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AGRICULTURAL INSPECTION AND ASSESSMENT OF EIGHT AGRICULTURAL BUILDINGS AT THE TEMPLETON DEVELOPMENTAL CENTER STRUCTURAL ASSESSMENT BASIS AND METHODOLOGY

August 4, 2019

PROGRAM

This structural assessment complements the building envelope assessment performed by McGinley Kalsow & Associates for Brown, Richardson, & Rowe, Inc. The purpose is to evaluate the capacity and repair needs for eight agriculture buildings at the former Templeton Developmental Center for the Department of Capital Asset Management (DCAMM), the Massachusetts Department of Agriculture Resources (MDAR), and the Executive Office of Energy and Environmental Affairs (EOEEA). These buildings are contributing historical assets which require indefinite maintenance. The State is evaluating the potential to invest limited funds to make these buildings viable for lease to fund indefinite maintenance.

METHODOLOGY

This assessment was carried out with a visual survey of these buildings during June and July of 2019, mapping the principal framing components, noting conditions, and documenting with photographs. The collected data provided the basis of analysis of representative structural components to evaluate member strength. The report will include an assessment for each building in its own chapter.

CODE LOADING COMPLIANCE

Massachusetts State Building Code (MSBC), Ninth Edition, is the present standard for building construction in the Commonwealth. It is based on the 2015 International Building Code (IBC 2015). This code points to another code for work on existing buildings, the 2015 International Existing Building Code (IEBC 2015). In addition, the State publishes the Massachusetts Amendments (MA) to these codes. In general, existing buildings are permitted to continue service if they met original building codes and have no dangerous conditions. The buildings surveyed were built over a period extending from the late 1800's to the mid 1900's.

The loads critical to these structures are as follows: snow and dead load on roofs, wind on roofs and walls, and live loads on floors. The Massachusetts Amendments give the following design parameters for the Templeton area:

Ground snow load 60 psf Flat roof snow load 35 psf Design wind speed 108 mph Templeton Developmental Center Structural Assessment Basis and Methodology August 4, 2019 Page 2

Short seismic acceleration 0.187g
One second seismic acceleration 0.069g

These loads are combined using Allowable Stress Design method formulas from the Building Code.

The code does not offer specific live load requirements for agricultural use. It leaves this to the local building official and building owner.

The snow loading is further modified to account for roof pitch, heat loss through the roof, local terrain shielding from wind, and slipperiness of roofing. The design snow loads will vary from 25 to 36 psf.

Wind loading is determined based on a complex set of factors that figure to 25 psf for walls and an average of 16 psf vertical profile on the roofs. The roof profile is figured from pressures perpendicular to the surfaces.

As the buildings are single story (some with lofts), made of wood, and are largely open making them lightweight, wind will easily dominate over seismic loading for lateral load evaluation needs. No attempt is made for seismic loading.

BUILDING TYPES

Four buildings (Elliot Horse Barn, Elliot Upper Barn, Brook House Barn, and the Horse Barn), are classic traditional barns where they are framed as post and beam structures. The exterior walls are vertically boarded onto girts, and the roofs are sheathed with boards on rafters.

The Old Cow Barn is a composite of concrete, steel, and wood framing.

The Greenhouse main wing is a concrete masonry block wall structure supporting prefabricated wood truss roof. The wings are extruded aluminum fabricated frames infilled with glass.

The Elliot Office is much like a typical house framing of the period.

The Morton Shed is a light wood framed accessory building.

CAPACITY

Wood material strength is based upon values published in the National Design Specification for Wood Construction 2015 published by the American Wood Council. The species used for lumber is Eastern Softwoods, Select Structural and Number one grades. Those for timber is the Spruce-Pine-Fir, Select Structural and Number one grades for both Beams and Stringers and Posts and Timbers.

The roofs, walls, and posts are checked for Code snow and wind loading. These are natural forces for which we cannot control and therefore must meet.

The floors are checked for existing capacity given their framing conditions. The choice here is to accept their limited capacity or strengthen for a higher load demand depending upon the occupant's needs.

Templeton Developmental Center Structural Assessment Basis and Methodology August 4, 2019 Page 3

All the buildings are evaluated for lateral strength for stability and ability to resist wind loading based upon "box Building" concept of structure. This is the resistance of lateral forces by wall and roof framing carried into the roof diaphragm and then in turn carried to end or side walls parallel to the applied wind force. Herein, the gable wall will be called the end wall, and the eave wall will be the side wall. The knee bracing one sees in a traditional post and beam structure is intended for the buildings to plumb and stabilize the building as it is built. The knee bracing has very little capacity to resist wind loading. The integrity of the roof and wall diaphragms and nailing to joining members are critical in maintaining lateral strength of these buildings.

REPAIRS

Buildings are prone to degrade over time and need indefinite maintenance. Some causes of deterioration can greatly accelerate deterioration and should be avoided. Wood rots, which is a biological process of organisms eating wood when sufficiently moist and warm. Steel rusts as chemical processes oxidize the iron content.

Maintenance

In most of the barns, there is debris on the floors and on top of the wall sills. This can lead to an environment that will invite wood eating organisms. Remove floor debris.

The steel pipes in the cellars are susceptible to rusting where animal's acidic urine and other sources of water get into the ground around the bottoms of steel pipes. These need to be kept dry as do the wood posts.

The sills and the attachment of the siding to them require integrity to carry diaphragm forces into the foundation. These need periodic survey and possible repairs.

The choice of metal roofing for replacement is a wise choice as the metal is more slippery than asphalt shingles which will reduce snow load demands.

REPORTING DOCUMENTS

The narrative report includes this overview and eight sub-reports, one for each building.

See the Coordinated Repair Matrix prepared by McGinley Kalsow & Associates and amended by MacLeod Consulting, Inc. for a summery of repairs.

See Structural Framing Drawings attached to this report for schematic illustrations of the building structures.

Sincerely,

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AGRICULTURAL INSPECTION AND ASSESSMENT OF EIGHT AGRICULTURAL BUILDINGS AT THE TEMPLETON DEVELOPMENTAL CENTER STRUCTURAL ASSESSMENT ELLIOT HORSE BARN

August 5, 2019

BUILDING DESCRIPTION

The Elliot Horse Barn is a traditional wood framed post and beam structure with horizontal girts supporting vertical board sheathing covered with wood shingles. A replacement metal roof covers wood rafters supported on the walls and wood purlins. The main building has a basement level and is supported on rubble stone foundation walls. The side shed appears to be a concrete slab on grade. The basement and side shed are occupied by pigs. Chickens also use the side shed and main floor.

FLOOR AND ROOF LOAD CAPACITY

Main roof

The 2x6 rafters spaced at 24 inches are more than adequate to carry the 25-pound snow load and 15-pound dead load applied to the roof. The original 6x6 timber roof purlins are undersized having a capacity to carry a total load of 19 psf.

Shed roof

The 2x6 rafter spaced at 24 inches for the shed are adequate. The two-2x6 purlin is adequate where stall posts are five feet apart, but not at the one space that spans 12 feet. The 4x6 purlin on the flat is adequate at stall spacing of five feet but not the 12-foot space.

Main loft

The main loft is adequate for light loading of 50 psf.

Shed loft

The shed loft is adequate for light loading of 50 psf.

Main floor

The main floor joists 2x10 spaced at 16 inches are adequate for a live load of 125 psf. These joists are supported on 8x10 timber drop (under the joists) beams which in turn are supported on timber and steel posts. These beams are marginal, and each bay is loaded differently. The bay furthest from the side shed has an offset column supporting roof purlins above as does the central bay. The bay nearest the side shed carries only floor

August 5, 2019 Page 2

joists. It has a capacity to carry a total of 50 psf leaving 35 psf for live loading. Those carrying roof supporting posts are overstressed.

LATERAL STRENGTH

This is a box type structure where the lateral forces from wind are carried down to the sills on the foundation walls. Often, buildings from this era simply rely on friction to prevent sliding. This is not acceptable by the Building Code.

REPAIR NEEDS

- 1. Remove debris from the floors including that on top of sills in the main building and side shed.
- 2. Strengthen the roof purlins in the main building by adding a four by six on the flat to the underside of the existing purlins in-between the knee bracing. Fasten with 1/4 "Ø timber screws, two rows at four inches on center.
- 3. Add a 6x6 post in the side shed from floor to roof to fill in the 12-foot span.
- 4. Reinforce the first-floor beams with pairs of steel channels sistered to the timber beams. Stitch together with two rows of bolts spaced at 16 inches. Include a steel connection to reinforce the load from the posts above to transfer forces from the timber beam to the channels. There are five sets of three existing beams spanning 40 feet each.
- 5. Resupport the timber beams on new 3 ½" diameter steel pipe columns and concrete footings (3'x3'x1') on concrete pedestals (16" x 16") raised above the floor mud line by half a foot. Paint pipe columns inside and out. There are 10 sets of post-pier-footing assemblies. The economical design would be to relocate the new basement columns directly under the upper columns. The existing columns would serve as shoring during this work. The relocation would eliminate upper column loading on the beams thereby lessening the size of new sister channels. After new structure is installed, remove the existing basement columns.
- 6. Add ¾" Ø anchor bolts embedded 8" into the foundation wall to prevent the sill from sliding under lateral loads. Include 6 in each end wall and 4 in each of three side walls.
- 7. Apply a spray of wood preservative such as Bora-Care to the sills and wood within two feet of the sills.
- 8. Carry a contingency for sill repair concealed by debris, hay bales, and siding. The extent of deficient sill is unknown if any exists. It is a common problem with wood structures, so a contingency is needed to adequately budget for hidden conditions.

Templeton Developmental Center Elliot Horse Barn, Structural Conditions August 5, 2019 Page 3

CONSTRUCTION DOCUMENTATION

Carry out repairs from specifications and drawings prepared by a licensed design professional sufficient for bidding and construction.

Sincerely,

Arthur H. MacLeod, P.E., Principal

Templeton Developmental Center Elliot Horse Barn Structural Conditions

August 4, 2019 Photographs 1



1. Elliot Horse Barn viewed from the road.



2. Organic debris on floor and in the wall on top of the wood sill.



3. Roof purlin in the background propped on the eave tie beam.



4. Lower shed space. Note in the background the large space between posts supporting the loft beam.



5. Posts supporting the first floor beams are immersed in wet soil that contains urine.



6. Post in upper background that supports the roof purlins is on the first floor beam and offset about two and one half feet from the lower post supporting the floor beam.

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AGRICULTURAL INSPECTION AND ASSESSMENT OF EIGHT AGRICULTURAL BUILDINGS AT THE TEMPLETON DEVELOPMENTAL CENTER STRUCTURAL ASSESSMENT ELLIOT OFFICE

August 4, 2019

BUILDING DESCRIPTION

The Elliot Office is built as a cottage with light wood framed construction. Walls are covered with wood shingles, and the roof is finished with asphalt shingles. The building footprint is a rectangle with a small square vestibule at one gable end. The floor is a concrete slab on grade, At the chimney end, the boiler room steps down two feet.

FLOOR AND ROOF LOAD CAPACITY

Main roof

The 2x6 rafters spaced at 24 inches are more than adequate to carry the 36-pound snow load and 20-pound dead load applied to the roof.

Vestibule roof

The 2x4 rafters spaced at 24 inches for the vestibule are adequate.

Main floor

The main floor concrete slab on grade has several small shrinkage cracks. The floor is pitch toward drains.

LATERAL STRENGTH

This is a box type structure where the lateral forces from wind are carried down to the sills on the foundation walls.

REPAIR NEEDS

No structural repair needs are present.

Sincerely,

Arthur H. MacLeod, P.E., Principal

Templeton Developmental Center Elliot Office, Structural Conditions August 5, 2019 Photographs 1



1. Elliot Office viewed from nearby knoll.



2. Rafters supported on exterior wall at eave and central wall along ridge. Tie joists serve to support hung ceiling tile.



3. Some minor damage to finishes are present.

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AGRICULTURAL INSPECTION AND ASSESSMENT OF EIGHT AGRICULTURAL BUILDINGS AT THE TEMPLETON DEVELOPMENTAL CENTER STRUCTURAL ASSESSMENT ELLIOT UPPER BARN

August 5, 2019

BUILDING DESCRIPTION

The Elliot Upper Barn is comprised of three separate structures. A traditional post and beam wood barn, a tile silo, and a concrete masonry block wall and wood framed wing. The original barn sits upon a rubble wall which at the rear and end toward the Elliot Office is also a retaining wall where grade drops five to ten feet. The floor is a concrete slab on grade which steps down several inches from the central aisle and slopes downward toward the side walls. The slab includes urine troughs on both sides midway from the central aisle and side walls. Below the trough is a tunnel to carry urine toward the Elliot Office end. Presently, the barn is half filled with bales of hay.

The silo is slated for removal and was not surveyed.

The addition is made of eight-inch unreinforced concrete masonry block and capped with a wood framed roof.

FLOOR AND ROOF LOAD CAPACITY

Main roof

The 2x6 rafters spaced at 24 inches are adequate to carry the 36-pound snow load and 15-pound dead load applied to the roof. The original 6x8 timber posts supporting the monitor walls and roof are adequate. Some of the posts are gouged from equipment collisions and perhaps from animals chewing on them.

Monitor roof

The monitor roof is inaccessible. There are a few small openings to permit viewing of framing from the floor. Through one opening, I could see 2x4 rafters. These are adequate. In some small areas, some soffit is missing.

Main floor

The main floor is a concrete slab on grade. It appears adequate for tractors used to move hay bales.

Templeton Developmental Center Elliot Upper Barn, Structural Conditions August 5, 2019 Page 2

Side walls

Sighting along the rear wall, it appears that the rear side wall is bowed outward along the floor sill level. It is likely that hay bales piled against the wall are pushing the sill outward. Another possibility is that the foundation side wall is tipping outward from unbalanced earth fill pressures.

Bracing

The eave ties between the side walls and monitor posts are broken in two locations from tractors crashing into them.

Addition

Most of the CMU walls are cracked apparently from equipment crashing into them. One wall with a door opening near the original barn is significantly buckled and in danger of collapse. This addition should be demolished soon. The walls are unreinforced and would need to be reinforced (replaced) if repaired.

LATERAL STRENGTH

This is a box type structure where the lateral forces from wind are carried down to the sills on the foundation walls. Often, buildings from this era simply rely on friction to prevent sliding. This is not acceptable by the Building Code.

REPAIR NEEDS

- 1. Remove debris from the floors including that around timber posts.
- 2. Rearrange hay bale storage so that it stacks vertically without leaning against the sidewalls, columns, and eave ties.
- 3. Add 2x6 or 2x8 cover plate to gouged posts stitched with two rows 16d nails.
- 4. Replace two broken eave ties.
- 5. Patch miscellaneous holes in soffit. Allow for 100 square feet total.
- 6. Add ¾" Ø anchor bolts embedded 8" into the foundation wall to prevent the sill from sliding under lateral loads. Include 6 in each end wall and 8 in each of two side walls. At the side walls, include strap anchors to secure the bolts to the floor slab along the rear wall.
- 7. Apply a spray of wood preservative such as Bora-Care to the sills and wood within two feet of the sills.
- 8. Carry a contingency for sill repair concealed by debris, hay bales, and siding. The extent of deficient sill is unknown if any exists. It is a common problem with wood structures, so a contingency is needed to adequately budget for hidden conditions.

9. Until the addition is removed, post a warning sign at entryways to the addition to warn people not to enter as a dangerous condition is present.

CONSTRUCTION DOCUMENTATION

Carry out repairs from specifications and drawings prepared by a licensed design professional sufficient for bidding and construction.

Sincerely,

Arthur H. MacLeod, P.E., Principal



1. Elliot Upper Barn viewed from the road. The original barn side wall is in the background. The silo at the center is slated for removal. The structure in the left foreground is an addition made of CMU walls and a wood framed roof.



2. The original barn has access doors in each gable end wall. The roof is topped with a continuous monitor.



3. The original barn rear side wall seen from the Elliot Office.



4. The rear side wall appears bowed out in areas along the sill line.



- 5. The end wall is missing the central post and beam bent that replicates those within the barn.
- 6. The end of the barn nearest the Elliot Office is filled with hay bales. Bales are applying loads against the side walls and the tie beams connecting side walls to the center bay.





7. Replacement 6-2x6 eave tie broken by equipment moving hay bales.



8. Closer view of door opening. Monitor frames into end wall. Post framing in line with the monitor wall is missing inside the end wall.

Knee braces here serve to shorten column unbraced lengths and are needed.

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AGRICULTURAL INSPECTION AND ASSESSMENT OF EIGHT AGRICULTURAL BUILDINGS AT THE TEMPLETON DEVELOPMENTAL CENTER STRUCTURAL ASSESSMENT BROOK HOUSE BARN

August 5, 2019

BUILDING DESCRIPTION

The Elliot Horse Barn is a traditional wood framed post and beam structure with horizontal girts supporting vertical board sheathing covered with wood shingles. A replacement metal roof covers wood rafters supported on the walls and wood purlins. The main building has a basement level. The main floor is supported on rubble stone foundation walls and steel or wood posts. The side shed appears to be a concrete slab-ongrade.

FLOOR AND ROOF LOAD CAPACITY

Main roof

The 2x6 rafters spaced at 24 inches are more than adequate to carry the 25-pound snow load and 15-pound dead load applied to the roof. The original 6x6 timber roof purlin and replacement triple 2x6 purlin are undersized having a capacity to carry a total load of 19 psf.

Shed roof

The 2x8 rafter spaced at 24 inches for the shed are adequate. The 6x6 and 4x6 purlins are adequate.

Main loft

The 2x8@24 rafters have capacities that vary according to spans as follows: 9 foot, 79 psf live load; 10 feet, 61 psf; 11 feet, 48 psf; 12 feet, 38 psf, and 13 feet, 30 psf.

Shed loft

The shed loft is adequate for light loading of 50 psf.

Main floor

The main floor joists 2x10 spaced at 16 inches are adequate for a live load of 80 psf at the longer pans. These joists are supported on 8x8 timber drop (under the joists) beams which in turn are supported on timber and steel posts. These beams are marginal, and each bay is loaded differently. Load capacities vary from 28 psf live load to 42 psf depending upon their span. The steel and wood posts at the basement are embedded in the

Templeton Developmental Center Brook House Barn, Structural Conditions August 5, 2019 Page 2

concrete floor which is problematic for wood. This area served as animal pens in the past which generate urine deposited on the floors. This is not good for steel.

LATERAL STRENGTH

This is a box type structure where the lateral forces from wind are carried down to the sills on the foundation walls. Often, buildings from this era simply rely on friction to prevent sliding. This is not acceptable by the Building Code.

REPAIR NEEDS

- 1. Remove debris from the floors including that on top of sills in the main building and side shed.
- 2. Strengthen the roof purlins in the main building by adding sister 5 ½ LVL's beside the existing purlins. Sister as follows: up to 10-foot span, 1-5 ½ LVL; from 10 to 11 feet, 2-5 ½ LVL, from 12 to 13 feet, 3-5 ½ LVL.
- 3. An option to strengthen floor beams is to cover plate the bottom existing beams with 4x8 on the flat stitched with ¼ inch timber screws, two rows at 4-inch centers.
- 4. An option to improve reliability of beam support is to resupport the timber beams on new 3 ½" diameter steel pipe columns and concrete footings (3'x3'x1') on concrete pedestals (16" x 16") raised above the floor mud line by half a foot. Paint pipe columns inside and out. There are 12 sets of post-pier-footing assemblies.
- 5. Add ¾" Ø anchor bolts embedded 8" into the foundation wall to prevent the sill from sliding under lateral loads. Include 6 in each end wall and 4 in each of two main side walls and 2 in the shed side wall.
- 6. Apply a spray of wood preservative such as Bora-Care to the sills and wood within two feet of the sills.
- 7. Carry a contingency for sill repair concealed by debris, hay bales, and siding. The extent of deficient sill is unknown if any exists. It is a common problem with wood structures, so a contingency is needed to adequately budget for hidden conditions.

CONSTRUCTION DOCUMENTATION

Carry out repairs from specifications and drawings prepared by a licensed design professional sufficient for bidding and construction.

Sincerely,

Arthur H. MacLeod, P.E., Principal



1. Brook House Barn viewed from the road.



2. Brook House Barn viewed right of front.



Brook House Barn viewed left of front.



3. Rear view of Brook House Barn.



4. Main barn interior viewed from loft.



5. View of roof framing over loft in main barn.



6. View of side wall bay in main barn under loft.



7. View of eave framing at interior of main barn.



8. View of the underside of first floor framing in the main barn.



9. View of reinforcement under beam at first floor. The reinforcement is not consistent throughout the floor.



10. View of steel pipe columns showing a rust scale.



11. View of shed framing seen from inside.

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AGRICULTURAL INSPECTION AND ASSESSMENT OF EIGHT AGRICULTURAL BUILDINGS AT THE TEMPLETON DEVELOPMENTAL CENTER STRUCTURAL ASSESSMENT GREEN HOUSE

August 4, 2019

BUILDING DESCRIPTION

The main building of the Green House is built with technology still in use. It is a box structure with concrete masonry unit (CMU) walls. These walls support prefabricated wood trusses joined with steel tie plates. The glazed greenhouse wings are built with aluminum rigid frames forming three hinged arches. The aluminum components are mostly extruded aluminum. The structure appears designed by professional architects and engineers.

FLOOR AND ROOF LOAD CAPACITY

Main roof

Wood roof trusses span the entire width of the structure to exterior bearing walls. The chords of the trusses are 2x6's. These calculate to be adequate to support a snow load of 36 psf. The framing scheme uses triangular trusses under the ridge, step hip trusses part way down the hip slope, and ending in rafters supported on a double hip truss and the bearing wall.

Green House wing roofs

The green house is divided into three roof bays supported on three sets of rigid frames and an end gable wall. The snow load here is 31 psf. The aluminum frames show no distress from past use and appear adequate for service.

Main floor

The floor is a slab on grade. It should have a capacity for continued service.

