Maine Bureau of Parks and Lands
RICHMOND MAINTENANCE FACILITY BUILDINGS

1009 BRUNSWICK ROAD
RICHMOND , MAINE
BGS PROJECT PT3204

APPENDIX B - PROJECT PLANS

	SITEWORK		NAVIGATION AIDS BUILDING				CARPENTRY SHOP
			METAL FRAMED BUILDING OPTION		WOOD FRAMED BUILDING OPTION		
SHT	TITLE	SHT	TITLE	SHT	TITLE	SHT	TITLE
C-1	Overall Plan, Legend & Notes	A-1	Floor Plan - Metal Framed	W-1	Floor Plan - Wood Framed	B-1	Floor Plan
C-2	Site Plan A- Nav Aids Building & New Entrance	A-2	Building North Exterior Elevation	W-2	Building Cross Section. -Wood Framed	B-2	South & East Elevations
C-3	Site Plan B - Carpentry shop & Drainage Outfall	A-3	Building East Exterior Elevation	W-3	Building End Wall Framing -Wood Framed	B-3	North & West Elevations
C-4	Sitework General Notes	A-4	Building South Exterior Elevation	W-4	Foundation Plan -Wood Framed	B-4	Roof Framing Plan
C-5	Erosion and Sediment Control Details	A-5	Building West Exterior Elevation	W-5	Foundation Details - Woodl Framed	B-5	Framing Elevations
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C-7	Sitework Details	A-7	Building Cross Section			B-7	Roof Details
C-8	Sitework Details	A-8	Building Longitudinal Section			B-8	Foundation Plan
		A-9	Foundation Plan			B-9	Foundation Details
		A-10	Foundation Details			B-10	Slab Heating Plan
		A-11	Foundation Details			E-1	Electrical Plan
		A-12	Electrical Plan				

LANDMARK CORPORATION
SURVEYORS & ENGINEERS

ISSUED FOR BID

MAY 12, 2022

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Canaan, ME 04924
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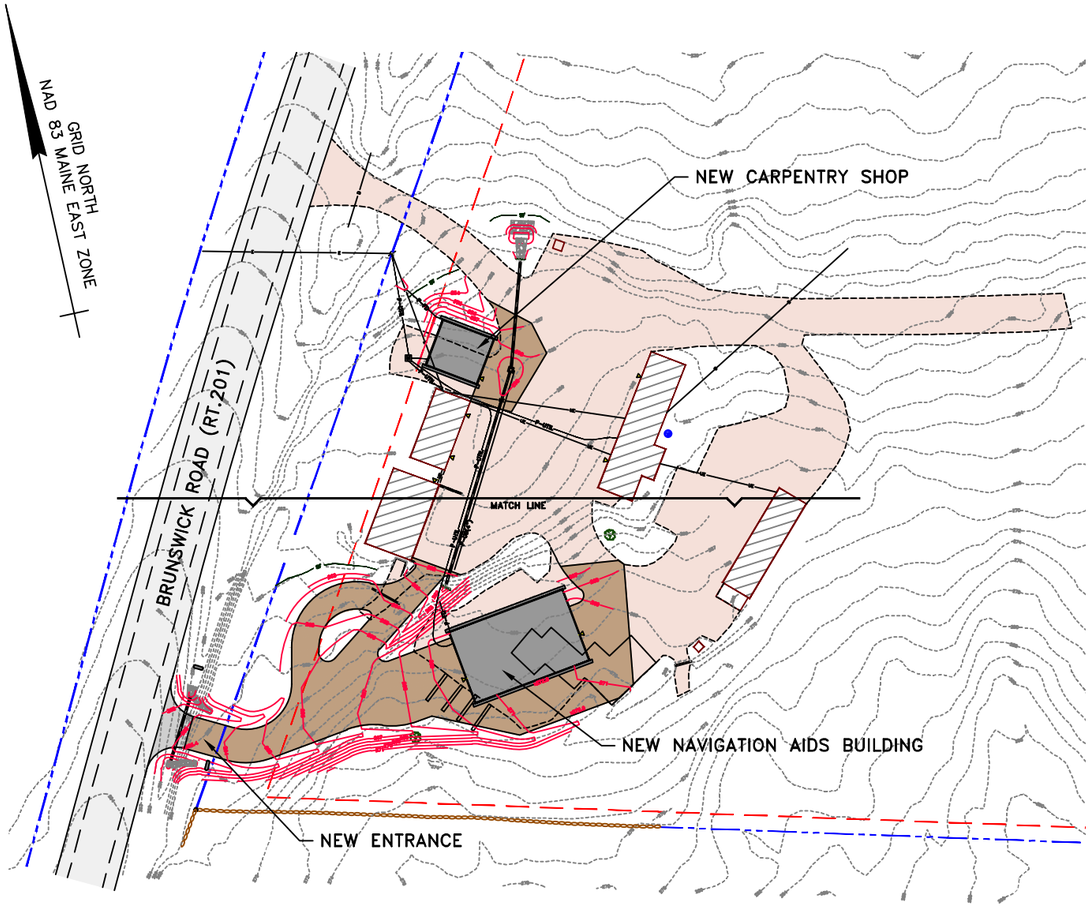


LEGEND:

- IRON PIN FOUND (AS NOTED)
- UTILITY POLE
- STONE WALL
- E — AERIAL UTILITY LINE
- UE — EX. UNDERGROUND UTILITIES
- S — EX. SANITARY SEWER LINE
- D — EX. STORM DRAIN
- EX. DRILLED WELL (APPROXIMATE LOCATION)
- DECIDUOUS TREE
- —266— EXISTING CONTOUR
- 1.7' TEST PIT WITH DEPTH TO LEDGE BELOW EXISTING GRADE PROVIDED BY OTHERS
- EXISTING BUILDING
- EXISTING GRAVEL DRIVE
- 235.2x NEW SPOT ELEVATION
- 230 NEW CONTOURS
- P-UTIL NEW UNDERGROUND UTILITIES
- P-UD NEW UNDERDRAIN 4" PERFORATED PVC
- P-FD NEW FOUNDATION DRAIN OUTFALL 4" SOLID PVC
- NEW STORMDRAIN
- NEW GRAVEL DRIVE
- NEW PAVED DRIVE
- NEW RIPRAP CHANNEL
- NEW CATCHBASIN (TYPE F)
- NEW BUILDING MOUNTED SITE LIGHT
- SF SILT FENCE
- NEW BOULDER HEADWALL
- NEW STONE CHECK DAM

SITE NOTES:

1. THESE PLANS ARE ISSUED FOR CONSTRUCTION OF NEW BUILDINGS AND SITE IMPROVEMENTS AT THE MAINE BUREAU OF PARKS & LANDS FACILITY IN RICHMOND, AND ARE PART OF THE OVERALL BGS PROJECT #3204. FOR OTHER INFORMATION REFER THE CONTRACT DOCUMENTS – PROJECT MANUAL, BUILDING DRAWINGS AND SPECIFICATIONS.
2. UTILITIES SHOWN ARE APPROXIMATE. LOCATION SHALL BE VERIFIED PRIOR TO START OF CONSTRUCTION. NOTIFY OWNER OF ANY DISCREPANCIES. NEW UNDERGROUND UTILITIES SHOWN ARE FOR INFORMATION ONLY AND ARE SCHEMATIC. COORDINATION WITH A LICENSED ELECTRICIAN AND CMP IS REQUIRED.
3. ALL STORM DRAIN PIPES SHALL BE ADS–N12 OR EQUAL. ALL PVC PIPES SHALL BE SDR 35 OR EQUAL. CONTRACTORS SHALL STAKE–OUT ALL DRAINAGE STRUCTURES, STORM DRAINS, CULVERTS, AND LEVEL SPREADERS PRIOR TO PLACEMENT, FOR APPROVAL BY OWNER/ENGINEER.
4. BOULDER HEADWALLS SHALL BE LOOSE LAID AND MACHINE PLACED.
5. SEE TEST PIT LOCATIONS AND CORRESPONDING DEPTHS TO LEDGE BELOW EXISTING GRADE FOR LEDGE REMOVAL REQUIREMENTS. COMPLY WITH PROJECT MANUAL SPECIFICATION SECTION 31 23 06 AND MAINE DOT STANDARD SPECIFICATION SECTION 203.042 FOR REQUIREMENTS FOR BLASTING.
6. THE NEW ENTRANCE IS SUBJECT TO MAINE DEPARTMENT OF TRANSPORTATION ENTRANCE PERMIT #29290.
7. VEGETATION CLEARING LIMIT IS 15 FEET FROM THE EDGES OF NEW GRADED AREAS OR EDGE OF ROAD. ANY TREE LIMBS THAT EXTEND OVER THE NEW DRIVEWAY AREAS BELOW 16 FEET HEIGHT SHALL BE REMOVED BACK TO THE TREE TRUNK.
8. THIS SITE WAS INITIALLY DEVELOPED IN THE EARLY 1970's AND THEREFORE MOST OF THE IMPERVIOUS ARE IS NON–JURISDICTIONAL. THE AMOUNT OF IMPERVIOUS AREA THAT WAS CONSTRUCTED AFTER 1997 COMBINED WITH THAT WHICH IS PROPOSED FOR THIS PROJECT IS APPROXIMATELY 18,000 SF WHICH DOES NOT MEET THE THRESHOLD FOR A DEP STORMWATER PERMIT.

SURVEYOR'S NOTES:

Elevations shown hereon are in feet, referenced to the North American Vertical Datum of 1988 (NAVD 88) derived from GPS observations tied to the MaineDOT CORS network.

Contours shown at 1–foot intervals are derived from field survey. Contours shown at 2–foot intervals are taken from Maine Office of GIS lidar data.

STATE OF MAINE
MICHAEL J. SABATINI 9053
LICENSED PROFESSIONAL ENGINEER
12/13/21

REVISED DECEMBER 13, 2021

LANDMARK CORPORATION
SURVEYORS & ENGINEERS
135 ROCKLAND STREET ROCKPORT, MAINE 04856 PHONE: (207) 236-6757 WWW.LANDMARKMAINE.COM

FIELD WORK DATE:	5/19/21
FIELD WORK BY:	KMB/EST
DRAFTED BY:	KMB/JML
CHECKED BY:	MJS
PLAN DATE:	AUGUST 27, 2021

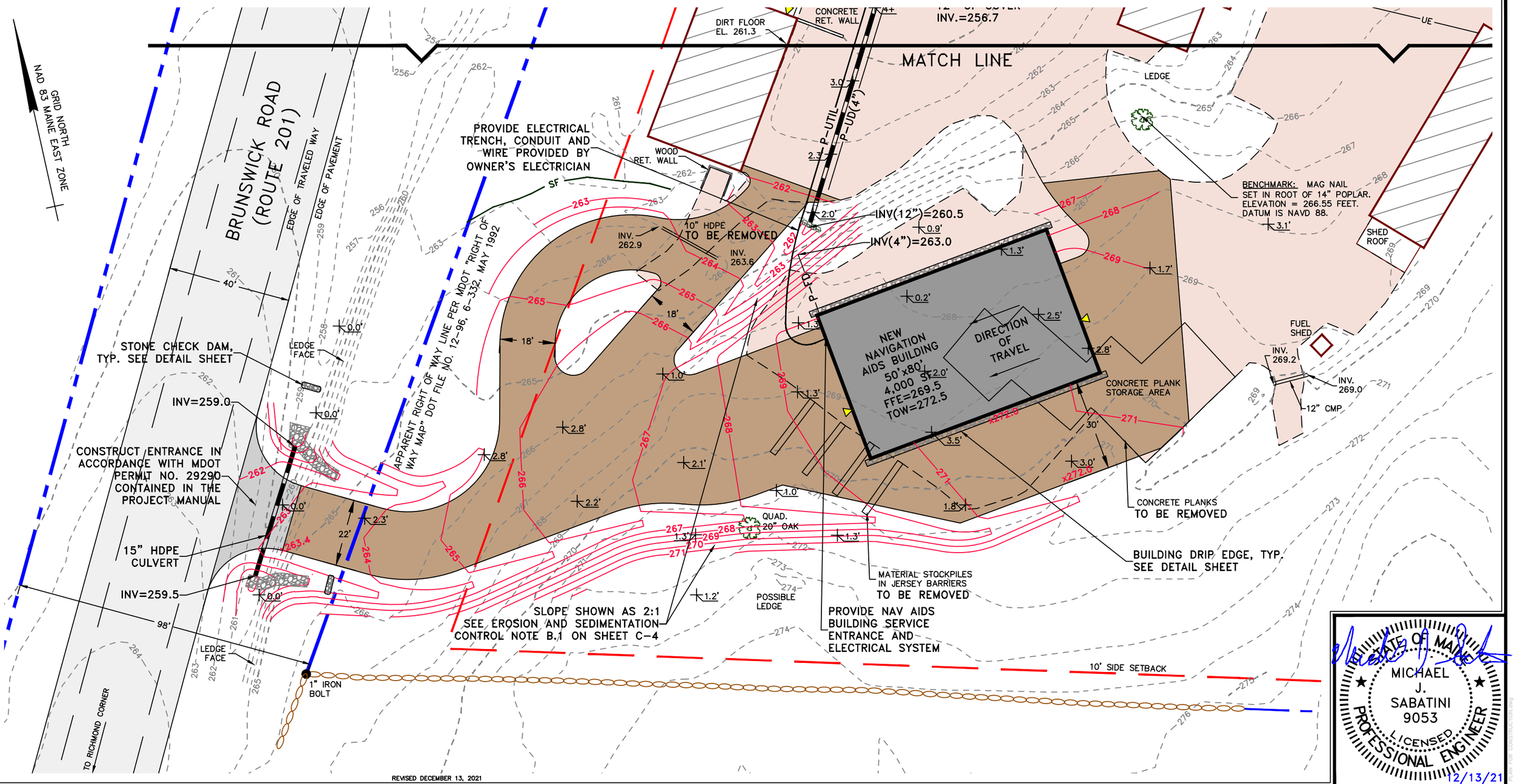
GRAPHIC SCALE
100 0 50 100 200
1 inch = 100 ft.

BGS PROJECT #PT3204
SITEWORK WORK SCOPE
OVERALL PLAN, LEGEND & NOTES

MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY
BUREAU OF PARKS AND LANDS
BOATING FACILITIES PROGRAM
RICHMOND MAINTENANCE FACILITY BUILDINGS
1009 BRUNSWICK ROAD RICHMOND, MAINE SAGADAHOC COUNTY

SCALE:	JOB No.:	SHEET:
1" = 100'	20 - 015	1 OF 8

SHEET DESIGNATION: **C-1**



REVISED DECEMBER 13, 2021

STATE OF MAINE
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LANDMARK CORPORATION
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FIELD WORK DATE:	5/19/21
FIELD WORK BY:	KMB/EST
DRAFTED BY:	KMB/JML
CHECKED BY:	MJS
PLAN DATE:	AUGUST 27, 2021

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.

