

SCOPE OF WORK

NJ Forest Fire Service R&D Facility Feasibility Study

Mile Marker 1 Highway Route 72 East
Woodland Township, Burlington County, NJ

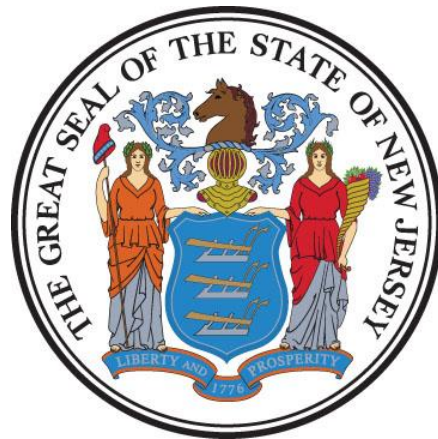
Project No. P1374-00

STATE OF NEW JERSEY

Honorable Mikie Sherrill, Governor
Honorable Dr. Dale G. Caldwell, Lt. Governor

DEPARTMENT OF THE TREASURY

Aaron Binder, Acting State Treasurer



DIVISION OF PROPERTY MANAGEMENT AND CONSTRUCTION

Thomas A. Edenbaum, Director

Date: February 2, 2026

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I. OBJECTIVE

The objective of this feasibility study is to evaluate the costs and permitting requirements associated with relocating the existing New Jersey Forest Fire Service R&D Facility from Mays Landing Township to two (2) potential sites in Woodland Township. The locations to be considered are the Brendan T. Byrne Maintenance Yard and the NJDOT Maintenance Yard on State Highway 70 (see **Exhibit ‘B’** Project Site Location Map).

A feasibility study report will be provided after the approval of the feasibility study to include the utility/infrastructure to support the facility’s operation, the permitting/regulatory requirements for construction, cost estimates to build a new facility or modify the existing site, and the schedules for design and construction.

II. CONSULTANT QUALIFICATIONS

A. CONSULTANT & SUB-CONSULTANT PRE-QUALIFICATIONS

The Consultant shall be a firm pre-qualified with the Division of Property Management & Construction (DPMC) in the following discipline(s):

- **P005 Civil Engineering**

The Consultant shall also have in-house capabilities or Sub-Consultants pre-qualified with DPMC in:

- **P025 Estimating/ Cost Analysis**

As well as, **any and all** other Architectural, Engineering and Specialty Disciplines necessary to complete the project as described in this Scope of Work (SOW).

III. PROJECT BUDGET

A. CURRENT WORKING ESTIMATE (CWE)

The Current Working Estimate (CWE) for this project is \$147,500.

The CWE is the client agency’s financial budget based on this project Scope of Work and shall not be exceeded during the project unless DPMC approves the change in the Scope of Work through a Contract Amendment.

B. CONSULTANT’S FEES

The cost estimate for this project *shall not* be used as a basis for the Consultant’s fees. The Consultant’s fees shall be based on the information contained in this Scope of Work document and the observations made and/or the additional information received during the pre-proposal meeting.

IV. PROJECT SCHEDULE

A. SCOPE OF WORK FEASIBILITY STUDY SCHEDULE

The following schedule identifies the estimated project phases for this feasibility study and the estimated durations.

PROJECT PHASE	ESTIMATED DURATION (Calendar Days)
1. Site Access Approvals & Schedule Design Kick-off Meeting	14
2. Preliminary Draft Feasibility Study 25% (Minimum)	42
• <i>Project Team Review & Comment</i>	14
3. Final Draft Feasibility Study 75% (Minimum)	42
• <i>Project Team Review & Comment</i>	14
4. Final Feasibility Study 100%	42
• <i>Project Team Review & Approval</i>	14
5. Feasibility Study Report	42
• <i>Project Team Review & Approval</i>	14
6. Project Close Out Phase	30

B. CONSULTANT’S PROPOSED FEASIBILITY STUDY SCHEDULE

The Consultant shall submit the feasibility study schedule and its technical proposal that is similar in format and detail to the schedule depicted in **Exhibit ‘A.’** The Feasibility Study schedule developed by the Consultant shall reflect its recommended project phases, phase activities, and activity durations. At each phase, Preliminary, Final draft and Final, an in-person, single presentation will be made by the consultant to members of the of State Parks Forests &

Historic Sites, New Jersey Forest Fire, the project team, and any other internal or external stakeholders invited to attend.

A written narrative shall also be included with the technical proposal explaining the schedule submitted and the reasons why and how it can be completed in the time frame proposed by the Consultant.

This schedule and narrative will be reviewed by the Consultant Selection Committee as part of the evaluation process and will be assigned a score commensurate with clarity and comprehensiveness of the submission.

C. APPROVED FEASIBILITY STUDY SCHEDULE

The Consultant shall issue the approved schedule at the first kickoff meeting. This schedule will be binding for the Consultant’s activities and will include the start and completion dates for each activity. The Consultant and Project Team members shall use this schedule to ensure that all milestone dates are being met for the project. The Consultant shall update the schedule to reflect performance periodically (minimally at each study phase) for the Project Team review and approval. Any recommendations for deviations from the approved design schedule must be explained in detail as to the causes for the deviations(s) and impact to the overall project schedule.

V. PROJECT SITE LOCATION & TEAM MEMBERS

A. PROJECT SITE ADDRESS

The location of the project site is:

Proposed Location #1

NJDEP Brendan T. Byrne State Forest Maintenance Yard/Building
Mile Marker 1
Highway Route 72 East
Woodland Township, Burlington County, NJ, 08088
GPS Coordinates: 39.895857, -74.577159

Proposed Location #2

NJDOT Four Mile Maintenance Yard
State Highway 70 (east of Route 72 circle)
Woodland Township, Burlington County, 08088
GPS Coordinates: 39.901006, -74.593621

Existing Location

NJ Forest Fire Service Facility (co-located with Division C Headquarters)
5555 Atlantic Avenue
Mays Landing, Atlantic County, NJ 08330
GPS Coordinates: 3 -9.4485559, - 74.7346923

See **Exhibit ‘B’** for the project site location map.

B. PROJECT TEAM MEMBER DIRECTORY

The following are the names, addresses, and phone numbers of the Project Team member(s).

1. Department of Environmental Protection:

Name: William C. White, Construction Mgmt. Specialist 2
Address: Department of Environmental Protection
275 Freehold-Englishtown Road
Englishtown, NJ 07726
Phone No: (609) 802-5886
E-Mail: William.White@dep.nj.gov

VI. PROJECT DEFINITION

A. BACKGROUND

The New Jersey Forest Fire Service protects life, property, and natural resources from the dangers of wildfire. Fire suppression vehicles used by the Forest Fire Service are specialized constructed equipment that are built and maintained within divisional maintenance locations across New Jersey. To carry out its fire suppression mission and while supporting and furthering the ability of the Forest Fire Service much of the NJ Forest Fire Service equipment requires modification to be useful in forest fire suppression. The development for modifying the specialized fire protection equipment conversion is accomplished at the Forest Fire Equipment Research and Development Facility located in Mays Landing (see **Exhibit ‘B’** Project Site Location Map).

B. FUNCTIONAL DESCRIPTION OF THE BUILDING

The NJ Forest Fire Service (NJFFS) Research and Development (R&D) Facility in Mays Landing is collocated with the Division C Headquarters Forest Fire Service. The existing location in Mays Landing is too small for efficient operation and does not have the room to expand the facility. The existing R&D Facility in Mays Landing is a maintenance shop and is not open to the public. A future R&D Facility, centrally located in New Jersey (see **Exhibit ‘B’** Project Site Location Map), is ideal region for a future facility as this area experiences the highest fire risk and equipment needs of New Jersey. The two potential locations to be evaluated are the Brendan T. Byrne State Forest Maintenance Yard and the NJDOT Maintenance Yard on State Highway 70. A separate project no. P1376-00 at the Brendan T. Byrne State Forest is underway with the intention of constructing a new office building (see **Exhibit ‘B’** Project Site Location Map).