LATERAL STRENGTH

The CMU walls are adequate to resist lateral loads. The aluminum frames are correctly configured to resist lateral loads.

REPAIR NEEDS

No structural repair needs are present.

Sincerely,

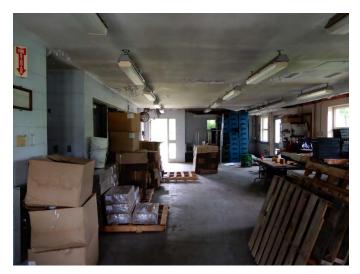
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1. Green House viewed from the road.



2. Green House viewed from knoll behind the building.



3. Interior of staff area of Green House viewed from front entry.

Templeton Developmental Center Green House, Structural Conditions August 5, 2019 Photographs 2



4. Roof framing viewed from hole in ceiling. There are prefabricated wood trusses with metal tie plates. The roof is sheathed with plywood.



5. Green House wing framed with extruded aluminum shapes using rigid frame design. The knees have brackets to form rigid joints. The aluminum structure is supported on a concrete knee wall.



6. View of one half of a arch ridged frame. The rigid frames carry roof purlins and wall girts. Glazed panels in sash and rafter mullions complete the construction.

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AGRICULTURAL INSPECTION AND ASSESSMENT OF EIGHT AGRICULTURAL BUILDINGS AT THE TEMPLETON DEVELOPMENTAL CENTER STRUCTURAL ASSESSMENT HORSE BARN

August 5, 2019

BUILDING DESCRIPTION

The Horse Barn is a traditional wood framed post and beam structure with horizontal girts supporting vertical board sheathing covered with wood shingles. A replacement metal roof covers wood rafters supported on the walls and wood purlins. The main building and rear shed have concrete slab-on-grade floors and are supported on rubble stone foundation walls. An open shed roof is attached to the side left of front. A loft covers about one-quarter of the main building. Another loft covers about one-half of the rear shed.

FLOOR AND ROOF LOAD CAPACITY

Main roof

The 6x6 rafters spaced at 48 inches over two-thirds of the roof are adequate to carry the 25-pound snow load and 15-pound dead load applied to the roof.

The 2x6 rafters spaced at 18 inches over the remaining one-third of the roof are adequate to carry the 25-pound snow load and 15-pound dead load applied to the roof.

The eaves are not tied together at the middle of the front wall as no bent is present there. Rafter thrust is pushing out at the eaves.

Interior posts are not carrying significant loads. At most, each picks up one rafter and tie beams. At several interior posts, one can see that their bottoms are not supported, they are floating.

Shed roof

The 2x6 rafters spaced at 24 inches for the shed are adequate. The two-2x6 purlin is adequate where stall posts are five feet apart, but not at the one space that spans 12 feet. The 4x6 purlin on the flat is adequate at stall spacing of five feet but not the 12-foot space. The shed rafters are separating form the main building.

The loft is marginally supported along the stall posts.

Main loft

The main loft is adequate for light loading of 50 psf.

Templeton Developmental Center Horse Barn, Structural Conditions August 5, 2019 Page 2

Shed loft

The shed loft is adequate for light loading of 50 psf.

LATERAL STRENGTH

This is a box type structure where the lateral forces from wind are carried down to the sills on the foundation walls. Often, buildings from this era simply rely on friction to prevent sliding. This is not acceptable by the Building Code.

REPAIR NEEDS

- 1. Remove debris from the floors including that on top of sills in the main building and side shed.
- 2. Add a ¾" Ø tie rod at eave level in the post at the middle of the wall to counter rafter thrust. Include a 5/8" Ø hanger rod from the ridge for midspan support.
- 3. Add footings and standoff column bases to the interior posts. There are eight total. Cut out the concrete floor and cast a 30 x 30 x 12-inch footing under each. Support the post on stand off base plates made by Simpson Strong-Tie.
- 4. Add a ledger to the stall posts to resupport the shed loft.
- 5. Add metal ties to the shed rafters to secure them to the main building.
- 6. Add ¾" Ø anchor bolts embedded 8" into the foundation wall to prevent the sill from sliding under lateral loads. Include 4 in each end wall and 4 in each of three side walls.
- 7. Apply a spray of wood preservative such as Bora-Care to the sills and wood within two feet of the sills.
- 8. Carry a contingency for sill repair concealed by debris, hay bales, and siding. The extent of deficient sill is unknown if any exists. It is a common problem with wood structures, so a contingency is needed to adequately budget for hidden conditions.

CONSTRUCTION DOCUMENTATION

Carry out repairs from specifications and drawings prepared by a licensed design professional sufficient for bidding and construction.

Sincerely,

Arthur H. MacLeod, P.E., Principal



1. Horse Barn viewed from the road.



2. Horse Barn viewed right of front.



3. Horse Barn viewed from rear.



4. Horse Barn viewed left of front facing open shed roof.



5. End of open shed roof viewed from rear.



6. Interior of main barn looking toward right end wall.

August 5, 2019 Photographs 3



7. Close up view of interior column showing gap under post.



8. Some walls are covered on the interior side of framing as well as on the exterior concealing structure.



9. Posts between stalls in the rear shed are closely spaced.

Templeton Developmental Center Horse Barn Structural Conditions

August 5, 2019 Photographs 4



10. Posts in the rear shed between stalls support a roof purlin.



11. The rear wall is wood stud framed supporting dimensioned lumber rafters.



12. The sill of the rear wall is rotted in some locations.

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AGRICULTURAL INSPECTION AND ASSESSMENT OF EIGHT AGRICULTURAL BUILDINGS AT THE TEMPLETON DEVELOPMENTAL CENTER STRUCTURAL ASSESSMENT MORTON BUILDING

August 4, 2019

BUILDING DESCRIPTION

The Morton Building is a shed with one wall completely open. It is framed with pressure treated dimensional lumber. Four 12-foot square bays make the 12 x 48-foot footprint. The end and rear side walls are sheathed with vertical metal siding full height. An additional layer of board siding oriented horizontally is on the interior lower half of the walls. Ganged 3-2x6 posts support truss frames which in turn support rafters. The rafters are sheathed with metal roofing. The floor is earth.

FLOOR AND ROOF LOAD CAPACITY

Main roof

The truss frame is highly overstressed from the 36 psf snow load and 10 psf dead load with essentially a single 2x12 supporting a 12 x12 foot square area. The 2x6 rafters are at least 20 percent over stressed with this loading.

Vestibule roof

The 2x4 rafters spaced at 24 inches for the vestibule are adequate.

LATERAL STRENGTH

The combined strength of the 1 1/4inch by 18-gauge straps, the metal siding, the wood siding, and embedment of posts into the ground are adequate to provide lateral stability and strength against wind loads.

REPAIR NEEDS

- 1. Strengthen the rafters by sistering them with 2x6's.
- 2. Reinforce the truss frame by sistering with pressure treated 2x14 on each side. Add connectors or wood cleats to post sides to support reaction forces.

Sincerely,

Arthur H. MacLeod, P.E., Principal



1. Morton Building viewed from the access road.



2. End wall view of Morton Building.



3. Front view of typical bay framing. Front and rear posts support a truss frame. The top chord, a 2x12, supports 2x6 rafters spaced at 24 inches.

Wall girts support metal siding spanning vertically.

The posts made of 3-2x6's are pressure treated and are embedded in the ground much like fence posts.



4. Interior view of end wall framing.



5. Wall girt pulled away from post likely the result of equipment bumping into the wall.



6. View of sheathing along the ground (photo is rotated 90° clockwise) is pulled away from the post likely the result of equipment bumping into the wall.

MacLeod Consulting, Inc.
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Belmont, MA 02478
(617) 484-4733
fax (617) 484-9708
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AGRICULTURAL INSPECTION AND ASSESSMENT OF EIGHT AGRICULTURAL BUILDINGS AT THE TEMPLETON DEVELOPMENTAL CENTER STRUCTURAL ASSESSMENT OLD COW BARN

August 5, 2019

BUILDING DESCRIPTION

The Old Cow Barn is a hybrid construction of steel, concrete, and light wood framing. The upper level is on a reinforced concrete slab with a wood framed roof supported on concrete and wood stud walls. Metal roofing covers board sheathing. The upper level covers a lower level of regularly spaced stalls. The upper level is supported on concrete encased steel beams which are carried by concrete piers and rubble foundation walls. These piers are supported on concrete grade beams.

FLOOR AND ROOF LOAD CAPACITY

Main roof

The 2x6 rafters spaced at 24 inches are more than adequate to carry the 25-pound snow load and 15-pound dead load applied to the roof. The rafter thrusts at the eaves are not adequately restrained. Only a few tie beams are present.

Upper floor

Information about concealed reinforcing steel in the floor slab is not readily available. The floor appears in good condition from visible areas on top and from below. The concealed steel beam sizes also are unknown. The amount of rust seen on the one cracked open casing suggest the level of corrosion is small and has not significantly degraded the floor strength. The floor should easily carry a 50 psf live load. Should a higher loading be desired, some selective chipping of concrete should provide enough data to evaluate the floor capacity more precisely.

Lower level framing

The grade beams are cracked on their top sides. This suggests the ground may have displaced them by frost heaving during winters. Alternatively, the ground may be settling under the outer piers thereby tensioning the tops of the grade beams. In either case, the cracks provide a pathway for water to aggravate corrosion of internal reinforcing steel.

LATERAL STRENGTH

This is a box type structure where the lateral forces from wind are carried down to the upper floor. The concrete portions of the side walls are adequate to carry lateral forces to

Templeton Developmental Center Old Cow Barn, Structural Conditions August 5, 2019 Page 2

the foundation. The one end concrete wall and the one interior concrete partition are adequate to carry lateral forces from the perpendicular direction into the floor and foundation.

REPAIR NEEDS

- 1. Remove debris from the floors.
- 2. Add ceiling joists to properly restrain the eaves from rafter thrusts. Use 2x6 joists spaced with rafters and supported mid span with a board hanger along the ridge line will provide adequate restraint.
- 3. Patch cracks in grade beams to displace water intrusion, about two cracks per beam.
- 4. Remove loose casing on one floor beam and patch. Apply a corrosion inhibitor to the steel beam before patching.
- Rebuild concrete foundation wall under the wood framed end wall. Remove loose concrete sections. Form and cast wall up to the wall sill. Patch cracks in stall side of wall.
- 6. Add a galvanized steel lintel over the end stall to replace the wood shoring.

CONSTRUCTION DOCUMENTATION

Carry out repairs from specifications and drawings prepared by a licensed design professional sufficient for bidding and construction.

Sincerely,

Arthur H. MacLeod, P.E., Principal



 Front of Old Cow Barn viewed from access road.
 Portions of the wall are concrete, and others are wood stud walls.



2. Rear of Old Cow Barn. The rear upper wall is concrete.



3. End wall to right of front. This end wall is made of concrete.

Templeton Developmental Center Old Cow Barn, Structural Conditions

August 5, 2019 Photographs 2



4. End wall to left of front. Left half of foundation wall is cracked and spalled. The upper portion of the wall is wood framed.



5. End bay of lower level stall. Foundation is rubble stone. Support sleeper and piers are concrete.



6. Typical stall bay at lower level. Concrete piers support steel beam encased in concrete which in turn supports a one way concrete slab.



7. Many sleepers are cracked. This appears to be the result of not supporting piers on foundations carried down below the frost line. The sleepers are surface mounted and susceptible to frost heave.



8. Casing falling off one beam exposing the bottom flange of a rusting steel beam.



9. Multiple bays viewed down outer rows of piers. Note the cracked sleepers.



10. Multiple bays viewed down inner rows of piers and foundation wall. Some sleepers are cracked.



11. Shoring at end bay.



12. Another view of the shoring at the other end. This end foundation wall is made of concrete.

Templeton Developmental Center Old Cow Barn, Structural Conditions August 5, 2019 Photographs 5

13. End stall with shoring.



14. Upper end wall over shore stall below. This is a wood stud wall.



15. An interior wood stud wall partition on the left and a wood tie beam at eave level to the right.

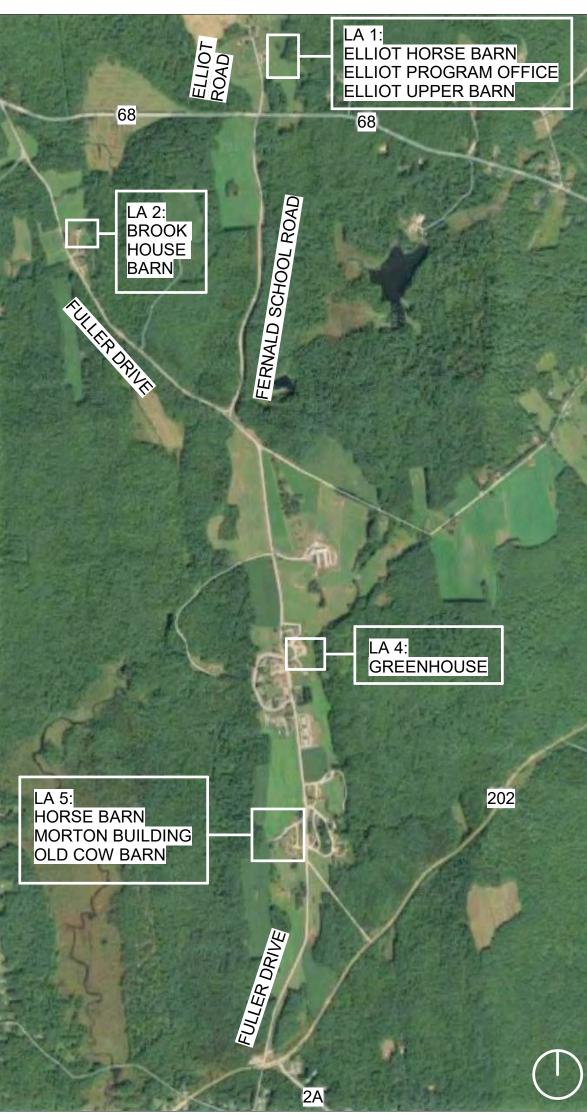


Review Set - 7 / 30 / 2019

212 Fuller Road Baldwinville, MA 01436



LOCUS MAP



DRAWINGS	
Sheet Number	Sheet Name
A1.1	LA1 Elliot Horse Barn - Roof Plan and East Elevation
A1.2	LA1 Elliot Horse Barn South Elevation
A1.3	LA1 Elliot Horse Barn West Elevation
A1.4	LA1 Elliot Horse Barn North Elevation
A2.1	LA1 Elliot Program Office - Roof Plan and South Elevation
A2.2	LA1 Elliot Program Office - West Elevation
A2.3	LA1 Elliot Program Office - North Elevation
A2.4	LA1 Elliot Program Office East Elevation
A3.1	LA1 Elliot Upper Barn - Roof Plan and East Elevation
A3.2	LA1 Elliot Upper Barn - South Elevation
A3.3	LA1 Elliot Upper Barn - West Elevation
A3.4	LA1 Elliot Upper Barn - North Elevation
A4.1	LA2 Brook House Barn - Roof Plan and East Elevation
A4.2	LA2 Brook House Barn - South Elevation
A4.3	LA2 Brook House Barn - West Elevation
A4.4	LA2 Brook House Barn - North Elevation
A5.1	LA4 Greenhouse - Roof Plan and East Elevation
A5.2	LA4 Greenhouse - South Elevation
A5.3	LA4 Greenhouse - West Elevation
A5.4	LA4 Greenhouse - North Elevation
A6.1	LA5 Horse Barn - Roof Plan and East Elevation
A6.2	LA5 Horse Barn - South Elevation
A6.3	LA5 Horse Barn - West Elevation
A6.4	LA5 Horse Barn - North Elevation
A7.1	LA5 Morton Building - Roof Plan and East Elevation
A7.2	LA5 Morton Building - South Elevation
A7.3	LA5 Morton Building - West Elevation
A7.4	LA5 Morton Building - North Elevation
A8.1	LA5 Old Cow Barn - Roof Plan and East Elevation
A8.2	LA5 Old Cow Barn - South Elevation
A8.3	LA5 Old Cow Barn - West Elevation
A8.4	LA5 Old Cow Barn - North Elevation

For the Division of Capital Asset Management and Maintenance (DCAMM), Massachusetts Department of Agricultural Resources (MDAR), and Brown, Richardson + Rowe (Landscape Architects and Planners) by the Executive Office of Energy and Environmental Affairs (EOEEA) Gateway City Parks Program.



Division of Capital Asset Management and Maintenance (DCAMM) 1 Ashburton Place, 15th Floor Boston, MA 02108



Massachusetts Department of Agricultural Resources (MDAR) 251 Causeway Street, Suite 500 Boston, MA 02114-2151



Executive Office of Energy and Environmental Affairs (EOEEA) 100 Cambridge Street, Suite 900 Boston, MA 02114

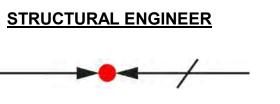


Landscape Architects and Planners 3 Post Office Square, 3rd Floor Boston, Massachusetts 02109 USA





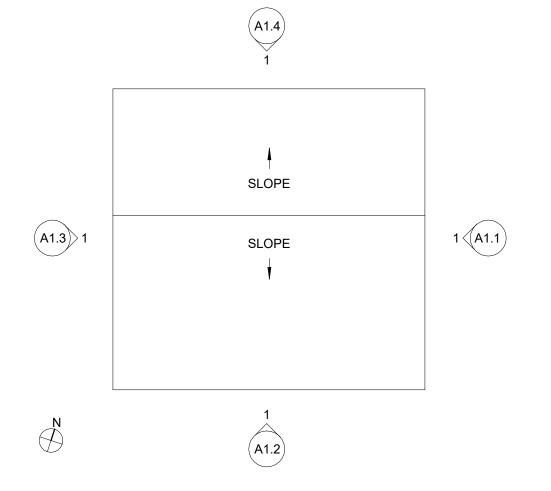
324 Broadway - PO Box 45248 Somerville, MA 02145-2803 617-625-8901



MacLeod Consulting, Inc.

29 Woods Road Belmont, MA 02478 617-484-4733 macleod-consulting.com





2 LA1 Elliot Horse Barn - Roof Plan

1" = 20'-0"

GENERAL NOTES

- 1. RESTORATION PRIORITY DESIGNATIONS:
 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
 TO 2 YEARS.
 C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN 3 TO 5 YEARS.
 D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6
 TO 10 YEARS.
 2. REMOVE ALL INSECT HIVES AT EAVES.
 3. TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF BUILDING PERIMETER.
 4. REFER TO STRUCTURAL DRAWINGS FOR ANY
- 4. REFER TO STRUCTURAL DRAWINGS FOR ANY
- STRUCTURAL REPAIRS.

 5. SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).

Architectural Inspection and Assessment of Eight Agricultural Buildings at the Templeton Developmental Center

01436

212 Fuller Drive Baldwinville, MA

DCAMM

1902.00

ASSESSMENT

7/30/19 Date: As indicated Scale: Drawn By: ERC Reviewed By:

Project No:



LA1 Elliot Horse Barn - Roof Plan and East Elevation

A1.1

GENERAL NOTES:

1. <u>ELECTRICAL SERVICE:</u> 100 AMP PANEL, (12) CIRCUITS: (7) CIRCUIT BREAKERS (5) BLANKS

WIRING IN RIGID METAL CONDUIT



REFER TO STRUCTURAL REPORT FOR - FOUNDATION INFORMATION CAT. 2: REPLACE WOOD BARN -DOOR AND SLIDING HARDWARE

- 1. RESTORATION PRIORITY DESIGNATIONS:
 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
 TO 2 YEARS.
 C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN
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 4. REFER TO STRUCTURAL DRAWINGS FOR ANY

- 4. REFER TO STRUCTURAL DRAWINGS FOR ANY STRUCTURAL REPAIRS.

 5. SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).



ASSESSMENT

01436

212 Fuller Drive Baldwinville, MA

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1902.00

7/30/19 Date: Scale: As indicated Drawn By: ERC Reviewed By:



Project No:

324 Broadway, P.O. Box 45248 Somerville, MA 02145 617.625.8901 - www.mcginleykalsow.com

LA1 Elliot Horse Barn South Elevation

A1.2



CAT. 2: REPLACE -DETERIORATED WOOD SHEATHING AND SHINGLES

1 LA1 Elliot Horse Barn - South Elevation NOT TO SCALE

- RESTORATION PRIORITY DESIGNATIONS:
 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
 - TO 2 YEARS.
 C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN 3 TO 5 YEARS.
- D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6
 TO 10 YEARS.

 2. REMOVE ALL INSECT HIVES AT EAVES.

 3. TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF
- BUILDING PERIMETER.

- REFER TO STRUCTURAL DRAWINGS FOR ANY STRUCTURAL REPAIRS.
 SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).



CAT. 2: REPAIR, SCRAPE, PREP, AND PAINT WOOD SWINGING DOOR

CAT. 2: REPLACE WOOD SILL

CAT. 2: SELECTIVE WOOD SHINGLE SIDING REPLACEMENT, TYP. (APPROX. 5%.)