BGS PROJECT #PT3204
SITEWORK WORK SCOPE
SITE PLAN A - NAVIGATION AIDS BUILDING & NEW ENTRANCE

MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY
BUREAU OF PARKS AND LANDS
BOATING FACILITIES PROGRAM
RICHMOND MAINTENANCE FACILITY BUILDINGS
1009 BRUNSWICK ROAD RICHMOND, MAINE SAGADAHOC COUNTY

SCALE: 1" = 30' | JOB No.: 20 - 015 | SHEET: 2 OF 8

SHEET DESIGNATION: **C-2**

GRID NORTH
NAD 83 MAINE EAST ZONE

TO GARDINER

BRUNSWICK ROAD
(ROUTE 201)

EDGE OF TRAVELED WAY

EDGE OF PAVEMENT

APPARENT RIGHT OF WAY LINE PER MDOT "RIGHT OF WAY MAP" DOT FILE NO. 12-96, 6-332, MAY 1992

40' FRONT SETBACK

20'

D

E

E

SF

SF

INV=252.5

PROVIDE UNDERGROUND UTILITIES, SERVICE ENTRANCE AND WIRING TO CARPENTRY SHOP

METER PEDESTAL

M

P-UTIL

P-FD

P-UTIL

P-UTIL

NEW CARPENTRY SHOP 32'x36' 1,152 SF FFE=258.5 TOW=260.17

2.5'

1.3'

1.2'

1.2'

1.0'

0.0'

1.3'

LEVEL SPREADER
BERM=252.0
BOTTOM=250.5
LENGTH=10.0'

INV(12")=253.0

EXISTING DUMPSTER

2.4'

1.8'

CATCHBASIN
TYPE F W/4"FRAME
RIM=257.6
INV.IN(12")=255.6
INV.IN(4")=255.8
INV.OUT(12")255.5

GRAVEL SURFACED DRIVE AND PARKING

EXISTING DATA CABLES IN CONDUIT TO REMAIN, COORDINATE WITH OWNER AT DRAINAGE CROSSING

PROVIDE ELECTRICAL TRENCH, CONDUIT AND WIRE PROVIDED BY OWNER'S ELECTRICIAN

ALL SITEWORK SHOWN ON THIS SHEET IS IN CARPENTRY SHOP CONTRACT

EXISTING SEPTIC SYSTEM

S

S

UE

UE

UE

UE

UE

UE

12'

APPROX. UNDERGROUND POWER 12" DEEP TO BE REPLACED

GARAGE F.F.E. 259.38

4+'

4+'

P-UTIL

P-UTIL

TO MAINTAIN 12" OF COVER INV.=256.7

CONCRETE RET. WALL

DIRT FLOOR EL. 261.3

F.F.E. GARAGE 262.79

W

MATCH LINE

LEDGE

REVISED DECEMBER 13, 2021

STATE OF MAINE
MICHAEL J. SABATINI
9053
LICENSED PROFESSIONAL ENGINEER

12/13/21

LANDMARK CORPORATION
SURVEYORS & ENGINEERS
135 ROCKLAND STREET ROCKPORT, MAINE 04856 PHONE: (207) 236-6757 WWW.LANDMARKMAINE.COM

FIELD WORK DATE:	5/19/21
FIELD WORK BY:	KMB/EST
DRAFTED BY:	KMB/JML
CHECKED BY:	MJS
PLAN DATE:	AUGUST 27, 2021

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.

BGS PROJECT #PT3204
SITEWORK WORK SCOPE
SITE PLAN B - CARPENTRY SHOP & DRAINAGE OUTFALL

MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY
BUREAU OF PARKS AND LANDS
BOATING FACILITIES PROGRAM
RICHMOND MAINTENANCE FACILITY BUILDINGS
1009 BRUNSWICK ROAD RICHMOND, MAINE SAGADAHOC COUNTY

SCALE:	1" = 30'	JOB No.:	20 - 015	SHEET:	3 OF 8

SHEET DESIGNATION:
C-3

GENERAL NOTES

1. THESE PLANS ARE FOR IMPROVEMENTS ASSOCIATED WITH EXPANSION OF THE STATE OF MAINE NAVIGATION AIDS/BOATING FACILITIES OFFICE AND MAINTENANCE SHOP IN RICHMOND, MAINE.

2. THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLANS ARE BASED ON EVIDENCE VISIBLE FROM ABOVE GROUND AND ARE APPROXIMATE. THE CONTRACTOR SHALL NOTIFY DIG SAFE PRIOR TO BEGINNING WORK. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION, AND DEPTH OF ANY UTILITIES AND SHALL NOTIFY THE OWNER/ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE OWNER AND THE ENGINEERING OFFICE OF LANDMARK CORPORATION AT (207) 236-6757 IN THE EVENT OF ANY DISCREPANCIES IN THE PLANS OR IN THE RELATIONSHIPS OF FINISHED GRADES TO EXISTING GRADES PRIOR TO BEGINNING WORK.

4. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF TRAFFIC.

5. THE CONTRACTOR SHALL NOTE THAT IN CASE OF A DISCREPANCY BETWEEN THE SCALED AND FIGURED DIMENSIONS SHOWN ON THESE PLANS, THE FIGURED DIMENSIONS SHALL GOVERN.

6. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM SUCH WORK.

7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL LOCAL, STATE, & FEDERAL CONSTRUCTION SAFETY REGULATIONS ARE FOLLOWED DURING THE CONSTRUCTION OF THIS SITE.

8. LANDMARK CORPORATION AND PINNACLE HILL ENGINEERING ARE NOT RESPONSIBLE FOR THE CONTRACTOR'S MEANS OR METHODS FOR CONSTRUCTION, INCLUDING, BUT NOT LIMITED TO THE CONTRACTOR'S UTILIZATION OF PERSONNEL, MATERIALS, EQUIPMENT, OR SAFETY MEASURES IN THE PERFORMANCE OF ANY WORK FOR THIS CONSTRUCTION. THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR PERFORMING THE WORK CORRECTLY AND IN CONFORMANCE WITH ALL FEDERAL, STATE, AND LOCAL CODE AND/OR REGULATORY REQUIREMENTS.

9. THE CONTRACTOR IS RESPONSIBLE FOR LAYOUT FOR CONSTRUCTION AND LAYOUT SHALL BE ACCURATELY PERFORMED BY QUALIFIED PERSONNEL USING PROFESSIONAL SURVEY EQUIPMENT. CONTRACTOR MAY CONTACT LANDMARK CORPORATION SURVEYORS AND ENGINEERS FOR ASSISTANCE. DIMENSIONS NOT SHOWN ON THE PLANS MAY BE PROVIDED TO THE CONTRACTOR'S SURVEYOR IN THE FORM OF A GEOREFERENCED AUTOCAD FILE.

10. CONTRACTOR SHALL SURVEY LOCATE ALL NEW UNDERGROUND UTILITIES AND PROVIDE OWNER WITH AS BUILT INFORMATION AT THE END OF THE PROJECT.

EROSION & SEDIMENTATION CONTROL NOTES

IN ORDER TO PROTECT THE SOIL AND WATER RESOURCES OF THIS DEVELOPMENT AND ADJACENT LANDS, THE FOLLOWING ACTIONS WILL BE TAKEN:

A. EROSION CONTROL/TEMPORARY MEASURES

THE FOLLOWING TEMPORARY MEASURES TO CONTROL EROSION AND SEDIMENTATION SHALL BE USED.

1. SILT FENCE OR WOOD WASTE COMPOST/BARK FILTER BERM WILL BE INSTALLED AROUND THE LIMITS OF CLEARING ASSOCIATED WITH EACH PORTION OF THIS PROJECT. EITHER OF THESE DEVICES CAN BE USED INTERCHANGEABLY. SILT FENCE SHALL REMAIN IN PLACE UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED. SILT FENCING WILL BE INSTALLED TO SPECIFICATIONS OUTLINED IN THE MAINE EROSION AND SEDIMENTATION CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES.

2. EACH GROUND AREA, OPENED OR EXPOSED, WHETHER DIRECTLY OR INDIRECTLY DUE TO THE PROJECT CONSTRUCTION, SHALL BE MINIMIZED AND SHALL BE STABILIZED WITHIN 7 DAYS OF THE LAST WORKING OF THE MINERAL SOIL, AND SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING.

3. TEMPORARY SOIL STABILIZATION SHALL BE EITHER BY TEMPORARY MULCHING, TEMPORARY SEEDING, OR PERMANENT BASE GRAVEL, AS FOLLOWS:

TEMPORARY SEEDING

SEED SHALL BE AROOSTOOK RYE APPLIED AT 2.60#/1000SF. LIME SHALL BE AGRICULTURAL GROUND LIMESTONE APPLIED AT 13.8#/1000SF. FERTILIZER SHALL BE 10-10-10 CLASSIFICATION APPLIED AT 13.8#/1000SF. MULCH SHALL CONSIST OF HAY OR STRAW MULCH AND SPREAD EVENLY AT A RATE OF 70-90#/1000SF. TEMPORARY SEEDING SHALL ONLY BE MADE BETWEEN APRIL 15TH AND OCTOBER 15TH, AND SHALL NOT BE PLACED OVER SNOW. IF THE SEEDING IS NOT COMPLETED BY OCTOBER 15TH, ADDITIONAL MULCH WILL BE ADDED TO PROVIDE ADEQUATE WINTER PROTECTION.

TEMPORARY MULCHING

MULCH SHALL CONSIST OF CHOPPED HAY OR STRAW MULCH AND SPREAD BY MECHANICAL BLOWER, OR BY HAND IF ADJACENT TO WETLAND HABITAT, EVENLY AT A RATE OF 150-200#/1000 SF. TEMPORARY MULCH SHALL BE REMOVED PRIOR TO PERMANENT SOIL STABILIZATION. MULCH MUST NOT BE PLACED OVER SNOW.

PERMANENT BASE GRAVEL

BASE GRAVEL UNDER PAVEMENT SHALL BE SUITABLE AS TEMPORARY SOIL STABILIZATION UNDER THE FOLLOWING CONDITIONS:

A. GRAVEL SHALL MEET THE SPECIFICATIONS FOR BASE GRAVEL FOR THE PROPOSED COMPLETED PAVEMENT.

B. EROSION CONTROL/PERMANENT LAWN SEEDING MEASURES

1. EXCESSIVELY STEEP SLOPES, 2:1 OR GREATER, SHALL BE PROTECTED BY EROSION CONTROL EXCELSIOR BLANKET WITH BIODEGRADABLE PLASTIC OR JUTE MESH AFTER SEEDING, EXCEPT WHERE STABLE LEDGE FACE IS ENCOUNTERED.

2. PERMANENT SEEDING SHALL BE PERFORMED DURING CONSTRUCTION OPERATIONS AS EACH DISTURBED AREA HAS BEEN BROUGHT TO FINISH GRADE. ALL NEW GRASS AREAS SHALL BE SEEDED AT THE RATE OF (8 LBS/1000SF) WITH THE FOLLOWING MIXTURE: 35% CREEPING RED FESCUE, 35% KENTUCKY BLUEGRASS, 20% CHEWINGS FESCUE, 10% PERENNIAL RYEGRASS. MULCH ALL SEEDED AREAS WITH HAY AT A RATE OF 4 BALES PER 1000 SF. REMOVE MULCH WHEN GRASS IS 3" HIGH & RESEED ALL BARE SPOTS.

3. THE CONTRACTOR SHALL MAINTAIN THE SEEDED AND MULCHED AREAS UNTIL FINAL ACCEPTANCE OF THE WORK. MAINTENANCE SHALL CONSIST OF PROVIDING PROTECTION AGAINST TRAFFIC AND REPAIRING ANY AREAS DAMAGED DUE TO WIND, WATER, EROSION, FIRE OR OTHER CAUSES. SUCH DAMAGED AREAS SHALL BE REPAIRED TO REESTABLISH THE CONDITION AND GRADE OF THE SOIL PRIOR TO SEEDING AND SHALL THEN BE RE-FERTILIZED, RE-SEEDED AND RE-MULCHED.

REVISED OCTOBER 19, 2021

AGGREGATE & BORROW NOTES

1. AGGREGATE FOR GRAVEL BASE AND SUBBASE,

AGGREGATE FOR GRAVEL BASE, AND GRAVEL SUBBASE SHALL BE SCREENED OR CRUSHED GRAVEL OF HARD DURABLE PARTICLES FREE FROM VEGETABLE MATTER, LUMPS OR BALLS OF CLAY AND OTHER DELETERIOUS SUBSTANCES. THE GRADATION OF THE PART THAT PASSES A 3 INCH SIEVE SHALL MEET THE GRADING REQUIREMENTS OF THE FOLLOWING TABLE:

SIEVE DESIGNATION	PERCENTAGE BY WEIGHT PASSING SQUARE MESH SIEVES	
	TYPE A AGGREGATE	TYPE D AGGREGATE
2 INCH	100	---
1/2 INCH	45-70	35-80
1/4 INCH	30-55	25-65
No. 40	0-20	0-30
No. 200	0-6.0	0-7.0

TYPE A AGGREGATE SHALL NOT CONTAIN PARTICLES WHICH WILL NOT PASS THE 2 INCH SQUARE MESH SIEVE.

TYPE D AGGREGATE SHALL NOT CONTAIN PARTICLES WHICH WILL NOT PASS THE 6 INCH SQUARE MESH SIEVE.

EACH LAYER AS APPLIED SHALL BE ROLLED WITH A 20 TON ROLLER. THE MATERIAL AS SPREAD SHALL BE WELL MIXED WITH NO POCKETS OF EITHER FINE OR COARSE MATERIAL. OVER SIZED STONES SHALL BE REMOVED FROM THE AGGREGATE.

EACH LAYER OF AGGREGATE SHALL BE PLACED OVER THE FULL WIDTH OF THE SECTION.

THE SURFACE OF EACH LAYER SHALL BE MAINTAINED DURING COMPACTION OPERATIONS IN SUCH A MANNER THAT A UNIFORM TEXTURE IS PRODUCED AND THE AGGREGATE IS FIRMLY KEYED. THE MOISTURE CONTENT OF THE MATERIAL SHALL BE MAINTAINED AT THE PROPER PERCENT TO ATTAIN THE REQUIRED COMPACTION AND STABILITY. COMPACTION OF EACH LAYER SHALL BE CONTINUED UNTIL DENSITY OF NOT LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557 "MODIFIED PROCTOR DENSITY" HAS BEEN ACHIEVED FOR THE FULL WIDTH AND DEPTH OF EACH LAYER AS APPLIED.

THE SURFACE TOLERANCE OF EACH COURSE AS APPLIED SHALL BE 3/8 INCHES ABOVE OR BELOW THE REQUIRED TEMPLATE LINES.

2. COMMON BORROW

COMMON BORROW SHALL CONSIST OF EARTH, SUITABLE FOR EMBANKMENT CONSTRUCTION. IT SHALL BE FREE FROM FROZEN MATERIAL, PERISHABLE RUBBISH, PEAT AND OTHER UNSUITABLE MATERIAL.

THE MOISTURE CONTENT SHALL BE SUFFICIENT TO PROVIDE THE REQUIRED COMPACTION AND STABLE EMBANKMENT. IN NO CASE SHALL THE MOISTURE CONTENT EXCEED 4 PERCENT ABOVE OPTIMUM.

GEOTEXTILE FABRIC MAY BE REQUIRED TO PROVIDE SEPARATION IF COMMON BORROW CONTAINS SIGNIFICANT VOIDS.

3. AGGREGATE FOR CRUSHED STONE ¾-INCH

AGGREGATE FOR CRUSHED STONE ¾-INCH SHALL BE OF QUARRIED STONE. THE AGGREGATE SHALL MEET THE GRADING REQUIREMENTS OF THE FOLLOWING TABLE:

SIEVE DESIGNATION	PERCENTAGE BY WEIGHT PASSING SQUARE MESH SIEVES
	MDOT 703.13 CRUSHED STONE ¾-INCH
1 INCH	100
3/4 INCH	90-100
1/2 INCH	20-55
3/8 INCH	0-15
No. 4	0-5

CRUSHED STONE ¾-INCH SHALL ONLY CONTAIN PARTICLES OF ROCK THAT WILL PASS THE 1 INCH SQUARE MESH SIEVE.

