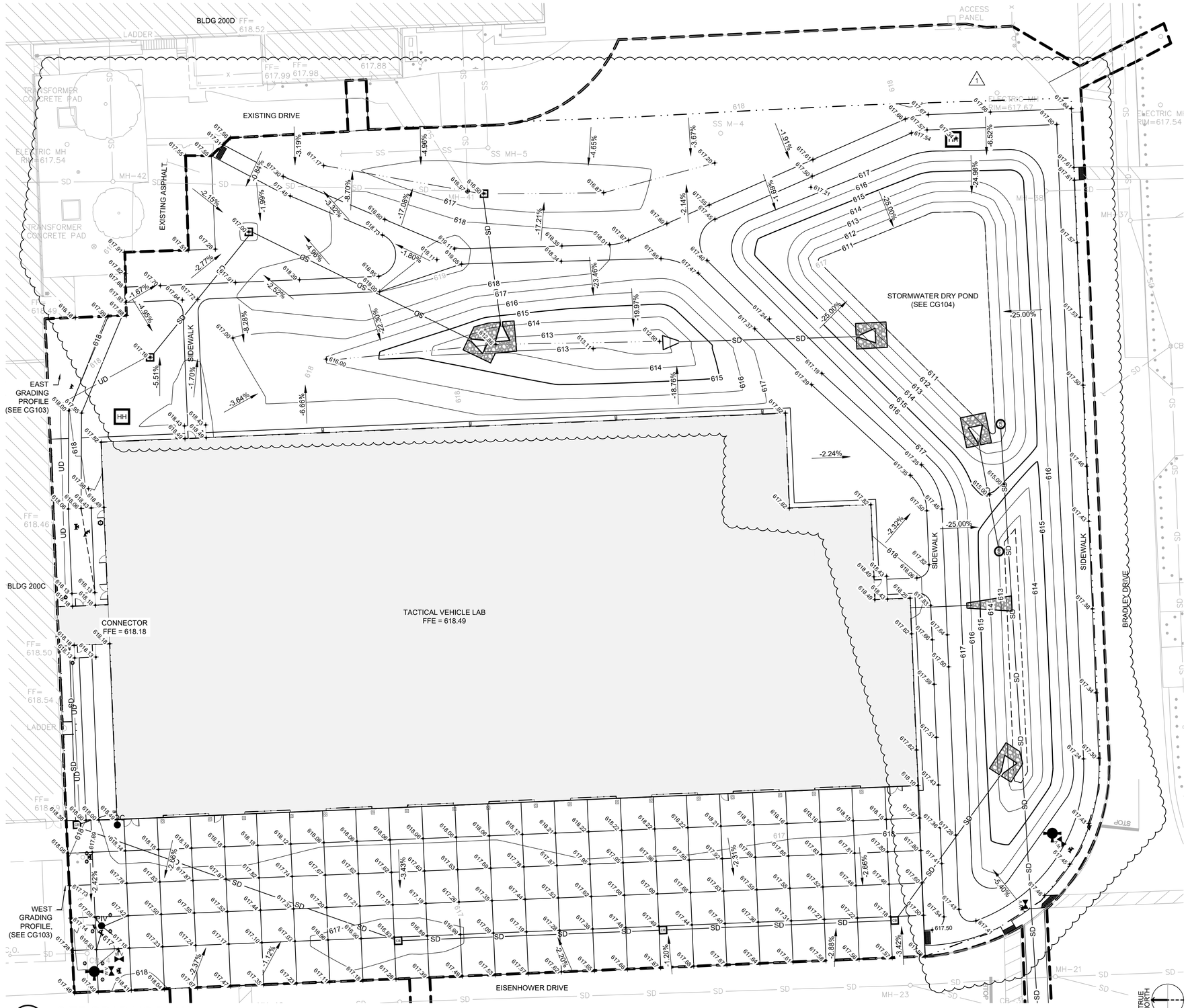
BENHAM Mead & Hunt JOINT VENTURE TEAM

DETROIT ARSENAL, MICHIGAN
MANNED / UNMANNED TACTICAL VEHICLE LAB
FY 2025
P2# 506474
OVERALL SITE GRADING PLAN

SHEET ID
CG101

WISCONSIN
ANNE C. ANDERSON
E-39767
WAUNAKEE
WI
PROFESSIONAL ENGINEER

CERTIFIED FINAL SUBMITTAL W912QR25R0052_Plans-0001



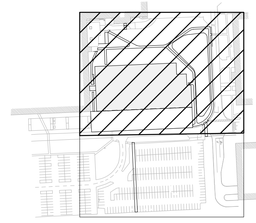
A1 SITE GRADING PLAN
SCALE: 1"=20'-0"

GENERAL SHEET NOTES

1. FOR SITE PROFILES, SEE CG103.
2. FOR POND PROFILES, SEE CG104.

SHEET LEGEND

- EXISTING CONTOUR LINES
- PROPOSED CONTOUR LINES
- GRADING LIMITS
- FINISHED / PROPOSED SPOT ELEVATION
- FINISHED / PROPOSED SLOPE



KEY PLAN

WISCONSIN ANNE C ANDERSON E-39767 WAUNAKEE WI PROFESSIONAL ENGINEER

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE
1	REVISED IN ACCORDANCE WITH AMENDMENT 0001	05/29/2025

File Path: X:\324620022285 7 011TECH\CAD\506474_CG102.DWG

Plot Date: 5/23/2025

ISSUE DATE: SEPTEMBER 20, 2024
SOLICITATION NO.:
CONTRACT NO.:

DESIGN BY: A. ANDERSON
DRAWN BY: C. JONES
CHECKED BY: A. ANDERSON
SUBMITTED BY: M. BUTLER
SIZE: ANSI D
M&H PROJECT NO.: R324620022285 7.01

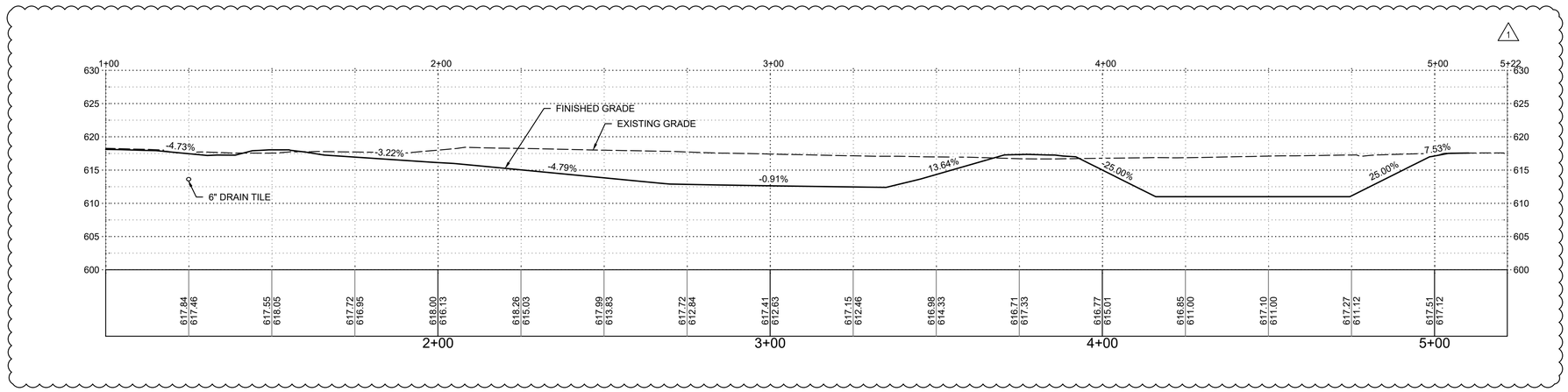
U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR MARTIN LUTHER JR PL
LOUISVILLE, KENTUCKY 40202

BENHAM Mead & Hunt JOINT VENTURE TEAM

DETROIT ARSENAL, MICHIGAN
MANNED / UNMANNED TACTICAL VEHICLE LAB
FY 2025
P2# 506474
SITE GRADING PLAN

SHEET ID
CG102

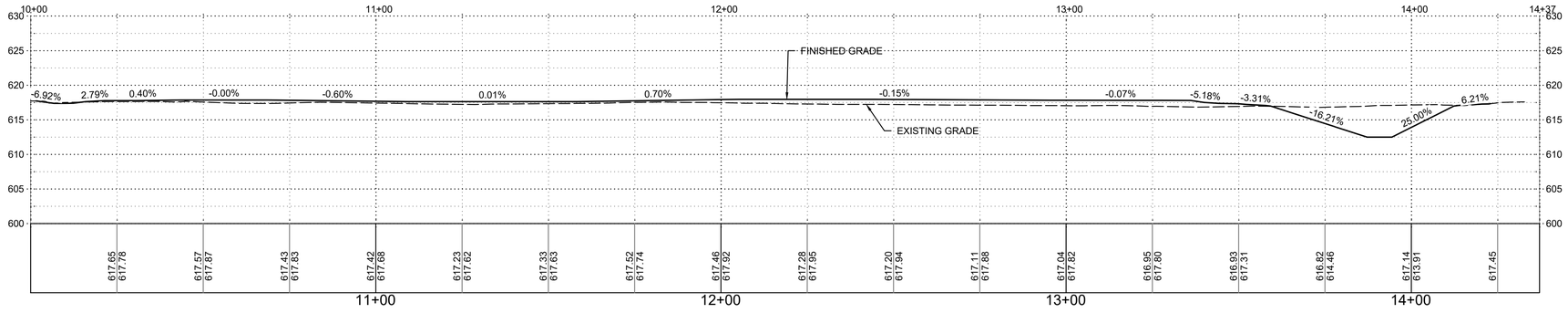
CERTIFIED FINAL SUBMITTAL W912QR25R0052_Plans-0001



K1 EAST GRADING PROFILE

SCALE: H 1"=20'-0" V 1"=10'-0"

V 0 10' 20' H 0 20' 40'



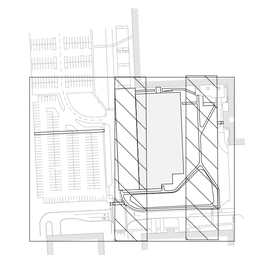
E1 WEST GRADING PROFILE

SCALE: H 1"=20'-0" V 1"=10'-0"

V 0 10' 20' H 0 20' 40'

GENERAL SHEET NOTES

1. FOR SITE PROFILES, SEE CG103.
2. FOR POND PROFILES, SEE CG104.



KEY PLAN

WISCONSIN
ANNE C. ANDERSON
E-39767
WAUNAKEE
PROFESSIONAL ENGINEER

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE
1	REVISED IN ACCORDANCE WITH AMENDMENT 0001	05/29/2025

ISSUE DATE: SEPTEMBER 20, 2024
SOLICITATION NO.:
CONTRACT NO.:

DESIGN BY: A. ANDERSON
DRAWN BY: C. JONES
CHECKED BY: K. KOCH
SUBMITTED BY: M. BUTLER
SIZE: ANSI D
M&H PROJECT NO.: R3246200-222857.01

U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR MARTIN LUTHER JR PL
LOUISVILLE, KENTUCKY 40202

BENHAM Mead & Hunt JOINT VENTURE TEAM

DETROIT ARSENAL, MICHIGAN
MANNED / UNMANNED TACTICAL VEHICLE LAB
FY 2025
P2# 506474

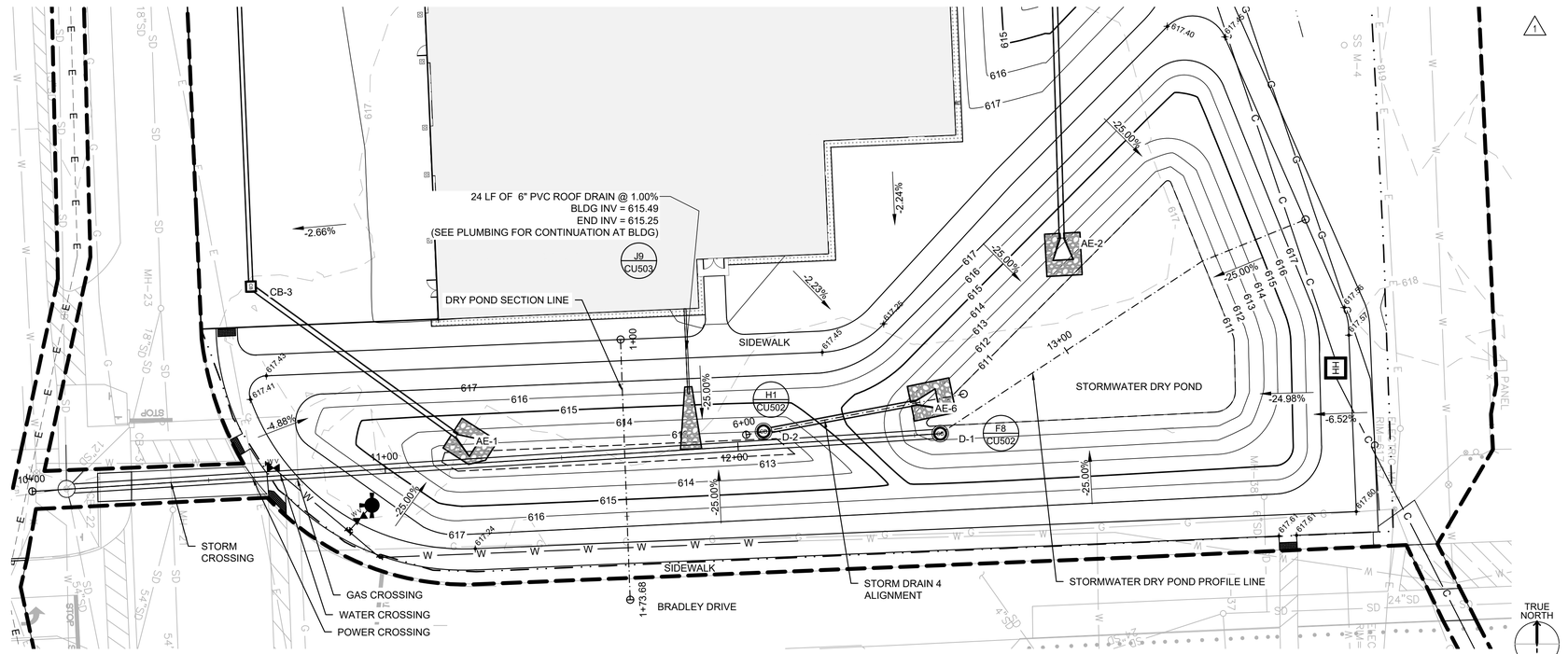
SITE GRADING PROFILES

SHEET ID
CG103

File Path: X:\3246200\222857.01\TECH\CAD\506474_CG103.DWG

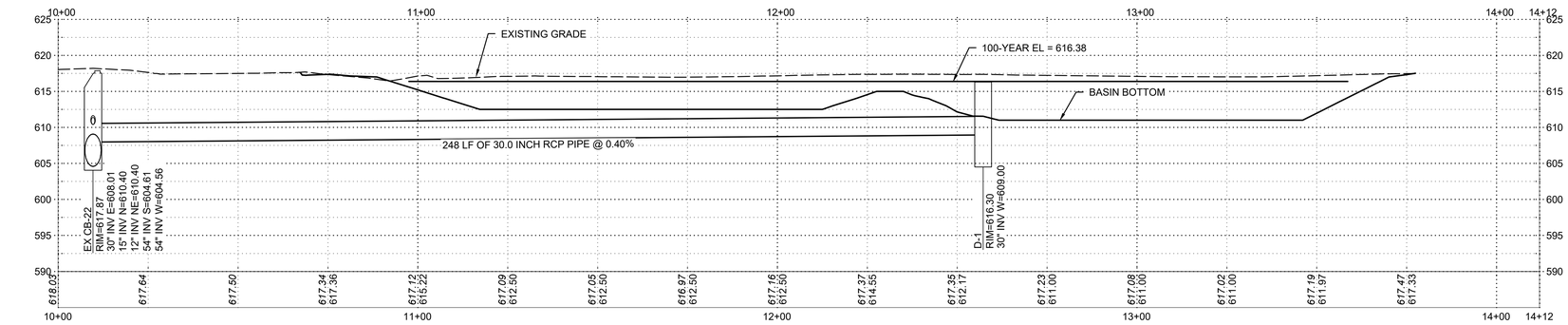
Plot Date: 5/23/2025

CERTIFIED FINAL SUBMITTAL W912QR25R0052_Plans-0001



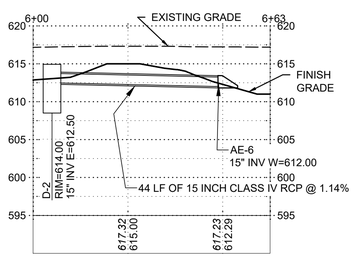
H1 STORMWATER DRY POND PLAN

SCALE 1"=20'-0"



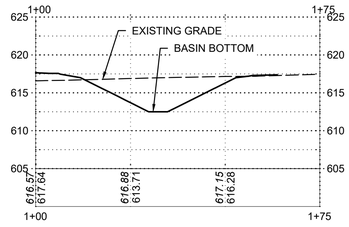
D1 STORMWATER DRY POND PROFILE

SCALE: H 1"=20'-0" V 1"=10'-0"



A1 STORMWATER DRY POND SECTION

SCALE: H 1"=20'-0" V 1"=10'-0"



A7 STORMWATER DRY POND SECTION

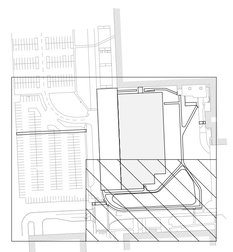
SCALE: H 1"=20'-0" V 1"=10'-0"

GENERAL SHEET NOTES

1. FOR SITE PROFILES, SEE CG103.
2. FOR POND PROFILES, SEE CG104.

SHEET LEGEND

- FIRE HYDRANT
- SANITARY SEWER MANHOLE
- STORM CATCH BASIN
- STORMWATER OVERFLOW STRUCTURE
- HANDHOLE
- WATER VALVE
- G — GAS
- E — ELECTRIC, UNDERGROUND
- SS — SANITARY SEWER
- SD — STORM DRAIN
- C — COMMUNICATIONS LINE
- W — WATER
- CONTRACTOR WORK LIMIT



KEY PLAN

WISCONSIN ANNE C. ANDERSON E-39787 WAUNAKEE WI 5-31-2026 PROFESSIONAL ENGINEER

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE
1	REVISED IN ACCORDANCE WITH AMENDMENT 0001	05/29/2025

File Path: X:\324620\0222857.011\TECH\CAD\506474_CG104.DWG

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SOLICITATION NO.:
CONTRACT NO.:

DESIGN BY: A. ANDERSON
DRAWN BY: C. JONES
CHECKED BY: A. ANDERSON
SUBMITTED BY: M. BUTLER
SIZE: ANSI D
P.C.A.
M&H PROJECT NO.: R3246200-222857.01

U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR MARTIN LUTHER JR PL
LOUISVILLE, KENTUCKY 40202

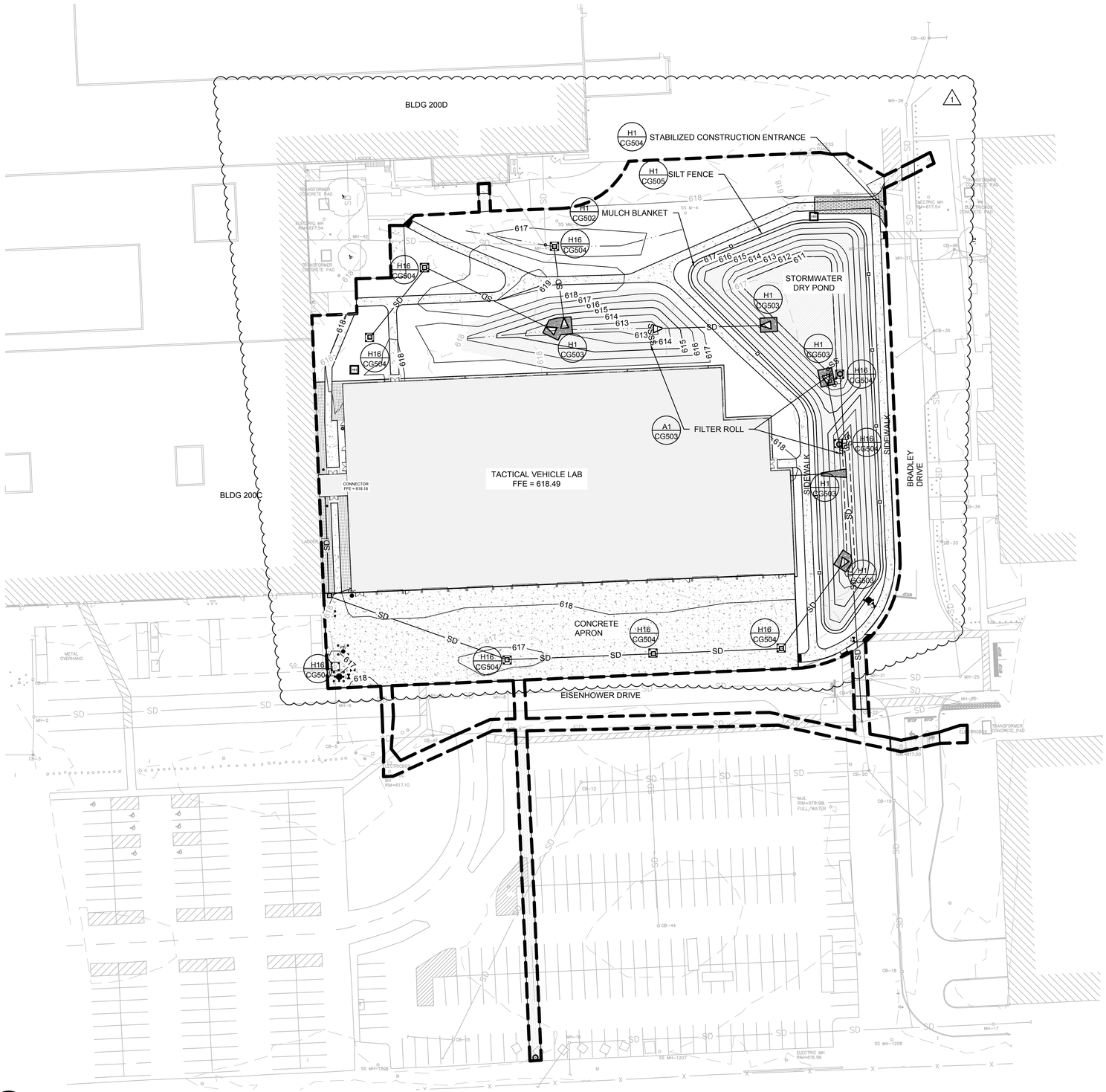
BENHAM — Mead & Hunt — JOINT VENTURE TEAM

DETROIT ARSENAL, MICHIGAN
MANNED / UNMANNED TACTICAL VEHICLE LAB
FY 2025
P2# 506474

STORMWATER DRY POND PLAN AND PROFILE

SHEET ID
CG104

CERTIFIED FINAL SUBMITTAL W912QR25R0052_Plans-0001



A1 OVERALL EROSION CONTROL PLAN
SCALE: 1"=40'-0"

EROSION CONTROL NOTES

1. ALL WORK SHALL COMPLY WITH THE APPLICABLE SOIL EROSION AND SEDIMENTATION CONTROL (SESC) RULES AND REGULATIONS (SOIL EROSION AND SEDIMENTATION CONTROL – 1994 PA 451, PART 91, AS AMENDED, MCL 324.9101 ET SEQ.).
2. ALL EARTH CHANGES OF ONE ACRE OR MORE OR WITHIN 500 FEET OF WATERS OF THE STATE REQUIRE A SESC PERMIT. IF A SESC PERMIT IS REQUIRED THE PROFESSIONAL SERVICES CONTRACTOR (DESIGN CONSULTANT) SHALL PREPARE AN SESC PLAN. THE SESC PLAN SHALL ADDRESS BOTH WIND AND WATER EROSION AND SEDIMENTATION.
3. THE CONTRACTOR SHALL REVIEW THE DESIGN CONSULTANT'S SESC PLAN 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.
4. THE DTMB SESC PROGRAM, UPON APPROVAL OF THE IMPLEMENTATION PLAN, WILL ISSUE THE CONTRACTOR AN "AUTHORIZATION TO PROCEED WITH EARTH CHANGE", WHICH IS TO BE POSTED AT THE JOB SITE. THIS DOCUMENT IS ISSUED IN LIEU OF A PERMIT FROM THE COUNTY OR OTHER LOCAL ENFORCING AGENCY.
5. THE CONTRACTOR SHALL IMPLEMENT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY THE PROJECT'S SESC PLAN, SESC IMPLEMENTATION PLAN, DTMB'S SOIL EROSION AND SEDIMENTATION CONTROL GUIDEBOOK, DATED FEBRUARY 2005, AND AS DIRECTED BY THE PROFESSIONAL SERVICES CONTRACTOR, DTMB SESC INSPECTOR, AND/OR DTMB PROJECT DIRECTOR. THE DTMB SESC INSPECTOR SHALL INSPECT THE SITE WEEKLY AND AFTER SIGNIFICANT RAIN EVENTS.
6. THE CONTRACTOR SHALL INSTALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES PRIOR TO OR UPON COMMENCEMENT TO EARTHWORK ACTIVITIES.
7. THE CONTRACTOR WILL PERFORM SWEEPING AS NEEDED TO REMOVE ANY SEDIMENT TRACKED OFF SITE. FREQUENCY OF SWEEPING WILL BE BASED ON SITE CONDITIONS.
8. THE CONTRACTOR WILL PERFORM DUST CONTROL AS NEEDED BASED ON SITE CONDITIONS.
9. DISTURBED AREAS THAT WILL REMAIN IDLE DURING CONSTRUCTION MUST BE TEMPORARILY STABILIZED, INCLUDING SOIL STOCKPILES, USING DTMB SESC BEST MANAGEMENT PRACTICES.
10. THE CONTRACTOR SHALL MAINTAIN AND INSPECT SESC MEASURES THROUGHOUT THE COURSE OF THE PROJECT. RECOMMEND INSPECTING AND MAINTAINING EROSION AND SEDIMENTATION CONTROLS ON A DAILY BASIS. AT A MINIMUM, THE CONTRACTOR SHALL INSPECT AND MAINTAIN SESC MEASURES ONCE A WEEK AND AFTER RAIN EVENTS.
11. 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.
12. 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.
13. THE CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER PERMANENT SOIL EROSION MEASURES ARE IN PLACE AND THE AREA IS STABILIZED. CARE SHALL BE TAKEN DURING REMOVAL TO PREVENT SOIL EROSION AND SEDIMENTATION.
14. AFTER THE COMPLETION OF THE PROJECT, PERMANENT SESC MEASURES WILL BE MAINTAINED BY THE PROPERTY OWNER.
15. STORMWATER DRY POND SHALL NOT BE PUT INTO USE UNTIL THE SITE IS STABILIZED.