CAT. 2: REPLACE SLIDING WOOD BARN DOOR AND HARDWARE

Architectural Inspection and Assessment of Eight Agricultural Buildings at the Templeton Developmental Center 01436

ASSESSMENT

212 Fuller Drive Baldwinville, MA

DCAMM

7/30/19 Date: Scale: As indicated Drawn By: ERC Reviewed By: Project No: 1902.00

McGinley Kalsow & Associates, Inc. ARCHITECTS & PRESERVATION PLANNERS 324 Broadway, P.O. Box 45248 Somerville, MA 02145 617.625.8901 - www.mcginleykalsow.com

LA1 Elliot Horse Barn West Elevation

A1.3

CAT. 2: REPLACE – BROKEN PLEXIGLASS WITH LOUVERS OR OTHER PROTECTIVE COVERING

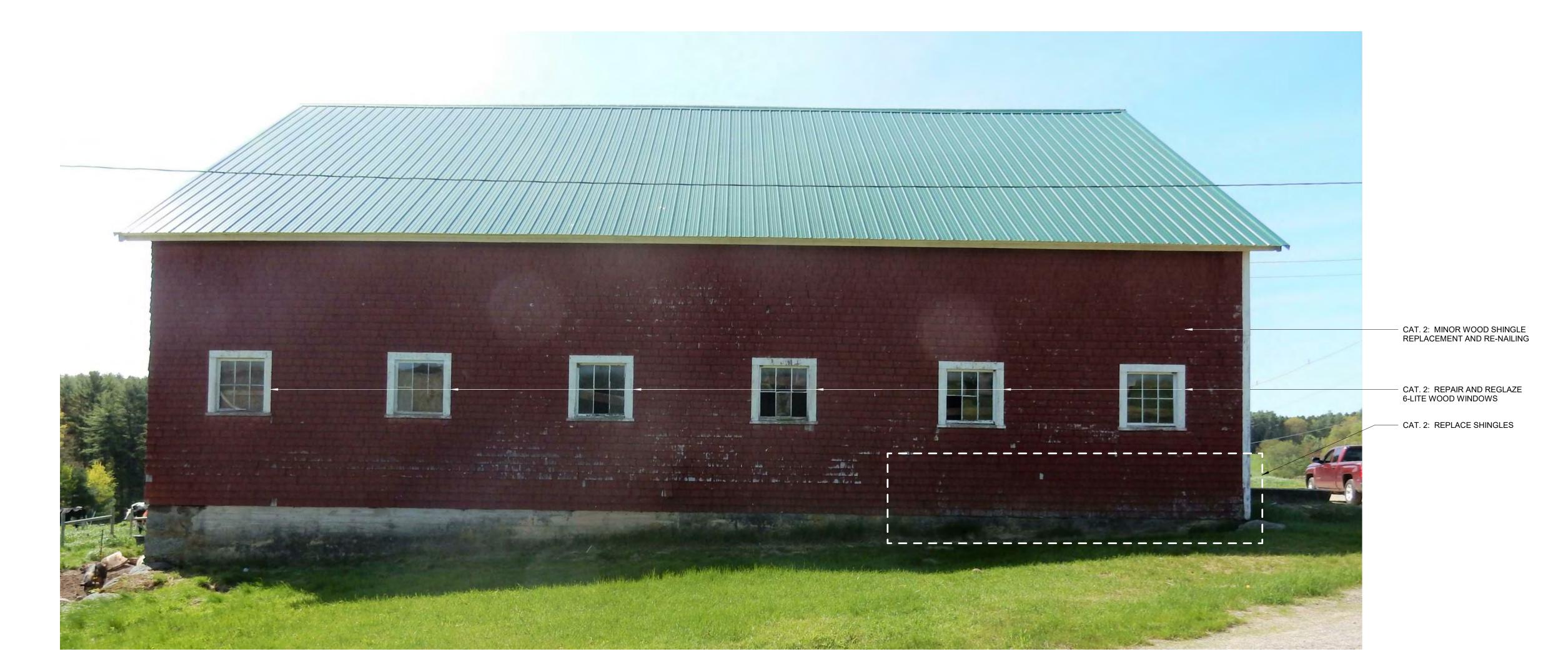
CAT. 3: INSTALL BOTTOM -GUIDES AT SLIDING WOOD BARN DOORS

- 1. RESTORATION PRIORITY DESIGNATIONS:
- A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
- TO 2 YEARS.
 C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN 3 TO 5 YEARS.

- D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6
 TO 10 YEARS.

 2. REMOVE ALL INSECT HIVES AT EAVES.

 3. TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF
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- 4. REFER TO STRUCTURAL DRAWINGS FOR ANY
- STRUCTURAL REPAIRS.
 5. SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).





01436

212 Fuller Drive Baldwinville, MA DCAMM

ASSESSMENT

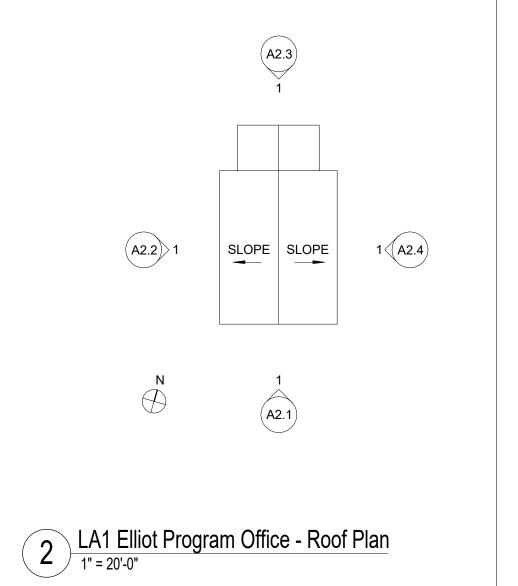
7/30/19 Date: Scale: As indicated Drawn By: ERC Reviewed By: 1902.00 Project No:

McGinley Kalsow & Associates, Inc. ARCHITECTS & PRESERVATION PLANNERS 3 2 4 Broadway, P.O. Box 4 5 2 4 8 Somerville, MA 0 2 1 4 5 617.625.8901 - www.mcginleykalsow.com

LA1 Elliot Horse Barn North Elevation

A1.4





- RESTORATION PRIORITY DESIGNATIONS:
 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
- TO 2 YEARS.
 C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN
- 3 TO 5 YEARS.

 D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6
 TO 10 YEARS.

 2. REMOVE ALL INSECT HIVES AT EAVES.

 3. TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF

- 5. TRIM AND MAINTAIN ALL VEGETATION WITHIN 6-0 BUILDING PERIMETER.
 4. REFER TO STRUCTURAL DRAWINGS FOR ANY STRUCTURAL REPAIRS.
 5. SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).

GENERAL NOTES:

- 1. ELECTRICAL SERVICE: 100 AMP PANEL, (20) CIRCUITS (8) 15 AMP CIRCUITS (1) 220/240 VOLT CIRCUIT
- 2. <u>HEAT</u>: OIL FIRED FURNACE (SINGER BRAND), LAST INSPECTION 10/1/14
- 3. <u>HOT WATER</u>: 40 GALLON HOT WATER HEATER, 4500 WATT, 240 VOLT, DRAINIED ON 10/15/09





Templeton Architectural Inspection and Assessment of Eight Agricultural Buildings at the Templet Developmental Center

01436

212 Fuller Drive Baldwinville, MA

ASSESSMENT

7/30/19 Date: Scale: As indicated Drawn By: ERC Reviewed By: 1902.00 Project No:



LA1 Elliot Program Office -Roof Plan and South Elevation

A2.1

LA1 Elliot Program Office -South Elevation

NOT TO SCALE

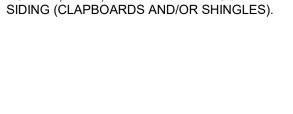
- 1. RESTORATION PRIORITY DESIGNATIONS:
- A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
 TO 2 YEARS.
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 3 TO 5 YEARS.

- D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6
 TO 10 YEARS.

 2. REMOVE ALL INSECT HIVES AT EAVES.

 3. TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF BUILDING PERIMETER.
- 4. REFER TO STRUCTURAL DRAWINGS FOR ANY
- STRUCTURAL REPAIRS.

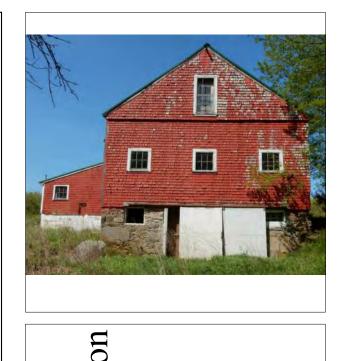
 5. SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).





CAT. 2: REMOVE AND REBUILD TOP (12) COURSES OF MASONRY AT CHIMNEY

CAT. 3: SELECTIVE
 REPLACEMENT OF WOOD
 SHINGLE SIDING



Architectural Inspection and Assessment of Eight Agricultural Buildings at the Templeton Developmental Center

01436

212 Fuller Drive Baldwinville, MA

ASSESSMENT

7/30/19 Date: As indicated Scale: Drawn By: ERC Reviewed By: Project No: 1902.00



LA1 Elliot Program Office - West Elevation

A2.2

- RESTORATION PRIORITY DESIGNATIONS:

 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1 TO 2 YEARS.
 C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN 3 TO 5 YEARS.
 D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6 TO 10 YEARS.

 REMOVE ALL INSECT HIVES AT EAVES.
 TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF BUILDING PERIMETER.
 REFER TO STRUCTURAL DRAWINGS FOR ANY STRUCTURAL REPAIRS.
 SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).



01436

212 Fuller Drive Baldwinville, MA

DCAMM

ASSESSMENT

7/30/19 As indicated Date: Scale: Drawn By: Reviewed By: ERC Project No: 1902.00



LA1 Elliot Program Office -North Elevation

A2.3



- RESTORATION PRIORITY DESIGNATIONS:
 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
- TO 2 YEARS.
 C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN
- 3 TO 5 YEARS.

 D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6
 TO 10 YEARS.

 2. REMOVE ALL INSECT HIVES AT EAVES.

 3. TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF

- TRIM AND MAINTAIN ALL VEGETATION WITHIN 6-0 BUILDING PERIMETER.
 REFER TO STRUCTURAL DRAWINGS FOR ANY STRUCTURAL REPAIRS.
 SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).





CAT. 2: REPLACE STORM WINDOWS, TYP.

- CAT. 2: REPLACE WOOD DOOR AND SILL CAT. 2: REPLACE WOOD WINDOW SILLS **ASSESSMENT**

Architectural Inspection and Assessment of Eight Agricultural Buildings at the Templeton Developmental Center

01436

7/30/19 Date: As indicated Scale: Drawn By: Reviewed By: ERC WK Project No: 1902.00



LA1 Elliot Program Office East Elevation

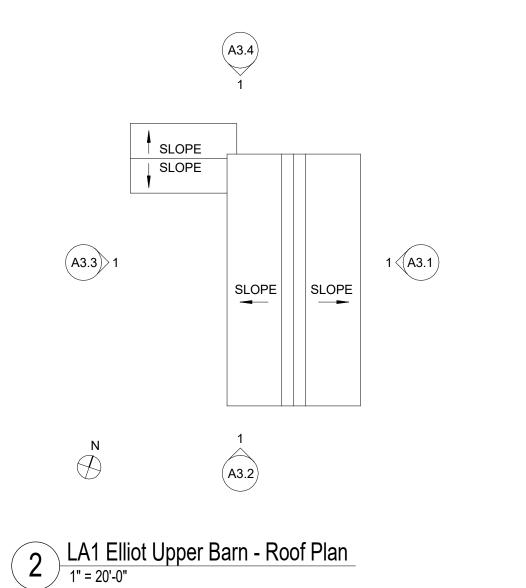
A2.4

LA1 Elliot Program Office -

CAT. 2: REPAIR OR REPLACE — WOOD 6-LITE DOOR

1 East Elevation NOT TO SCALE





- RESTORATION PRIORITY DESIGNATIONS:
 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
- TO 2 YEARS.
 C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN 3 TO 5 YEARS.

 D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6
 TO 10 YEARS.

 2. REMOVE ALL INSECT HIVES AT EAVES.

 3. TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF

- 5. TRIM AND MAINTAIN ALL VEGETATION WITHIN 6-0 BUILDING PERIMETER.
 4. REFER TO STRUCTURAL DRAWINGS FOR ANY STRUCTURAL REPAIRS.
 5. SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).

Architectural Inspection and Assessment of Eight Agricultural Buildings at the Templeton Developmental Center

01436

ASSESSMENT

7/30/19 Date: Scale: As indicated Drawn By: ERC Reviewed By: 1902.00 Project No:



LA1 Elliot Upper Barn - Roof Plan and East Elevation

A3.1

GENERAL NOTES:

1. ELECTRICAL SERVICE:

NO SERVICE TO BUILDING.

ALL WIRING IN RIGID STEEL CONDUIT.

MAIN PANEL: 100 AMPS (BRAND: GE) (6) 20 AMP BREAKERS
(1) DOUBLE 240 VOLT BREAKER
(3) SPARES



CAT. 2: REPAIR AND REGLAZE, OR REPLACE, WOOD SASH AND WINDOWS.

1 LA1 Elliot Upper Barn - East Elevation NOT TO SCALE

CAT. 2: REPAIR AND REGLAZE, OR REPLACE, WOOD SASH AND

FRAMES, TYP.

- RESTORATION PRIORITY DESIGNATIONS:
 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
- TO 2 YEARS.
 C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN
- 3 TO 5 YEARS. D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6 TO 10 YEARS.
- REMOVE ALL INSECT HIVES AT EAVES.
 TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF BUILDING PERIMETER.
- REFER TO STRUCTURAL DRAWINGS FOR ANY STRUCTURAL REPAIRS.
 SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).

ASSESSMENT

01436

212 Fuller Drive Baldwinville, MA

DCAMM

7/30/19 Date: Scale: As indicated Drawn By: ERC Reviewed By: Project No: 1902.00



324 Broadway, P.O. Box 45248 Somerville, MA 02145 617.625.8901 - www.mcginleykalsow.com

LA1 Elliot Upper Barn - South Elevation

A3.2

GENERAL NOTES:

CLAY TILE SILO NOT IN CONTRACT



CAT. 2: REPAIR AND REGLAZE 6-LITE WOOD WINDOW

CAT. 2: REPAIR AND -REFRAME WOOD BOARDED OPENING

CAT. 2: REPAIR AND — REFRAME WOOD SHEATHING AND WOOD SHINGLE SIDING AT WARP/BOW.

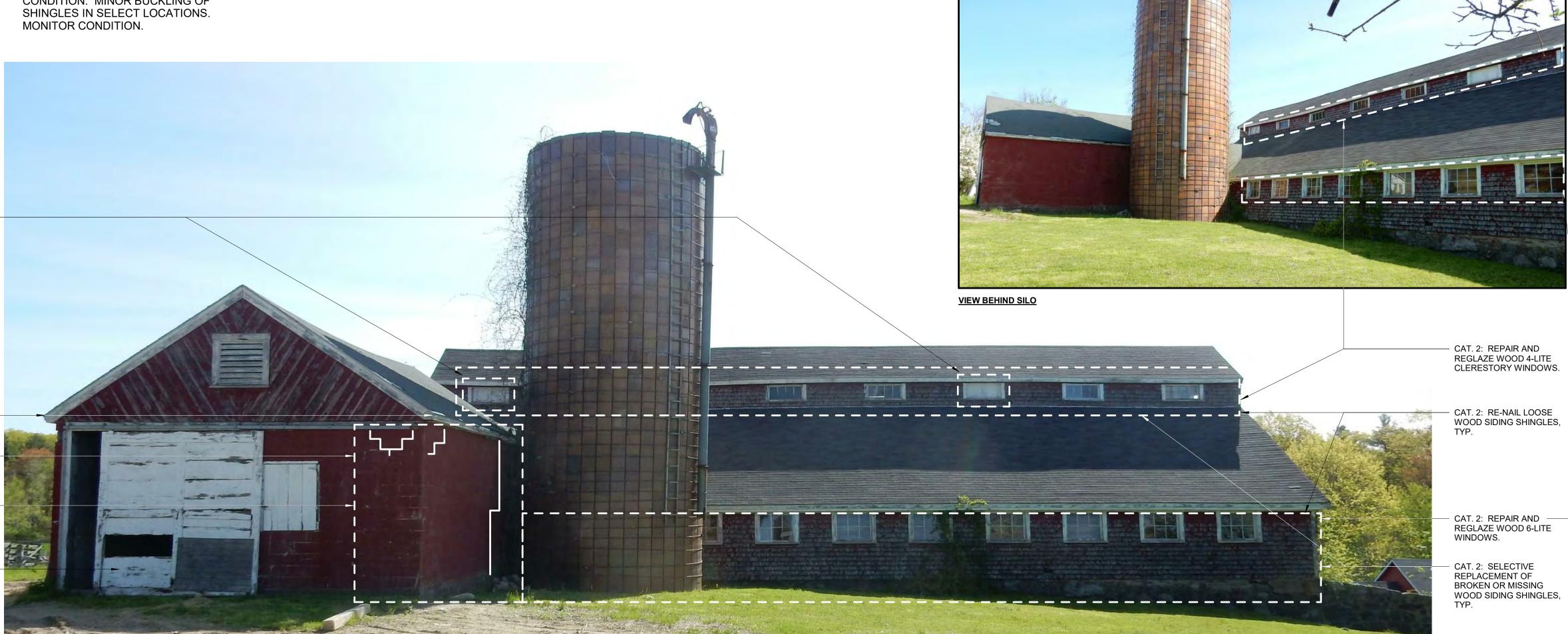
- CAT. 2: SELECTIVE REPLACEMENT OF WOOD SHINGLE SIDING

CAT. 2: SELECTIVE REPLACEMENT OF WOOD SILL SHEATHING AND WOOD SHINGLE SIDING.

- RESTORATION PRIORITY DESIGNATIONS:
 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
- TO 2 YEARS. C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN
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- TO 10 YEARS. 2. REMOVE ALL INSECT HIVES AT EAVES.
- 3. TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF
- BUILDING PERIMETER. 4. REFER TO STRUCTURAL DRAWINGS FOR ANY
- 5. SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND
- STRUCTURAL REPAIRS. SIDING (CLAPBOARDS AND/OR SHINGLES).

GENERAL NOTES:

- 1. CLAY TILE SILO NOT IN CONTRACT.
- 2. ASPHALT SHINGLE ROOF IN GOOD CONDITION. MINOR BUCKLING OF SHINGLES IN SELECT LOCATIONS.



Templeton Architectural Inspection and Assessment of Eight Agricultural Buildings at the Templet Developmental Center

01

212 Fuller Drive Baldwinville, M

ASSESSMENT

Date: Scale: Drawn By: Reviewed By:

As indicated ERC 1902.00 Project No:

7/30/19

McGinley Kalsow & Associates, Inc. ARCHITECTS & PRESERVATION PLANNERS 3 2 4 Broadway, P.O. Box 4 5 2 4 8 Somerville, MA 0 2 1 4 5 617.625.8901 - www.mcginleykalsow.com

LA1 Elliot Upper Barn - West Elevation

A3.3

CAT. 2: REPLACE WOOD BOARD INFILL AT WINDOWS.

CAT. 2: REPAIR / REPLACE WOOD FASCIA AND SOFFIT (IF STRUCTURE REMAINS).

WALL BOWS OUTWARD 8" - 10" — FROM PLUMB. REFER TO STRUCTURAL REPORT FOR MORE INFORMATION.

MULTIPLE STEP CRACKS AT UNREINFORCED CMU WALL. REFER TO

STRUCTURAL REPORT FOR MORE INFORMATION.

CAT. 2: REPAIR SLIDING -WOOD BARN DOOR (IF STRUCTURE REMAINS)

- RESTORATION PRIORITY DESIGNATIONS:
 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
- TO 2 YEARS. C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN
- 3 TO 5 YEARS.

 D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6
 TO 10 YEARS.

- 5. SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).

REMOVE ALL INSECT HIVES AT EAVES. TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF BUILDING PERIMETER. 4. REFER TO STRUCTURAL DRAWINGS FOR ANY STRUCTURAL REPAIRS.

GENERAL NOTES:

CLAY TILE SILO NOT IN CONTRACT.



ROOF DEFLECTION 8" +/-.
REFER TO STRUCTURAL REPORT FOR MORE INFORMATION.

Architectural Inspection and Assessment of Eight Agricultural Buildings at the Templeton Developmental Center 212 Fuller Drive Baldwinville, MA

01436

ASSESSMENT

7/30/19 Date: As indicated Scale: Drawn By: ERC Reviewed By: Project No: 1902.00



LA1 Elliot Upper Barn - North Elevation

A3.4

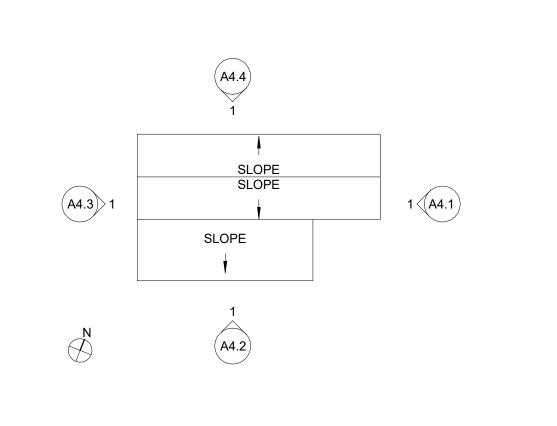
1 LA1 Elliot Upper Barn - North Elevation NOT TO SCALE

CAT. 2: SELECTIVE REPAIR AND -REPLACEMENT OF WOOD SIDING SHINGLES AND WOOD TRIM, TYP.

CAT. 2: REPLACE MISSING SLIDING WOOD BARN DOOR HARDWARE

CAT. 2: REPLACE MISSING WOOD -HEADER





- 1. RESTORATION PRIORITY DESIGNATIONS:
 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1 TO 2 YEARS.
- C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN
- 3 TO 5 YEARS.
 D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6
- TO 10 YEARS.

 2. REMOVE ALL INSECT HIVES AT EAVES.

 3. TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF

- STRIM AND MAINTAIN ALL VEGETATION WITHIN 0-0 BUILDING PERIMETER.
 4. REFER TO STRUCTURAL DRAWINGS FOR ANY STRUCTURAL REPAIRS.
 5. SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).