4. RIPRAP

STONE FOR RIPRAP SHALL CONSIST OF HARD, SOUND DURABLE ROCK THAT WILL NOT DISINTEGRATE BY EXPOSURE TO WATER OR WEATHER. STONE FOR RIPRAP SHALL BE ANGULAR AND ROUGH. ROUNDED OR LONG THIN STONES WILL NOT BE ALLOWED. THE MAXIMUM ALLOWABLE LENGTH TO WIDTH RATIO WILL BE 3:1.

RIPRAP SIZE FOR THE PROJECT SHALL BE D50=6". THIS MEANS THAT THE AVERAGE SIZE STONE IN THE RIPRAP IS ROUGHLY 6" IN DIAMETER. MAXIMUM SIZE OF THE RIPRAP SHOULD BE 9" AND MINIMUM SIZE SHOULD BE 2".

RIPRAP SHALL BE PLACED FULL DEPTH IN ONE OPERATION AND SHALL BE PLACED APPROXIMATELY TRUE TO THE REQUIRED SLOPE LINE AND BE UNIFORM IN APPEARANCE. RIPRAP SHALL BE PLACED TO SECURE INTERLOCKING OF ALL FACE STONES AND STONES PLACED AS BACKING. RIPRAP SHALL BE PLACED ON THE SLOPE IN A WELL KNIT, COMPACT AND UNIFORM LAYER. THE SURFACE STONES SHALL BE CHINKED WITH SMALLER STONES FROM THE SAME SOURCE.

STATE OF MAINE
MICHAEL J. SABATINI
9053
LICENSED PROFESSIONAL ENGINEER
10/19/21

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SURVEYORS & ENGINEERS
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FIELD WORK DATE:	5/19/21
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PLAN DATE:	AUGUST 27, 2021

BGS PROJECT #PT3204
SITEWORK WORK SCOPE
GENERAL NOTES, EROSION & SEDIMENTATION CONTROL NOTES, AGGREGATE & BORROW NOTES

MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY
BUREAU OF PARKS AND LANDS
BOATING FACILITIES PROGRAM
RICHMOND MAINTENANCE FACILITY BUILDINGS
1009 BRUNSWICK ROAD RICHMOND, MAINE SAGADAHOC COUNTY

SCALE:	JOB No.:	SHEET:
NTS	20 - 015	4 OF 8

SHEET DESIGNATION: **C-4**

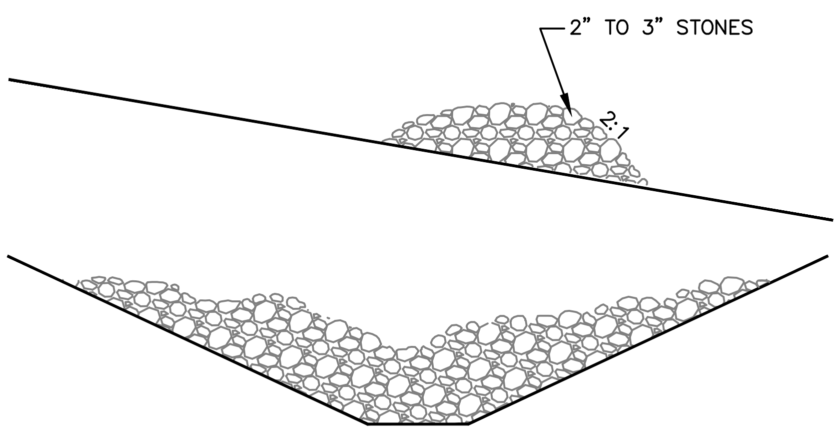
SPECIFICATIONS
THE CHECK DAMS SHALL BE INSTALLED IMMEDIATELY AFTER ROUGH GRADING OF THE DITCH OR SWALE.

THE MAXIMUM HEIGHT OF THE CHECK DAM SHOULD BE 24 INCHES. THE CENTER OF THE DAM MUST BE AT LEAST 12 INCHES LOWER THAN THE OUTER EDGE. THE DAMS SHOULD BE CONSTRUCTED OF 2 TO 3 INCH STONE.

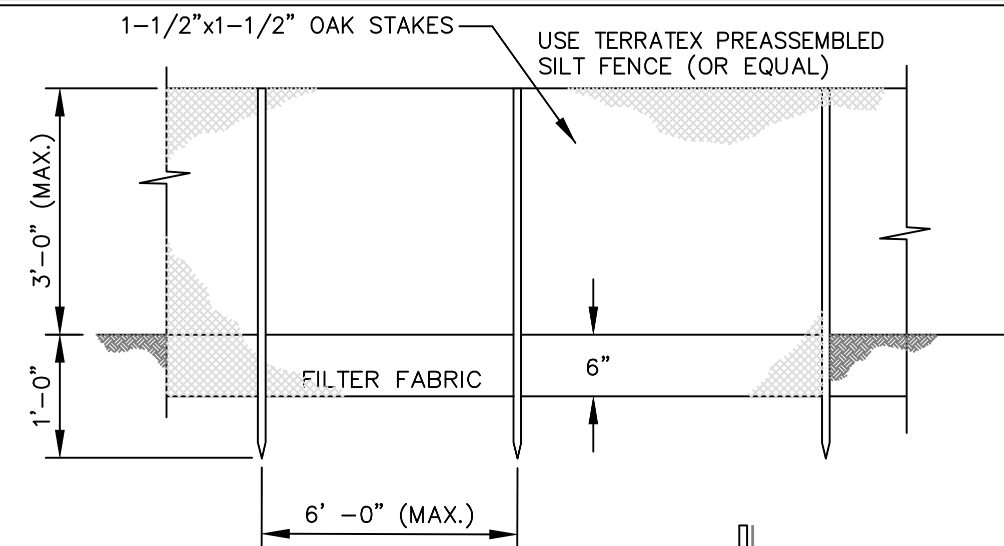
MAINTENANCE
CHECK DAMS SHOULD BE CHECKED FOR SEDIMENT ACCUMULATION AFTER EACH SIGNIFICANT RAINFALL. SEDIMENT SHALL BE REMOVED WHEN IT REACHES ONE HALF OF THE ORIGINAL HEIGHT OR BEFORE. REGULAR INSPECTION SHOULD BE MADE TO INSURE THE CENTER OF THE DAM IS LOWER THAN THE EDGES. EROSION CAUSED BY HIGH FLOWS AROUND THE EDGES OF THE DAM SHOULD BE CORRECTED IMMEDIATELY.

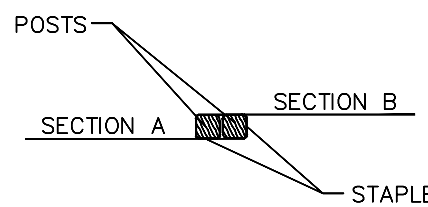
REMOVAL
THE DAMS SHOULD BE REMOVED WHEN THE GRASS HAS REACHED A HEIGHT OF 12 INCHES OR MORE. THE STONES SHOULD BE REMOVED ENTIRELY OR LEVELED INTO THE BOTTOM OF THE DITCH. THE AREA BENEATH THE DAMS SHALL BE SEEDED AND MULCHED IMMEDIATELY AFTER THEY ARE REMOVED.

NOTE
CREATE DITCH DEPTH OF 24" IN VICINITY OF CHECK DAM

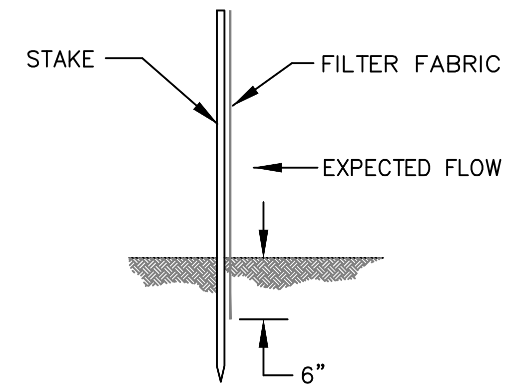


STONE CHECK DAM
NOT TO SCALE





JOINING TWO ADJACENT SILT FENCE SECTIONS



SECTION VIEW

NOTES:

SILT FENCE AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

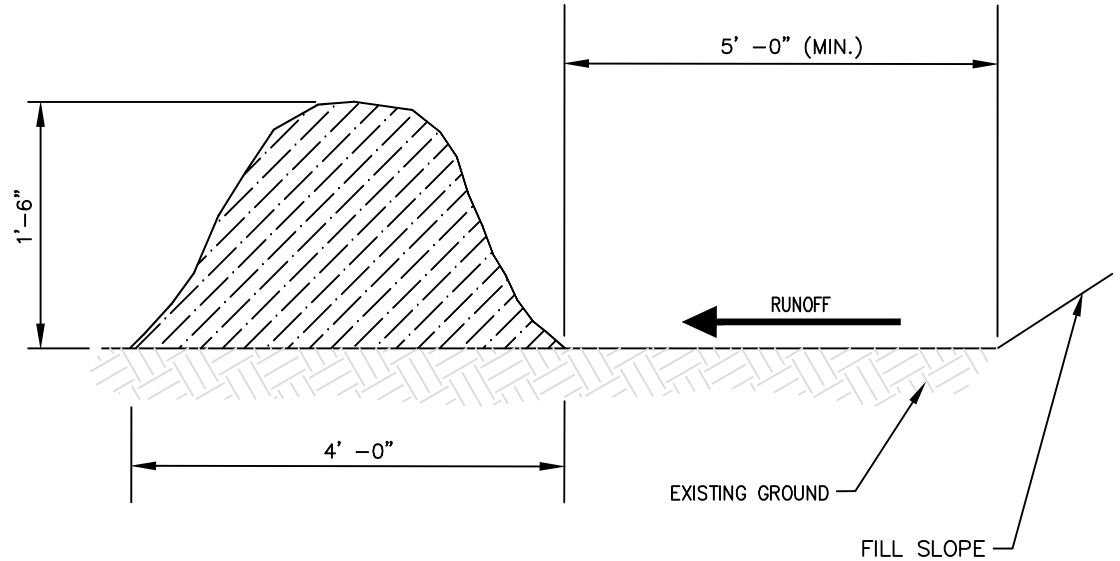
SHOULD THE FABRIC ON A SILT FENCE OF FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL IS NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.

SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.

THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC. SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.

SILT FENCE MAY BE USED IN PLACE OF WOOD WASTE COMPOST/BARK FILTER BERM.

SILT FENCE DETAIL
NOT TO SCALE



WOOD WASTE COMPOST/BARK FILTER BERMS

THE FILTER BERM SHALL CONSIST OF A WOOD WASTE COMPOST/BARK MULCH MIX OR RECYCLED COMPOSTED BARK FLUME GRIT AND FRAGMENTED WOOD GENERATED FROM WATER-FLUME LOG HANDLING SYSTEMS.

THE MIX SHALL CONFORM TO THE FOLLOWING STANDARDS:

A. MOISTURE CONTENT – 30-60%
B. pH – 5.0-8.0
C. SCREEN SIZE – 100% LESS THAN 3", MAXIMUM 70% LESS THAN 1".
D. NO LESS THAN 40% ORGANIC MATERIAL (DRY WEIGHT) BY LOSS OF IGNITION
E. NO STONES LARGER THAN 2" IN DIAMETER

THE COMPOSTED BERM SHALL BE PLACED, UNCOMPACTED ALONG A RELATIVELY LEVEL CONTOUR.

WOOD WASTE COMPOST/BARK FILTER BERM MAY BE USED IN PLACE OF SILT FENCE.

WOOD WASTE COMPOST/ BARK FILTER BERM
NOT TO SCALE

STATE OF MAINE
MICHAEL J. SABATINI 9053
LICENSED PROFESSIONAL ENGINEER
10/19/21

REVISED OCTOBER 19, 2021

LANDMARK CORPORATION
SURVEYORS & ENGINEERS
135 ROCKLAND STREET ROCKPORT, MAINE 04856 PHONE: (207) 236-6757 WWW.LANDMARKMAINE.COM

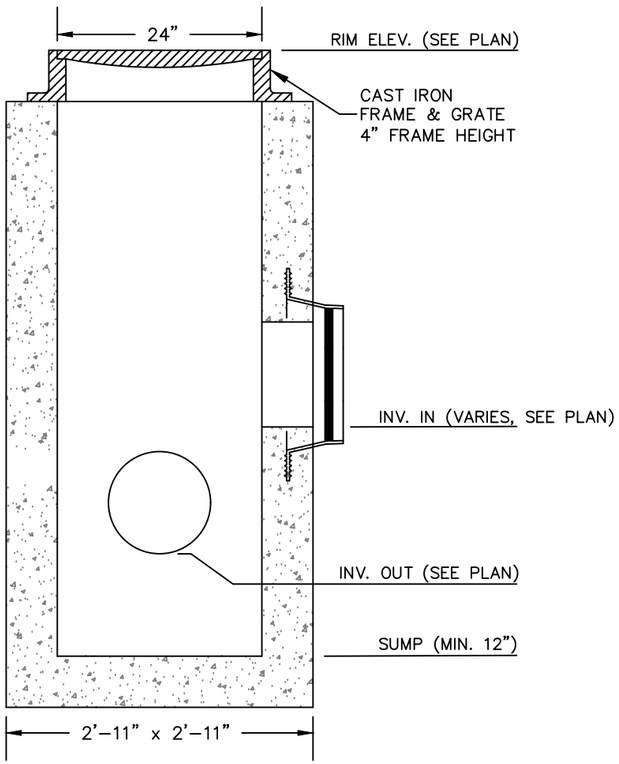
FIELD WORK DATE:	5/19/21
FIELD WORK BY:	KMB/EST
DRAFTED BY:	JML
CHECKED BY:	MJS
PLAN DATE:	AUGUST 27, 2021

BGS PROJECT #PT3204
SITEWORK WORK SCOPE
EROSION & SEDIMENTATION CONTROL DETAILS

MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY
BUREAU OF PARKS AND LANDS
BOATING FACILITIES PROGRAM
RICHMOND MAINTENANCE FACILITY BUILDINGS
1009 BRUNSWICK ROAD RICHMOND, MAINE SAGADAHOC COUNTY

SHEET DESIGNATION: C-5

SCALE: NTS JOB No.: 20-015 SHEET: 5 OF 8

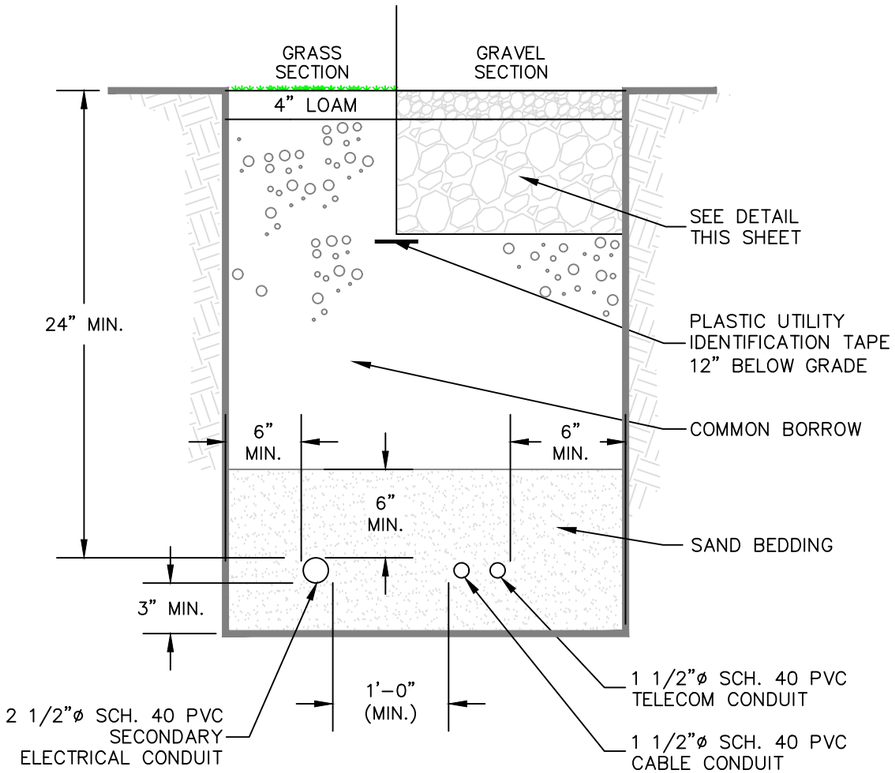


NOTES:

1. SEE PLAN FOR ALL ELEVATIONS AND SIZES.
2. CONCRETE: 4,000 PSI AFTER 28 DAYS.
3. FRAME AND GRATE SHALL BE 4" DEEP.
4. RECOMMENDED GRATE IS ETHERIDGE FOUNDRY STANDARD GRATE OR EQUIVALENT.