VII. CONSULTANT DESIGN RESPONSIBILITIES

A. FEASIBILITY STUDY REQUIREMENTS

1. General

A Feasibility Study shall be conducted in consultation with the NJ DEP, State Parks Forests & Historic Sites, NJ Forest Fire Service, and the project team, for relocating the existing NJ Forest Fire Service R&D Facility from Mays Landing to two proposed locations in Woodland Township. The two potential locations to be evaluated are the Brendan T. Byrne State Forest Maintenance Yard and the NJDOT Maintenance Yard near State Highway 70 (see **Exhibit ‘B’** Project Site Location Map).

The Feasibility Study for the new NJ Forest Fire Service R&D Facility shall be an evaluation to produce a new code-compliant facility at each of the potential locations while incorporating the design requirements as stated below:

- A design based on recreating the floor plan of the MDNR Forest Fire Experiment Station in Roscommon, Michigan (see **Exhibit ‘C’** Example).
- An alternate design using **Exhibit ‘C’** for a footprint of less than 15,000 sq.ft. while incorporating the same internal components of the manufacturing areas and reducing the office areas, as necessary.
- Include the amenities listed in the provided ‘Future Research and Development Facility’ report.
- A 208 Volt 3-phase electrical system (minimum) with electric supply and switch gear equipment sufficient for the load of the facility.
- A single exterior parking lot design for approximately 8-12 vehicles and as per ADA/Barrier Free codes and standards.

2. Utility/ Infrastructure Evaluation

The Feasibility Study shall include an investigation of all utility sources and the existing supply at each of the potential locations including electric, water, and gas.

Based on the new facility design and floor plan design requirements outlined above, the Feasibility Study shall include the necessary utility infrastructure requirements for supporting the facility’s operation, equipment, and machinery. The Consultant shall investigate and make recommendations for improving or upgrading the required utility infrastructure at each potential location.

The Feasibility Study shall include the required design documentation and forms to coordinate the required work or upgrades with each utility company.

3. Permitting/ Regulatory Requirements

The Feasibility Report shall identify all State and Federal Regulatory Agency approvals and permits that will govern and affect the work proposed in the study. An itemized list of these approvals and permits shall be included for each location and the total amount of the application fees should be included as part of the CWE. Note that the sites are located within the Pinelands National Reserve.

4. Cost Estimates

Based on the new facility design requirements outlined above, an evaluation shall be conducted to provide the cost estimates of the new facility at each of the locations.

The cost estimates shall include a summary of the design and construction costs to support the facility's operation, equipment, and machinery.

B. FEASIBILITY STUDY REPORT

The Feasibility Study Report shall be a compilation of all the information requested in this Scope of Work and identified in Section XV of this document entitled "Contract Deliverables". It is suggested that the document be divided into the following sections. The Consultant may add sections as necessary:

- Executive Summary
- Purpose, Limitations and Process
- Existing Conditions, Requirements & Recommendations
 - General Construction
 - Lighting
 - Fire Protections Systems
 - Plumbing Systems
 - Heating, Ventilation and Air Conditioning Systems
 - Electrical Systems
 - Fire Alarm and Security Systems
 - Water Distribution Systems
 - Sanitary Systems
 - Storm Drainage Systems
- ADA Compliance
- Recommendations
- Cost Estimates
- Exhibits & Addendums
 - Site Location Maps
 - Photographs
 - Floor Plans

The document shall contain a narrative of the surveys, inspections, and investigations conducted for each item listed.

The Feasibility Study shall include recommendations by the Consultant for the demolition, replacement, repair, and/or upgrade of each building component and shall be described and prioritized based on design requirements and code compliance.

All recommendations shall include estimates of costs. All floor plan drawings, surveys, utility schematics and colored photographs related to the buildings and their components shall be included for reference. All survey data, interviews, field notes, cost calculations, review comments, etc. shall be included in the study as an addendum.

The Consultant shall make an oral presentation of the study to the Project Team members at the preliminary and final study phase. All study evaluations and recommendations shall be discussed at each presentation.

C. FEASIBILITY STUDY MEETINGS & PRESENTATIONS

1. Feasibility Study Meetings

Conduct the appropriate number of review meetings with the Project Team members during each phase of the project so they may determine if the project meets their requirements, question any aspect of the contract deliverables, and make changes where appropriate. The Consultant shall describe the philosophy and process used in the development of the criteria and the various alternatives considered to meet the project objectives. Selected studies, sketches, cost estimates, schedules, and other relevant information shall be presented to support the design solutions proposed.

It shall also be the responsibility of the Consultant to arrange and require all critical Sub-Consultants to be in attendance at the review meetings.

Record the minutes of each design meeting and distribute within three (3) calendar days to all attendees and those persons specified to be on the distribution list by the Project Manager.

2. Feasibility Study Presentations

The minimum number of design presentations required for each phase of this project is identified below for reference:

Preliminary Draft Feasibility Study Phase: One (1) oral presentation at phase completion.

Final Draft Feasibility Study Phase: One (1) oral presentation at phase completion.

Final Feasibility Study Phase: One (1) oral presentation at phase completion.

D. EXISTING DOCUMENTATION

Copies of the following documents will be provided to each Consulting firm at the pre-proposal meeting to assist in the bidding process.

- Future Research and Development Facility Report, January 30, 2025, NJ Forest Fire Service
- MDNR Forest Fire Experiment Station, Roscommon, MI, July 1, 2013, James S. Bates Architect
- NJDOT Building Upgrades List for 4 Mile Location

Review these documents and any additional information that may be provided at a later date such as reports, studies, surveys, equipment manuals, as-built drawings, etc. The State does not attest to the accuracy of the information provided and accepts no responsibility for the consequences of errors by the use of any information and material contained in the documentation provided. It shall be the responsibility of the Consultant to verify the contents and assume full responsibility for any determination or conclusion drawn from the material used. If the information provided is insufficient, the Consultant shall take the appropriate actions necessary to obtain the additional information required.

All original documentation shall be returned to the provider at the completion of the project.

VIII. PROJECT CLOSE-OUT PHASE

The DPMC Project Manager has the full responsibility for the planning, scheduling, and execution of project close-out activities. The A/E is responsible to cooperate with the DPMC Project Manager in the planning, scheduling, and execution of project close-out activities. The Consultant shall refer to the DPMC “Procedures for Architects and Engineers Manual”, Paragraph “19. PROJECT CLOSE-OUT PHASE” for all requirements available at <https://www.nj.gov/treasury/dpmc/Assets/Files/ProceduresforArchitectsandEngineers.pdf>.

X. CONTRACT DELIVERABLES

The following are checklists listing the Contract Deliverables that are required at the completion of each phase of this project. The Consultant shall refer to the DPMC publication entitled “Procedures for Architects and Engineers,” 3.0 Edition, dated September 2022 available at <https://www.nj.gov/treasury/dpmc/Assets/Files/ProceduresforArchitectsandEngineers.pdf> for a detailed description of the deliverables required for each submission item listed. References to the applicable paragraphs of the “Procedures for Architects and Engineers” are provided.

Note that the Deliverables Checklist may include submission items that are “S.O.W. Specific Requirements.” These requirements will be defined in the project specific scope of work and included on the deliverables checklist.

This project includes the following phases with the deliverables noted as “Required by S.O.W” on the Deliverables Checklist:

- PRELIMINARY DRAFT FEASIBILITY STUDY;**
- FINAL DRAFT FEASIBILITY STUDY;**
- FINAL FEASIBILITY STUDY;**
- FEASIBILITY STUDY REPORT; and**
- PROJECT CLOSE-OUT PHASE**

XI. EXHIBITS

- A. SAMPLE PROJECT SCHEDULE FORMAT**
- B. PROJECT SITE LOCATION MAP**
- C. MDNR FOREST FIRE FACILITY ‘EXAMPLE’**

END OF SCOPE OF WORK

Deliverables Checklist Feasibility Study

A/E Name: _____

A/E Manual Reference	Submission Item	Required by S.O.W.		Previously Submitted		Enclosed	
		Yes	No	Yes	No	Yes	No
14.4.1.	A/E Statement of Site Visit						
14.4.2.	Narrative Description of Project						
14.4.3.	Building Code Information Questionnaire						
14.4.4.	Space Analysis						
14.4.5.	Special Features						
14.4.6.	Catalog Cuts						
14.4.7.	Site Evaluation						
14.4.8.	Subsurface Investigation						
14.4.9.	Surveys						
14.4.10.	Arts Inclusion						
14.4.11.	Design Rendering						
14.4.12.	Regulatory Approvals						
14.4.13.	Utility Availability						
14.4.14.	Drawings (6 Sets)						
14.4.15.	Specifications (6 Sets)						
14.4.16.	Current Working Estimate/Cost Analysis in CSI Format						
14.4.17.	Project Schedule						
14.4.18.	Formal Presentation						
14.4.19.	Plan Review/Scope of Work Compliance Statement						
14.4.20.	Design development Phase Deliverables Checklist						
S.O.W. Reference	S.O.W. Specific Requirements						
VII	Preliminary Draft Feasibility Study (6 Bound Copies + 1 Digital Copy in PDF Format)						
VII	Final Draft Feasibility Study (6 Bound Copies + 1 Digital Copy in PDF Format)						
VII	Final Feasibility Study (6 Bound Copies + 1 Digital Copy in PDF Format)						
VII	Feasibility Study Report (6 Bound Copies + 1 Digital Copy in PDF Format)						

This checklist shall be completed by the Design Consultant and included as the cover sheet of this submission to document to the DPMC the status of all the deliverables required by the project specific Scope of Work.