PROJECT SEQUENCE:

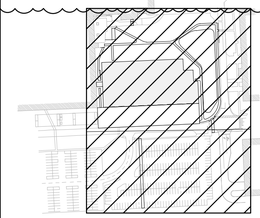
1) INSTALL INLET PROTECTION AND SEDIMENT LOG BARRIER.
2) PIPE DEMOLITION AND UTILITY INSTALLATION.
3) INSTALL INLET PROTECTION ON NEW INLETS.
4) REMOVE PAVEMENT, INSTALL STABILIZED CONSTRUCTION ENTRANCE, MASS GRADING, AND INSTALLATION OF BUILDING FOUNDATION. TEMPORARY SEED IF SITE IS LEFT MORE THAN 5 DAYS.
4) ROUGH GRADE.
5) FINISH GRADE SITE, INSTALLATION OF SEED AND MULCH BLANKET ON ALL DISTURBED TURF AREAS.
6) INSTALL SEDIMENT LOG ON THE TOE OF THE SLOPE AND RIP RAP AT PIPE OUTFALLS.
7) ONCE VEGETATION IS ESTABLISHED, REMOVE SEDIMENT LOGS, SILT FENCE, INLET PROTECTION AND RESTORE AS NEEDED.

SITE DATA:

ACREAGE DISTURBED = 3.50 ACRES
NEAREST WATERCOURSE = 925 FEET FROM BEAR CREEK
SOIL TYPES = LEWANEE SILTY CLAY LOAM

SHEET LEGEND

- INLET PROTECTION H16/CG504
- SILT FENCE H1/CG505
- EXISTING CONTOUR LINES
- PROPOSED CONTOUR LINES
- SSSSSSSSSSSSSSS FILTER ROLL A1/CG503
- STABILIZED CONSTRUCTION ENTRANCE H1/CG504
- MULCH BLANKET H1/CG502
- CONTRACTOR WORK LIMIT



KEY PLAN

ANNE C. ANDERSON E-39767 WAUNAKEE WI 05/29/2025 PROFESSIONAL ENGINEER WISCONSIN

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE
1	REVISED IN ACCORDANCE WITH AMENDMENT 0001	05/29/2025

File Path: X:\324620\0222857.011TECH\CAD\506474_CG105.DWG

Plot Date: 5/30/2025

ISSUE DATE: SEPTEMBER 20, 2024
SOLICITATION NO.:
CONTRACT NO.:

DESIGN BY: A. ANDERSON
DRAWN BY: C. JONES
CHECKED BY: A. KOCH
SUBMITTED BY: M. BUTLER
SIZE: ANSI D
M&H PROJECT NO.: R3246200-222857.01

U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR MARTIN LUTHER JR PL
LOUISVILLE, KENTUCKY 40202

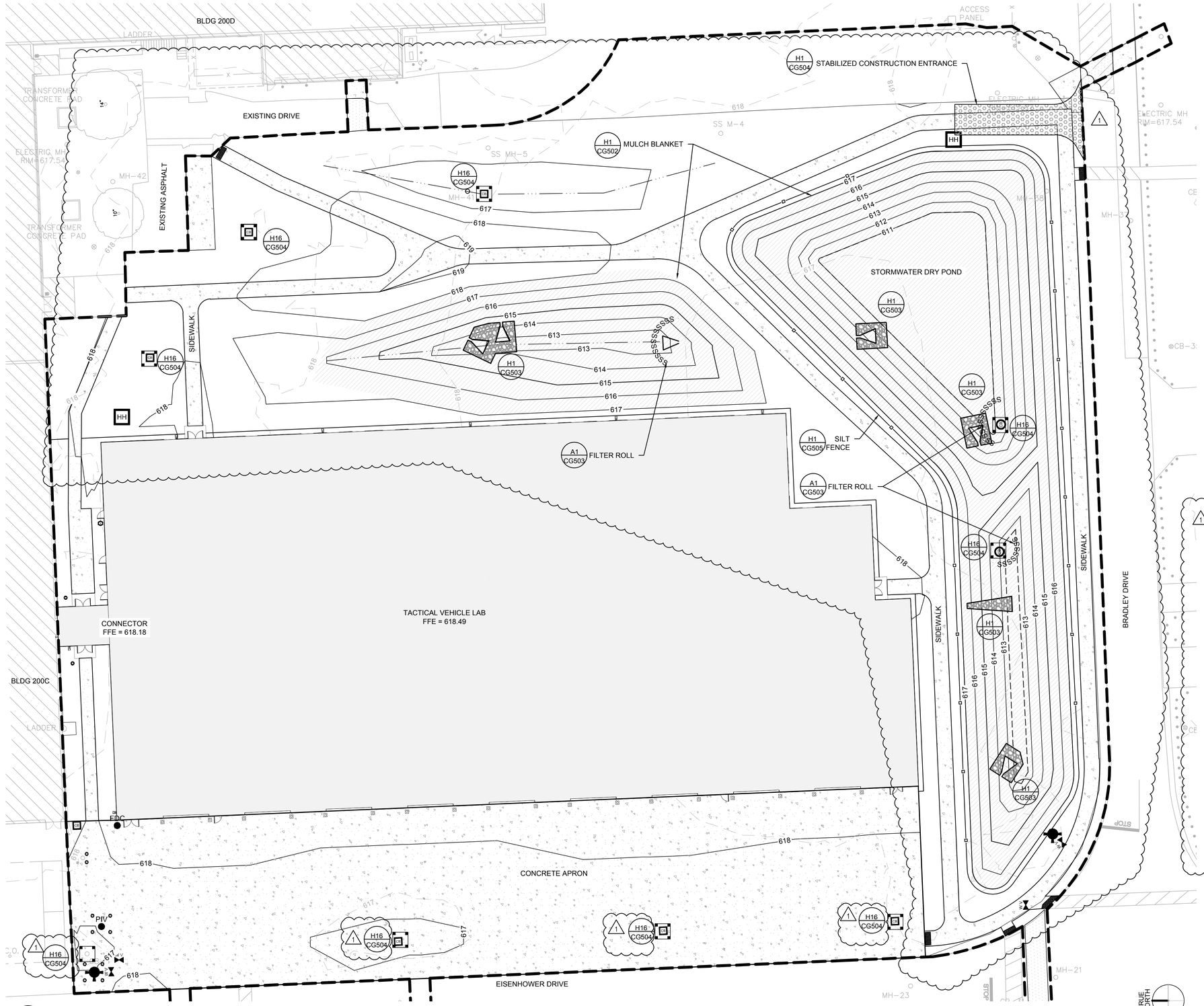
BENHAM Mead & Hunt JOINT VENTURE TEAM

DETROIT ARSENAL, MICHIGAN
MANNED / UNMANNED TACTICAL VEHICLE LAB
FY 2025
P2# 506474

OVERALL EROSION CONTROL PLAN

SHEET ID
CG105

CERTIFIED FINAL SUBMITTAL W912QR25R0052_Plans-0001



A1 EROSION CONTROL PLAN
SCALE: 1"=20'-0"

EROSION CONTROL NOTES

1. ALL WORK SHALL COMPLY WITH THE APPLICABLE SOIL EROSION AND SEDIMENTATION CONTROL (SESC) RULES AND REGULATIONS (SOIL EROSION AND SEDIMENTATION CONTROL – 1994 PA 451, PART 91, AS AMENDED, MCL 324.9101 ET SEQ.).
2. ALL EARTH CHANGES OF ONE ACRE OR MORE OR WITHIN 500 FEET OF WATERS OF THE STATE REQUIRE A SESC PERMIT. IF A SESC PERMIT IS REQUIRED THE PROFESSIONAL SERVICES CONTRACTOR (DESIGN CONSULTANT) SHALL PREPARE AN SESC PLAN. THE SESC PLAN SHALL ADDRESS BOTH WIND AND WATER EROSION AND SEDIMENTATION.
3. THE CONTRACTOR SHALL REVIEW THE DESIGN CONSULTANT'S SESC PLAN 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.
4. THE DTMB SESC PROGRAM, UPON APPROVAL OF THE IMPLEMENTATION PLAN, WILL ISSUE THE CONTRACTOR AN "AUTHORIZATION TO PROCEED WITH EARTH CHANGE", WHICH IS TO BE POSTED AT THE JOB SITE. THIS DOCUMENT IS ISSUED IN LIEU OF A PERMIT FROM THE COUNTY OR OTHER LOCAL ENFORCING AGENCY.
5. THE CONTRACTOR SHALL IMPLEMENT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY THE PROJECT'S SESC PLAN, SESC IMPLEMENTATION PLAN, DTMB'S SOIL EROSION AND SEDIMENTATION CONTROL GUIDEBOOK, DATED FEBRUARY 2005, AND AS DIRECTED BY THE PROFESSIONAL SERVICES CONTRACTOR, DTMB SESC INSPECTOR, AND/OR DTMB PROJECT DIRECTOR. THE DTMB SESC INSPECTOR SHALL INSPECT THE SITE WEEKLY AND AFTER SIGNIFICANT RAIN EVENTS.
6. THE CONTRACTOR SHALL INSTALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES PRIOR TO OR UPON COMMENCEMENT TO EARTHWORK ACTIVITIES.
7. THE CONTRACTOR WILL PERFORM SWEEPING AS NEEDED TO REMOVE ANY SEDIMENT TRACKED OFF SITE. FREQUENCY OF SWEEPING WILL BE BASED ON SITE CONDITIONS.
8. THE CONTRACTOR WILL PERFORM DUST CONTROL AS NEEDED BASED ON SITE CONDITIONS.
9. DISTURBED AREAS THAT WILL REMAIN IDLE DURING CONSTRUCTION MUST BE TEMPORARILY STABILIZED, INCLUDING SOIL STOCKPILES, USING DTMB SESC BEST MANAGEMENT PRACTICES.
10. THE CONTRACTOR SHALL MAINTAIN AND INSPECT SESC MEASURES THROUGHOUT THE COURSE OF THE PROJECT. RECOMMEND INSPECTING AND MAINTAINING EROSION AND SEDIMENTATION CONTROLS ON A DAILY BASIS. AT A MINIMUM, THE CONTRACTOR SHALL INSPECT AND MAINTAIN SESC MEASURES ONCE A WEEK AND AFTER RAIN EVENTS.
11. 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.
12. 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.
13. THE CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER PERMANENT SOIL EROSION MEASURES ARE IN PLACE AND THE AREA IS STABILIZED. CARE SHALL BE TAKEN DURING REMOVAL TO PREVENT SOIL EROSION AND SEDIMENTATION.
14. AFTER THE COMPLETION OF THE PROJECT, PERMANENT SESC MEASURES WILL BE MAINTAINED BY THE PROPERTY OWNER.
15. STORMWATER DRY POND SHALL NOT BE PUT INTO USE UNTIL THE SITE IS STABILIZED.

PROJECT SEQUENCE:

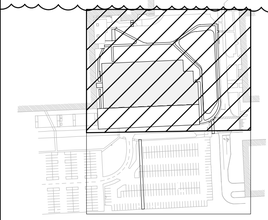
1) INSTALL INLET PROTECTION AND SEDIMENT LOG BARRIER.
2) PIPE DEMOLITION AND UTILITY INSTALLATION.
3) INSTALL INLET PROTECTION ON NEW INLETS.
4) REMOVE PAVEMENT, INSTALL STABILIZED CONSTRUCTION ENTRANCE, MASS GRADING, AND INSTALLATION OF BUILDING FOUNDATION. TEMPORARY SEED IF SITE IS LEFT MORE THAN 5 DAYS.
4) ROUGH GRADE.
5) FINISH GRADE SITE, INSTALLATION OF SEED AND MULCH BLANKET ON ALL DISTURBED TURF AREAS.
6) INSTALL SEDIMENT LOG ON THE TOE OF THE SLOPE AND RIP RAP AT PIPE OUTFALLS.
7) ONCE VEGETATION IS ESTABLISHED, REMOVE SEDIMENT LOGS, SILT FENCE, INLET PROTECTION AND RESTORE AS NEEDED.

SITE DATA:

ACREAGE DISTURBED = 3.50 ACRES
NEAREST WATERCOURSE = 925 FEET FROM BEAR CREEK
SOIL TYPES = LEWANEE SILTY CLAY LOAM

SHEET LEGEND

- INLET PROTECTION H16/CG504
- SILT FENCE H1/CG505
- EXISTING CONTOUR LINES
- PROPOSED CONTOUR LINES
- FILTER ROLL A1/CG503
- STABILIZED CONSTRUCTION ENTRANCE H1/CG504
- MULCH BLANKET H1/CG502
- CONTRACTOR WORK LIMIT



KEY PLAN

ANNE C. ANDERSON E-39767 WAUNAKEE WISCONSIN PROFESSIONAL ENGINEER

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE
1	REVISED IN ACCORDANCE WITH AMENDMENT 0001	05/29/2025

File Path: X:\324620\0222857.011TECH\CAD\506474_CG106.DWG

Plot Date: 5/30/2025

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SOLICITATION NO.:
CONTRACT NO.:

DESIGN BY: A. ANDERSON
DRAWN BY: C. JONES
CHECKED BY: A. ANDERSON
SUBMITTED BY: M. BUTLER
SIZE: ANSI D
M&H PROJECT NO.: R3246200-222857.01

U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR MARTIN LUTHER JR PL
LOUISVILLE, KENTUCKY 40202

BENHAM Mead & Hunt JOINT VENTURE TEAM

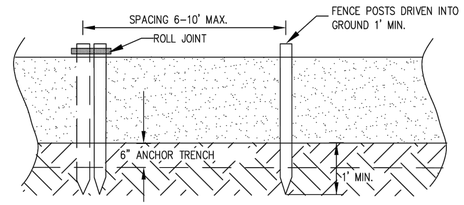
DETROIT ARSENAL, MICHIGAN
MANNED / UNMANNED TACTICAL VEHICLE LAB
FY 2025
P2# 506474
EROSION CONTROL PLAN

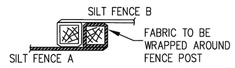
SHEET ID
CG106

CERTIFIED FINAL SUBMITTAL W912QR25R0052_Plans-0001

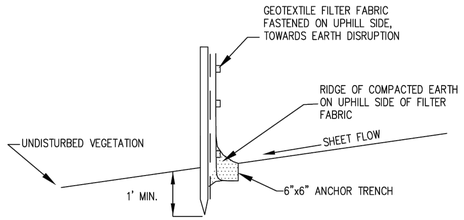
S51

SILT FENCE

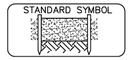




ROLL JOINTS



STANDARD SYMBOL



STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
STATE FACILITIES ADMINISTRATION

S51

SILT FENCE SPECIFICATIONS

When
- A temporary measure for preventing sediment movement.

Why
- Used to prevent sediment suspended in runoff from leaving an earth change area.

Where
- Use adjacent to critical areas, wetlands, base of slopes, and watercourses.

How
1. Install parallel to a contour.
2. The silt fence should be made of woven geotextile fabric.
3. Silt fence should accomodate no more than 1/2 to 1 acre of drainage per 100' of fence.
4. Dig a 6" trench along the area where the fence is to be installed.
5. Place 6" of the silt fence bottom flap into the trench.
6. Backfill the trench with soil and compact the soil on both sides. Create a small ridge on the up–slope side of the fence.
7. Install wooden stakes 6 – 10' apart and drive into the ground a minimum of 12".
8. Staple the geotextile fabric to the wooden stakes.
9. Join sections of silt fence by wrapping ends together (See drawing).

Maintenance
- Inspect frequently and immediately after each storm event. Check several times during prolonged storm events. If necessary, repair immediately.
- If the sediment has reached 1/3 the height of the fence, the soil should be removed and disposed of in a stable upland site.
- The fence should be re–installed if water is seeping underneath it or if the fence has become ineffective.
- Silt fence should be removed once vegetation is established and up–slope area has stabilized.

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
STATE FACILITIES ADMINISTRATION

S51

SILT FENCE SPECIFICATIONS

Limitations
- Silt fence may cause temporary ponding and could fail if too much water flows through the area.
- Do not use in areas with concentrated flows.
- Chance of failure increases if fence is installed incorrectly or if sediment accumulation is not removed.

STATE OF MICHIGAN
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MARK	DESCRIPTION	DATE
1.	REVISED IN ACCORDANCE WITH AMENDMENT 0001	05/29/2025

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Plot Date: 5/30/2025

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SOLICITATION NO.:
CONTRACT NO.:

DESIGN BY: A. ANDERSON
DRAWN BY: C. JONES
CHECKED BY: A. SCHOLZ
SUBMITTED BY: M. BUTLER
SIZE: ANSI D
M&H PROJECT NO.: R324620.222857.01

U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR MARTIN LUTHER JR PL
LOUISVILLE, KENTUCKY 40202

BENHAM Mead & Hunt JOINT VENTURE TEAM

DETROIT ARSENAL, MICHIGAN
MANNED / UNMANNED TACTICAL VEHICLE LAB
FY 2025
P2# 506474

EROSION CONTROL DETAILS

SHEET ID

CG505

ANNE C. ANDERSON
E-39787
WAUNAKEE
WI
5-31-2025
PROFESSIONAL ENGINEER
WISCONSIN

CERTIFIED FINAL SUBMITTAL W912QR25R0052_Plans-0001

DETENTION VOLUME CALCULATIONS		
	Value	Units
Contributing Acreage (A)	3.50	ac
Weighted Runoff Coefficient (C)	0.79	
Time of Concentration (Tc)	15	min
H.3 Channel Protection Rate Control - Extended Detention (CPRC)		
Ved=3630(1.9)(C)(A)	19,070	cuft
Qed=Ved/(48*60*60)	0.11	cfs
H.4 Detention & Flood Control (DFC)		
Qvrr=1.1055-(0.206*LN(A))	0.85	cfs/ac
Qres (Restricted Outlet Rate per Macomb County)	0.15	cfs/ac
Q100all=Qres(A)	0.53	cfs
V100run=3630(5.2)(C)(A)	52,192	cuft
Q100in=(C)(A)(275/(Tc+25))	19.01	cfs
R=0.206-0.15*LN(Q100all/Q100in)	0.74	
Vdet=(V100run*R)-Vcp-c	38,851	cuft

Dry Pond		
Elevation	Area (SF)	Cum Storage (CF)
611	3,085	
612	4,119	3,602
613	5,332	8,328
614	6,650	14,319
615	8,177	21,732
616	14,207	32,924
617	17,018	48,537

Forebay		
Elevation	Area (SF)	Cum Storage (CF)
612.5	520	
613	985	376
614	2,076	1,907
615	3,080	4,485

MULTI-STAGE DETENTION OUTLET CALCULATION (CPRC & DFC)		
Contributing Acreage (A)	3.50	ac
Weighted Runoff Coefficient (C)	0.79	
100-Year Storm Allowable Outlet Rate (Qall) = A x 0.15 cfs/acre	0.53	cfs
Top of Detention Storage (Ztop)	616.38	ft
Bottom of Detention Storage (Zbot)	611	ft
Elevation of Outlet Control (Zout)	611	ft
Extended Detention Outlet Calculations (1.9" CPRC)		
Extended Detention Volume (Ved)	19,070	cuft
Extended Detention Outfall Rate (Qed)	0.11	cfs
Extended Detention Elevation (Zed)	614.64	ft
Calculate Average Head (Hed)		
Hed=0.67*(Zed-Zout)	2.44	ft
Calculate the Required Orifice Area (Aed)		
Aed=Qed/(0.62*(2*g*Hed)^0.5)	0.014	sqft
Provided Number of Holes	1	hole
Required Diameter of Holes	1.67	in
Provided Orifice Area (Aed-act)	0.015	sqft
Calculate Actual Average Release Rate		
Qed-act=0.62*Aed-act*((2*g*Hed)^0.5)	0.12	cfs
Calculate the Actual Holding Time (Ted)		
Ted=(Ved/Qed-act)/3600	45	hr

100-Year Flood Volume Outlet Calculations (DFC)		
Calculate Head on Extended Detention Holes (Hout)		
Hout=Ztop-Zout	5.38	ft
Calculate Flow Through Extended Detention Holes (Q100p-ed)		
Q100p-ed=0.62*Aed-act*(2*g*Hout)^0.5	0.18	cfs
Calculate Adjusted Required Outlet Release Rate (Q100p-adj)		
Q100p-adj=Q100p-Q100p-ed	0.35	cfs
Calculate Head on 100-Year Holes (H100p)		
H100p=Ztop-Zed	1.74	ft
Calculate Required Orifice Area (A100p)		
A100p=Q100p-adj/(0.62*(2*g*H100p)^0.5)	0.053	sqft
Provided Number of Holes	2	holes
Required Diameter of Holes	2.00	in
Provided Orifice Area (A100p-act)	0.044	sqft
Calculate Actual Peak Release Rate (Q100p-act)		
Q100p-act=(0.62*A100p-act)*(2*g*H100p)^0.5	0.29	cfs
Calculate the Total Release Rate (Q100p-tot)		
Q100p-tot=Q100p-ed+Q100p-act	0.46	cfs

Bottom Orifice during 100-year Storm Flow Calculation		
100-year Pool Elevation (Z100)	616.38	ft
Outlet Invert Elevation (Zout)	611	ft
Calculate Maximum Head (Hed-max)		
Hed-max = (Z100-Zout)	5.38	ft
Provided Number of Holes	1	hole
Diameter of Holes	1.67	in
Provided Orifice Area (Aed-act)	0.015	sqft
Calculate Maximum Release Rate (Qed-max)		
Qed-max=0.62*Aed-act*((2*g*Hed-max)^0.5)	0.18	cfs

WATER QUALITY CONTROL CALCULATIONS WEST (WQ)		
	Value	Units
Contributing Acreage (A)	2.38	ac
Weighted Runoff Coefficient (C)	0.95	
Time of Concentration (Tc)	15	min
Water Quality Design Storm (P)	1	in
Water Quality Rainfall Intensity (I) I=(30.2033*P^0.2203)/(Tc+9.1747)^0.8069	2.31	in/hr
H.1 Water Quality Control (WQC)		
Vwq=3630(1.0)(C)(A)	8,207	cuft
Vf=3630(0.15)(C)(A)	1,231	cuft
Qwq=CiA	5.23	cfs
Forebay outlet size is same as ED outlet	1.67	inch diameter x 1 hole
WQ met by forebay for concrete apron areas on west side of Building 71.		