Architectural Inspection and Assessment of Eight Agricultural Buildings at the Templeton Developmental Center

01

212 Fuller Drive Baldwinville, M

DCAMM

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LA2 Brook House Barn - Roof Plan and East Elevation

A4.1

GENERAL NOTES:

1. <u>ELECTRICAL SERVICE:</u> 100 AMP PANEL, (10) CIRCUITS: (8) 20 AMP CIRCUITS (2) BLANKS



CAT. 2: REPAIR AND REGLAZE WOOD WINDOW

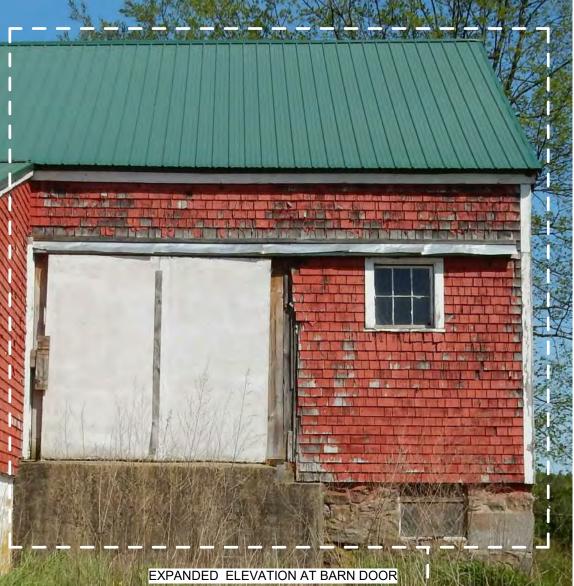
— CAT. 2: REPLACE WOOD SILL

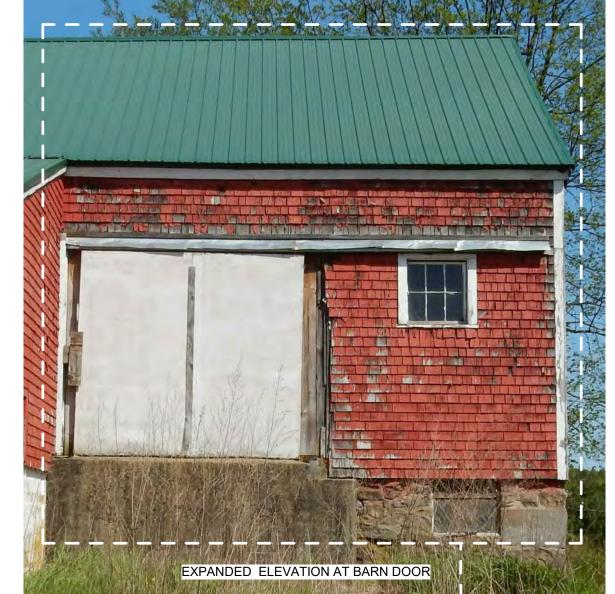
- CAT. 3: REPLACE WOOD SHINGLE SIDING

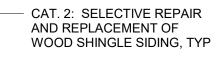
- CAT. 2: REPAIR AND REGLAZE 6-LITE WOOD WINDOWS

- CAT. 3: REPLACE WOOD SLIDING BARN DOORS AND HARDWARE

- RESTORATION PRIORITY DESIGNATIONS:
 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
- TO 2 YEARS. C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN
- 3 TO 5 YEARS. D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6 TO 10 YEARS.
- REMOVE ALL INSECT HIVES AT EAVES.
 TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF BUILDING PERIMETER.
- 4. REFER TO STRUCTURAL DRAWINGS FOR ANY
- STRUCTURAL REPAIRS.
- 5. SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).







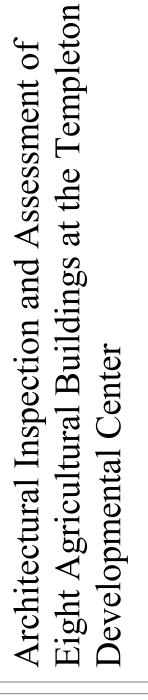
- CAT. 2: REPAIR SLIDING WOOD BARN DOOR AND HARDWARE

- CAT. 2: REPAIR AND REGLAZE 6-LITE WOOD WINDOWS

CAT. 2: REPLACE WOOD DOOR TRIM

- CAT. 2: REPLACE WOOD WINDOW - CAT. 2: REPLACE 20'-0" (+/-) OF BUILDING SILL

CAT. 2: REPLACE WOOD SASH



ASSESSMENT

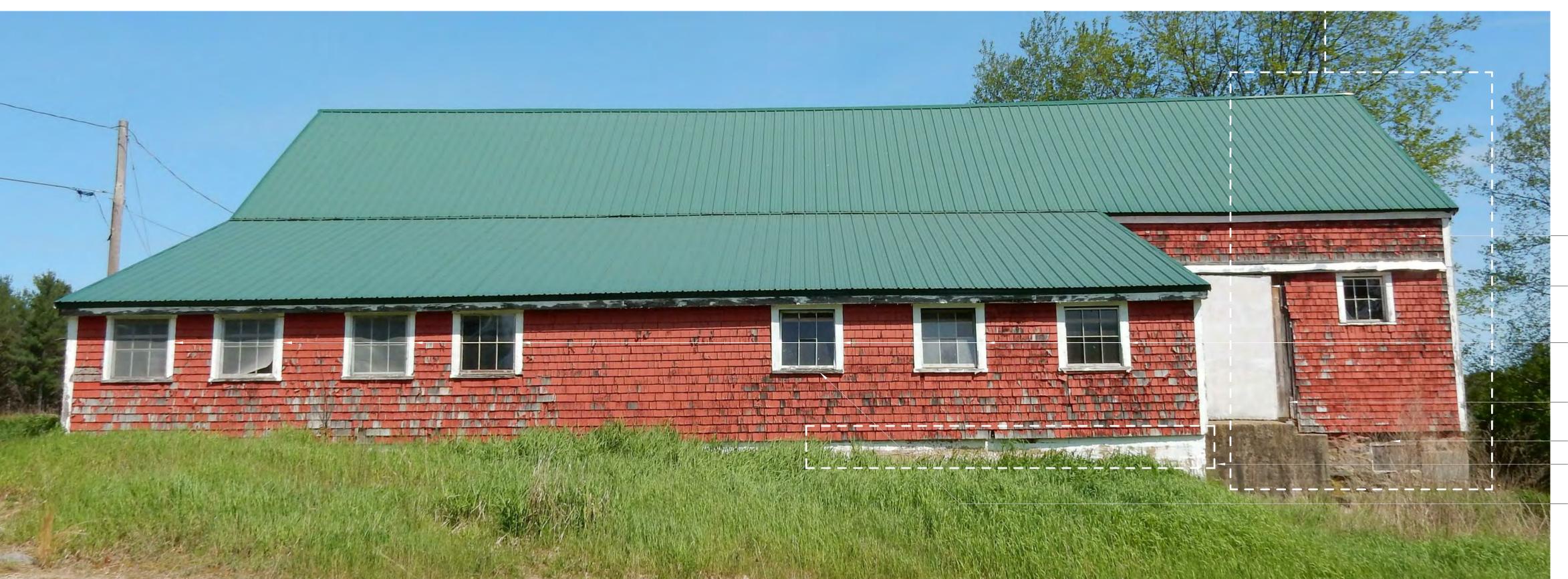
01

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LA2 Brook House Barn - South Elevation

A4.2



LA2 Brook House Barn -1 South Elevation NOT TO SCALE

- RESTORATION PRIORITY DESIGNATIONS:
 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
 TO 2 YEARS.
 C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN
- 3 TO 5 YEARS.

 D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6
 TO 10 YEARS.
- REMOVE ALL INSECT HIVES AT EAVES.
 TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF
- BUILDING PERIMETER.

 4. REFER TO STRUCTURAL DRAWINGS FOR ANY
- STRUCTURAL REPAIRS.

 5. SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).



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324 Broadway, P.O. Box 45248 Somerville, MA 02145 617.625.8901 - www.mcginleykalsow.com

LA2 Brook House Barn - West Elevation

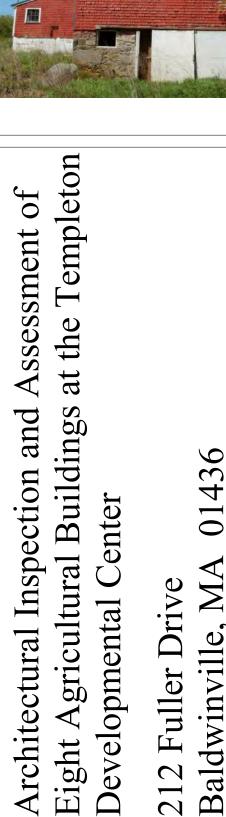
A4.3

LA2 Brook House Barn -1 West Elevation
NOT TO SCALE

- 1. RESTORATION PRIORITY DESIGNATIONS:
 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1 TO 2 YEARS.
 C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN
- 3 TO 5 YEARS.
- D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6 TO 10 YEARS.
- REMOVE ALL INSECT HIVES AT EAVES.
 TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF
- BUILDING PERIMETER.

- REFER TO STRUCTURAL DRAWINGS FOR ANY STRUCTURAL REPAIRS.
 SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).





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LA2 Brook House Barn - North

Elevation

A4.4



- CAT. 2: SELECTIVE REPAIR AND RENAIL AT WOOD SHINGLE SIDING - CAT. 3: REPLACE WOOD SHINGLE SIDING

CAT. 2: REPLACE
WOOD BASEMENT
WINDOW FRAMES
WITH P.T. FRAMES.
REPLACE WOOD
BASEMENT WINDOWS
TO MATCH EXISTING.

LA2 Brook House Barn -North Elevation
NOT TO SCALE

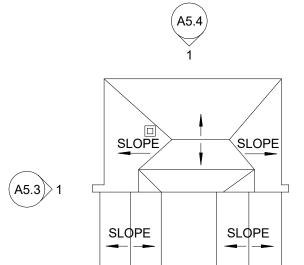
CAT. 2: REPLACE LAST 20'-0" (+/-) SHINGLE SHEATHING AND SILL



LA4 Greenhouse - Aerial View NOT TO SCALE



1 (A5.1)





LA4 Green House - Roof Plan

GENERAL NOTES

- RESTORATION PRIORITY DESIGNATIONS:
 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
- TO 2 YEARS.
 C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN
- 3 TO 5 YEARS.
 D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6
 TO 10 YEARS.
 2. REMOVE ALL INSECT HIVES AT EAVES.
 3. TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF

- BUILDING PERIMETER.

 4. REFER TO STRUCTURAL DRAWINGS FOR ANY STRUCTURAL REPAIRS.
- 5. SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).



Templeton Architectural Inspection and Assessment of Eight Agricultural Buildings at the Templet Developmental Center

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LA4 Greenhouse -Roof Plan and East Elevation

A5.1

GENERAL NOTES:

1. ASPHALT ROOF CONDITION (THIS ELEVATION) IS FAIR (AND BETTER THAN WEST ROOF CONDITION).

2. ELECTRICAL SERVICE:

METER HAS BEEN REMOVED, BUILDING CURRENTLY NOT POWERED

MAIN PANEL: 225 AMPS (2) 100 AMP BREAKERS

SUB-PANEL: 100 AMPS, 40 CIRCUITS (34) CIRCUITS IN USE (6) BLANKS

PANEL "L": (24) CIRCUITS (8) CIRCUITS IN USE (16) BLANKS

3. BOILER:

OLDER UNIT, TO BE REVIEWED

4. MODINE UNIT (INTERIOR):

TO BE REVIEWED



CAT. 1: SECURE OR -REMOVE ROLLING METAL GREENHOUSE SHADES

1 LA4 Green House - East Elevation NOT TO SCALE

- RESTORATION PRIORITY DESIGNATIONS:
 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1 TO 2 YEARS.
 C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN
- 3 TO 5 YEARS.
- D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6
 TO 10 YEARS.

 2. REMOVE ALL INSECT HIVES AT EAVES.

 3. TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF
- BUILDING PERIMETER.

- REFER TO STRUCTURAL DRAWINGS FOR ANY STRUCTURAL REPAIRS.
 SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).



- CAT. 4: REPLACE MISSING ASPHALT SHINGLES (9+/-)

CAT. 2: REPLACE ALL WINDOW SEALANT, TYP.

- REMOVE ALL DEBRIS AT BUILDING PERIMETER, TYP

CAT. 2: REMOVE DETERIORATED WOOD SHED AND OVERHANG



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LA4 Greenhouse -South Elevation

A5.2

- RESTORATION PRIORITY DESIGNATIONS:
 CATEGORY (CAT.) 1: URGENT
 CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
 TO 2 YEARS.
 CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN

SHADES

- C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN 3 TO 5 YEARS.

 D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6 TO 10 YEARS.

 2. REMOVE ALL INSECT HIVES AT EAVES.

 3. TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF DEPLIABLE.
- BUILDING PERIMETER.
- REFER TO STRUCTURAL DRAWINGS FOR ANY STRUCTURAL REPAIRS.
 SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).

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ERC WK 1902.00 Project No:



LA4 Greenhouse -

GENERAL NOTES:

ASPHALT SHINGLE ROOF CONDITION (THIS ELEVATION) IS POOR, BUT WATERTIGHT.



CAT. 2: REPLACE -WOOD FASCIA AND GUTTER

CAT. 2: SELECTIVE REPLACEMENT OF
WOOD SIDING AT
GRADE. ADJUST
SIDING AND
SHEATHING AWAY
FROM DIRECT
CONTACT WITH GRADE

West Elevation

A5.3

- RESTORATION PRIORITY DESIGNATIONS:
 CATEGORY (CAT.) 1: URGENT
 CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
 TO 2 YEARS.
 CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN
- 3 TO 5 YEARS.

 D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6
 TO 10 YEARS.

 2. REMOVE ALL INSECT HIVES AT EAVES.

 3. TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF
- BUILDING PERIMETER.

 4. REFER TO STRUCTURAL DRAWINGS FOR ANY STRUCTURAL REPAIRS.

 5. SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).

Architectural Inspection and Assessment of Eight Agricultural Buildings at the Templeton Developmental Center

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LA4 Greenhouse -North Elevation

A5.4

GENERAL NOTES:

ASPHALT SHINGLE ROOF CONDITION (THIS ELEVATION) IS FAIR.

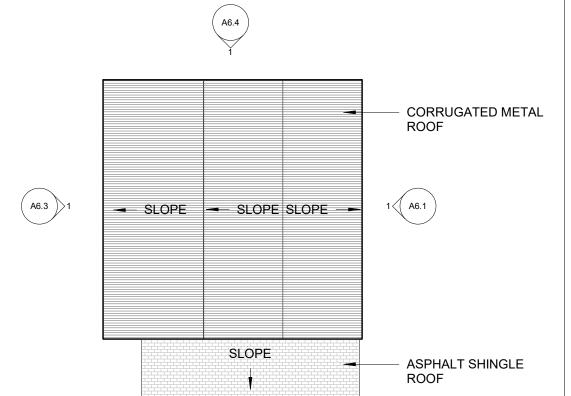


- CAT. 2: REPLACE WOOD FASCIA

CAT. 4: SELECTIVE REMOVAL OF CLAPBOARD SIDING TO REVIEW CONDITION OF SHEATHING.

- CAT. 2: REPLACE EXISTING WOOD DOOR FRAME

LA5 Horse Barn - Aerial View NOT TO SCALE



\ LA5 Horse Barn Roof Plan 2 LA5 Ho

GENERAL NOTES

- RESTORATION PRIORITY DESIGNATIONS:
 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1 TO 2 YEARS.
 C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN 2 TO 5 YEARS
- 3 TO 5 YEARS.

 D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6
 TO 10 YEARS.
- REMOVE ALL INSECT HIVES AT EAVES.
 TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF
- TRIM AND MAINTAIN ALL VEGETATION WITHIN 6-0 BUILDING PERIMETER.
 REFER TO STRUCTURAL DRAWINGS FOR ANY STRUCTURAL REPAIRS.
 SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).



Templeton Architectural Inspection and Assessment of Eight Agricultural Buildings at the Templet Developmental Center

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Date: Scale: Drawn By:

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LA5 Horse Barn -Roof Plan and East Elevation

A6.1

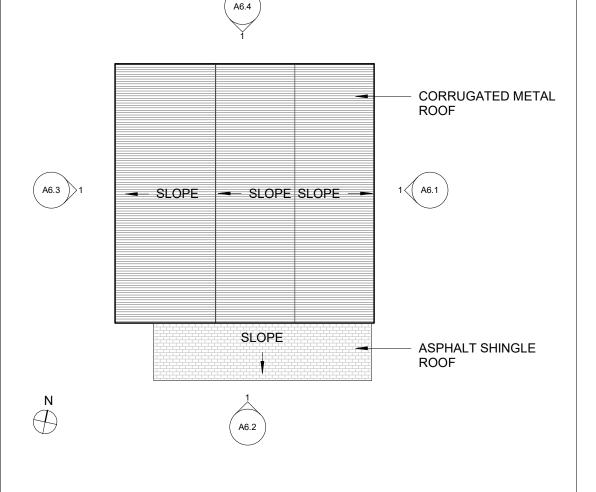
GENERAL NOTES:

1. ELECTRICAL SERVICE: 100 AMP PANEL, (6) CIRCUITS (SPACE FOR 12 CIRCUITS): (6) CIRCUIT BREAKERS (4 ARE LABELED)

GE BRAND CIRCUIT BREAKER PANEL

WIRING IN RIGID METAL CONDUIT







1 LA5 Horse Barn - East Elevation NOT TO SCALE

- RESTORATION PRIORITY DESIGNATIONS:
 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
- TO 2 YEARS.
 C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN 3 TO 5 YEARS.
- D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6 TO 10 YEARS.
- REMOVE ALL INSECT HIVES AT EAVES.
 TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF
- BUILDING PERIMETER.
- REFER TO STRUCTURAL DRAWINGS FOR ANY STRUCTURAL REPAIRS.
 SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND
 - SIDING (CLAPBOARDS AND/OR SHINGLES).



CAT. 2: REPAIR AND REGLAZE WINDOW



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LA5 Horse Barn -South Elevation

A6.2

CAT. 3: REPLACE WOOD -SIDING SHINGLES, APPROX. 10% TYP. (SHINGLES IN FAIR TO POOR CONDITION.)

CAT. 3: ADD FLASHING AT SIDEWALL OR REMOVE SHED

CAT. 3: REPLACE WOOD -SIDING SHINGLES AND SHEATHING, 15 SF.

ADDITION

- 1. RESTORATION PRIORITY DESIGNATIONS:
 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
 TO 2 YEARS.
 C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN
 3 TO 5 YEARS.
 D. CAT. 4: LOW PRIORITY.

- D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6
 TO 10 YEARS.

 2. REMOVE ALL INSECT HIVES AT EAVES.

 3. TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF BUILDING PERIMETER.
- 4. REFER TO STRUCTURAL DRAWINGS FOR ANY STRUCTURAL REPAIRS.

 5. SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).



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Project No:

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LA5 Horse Barn -West Elevation

A6.3



WINDOW.

- CAT. 3: REPLACE SASH, FRAME AND CASING AT 6 LITE WINDOW (TYP. 4)

CAT. 3: SELECTIVE -REPLACEMENT OF MISSING WOOD SIDING SHINGLES, TYP. APPROX. 10%

1 LA5 Horse Barn - West Elevation NOT TO SCALE

- RESTORATION PRIORITY DESIGNATIONS:
 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
 TO 2 YEARS.
 C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN
- CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN 3 TO 5 YEARS.

 D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6 TO 10 YEARS.

 2. REMOVE ALL INSECT HIVES AT EAVES.

 3. TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF BUILDING PERIMETER.

 4. REFER TO STRUCTURAL DRAWINGS FOR ANY.

- REFER TO STRUCTURAL DRAWINGS FOR ANY STRUCTURAL REPAIRS.
 SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).



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LA5 Horse Barn -

North Elevation

A6.4

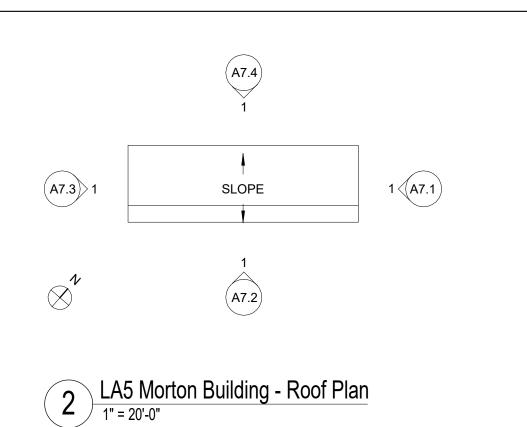


CAT. 3: FLASH AND SEAL OPENING AROUND 6" RIGID METAL EXHAUST DUCT.

REMOVE ALL DEBRIS FROM PERIMETER OF BUILDING, TYP.

1 LA5 Horse Barn - North Elevation NOT TO SCALE





- RESTORATION PRIORITY DESIGNATIONS:
 CATEGORY (CAT.) 1: URGENT
 CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1 TO 2 YEARS.
 CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN 3 TO 5 YEARS.

- 3 TO 5 YEARS.
 D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6
 TO 10 YEARS.
 2. REMOVE ALL INSECT HIVES AT EAVES.
 3. TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF
 BUILDING PERIMETER.
 4. REFER TO STRUCTURAL DRAWINGS FOR ANY
 STRUCTURAL REPAIRS.

GENERAL NOTES:

1. NO ELECTRICAL SERVICE TO STRUCTURE





Architectural Inspection and Assessment of Eight Agricultural Buildings at the Templeton Developmental Center

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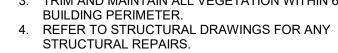
LA5 Morton Building - Roof Plan and East Elevation

A7.1

- 1. RESTORATION PRIORITY DESIGNATIONS:
- A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
- TO 2 YEARS.

 C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN
- 3 TO 5 YEARS.

 D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6
 TO 10 YEARS.
- REMOVE ALL INSECT HIVES AT EAVES.
 TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF





THE PAINT ON THE STANDING SEAM ROOF HAS FAILED. THE PAINT FAILURE IS VISUAL AND NOT AN IMPORTANT PERFORMANCE ELEMENT. RECOMMENDATION - NO ACTION

FIELD OBSERVATION: TOP OF REAR POST #4 IS 2"-3" HIGHER THAN ADJACENT REAR POST #3 AND REAR POST #5. DIFFERENCE IN POST HEIGHT RESULTS IN BEAM DEFLECTION. REFER TO SHEET A7.4 FOR ADDITIONAL INFORMATION. REFER TO STRUCTURAL DRAWINGS FOR ANY **NECESSARY REPAIRS**

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LA5 Morton Building - South Elevation

A7.2

1 LA5 Morton Building - South Elevation NOT TO SCALE

- RESTORATION PRIORITY DESIGNATIONS:
 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
 TO 2 YEARS.
 C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN
 - 3 TO 5 YEARS.
- D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6
 TO 10 YEARS.