Consultant Signature

Date

Typical DPMC Project - Random Selection of Design Consultant

ID	Task Name	Start	Finish	Duration	Half 2, 2025							Half 1, 2026							Half 2, 2026							Half 1, 2027						
					A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M		
0	Typical Project Model	Mon 5/19/...	Fri 4/9/27	691 days																												
1	Project Initiation Phase	Mon 5/19/25	Mon 7/14/25	57 days																												
2	Project Funding Received	Mon 5/19/25	Mon 5/19/25	1 day																												
3	Schedule Site Visit	Thu 5/22/25	Thu 5/22/25	1 day																												
4	Site Visit	Fri 5/30/25	Fri 5/30/25	1 day																												
5	Prepare Draft SOW	Mon 6/2/25	Fri 6/6/25	5 days																												
6	Distribute Draft SOW for Review	Mon 6/9/25	Mon 6/9/25	1 day																												
7	Review SOW	Tue 6/10/25	Mon 6/23/25	10 days																												
8	Review SOW	Tue 6/10/25	Mon 6/23/25	10 days																												
9	Review SOW	Tue 6/10/25	Mon 6/23/25	10 days																												
10	Receive Comments Revise SOW	Tue 6/24/25	Mon 6/30/25	5 days																												
11	Distribute Final SOW for Review & Signature	Tue 7/1/25	Tue 7/1/25	1 day																												
12	Review & Sign SOW	Wed 7/2/25	Wed 7/2/25	1 day																												
13	Review & Sign SOW	Mon 7/7/25	Mon 7/7/25	1 day																												
14	Review & Sign SOW	Thu 7/10/25	Thu 7/10/25	1 day																												
15	Forward SOW to Procurement	Mon 7/14/25	Mon 7/14/25	1 day																												
16	Consultant Selection Phase	Tue 7/15/25	Mon 9/1/25	49 days																												
17	Prepare Solicitation, Advertise Proj	Tue 7/15/25	Wed 7/16/25	2 days																												
18	Select Firms - Random Selection	Thu 7/17/25	Thu 7/17/25	1 day																												
19	Conduct Preproposal Meeting	Mon 7/28/25	Mon 7/28/25	1 day																												
20	Consultant Questions Due - Prepare and Issue Addenda	Tue 7/29/25	Tue 7/29/25	1 day																												
21	Receive Proposals - Distribute for Review	Tue 8/12/25	Tue 8/12/25	1 day																												
22	Review & Rank Proposals	Wed 8/13/25	Tue 8/19/25	5 days																												
23	Review & Rank Proposals	Wed 8/13/25	Tue 8/19/25	5 days																												
24	Review & Rank Proposals	Wed 8/13/25	Tue 8/19/25	5 days																												
25	Determine Rankings, Open Fee Proposals and Distribute to Committee	Wed 8/20/25	Wed 8/20/25	1 day																												
26	Negotiate Fee	Thu 8/21/25	Wed 8/27/25	5 days																												
27	Provide Funding for Consultant Contract	Thu 8/28/25	Thu 8/28/25	1 day																												
28	Complete Recommendation to Award	Thu 8/28/25	Fri 8/29/25	2 days																												
29	Consultant Contract Award	Sat 8/30/25	Mon 9/1/25	2 days																												
30	Design Phase	Sun 9/7/25	Fri 5/8/26	244 days																												
31	Design Contract "Kick-Off" Meeting	Sun 9/7/25	Mon 9/8/25	2 days																												
32	Program Design Phase	Tue 9/9/25	Mon 10/6/25	28 days																												
33	Receive Program Submittal & Distribute for Review	Tue 10/7/25	Thu 10/9/25	3 days																												

EXHIBIT 'A'

Typical DPMC Project - Random Selection of Design Consultant

Project: Typical Project Model
 Date: Wed 4/9/25





















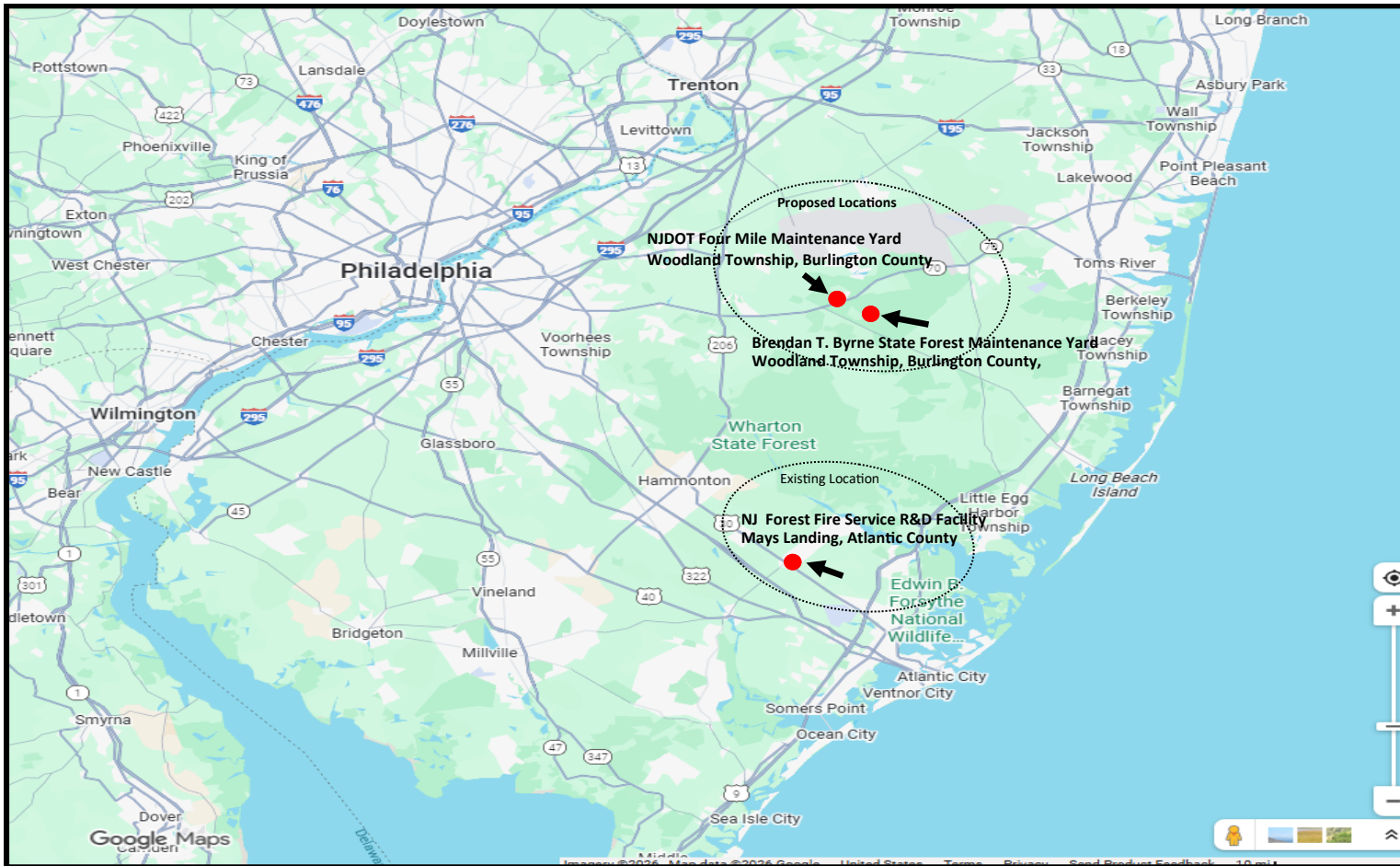
Task		Summary		External Milestone		Inactive Summary		Manual Summary Rollup		Finish-only		
Split		Project Summary		Inactive Task		Manual Task		Manual Summary		Deadline		
Milestone		External Tasks		Inactive Milestone		Duration-only		Start-only		Progress		