WATER QUALITY CONTROL CALCULATIONS EAST (WQ)		
	Value	Units
Contributing Acreage (A)	0.59	ac
Weighted Runoff Coefficient (C)	0.58	
Time of Concentration (Tc)	15	min
Water Quality Design Storm (P)	1	in
Water Quality Rainfall Intensity (I) I=(30.2033*P^0.2203)/(Tc+9.1747)^0.8069	2.31	in/hr
H.1 Water Quality Control (WQC)		
Vwq=3630(1.0)(C)(A)	1,242	cuft
Vf=3630(0.15)(C)(A)	186	cuft
WQ met by swale and hooded catch basin for runoff on east side of Building 71		
Grass swale 65% removal + hooded CB 20% = 85%		

Swale Volume		
Elevation	Area (SF)	Cum Storage (CF)
612.5	62	
613	567	157
614	1,750	1,316
615	3,355	3,868
616	5,381	8,236
617	8,532	15,193

Existing													
Outfall	AREA (SF)	AREA (AC)	ROOF (SF)	ROOF (AC)	PAVEMENT (SF)	PAVEMENT (AC)	SIDEWALK (SF)	SIDEWALK (AC)	LANDSCAPE (SF)	LANDSCAPE (AC)	POND (SF)	POND (AC)	% Impervious	C Factor
E1	150443	3.45	860	0.02	131719	3.02	0	0.00	17865	0.41	0	0.00	0.88	0.89
E2	1893	0.04	0	0.00	1893	0.04	0	0.00	0	0.00	0	0.00	1.00	0.95
Totals	152336	3.50	860	0.02	133612	3.07	0	0.00	17865	0.41	0	0.00	0.88	0.89
			CHECK =	152,337										
Proposed														
Outfall	AREA (SF)	AREA (AC)	ROOF (SF)	ROOF (AC)	PAVEMENT (SF)	PAVEMENT (AC)	SIDEWALK (SF)	SIDEWALK (AC)	LANDSCAPE (SF)	LANDSCAPE (AC)	POND (SF)	POND (AC)	% Impervious	C Factor
R1 to pond	79097	1.82	44624	1.02	0	0.00	4000	0.09	16266	0.37	14207	0.33	0.79	0.86
R1 to pipes, CB7	4293	0.10	0	0.00	0	0.00	2439	0.06	1854	0.04	0	0.00	0.57	0.73
R1 to pipes, CB5	8515	0.20	0	0.00	1126	0.03	1569	0.04	5820	0.13	0	0.00	0.32	0.61
R1 to pipes, EW1	12750	0.29	0	0.00	0	0.00	740	0.02	8856	0.20	3154	0.07	0.31	0.62
R2a	13504	0.31	307	0.01	12883	0.30	315	0.00	0	0.00	0	0.00	0.98	0.95
R2b	10803	0.25	0	0.00	10803	0.25	0	0.00	0	0.00	0	0.00		0.95
R3	23375	0.54	860	0.02	3041	0.07	720	0.02	18754	0.43	0	0.00	0.20	0.55
Totals	152337	3.50	45791	1.05	27853	0.64	9783	0.22	51550	1.18	17361	0.40	0.66	
C Factor			**0.95**		**0.95**		**0.95**		**0.45**		**1.00**			**0.79**

WISCONSIN
ANNE C. ANDERSON
E-39767
WAUNAKEE
PROFESSIONAL ENGINEER

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE
1	REVISED IN ACCORDANCE WITH AMENDMENT 0001	05/29/2025

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Plot Date: 5/30/2025

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SOLICITATION NO.:
CONTRACT NO.:
DELIVERY ORDER NO.:
PROJECT NO.: 0222857.01

DESIGN BY: A. ANDERSON, A-CA
DRAWN BY: C. JONES
CHECKED BY: A. ANDERSON
SUBMITTED BY: M. BUTLER
SIZE: ANSI D
M&H PROJECT NO.: R324620-222857.01

U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR MARTIN LUTHER JR PL
LOUISVILLE, KENTUCKY 40202

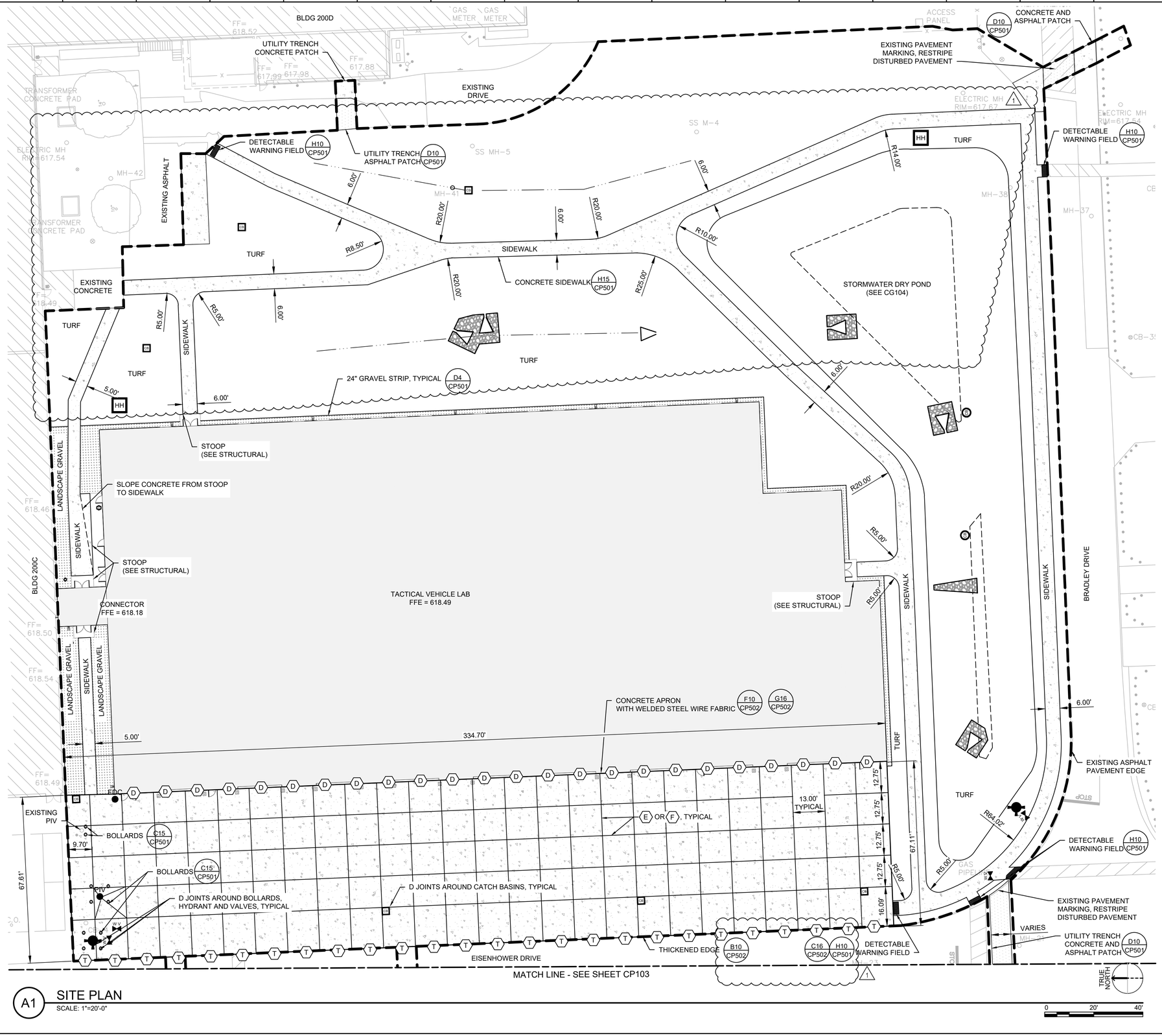
BENHAM Mead & Hunt JOINT VENTURE TEAM

DETROIT ARSENAL, MICHIGAN
MANNED / UNMANNED TACTICAL VEHICLE LAB
FY 2025
P2# 506474

STORMWATER CALCULATIONS

SHEET ID
CG601

CERTIFIED FINAL SUBMITTAL W912QR25R0052_Plans-0001



A1 SITE PLAN
SCALE: 1"=20'-0"

GENERAL SHEET NOTES

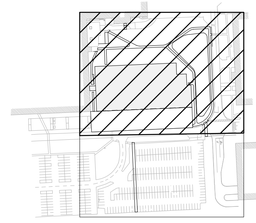
1. CONTRACTOR SHALL REPLACE ALL PAVEMENT DISTURBED BY PROJECT. CARE SHALL BE TAKEN TO PROTECT PAVEMENT OUTSIDE OF THE PROJECT LIMIT BOUNDARY.
2. CONTRACTOR SHALL PHASE CONCRETE AND PAVING TO AVOID TRAFFIC DELAYS TO THE EXTENT PRACTICAL.
3. FOR PAVEMENT PATCHING, CONTRACTOR SHALL MATCH PAVEMENT TYPE AND DEPTH OF EXISTING PAVEMENT AS WELL AS COURSE.
4. CONCRETE SIDEWALK JOINTING SHALL BE 5' MINIMUM.
5. ALL PAVEMENT STRIPING DISTURBED SHALL BE RE-ESTABLISHED TO MATCH EXISTING PAINT TYPE AND MARKINGS.

SHEET KEY NOTES

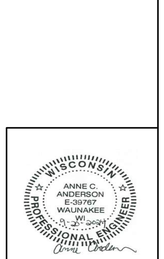
D EXPANSION JOINT — K11 CP502 / G1 CP502 (1)
E CONSTRUCTION JOINT — G1 CP502
F SAWED CONTRACTION JOINT — G1 CP502
T THICKENED EDGE — B10 CP502 (1)

SHEET LEGEND

ASPHALT
CONCRETE
CONTRACTOR WORK LIMIT



KEY PLAN



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DRAWN BY: C. JONES
CHECKED BY: A. ANDERSON
SUBMITTED BY: M. BUTLER
SIZE: ANSI D
M&H PROJECT NO.: R3246200-222857.01

U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR MARTIN LUTHER JR PL
LOUISVILLE, KENTUCKY 40202

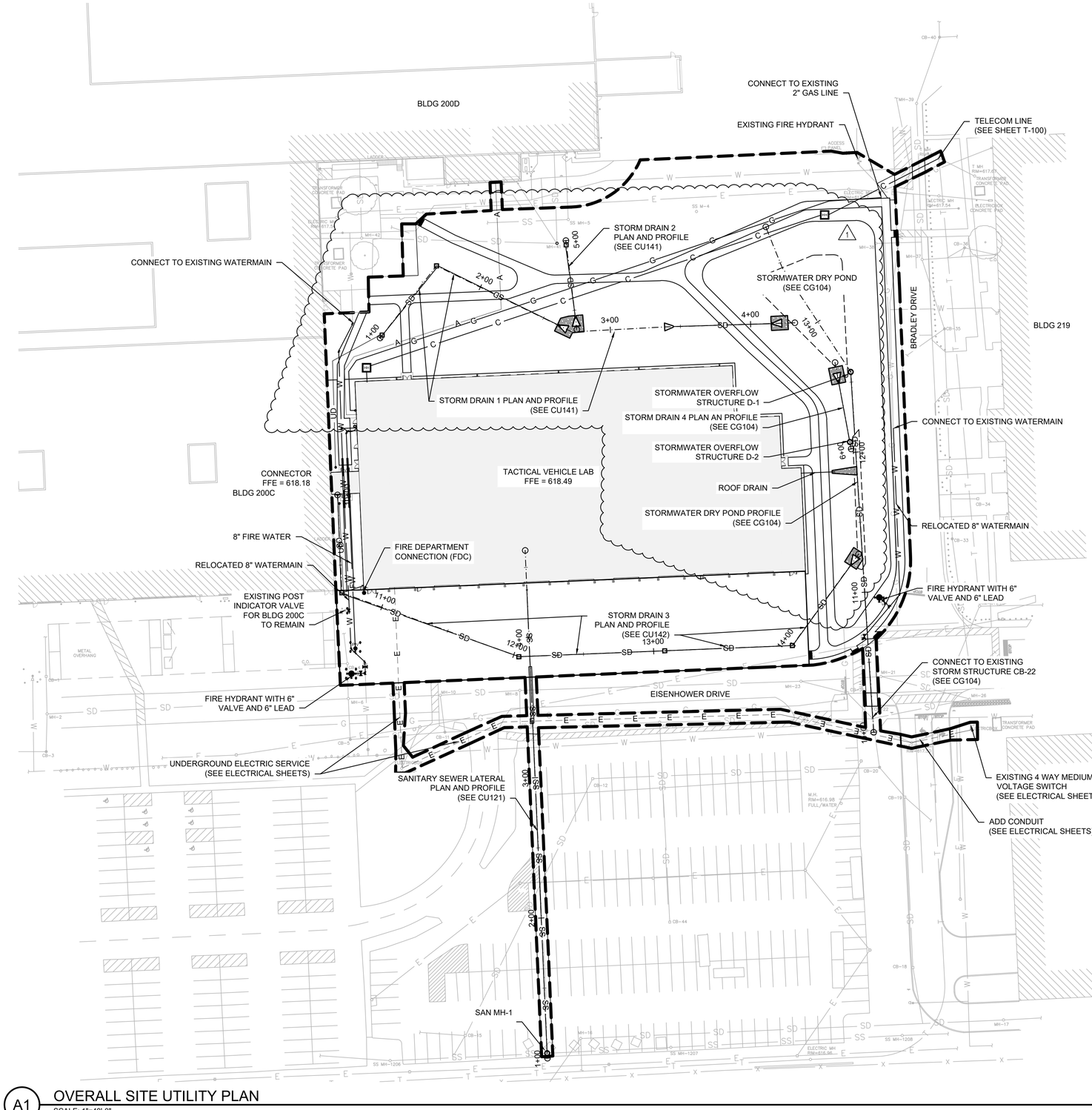
BENHAM — Mead & Hunt — JOINT VENTURE TEAM

DETROIT ARSENAL, MICHIGAN
IMANNED / UNMANNED TACTICAL VEHICLE LAB
FY 2025
P2# 506474
SITE PLAN

SHEET ID
CP102

Plot Date: 5/23/2025

CERTIFIED FINAL SUBMITTAL W912QR25R0052_Plans-0001



A1 OVERALL SITE UTILITY PLAN

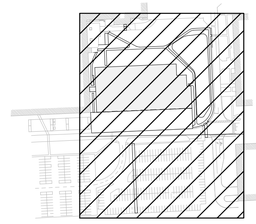
SCALE: 1"=40'-0"

GENERAL SHEET NOTES

1. CONTRACTOR SHALL EXPOSE ALL EXISTING UTILITIES BEFORE INSTALLING UTILITY CROSSINGS TO VERIFY THERE IS NO CONFLICT.
2. CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION OF UTILITY OWNERS PRIOR TO CROSSING VARIOUS UTILITIES.

SHEET LEGEND

- FIRE HYDRANT
- SANITARY SEWER MANHOLE
- STORM CATCH BASIN
- STORMWATER OVERFLOW STRUCTURE
- HANDHOLE
- WATER VALVE
- A — UNDERGROUND COMPRESSED AIR
- G — GAS
- E — E — ELECTRIC, UNDERGROUND
- SS — SANITARY SEWER
- SD — STORM DRAIN
- UD — DRAIN TILE
- C — COMMUNICATIONS LINE
- FW — FIRE WATER
- W — WATER



KEY PLAN

ANNE C. ANDERSON E-39767 WAUNAKEE WISCONSIN PROFESSIONAL ENGINEER

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE
1	REVISED IN ACCORDANCE WITH AMENDMENT 0001	05/29/2025

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CONTRACT NO.:

DESIGN BY: A. ANDERSON, A-CA
DRAWN BY: C. JONES
CHECKED BY: A. ANDERSON
SUBMITTED BY: M. BUTLER
SIZE: ANSI D
M&H PROJECT NO.: R324620-0222857.01

U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
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LOUISVILLE, KENTUCKY 40202

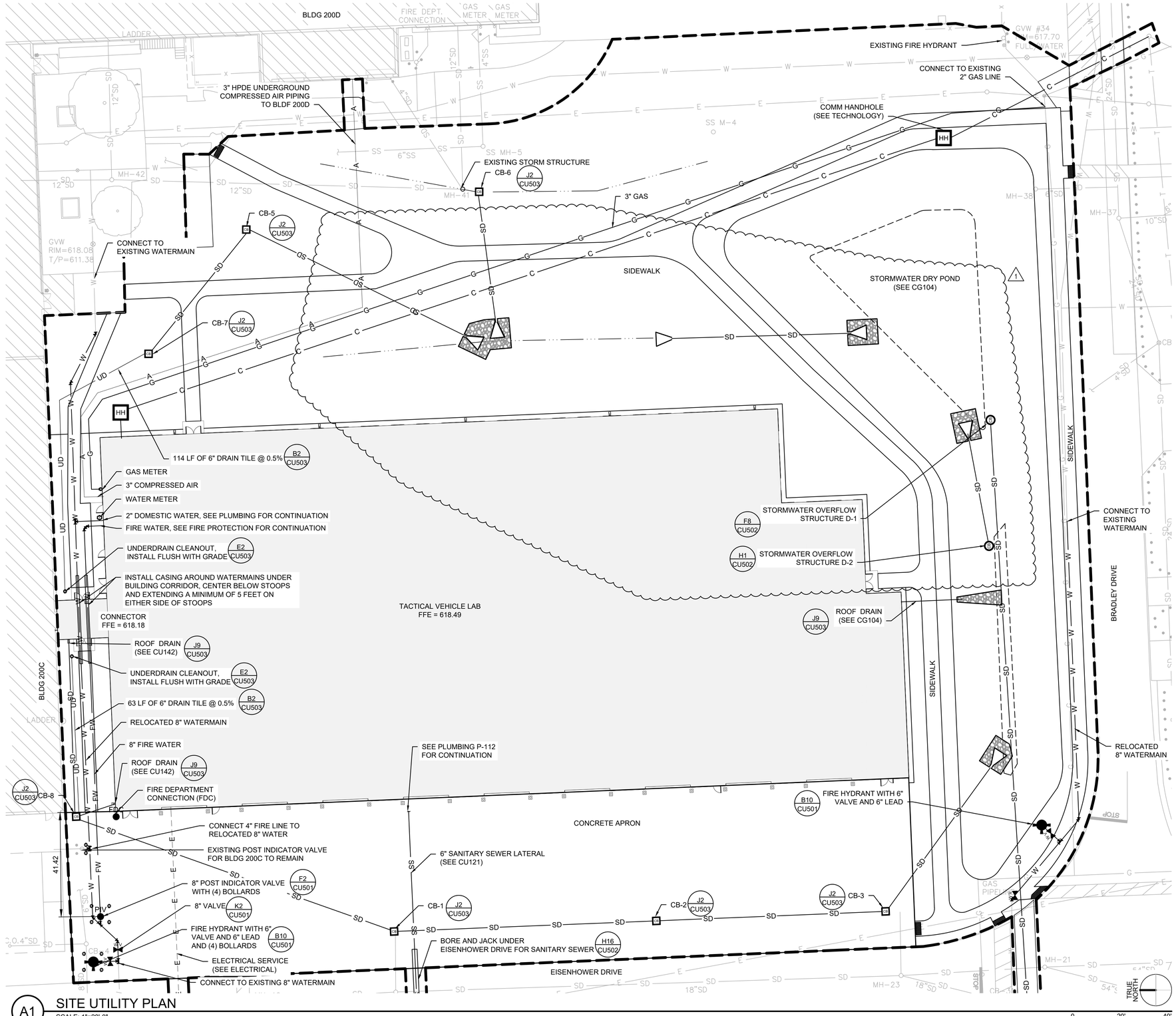
BENHAM — Mead & Hunt — JOINT VENTURE TEAM

DETROIT ARSENAL, MICHIGAN
MANNED / UNMANNED TACTICAL VEHICLE LAB
FY 2025
P2# 506474

OVERALL SITE UTILITY PLAN

SHEET ID
CU101

CERTIFIED FINAL SUBMITTAL W912QR25R0052_Plans-0001



A1 SITE UTILITY PLAN

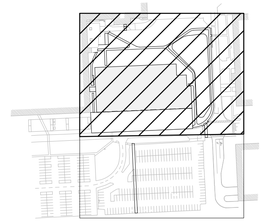
SCALE: 1"=20'-0"

GENERAL SHEET NOTES

1. CONTRACTOR SHALL EXPOSE ALL EXISTING UTILITIES BEFORE INSTALLING UTILITY CROSSINGS TO VERIFY THERE IS NO CONFLICT.
2. CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION OF UTILITY OWNERS PRIOR TO CROSSING VARIOUS UTILITIES.

SHEET LEGEND

- FIRE HYDRANT
- SANITARY SEWER MANHOLE
- STORM CATCH BASIN
- STORMWATER OVERFLOW STRUCTURE
- HANDHOLE
- WATER VALVE
- A — UNDERGROUND COMPRESSED AIR
- G — GAS
- E — E — ELECTRIC, UNDERGROUND
- SS — SANITARY SEWER
- SD — STORM DRAIN
- UD — DRAIN TILE
- C — COMMUNICATIONS LINE
- FW — FIRE WATER
- W — WATER



KEY PLAN

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE
1	REVISED IN ACCORDANCE WITH AMENDMENT 0001	05/29/2025

File Path: X:\324620\0222857.011TECH\CAD\506474_CU102.DWG

Plot Date: 5/23/2025

ISSUE DATE: SEPTEMBER 20, 2024
SOLICITATION NO.:
CONTRACT NO.:

DESIGN BY: A. ANDERSON, P.E.
DRAWN BY: C. JONES
CHECKED BY: AJS
SUBMITTED BY: M. BUTLER
SIZE: ANSI D
M&H PROJECT NO.: R324620-222857.01

U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR MARTIN LUTHER JR PL
LOUISVILLE, KENTUCKY 40202

BENHAM — Mead & Hunt — JOINT VENTURE TEAM

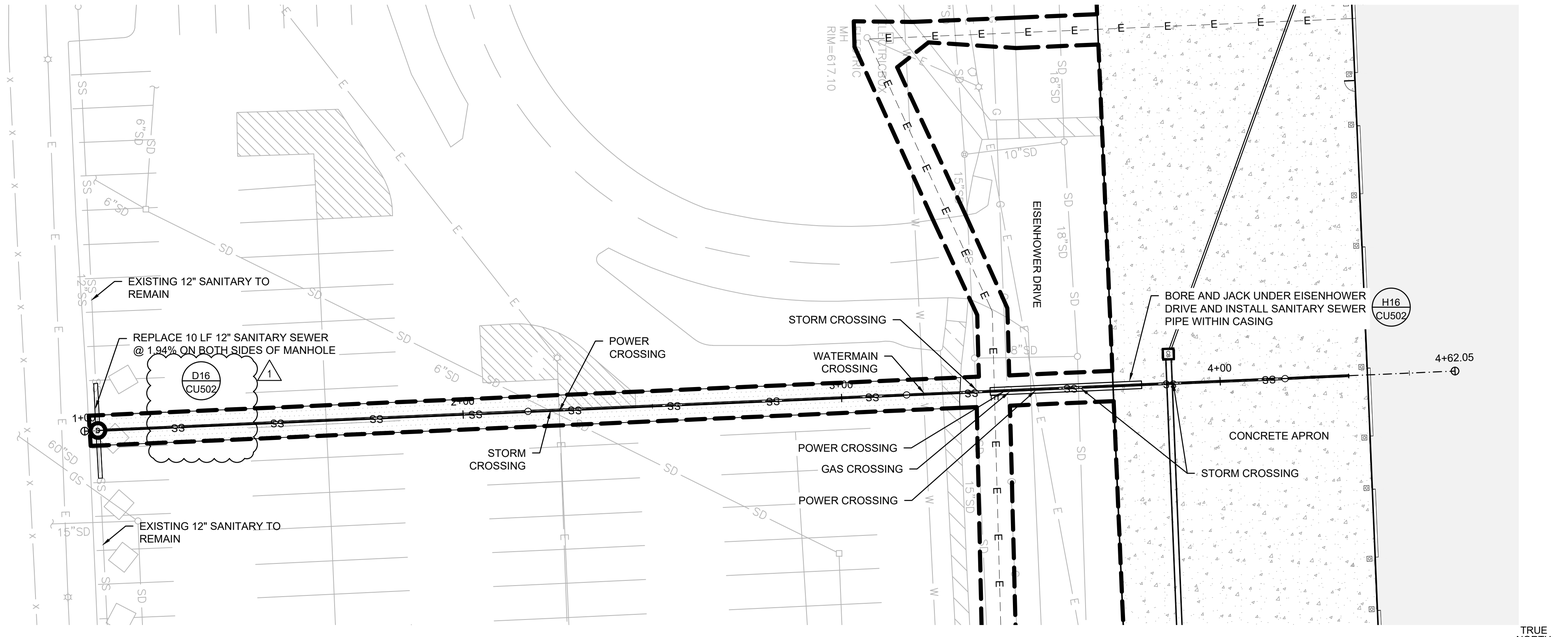
DETROIT ARSENAL, MICHIGAN
MANNED / UNMANNED TACTICAL VEHICLE LAB
FY 2025
P2# 506474

SITE UTILITY PLAN

SHEET ID
CU102

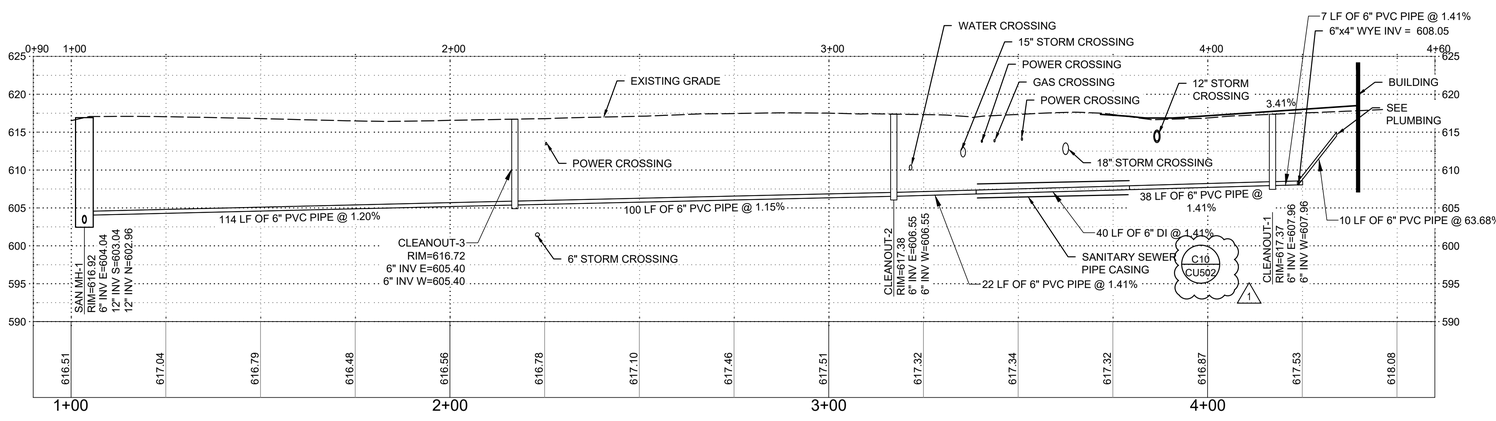
WISCONSIN — ANNE C. ANDERSON — E-39767 — WAUNAKEE — PROFESSIONAL ENGINEER

CERTIFIED FINAL SUBMITTAL W912QR25R0052_Plans-0001



H1 SANITARY SEWER PLAN

SCALE 1"=20'-0"



C1 SANITARY SEWR PROFILE

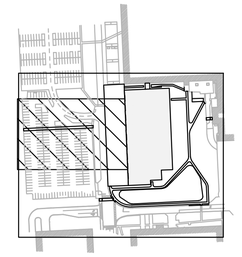
SCALE: H 1"=20'-0" V 1"=10'-0"

GENERAL SHEET NOTES

1. FOR OVERALL UTILITY LAYOUT, SEE CU101.

SHEET LEGEND

- SANITARY SEWER MANHOLE
- SANITARY CLEANOUT
- STORM CATCH BASIN
- ELECTRIC, UNDERGROUND
- SANITARY SEWER
- STORM DRAIN
- COMMUNICATIONS LINE
- WATER



KEY PLAN

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE
1	REVISED IN ACCORDANCE WITH AMENDMENT 0001	05/29/2025

File Path: X:\324620\0222857.011\TECH\CAD\506474_CU121.DWG

Plot Date: 5/23/2025

ISSUE DATE: SEPTEMBER 20, 2024
SOLICITATION NO.:
CONTRACT NO.:

DESIGN BY: A. ANDERSON
DRAWN BY: C. JONES
CHECKED BY: A. ANDERSON
SUBMITTED BY: M. BUTLER
SIZE: ANSI D
M&H PROJECT NO.: R324620-222857.01