 2. REMOVE ALL INSECT HIVES AT EAVES.

 3. TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF BUILDING PERIMETER.

- 4. REFER TO STRUCTURAL DRAWINGS FOR ANY STRUCTURAL REPAIRS.

 5. SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).



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LA5 Morton Building - West Elevation

A7.3



- RESTORATION PRIORITY DESIGNATIONS:
 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
- TO 2 YEARS.
 C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN
- 3 TO 5 YEARS.
- D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6 TO 10 YEARS.
- REMOVE ALL INSECT HIVES AT EAVES.
 TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF BUILDING PERIMETER.
- REFER TO STRUCTURAL DRAWINGS FOR ANY STRUCTURAL REPAIRS.
 SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).



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LA5 Morton Building - North Elevation

A7.4

THE PAINT ON THE STANDING SEAM ROOF HAS FAILED. THE PAINT FAILURE IS VISUAL AND NOT AN IMPORTANT PERFORMANCE ELEMENT. RECOMMENDATION - NO ACTION

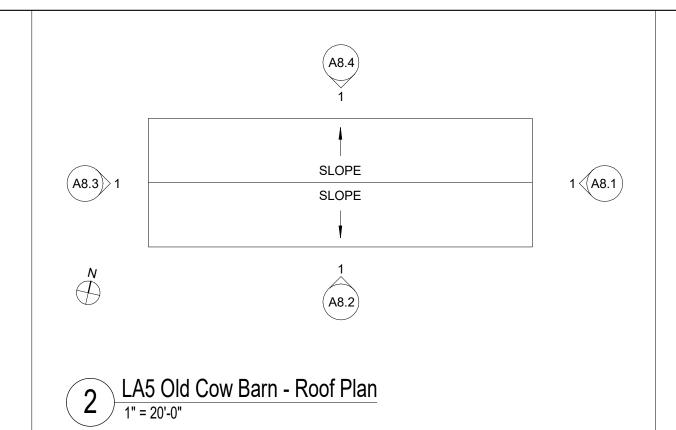


FIELD OBSERVATION: BEAM —
DEFLECTION. REFER TO SHEET A7.2
FOR MORE INFORMATION. REFER TO
STRUCTURAL DRAWINGS FOR ANY
NECESSARY REPAIRS.

1 LA5 Morton Building - North Elevation NOT TO SCALE



LA5 Old Cow Barn - Aerial View
NOT TO SCALE



GENERAL NOTES

- RESTORATION PRIORITY DESIGNATIONS:
 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
- TO 2 YEARS.
 C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN
- C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN 3 TO 5 YEARS.
 D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6 TO 10 YEARS.
 2. REMOVE ALL INSECT HIVES AT EAVES.
 3. TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF
- BUILDING PERIMETER.
- REFER TO STRUCTURAL DRAWINGS FOR ANY STRUCTURAL REPAIRS.
 SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).

Architectural Inspection and Assessment of Eight Agricultural Buildings at the Templeton Developmental Center

01436

212 Fuller Drive Baldwinville, MA

DCAMM

ASSESSMENT

7/30/19 Date: Scale: As indicated Drawn By: ERC Reviewed By: Project No: 1902.00



LA5 Old Cow Barn - Roof Plan and East Elevation

A8.1

GENERAL NOTES:

1. ELECTRICAL SERVICE: ABANDONED 60 AMP FUSED MAIN DISCONNECT (BULLDOG BRAND) WITH ANTIQUATED (5) CIRCUIT MAIN PANEL

SERVICE WIRE TO BUILDING HAS BEEN DISCONNECTED.



- CAT. 2: REPLACE WOOD SLIDING BARN DOOR AND HARDWARE

REFER TO STRUCTURAL REPORT FOR FOUNDATION INFORMATION

- 1. RESTORATION PRIORITY DESIGNATIONS:
- A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
- TO 2 YEARS. C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN
- 3 TO 5 YEARS. D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6 TO 10 YEARS.
- 2. REMOVE ALL INSECT HIVES AT EAVES.
 3. TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF
- BUILDING PERIMETER.
- 4. REFER TO STRUCTURAL DRAWINGS FOR ANY
- STRUCTURAL REPAIRS. 5. SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).



436

01

212 Fuller Drive Baldwinville, MA DCAMM

ASSESSMENT

7/30/19 Date: Scale: As indicated Drawn By: Author Reviewed By: Checker 1902.00 Project No:

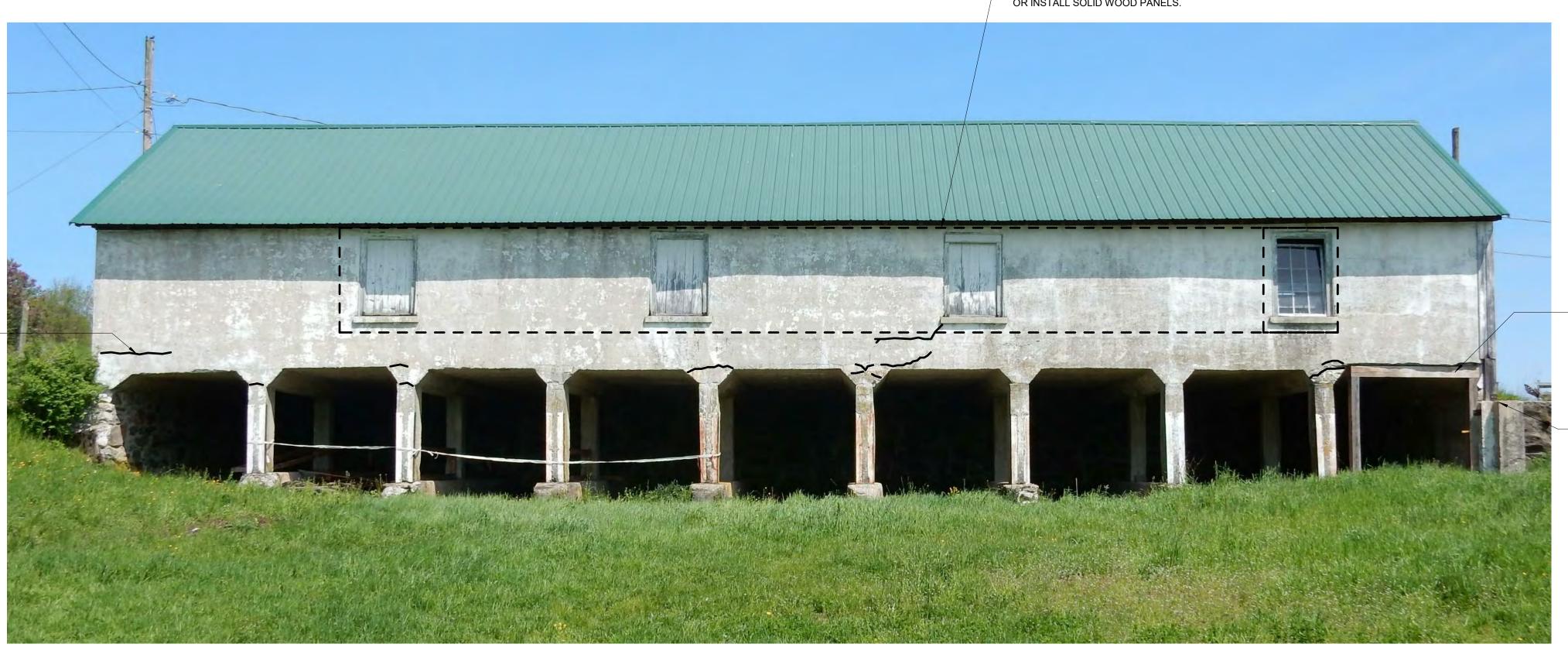


324 Broadway, P.O. Box 45248 Somerville, MA 02145 617.625.8901 - www.mcginleykalsow.com

LA5 Old Cow Barn - South Elevation

A8.2

CAT. 2: AT ORIGINAL 4 WINDOWS REMOVE ALL EXISTING WOOD AND INSTALL EITHER NEW WINDOWS AND FRAMES OR INSTALL SOLID WOOD PANELS.



CAT. 2: REPAIR HEAVY CRACKING, TYP. REFER TO STRUCTURAL REPORT FOR MORE INFORMATION.

TEMPORARY WOOD 6X8
CORNER POST AND SHORING. REFER TO STRUCTURAL REPORT FOR MORE INFORMATION.

CAT 2.: REMOVE CORRODED
REINFORCING AT TOP OF
FOUNDATION WALL. REFER TO
STRUCTURE INFORMATION MORE INFORMATION.

1 LA5 Old Cow Barn - South Elevation NOT TO SCALE

GENERAL NOTES

- RESTORATION PRIORITY DESIGNATIONS:

 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1 TO 2 YEARS.
 C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN 3 TO 5 YEARS.
 D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6 TO 10 YEARS.

 REMOVE ALL INSECT HIVES AT EAVES.
 TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF BUILDING PERIMETER.
 REFER TO STRUCTURAL DRAWINGS FOR ANY

- 4. REFER TO STRUCTURAL DRAWINGS FOR ANY
- STRUCTURAL REPAIRS.

 5. SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).



Architectural Inspection and Assessment of Eight Agricultural Buildings at the Templeton Developmental Center

ASSESSMENT

01436

212 Fuller Drive Baldwinville, MA

DCAMM

7/30/19 Date: As indicated Scale: Drawn By: ERC Reviewed By: 1902.00 Project No:



LA5 Old Cow Barn - West Elevation

A8.3



CAT. 2: REPLACE SILLS AT WINDOWS, -TYP.

CAT. 2: REPLACE BOTTOM 1'-0" – OF FLAT WOOD CASING AT WINDOWS, TYP.

CAT. 2: REPLACE WOOD BRICK - MOLD AT WINDOW JAMBS, TYP.

CAT. 2: REGLAZE WINDOWS, TYP.

CAT. 2: REPLACE MISSING GLASS -

- RESTORATION PRIORITY DESIGNATIONS:
 A. CATEGORY (CAT.) 1: URGENT
 B. CAT. 2: HIGH PRIORITY. CONDUCT REPAIRS IN 1
- TO 2 YEARS.
 C. CAT. 3: NORMAL PRIORITY. CONDUCT REPAIRS IN
- 3 TO 5 YEARS.

 D. CAT. 4: LOW PRIORITY. CONDUCT REPAIRS IN 6
 TO 10 YEARS.

 2. REMOVE ALL INSECT HIVES AT EAVES.

 3. TRIM AND MAINTAIN ALL VEGETATION WITHIN 6'-0" OF

- BUILDING PERIMETER.
- REFER TO STRUCTURAL DRAWINGS FOR ANY STRUCTURAL REPAIRS.
 SCRAPE, PREP, AND PAINT ALL WOOD TRIM AND SIDING (CLAPBOARDS AND/OR SHINGLES).



Architectural Inspection and Assessment of Eight Agricultural Buildings at the Templeton Developmental Center

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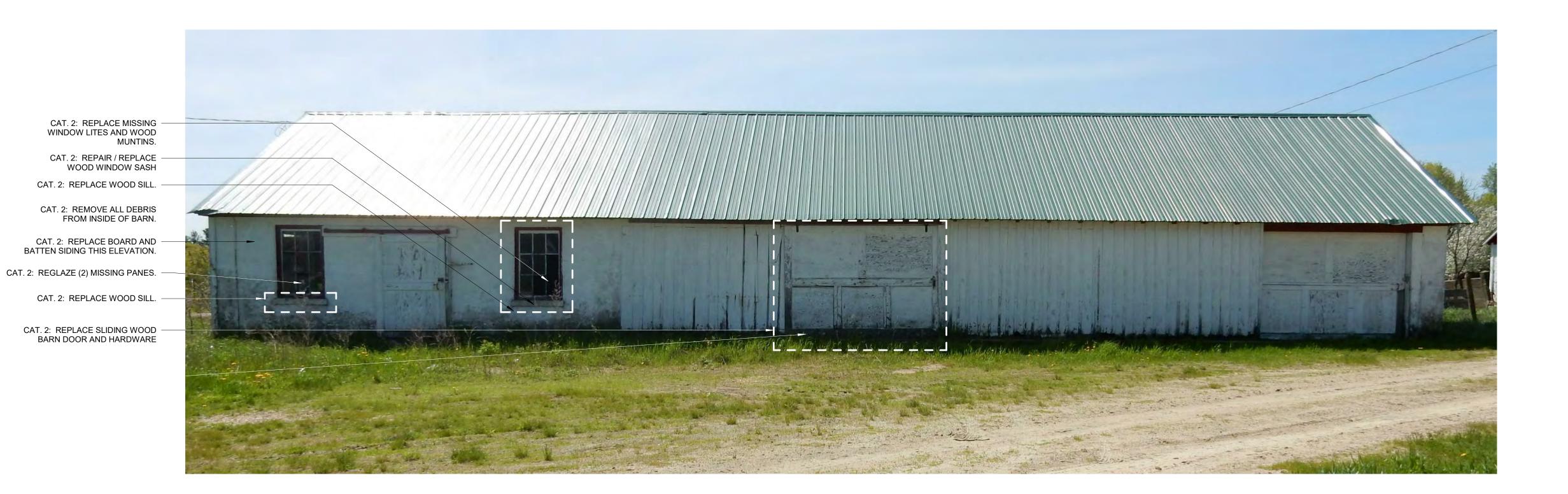
ASSESSMENT

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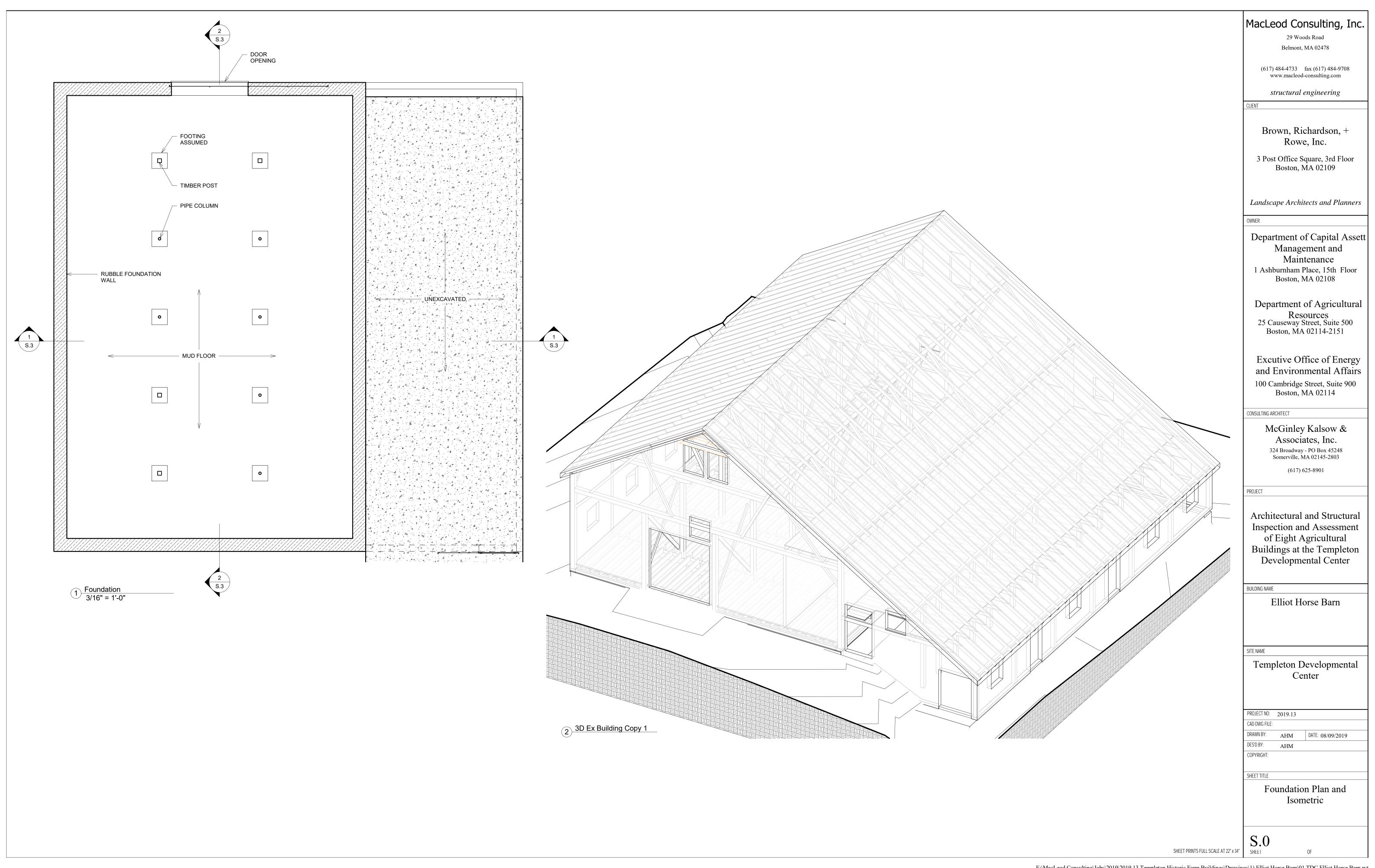


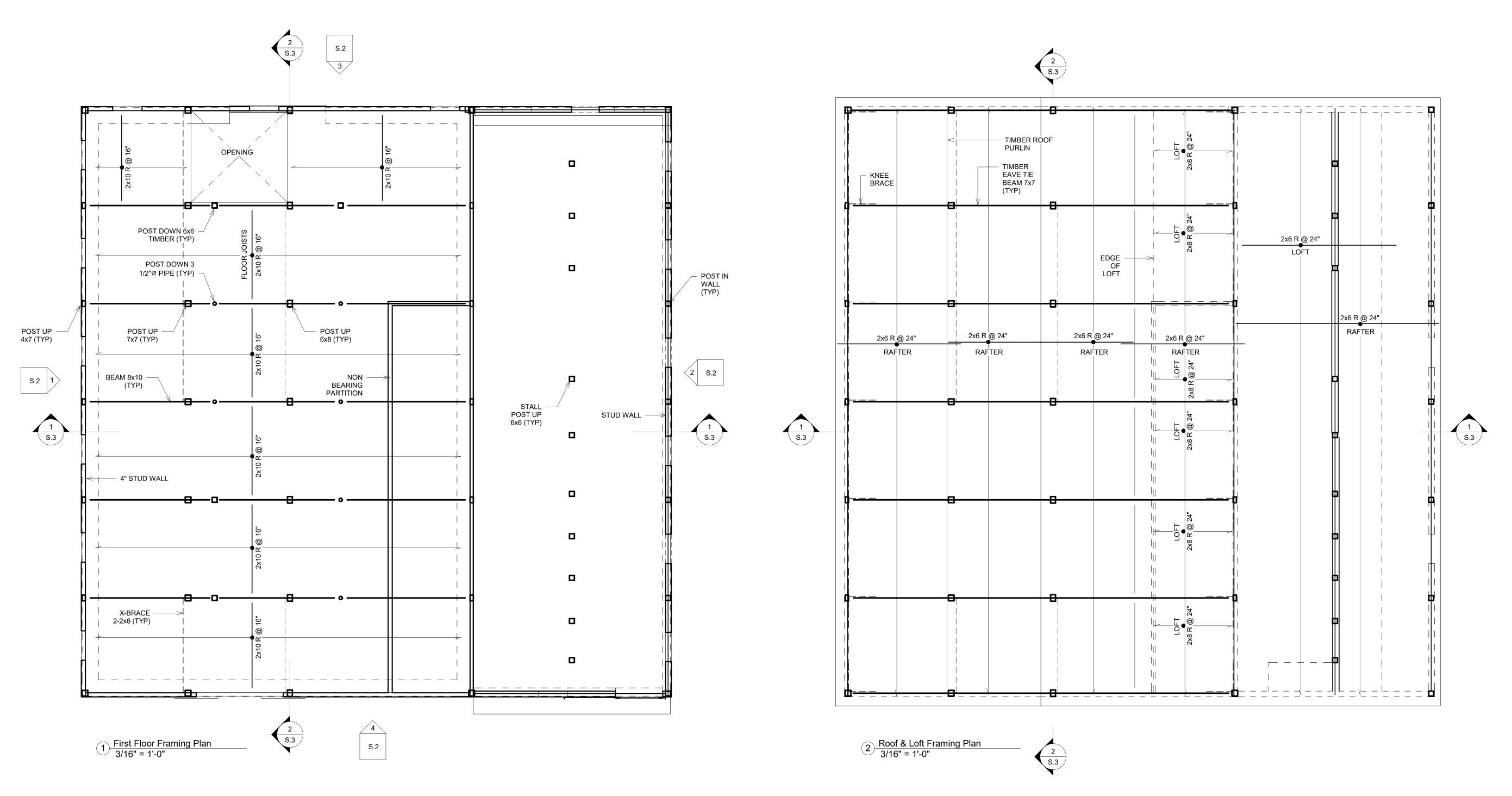
LA5 Old Cow Barn - North Elevation

A8.4



1 LA5 Old Cow Barn - North Elevation NOT TO SCALE



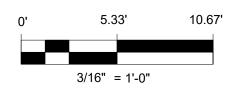


NOTES

- 1. DRAWINGS ARE INTENDED TO COMPLEMENT THE EIGHT AGRICULTURAL BUILDING ASSESSMENT NARRATIVE REPORT. THEY ARE PRESENTED TO PROVIDE A BASIS FOR
- FURTHER USE IN PLANNING REPAIRS AND MAINTENANCE.