EXHIBIT 'A'

Feasibility Study

Existing & Proposed Locations #1 & #2



Project Site Location Map
NJ Forest Fire Service R&D Facility
EXHIBIT 'B'

Feasibility Study
Proposed Locations #1 & #2



Project Location Map
NJ Forest Fire Service R&D Facility
EXHIBIT 'B'

Feasibility Study
Proposed Location #1



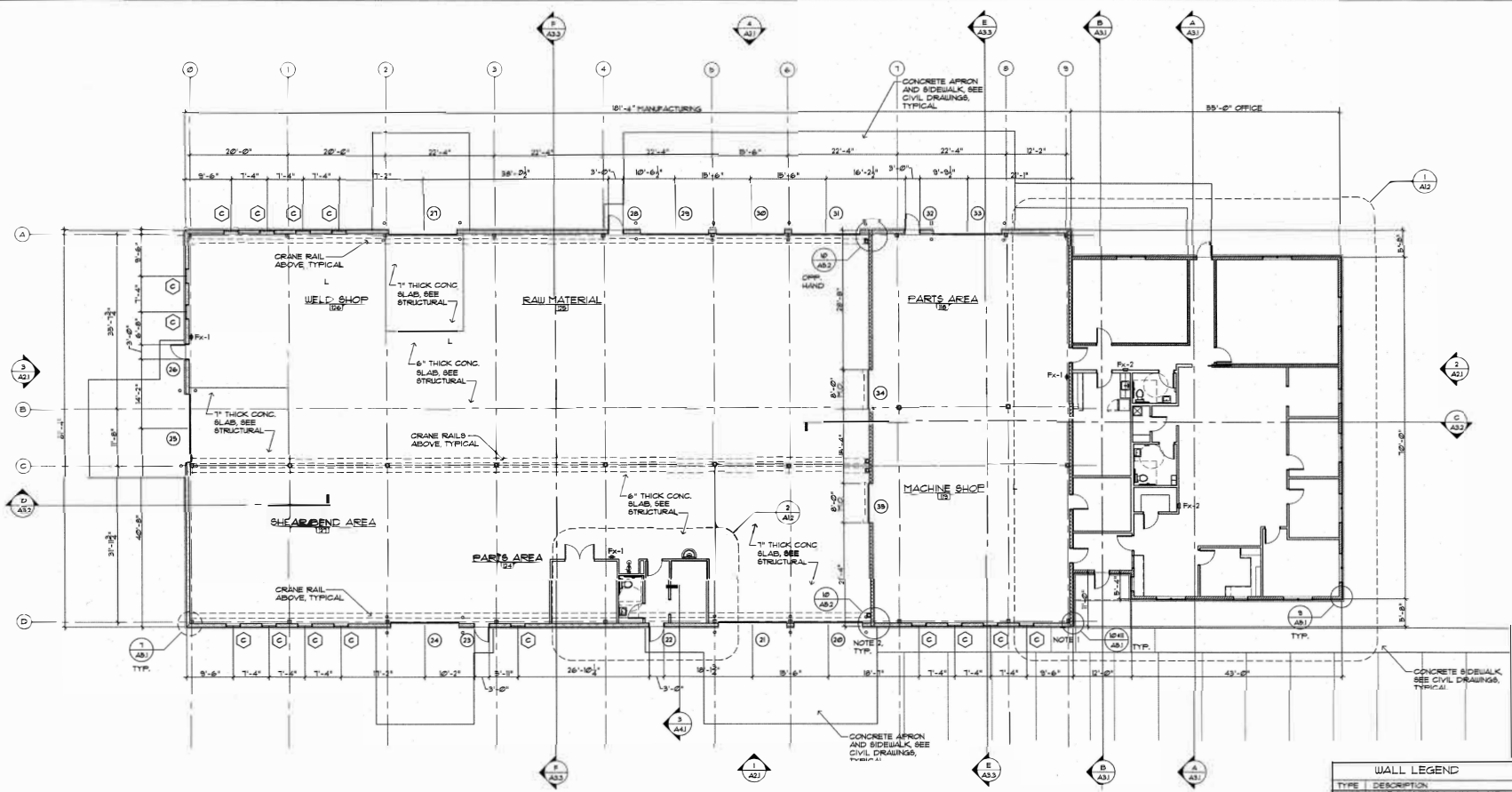
Project Site
NJ Forest Fire Service R&D Facility
EXHIBIT 'B'

Feasibility Study
Proposed Location #2



Project Site
NJ Forest Fire Service R&D Facility
EXHIBIT 'B'

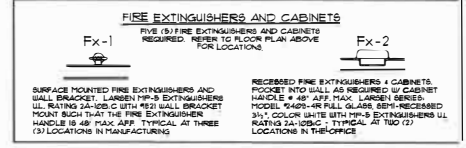
PROJECT MANAGER: UNIVERSITY MICROFILMS INTERNATIONAL, DOCUMENTS SERVICES, 300 NORTH ZEEB ROAD, ANN ARBOR, MI 48106-1500
 FIELD BOOK INFORMATION: BUILDING PLANS - FLOOR PLAN - REVISED: 6/22/2013 8:51 AM BY: JAB/MSJ
 PROJECT MANAGER: UNIVERSITY MICROFILMS INTERNATIONAL, DOCUMENTS SERVICES, 300 NORTH ZEEB ROAD, ANN ARBOR, MI 48106-1500



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

OFFICE AREA
 MANUFACTURING
 TOTAL

NOTES:
 1. ACCESSIBLE PARKING SIGN, SECURE TO SIDING PER SIDING MANUFACTURER'S RECOMMENDATIONS. REFER TO DRAWING C-20 FOR ADDITIONAL INFORMATION.
 2. CONCRETE FILLED STEEL PIPE BOLLARDS, PAINT SEE DETAIL ON DRAWING C-20 FOR ADDITIONAL INFORMATION. TYPICAL BOLLARDS ARE ON THE INTERIOR AND EXTERIOR OF EACH OVERHEAD DOOR.
 3. REFER TO STRUCTURAL DRAWINGS FOR BRIDGE CRANE INFORMATION.
 4. Fx-1 REFERS TO THE EXTINGUISHER LOCATIONS. SEE DETAILS ON THIS DRAWING.



GENERAL NOTES:
 1. ALL DIMENSIONS ARE TO THE FACE OF STUD ON EXTERIOR STUD WALL, FACE OF STUD ON INTERIOR STUD WALLS FACE OF CONCRETE FOUNDATION WALL, FACE OF CHU WALL, FACE OF GIRTS AT FIRE-ENGINEERED FRAME, OR TO THE CENTERLINE OF A WINDOW, DOOR OR OBJECT, UNLESS NOTED OTHERWISE.
 2. PROVIDE 'ECCOCELL' CELLULOSE BATT INSULATION AT ALL TOILET ROOM WALLS, FULL HEIGHT OF WALL.