U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR MARTIN LUTHER JR PL
LOUISVILLE, KENTUCKY 40202

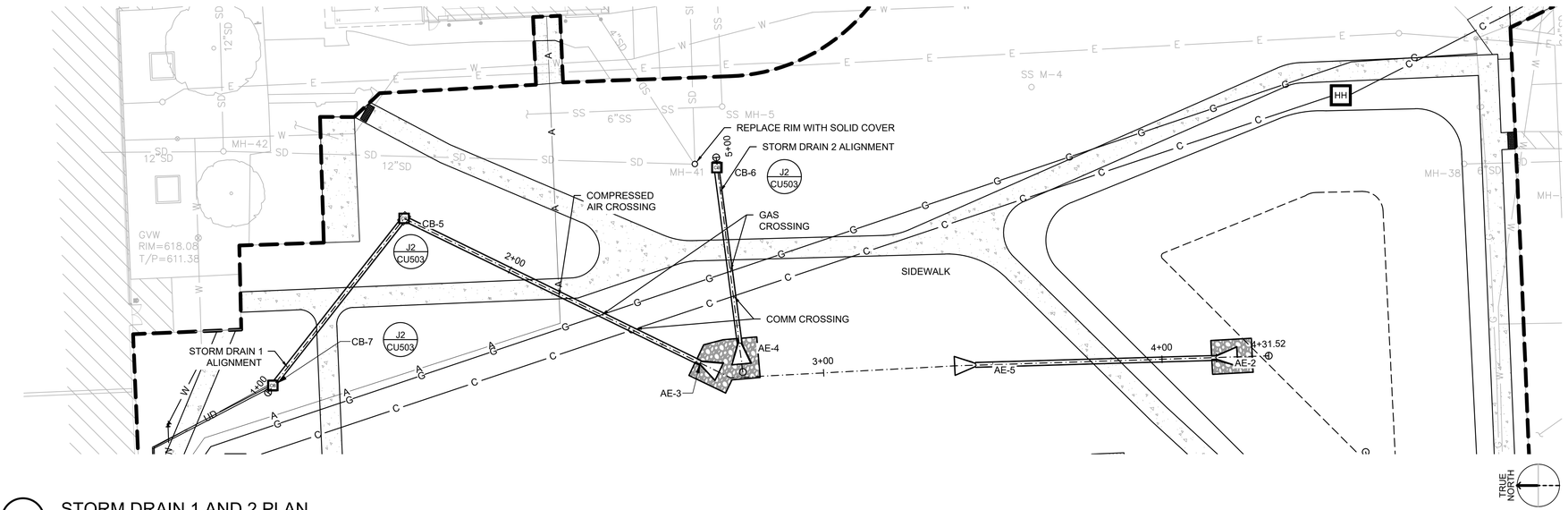
BENHAM Mead & Hunt JOINT VENTURE TEAM

DETROIT ARSENAL, MICHIGAN
MANNED / UNMANNED TACTICAL VEHICLE LAB
FY 2025
P2# 506474
SANITARY SEWER PLAN AND PROFILE

SHEET ID
CU121

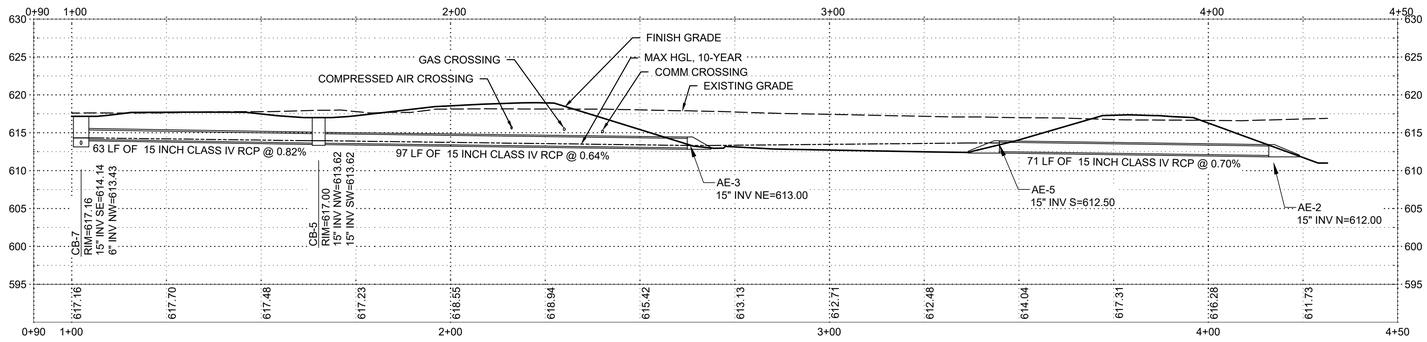
WISCONSIN ANNE C. ANDERSON E-39787 WAUNAKEE PROFESSIONAL ENGINEER

CERTIFIED FINAL SUBMITTAL W912QR25R0052_Plans-0001



J1 STORM DRAIN 1 AND 2 PLAN

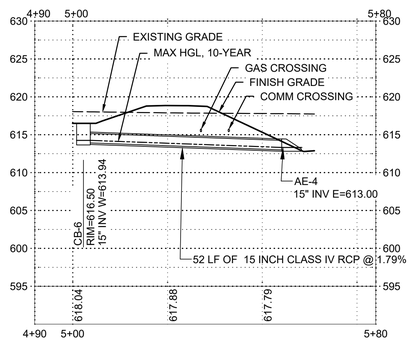
SCALE 1"=20'-0"



E1 STORM DRAIN 1 PROFILE

SCALE: H 1"=20'-0" V 1"=10'-0"

V 0 10' 20' H 0 20' 40'



A7 STORM DRAIN 2 PROFILE

SCALE: H 1"=20'-0" V 1"=10'-0"

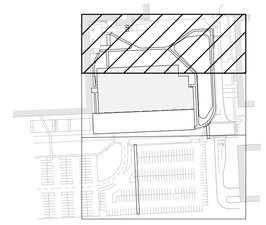
H 0 20' 40' V 0 10' 20'

GENERAL SHEET NOTES

1. FOR OVERALL UTILITY LAYOUT, SEE CU101.

SHEET LEGEND

- FIRE HYDRANT
- SANITARY SEWER MANHOLE
- STORM CATCH BASIN
- STORMWATER OVERFLOW STRUCTURE
- HANDHOLE
- WATER VALVE
- GAS
- ELECTRIC, UNDERGROUND
- SANITARY SEWER
- STORM DRAIN
- COMMUNICATIONS LINE
- WATER
- CONTRACTOR WORK LIMIT



KEY PLAN

ANNE C. ANDERSON E-39767 WAUNAKEE WISCONSIN PROFESSIONAL ENGINEER

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE
1	REVISED IN ACCORDANCE WITH AMENDMENT 0001	05/29/2025

File Path: X:\324620\0222857.011TECH\CAD\506474_CU141.DWG

Plot Date: 5/23/2025

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SOLICITATION NO.:
CONTRACT NO.:

DESIGN BY: A. ANDERSON, P.E.
DRAWN BY: C. JONES
CHECKED BY: AJS
SUBMITTED BY: M. BUTLER
SIZE: ANSI D
M&H PROJECT NO.: R324620.0222857.01

U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR MARTIN LUTHER JR PL
LOUISVILLE, KENTUCKY 40202

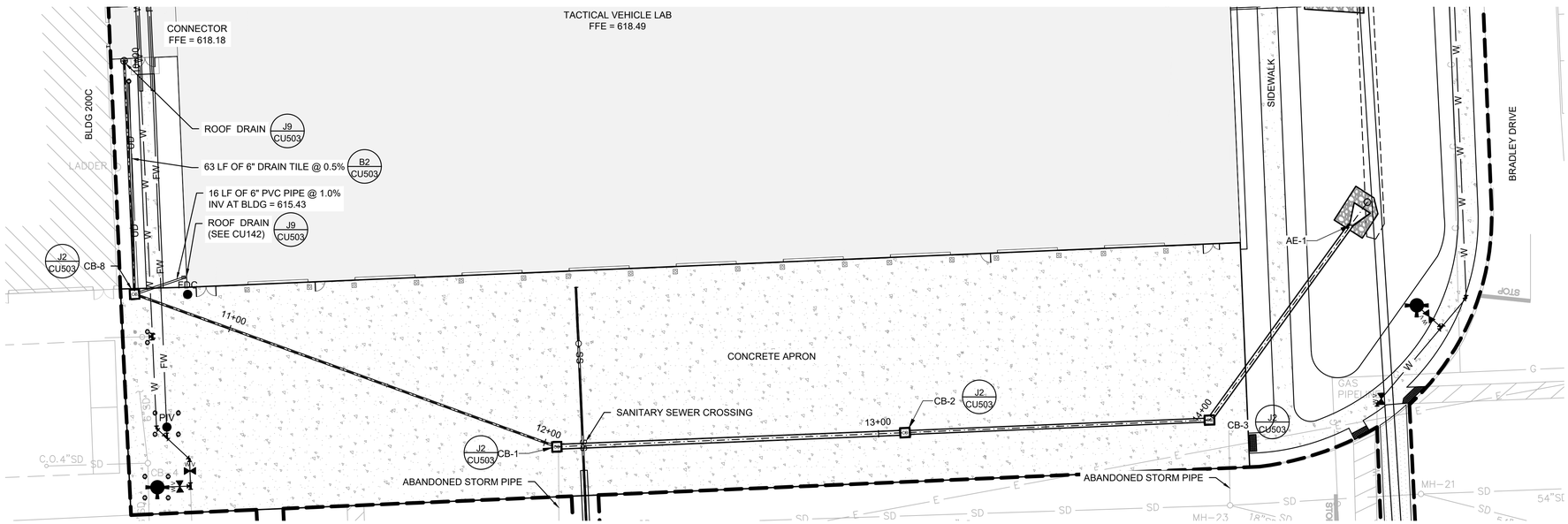
BENHAM Mead & Hunt JOINT VENTURE TEAM

DETROIT ARSENAL, MICHIGAN
MANNED / UNMANNED TACTICAL VEHICLE LAB
FY 2025
P2# 506474

STORM DRAIN PLAN AND PROFILE

SHEET ID
CU141

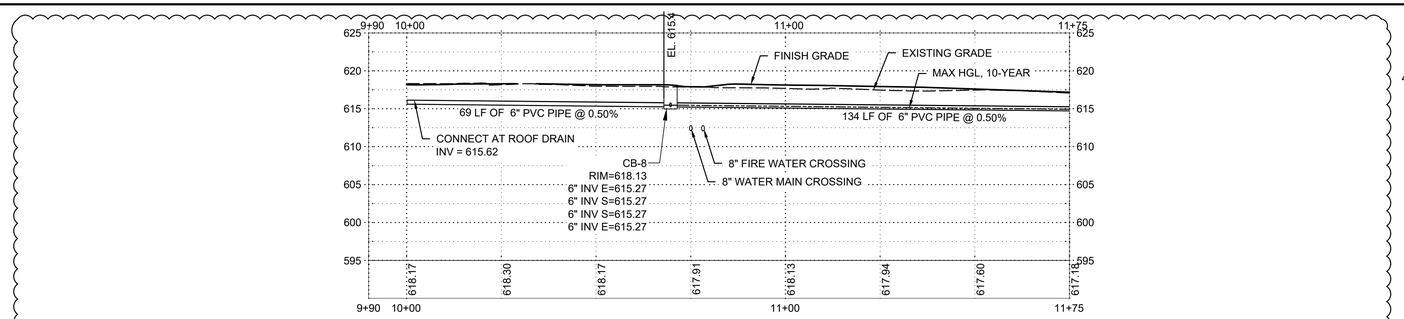
CERTIFIED FINAL SUBMITTAL W912QR25R0052_Plans-0001



H1 STORM DRAIN 3 PLAN

SCALE 1"=20'-0"

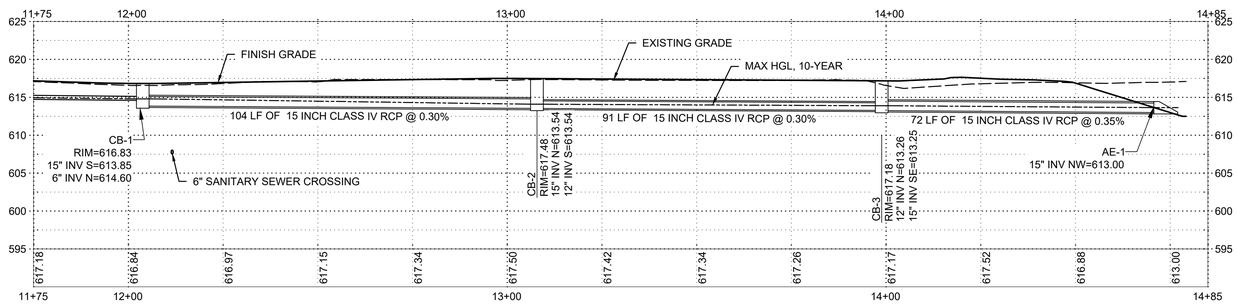
0 20' 40'



E5 STORM DRAIN 3 PROFILE

SCALE: H 1"=20'-0" V 1"=10'-0"

V 0 10' 20' H 0 20' 40'



A3 STORM DRAIN 3 PROFILE CONTINUED

SCALE: H 1"=20'-0" V 1"=10'-0"

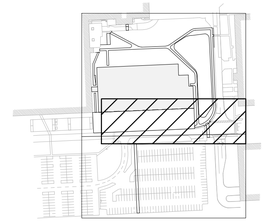
V 0 10' 20' H 0 20' 40'

GENERAL SHEET NOTES

1. FOR OVERALL UTILITY LAYOUT, SEE CU101.

SHEET LEGEND

- FIRE HYDRANT
- SANITARY SEWER MANHOLE
- STORM CATCH BASIN
- WATER VALVE
- G — GAS
- E — ELECTRIC, UNDERGROUND
- SS — SANITARY SEWER
- SD — STORM DRAIN
- C — COMMUNICATIONS LINE
- W — WATER
- CONTRACTOR WORK LIMIT



KEY PLAN

ANNE C. ANDERSON E-39767 WAUNAKEE WISCONSIN PROFESSIONAL ENGINEER

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE
1	REVISED IN ACCORDANCE WITH AMENDMENT 0001	05/29/2025

File Path: X:\324620\0222857.011TECH\CAD\506474_CU141.DWG

Plot Date: 5/23/2025

ISSUE DATE: SEPTEMBER 20, 2024
SOLICITATION NO.:
CONTRACT NO.:

DESIGN BY: A. ANDERSON A-CA
DRAWN BY: C. JONES
CHECKED BY: AJS
SUBMITTED BY: M. BUTLER
SIZE: ANSI D
M&H PROJECT NO.: R324620-222857.01

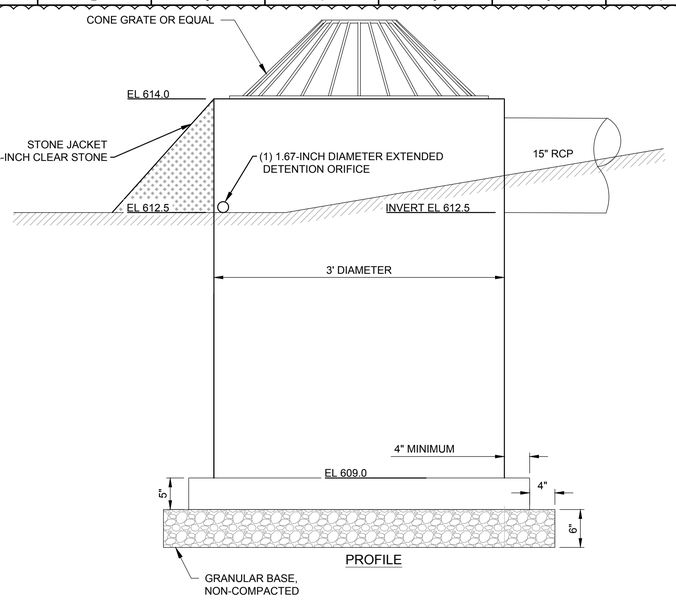
U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR MARTIN LUTHER JR PL
LOUISVILLE, KENTUCKY 40202

BENHAM Mead & Hunt JOINT VENTURE TEAM

DETROIT ARSENAL, MICHIGAN
MANNED / UNMANNED TACTICAL VEHICLE LAB
FY 2025
P2# 506474
STORM DRAIN PLAN AND PROFILE

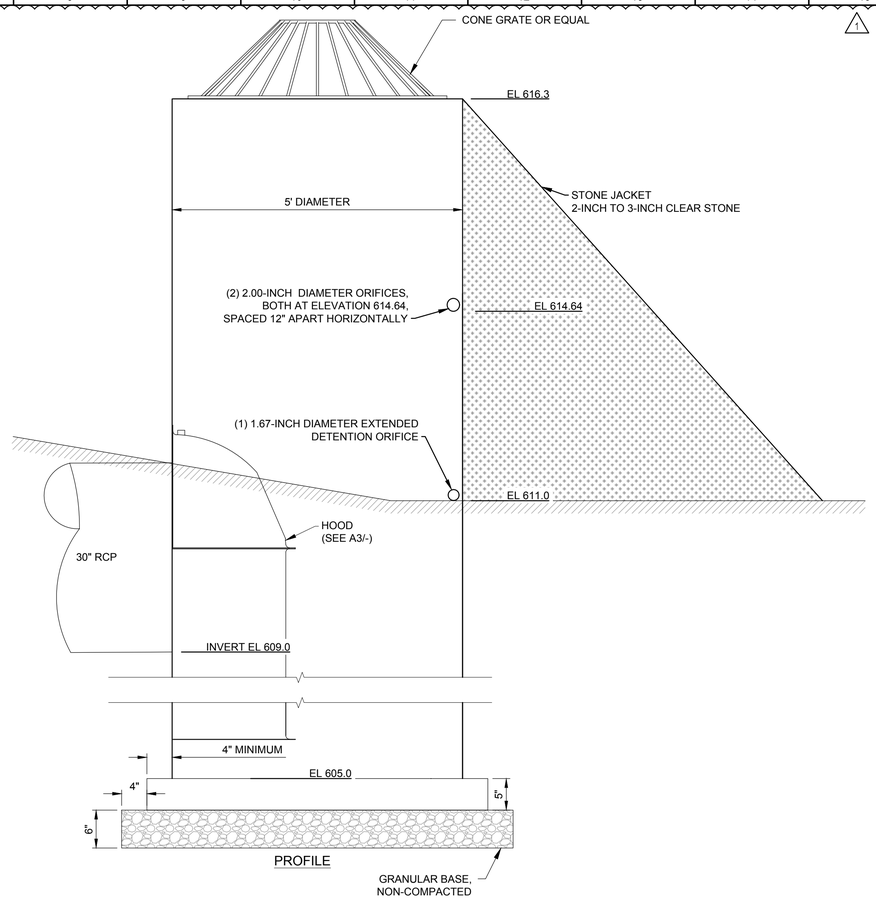
SHEET ID
CU142

CERTIFIED FINAL SUBMITTAL W912QR25R0052_Plans-0001



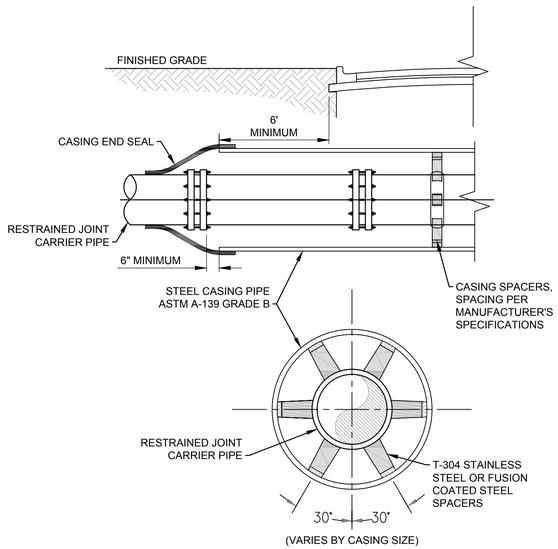
NOTES:
1. PRECAST INLET IN ACCORDANCE WITH ASTM C478.
2. BASE SHALL BE MONOLITHIC WITH THE RISER SECTION BOTTOM A MINIMUM OF 24 INCHES HIGH.
3. COVER SHALL BE RATED FOR HS-20 LOADING.

H1 STORMWATER OVERFLOW STRUCTURE (D-2) DETAIL
NOT TO SCALE



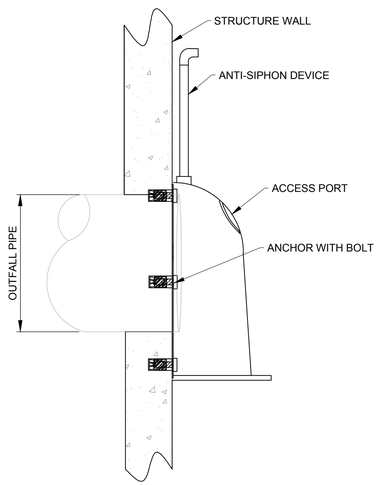
NOTES:
1. PRECAST INLET IN ACCORDANCE WITH ASTM C478.
2. BASE SHALL BE MONOLITHIC WITH THE RISER SECTION BOTTOM A MINIMUM OF 24 INCHES HIGH.
3. COVER SHALL BE RATED FOR HS-20 LOADING.

F8 STORMWATER OVERFLOW STRUCTURE (D-1) DETAIL
NOT TO SCALE

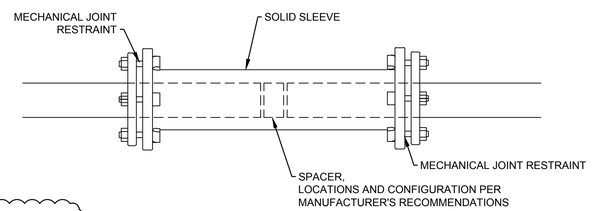


NOTES:
1. DISTANCE BETWEEN SPACERS TO BE PER MANUFACTURER'S SPECIFICATIONS.
2. NO FLOWABLE FILL BETWEEN THE ANULAR SPACE OF THE CASING OR CARRIER PIPE.

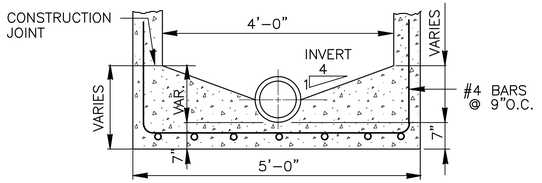
H16 BORE AND JACK DETAIL
NOT TO SCALE



A3 HOOD DETAIL
NOT TO SCALE



C10 SOLID CASING SLEEVE DETAIL
NOT TO SCALE



D16 SANITARY MANHOLE SECTION THRU BASE DETAIL
NOT TO SCALE

US Army Corps of Engineers®

U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR MARTIN LUTHER JR PL
LOUISVILLE, KENTUCKY 40202

BENHAM | Mead & Hunt | JOINT VENTURE TEAM

MARK	DESCRIPTION	DATE
1	REVISED IN ACCORDANCE WITH AMENDMENT 0001	05/29/2025

File Path: X:\324620\0222857.01\TECH\CAD\506474_CU501.DWG

ISSUE DATE:	SEPTEMBER 20, 2024
SOLICITATION NO.:	
CONTRACT NO.:	
DESIGN BY:	A.C.A.
A. ANDERSON	
DRAWN BY:	
C. JONES	
CHECKED BY:	
A. ANDERSON	
SUBMITTED BY:	
M. BUTLER	
SIZE:	
ANSI D	
M&H PROJECT NO.:	
R324620.0222857.01	

DETROIT ARSENAL, MICHIGAN
MANNED / UNMANNED TACTICAL VEHICLE LAB
FY 2025
P2# 506474

SITE UTILITY DETAILS

SHEET ID
CU502

ANNE C. ANDERSON
E-39767
WAUNAKEE
WI
5-21-2025
WISCONSIN PROFESSIONAL ENGINEER

Plot Date: 5/30/2025

CERTIFIED FINAL SUBMITTAL W912QR25R0052_Plans-0001

SHEET LIST - VOLUME 2

SHEET NUMBER	SHEET NAME	REV	DATE
GENERAL			
G-001.2	COVER SHEET - VOLUME 2		
G-002.2	SHEET INDEX - VOLUME 2	1	05/29/2025
STRUCTURAL			
S-001	STRUCTURAL NOTES		
S-002	STRUCTURAL NOTES		
S-010	ROOF LOADING PLAN		
S-011	COMPONENTS AND CLADDING LOADING		
S-101	FOUNDATION PLAN - COMPOSITE		
S-102	FOUNDATION PLAN - AREA 1		
S-103	FOUNDATION PLAN - AREA 2		
S-104	FOUNDATION PLAN - AREA 3		
S-111	FLATWORK PLAN - COMPOSITE		
S-112	FLATWORK PLAN - AREA 1		
S-113	FLATWORK PLAN - AREA 2		
S-114	FLATWORK PLAN - AREA 3		
S-131	STRUCTURAL FLOOR PLAN - COMPOSITE		
S-132	STRUCTURAL FLOOR PLAN - AREA 1		
S-133	STRUCTURAL FLOOR PLAN - AREA 2		
S-134	STRUCTURAL FLOOR PLAN - AREA 3		
S-141	FRAMING PLAN - COMPOSITE		
S-142	FRAMING PLAN - AREA 1		
S-143	FRAMING PLAN - AREA 2		
S-144	FRAMING PLAN - AREA 3		
S-151	LOW ROOF FRAMING PLAN - COMPOSITE		
S-152	LOW ROOF FRAMING PLAN - AREA 1		
S-153	LOW ROOF FRAMING PLAN - AREA 2		
S-154	LOW ROOF FRAMING PLAN - AREA 3		
S-155	HIGH ROOF FRAMING PLAN - COMPOSITE		
S-156	HIGH ROOF FRAMING PLAN - AREA 1		
S-157	HIGH ROOF FRAMING PLAN - AREA 2		
S-158	HIGH ROOF FRAMING PLAN - AREA 3		
S-241	FRAMING ELEVATIONS		
S-242	FRAMING ELEVATIONS		
S-243	FRAMING ELEVATIONS		
S-244	FRAMING ELEVATIONS		
S-245	FRAMING ELEVATIONS		
S-246	FRAMING ELEVATIONS		
S-247	FRAMING ELEVATIONS		
S-251	GIRT FRAMING ELEVATIONS		
S-254	GIRT FRAMING ELEVATIONS		
S-255	GIRT FRAMING ELEVATIONS		
S-256	GIRT FRAMING ELEVATIONS		
S-257	GIRT FRAMING ELEVATIONS		
S-301	SECTIONS		
S-501	FOUNDATION DETAILS		
S-505	EFFECTIVE PIER PLANS		
S-511	FLATWORK DETAILS		
S-512	FLATWORK DETAILS		
S-521	WALL DETAILS		
S-541	FRAMING DETAILS		
S-542	FRAMING DETAILS		
S-543	BRACE FRAMING DETAILS		
S-544	BRACE FRAMING DETAILS		
S-545	BRACE FRAMING DETAILS		
S-546	GIRT FRAMING DETAILS		
S-547	GIRT FRAMING DETAILS		
S-551	JOIST AND DECK DETAILS		
S-552	JOIST AND DECK DETAILS		
S-601	SCHEDULES		
S-602	BASE PLATES		
S-901	REFERENCE ISOMETRICS		