 2. SOME COMPONENTS ARE DETERIORATED, REFER TO THE NARRATIVE STRUCTURAL ASSESSMENT AND
- ARCHITECTURAL REPORT.

 3. SCALE IS MEASURED BUT APPROXIMATE.
- 4. COMPONENTS MAY VARY IN SIZE FROM THAT SHOWN.



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PROJECT

Architectural and Structural
Inspection and Assessment
of Eight Agricultural
Buildings at the Templeton
Developmental Center

BUILDING NAME

Elliot Horse Barn

SITE NAM

Templeton Developmental Center

PROJECT NO: 2019.13

CAD DWG FILE:

 DRAWN BY:
 AHM
 DATE: 08/09/2019

 DES'D BY:
 AHM

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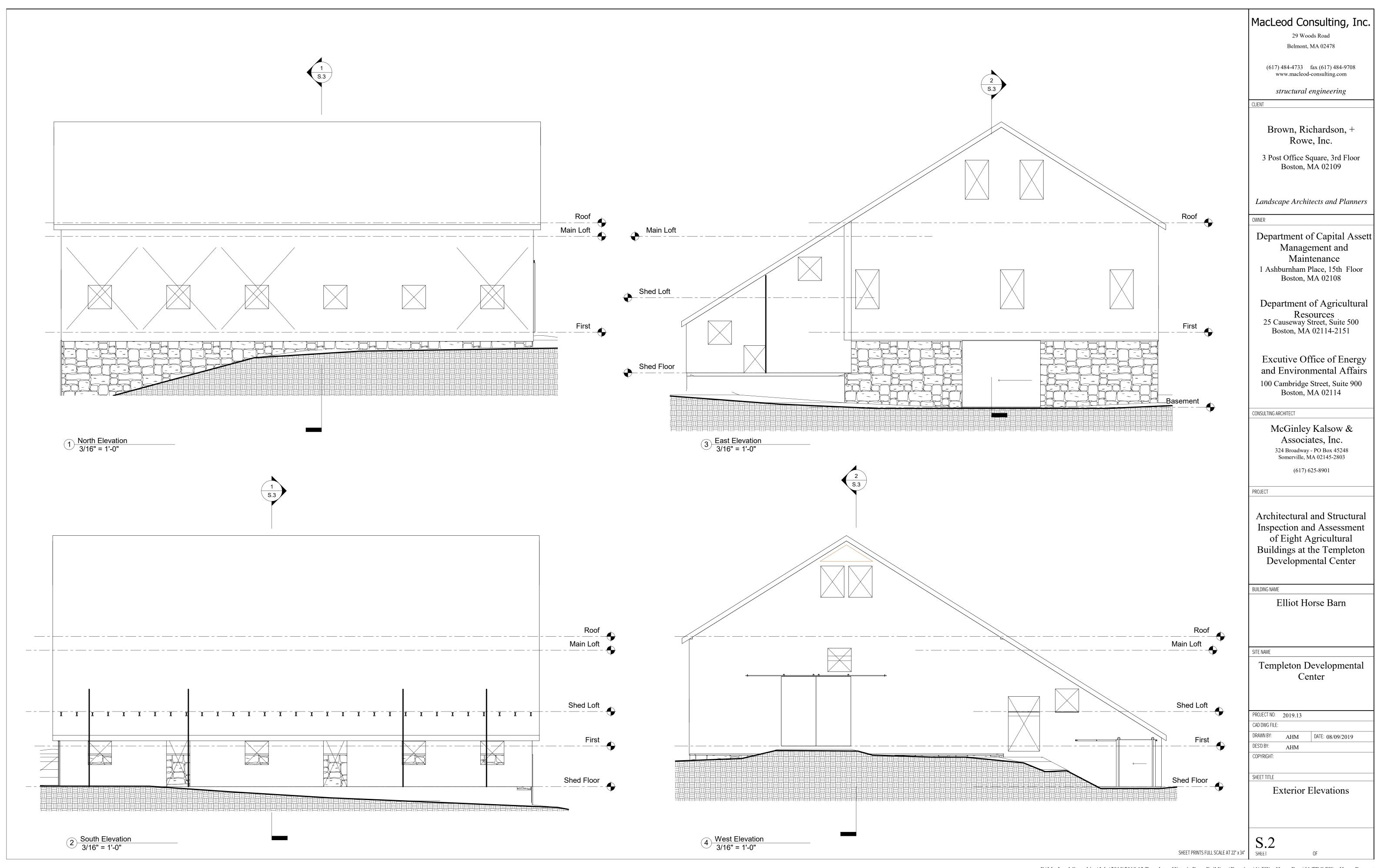
SHEET TITLE

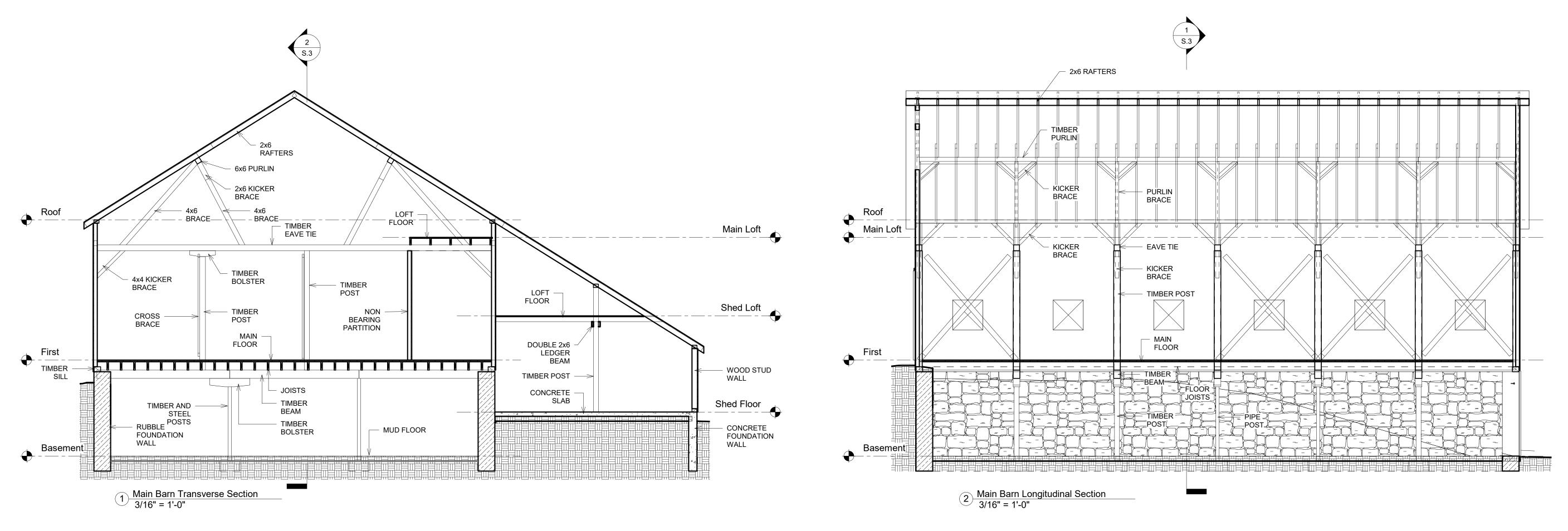
First Floor Framing & Roof Framing Plans

S.1

SHEET PRINTS FULL SCALE AT 22" x 34"

E:\MacLeod Consulting\Jobs\2019\2019.13 Templeton Historic Farm Buildings\Drawings\1) Elliot Horse Barn\01 TDC Elliot Horse Barn.rvt





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PROJECT

Architectural and Structural
Inspection and Assessment
of Eight Agricultural
Buildings at the Templeton
Developmental Center

BUILDING NAME

Elliot Horse Barn

TE NAME

Templeton Developmental Center

PROJECT NO: 2019.13

CAD DWG FILE:

 DRAWN BY:
 AHM
 DATE: 08/09/2019

 DES'D BY:
 AHM

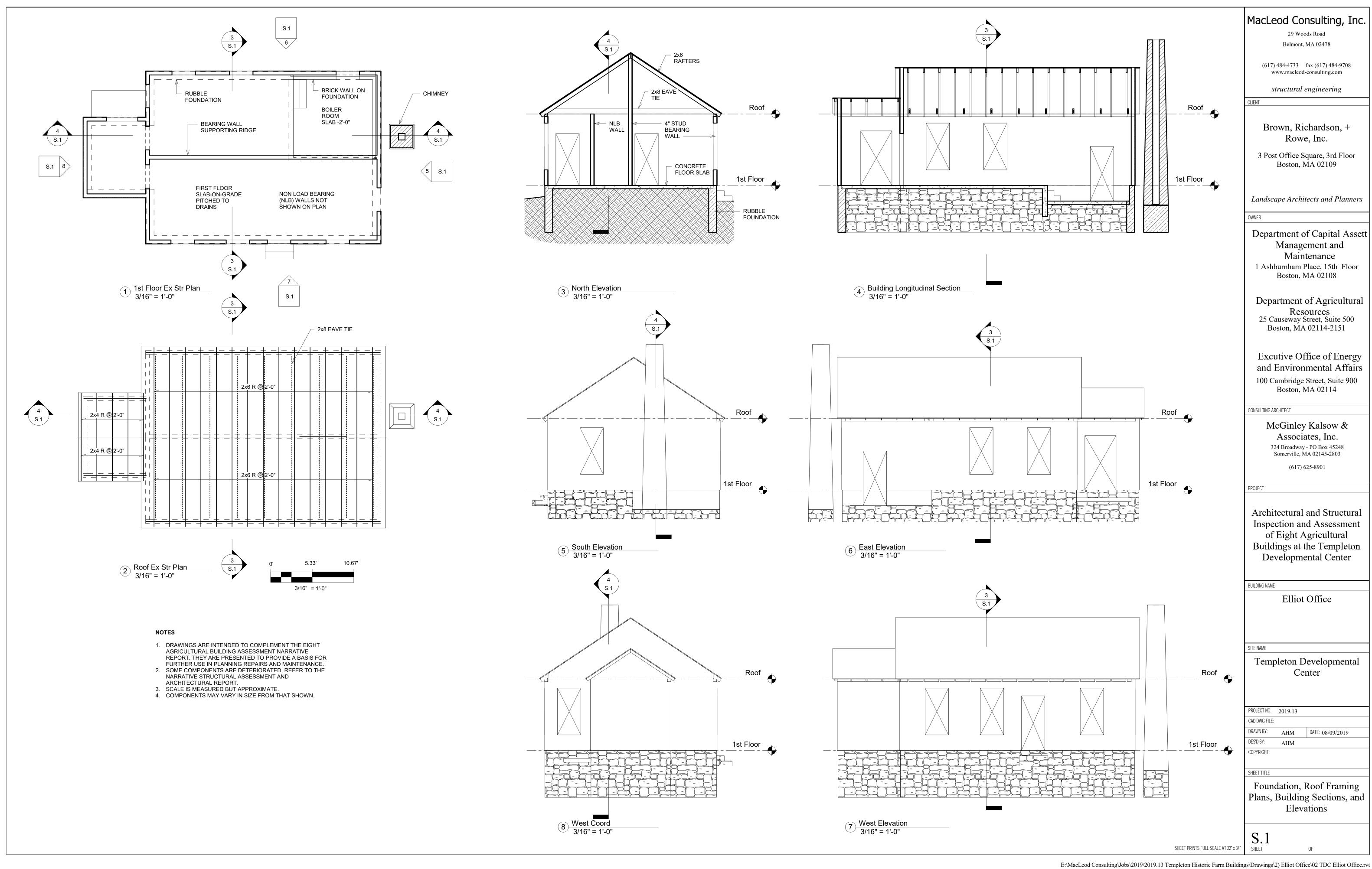
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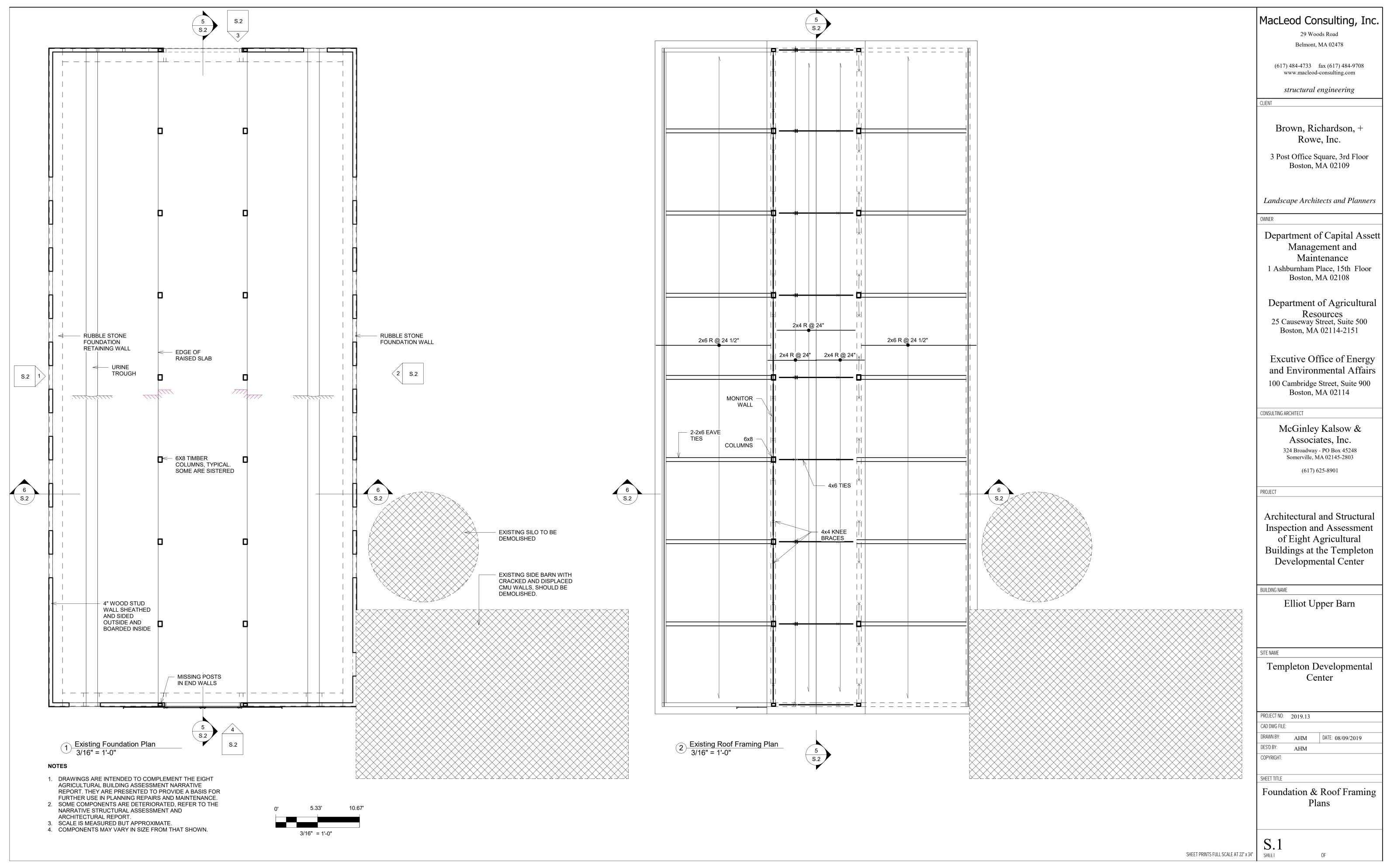
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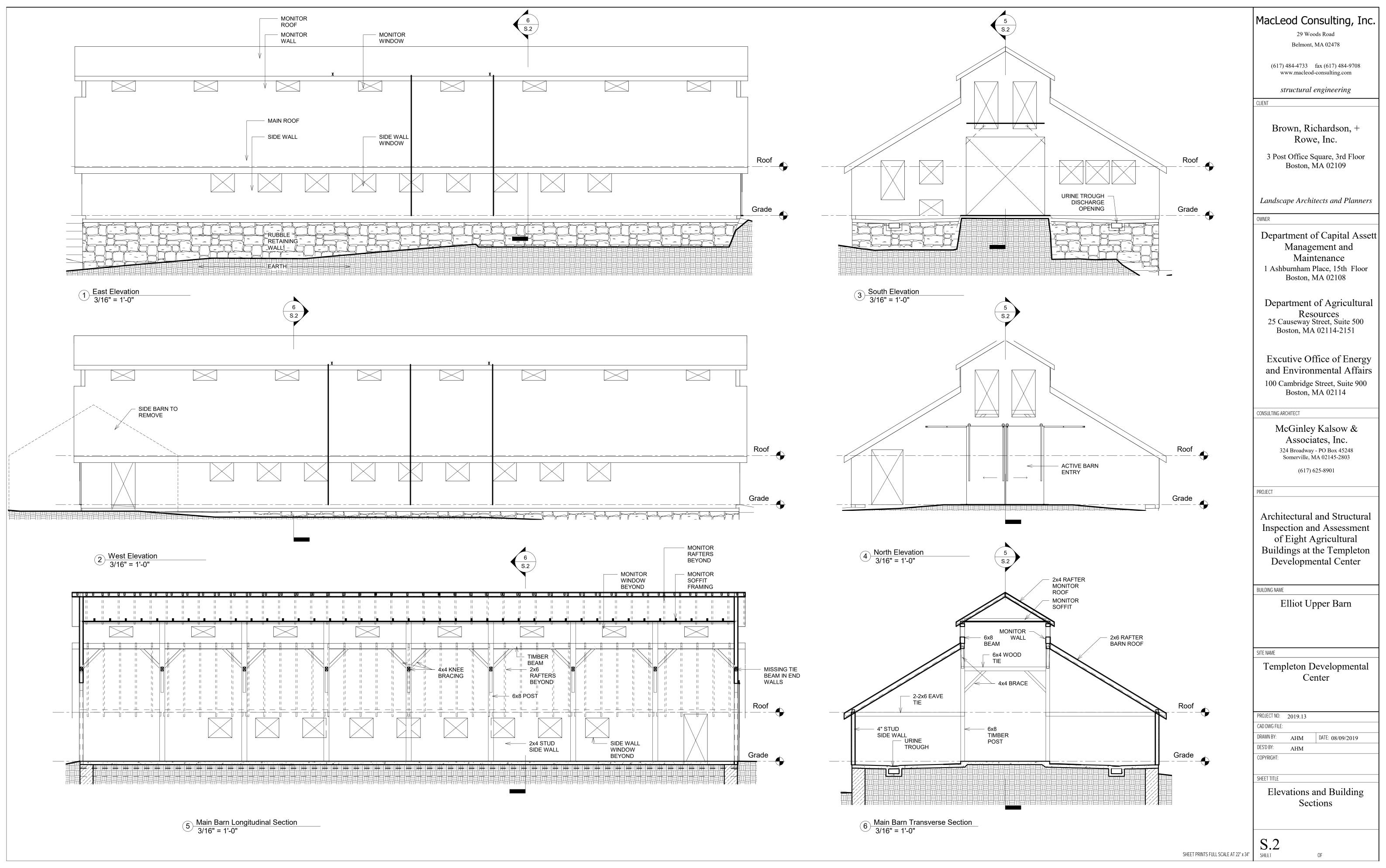
Building Sections

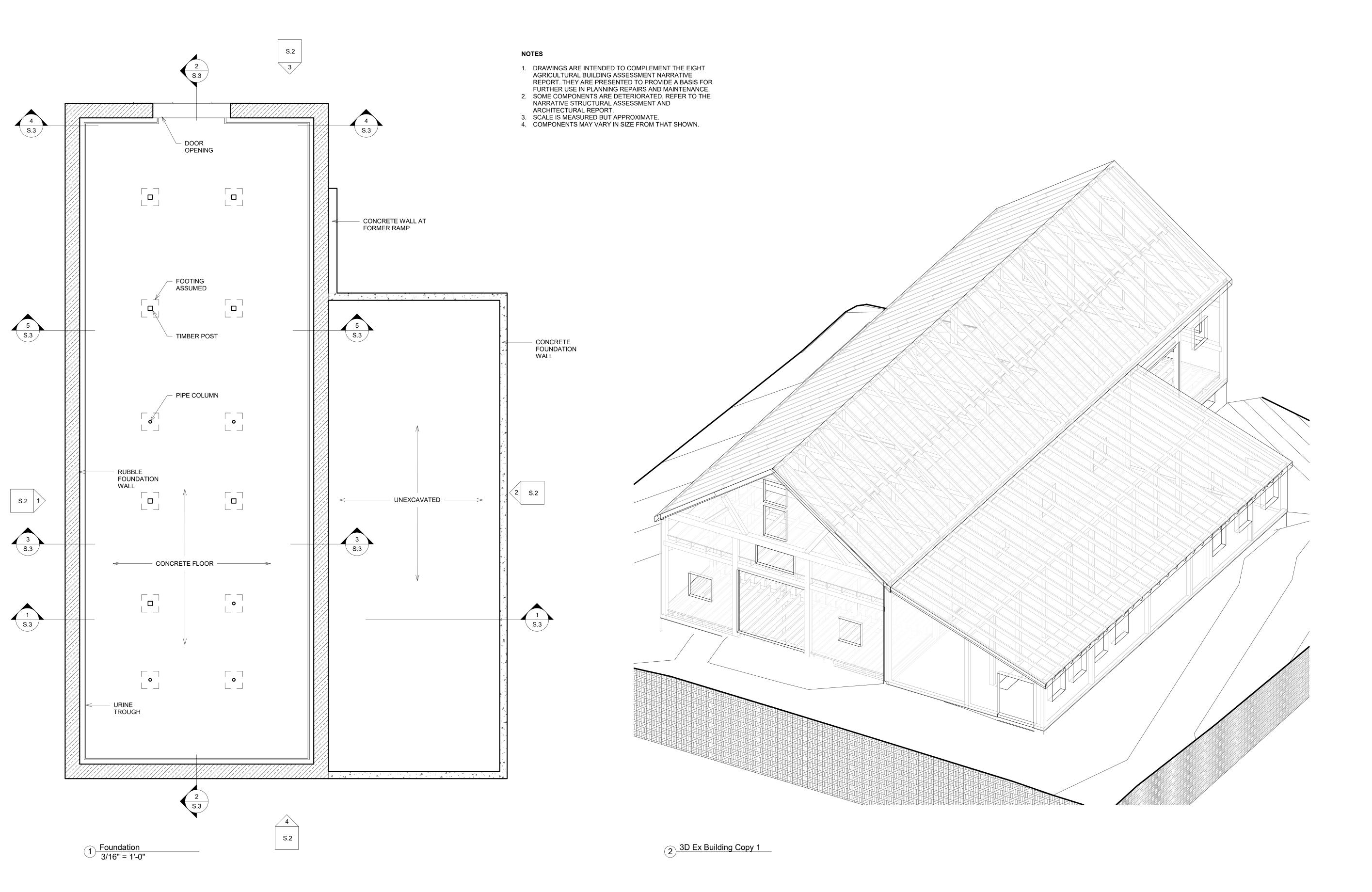
S.3

SHEET PRINTS FULL SCALE AT 22" x 34"