WALL LEGEND

TYPE	DESCRIPTION
1	FIRE-ENGINEERED WALL SYSTEM WITH 8\"/>
2	6\"/>
3	3-HOUR FIRE BARRIER, 8\"/>
4	8\"/>
5	3-5/8\"/>
6	6\"/>
7	3-5/8\"/>
8	6\"/>

CODE COMPLIANCE

2009 MICHIGAN BUILDING CODE

USE AND OCCUPANCY CLASSIFICATIONS
 M01 Manufacturing P. Office
 M02 Manufacturing
 M03 Manufacturing

TYPE OF CONSTRUCTION
 1. Construction Classification
 2. Construction Classification
 3. Construction Classification

GENERAL BUILDING HEIGHTS AND AREAS
 1. Maximum Building Height
 2. Maximum Building Area
 3. Maximum Building Area

ADDITIONAL CODE ITEMS
 1. Occupancy
 2. Egress
 3. Fire Protection
 4. Mechanical
 5. Electrical
 6. Plumbing
 7. Energy Conservation
 8. Accessibility
 9. Other

ADDITIONAL CODE ITEMS
 1. Occupancy
 2. Egress
 3. Fire Protection
 4. Mechanical
 5. Electrical
 6. Plumbing
 7. Energy Conservation
 8. Accessibility
 9. Other

ENERGY EFFICIENCY
 1. Energy Conservation
 2. Energy Conservation
 3. Energy Conservation

Element	Non-Res. max. U	Residential
Roof	0.15	0.15
Walls	0.15	0.15
Floors	0.15	0.15
Windows	0.15	0.15
Doors	0.15	0.15
Partitions	0.15	0.15
Glazing	0.15	0.15
Other	0.15	0.15

STATE OF MICHIGAN
 DEPARTMENT OF TREASURY, MANAGEMENT AND BUDGET
 FACILITIES AND BUSINESS SERVICES ADMINISTRATION
 ROBERT C. HALL, RA, NCARB DIRECTOR

NOT VALID FOR CONSTRUCTION UNLESS SIGNED AND DATED

Wade Trim
 2711 Manassas, Ann Arbor, MI 48106
 734.963.9987
 www.wadetrिम.com

James S. Bates Architect
 Gaylord, Michigan
 989.756.9987
 www.jbatarchitect.com

MDNR FOREST FIRE EXPERIMENT STATION
 ROSCOMMON, MI
 FLOOR PLAN AND CODE COMPLIANCE
 ROSCOMMON, MI, FOREST FIRE EXPERIMENT STATION REPLACEMENT

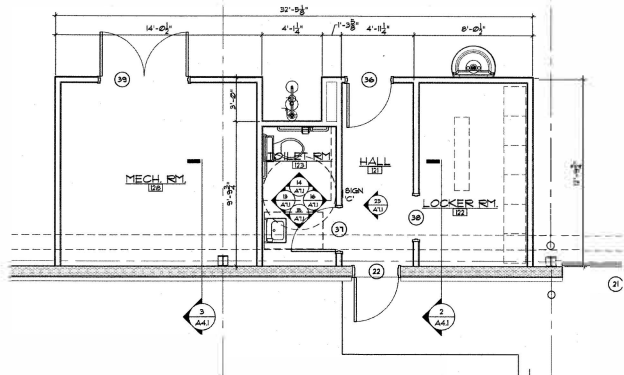
DATE: 6/22/2013
 REV: 1
 BY: JAB/MSJ

008 05
 LDM62022-010
 SHEET
 A1.1

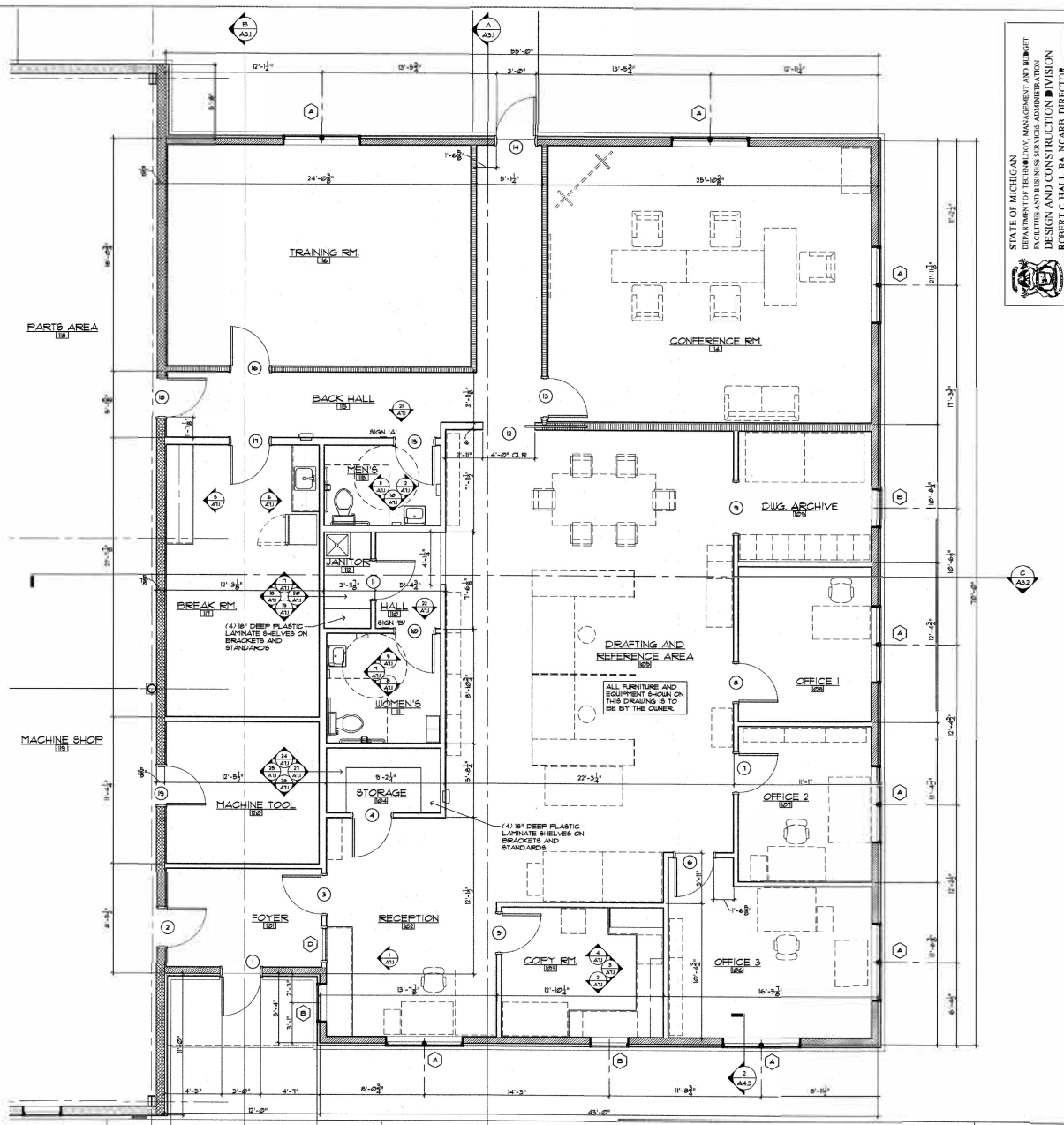
PROJECT MANAGER: CLUSTER/CM: BATES ARCHITECTURE/PROJECTS/1302 MORE FITS - ROSCOMMON UNIVERSITY/1302 PARTIAL FLOOR PLANS - PARTIAL FLOOR PLANS - 6/29/2017 12:38 AM BY JIM BATES