SHEET LIST - VOLUME 2

SHEET NUMBER	SHEET NAME	REV	DATE
ARCHITECTURAL			
A-002	PROJECT NOTES		
A-003	LEGENDS		
A-004	LEGENDS		
A-005	LEGENDS		
A-006	MOUNTING HEIGHTS		
A-011	ACCESSIBILITY		
A-012	ACCESSIBILITY		
A-013	ACCESSIBILITY PLAN		
A-021	AIR BARRIER PLAN		
A-022	AIR BARRIER SECTIONS		
A-023	AIR BARRIER SECTIONS		
A-024	AIR BARRIER SECTIONS		
A-031	UL ASSEMBLIES PLAN		
A-041	STC RATINGS PLAN		
A-051	PLUMBING FIXTURE COUNT PLAN		
A-061	ROOF DRAINAGE PLAN		
A-071	AREA TABULATIONS PLAN		
A-101	COMPOSITE PLAN		
A-102	AREA 1 PLAN		
A-103	AREA 2 PLAN		
A-104	AREA 3 PLAN		
A-105	ROOF PLAN		
A-106	COMPOSITE RCP		
A-107	AREA 1 RCP		
A-108	AREA 2 RCP		
A-109	AREA 3 RCP		
A-201	BUILDING ELEVATIONS		
A-301	BUILDING SECTIONS		
A-302	BUILDING SECTIONS		
A-303	BUILDING SECTIONS		
A-304	BUILDING SECTIONS		
A-305	BUILDING SECTIONS		
A-310	WALL SECTIONS		
A-311	WALL SECTIONS		
A-312	WALL SECTIONS		
A-313	WALL SECTIONS		
A-314	WALL SECTIONS		
A-401	ENLARGED PLANS AND ELEVATIONS		
A-402	ENLARGED PLANS AND ELEVATIONS		
A-403	ENLARGED PLANS AND ELEVATIONS		
A-501	DETAILS		
A-502	DETAILS		
A-503	DETAILS		
A-504	DETAILS		
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A-506	DETAILS		
A-507	DETAILS		
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A-510	DETAILS		
A-511	DETAILS		
A-512	DETAILS		
A-513	DETAILS		
A-514	DETAILS		
A-601	PARTITION TYPES	1	05/29/2025
A-602	PARTITION TYPES	1	05/29/2025
A-603	DOOR SCHEDULE		
A-604	WINDOW AND LOUVER SCHEDULE		
A-901	ISOMETRIC VIEWS		
INTERIORS			
I-001	MOUNTING HEIGHTS		
IN101	FINISH PLAN - COMPOSITE		
IN102	FINISH PLAN - AREA 1		
IN103	FINISH PLAN - AREA 2		
IN104	FINISH PLAN - AREA 3		
IF101	FF&E PLAN - COMPOSITE		
IF102	FF&E PLAN - AREA 1		
IF103	FF&E PLAN - AREA 2		
IF104	FF&E PLAN - AREA 3		
IF105	FURNITURE TYPICALS		
IF106	FURNITURE TYPICALS		
IS101	SIGNAGE PLAN - COMPOSITE		
IS102	SIGNAGE PLAN - AREA 1		
IS103	SIGNAGE PLAN - AREA 2		
IS104	SIGNAGE PLAN - AREA 3		
I-401	ENLARGED PLANS AND ELEVATIONS		
I-402	ENLARGED PLANS AND ELEVATIONS		
I-501	FINISH DETAILS		
I-502	MILLWORK DETAILS		
I-531	SIGNAGE DETAILS		
I-601	FINISH SCHEDULES	1	05/29/2025
I-602	SIGNAGE SCHEDULE		

SHEET LIST - VOLUME 2

SHEET NUMBER	SHEET NAME	REV	DATE
FIRE PROTECTION			
FA-001	FIRE ALARM LEGEND AND NOTES		
FA-101	FIRE ALARM PLAN - AREA 1		
FA-102	FIRE ALARM PLAN - AREA 2		
FA-103	FIRE ALARM PLAN - AREA 3		
FA-600	FIRE ALARM AND MNS INPUT/OUTPUT MATRIX		
FA-601	FIRE ALARM AND MNS RISER DIAGRAM		
FA-602	FIRE ALARM & MASS NOTIFICATION - AUDIBLE AND VISUAL MESSAGES		
FX-001	FIRE SUPPRESSION SYSTEMS LEGEND AND NOTES		
FX-101	FIRE SUPPRESSION PLAN		
FX-400	ENLARGED FIRE PUMP ROOM PLAN		
FX-401	FIRE PUMP DIAGRAM, SCHEDULE, AND DETAIL		
PLUMBING			
P-001	LEGEND AND ABBREVATIONS		
P-110	SANITARY & VENT - OVERALL		
P-111	SANITARY & VENT - AREA 1		
P-112	SANITARY & VENT - AREA 2		
P-113	SANITARY & VENT - AREA 3		
P-120	DOMESTIC WATER - OVERALL		
P-121	DOMESTIC WATER - AREA 1		
P-122	DOMESTIC WATER - AREA 2		
P-123	DOMESTIC WATER - AREA 3		
P-130	NAT. GAS, COMP. AIR, AND ROOF DRAINAGE-OVERALL		
P-401	ENLARGED SANITARY AND VENT PLANS		
P-402	ENLARGED DOMESTIC WATER AND GAS PLANS		
P-501	PLUMBING DETAILS		
P-502	PLUMBING DETAILS		
P-601	PLUMBING SCHEDULES		
P-901	WASTE RISER DIAGRAM - SANITARY AND VENT		
P-902	WASTE RISER DIAGRAM - STORM AND CONDENSATE		
P-903	DOMESTIC WATER RISER DIAGRAM		
P-904	COMPRESSED AIR AND NATURAL GAS RISER DIAGRAM		
MECHANICAL			
M-001	LEGEND AND ABBREVIATIONS		
M-110	OVERALL HVAC PLAN - SUPPLY AND RETURN		
M-111	HVAC PLAN - AREA 1 - SUPPLY AND RETURN		
M-112	HVAC PLAN - AREA 2 - SUPPLY AND RETURN		
M-113	HVAC PLAN - AREA 3 - SUPPLY AND RETURN		
M-120	OVERALL HVAC PLAN - OUTSIDE AIR AND EXHAUST		
M-121	HVAC PLAN - AREA 1 OUTSIDE AIR AND EXHAUST		
M-122	HVAC PLAN - AREA 2 OUTSIDE AIR AND EXHAUST		
M-123	HVAC PLAN - AREA 3 OUTSIDE AIR AND EXHAUST		
M-130	OVERALL HVAC ROOF PLAN		
M-401	ENLARGED HVAC PLAN - AREA 2		
M-501	MECHANICAL DETAILS		
M-601	MECHANICAL SCHEDULES		
M-602	MECHANICAL SCHEDULES		
M-701	MECHANICAL CONTROLS GENERAL NOTES		
M-702	POINT SCHEDULE NOTES INSTRUCTIONS		
M-703	DDC SYSTEM ARCHITECTURE		
M-704	DDC CONTROLS - DX DOAS DIAGRAM AND SEQUENCE		
M-705	DDC CONTROLS - DOAS POINTS LIST		
M-706	DDC CONTROLS - MULTIZONE VAV RTU-01		
M-707	DDC CONTROLS - VAV TERMINAL UNIT		
M-708	DDC CONTROLS - SINGLE ZONE RTU-02 AND RTU-03		
M-709	DDC CONTROLS - SPLIT SYSTEM CRAC UNITS AND MINI SPLIT		
M-710	DDC CONTROLS - UNIT HEATER AND VENTILATION		
M-711	DDC CONTROLS - ESB, AND METER CONTROLS		
M-712	DDC CONTROLS - DOMESTIC HOT WATER		

SHEET LIST - VOLUME 2

SHEET NUMBER	SHEET NAME	REV	DATE
ELECTRICAL			
E-001	LEGEND		
ED101	ELECTRICAL DEMO SITE PLAN		
ES101	ELECTRICAL SITE PLAN	1	05/29/2025
EG101	GROUNDING PLAN		
EG102	LIGHTNING PROTECTION PLAN		
EG501	GROUNDING DETAILS		
EG502	LIGHTNING PROTECTION DETAILS		
EG503	LIGHTNING PROTECTION ROOF DETAILS		
EP101	POWER PLAN - AREA 1	1	05/29/2025
EP102	POWER PLAN - AREA 2	1	05/29/2025
EP103	POWER PLAN - AREA 3	1	05/29/2025
EP104	ROOF POWER PLAN		
EP401	ENLARGED POWER PLANS		
EP500	POWER DETAILS		
EP501	POWER DETAILS		
EP600	MECHANICAL EQUIPMENT SCHEDULE		
EL001	LIGHTING LEGEND AND SCHEDULES		
EL101	LIGHTING PLAN - AREA 1	1	05/29/2025
EL102	LIGHTING PLAN - AREA 2	1	05/29/2025
EL103	LIGHTING PLAN - AREA 3	1	05/29/2025
EL501	LIGHTING DETAILS		
EL502	LIGHTING DETAILS		
EL601	LIGHTING CONTROL DIAGRAMS		
E-600	ELECTRICAL SCHEDULES		
E-601	ELECTRICAL ONE-LINE DIAGRAM		
E-610	ELECTRICAL SCHEDULE 01		
E-611	ELECTRICAL SCHEDULE 02		
E-612	ELECTRICAL SCHEDULE 03		
E-613	ELECTRICAL SCHEDULE 04		
E-614	ELECTRICAL SCHEDULE 05		
E-615	ELECTRICAL SCHEDULE 06		
TELECOMMUNICATIONS			
T-000	GENERAL NOTES, SYMBOLS & ABBREVIATIONS		
T-100	TELECOM SITE PLAN		
T-101	OVERALL TELECOM PLAN		
T-101.1	OVERALL TELECOM PLAN - CABLING ZONES		
T-101.2	OVERALL TELECOM PLAN - CABLE TRAY		
T-102	TELECOM PLAN - AREA 1		
T-103	TELECOM PLAN - AREA 2		
T-104	TELECOM PLAN - AREA 3		
T-400	COMM ROOM 106 ENLARGED PLANS		
T-401	COMM ROOM 140 ENLARGED PLANS		
T-402	SERVER ROOM 146 ENLARGED PLANS		
T-402.1	SERVER ROOM 146 RACK ELEVATIONS		
T-500	TELECOM DETAILS		
T-501	TELECOM DETAILS		
T-600	TELECOM BACKBONE PATHWAY / CABLE DIAGRAM		
TA000	AV LEGEND, GENERAL NOTES AND ABBREVIATIONS		
TA101	OVERALL AV PLAN		
TA102.1	AV PLAN - AREA 1		
TA102.2	AV ELEC. ROUGH-IN PLAN - AREA 1		
TA103.1	AV PLAN - AREA 2		
TA103.2	AV ELEC. ROUGH-IN PLAN - AREA 2		
TA104.1	AV PLAN - AREA 3		
TA104.2	AV ELEC. ROUGH-IN PLAN - AREA 3		
TA105	AV RCP - AREA 1		
TA106	AV RCP - AREA 2		
TA107	AV RCP - AREA 3		
TA400	AV ENLARGED CONF. ROOM 143		
TA401	AV ENLARGED CONF. ROOM 144		
TA402	ENLARGED OFFICE, BREAKROOM PLANS		
TA501	AV DEVICE DETAILS		
TA502	BREAK ROOM DISPLAY		
TA503	TYPICAL OFFICE DISPLAY		
TA504	TYPICAL CONFERENCE ROOM DISPLAY		
TA801	AV CONDUIT SCHEDULE - OFFICES		
TY000	GENERAL NOTES, SYMBOLS & ABBREVIATIONS		
TY100	SECURITY PLAN		
TY101	SECURITY PLAN - AREA 1		
TY102	SECURITY PLAN - AREA 2		
TY103	SECURITY PLAN - AREA 3		
TY501	ACCESS CONTROL DOOR ELEVATIONS		
TY502	ACCESS CONTROL DOOR ELEVATIONS		
TY503	ACCESS CONTROL DOOR ELEVATIONS		

US Army Corps of Engineers ®

MARK	DATE	APPR
1	05/29/2025	

1 REVISED IN ACCORDANCE WITH AMENDMENT 0001

Plot Date: 5/29/2025 1:50:17 PM

File Path: Autodesk Docs://15500044 USACE Detroit Arsenal MUMT JV_R2022/15500044_ARCH_R22.rvt

DESIGN BY: DR
D. RIDENOUR
DRAWN BY:
R. DICKMAN
CHECKED BY:
L. WHITNEY

ISSUE DATE: SEPTEMBER 20, 2024
SOLICITATION NO.:
CONTRACT NO.:

SUBMITTED BY:
M. BUTTLER
SIZE: ANSI D

U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR MARTIN LUTHER JR PL
LOUISVILLE, KENTUCKY

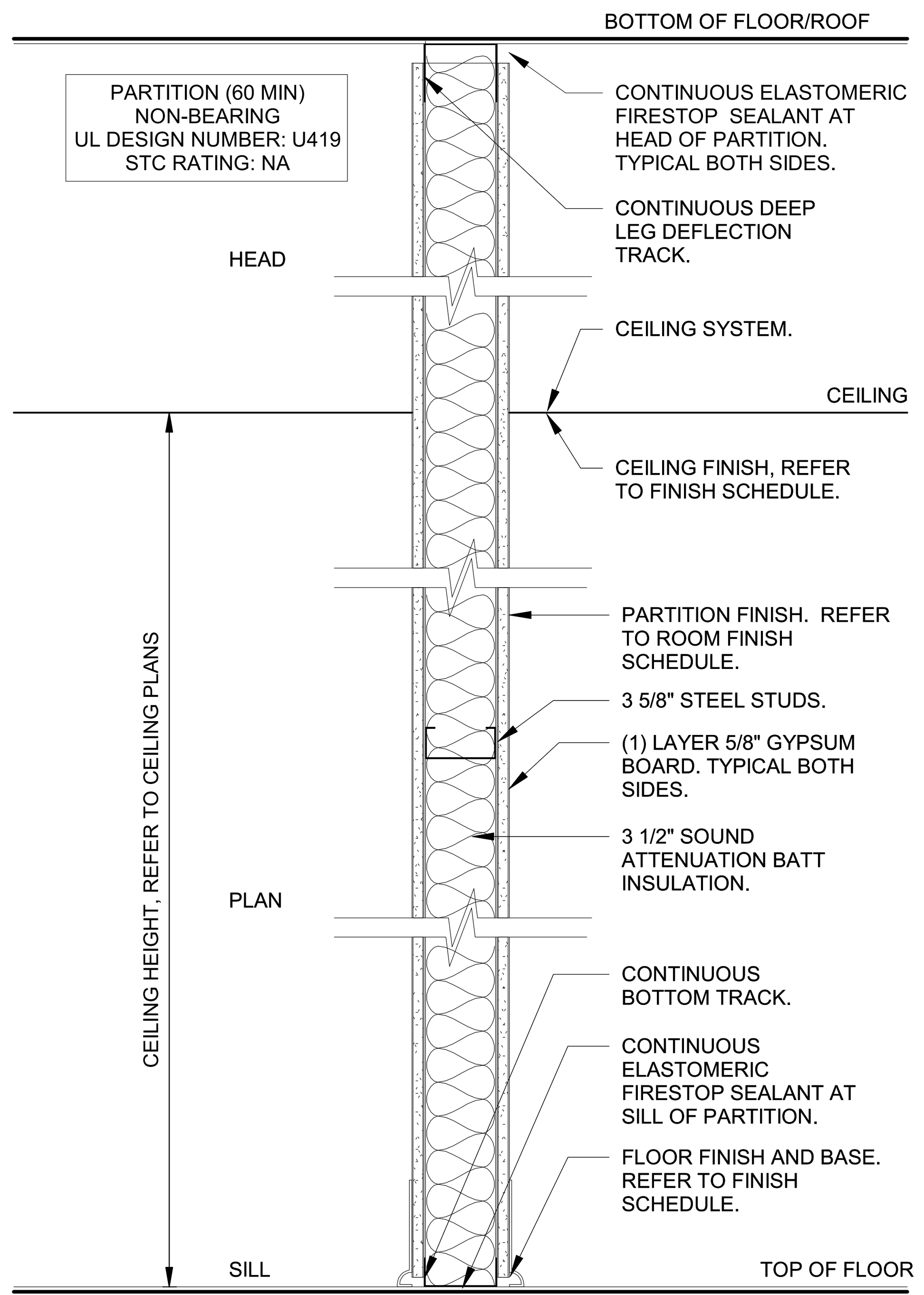
BENHAM | Mead & Hunt
JOINT VENTURE TEAM

DETROIT ARSENAL, MI
MANNED / UNMANNED TACTICAL VEHICLE LAB
FY 2025
P2#: 506474
00 - GENERAL
SHEET INDEX - VOLUME 2

SHEET ID
G-002.2

STATE OF MICHIGAN
LAURIE L. WHITNEY
ARCHITECT
No. 1301069394
LICENSED ARCHITECT
1.20.21

CERTIFIED FINAL SUBMITTAL W912QR25R0052_Plans-0001



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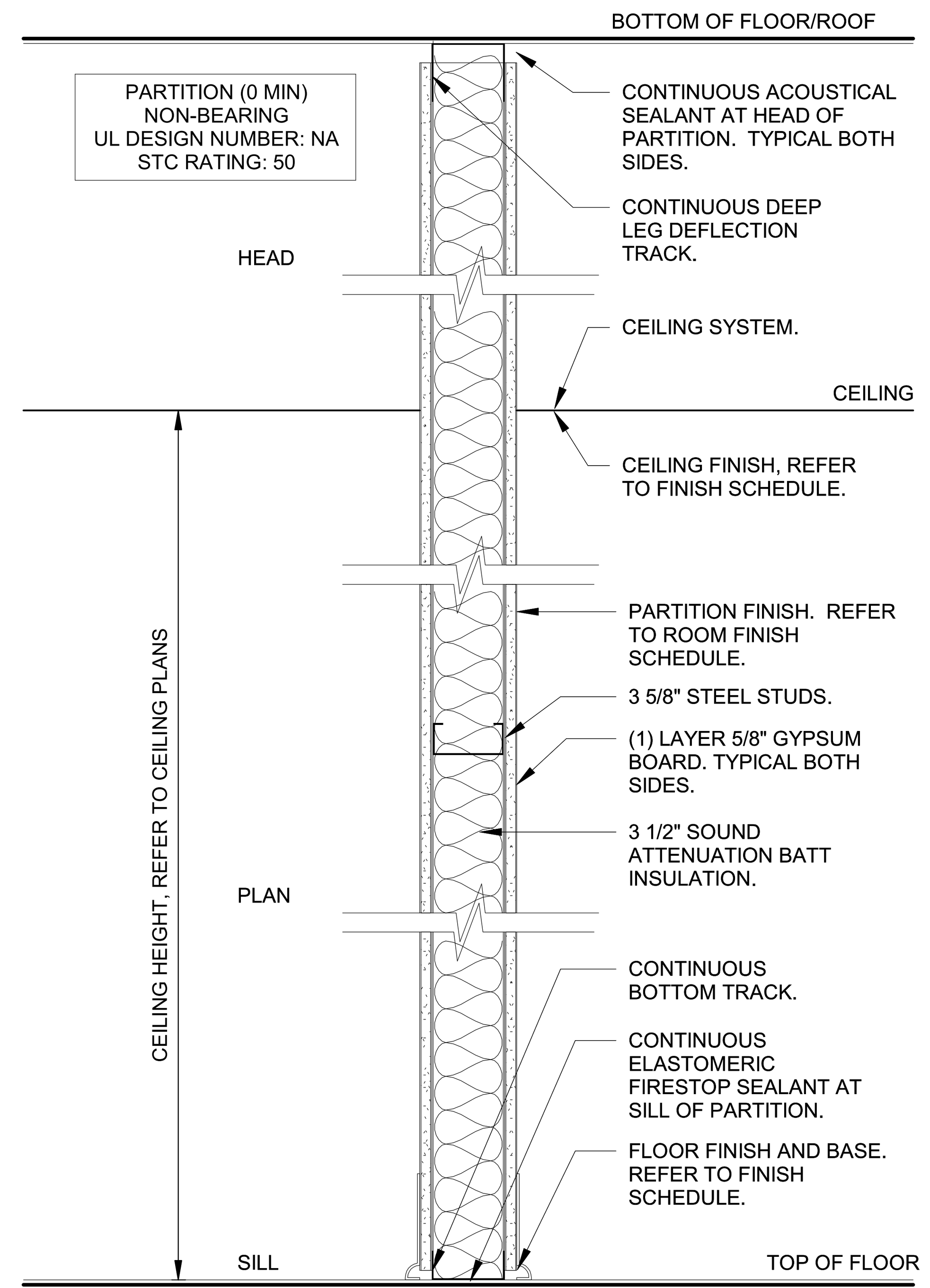

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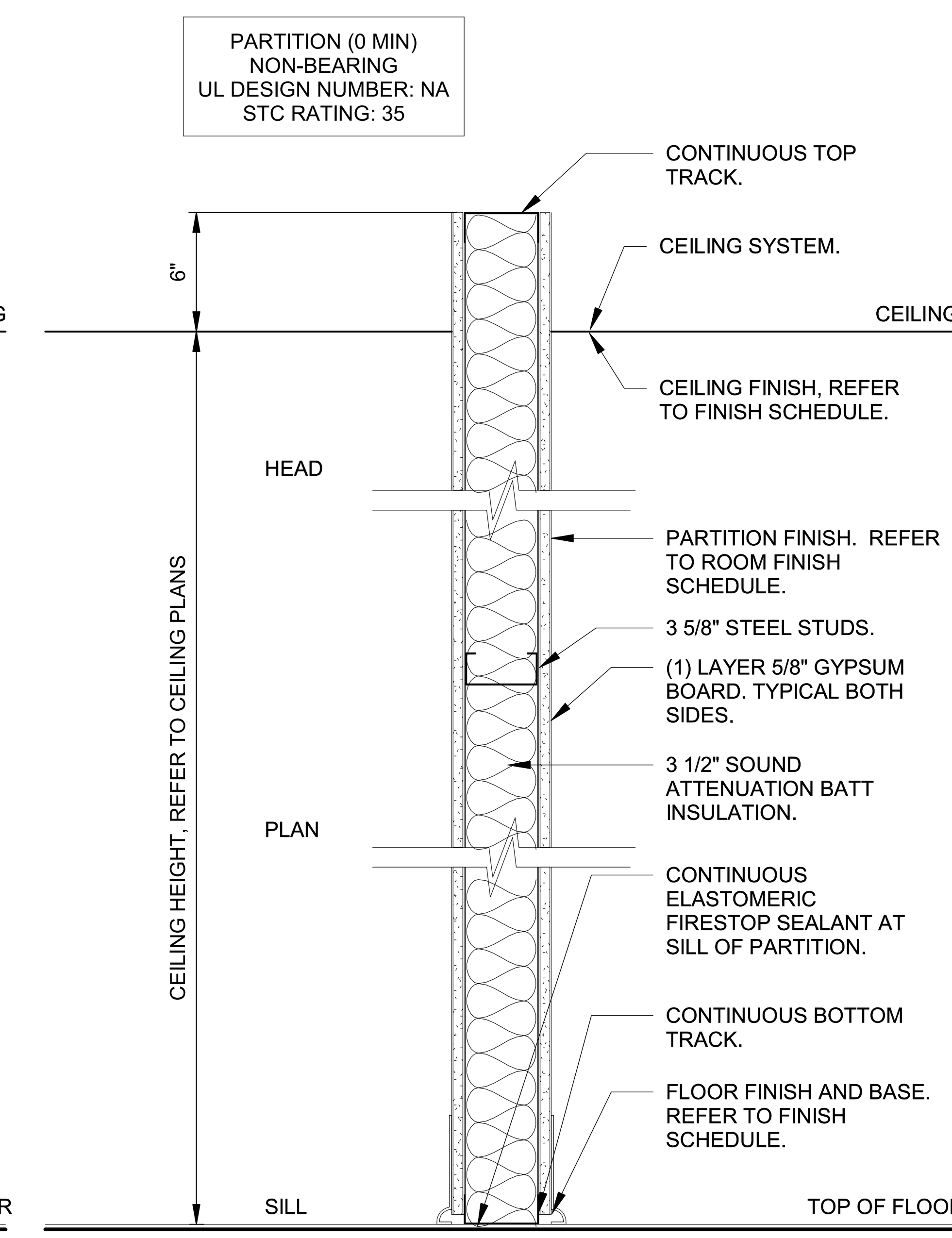