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PROJECT

Architectural and Structural Inspection and Assessment of Eight Agricultural Buildings at the Templeton Developmental Center

BUILDING NAME

Brook House Barn

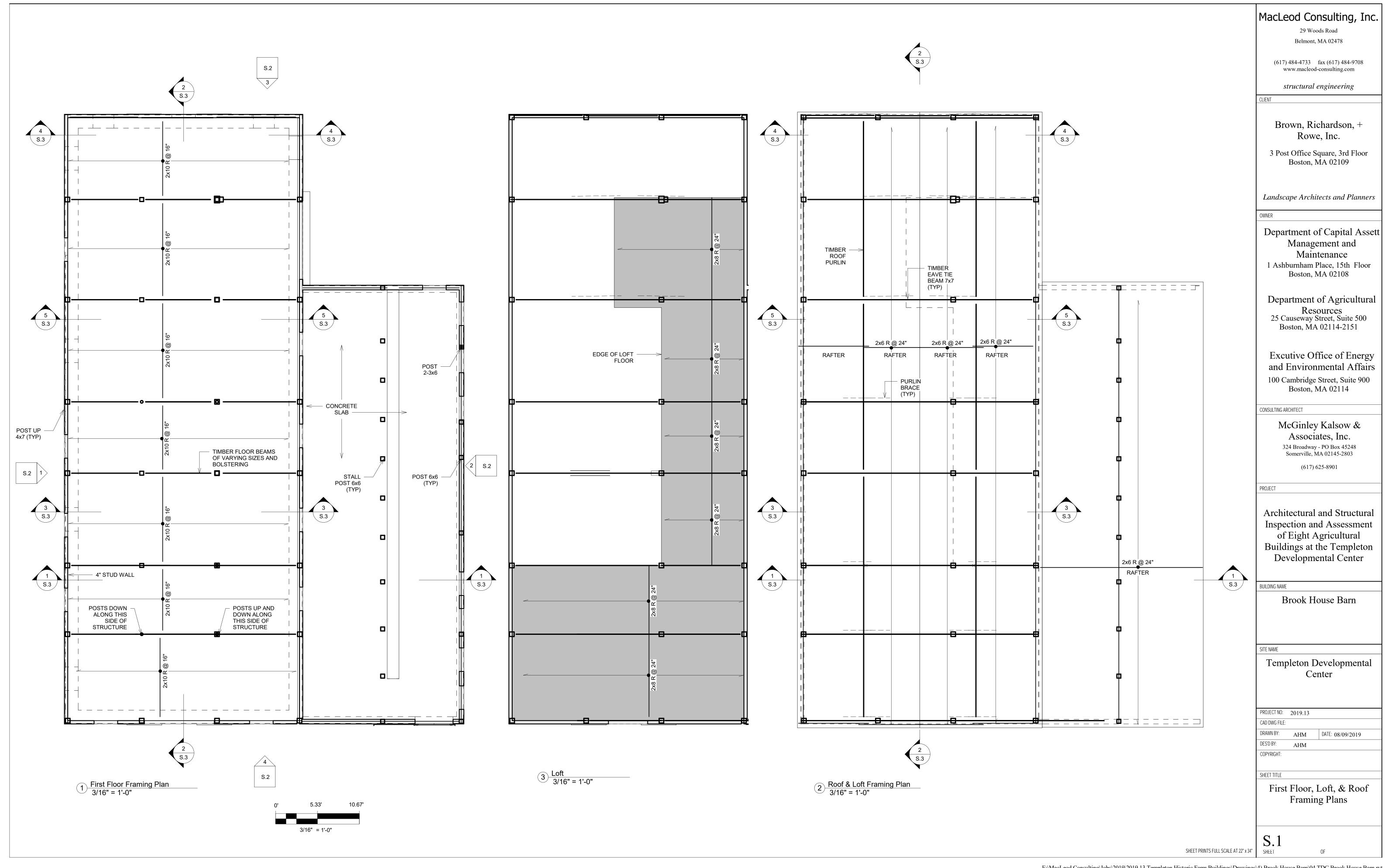
Templeton Developmental Center

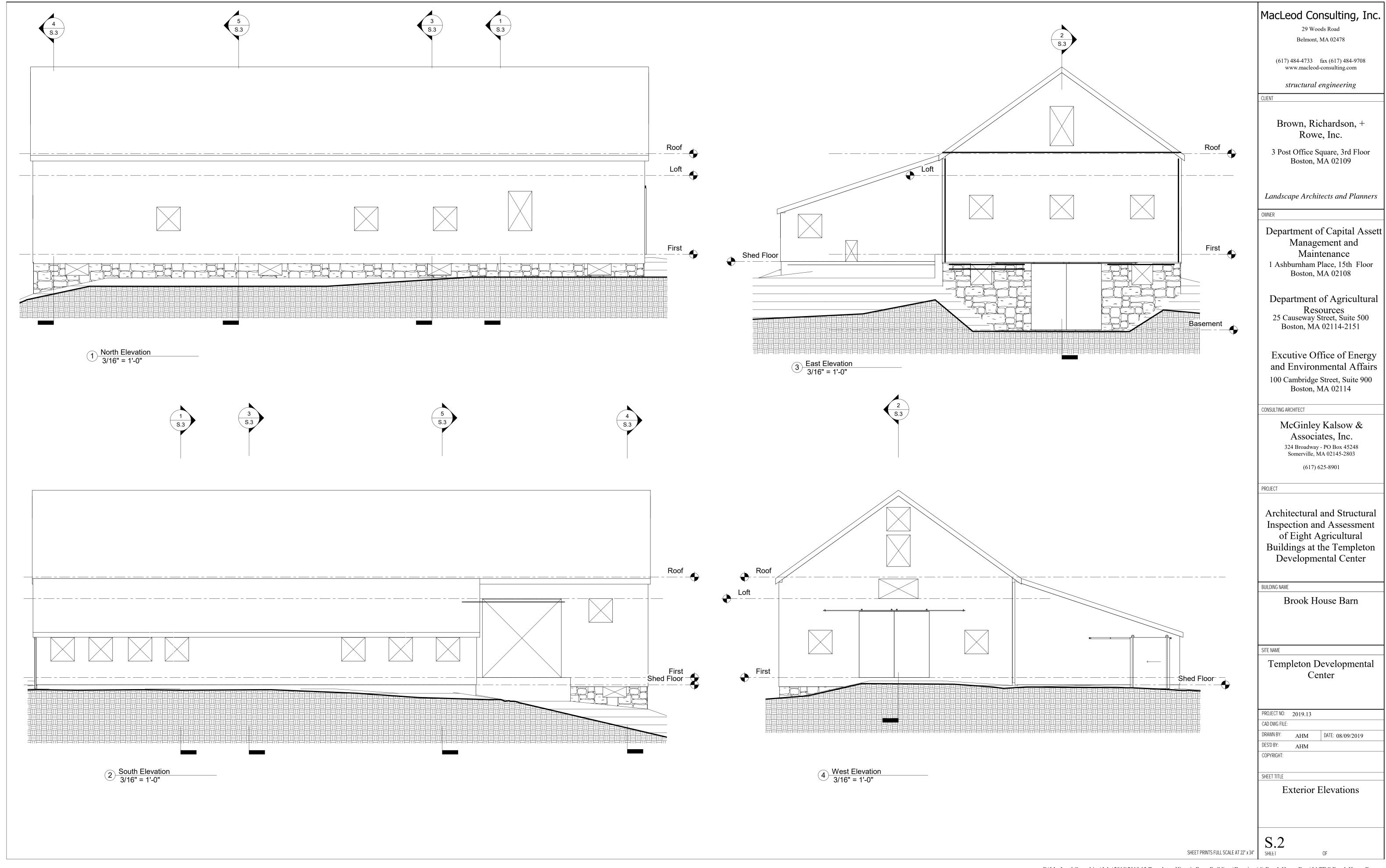
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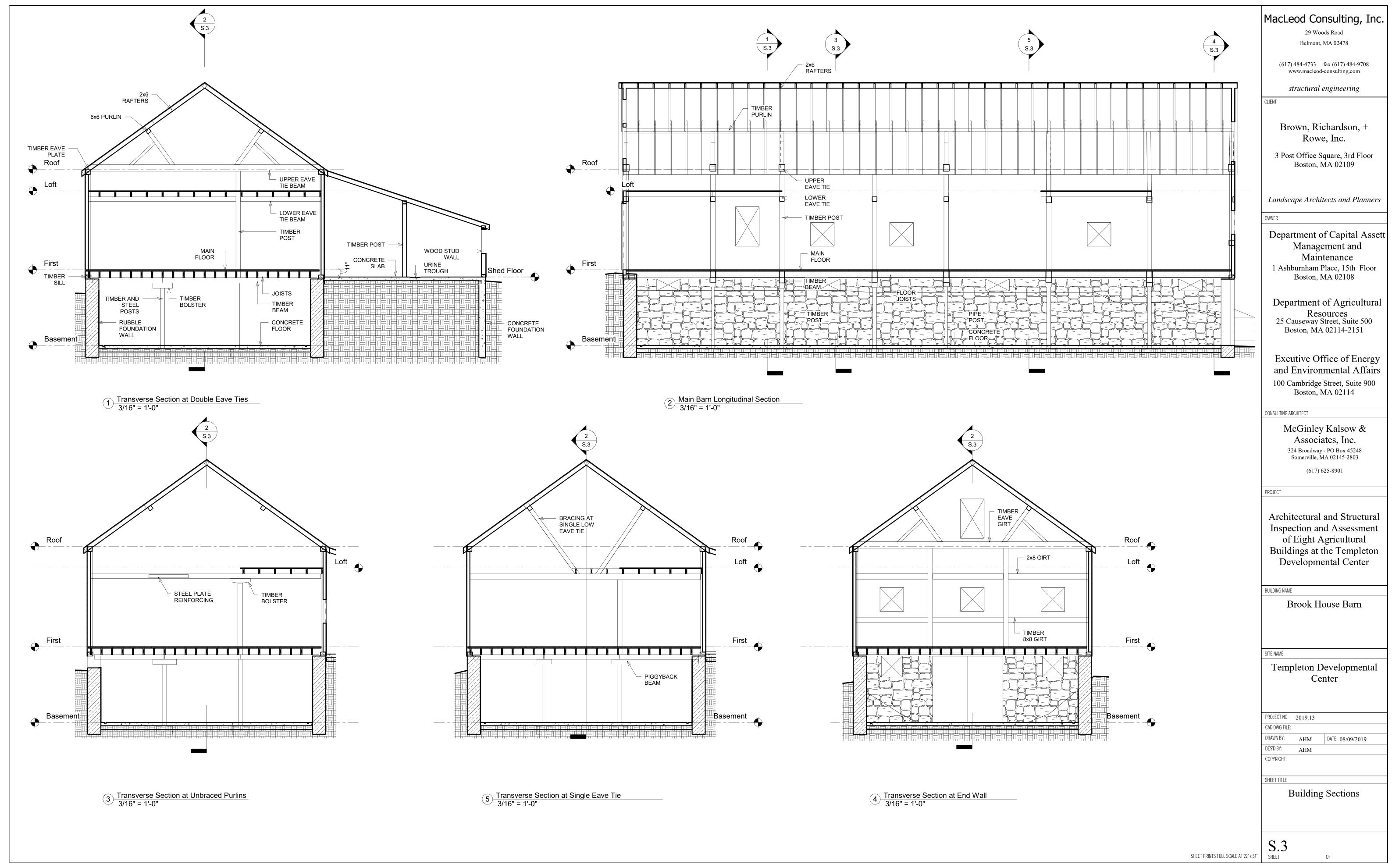
COPYRIGHT:

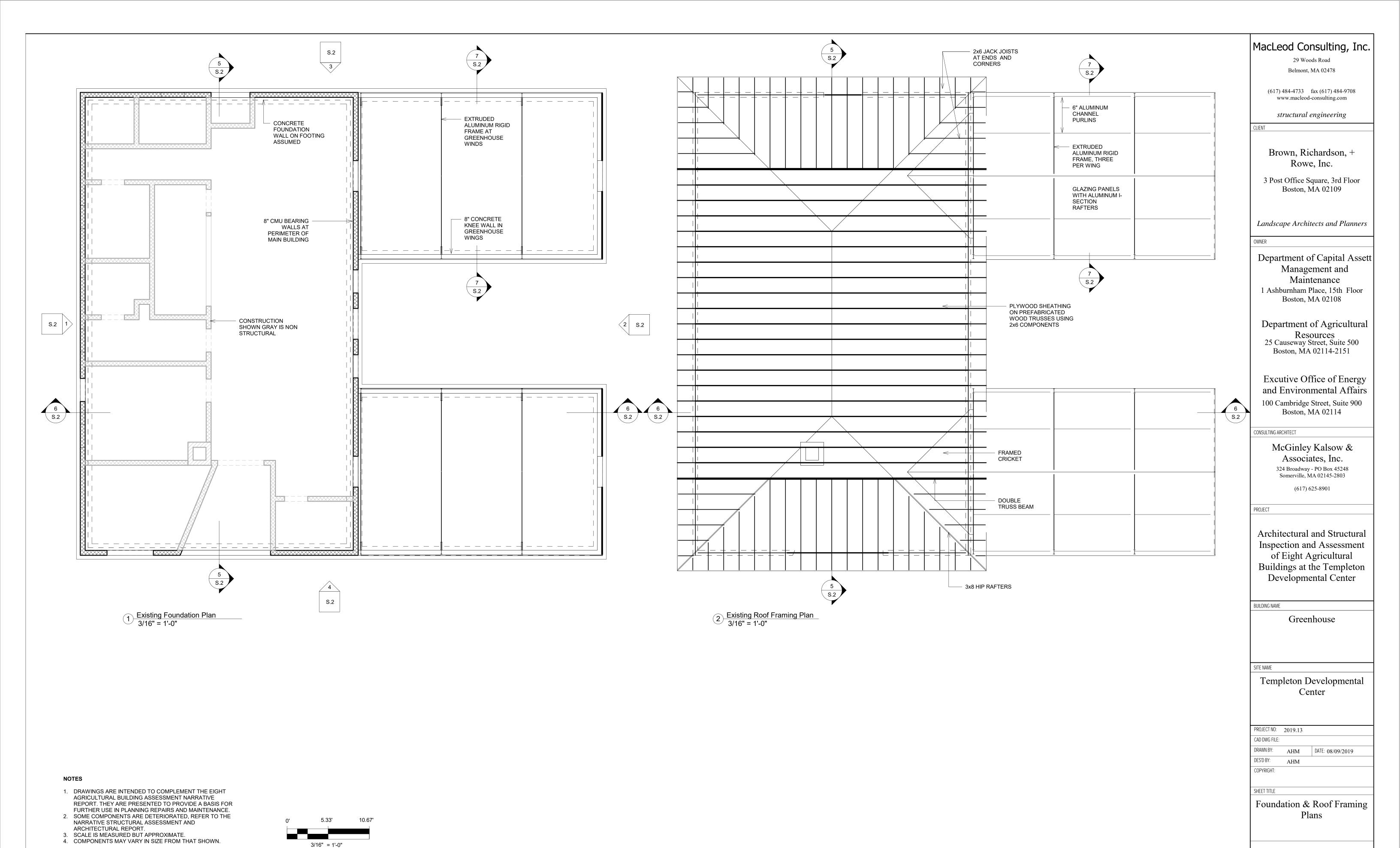
Foundation Plan and Isometric

S.O SHEET PRINTS FULL SCALE AT 22" x 34"