TYPE "F" CATCH BASIN

NOT TO SCALE

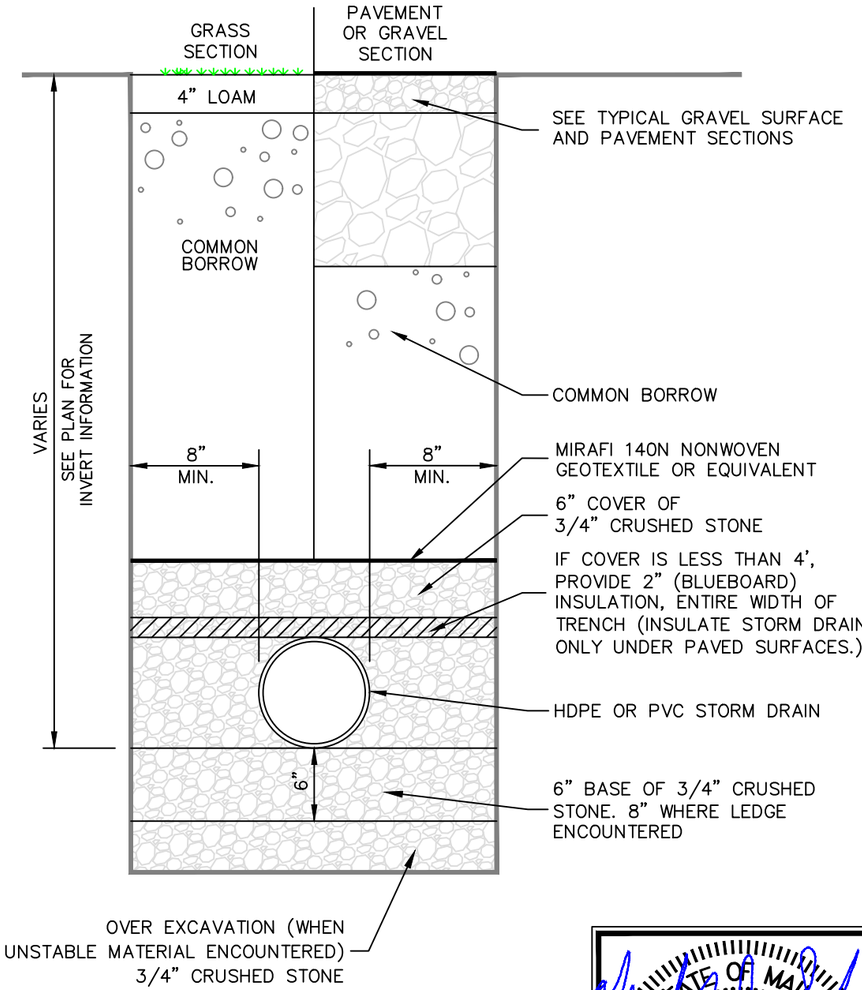


NOTES:

1. THIS DETAIL IS FOR THE CONDUIT TRENCH BETWEEN THE EXISTING UTILITY CONNECTION AND THE PROPOSED BUILDINGS.
2. CONDUIT NUMBER AND SIZES SHALL BE VERIFIED WITH THE ELECTRICIAN BEFORE INSTALLATION.
3. IF LEDGE IS ENCOUNTERED, REDUCTION IN COVER MAY BE ALLOWED IN ACCORDANCE WITH APPLICABLE CODES.

TYPICAL CONDUIT TRENCH SECTION

NOT TO SCALE



NOTE:

SEE TYPICAL CRUSHED STONE TRENCH SECTION FOR TRENCHES WITH UNDERDRAIN. SEE PLAN FOR LOCATIONS.

TYPICAL STORM DRAIN

NOT TO SCALE

STATE OF MAINE
MICHAEL J. SABATINI
9053
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10/19/21

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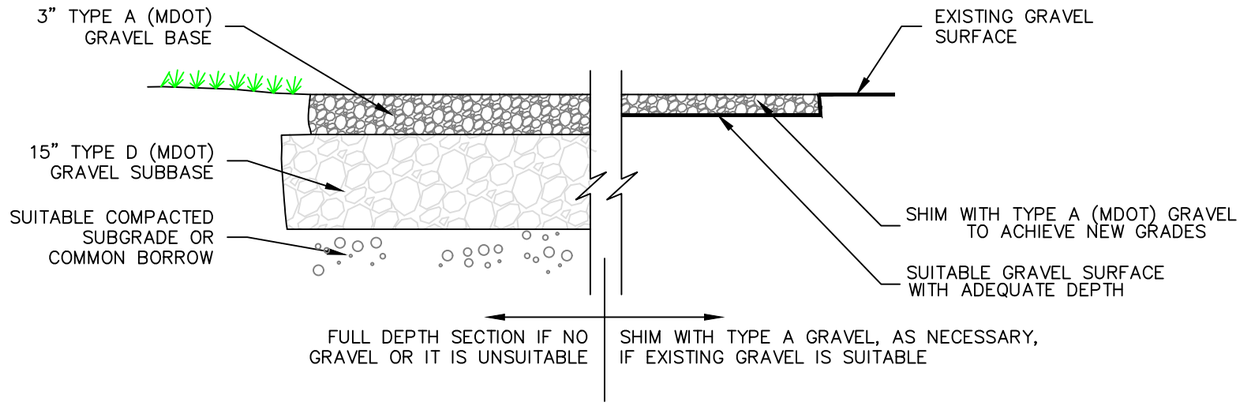
FIELD WORK DATE:	5/19/21
FIELD WORK BY:	KMB/EST
DRAFTED BY:	JML
CHECKED BY:	MJS
PLAN DATE:	AUGUST 27, 2021

BGS PROJECT #PT3204
SITEWORK WORK SCOPE
DETAILS

MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY
BUREAU OF PARKS AND LANDS
BOATING FACILITIES PROGRAM
RICHMOND MAINTENANCE FACILITY BUILDINGS
1009 BRUNSWICK ROAD RICHMOND, MAINE SAGADAHOC COUNTY

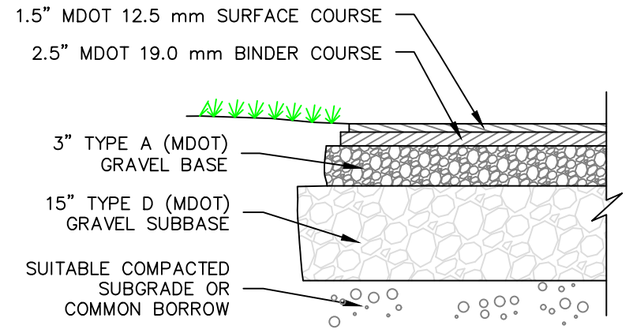
SCALE: NTS	JOB No.: 20-015	SHEET: 6 OF 8

SHEET DESIGNATION: C-6



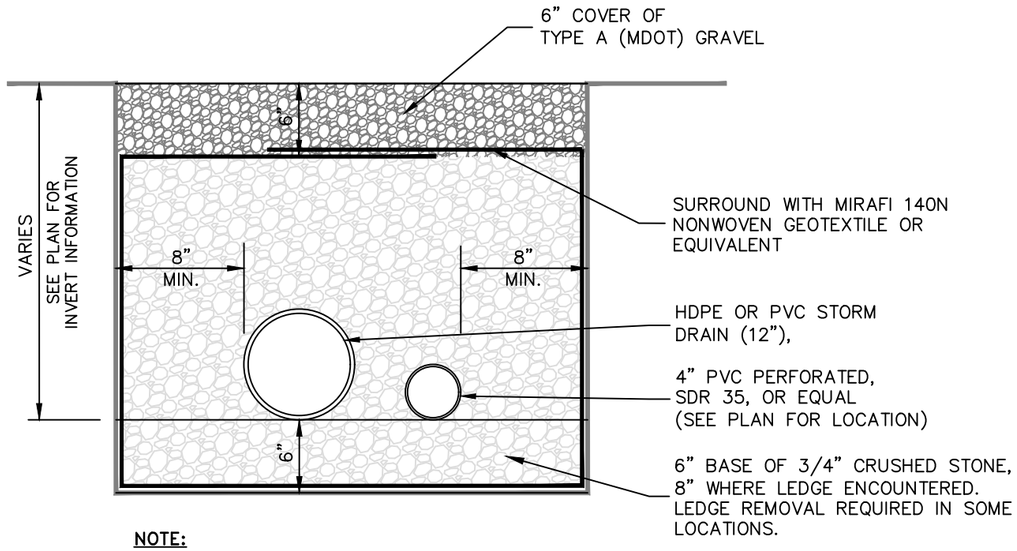
TYPICAL GRAVEL SURFACE SECTION

NOT TO SCALE



TYPICAL PAVEMENT SECTION

NOT TO SCALE

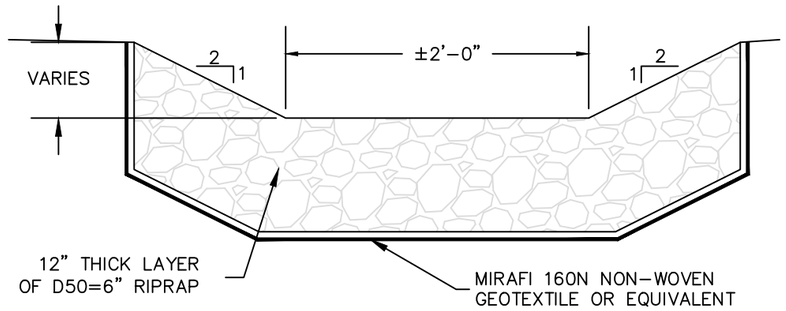


NOTE:

SEE PLAN FOR LOCATION OF CRUSHED STONE TRENCH WITH UNDERDRAIN.
SEE TYPICAL STORM DRAIN DETAIL FOR TRENCHES IN OTHER LOCATIONS.

TYPICAL CRUSHED STONE TRENCH SECTION

NOT TO SCALE



NOTES:

1. RIPRAP SIZE IN THE PROTECTION AREA SHALL CONFORM TO THE RIPRAP SPECIFICATION IN THE AGGREGATE AND BORROW NOTES ON THIS SHEET.
2. LOCATIONS OF RIPRAP CHANNEL PROTECTION SHOWN ON SITE PLAN.
3. CHANNEL SIDE SLOPES SHALL BE 2:1 UNLESS SHOWN OTHERWISE ON SITE PLAN.

TYPICAL RIPRAP CHANNEL PROTECTION

NOT TO SCALE

STATE OF MAINE
MICHAEL J. SABATINI
9053
LICENSED PROFESSIONAL ENGINEER
10/19/21

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LANDMARK CORPORATION
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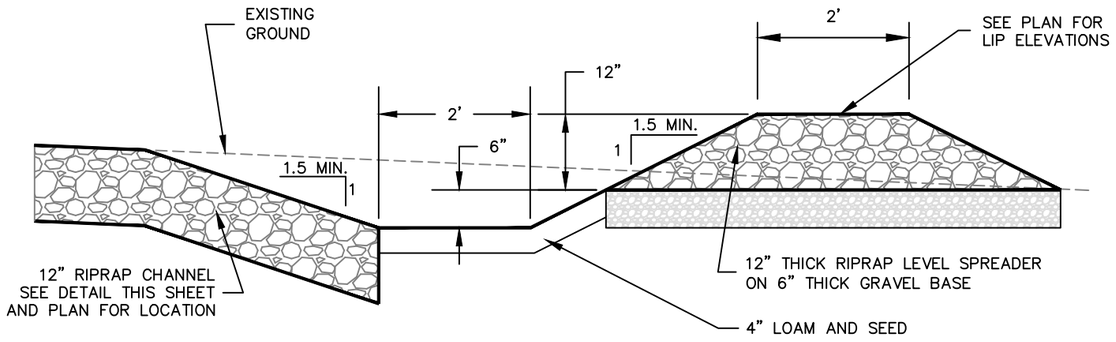
FIELD WORK DATE:	5/19/21
FIELD WORK BY:	KMB/EST
DRAFTED BY:	JML
CHECKED BY:	MJS
PLAN DATE:	AUGUST 27, 2021

BGS PROJECT #PT3204
SITEWORK WORK SCOPE
DETAILS

MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY
BUREAU OF PARKS AND LANDS
BOATING FACILITIES PROGRAM
RICHMOND MAINTENANCE FACILITY BUILDINGS
1009 BRUNSWICK ROAD RICHMOND, MAINE SAGADAHOC COUNTY

SCALE: NTS	JOB No.: 20 - 015	SHEET: 7 OF 8

SHEET DESIGNATION: **C-7**

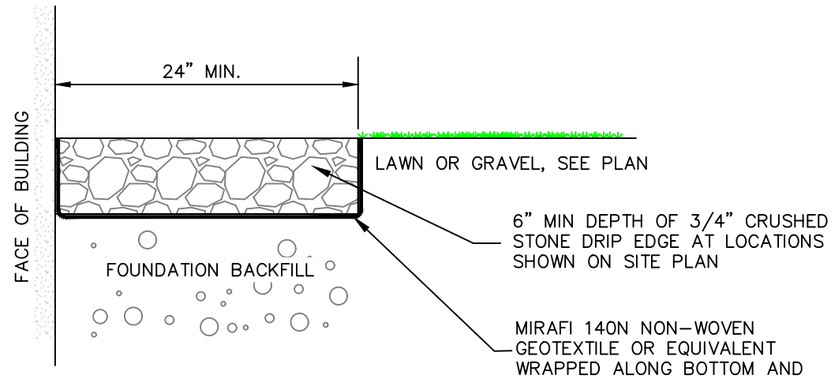


NOTES:

1. RIPRAP SIZE FOR LEVEL SPREADERS SHALL BE D50=6". THIS MEANS THAT THE AVERAGE SIZE STONE IN THE RIPRAP IS ROUGHLY 6" IN DIAMETER. MAXIMUM SIZE OF THE RIPRAP SHOULD BE 9" AND MINIMUM SIZE SHOULD BE 2".
2. ACTUAL LEVEL SPREADER LOCATION SHOULD BE FIELD VERIFIED.