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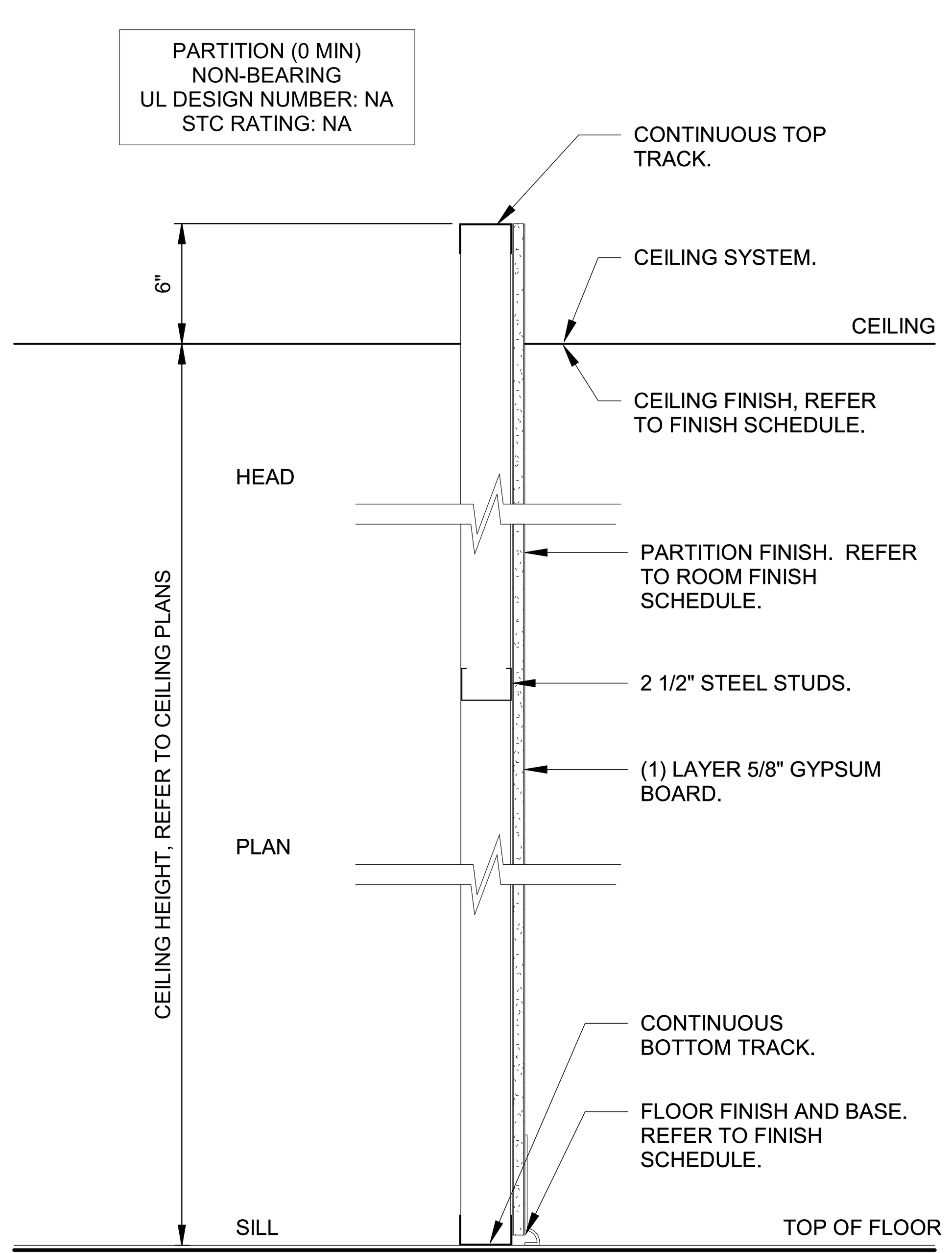

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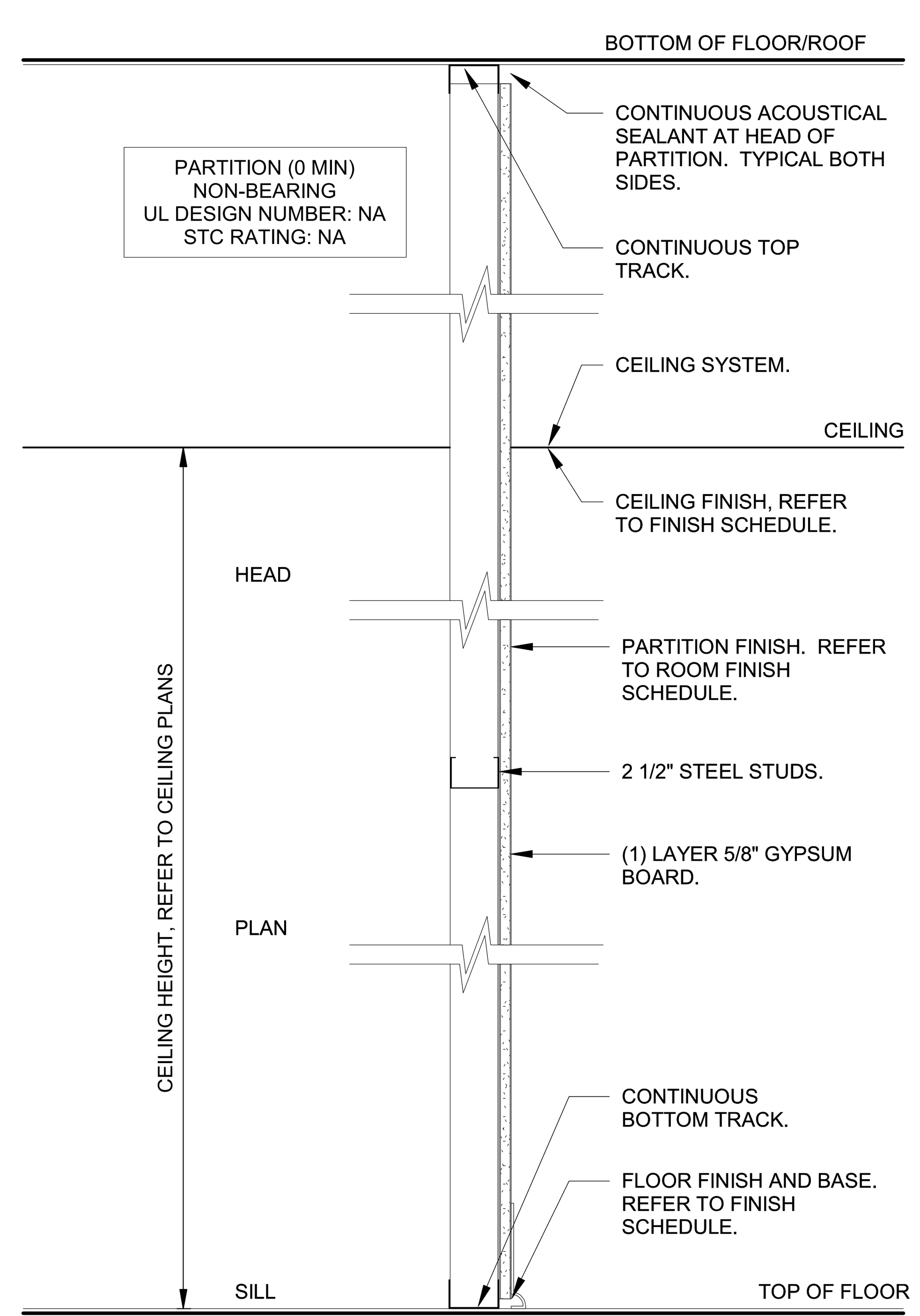

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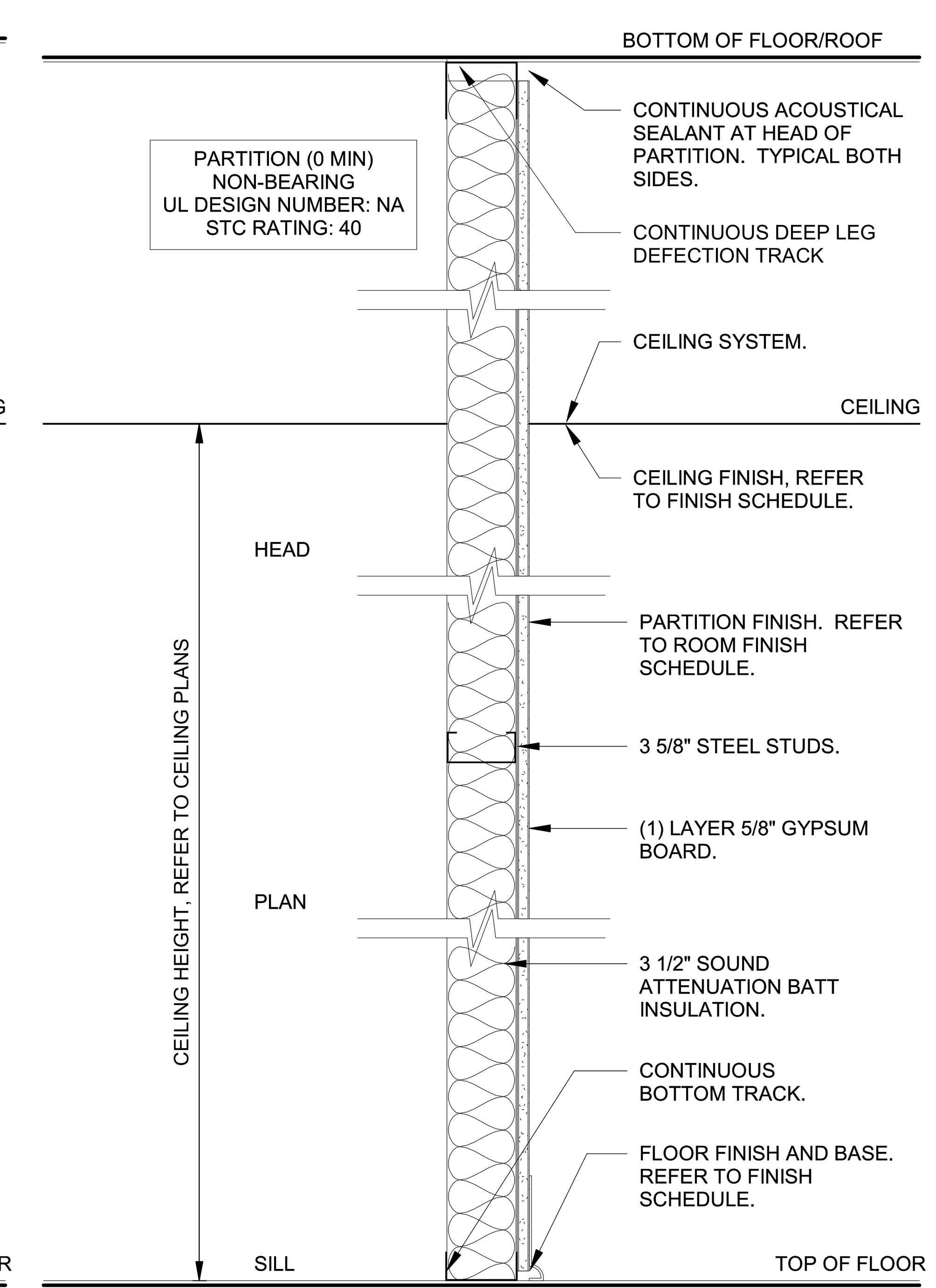

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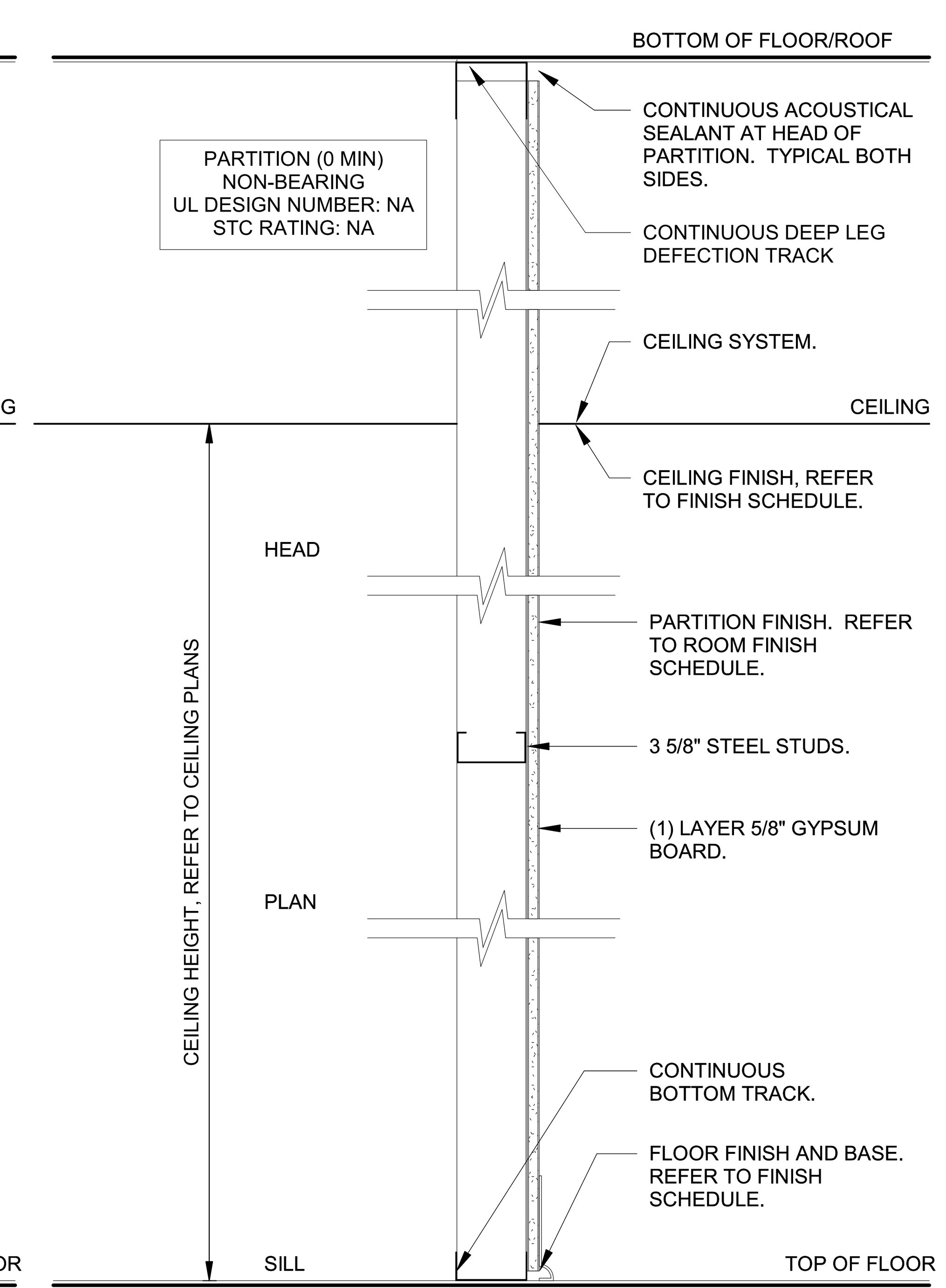


PARTITION TYPE - B7a

GENERAL NOTES

1. THESE DRAWINGS ARE NOT TO BE SCALED. REFER TO DIMENSIONS INDICATED ON DIMENSION PLANS, SHOP DRAWINGS, OR ESTABLISHED FIELD DIMENSIONS. WHERE NO DIMENSIONS OR METHOD OF DETERMINING A LOCATION IS GIVEN, VERIFY WITH ARCHITECT PRIOR TO PROCEEDING.

PARTITION TYPE NOTES

1. ALL EXPOSED BATT INSULATION SHALL HAVE FLAME SPREAD AND SMOKE DEVELOPMENT CHARACTERISTICS PER NFPA AND IBC FOR EACH APPLICATION.
2. STUD HEIGHT AND SPACING LIMITATIONS FOR GYPSUM PANEL APPLICATIONS SHALL BE A MAXIMUM ALLOWABLE DEFLECTION OF L/240.
3. ALL GYPSUM WALL BOARD SHALL BE TYPE-X. BESIDES ENHANCED FIRE-RESISTIVE PROPERTIES, TYPE-X BOARD IS HEAVIER AND STONGER THAN REGULAR GYPSUM WALL BOARD, WHICH IMPROVES DIMENSIONAL STABILITY, APPEARANCE, AND RESISTANCE TO SOUND TRANSMISSION.
4. ALL STC RATED ACOUSTICAL PARTITIONS SHALL REQUIRE A BEAD OF ACOUSTICAL SEALANT (NON-HARDENING CAULKING) AT PERIMETER EDGES OF PANEL SURFACES ON BOTH SIDES OF ASSEMBLY.
5. ACOUSTICAL SEALANT IS REQUIRED AT GAPS AND AROUND CUT-OUTS IN ASSEMBLIES FOR OUTLET BOXES AND OTHER PENETRATIONS. WHERE OUTLETS OCCUR IN STC RATED PARTITIONS, BACK OUTLET BOXES ENTIRE SURFACE WITH ACOUSTICAL OUTLET SOUNDPROOFING PUTTY PADS. 1
6. REFERENCE PLANS FOR FIRE EXTINGUISHER CABINET LOCATIONS. WHERE FIRE EXTINGUISHER CABINETS OCCUR IN STC RATED ACOUSTICAL PARTITIONS, BACK ENTIRE SURFACE OF RECESSED FIRE EXTINGUISHER CABINET WITH QUIET PUTTY BY QUIET SOLUTIONS OR APPROVED EQUAL.
7. ALL GYPSUM WALL BOARD ASSEMBLIES DESIGNATED AS SMOKE, FIRE, AND / OR STC RATED THAT ARE FULL HEIGHT, TO UNDERSIDE OF DECK, SHALL RECEIVE A MINIMUM LEVEL 1 FINISH ABOVE CEILING LINE TO COMPLETE THE ASSEMBLY.
8. ACRYLIC COATED MOISTURE AND MOLD RESISTANT GYPSUM PANEL OR CEMENT BOARD TO BE USED AS A SUBSTRATE FOR TILE APPLICATIONS.
9. MOISTURE AND MOLD RESISTANT GYPSUM PANEL TO BE USED FOR APPLICATIONS REQUIRING INCREASED RESISTANCE TO INCIDENTAL MOISTURE.
10. IDENTIFY ALL FIRE RATED BARRIERS WITH "FIRE BARRIER DO NOT PENETRATE". PLACE ABOVE SUSPENDED CEILINGS AND AT 8 FOOT IN MECHANICAL OR SIMILAR SPACES. IN SUB-FLOOR SPACES, PLACE AT 5 FOOT INTERVALS AND ALL OTHER SPACES PLACE AT 10' INTERVALS ALONG THE WALL. APPLY SIGNS USING FLORESCENT RED OR ORANGE PAINT OVER STENCILS. LETTERS MUST BE A MINIMUM OF 4 INCHES IN HEIGHT. METAL OR PAPER DECALS ARE NOT ACCEPTABLE.
11. HI-IMPACT WALL BOARD TO BE USED FOR ENHANCED IMPACT AND PENETRATION RESISTANCE IN CORRIDORS. HI-IMPACT WALL BOARD TO BE INSTALLED A MINIMUM OF 4FT FROM FINISH FLOOR.

INTERIOR NON-STRUCTURAL STUDS

STEEL STUDS HAVE A FOUR PART IDENTIFICATION CODE WHICH IDENTIFIES THE SIZE (BOTH DEPTH AND FLANGE WIDTH), STYLE, AND MILL THICKNESS OF EACH MEMBER.

600S162-54

STYLE:
S = STUD OR JOIST SECTIONS
T = TRACK SECTIONS
U = CHANNEL SECTIONS
F = FURRING CHANNEL SECTIONS

FLANGE WIDTH: (EXAMPLE: 1 5/8" = 1.625" = 162 x 1/100 INCHES)

MEMBER DEPTH: (EXAMPLE: 6" = 600 x 1/100 INCHES)

MIL THICKNESS: (EXAMPLE: 0.054 IN. = 54 MILS; 1 MIL = 1/1000 IN.)

INTERIOR WALL LIMITING HEIGHTS - NON-COMPOSITE

STUD SECTION	GAUGE NO.	SPACING (IN.) O.C.	LIMITING HEIGHT (5 PSF AT L/240)
162S125-33	20	12	9'-6"
162S125-33	20	16	8'-8"
162S125-33	20	24	7'-7"
250S125-33	20	12	13'-2"
250S125-33	20	16	12'-0"
250S125-33	20	24	10'-6"
250S125-43	18	12	14'-4"
250S125-43	18	16	13'-0"
250S125-43	18	24	11'-5"
362S125-33	20	12	17'-7"
362S125-33	20	16	16'-0"
362S125-33	20	24	14'-0"
362S125-43	18	12	19'-2"
362S125-43	18	16	17'-5"
362S125-43	18	24	15'-3"
362S125-54	16	12	20'-6"
362S125-54	16	16	18'-7"
362S125-54	16	24	16'-3"
400S125-33	20	12	19'-0"
400S125-33	20	16	17'-3"
400S125-33	20	24	15'-1"
400S125-43	18	12	20'-9"
400S125-43	18	16	18'-10"
400S125-43	18	24	16'-5"
400S125-54	16	12	22'-2"
400S125-54	16	16	20'-2"
400S125-54	16	24	17'-7"
600S125-33	20	12	26'-2"
600S125-33	20	16	23'-9"
600S125-33	20	24	20'-6"
600S125-43	18	12	28'-9"
600S125-43	18	16	26'-1"
600S125-43	18	24	22'-10"
600S125-54	16	12	30'-9"
600S125-54	16	16	27'-11"
600S125-54	16	24	24'-5"
800S125-43	18	12	36'-1"
800S125-43	18	16	32'-9"
800S125-43	18	24	28'-8"
800S125-54	16	12	38'-9"
800S125-54	16	16	35'-2"
800S125-54	16	24	30'-9"

STATE OF MICHIGAN LAURIE L. WHITNEY ARCHITECT No. 1301069394 LICENSED ARCHITECT 9.20.24

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE	APPR
1	REVISED IN ACCORDANCE WITH AMENDMENT 0001	05/29/2025	

Plot Date: 5/28/2025 10:08:57 AM

DESIGN BY: D. RIDENOUR
DRAWN BY: R. DICKMAN
CHECKED BY: L. WHITNEY
SUBMITTED BY: M. BUTLER
SIZE: ANSI D
ISSUE DATE: SEPTEMBER 20, 2024
SOLICITATION NO.:
CONTRACT NO.:

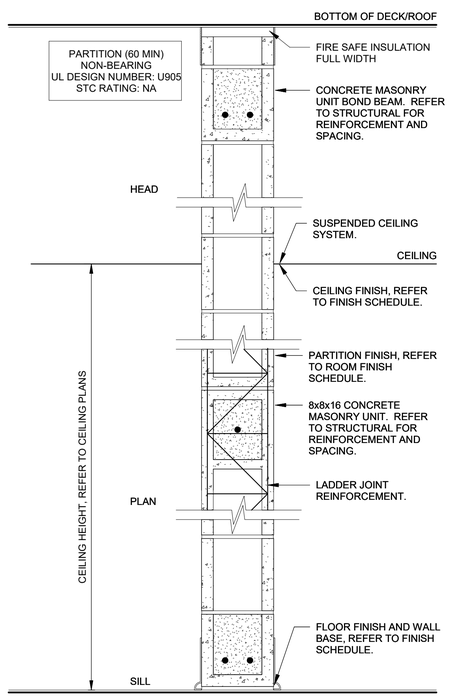
U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR MARTIN LUTHER JR PL
LOUISVILLE, KENTUCKY

BENHAM | Mead & Hunt — JOINT VENTURE TEAM

DETROIT ARSENAL, MI
MANNED / UNMANNED TACTICAL VEHICLE LAB
FY 2025
P2#: 506474
08 - ARCHITECTURAL
PARTITION TYPES

SHEET ID
A-601

CERTIFIED FINAL SUBMITTAL W912QR25R0052_Plans-0001



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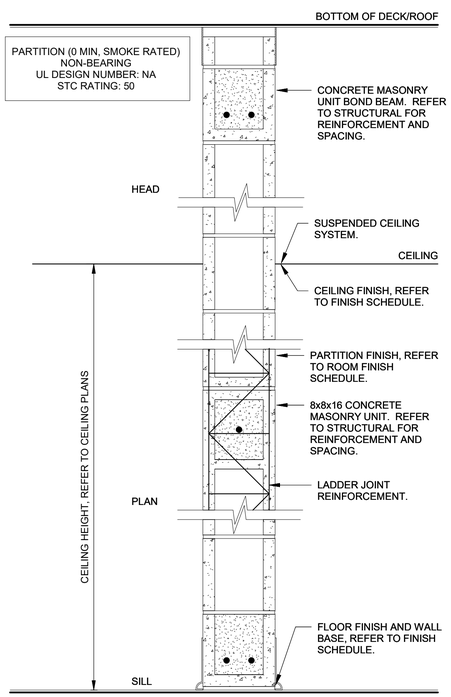

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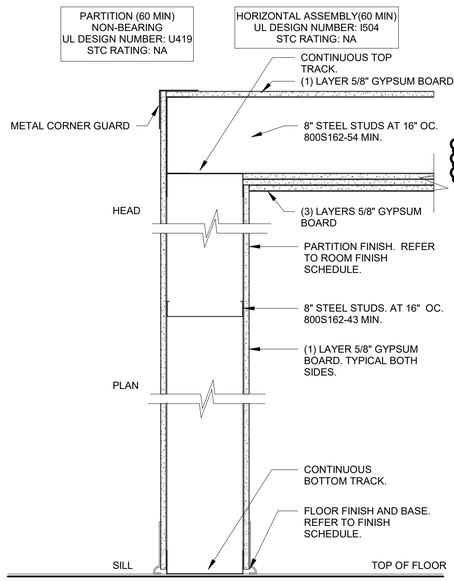

PARTITION TYPE - 1B8

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PARTITION TYPE NOTES

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6. RECESSED CABINETS FOR FIRE EXTINGUISHER CABINET LOCATIONS. WHERE FIRE EXTINGUISHER CABINETS OCCUR IN STC RATED ACOUSTICAL PARTITIONS, BACK ENTIRE SURFACE OF RECESSED FIRE EXTINGUISHER CABINET WITH QUIET PUTTY BY QUIET SOLUTIONS OR APPROVED EQUAL.
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362S125-33	20	24	14'-0"
362S125-43	18	12	19'-2"
362S125-43	18	16	17'-5"
362S125-43	18	24	15'-3"
362S125-54	16	12	20'-6"
362S125-54	16	16	18'-7"
362S125-54	16	24	16'-3"
400S125-33	20	12	19'-0"
400S125-33	20	16	17'-3"
400S125-33	20	24	15'-1"
400S125-43	18	12	20'-9"
400S125-43	18	16	18'-10"
400S125-43	18	24	16'-5"
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400S125-54	16	24	17'-7"
600S125-33	20	12	26'-2"
600S125-33	20	16	23'-9"
600S125-33	20	24	20'-6"
600S125-43	18	12	28'-9"
600S125-43	18	16	26'-1"
600S125-43	18	24	22'-10"
600S125-54	16	12	30'-9"
600S125-54	16	16	27'-11"
600S125-54	16	24	24'-5"
800S125-43	18	12	36'-1"
800S125-43	18	16	32'-9"
800S125-43	18	24	28'-8"
800S125-54	16	12	38'-9"
800S125-54	16	16	35'-2"
800S125-54	16	24	30'-9"

US Army Corps of Engineers ®

MARK	DATE	APPR
1	REVISED IN ACCORDANCE WITH AMENDMENT 0001 DESCRIPTION	05/29/2025

ISSUE DATE: SEPTEMBER 20, 2024
SOLICITATION NO.: -
CONTRACT NO.: -

DESIGN BY: D. RIDENOUR
DRAWN BY: R. DICKMAN
CHECKED BY: L. WHITNEY
SUBMITTED BY: M. BUTLER
SIZE: ANSI D

U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR MARTIN LUTHER JR PL
LOUISVILLE, KENTUCKY

BENHAM Mead & Hunt JOINT VENTURE TEAM

DETROIT ARSENAL, MI
MANNED / UNMANNED TACTICAL VEHICLE LAB
FY 2025
P2#: 506474
08 - ARCHITECTURAL
PARTITION TYPES

SHEET ID
A-602

Plot Date: 5/28/2025 10:09:15 AM File Path: Autodesk Docs://15500144 USACE Detroit Arsenal MUMT_JV_R2022/15500144_ARCH_R22.rvt