WALL LEGEND	
TYPE	DESCRIPTION
	PRE-ENGINEERED WALL SYSTEM WITH 6" GIRTS, 3" SINGLE SAVER [®] INSULATION, METAL WALL PANELS, AND SPLIT-FACE CMU BASE
	6" METAL STUDS AT 1'-4" O.C. WITH 5/8" GYPSUM WALL BOARD ON INTERIOR SURFACE AND 1/2" SHEATHING, 15" RIGID INSULATION, METAL WALL PANELS, AND SPLIT-FACE CMU BASE ON THE EXTERIOR SURFACE. PROVIDE R-15 BATT INSULATION BETWEEN STUDS
	3-HOUR FIRE BARRIER, 6" THICK REINFORCED CMU WALL. SEE STRUCTURAL. EXTEND WALL UP TO UNDERSIDE OF ROOF PANELS AND FILL WITH REMAINING CORES WITH VERMICULITE LOOSE FILL INSULATION
	8" THICK REINFORCED CMU WALL. SEE STRUCTURAL. EXTEND WALL UP TO UNDERSIDE OF ROOF PANELS AND FILL WITH REMAINING CORES WITH VERMICULITE LOOSE FILL INSULATION. PROVIDE 1/2" METAL FURRING STRIPS @ 1'-4" O.C. AND 5/8" GYPSUM BOARD ON OFFICE SIDE
	3-5/8" METAL STUDS @ 1'-4" O.C. WITH 5/8" GYPSUM WALL BOARD BOTH SIDES. EXTEND WALL UP TO THE UNDERSIDE OF THE ROOF TRUSSES
	6" LOAD BEARING METAL STUDS @ 1'-4" O.C. WITH 5/8" GYPSUM WALL BOARD BOTH SIDES. EXTEND WALL UP TO THE UNDERSIDE OF THE ROOF TRUSSES
	3-5/8" METAL STUDS @ 1'-4" O.C. WITH 5/8" GYPSUM WALL BOARD ONE SIDE, 1/2" RESILIENT CHANNELS @ 1'-4" O.C. AND 5/8" GYPSUM WALL BOARD ON THE OTHER. EXTEND WALL UP TO THE UNDERSIDE OF THE ROOF TRUSSES AND PROVIDE 3-1/2" ECOCELL [®] CELLULOSE BATT INSULATION BETWEEN STUDS AND THE FULL LENGTH AND HEIGHT OF WALL
	6" LOAD BEARING METAL STUDS @ 1'-4" O.C. WITH 5/8" GYPSUM WALL BOARD ONE SIDE, 1/2" RESILIENT CHANNELS @ 1'-4" O.C. AND 5/8" GYPSUM WALL BOARD ON THE OTHER. EXTEND WALL UP TO THE UNDERSIDE OF THE ROOF TRUSSES AND PROVIDE 3-1/2" ECOCELL [®] CELLULOSE BATT INSULATION BETWEEN STUDS AND THE FULL LENGTH AND HEIGHT OF WALL

GENERAL NOTES:
 1. ALL DIMENSIONS ARE TO THE FACE OF STUD ON EXTERIOR STUD WALL, FACE OF STUD ON INTERIOR STUD WALL, FACE OF CONCRETE FOUNDATION WALL, FACE OF CMU WALL, FACE OF GIRTS AT PRE-ENGINEERED FRAMES, OR TO THE CENTERLINE OF A WINDOW, DOOR OR OBJECT, UNLESS NOTED OTHERWISE.
 2. PROVIDE ECOCELL[®] CELLULOSE BATT INSULATION AT ALL TOILET ROOM WALLS, FULL HEIGHT OF WALL.



2 PARTIAL FLOOR PLAN NORTH CALLED NORTH
 A12 1/4" = 1'-0"



1 PARTIAL FLOOR PLAN NORTH CALLED NORTH
 A12 1/4" = 1'-0"

STATE OF MICHIGAN
 DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
 FACILITIES AND BUSINESS SERVICES ADMINISTRATION
 DESIGN AND CONSTRUCTION DIVISION
 ROBERT C. HALL, RA, NCARB, DIRECTOR

NO.	DATE	DESCRIPTION
1	7-11-17	BIDDING
2		
3		
4		
5		
6		
7		
8		
9		
10		

NOT VALID FOR CONSTRUCTION UNLESS SIGNED AND DATED:
WadeTRIM
 3717 W. MICHIGAN AVE., P.O. BOX 113
 FARMINGTON HILLS, MI 48334-1133
 (248) 852-2800
 FAX: (248) 852-2801
 www.wadetrims.com

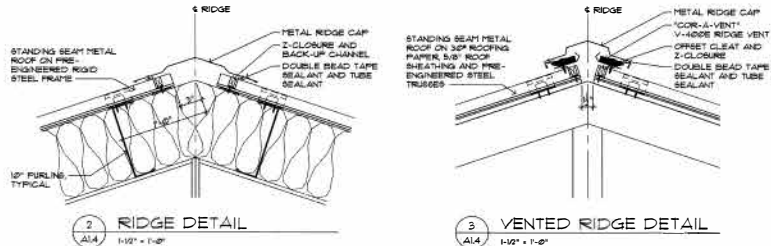
James S. Bates Architect
 5485 Chetaw Ct.
 Goshok, Michigan
 www.jbsarchitect.com

MDNR FOREST FIRE
 EXPERIMENT STATION
 ROSCOMMON, MI
 PARTIAL FLOOR PLANS
 MDNR ROSCOMMON, MI, FOREST FIRE EXPERIMENT STATION REPLACEMENT

JOB NO: DMB2022-016
 SHEET: A1.2

EXHIBIT 'C'

PROJECT MANAGER - CLAUDE VAN NESTER; DOCUMENTS BY - JAMES S. BATES ARCHITECT; PROJECT NO. 2022-016; DATE: 07/27/2023; 10:52 AM BY: JM BATES



ROOF VENTILATION (OFFICE WING ONLY)

ENCLOSED ATTIC SHALL HAVE CROSS VENTILATION FOR EACH SEPARATE SPACE. THE NET FREE VENTILATING AREA SHALL NOT BE LESS THAN 1/600 OF THE AREA OF THE SPACE VENTILATED, WITH 50% OF THE VENTING FOR EACH OF THE ROOF AND EAVE.

ROOF VENTING PRODUCTS ARE AS FOLLOWS:

RIDGE
 RIDGE VENT = 17 sq. ft. OF NET FREE VENT AREA (NFVA) PER LINEAL FOOT
 WALL LOUVER = 10 sq. ft. OF NFVA PER LINEAL FOOT

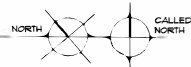
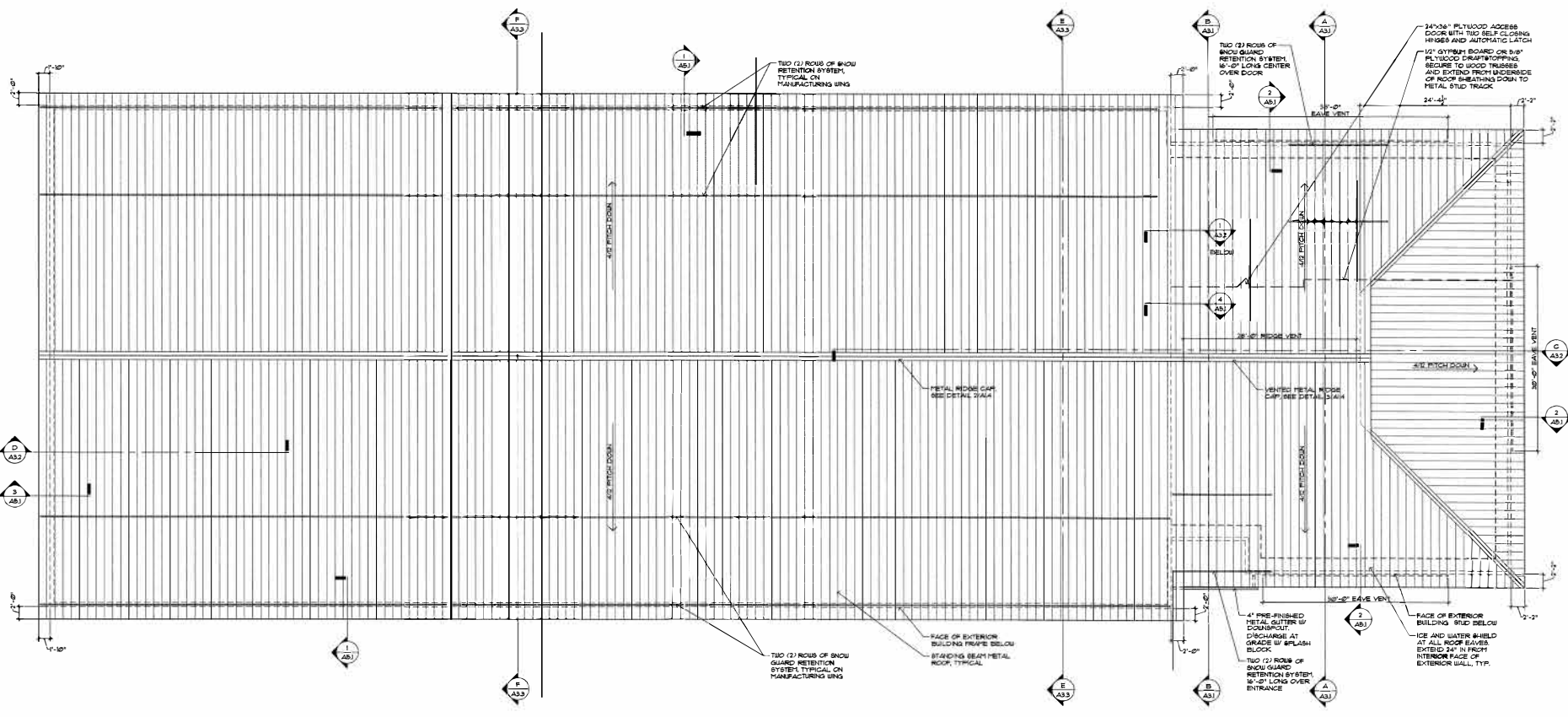
EAVE
 THE REQUIRED VENTILATION IS AS FOLLOWS:

1. OFFICE ROOF, 3800 #R300 = 583 SF (1340 sq. ft.) REQUIRED
 RIDGE VENT 304 sq. ft. REQUIRED
 RIDGE VENT 28 IF PROVIDED = 17 sq. ft. PER FOOT = 476 sq. ft.
 WALL LOUVER (3'-6") = APPROX. 900 sq. ft.
 TOTAL PROVIDED AT RIDGE = 976 sq. ft.
 EAVE = 976 sq. ft. / 10 sq. ft. PER FOOT = 97.6' IF REQUIRED AND PROVIDED

NOTES:

- INSTALL ICE & WATER SHIELD OVER ROOF SUBSTRANCE AT ALL ROOF EAVES 24" IN FROM INTERIOR FACE OF THE EXTERIOR WALL OF THE OFFICE WING.
- ALL VENT PIPING SHALL BE FLASHED AND SEALED PER ROOF MANUFACTURERS RECOMMENDATIONS.

STATE OF MICHIGAN
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 FACILITIES AND BUSINESS SERVICES ADMINISTRATION
 DESIGN AND CONSTRUCTION DIVISION
 ROBERT C. HALL, RA, NCA, RB, DIRECTOR



NO.	DATE	DESCRIPTION
7	11/1/2023	ISSUED FOR PERMITS

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Wade Trim
 271000 N. 200th Ave., Suite 104
 Grand Rapids, MI 49508
 616.221.2000
 www.wadetrims.com

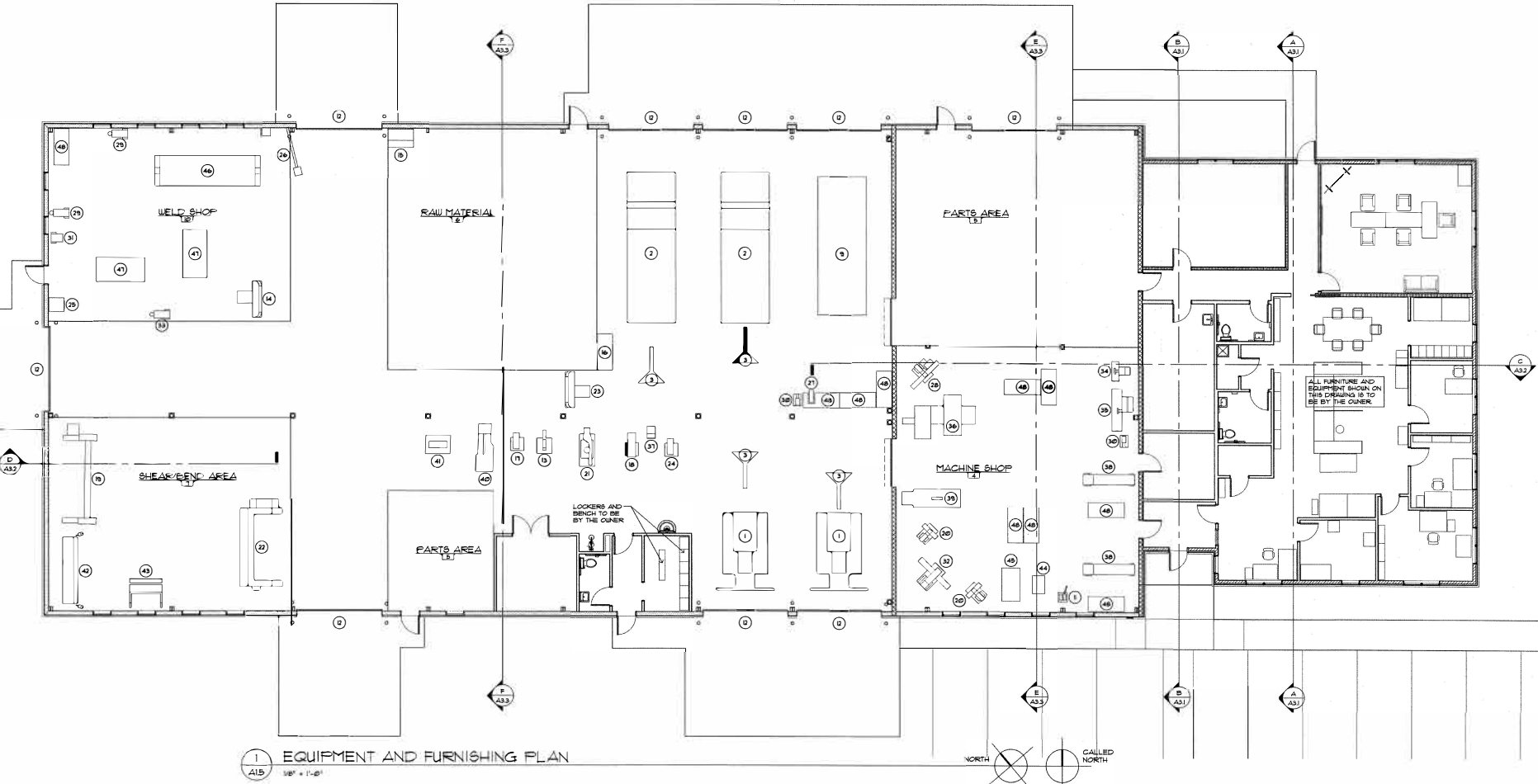
James S. Bates Architect
 Gaylord, Michigan
 5459 Chudow Ct.
 989.356.9597
 www.jbsaarchitect.com

MDNR FOREST FIRE
 EXPERIMENT STATION
 ROSCOMMON, MI
 ROOF PLAN AND DETAILS

DATE: 07/27/2023
 SHEET: DMB2022-016
A1.4

EXHIBIT 'C'

PROJECT MANAGER: CLUBVIEW INTL DOCUMENTS/ JAMES S. BATES ARCHITECTURE PROJECT/ 1502 WOOD FIELD - ROSCOMMON UNIMMEDIATE/ EQUIPMENT AND FURNISHING PLAN - PLOTTED 12/27/2013 10:43 PM BY JAM BATES



1
A15
EQUIPMENT AND FURNISHING PLAN
1/8" = 1'-0"

SHOP EQUIPMENT SCHEDULE			
ITEM	POWER REQ'D	DESCRIPTION	QTY
1		CRAILER TRACTOR	2
2		FRP 6X6 ENGINE	2
3		FRP FUELIE FLOW	2
4		MACHINE SHOP	4
5		PARTS AREA	2
6		RAW MATL STORAGE AREA	1
7		SHEAR & BEND AREA	1
8		SHOP FLOOR TOTAL	1
9		TRUCK HOIST, PORTABLE	1
10		WELD SHOP AREA	1
11		SHARPENING DRILL	1
12	100V 1 PH	OVERHEAD DOOR 14 X 14	9
13	100V 1 PH	RADIAL PRESS	1
14	100V 1 PH 63A	SAW HORIZONTAL BAND 100V	1
15	100V 1 PHASE/COMP AIR 20 PSI	BAND BLAST CABINET	1
16	10/220V - 1 PH 1000A	STD HOSE ASST BENCH	1
17	10/220V - 1 PH 3024/8.5A	VERTICAL BAND SAW 11"	1
18	220/440 - 3 PHASE 32476.7A	SAW VERTICAL BAND 36"	1
19	220/440 - 3 PHASE 31438.1A	BRAKE 65 TON	1
20	220/440V - 3 PHASE 46/23A	MILL VERTICAL SERIES 1	2
21	220/440V - 3 PHASE 84/42A	DRILL PRESS, RADIAL ARM	1
22	220/440V 3 PH 2036A	SHEARS	1
23	220/440V 3 PHASE 6/3A	SAW HORIZONTAL BAND 440V	1
24	220V - 1 PH 28A	VERTICAL BAND SAW 10"	1