LEVEL SPREADER DETAIL

NOT TO SCALE



DRIP EDGE DETAIL

NOT TO SCALE

STATE OF MAINE
MICHAEL J. SABATINI 9053
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10/19/21

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DRAFTED BY:	JML
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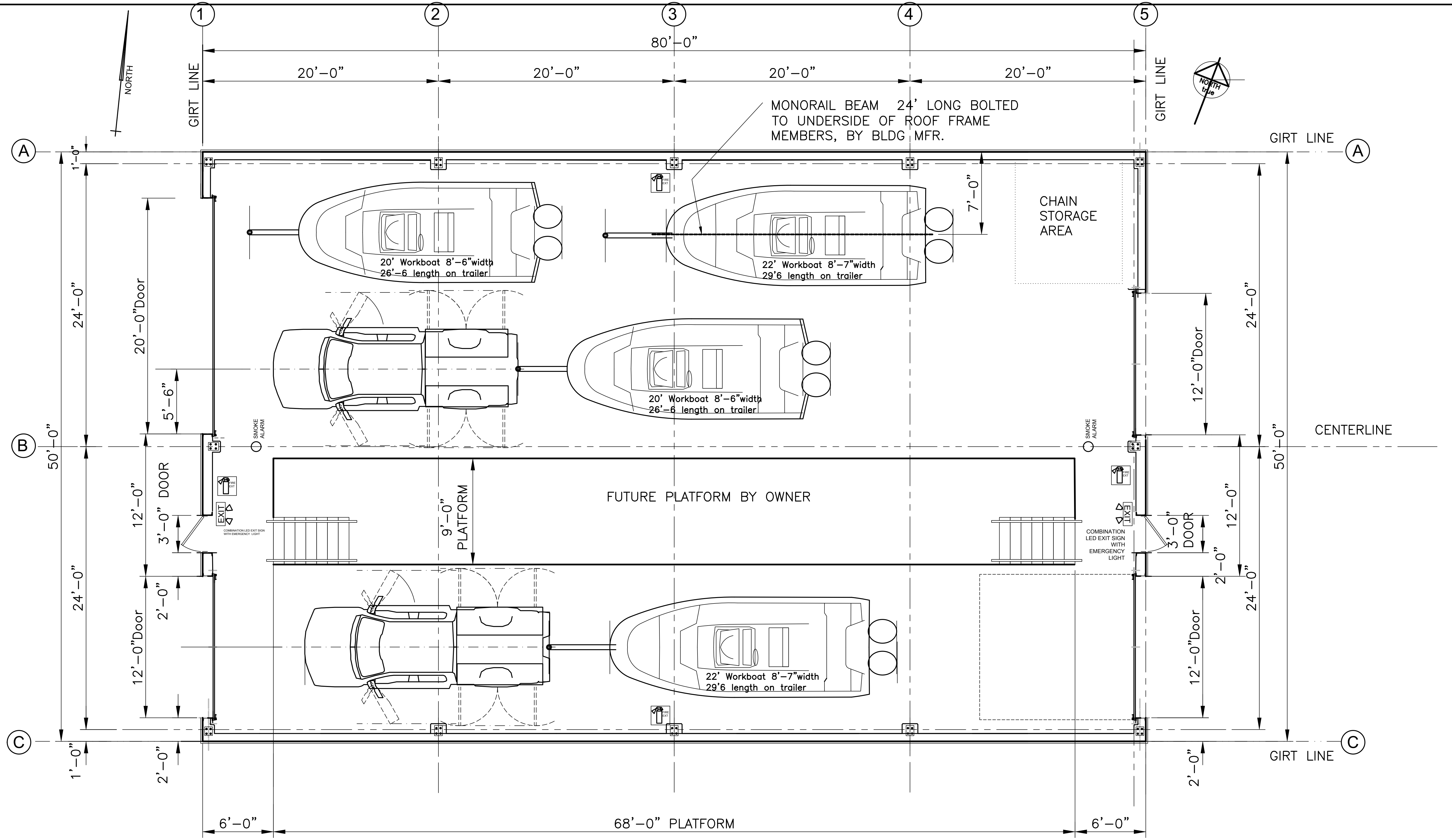
PLAN DATE:	AUGUST 27, 2021

BGS PROJECT #PT3204
SITEWORK WORK SCOPE
DETAILS

MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY
BUREAU OF PARKS AND LANDS
BOATING FACILITIES PROGRAM
RICHMOND MAINTENANCE FACILITY BUILDINGS
1009 BRUNSWICK ROAD RICHMOND, MAINE SAGADAHOC COUNTY

SCALE: NTS	JOB No.: 20-015	SHEET: 8 OF 8

SHEET DESIGNATION: **C-8**



FLOOR PLAN - METAL FRAME OPTION

DOOR NOTES:

1. ALL OVERHEAD DOORS SHALL BE OVERHEAD DOOR THERMACORE NODEL 591 OR APPROVED EQUAL, TO BE SUPPLIED WITH STANDARD LIFT TRACK KITS AND COMMERCIAL GRADE OPERATORS WITH REMOTE CONTROLS. COORDINATE BUILDING FRAME STRUTURE DIMENSIONS WITH TRACK CLEARANCE REQUIREMENTS
2. MANDOORS SHALL BE 3'–0" X 6'–8" STANDARD COMMERCIAL GRADE FIBERGLASS DOORS WITH COMPOSITE FRAMES, HALF GLASS, STAINLESS STEEL BALL BEARING HINGES, AND YALE 4701LN GRADE 1 LEVER STYLE PASSAGE SET. OWNER WILL SUPPLY THE DEAD BOLT LOCK FOR INSTALLATION BY CONTRACTOR AND WILL PAINT THE DOORS AND FRAMES. CORDINATE WITH OWNER,

STATE OF MAINE — STEPHEN T. RUELL — No. 4396 — LICENSED PROFESSIONAL ENGINEER

NO.	REVISION	DATE
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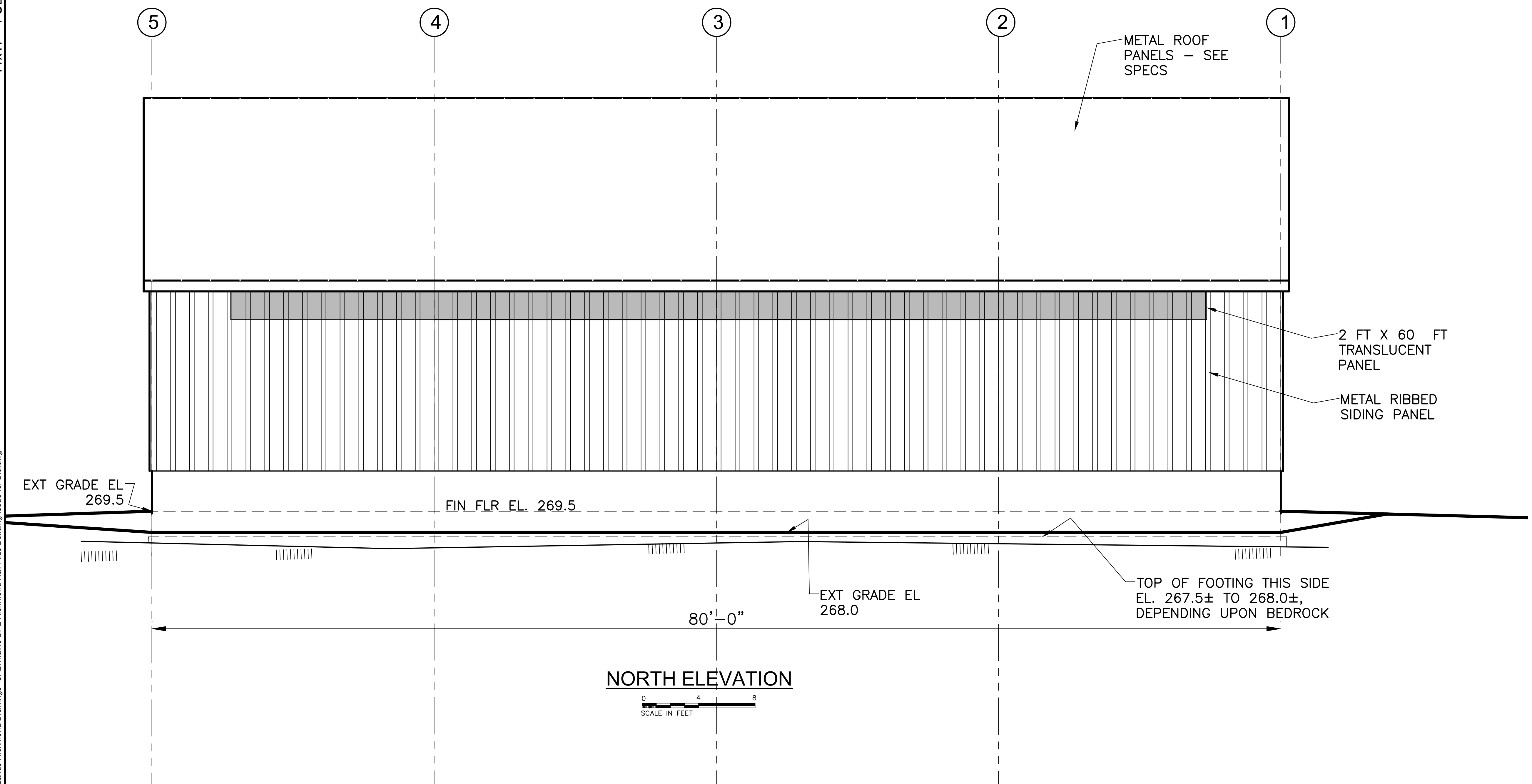
DATE REVISED 5-11-2022

Maine Department of Agriculture, Conservation and Forestry
Bureau of Parks and Lands
Richmond Maintenance Facility

Nav Aids Storage Building
FLOOR PLAN
METAL FRAME OPTION

PINNACLE HILL ENGINEERING
33 Pinnacle Road
Canaan, ME 04924
PinnacleHillEngineering@gmail.com

A-1
REV. 1



NORTH ELEVATION

STATE OF MAINE
STEPHEN T. RUELL
No. 4396
LICENSED PROFESSIONAL ENGINEER

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Maine Department of Agriculture, Conservation and Forestry
Bureau of Parks and Lands
Richmond Maintenance Facility

Nav Aids Storage Building
BUILDING NORTH EXTERIOR ELEVATION

PINNACLE HILL ENGINEERING
33 Pinnacle Road
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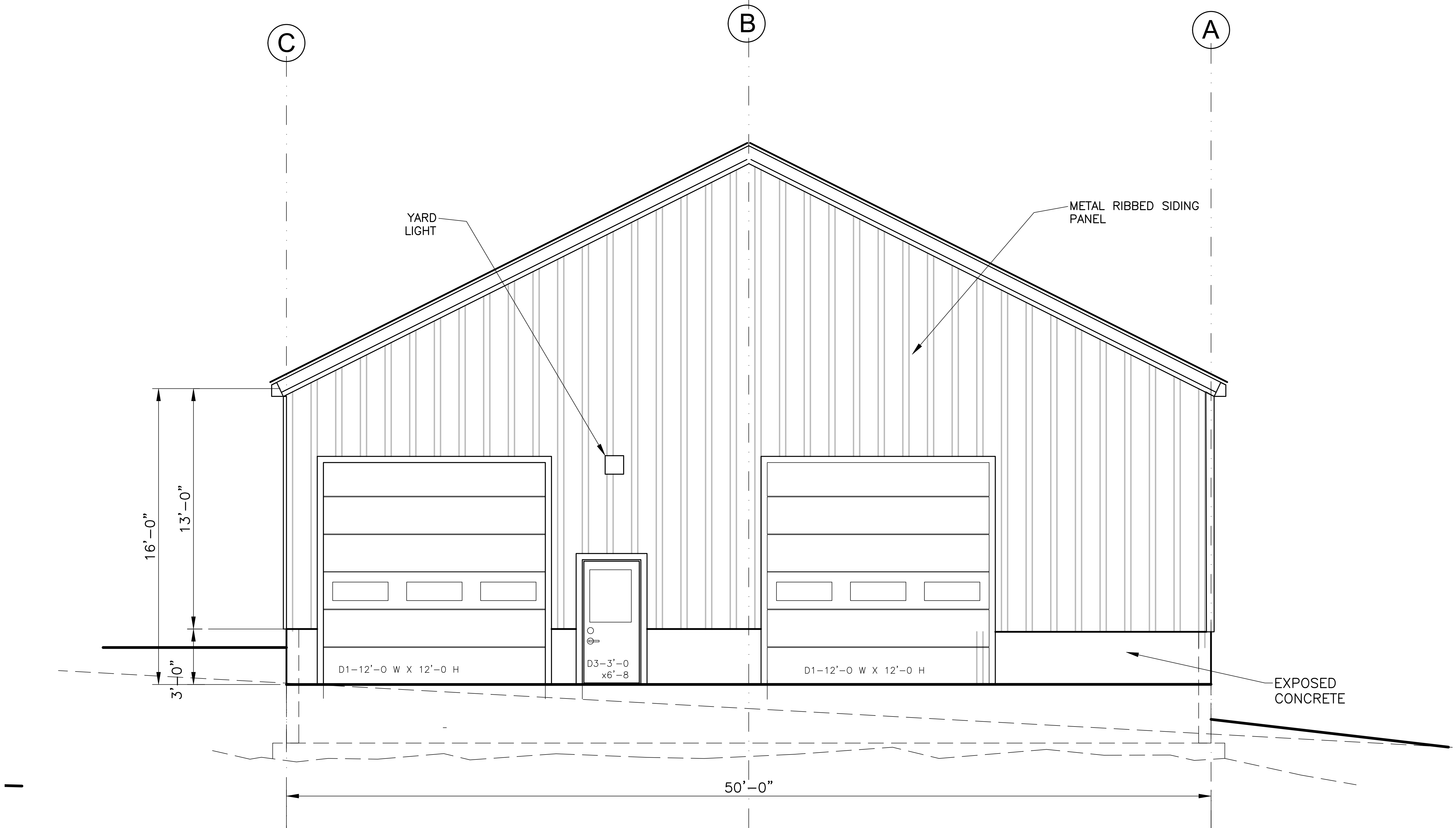
A-2
REV. 1



EAST ELEVATION

0 4 8
SCALE IN FEET

STATE OF MAINE · STEPHEN T. RUELL · No. 4396 · LICENSED · PROFESSIONAL ENGINEER

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Maine Department of Agriculture, Conservation and Forestry
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Richmond Maintenance Facility