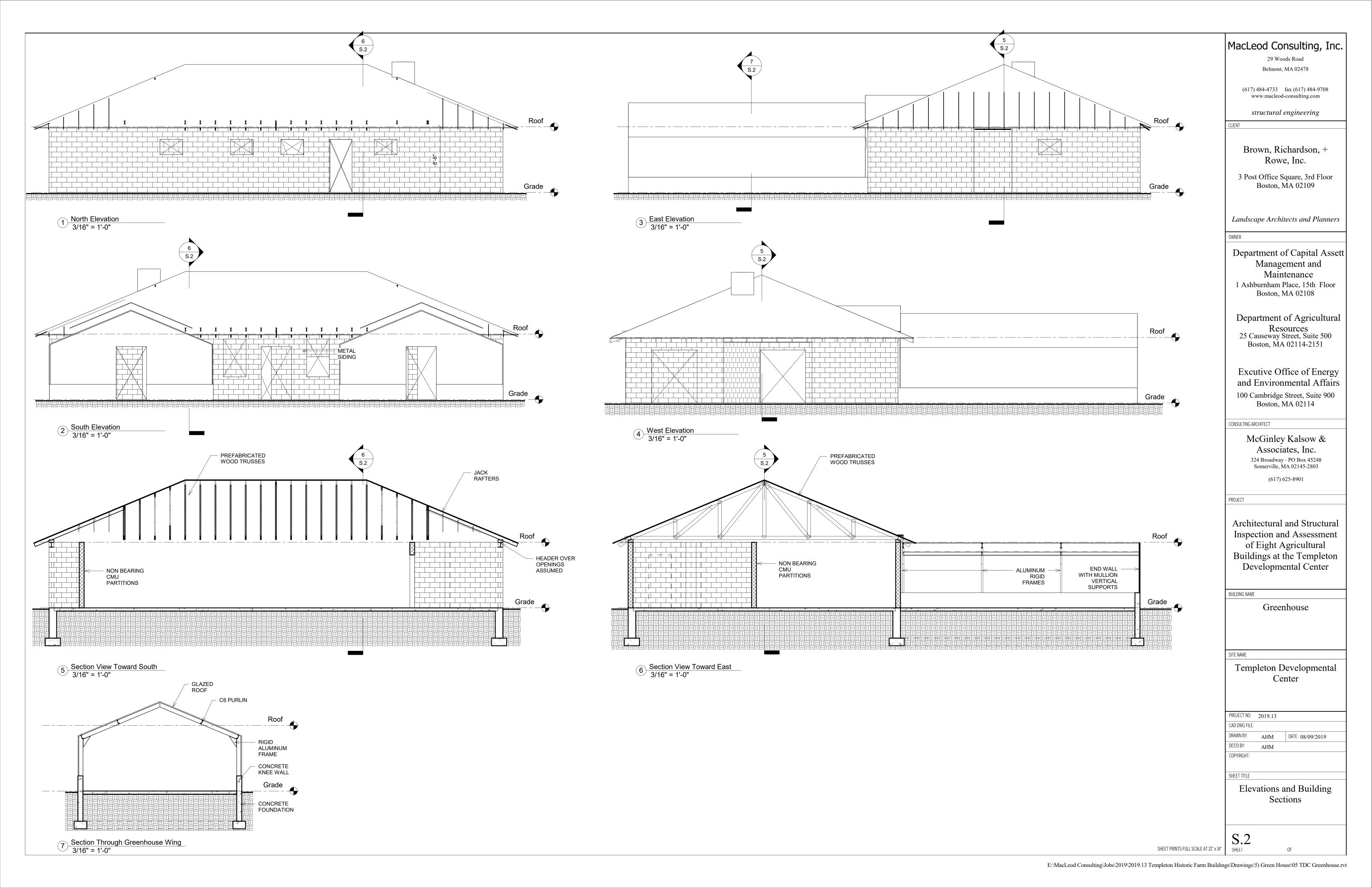


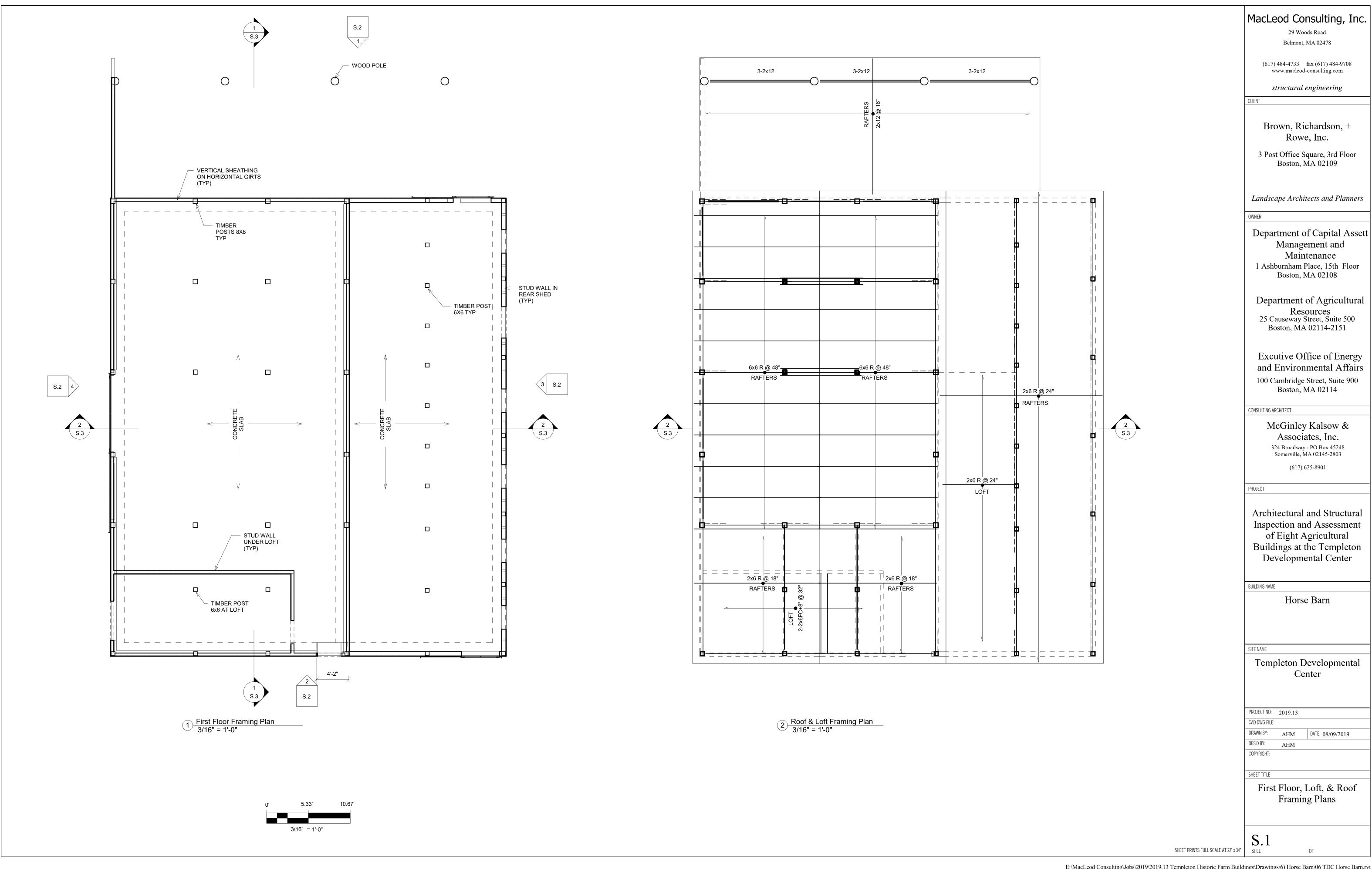


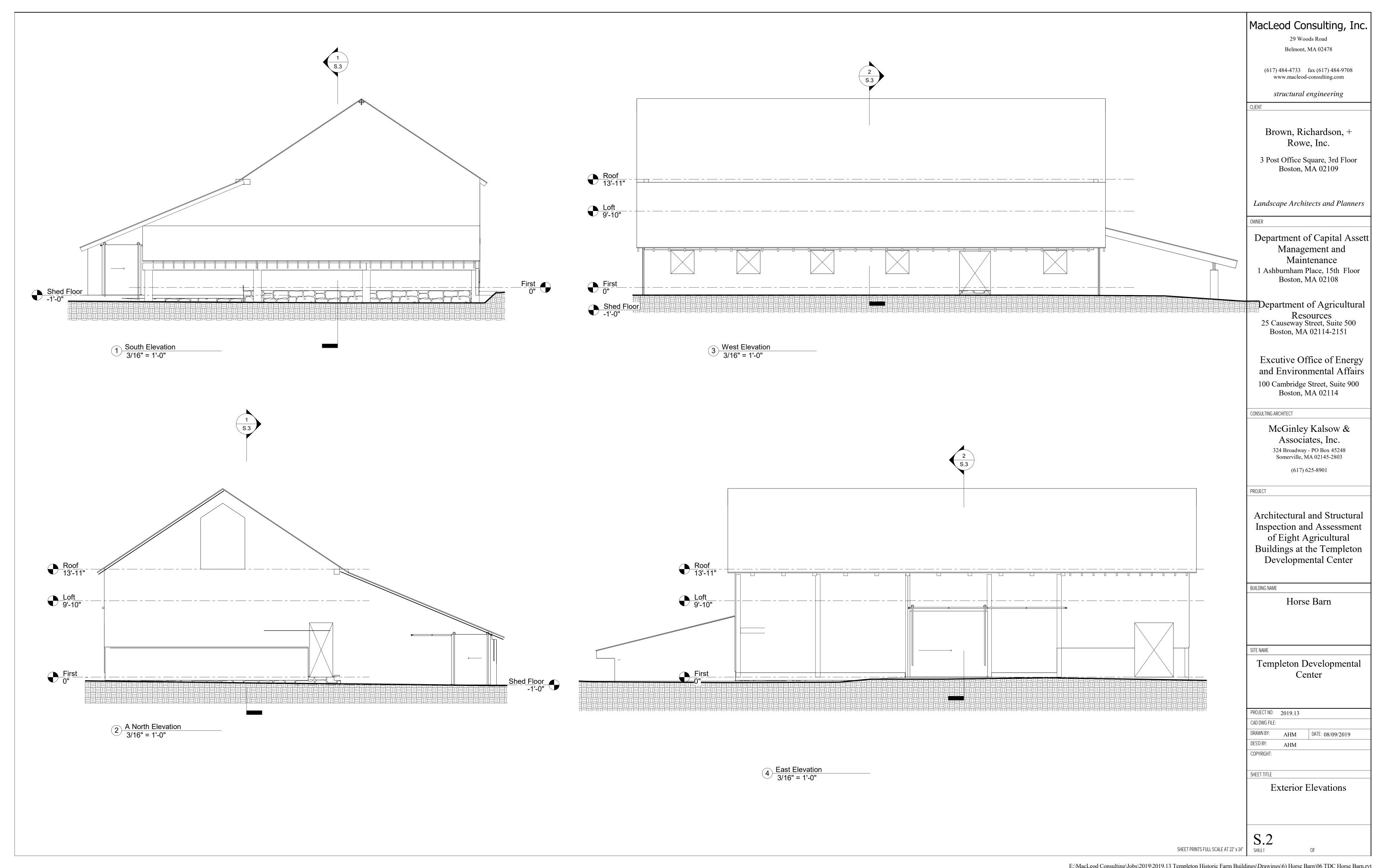


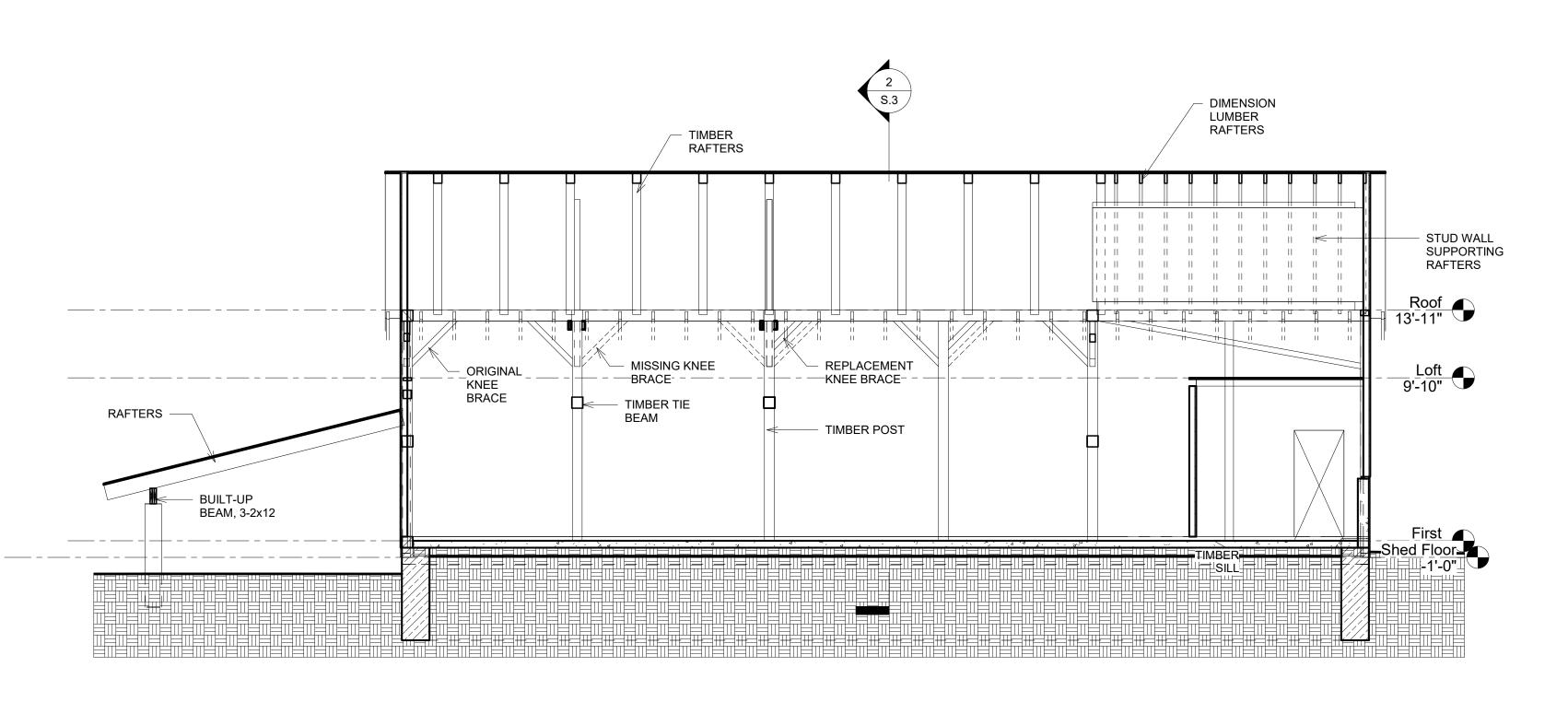
SHEET PRINTS FULL SCALE AT 22" x 34"

S.1









1 Main Barn Longitudinal Section 3/16" = 1'-0"

PROP AT JOIST ONLY AT COLUMN LINES
DOUBLE JOIST THE BEAM TIMBER TIE
BEAM STRUCTURE

TIMBER TIE
BEAM STRUCTURE

First
Shed Floor
STRUCTURE

First
Shed Floor

2 Transverse Section
3/16" = 1'-0"

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PROJECT

Architectural and Structural
Inspection and Assessment
of Eight Agricultural
Buildings at the Templeton
Developmental Center

BUILDING NAME

Horse Barn

TE NAME

Templeton Developmental Center

Building Sections

 PROJECT NO:
 2019.13

 CAD DWG FILE:
 DRAWN BY:
 AHM
 DATE: 08/09/2019

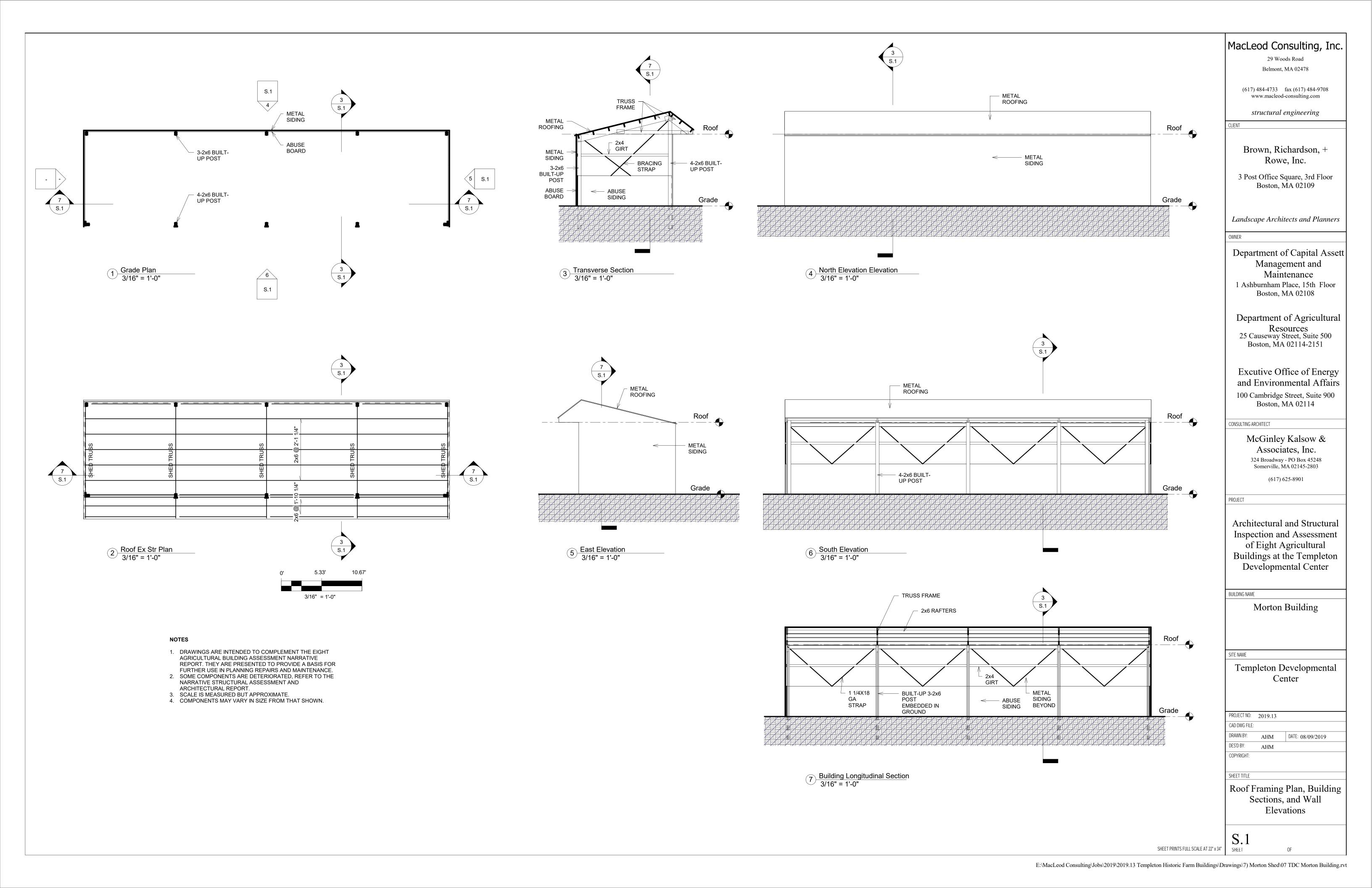
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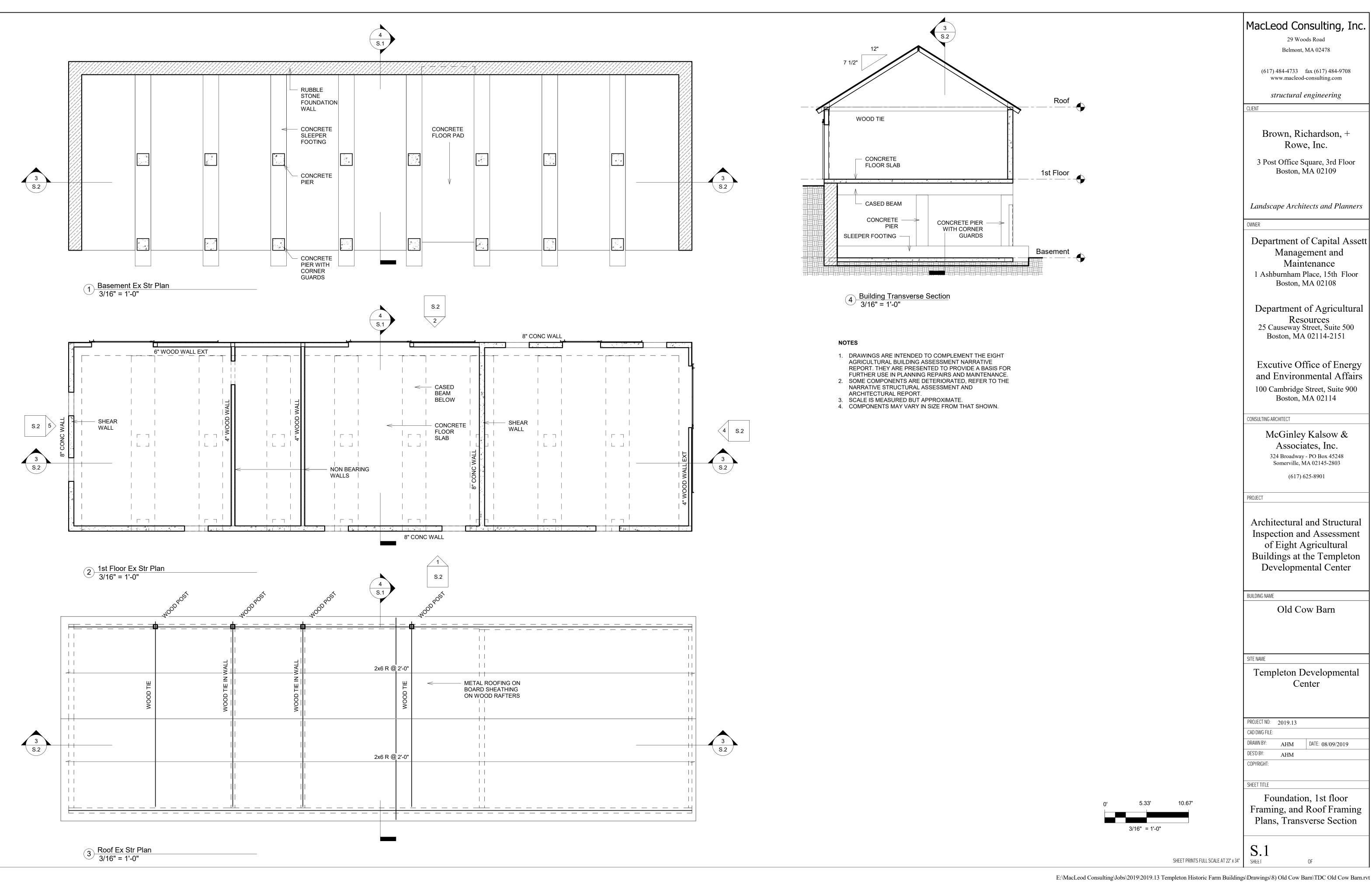
COPYRIGHT:

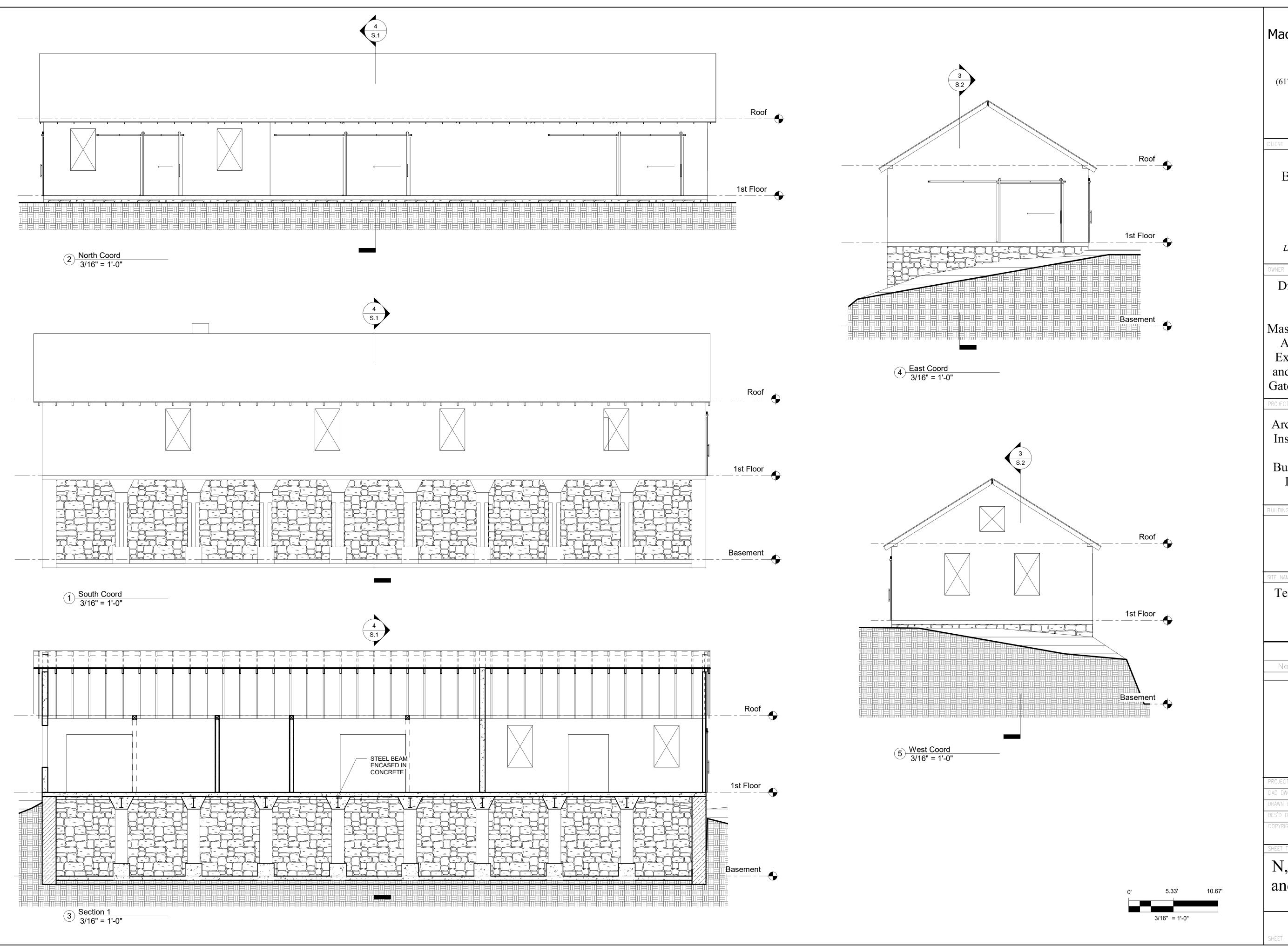
SHEET TITLE

S.3

SHEET PRINTS FULL SCALE AT 22" x 34"







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Architectural and Structural Inspection and Assessment of Eight Agricultural Buildings at the Templeton Developmental Center

Old Cow Barn

Templeton Developmental Center

> Revision Schedule Description

N, S, E, and W Elev, and Building Section

S.2