CERTIFIED FINAL SUBMITTAL W912QR25R0052_Plans-0001

ARCHITECTURAL FINISHES SCHEDULE

	FINISH DESCRIPTION	PRODUCT DESCRIPTION MANUFACTURER	MODEL NUMBER	STYLE	COLOR	SIZE	REMARKS
CEILINGS							
ACT-1	ACCOUSTIC CEILING TILE	ARMSTRONG CEILINGS	PBSA-2913-523	OPTIMA TEGULAR	WHITE TILE W/ BLIZZARD WHITE GRID	24" X 48" X 1" , 15/16" TEGULAR	INSTALL IN ALL AREAS U.N.O.
~~GYP-1~~	~~GYPSUM CEILING - PAINT~~	~~SHERWIN WILLIAMS~~	~~SW7007~~	~~ZERO VOC LATEX~~	~~BRIGHT WHITE~~	~~---~~	
OTS-1	OPEN TO STRUCTURE - PAINT	SHERWIN WILLIAMS	SW7007	ZERO VOC LATEX	BRIGHT WHITE	---	
OTS-2	OPEN TO STRUCTURE - PAINT	SHERWIN WILLIAMS	SW7020	ZERO VOC LATEX	BLACK FOX	---	
FLOOR							
CPT-1	CARPET - WALK OFF	INTERFACE	SR899	STEP REPEAT COLLECTION	104926 MIDNIGHT	20" X 20"	MONOLITHIC INSTALLATION
CPT-2	CARPET	INTERFACE	3130	DOT 2 DOT	108074 CHARCOAL	9.84" x 39.307"	1/3 OFFSET
CPT-3	CARPET	INTERFACE	3130	DOT 2 DOT	108075 LAPIS	9.84" x 39.307"	1/3 OFFSET
CPT-4	CARPET	INTERFACE	3130	DOT 2 DOT	108078 GRAPHITE	9.84" x 39.307"	USE AS BORDER IN CORRIDOR
ESD-1	ESD TILE	ARMSTRONG	51951	EXCELON SDT	ARMOR GRAY	12" X 12"	
FT-1	FLOOR TILE	CROSSVILLE	OST04	OWEN STONE	MITTENS EXT	12" X 24"	INSTALL STRAIGHT, SEE I-401 FOR DETAILS
LVT-1	LUXURY VINYL TILE	TARKETT	3542	ID LATITUDE ABSTRACT	TEXGRAIN IN COOL BEIGE	6" X 36"	UNIDIRECTIONAL INSTALLATION PATTERN.
SC-1	SEALED CONCRETE	SURECRETE DURA-KOTE	12	COLOR TEK 400WB	DOVE GREY	---	
BASE							
RB-1	RUBBER WALL BASE	ROPPE	193	STANDARD TOE PINNACLE RUBBER BASE	BLACK BROWN	4" H	ROLLED GOODS
TB-1	TILE BASE	CROSSVILLE	OST02.10612CBS	OWEN STONE COVE BASE	BUNNY LTR	6" X 12"	
WALLS							
PT-1	PAINT - FIELD	SHERWIN WILLIAMS	SW7009	ZERO VOC LATEX	PEARLY WHITE	---	
PT-2	PAINT - ACCENT	SHERWIN WILLIAMS	SW9164	ZERO VOC LATEX	ILLUSIVE GREEN	---	
PT-3	PAINT - ACCENT	SHERWIN WILLIAMS	SW7605	ZERO VOC LATEX	GALE FORCE	---	
PT-4	PAINT - DOORS, FRAMES, & STRINGERS	SHERWIN WILLIAMS	SW7020	ZERO VOC LATEX	BLACK FOX	---	
WT-1	WALL TILE - FIELD	CROSSVILLE	OST02	OWEN STONE	BUNNY LTR	12" X 24"	INSTALL STRAIGHT, SEE I-401 FOR DETAILS
WT-2	WALL TILE - ACCENT	CROSSVILLE	OST02.1CRSLMOS	OWEN STONE - CROSSVILLE MOSAIC	BUNNY LTR	8-1/2" X 14-1/2"	INSTALL AS INDICATED ON SHEET I-401
MISC							
CP-1	CORNER PROTECTION	CS ACROVYN	SM-20	---	EARTH 1215	1-1/2" LEGS FULL HEIGHT	INSTALL FROM TOP OF BASE, FULL HEIGHT. TO MATCH PT-1.
CP-2	CORNER PROTECTION	CS ACROVYN	SM-20	---	PEARL 934	1-1/2" LEGS FULL HEIGHT	INSTALL FROM TOP OF BASE, FULL HEIGHT. TO MATCH PT-1.
DB-1	DISPLAY BOARD	CALYX	CP-0404-MB	CONCEPT TACK SURFACES	CORK TACK SURFACE IN BUFF 1109. TRIM FINISH IN SLATE GREY.	48" x 48"	CFCI, INSTALL IN WALL BLOCKING AS REQUIRED.
GR-1	GROUT - FLOOR	LATICRETE	DS-0.30.0-0421	SPECTRALOCK 200 IG	45 RAVEN	---	INSTALL WITH FLOOR TILE.
GR-2	GROUT - WALL	LATICRETE	DS-256-1123	1500 SANDED GROUT	88 SILVER SHADOW	---	INSTALL WITH WALL TILE.
MB-1	MARKER BOARD, 48" x 48"	CALYX	VN-WM-4848-MB	VENUE WALL MOUNTED WHITE BOARD	WRITING SURFACE IN WHITE LCS PORCELAIN. TRIM FINISH IN RAL9003 SIGNAL WHITE.	48" x 48"	CFCI, INSTALL IN WALL BLOCKING AS REQUIRED.
MB-2	MARKER BOARD, 48" x 72"	CALYX	VN-WM-4872-MB	VENUE WALL MOUNTED WHITE BOARD	WRITING SURFACE IN WHITE LCS PORCELAIN. TRIM FINISH IN RAL9003 SIGNAL WHITE.	48" x 72"	CFCI, INSTALL IN WALL BLOCKING AS REQUIRED.
PART-1	TOLIET PARTITION	ASI GLOBAL PARTITIONS	---	SOLID PHENOLIC CORE	DARK GREY 3871		
PLAM-1	PLASTIC LAMINATE	WILSONART	7960K-18	HPL CLASSIC WOODS	STUDIO TEAK	---	
RS-1	ROLLER SHADES - 5% OPENNESS	MECHOSHADE	MECHO /5	ECOVEIL	WHITE 1351		
RS-2	ROLLER SHADES - BLACK OUT	MECHOSHADE	MECHO /5	CLASSIC	WHITE 0701		
SS-1	SOLID SURFACE	CORIAN	---	SOLID SURFACE	ASH AGGREGATE	---	

1

ROOM FINISH SCHEDULE

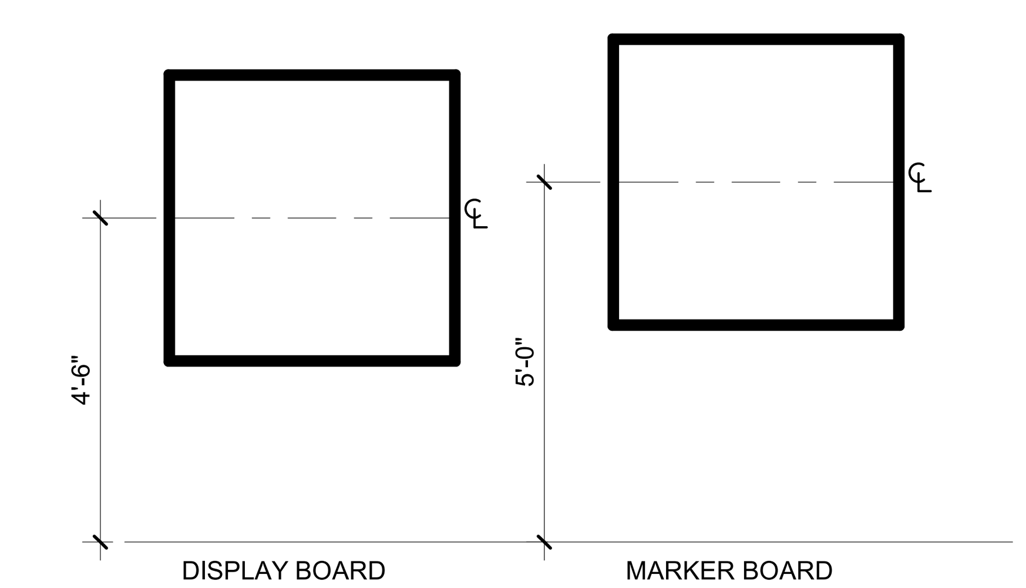
NUMBER	ROOM NAME	FLOOR	BASE	WALLS NORTH	EAST	SOUTH	WEST	CEILING MTL	HEIGHT
100	VESTIBULE	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	GYP-1	8'-0"
101	VESTIBULE	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	GYP-1	9'-0"
102	CORRIDOR	CPT-2/CPT-4	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	10'-0"
102A	CORRIDOR	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	GYP-1	8'-0"
102B	CORRIDOR	CPT-2/CPT-4	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	10'-0"
103	ELEC.	SC-1	---	PT-1	PT-1	PT-1	PT-1	OTS-1	---
104	FIRE PUMP	SC-1	---	PT-1	PT-1	PT-1	PT-1	OTS-1	---
105	MECH.	SC-1	---	PT-1	PT-1	PT-1	PT-1	OTS-1	---
106	COMM	ESD-1	---	PT-1	PT-1	PT-1	PT-1	ACT-1	8'-0"
107	OPEN OFFICE	CPT-3	RB-1	PT-1	PT-1	PT-3	PT-1	OTS-2	---
107A	LOCKERS	CPT-3	RB-1	---	PT-1	PT-3	PT-1	GYP-1	6'-0"
107B	CORRIDOR	CPT-4	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	8'-0"
107C	CORRIDOR	CPT-4	RB-1	PT-1	PT-1	PT-1	PT-1	OTS-2	---
108	BRANCH CHIEF	CPT-3	RB-1	PT-2	PT-1	PT-1	PT-1	ACT-1	8'-0"
109	BRANCH CHIEF	CPT-3	RB-1	PT-2	PT-1	PT-1	PT-1	ACT-1	8'-0"
110	BRANCH CHIEF	CPT-3	RB-1	PT-2	PT-1	PT-1	PT-1	ACT-1	8'-0"
111	DIV CHIEF	CPT-3	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	8'-0"
112	BRANCH CHIEF	CPT-3	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	8'-0"
113	BRANCH CHIEF	CPT-3	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	8'-0"
114	COPY ROOM	CPT-3	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	8'-0"
115	ELECT.	SC-1	---	PT-1	PT-1	PT-1	PT-1	OTS-1	---
116	RECYCLE	LVT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	8'-0"
117	DIV HEAD	CPT-3	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	8'-0"
118	DIV HEAD	CPT-3	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	8'-0"
119	DIV HEAD	CPT-3	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	8'-0"
120	NURSING MOTHER	LVT-1	RB-1	PT-3	PT-1	PT-1	PT-1	ACT-1	8'-0"
121	BRANCH CHIEF	CPT-3	RB-1	PT-1	PT-2	PT-1	PT-1	ACT-1	8'-0"
122	BRANCH CHIEF	CPT-3	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	8'-0"
123	BRANCH CHIEF	CPT-3	RB-1	PT-1	PT-2	PT-1	PT-1	ACT-1	8'-0"
124	BRANCH CHIEF	CPT-3	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	8'-0"
125	DIV CHIEF	CPT-3	RB-1	PT-1	PT-2	PT-1	PT-1	ACT-1	8'-0"
126	DIV CHIEF	CPT-3	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	8'-0"
127	DIV CHIEF	CPT-3	RB-1	PT-1	PT-2	PT-1	PT-1	ACT-1	8'-0"
128	DIV CHIEF	CPT-3	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	8'-0"
129	BRANCH CHIEF	CPT-3	RB-1	PT-1	PT-2	PT-1	PT-1	ACT-1	8'-0"
130	BRANCH CHIEF	CPT-3	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	8'-0"
131	BRANCH CHIEF	CPT-3	RB-1	PT-1	PT-2	PT-1	PT-1	ACT-1	8'-0"
132	BRANCH CHIEF	CPT-3	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	8'-0"
133	BREAK RM	LVT-1	RB-1	PT-3	PT-1	PT-1	PT-1	ACT-1	8'-6"
134	OPEN OFFICE	CPT-2	RB-1	PT-1 / PT-3	PT-1 / PT-3	PT-1	PT-1	OTS-2	---
134A	LOCKERS	CPT-2	RB-1	PT-1	PT-3	PT-1	---	GYP-1	6'-0"
135	BRANCH CHIEF	CPT-3	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	8'-0"
136	BRANCH CHIEF	CPT-3	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	8'-0"
137	BRANCH CHIEF	CPT-3	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	8'-0"
138	BRANCH CHIEF	CPT-3	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	8'-0"
139	COPY RM	CPT-3	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	8'-0"
140	COMM	ESD-1	---	PT-1	PT-1	PT-1	PT-1	ACT-1	8'-0"
141	DIV. CHIEF	CPT-3	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	8'-0"
142	DIV. CHIEF	CPT-3	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	8'-0"
143	CONF. ROOM	CPT-3/CPT-4	RB-1	PT-1	PT-1	PT-1	PT-3	ACT-1	8'-0"
144	CONF. ROOM	CPT-3/CPT-4	RB-1	PT-1	PT-1	PT-1	PT-3	ACT-1	8'-0"
145	OPEN BAYS	SC-1	RB-1	PT-1	PT-1	---	PT-1	OTS-1	---
146	SERVER	ESD-1	---	PT-1	PT-1	PT-1	PT-1	GYP-1	8'-0"
147	STORAGE AREA	SC-1	---	---	PT-1	PT-1	PT-1	GYP-1	8'-0"
148	MEN	FT-1	TB-1	WT-1	WT-1 / WT-2	WT-1	WT-1	GYP-1	8'-0"
149	VEST	FT-1	TB-1	PT-1	PT-1	PT-1	PT-1	GYP-1	8'-0"
150	JAN CLOSET	SC-1	---	PT-1	PT-1	PT-1	PT-1	GYP-1	8'-0"
151	VEST	FT-1	TB-1	PT-1	PT-1	PT-1	PT-1	GYP-1	8'-0"
152	WOMEN	FT-1	TB-1	WT-1	WT-1 / WT-2	WT-1	WT-1	GYP-1	8'-0"

FINISH PLAN GENERAL NOTES:

1. MANUFACTURERS AND COLORS LISTED ARE INTENDED TO ESTABLISH LEVEL OF QUALITY, COLOR & FINISH, AND ARE NOT INTENDED TO LIMIT THE SELECTION OF OTHER MANUFACTURERS FOR EQUAL PRODUCTS.
2. ALL FINISHES ARE TO BE INSTALLED / APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
3. FIELD VERIFY ALL DIMENSIONS PRIOR TO ORDERING FINISH MATERIALS.
4. ALL FLOORING TRANSITIONS ARE TO OCCUR AT THE CENTERLINE OF THE DOOR, DOORWAY, OR CEILING U.O.N.
5. GYPSUM BOARD WALLS ARE TO HAVE A LIGHT ORANGE PEEL TEXTURE.
6. PAINTED GYPSUM BOARD WALLS MUST HAVE AN EGGSHELL FINISH U.O.N.
7. PAINTED CYPSUM CEILINGS ARE TO HAVE A FLAT FINISH U.O.N.
8. DOORS AND FRAMES SCHEDULED TO BE PAINTED MUST HAVE A SEMI GLOSS FINISH U.O.N.
9. WHEN INSTALLING TILE, USE ALL APPLICABLE MATCHING TRIM PIECES; SUCH AS INSIDE AND OUTSIDE CORNERS AND EDGES. ALL EXPOSED TILE EDGES MUST BE COVERED.
10. ALL FLOORING TRANSITIONS SHALL BE CENTERED UNDER DOOR IN CLOSED POSITION U.O.N. REFER TO SHEET I-501 FOR TYPICAL TRANSITION DETAILS.
11. ALL INTERIOR HM DOOR FRAME FINISHES TO BE PAINTED PT-4. U.O.N. IN DOOR SCHEDULE.
12. ALL METAL LINEAR DIFFUSERS SHALL BE PAINTED TO MATCH SURROUNDING WALL SURFACE, U.O.N.
13. ALL CONCRETE FLOORS NOT TO RECEIVE ADDITIONAL FINISH SHALL BE SEALED, U.O.N.

ROOM FINISH ABBREVIATIONS:

ACT	= ACOUSTICAL CEILING PANEL
CP	= CORNER PROTECTION
CPT	= CARPET
EP	= EPOXY FLOORING
ESD	= STATIC DISSIPATIVE FLOORING
FT	= FLOOR TILE
GR	= GROUT
GYP	= PAINTED GYPSUM
LVT	= LUXURY VINYL TILE
OTS	= OPEN TO STRUCTURE
PART	= TOILET PARTITION
PLAM	= PLASTIC LAMINATE
PT	= PAINT
RB	= RUBBER BASE
RS	= ROLLER SHADES
SC	= SEALED CONCRETE
SS	= SOLID SURFACE MATERIAL
TB	= TILE BASE
WT	= WALL TILE



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
1	REVISED IN ACCORDANCE WITH AMENDMENT 0001	05/29/2025

DESIGNED BY: G. MOLLICA GM
DRAWN BY: C. FERNANDEZ
CHECKED BY: M. MCCARGAR MLM
SUBMITTED BY: M. BUTLER
SIZE: ANSI D
ISSUE DATE: 05/29/2025
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER: 222857.01-I-R22
M&H PROJECT NO.: R3246200-222857.01

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR MARTIN LUTHER KING PL
LOUISVILLE, KENTUCKY 40202

BENHAM | Mead & Hunt
JOINT VENTURE TEAM

DETROIT ARSENAL, MICHIGAN
MANNED / UNMANNED TACTICAL VEHICLE LAB
FY 2025
P2# 506474

09 - INTERIORS
FINISH SCHEDULES

STATE OF MICHIGAN
LAURIE L. WHITNEY
ARCHITECT
No. 1301069394
LICENSED ARCHITECT
9.20.24

SHEET ID
I-601

File Path: Autodesk Docs://1550044 USACE Detroit Arsenal MUMT JV_R2022/222857.01-I-R22.rvt
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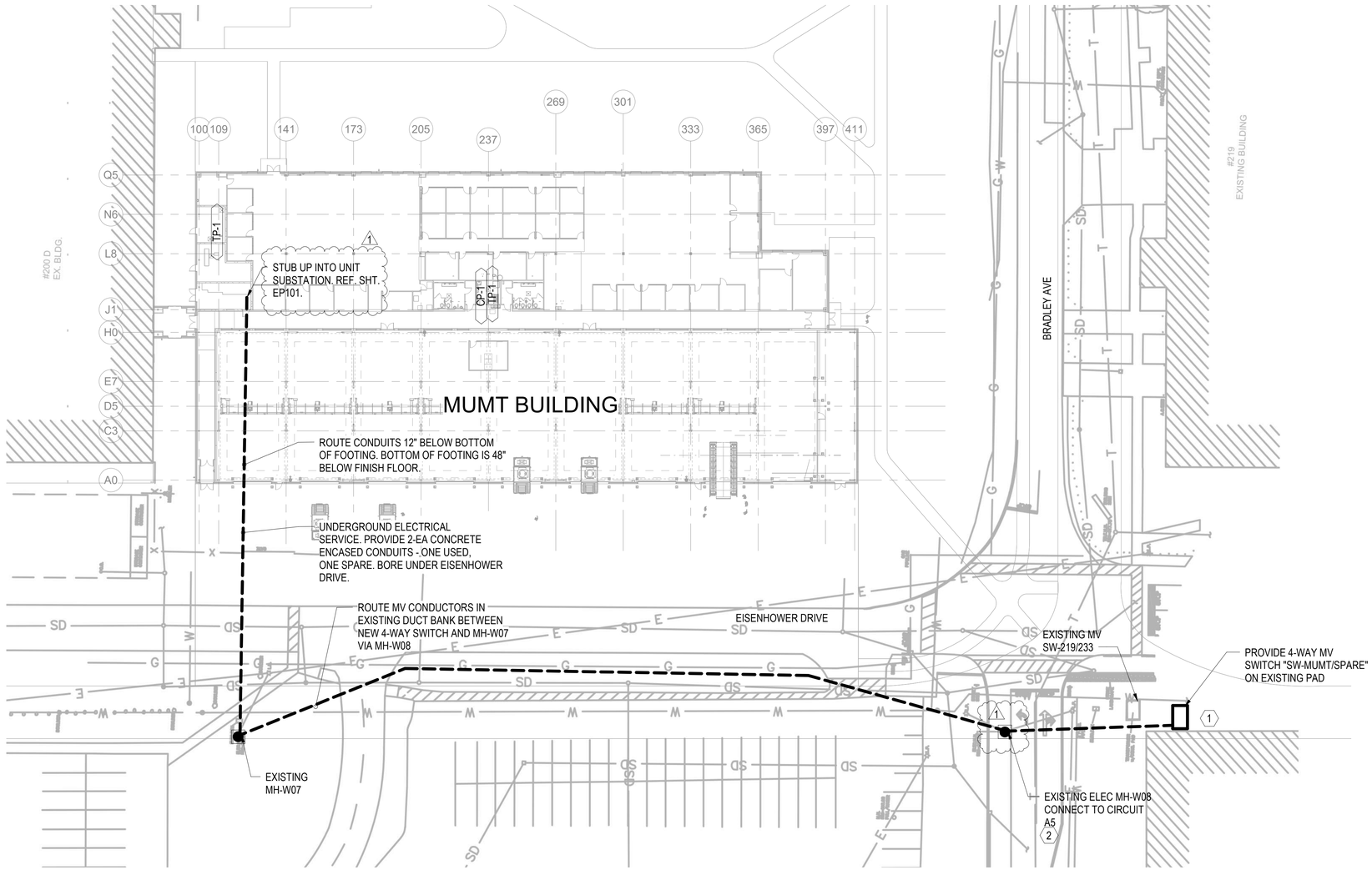

KEY NOTES

1. 1-IN, 1-OUT, 1-FOR MUMT, 1-SPARE. USE THREE SPARE 5-INCH UNDERGROUND CONDUITS IN THE EXISTING DUCTBANK BETWEEN NEW 4-WAY SWITCH AND MH-W08. USE ONE CONDUIT FOR MUMT, ONE FOR CIRCUIT A5-INCOMING, AND ONE FOR A5-OUTGOING. CORE A HOLE IN MH-W08 AND ADD A SPARE 5-INCH CONCRETE-ENCASED CONDUIT PARALLEL TO THE EXISTING DUCTBANK BETWEEN MH-W08 AND 4-WAY SWITCH. THIS ADDITIONAL SPARE CONDUIT WILL ALLOW ACCESS TO THE 4-WAY SWITCH FOR A FUTURE BUILDING TO THE NORTHWEST. REF SHEET E-601. INSTALLATION OF SPARE CONDUIT WILL REQUIRE TRENCHING, BACKFILL AND REPAIR OF ROADWAY AND SUBSTRATE.
2. IN MH-W08, SPLICE/CONNECT THE IN AND OUT CABLES TO AND FROM "SW-MUMT/SPARE" TO CABLE FOR CIRCUIT A5 BETWEEN SW-219/233 AND MH-W09 (LOCATED APPROXOMATELY 450-FT TO THE SOUTH, SOUTHEAST OF BLDG. 272).