Nav Aids Storage Building
BUILDING EAST EXTERIOR ELEVATION

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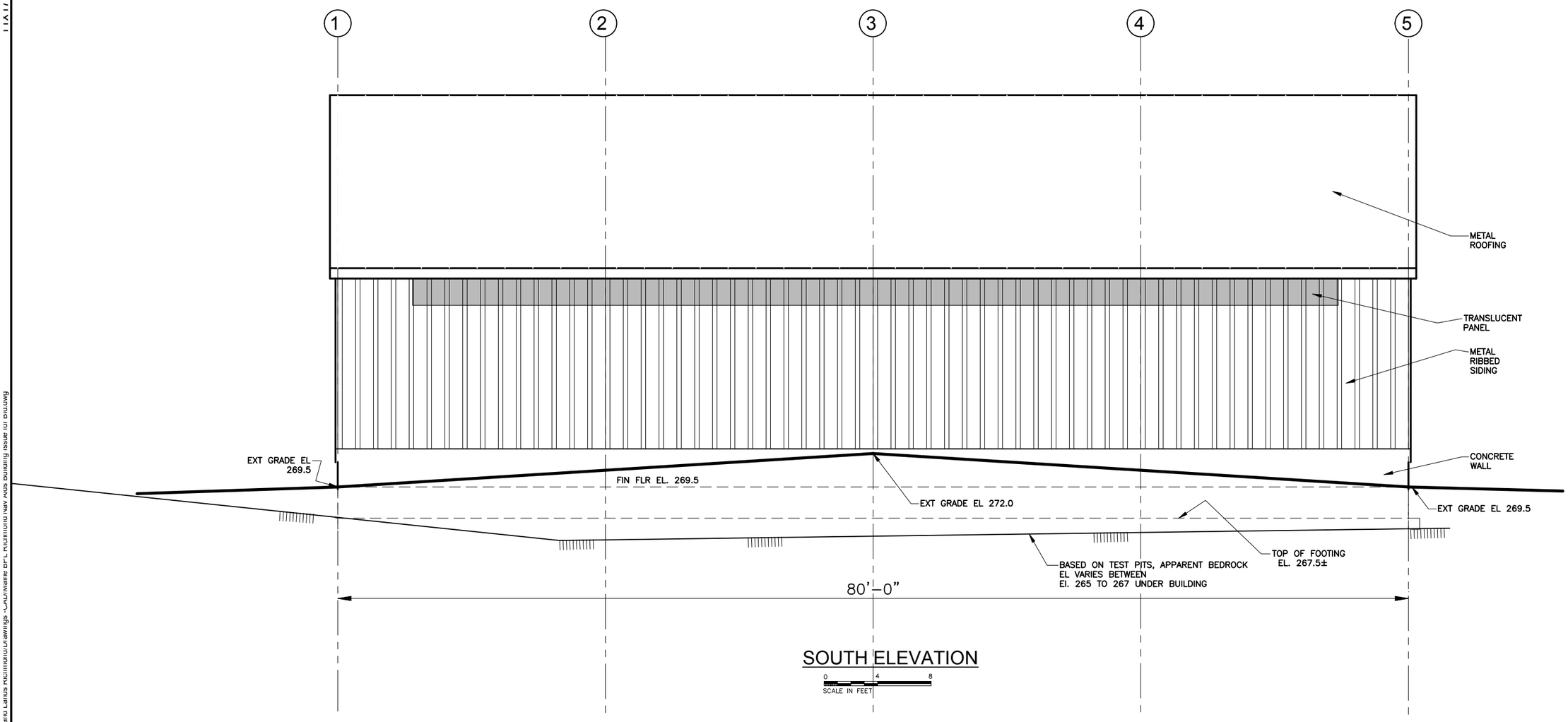
PinnacleHillEngineering@gmail.com

A-3
REV. 1



SOUTH ELEVATION

0 4 8
SCALE IN FEET

STATE OF MAINE
STEPHEN T. RUELL
No. 4396
LICENSED PROFESSIONAL ENGINEER

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Maine Department of Agriculture, Conservation and Forestry
Bureau of Parks and Lands
Richmond Maintenance Facility

Nav Aids Storage Building
BUILDING SOUTH EXTERIOR ELEVATION

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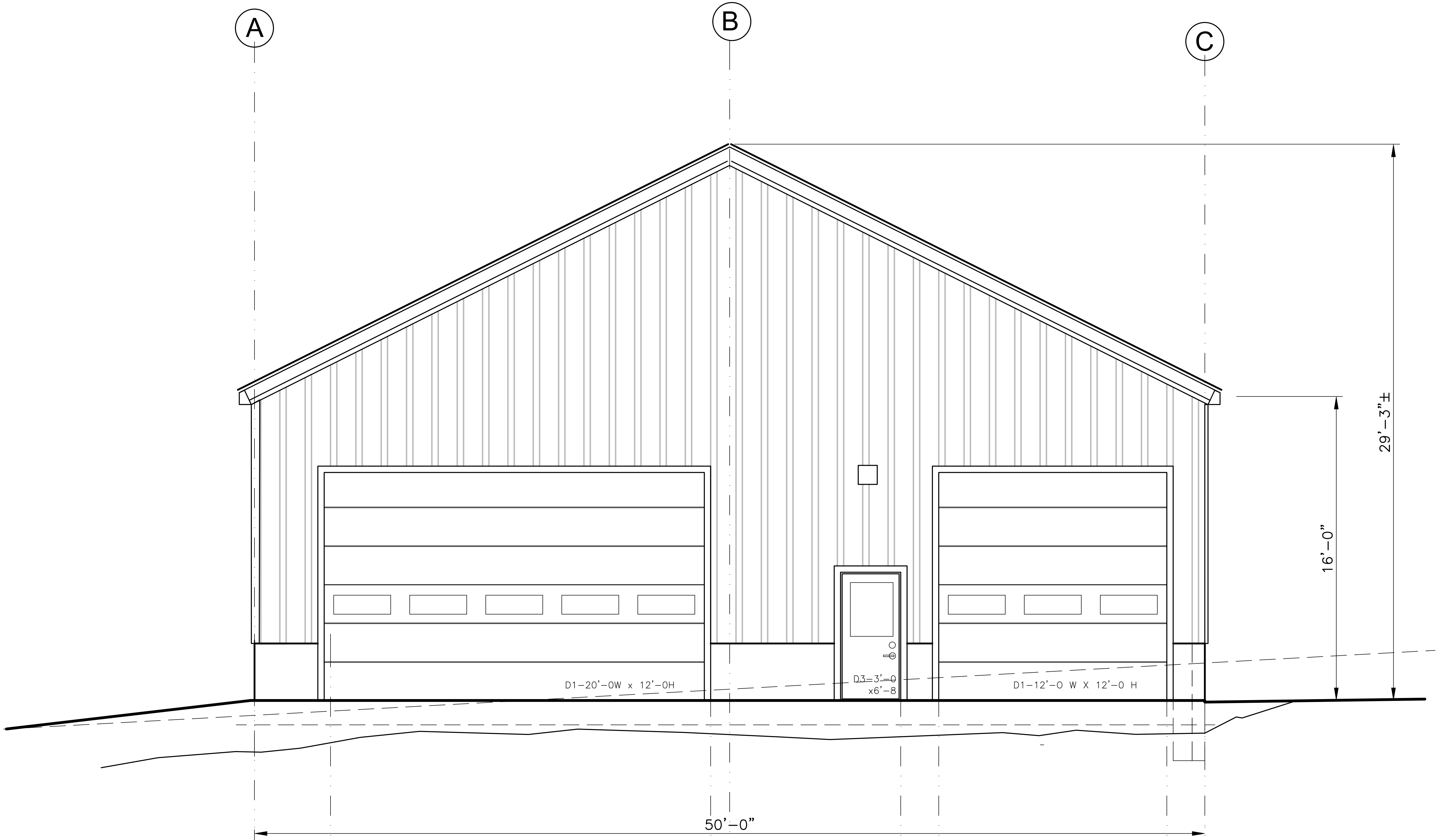
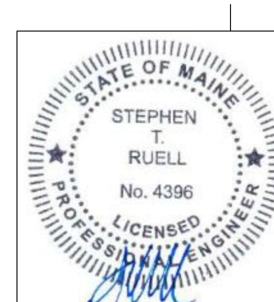
A-4
REV. 1



WEST ELEVATION

0 4 8
SCALE IN FEET



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Maine Department of Agriculture, Conservation and Forestry
Bureau of Parks and Lands
Richmond Maintenance Facility

Nav Aids Storage Building
BUILDING WEST EXTERIOR ELEVATION

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PinnacleHillEngineering@gmail.com

A-5
REV. 1

PRE–ENGINEERED BUILDING NOTES

1. Building Manufacturer shall have a minimum of 5 years commercial production of buildings of similar size and quality and shall be responsible for providing a complete building including design of all components, and including complete doors and door operators.

Building supplier shall coordinate, design, fabricate, supply and install a complete package with all components including all necessary connectors, fasteners, anchor bolts, doors, door operators, bracing and instructions for erection of building, including temporary and permanent bracing, and any sealants or adhesives needed during installation.

2. Design per IBC Code Latest Edition adopted in the jurisdiction.

3. Design Loads

Design Snow load = 47 psf per ASCE 7. Using ground snow load Pg = 70 psf, I= 1.0, Ce=1.0, Ct=1.2, Cs = 0.8 for unheated, unobstructed slippery roof, Design for unbalanced and balanced loads

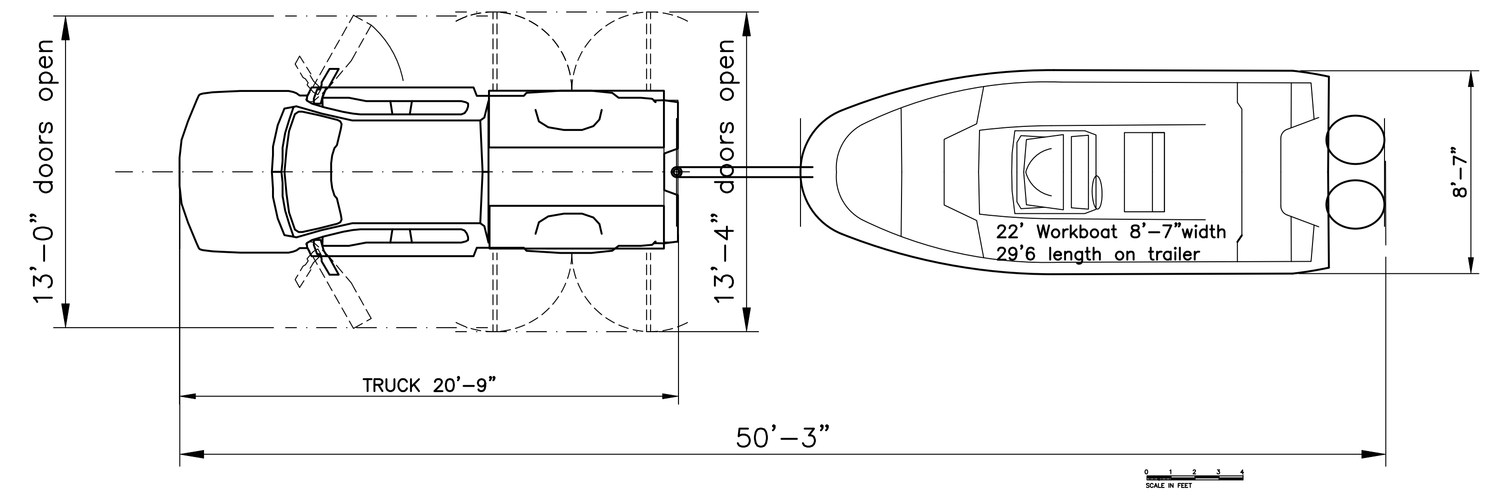
Design Wind load per ASCE 7. Wind speed 85 mph, Exposure C

Roof design shall include a superimposed dead load = 12 psf in addition to the building dead weight as supplied.

Temporary Roof Live Load 25 psf during construction

4. Submit shop drawings to Owner and Engineer prior to start of fabrication. The final details of the foundation will be dependent upon the building engineering and loads of the building and must be provided in sufficent time to allow completion of the foundation design before construction.

5. Monorail
Provide one steel monorail beam as shown on the plan, supported from roof structure, 24 feet long and rated for 6000 lbs capacity either as single point load anywhere on the beam or two points loads of 3000 lbs 15 feet apart. Bracing and hangers designed by building mfr. Provide two 2 ton 4 wheel trolleys and trolley end stops. Paint to match other structural steel. Provide painted label of beam capacity on both sides as required by OSHA. Monorail load may be occur coincident with snow load.



BUILDING DESIGN VEHICLE

CONCRETE NOTES

1. ALL FOOTING CONCRETE IS PLACED DIRECTLY AGAINST ROCK SURFACES CLEANED TO REMOVE DIRT OR LOOSE ROCK.
2. CONCRETE: 4000 PSI @ 28 DAYS, AIR ENTRAINED 5% TO 7%
3. REINFORCEMENT: 60,000 PSI, ASTM A615
4. HOOKS: ACI STANDARD
5. REBAR COVER: 2" UNLESS NOTED OTHERWISE
6. ANCHOR BOLTS AND ATTACHMENT OF PRE ENGINEERED BUILDING COMPONENTS SHALL BE PROVIDED BY THE BUILDING MFR.
7. CONCRETE ANCHORS UNLESS OTHERWISE SPECIFIED: HILTI "HAS" SUPER OR STD ADHESIVE ANCHOR OR APPROVED EQUAL. INSTALL TO MANUFACTURER'S RECOMMENDED DEPTH FOR ANCHOR SIZE.
8. MOIST CURE MINIMUM OF 7 DAYS. CONFORM TO ACI 301 AND ACI 318 FOR CONSTRUCTION METHODS, AND PLACEMENT SPECIFICATIONS. DO NOT USE LIQUID CURING AGENTS WHICH WILL INHIBIT BOND OF FUTURE FLOOR COATINGS
9. UNLESS NOTED OTHERWISE PROVIDE 3/4"" CHAMFER ON ALL EXPOSED EDGES.
10. FIELD BEND REINFORCING BARS TO CLEAR INCIDENTAL BOXOUTS WHERE REQUIRED.
11. VERTICAL CONCRETE SURFACES SHALL HAVE A SMOOTH FORMED FINISH. FILL AIR HOLES AND VOIDS LARGER THAN ¼". REMOVE FINS AND DRESS SURFACE, FILL AIR POCKETS AND RAT HOLES. SNAP TIES SHALL BE REMOVED TO BELOW SURFACE AND HOLE FILLED.
12. HORIZONTAL CONCRETE SURFACES ON INTERIOR SHALL HAVE A SMOOTH STEEL TROWEL FINISH (U.N.O.).
13. HORIZONTAL CONCRETE SURFACES ON EXTERIOR SHALL HAVE A WOOD FLOAT OR BROOM FINISH (U.N.O.)

FINISHES

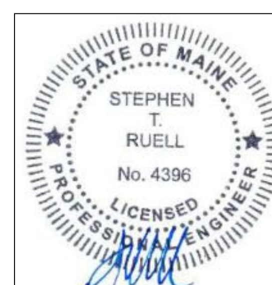
1. IT IS THE OWNERS INTENT THAT FIELD PAINTING WILL NOT BE REQUIRED EXCEPT FOR THE FLOOR.

2. ALL METAL SIDING, ROOFING, AND TRIM WILL BE SHOP PAINTED AS SPECIFIED. METAL STRUCTURAL AND FRAMING MEMBERS SHALL BE SHOP PRIMED WITH GRAY PRIMER, BOLTS SHALL BE GALVANIZED OR PLATED TO PREVENT RUSTING.

3. ALL DOORS SHALL BE FASTORY PREFINISHED IN THE COLOR SELECTED BY THE OWNER FROM THE MFR STANDARD COLORS..

4. ALL COMPONENTS SHALL BE PROTECTED THROUGHOUT DELIVERY, STORAGE AND INSTALLATION. ANY FIELD TOUCHUP REQUIRED FOR DAMAGED COATINGS, SHALL BE DONE BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER.

5. IF THE BID ALTERNATE IS ACCEPTED, THE CONCRETE FLOOR SHALL RECEIVE AN EPOXY FLOOR COATING WITH NON–SLIP AGGREGATE AND URETHANE TOP COAT. SEE SPECIFICATIONS.