ITEM	POWER REQ'D	DESCRIPTION	QTY
25	220/440 1 PH 26/148A	WELDER STICK/TIG	1
26	220/440 3 PH 302/83A	WELDER FIXED BOOM	1
27	220/440 3 PH 310A	BENCHTOP DRILL PRESS	1
28	220/440V - 3 PH 33/17A	MILL VERTICAL SERIES 1 CNC	1
29	220/440V 1 PH 42/21A	WELDER PORTABLE 300A	2
30	220/440V 3 PH 84/42A	BELT SANDER	2
31	220V 1 PH 46A	PLAZMA	1
32	220V - 3 PHASE 6.6A	MILL VERTICAL SERIES 2	1
33	220V 1 PH 22A	WELDER PORTABLE	1
34	440V - 3 PH 21A	GRINDER SURFACE 6"X11"	1
35	440V - 3 PH 33A	GRINDER SURFACE LIMBE	1
36	440V - 3 PH 18A	MILL HORIZONTAL BORING	1
37	440V 3 PH 25A	PANDBAU BLADE WELDER	1
38	440V - 3 PH 8A	LATHE SCHEIDT	2
39	440V - 3 PHASE 9A	SAW VERTICAL BAND, PEELLESS	1
40	440V 3 PH 6.5A 100V 1 PH	IRON WORKER - 65 TON	1
41	COMPRESSED AIR 100 PSI	H-RIPS FIRE	1
42	NONE	BRAKE HAND	1
43	NONE	SHEAR FOOT	1
44	NONE	SURFACE TABLE GRANITE	1
45	NONE	SURFACE TABLE STEEL	1
46	NONE	TANK FUTURE	1
47	NONE	WEL TENCH	2
48	NONE	WORK BENCH	10

STATE OF MICHIGAN
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FACILITIES AND BUSINESS SERVICES ADMINISTRATION
DESIGN AND CONSTRUCTION DIVISION
ROBERT C. HALL, RA, NCARB, DIRECTOR

MDNR FOREST FIRE
EXPERIMENT STATION
ROSCOMMON, MI
EQUIPMENT AND FURNISHING PLAN
MONT ROSCOMMON, MI, FOREST FIRE EXPERIMENT STATION REPLACEMENT

DATE: 12/27/2013
BY: JAM BATES

SCALE: AS SHOWN

NOT VALID FOR CONSTRUCTION UNLESS SIGNED AND DATED.

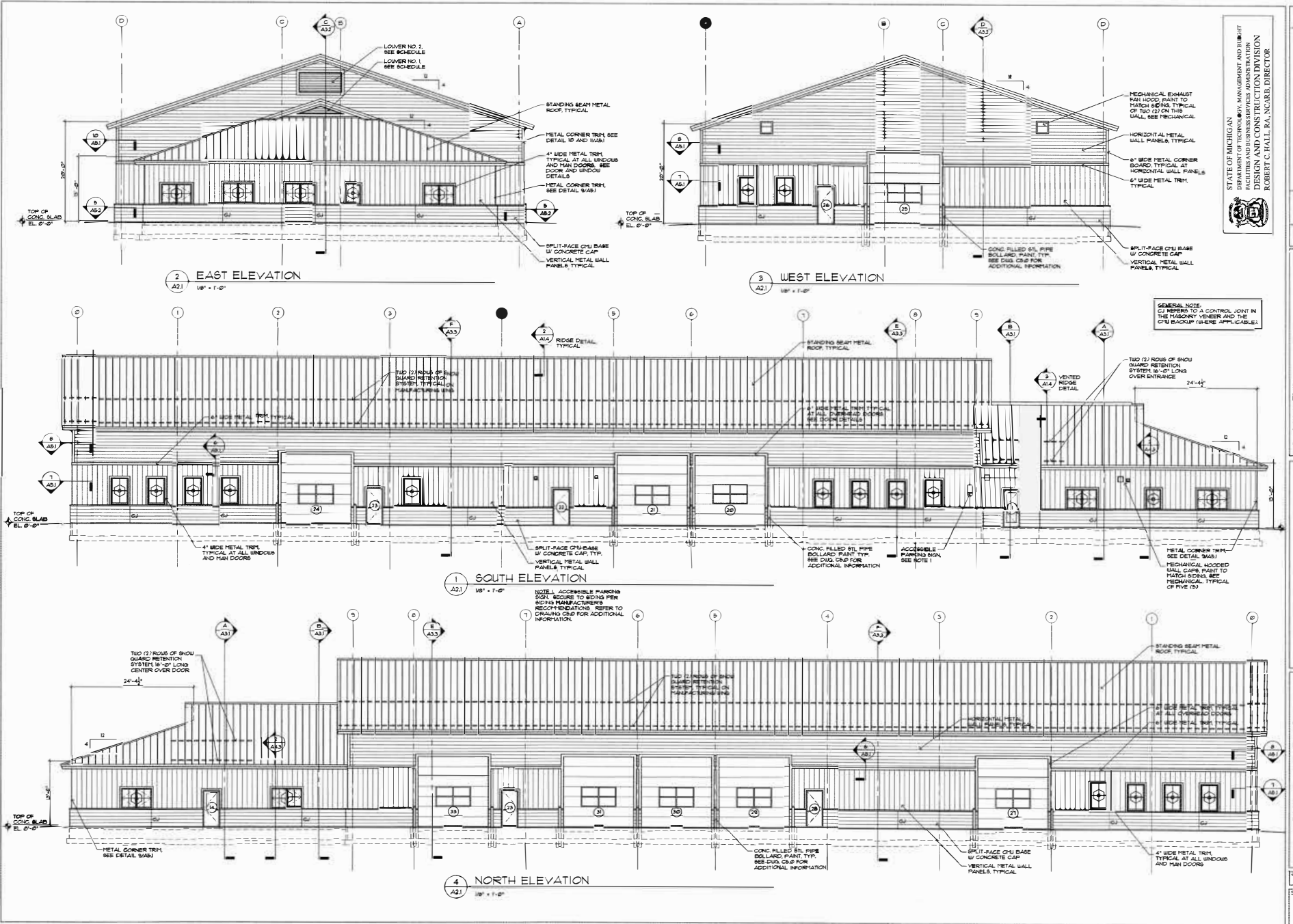
James S. Bates Architect
5459 Choclaw Ct.
Cayler, Michigan
www.jbsatesarchitect.com
989.350.9597

WadeTrim
27100 WOODBURN RD, SUITE 100
ROSCOMMON, MI 48867
www.wadetrims.com

SHEET
A1.5

EXHIBIT 'C'

PROJECT: VEHICLE COUNTERMOUNT DOCUMENT: JAMES S. BATES ARCHITECT/PROJECT: 132 MAIN FETS - ROSCOMMON/INVEST: 132 BUILDING PLANS/DATE: - PLOTTED: 6/29/2013 9:10 AM BY: JIM BATES



STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY MANAGEMENT AND SUPPORT
FACILITIES AND BUSINESS SERVICES ADMINISTRATION
DESIGN AND CONSTRUCTION DIVISION
ROBERT C. HALL, BA, NCARB, DIRECTOR

MDNR FOREST FIRE EXPERIMENT STATION ROSCOMMON, MI
EXTERIOR ELEVATIONS
JOB NO. DWB2022-01C
SHEET A2.1

DATE: 7-1-13
BIDDING

UNLESS SHOWN OTHERWISE, ALL DIMENSIONS ARE IN FEET AND INCHES.
UNLESS SHOWN AND DATED:
WADETRIM
5489 Cheddaw Ct.
Gaylord, Michigan 49735
989.356.9597
www.jamesbatesarchitect.com

James S. Bates Architect
Gaylord, Michigan
www.jamesbatesarchitect.com

MDNR FOREST FIRE EXPERIMENT STATION REPLACEMENT

EXHIBIT 'C'