A2 ELECTRICAL SITE PLAN
1" = 30'-0"

Z 0' 30' 60'
GRAPHIC SCALE

REGISTERED PROFESSIONAL ENGINEER
DOYLE W. MAGNUS
21231
OKLAHOMA
5/28/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE	APPR.
1	REVISED IN ACCORDANCE WITH AMENDMENT 0001	05/29/2025	

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Plot Date: 5/28/2025 11:33:34 AM

ISSUE DATE: MAY 29, 2025
SOLICITATION NO.: .
CONTRACT NO.: W912-QR-19-D-0038

DESIGN BY: D. MAGNUS
DRAWN BY: S. HOUSTON
CHECKED BY: A. GREGG
SUBMITTED BY: M. BUTLER
SIZE: ANSI D

U.S. ARMY CORPS OF ENGINEERS LOUISVILLE DISTRICT
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE, KENTUCKY

BENHAM Mead & Hunt JOINT VENTURE TEAM

DETROIT ARSENAL, MI
MANNED / UNMANNED TACTICAL VEHICLE LAB

CONTRACT #W912QR19D0038
P2#: 506474

ELECTRICAL SITE PLAN

SHEET ID
ES101

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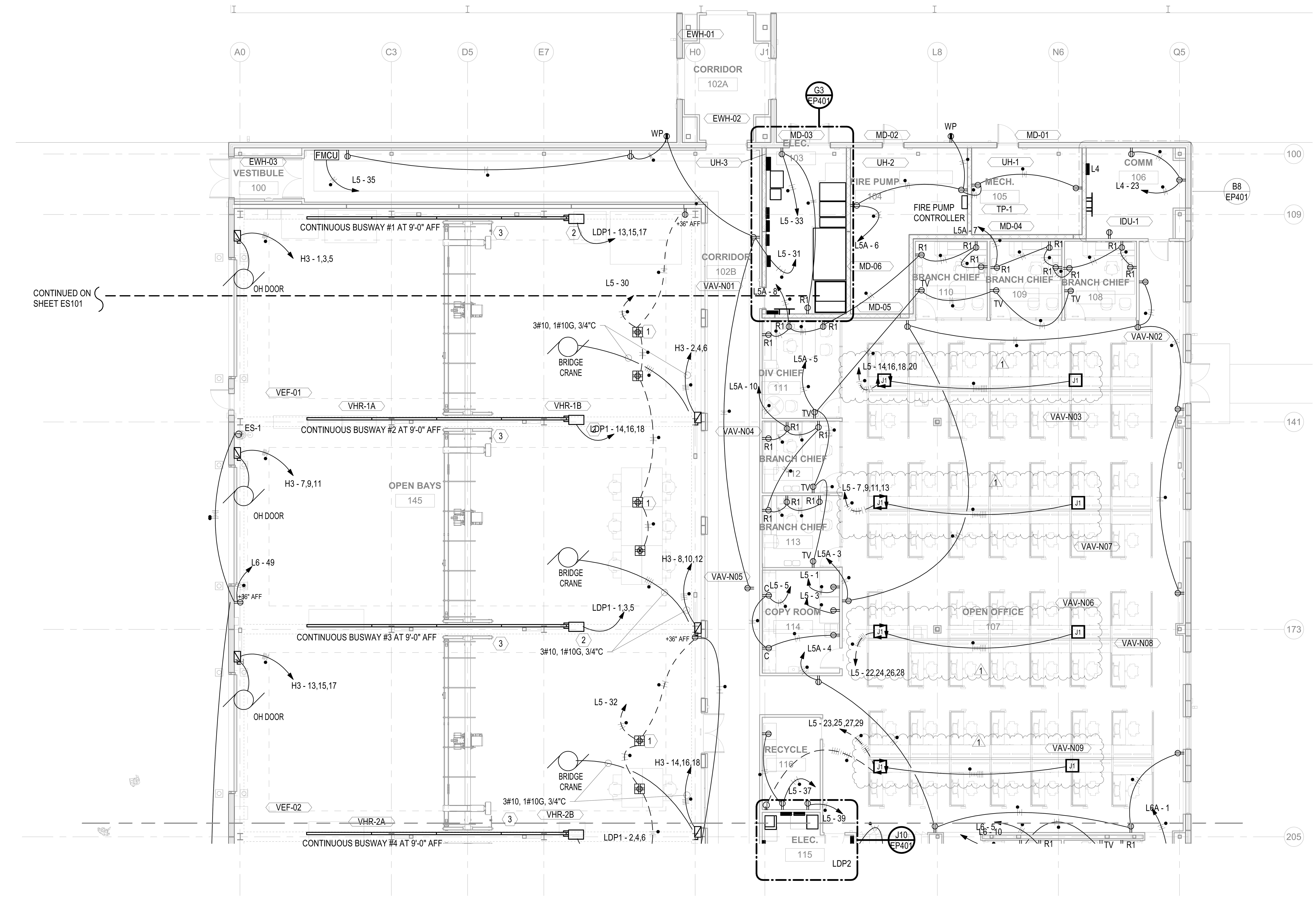


A2 POWER PLAN - AREA 1
1/8" = 1'-0"

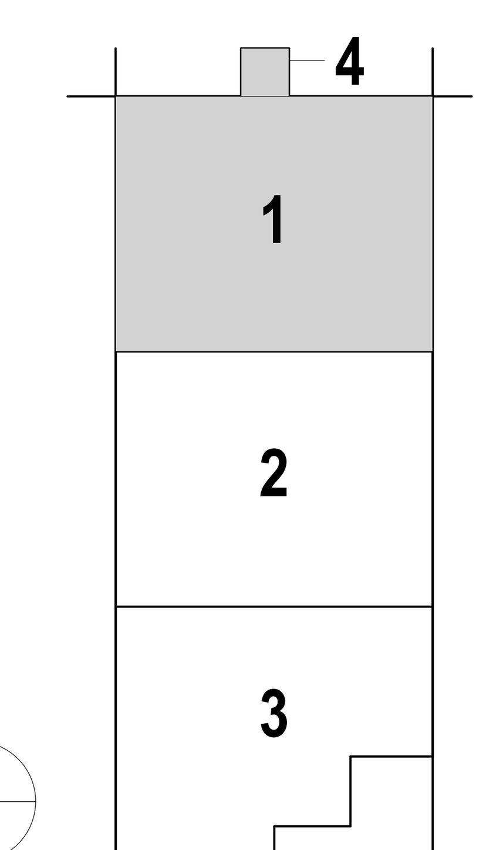
8' 4' 0' 8' 16' 24'
SCALE IN FEET - 1/8" = 1'-0"

GENERAL NOTES

A. REFER TO SHEET EP600 FOR MECHANICAL EQUIPMENT SCHEDULE AND ASSOCIATED CIRCUITS.

KEYED NOTES

1. COMBINE POWER AND COMM IN COMBINATION POWER/COMM FLOOR OUTLET. (TTP)
2. REF SHEET E601 FOR FEEDER TO BUSWAY.
3. PROVIDE 5-EA TYPE 1 PLUG-IN UNITS ALONG BUSWAY. PROVIDE 1-EA TYPE 2 PLUG-IN UNIT ALONG BUSWAY. IN ADDITION, FOR EACH RECEPTACLE PROVIDE A 12-FT SO CORD. SEE DETAILS, SHEET EP500. BUSWAYS SHALL BE 9-FT AFF TO THE BOTTOM. PROVIDE SUPPORT FOR BUSWAYS FROM HIGH-BAY STRUCTURE ABOVE IN ACCORDANCE WITH BUSWAY MANUFACTURER'S REQUIREMENTS.



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE	APPR
1	REVISED IN ACCORDANCE WITH AMENDMENT 0001	05/29/2025	

DESIGN BY: D. MAGNUS
DRAWN BY: S. HOUSTON
CHECKED BY: A. GREGG
SUBMITTED BY: M. BUTLER
SIZE: ANSI D
ISSUE DATE: MAY 29, 2025
SOLICITATION NO.:
CONTRACT NO.: W912-QR-19-D-0038

U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR MARTIN LUTHER JR PL
LOUISVILLE, KENTUCKY

BENHAM | Mead & Hunt
JOINT VENTURE TEAM

DETROIT ARSENAL, MI
MANNED / UNMANNED TACTICAL VEHICLE LAB
CONTRACT #W912QR19D0038
P2#: 506474
POWER PLAN - AREA 1

REGISTERED PROFESSIONAL ENGINEER
DOYLE W. MAGNUS
21231
OKLAHOMA

SHEET ID
EP101

Plot Date: 5/28/2025 11:33:18 AM

CERTIFIED FINAL SUBMITTAL W912QR25R0052_Plans-0001

GENERAL NOTES

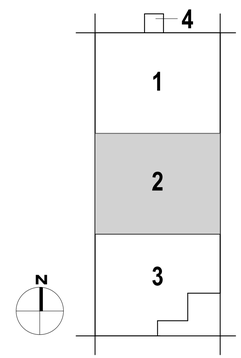
A. REFER TO SHEET EP600 FOR MECHANICAL EQUIPMENT SCHEDULE AND ASSOCIATED CIRCUITS.

KEYED NOTES

1. COMBINE POWER AND COMM IN COMBINATION POWER/COMM FLOOR OUTLET.
2. CONNECT TO VALVE SENSORS.
3. REF SHEET E-601 FOR FEEDER TO BUSWAY.
4. PROVIDE 5-EA TYPE 1 PLUG-IN UNITS ALONG BUSWAY. PROVIDE 1-EA TYPE 2 PLUG-IN UNIT ALONG BUSWAY. IN ADDITION, FOR EACH RECEPTACLE PROVIDE A 12-FT SO CORD. SEE DETAILS, SHEET EP500. BUSWAYS SHALL BE 9-FT AFF TO THE BOTTOM. PROVIDE SUPPORT FOR BUSWAYS FROM HIGH-BAY STRUCTURE ABOVE IN ACCORDANCE WITH BUSWAY MANUFACTURER'S REQUIREMENTS.

A3 POWER PLAN - AREA 2
1/8" = 1'-0"

8' 4' 0' 8' 16' 24'
SCALE IN FEET - 1/8" = 1'-0"



REGISTERED PROFESSIONAL ENGINEER
DOYLE W. MAGNUS
21231
9/12/2025
OKLAHOMA

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE	APPR.
1	REVISED IN ACCORDANCE WITH AMENDMENT 0001	05/29/2025	

Plot Date: 5/28/2025 11:33:25 AM File Path: Autodesk Docs://19500044 USACE Detroit Arsenal MUMT JV_R2022/19500044_ELEC-R22.rvt

ISSUE DATE: MAY 29, 2025
SOLICITATION NO.: -
CONTRACT NO.: W912-QR-19-D-0038

DESIGN BY: D. MAGNUS
DRAWN BY: S. HOUSTON
CHECKED BY: A. GREGG
SUBMITTED BY: M. BUTLER
SIZE: ANSI D

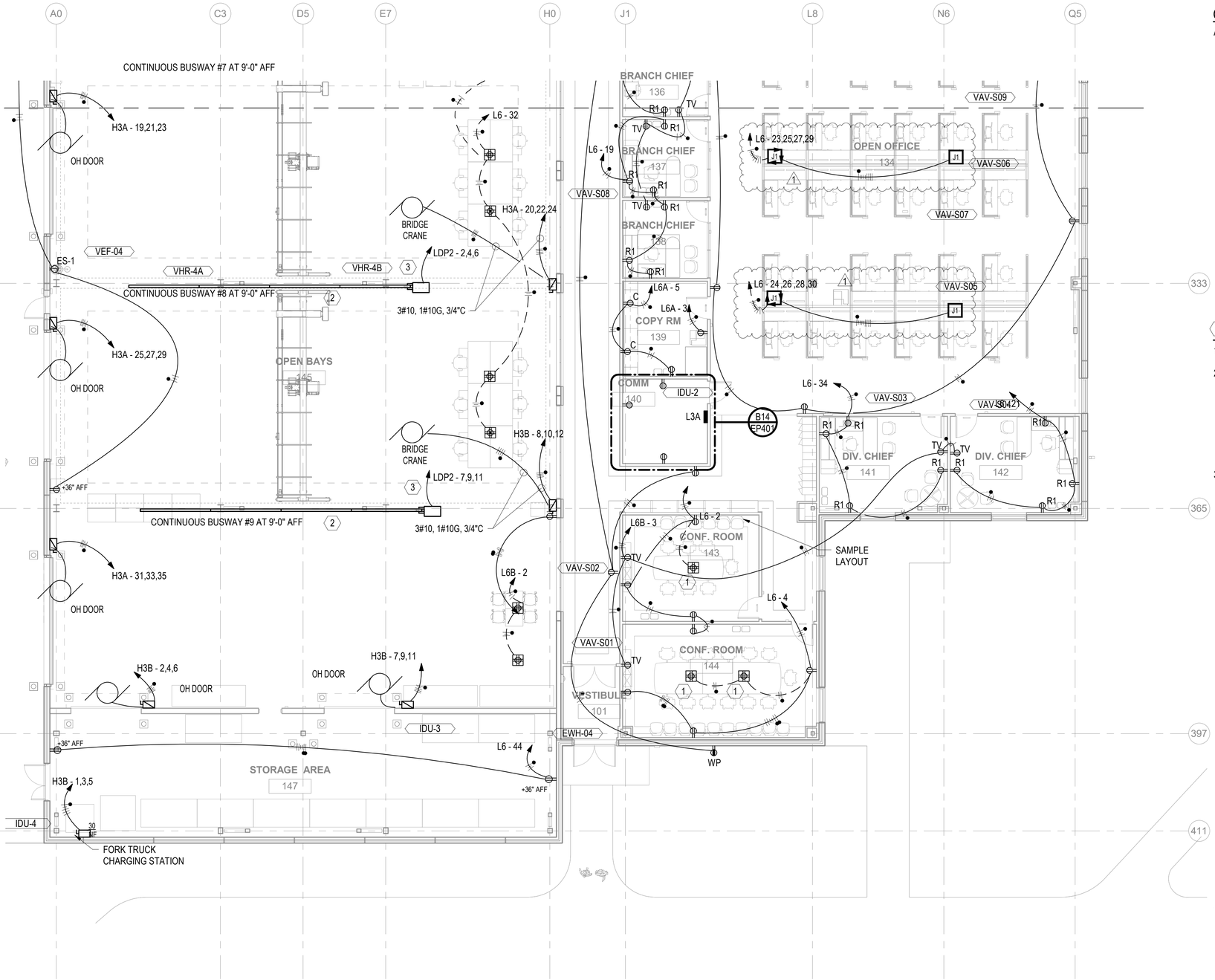
U.S. ARMY CORPS OF ENGINEERS
OMAHA DISTRICT
600 DR MARTIN LUTHER JR PL
LOUISVILLE, KENTUCKY

BENHAM | Mead & Hunt | JOINT VENTURE TEAM

DETROIT ARSENAL, MI
MANNED / UNMANNED TACTICAL VEHICLE LAB
CONTRACT #W912QR19D0038
P2#: 506474
POWER PLAN - AREA 2

SHEET ID
EP102

CERTIFIED FINAL SUBMITTAL W912QR25R0052_Plans-0001



GENERAL NOTES

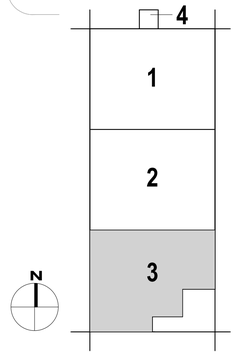
A. REFER TO SHEET EP600 FOR MECHANICAL EQUIPMENT SCHEDULE AND ASSOCIATED CIRCUITS.

KEYED NOTES

1. COMBINE POWER AND COMM IN COMBINATION POWER/COMM FLOOR OUTLET.
2. PROVIDE 5-EA TYPE 1 PLUG-IN UNITS ALONG BUSWAY. PROVIDE 1-EA TYPE 2 PLUG-IN UNIT ALONG BUSWAY. IN ADDITION, FOR EACH RECEPTACLE PROVIDE A 12-FT SO CORD. SEE DETAILS, SHEET EP500. BUSWAYS SHALL BE 9-FT AFF TO THE BOTTOM. PROVIDE SUPPORT FOR BUSWAYS FROM HIGH-BAY STRUCTURE ABOVE IN ACCORDANCE WITH BUSWAY MANUFACTURER'S REQUIREMENTS.
3. REF SHEET E601 FOR FEEDER TO BUSWAY.

A4 POWER PLAN - AREA 3
1/8" = 1'-0"

8' 4' 0' 8' 16' 24'
SCALE IN FEET - 1/8" = 1'-0"



REGISTERED PROFESSIONAL ENGINEER
DOYLE W. MAGNUS
21231
9/12/2025
OKLAHOMA

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE	APPR.
1	REVISED IN ACCORDANCE WITH AMENDMENT 0001	05/29/2025	

Autodesk Docs://19500044 USACE Detroit Arsenal MUMT JV_R2022/19500044_ELEC-R22.rvt

Plot Date: 5/28/2025 11:33:29 AM File Path:

DESIGN BY: D. MAGNUS
DRAWN BY: S. HOUSTON
CHECKED BY: A. GREGG
SUBMITTED BY: M. BUTLER
SIZE: ANSI D

U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR MARTIN LUTHER JR PL
LOUISVILLE, KENTUCKY

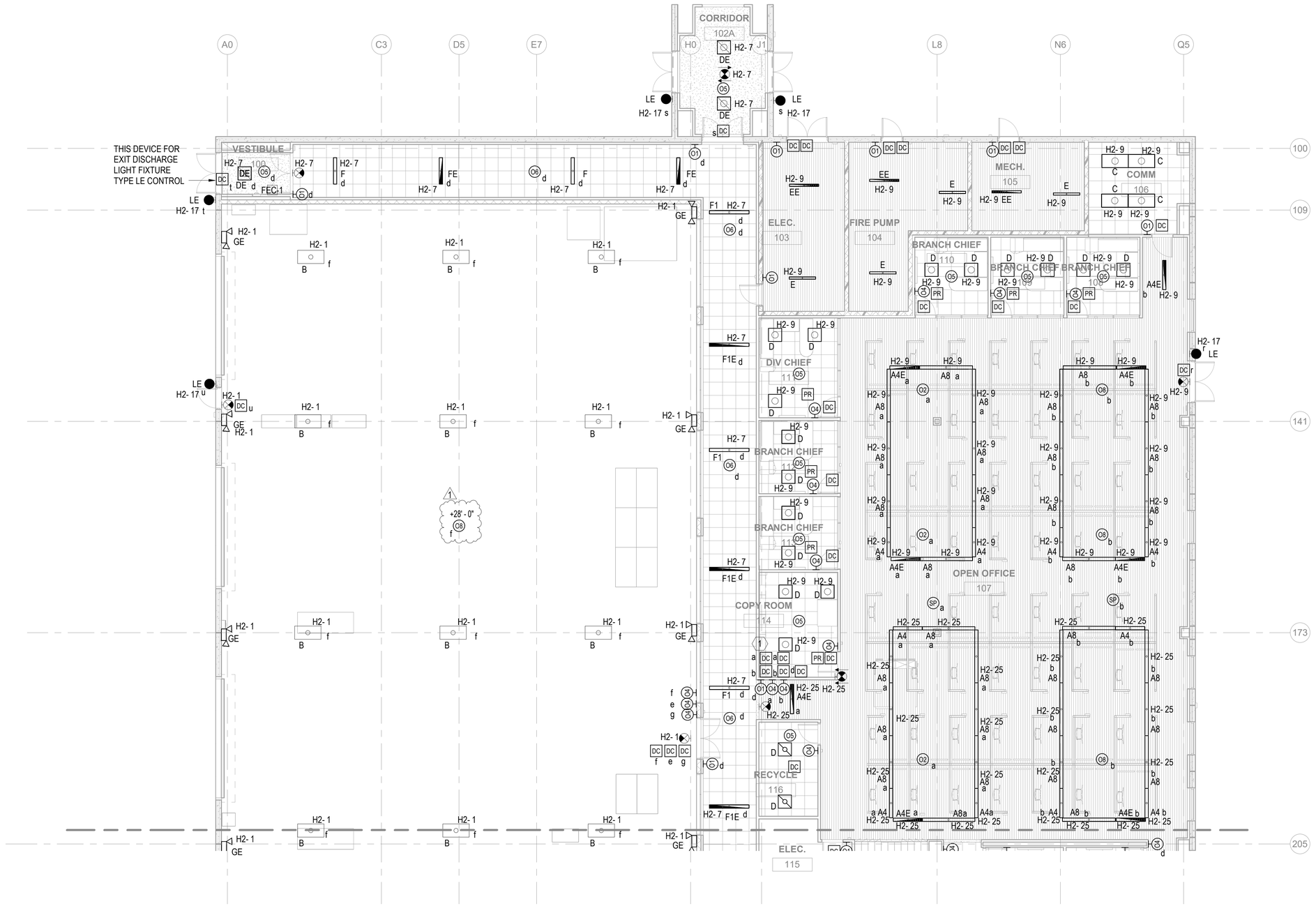
BENHAM | Mead & Hunt | JOINT VENTURE TEAM

ISSUE DATE: MAY 29, 2025
SOLICITATION NO.: -
CONTRACT NO.: W912-QR-19-D-0038

DETROIT ARSENAL, MI
MANNED / UNMANNED TACTICAL VEHICLE LAB
CONTRACT #W912QR19D0038
P2#: 506474
POWER PLAN - AREA 3

SHEET ID
EP103

CERTIFIED FINAL SUBMITTAL W912QR25R0052_Plans-0001

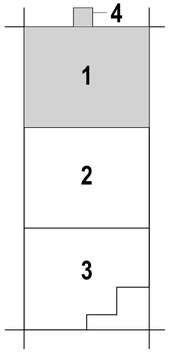


KEYED NOTES

1. LOCATE "DC" UNITS SERVING OFFICE AREA IN CEILING SPACE OF ROOM 114.

B9 LIGHTING PLAN - AREA 1
1/8" = 1'-0"

8' 4' 0' 8' 16' 24'
SCALE IN FEET - 1/8" = 1'-0"



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5/28/2025
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File Path:

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SOLICITATION NO.:
CONTRACT NO.: W912-QR-19-D-0038

DESIGN BY: D. MAGNUS
DRAWN BY: S. HOUSTON
CHECKED BY: A. GREGG
SUBMITTED BY: M. BUTLER
SIZE: ANSI D

U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER JR PL
LOUISVILLE, KENTUCKY

BENHAM Mead & Hunt JOINT VENTURE TEAM

DETROIT ARSENAL, MI
MANNED / UNMANNED TACTICAL VEHICLE LAB
CONTRACT #W912QR19D0038
P2#: 506474
LIGHTING PLAN - AREA 1

SHEET ID
EL101

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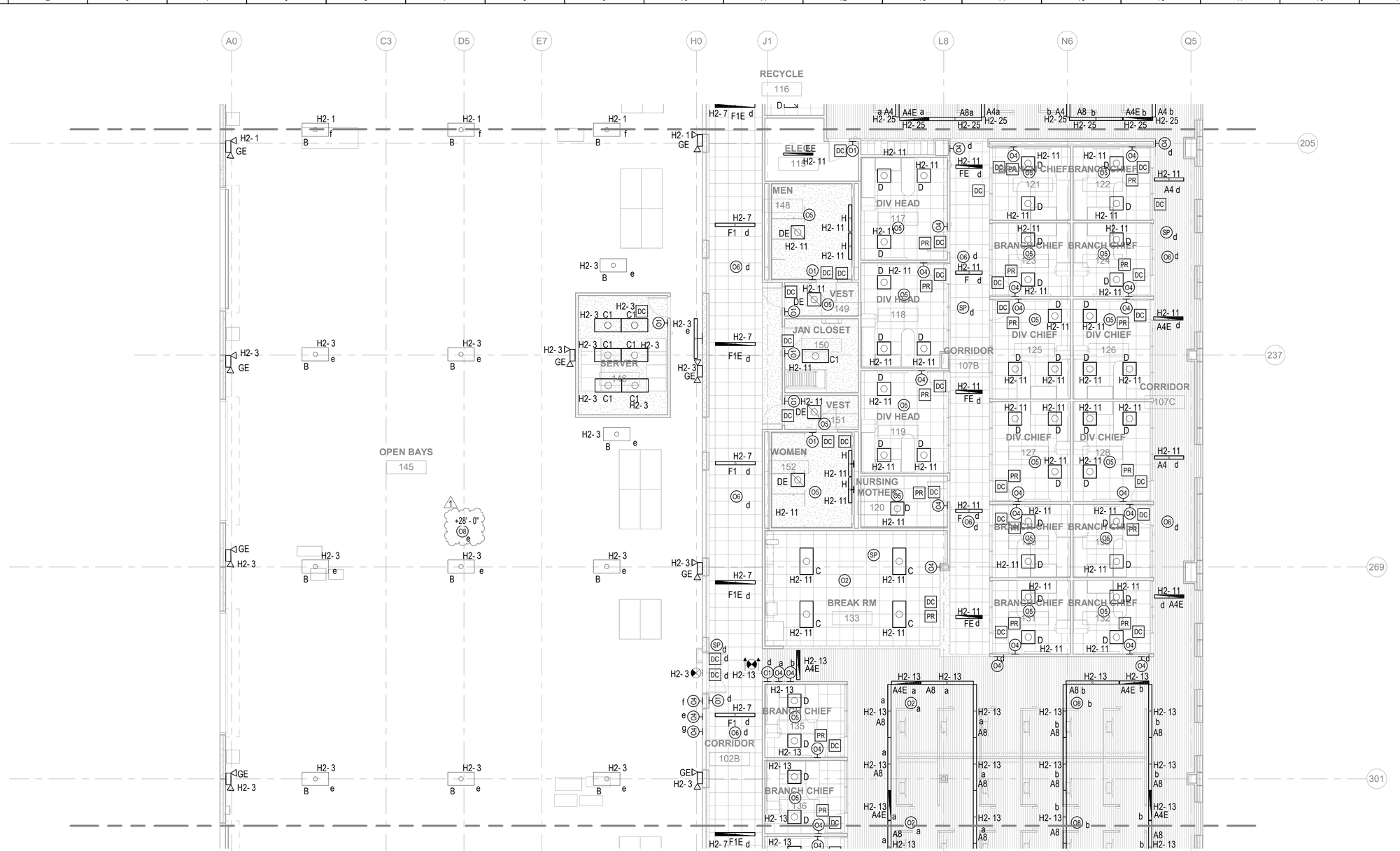
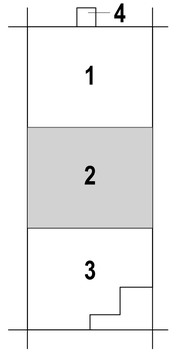


B8 LIGHTING PLAN - AREA 2

1/8" = 1'-0"

SCALE IN FEET - 1/8" = 1'-0"

8' 4' 0' 8' 16' 24'



REGISTERED PROFESSIONAL ENGINEER
DOYLE W. MAGNUS
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OKLAHOMA

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE	APPR.
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File Path: Autodesk Docs://15500044 USACE Detroit Arsenal MUMT JV_R2022/15500044_ELEC-R22.rvt

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ISSUE DATE: MAY 29, 2025
SOLICITATION NO.:
CONTRACT NO.: W912QR-19-D-0038

DESIGN BY: D. MAGNUS
DRAWN BY: S. HOUSTON
CHECKED BY: A. GREGG
SUBMITTED BY: B. BUTLER
SIZE: ANSI D

U.S. ARMY CORPS OF ENGINEERS
LOUIS E. LEVY, JR. PL
600 DR MARTIN LUTHER JR PL
LOUISVILLE, KENTUCKY

BENHAM | Mead & Hunt | JOINT VENTURE TEAM

DETROIT ARSENAL, MI
MANNED / UNMANNED TACTICAL VEHICLE LAB
CONTRACT #W912QR19D0038
P2#: 506474
LIGHTING PLAN - AREA 2

SHEET ID
EL102

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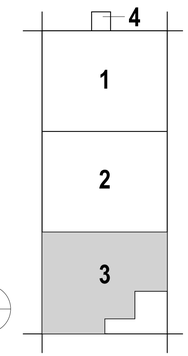
B7 LIGHTING PLAN - AREA 3
1/8" = 1'-0"

8' 4' 0' 8' 16' 24'
SCALE IN FEET - 1/8" = 1'-0"



REGISTERED PROFESSIONAL ENGINEER
DOYLE W. MAGNUS
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9/12/2025

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CONTRACT NO.: W912-QR-19-D-0038

DESIGN BY: D. MAGNUS
DRAWN BY: S. HOUSTON
CHECKED BY: A. GREGG
SUBMITTED BY: M. BUTLER
SIZE: ANSI D

U.S. ARMY CORPS OF ENGINEERS
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DETROIT ARSENAL, MI
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CONTRACT #W912QR19D0038
P2#: 506474

LIGHTING PLAN - AREA 3

SHEET ID
EL103

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