NO.	REVISION	DATE
1	ISSUED FOR BID	5-11-22

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DATE REVISED 5-11-2022

Maine Department of Agriculture, Conservation and Forestry
Bureau of Parks and Lands
Richmond Maintenance Facility

Nav Aids Storage Building
BUILDING GENERAL NOTES

PINNACLE HILL ENGINEERING
33 Pinnacle Road
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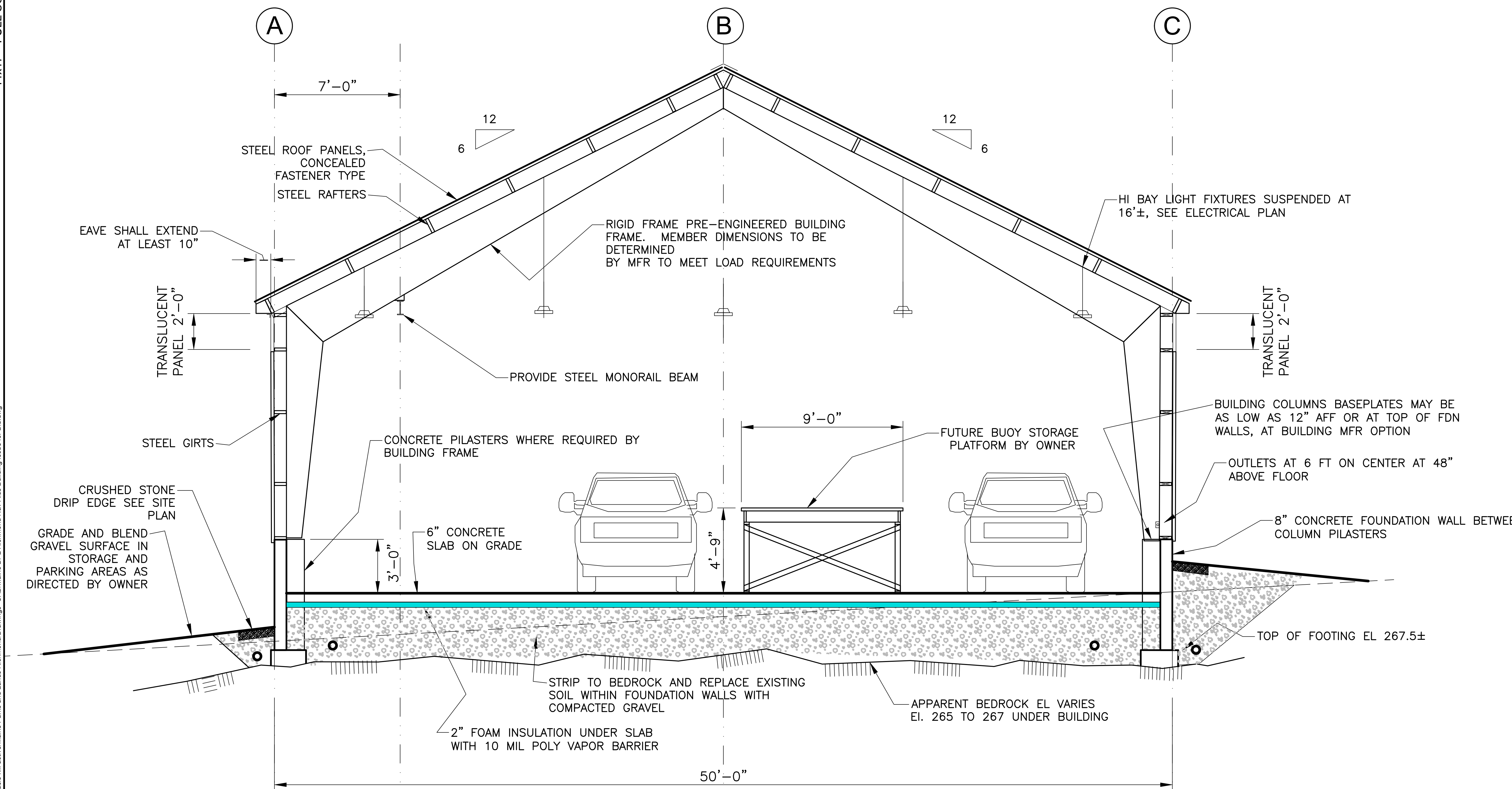
PinnacleHillEngineering@gmail.com

A-6
REV. 1



BUILDING TRANSVERSE SECTION
METAL FRAMED OPTION

0 4 8
SCALE IN FEET

STATE OF MAINE
STEPHEN T. RUELL
No. 4396
LICENSED
PROFESSIONAL ENGINEER

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Maine Department of Agriculture, Conservation and Forestry
Bureau of Parks and Lands
Richmond Maintenance Facility

Nav Aids Storage Building
BUILDING CROSS SECTION
METAL FRAME OPTION

PINNACLE HILL ENGINEERING
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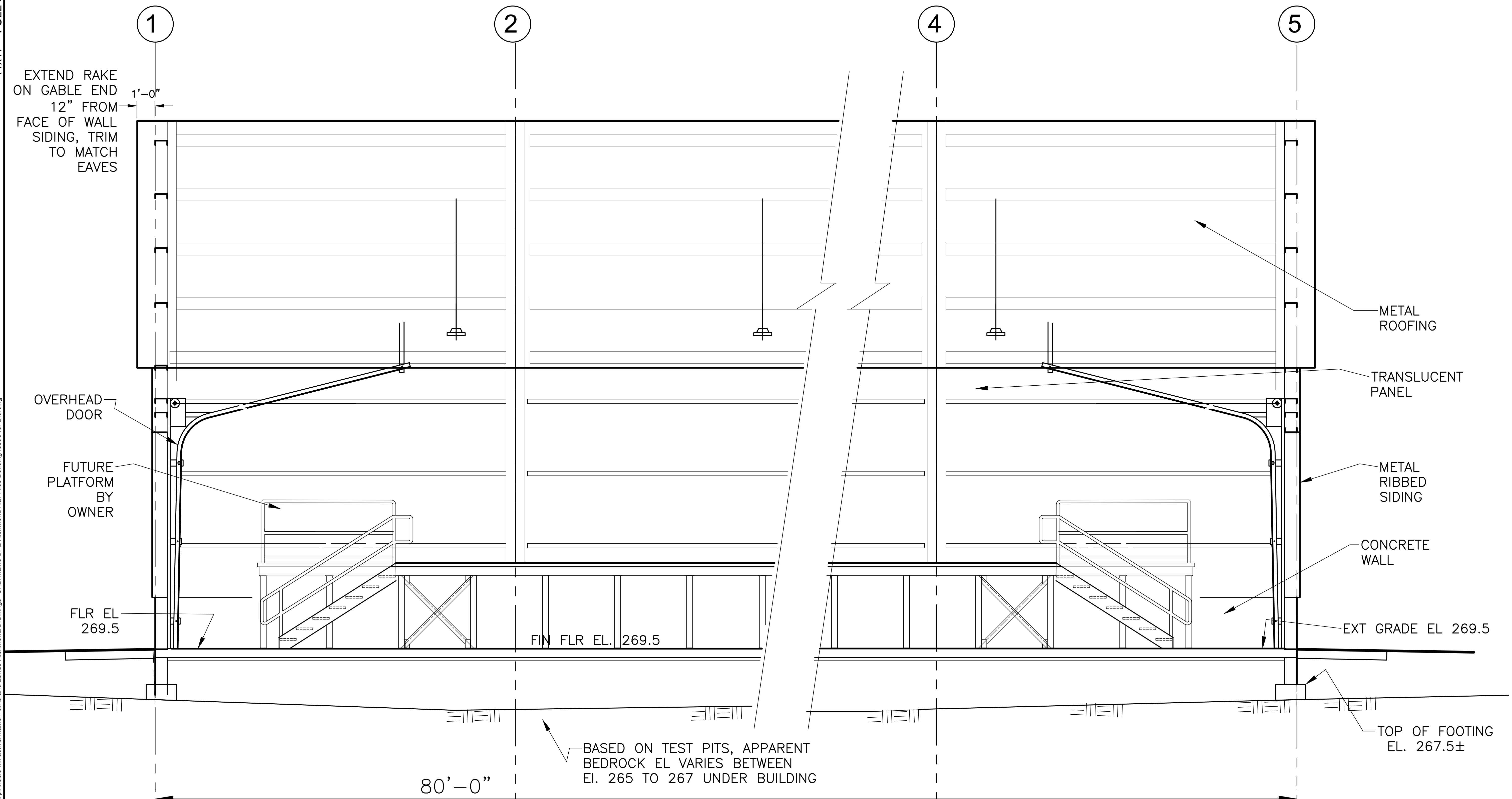
A-7
REV. 1



BUILDING LONGITUDINAL SECTION

0 4 8
SCALE IN FEET

STATE OF MAINE
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5-11-2022

Maine Department of Agriculture, Conservation and Forestry
Bureau of Parks and Lands
Richmond Maintenance Facility

Nav Aids Storage Building
BUILDING LONGITUDINAL SECTION
METAL FRAME OPTION

PINNACLE HILL ENGINEERING
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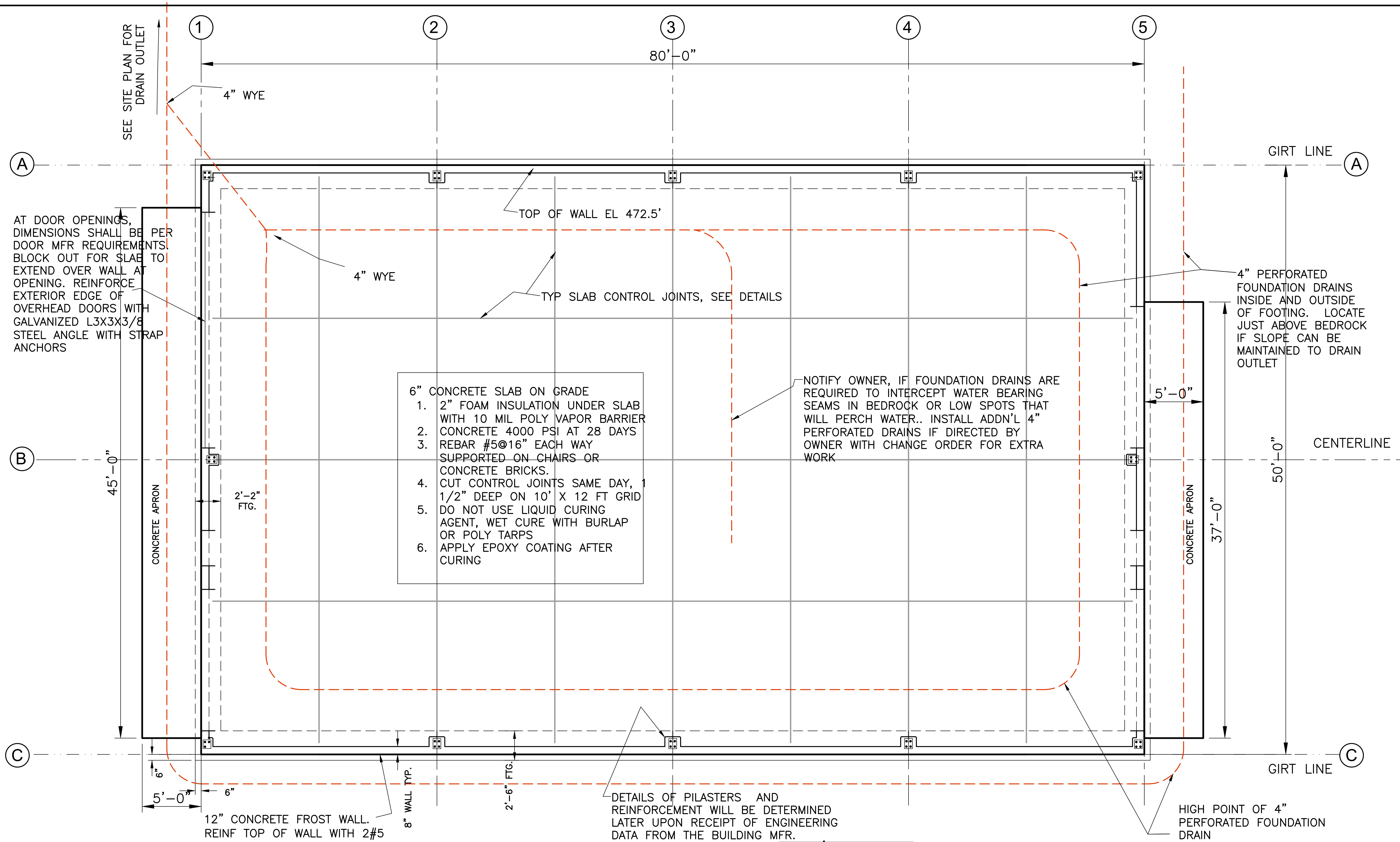
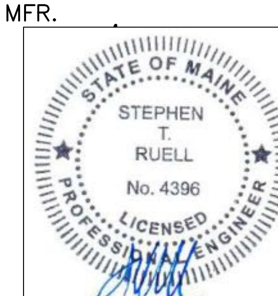
A-8
REV. 1



FOUNDATION PLAN - METAL FRAME OPTION

0 4 8
SCALE IN FEET



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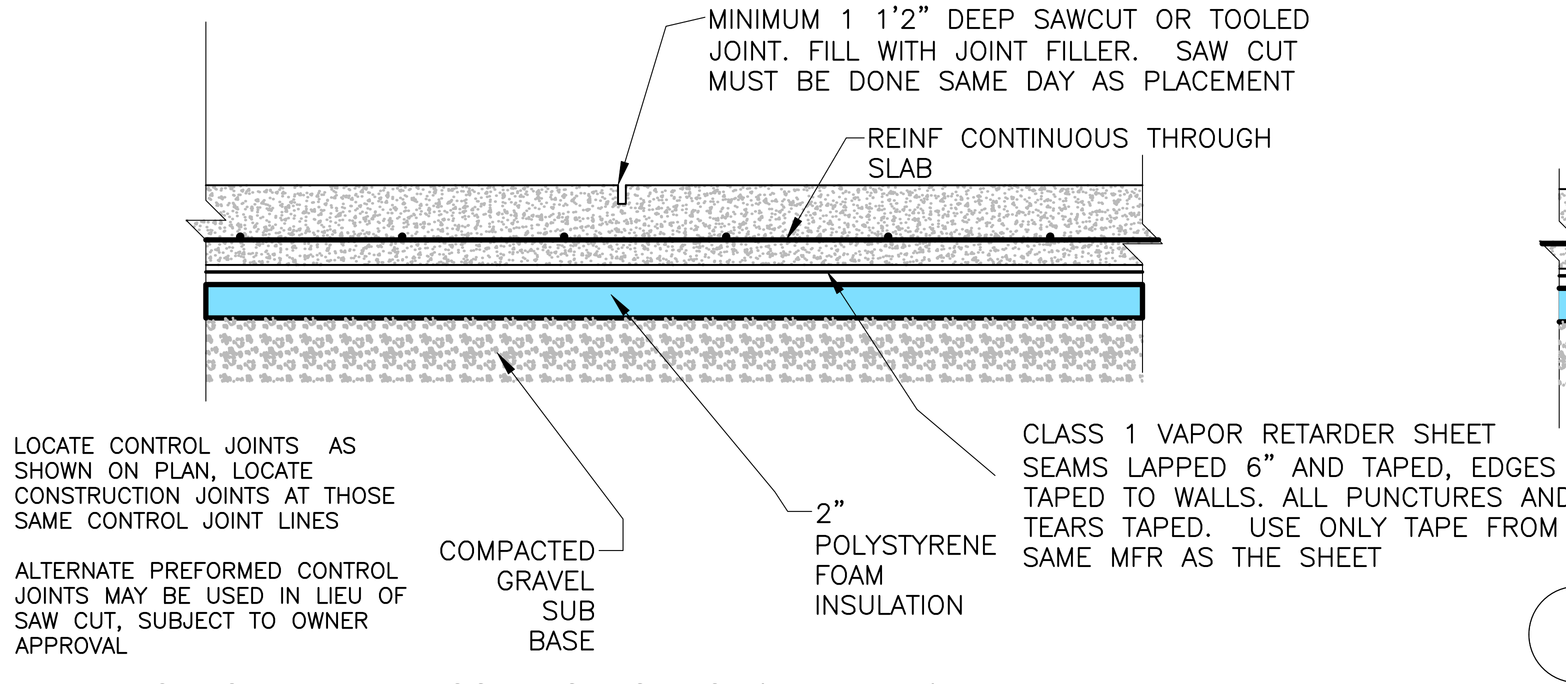
Maine Department of Agriculture, Conservation and Forestry
Bureau of Parks and Lands
Richmond Maintenance Facility

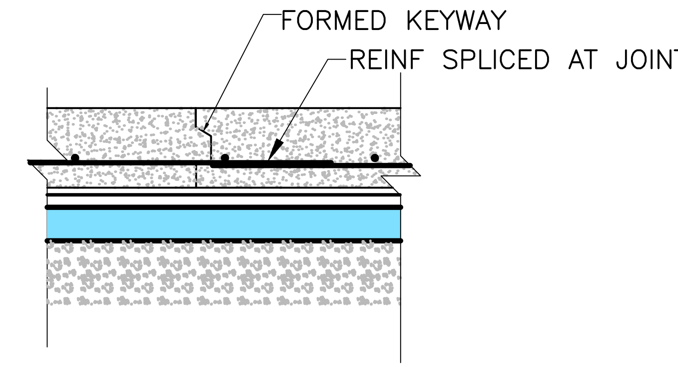
Nav Aids Storage Building
FOUNDATION PLAN
METAL FRAME OPTION

PINNACLE HILL ENGINEERING
33 Pinnacle Road
Canaan, ME 04924
PinnacleHillEngineering@gmail.com

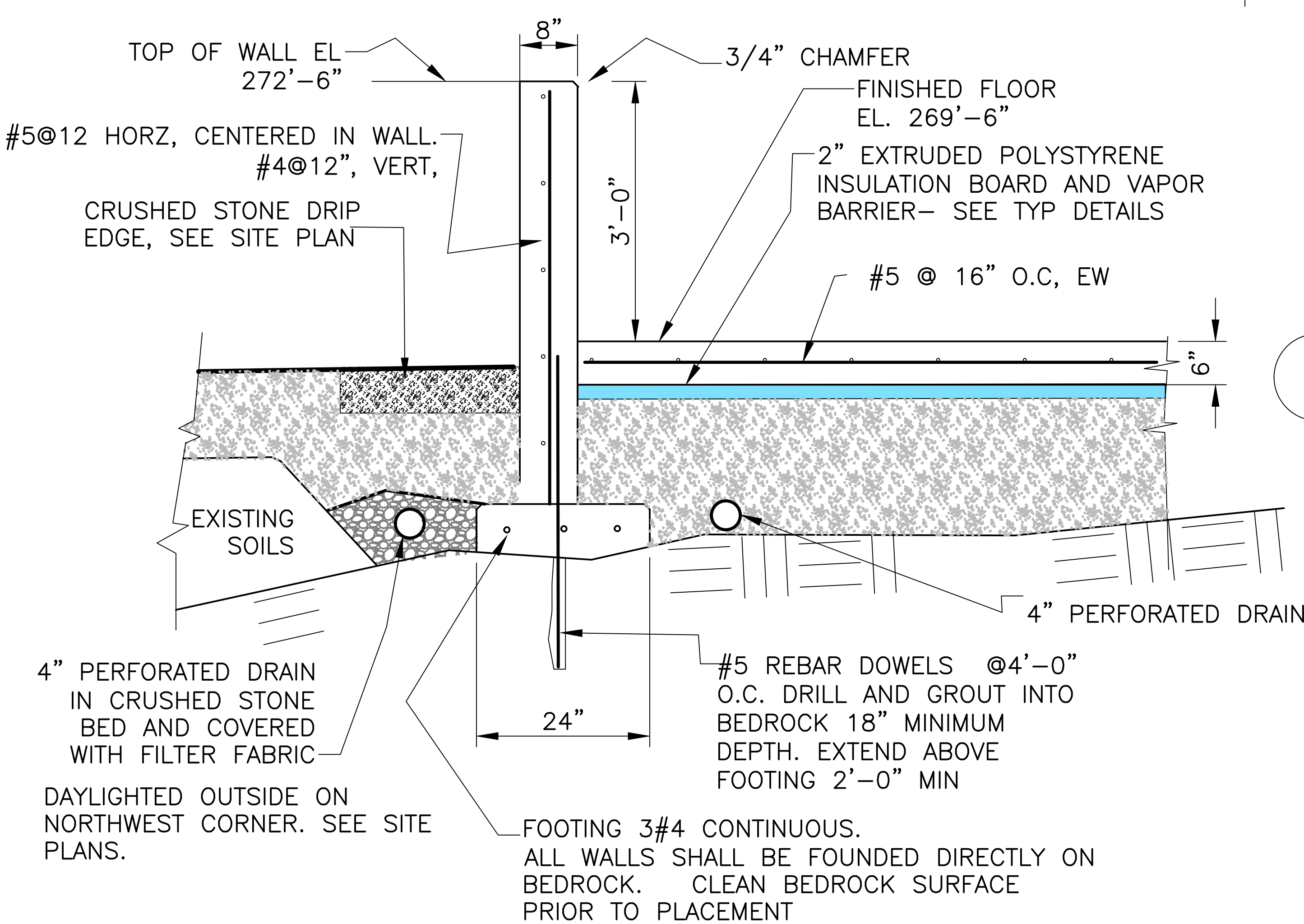
A-9
REV. 1



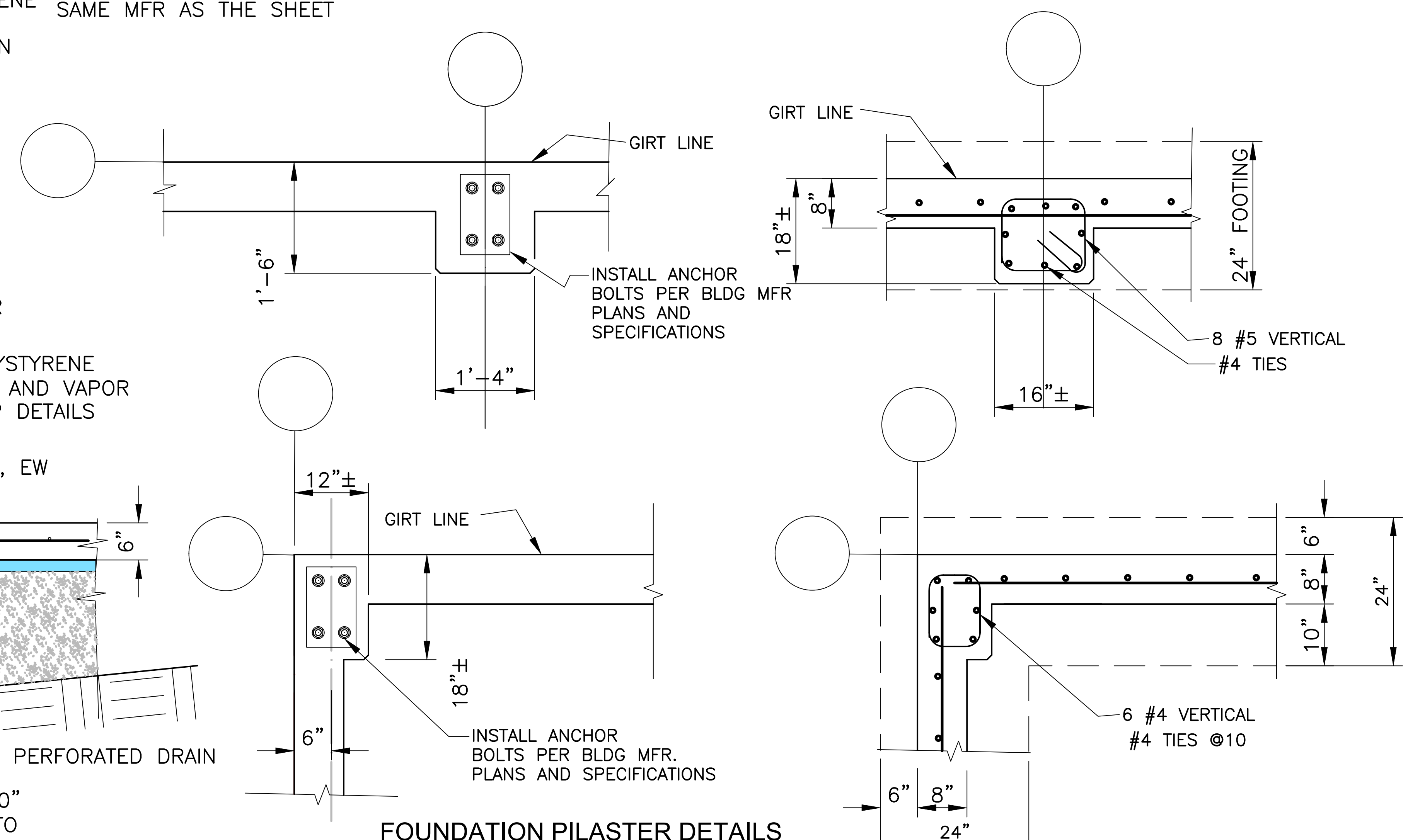
TYPICAL SLAB DETAIL- CONTROL JOINTS. -(not to scale)



TYPICAL SLAB DETAIL- CONSTRUCTION JOINTS



TYPICAL FOUNDATION WALL DETAIL



FOUNDATION PILASTER DETAILS

0 1 2 3 4
SCALE IN FEET

STATE OF MAINE — STEPHEN T. RUELL — No. 4396 — LICENSED PROFESSIONAL ENGINEER

NO.	REVISION	DATE
1	ISSUED FOR BID	5-11-22

DESIGNED BY: STR
DRAWN BY: STR
DATE REVISED: 5-11-2022

Maine Department of Agriculture, Conservation and Forestry
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Richmond Maintenance Facility

Nav Aids Storage Building
FOUNDATION DETAILS
METAL FRAME OPTION

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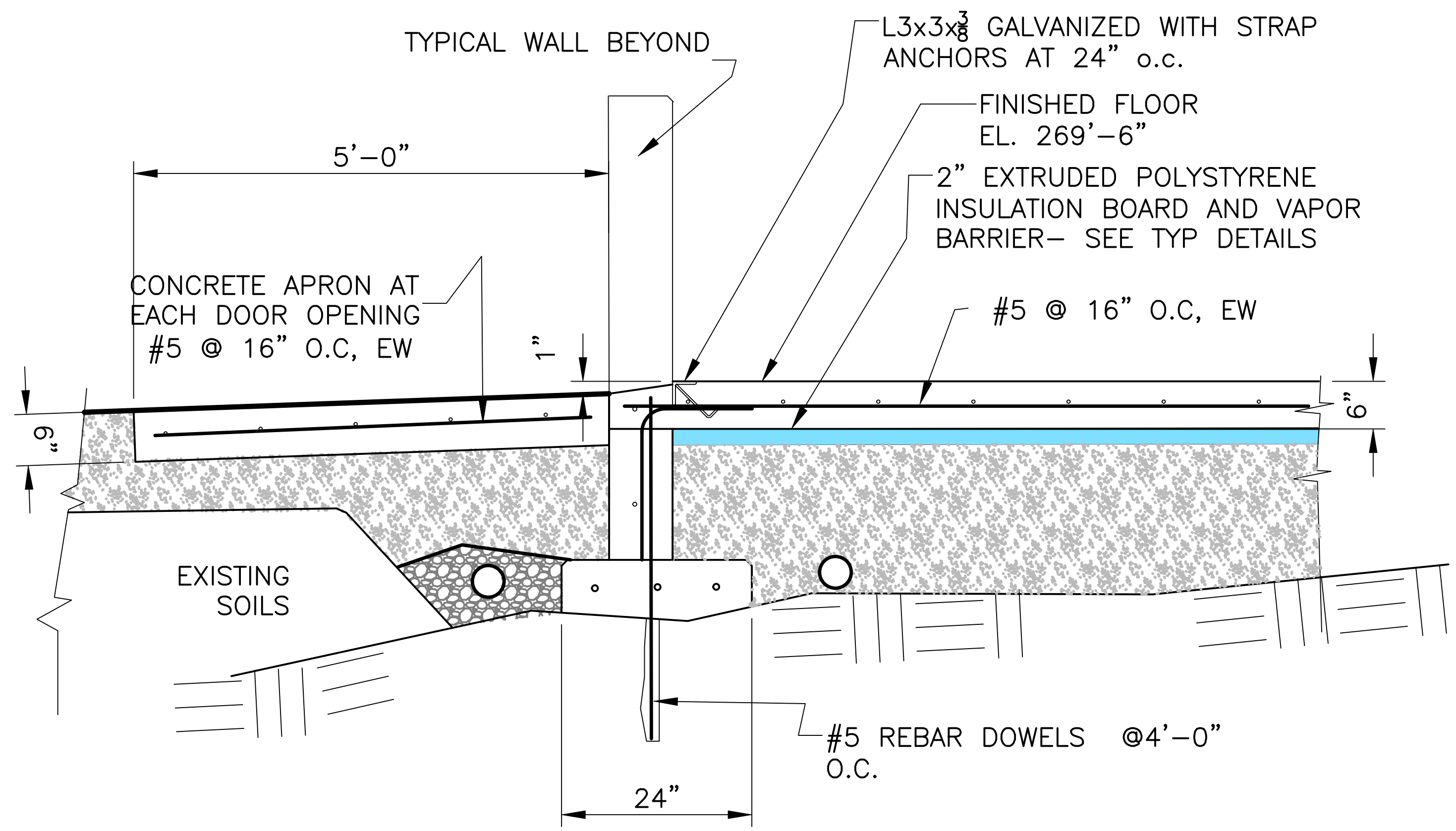
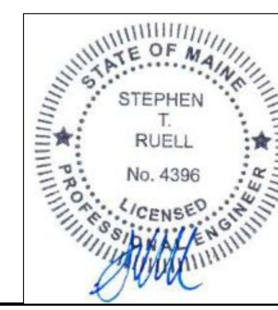


SLAB DETAIL AT OVERHEAD DOORS

0 1 2 3 4
SCALE IN FEET



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Nav Aids Storage Building
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2" SCHED 80 PVC BURIED CONDUIT FOR UNDERGROUND ELECTRIC BY CONTRACTOR. WIRE FEED TO BUILDING PERIMETER PROVIDED BY OWNERS ELECTRICIAN.

ELECTRICAL PANEL – SQUARE D 200 AMP MINIMUM 120/240 VOLT, SINGLE PHASE

GENERAL LIGHTING ~30 FOOT CANDLES/SF –LITHONIA LIGHTING 12L 50K 80CRI WH JEBL LED HIGH BAY, 136 WATTS, 12000 LUMENS 4000K COOL WHITE, OR EQUAL

EXTERIOR LIGHTING –LED SURFACE MOUNTED EXTERIOR FIXTURE LITHONIA WSR–LED 1 10A700/30K SR2 120 DDBXD DOWNWARD ILLUMINATION ("DARK SKY" TYPE)

GFCI DUPLEX RECEPTACLE OR PROTECTED BY GFCI BREAKER, 20 AMP TAMPER PROOF, EXTERIOR OUTLETS SHALL HAVE WEATHERPORRF COVERS

250V/50AMP — PROVIDE 250 VOLT 50 AMP RECEPTACLE (NEMA 6–50 SOCKET) FOR ELECTRIC VEHICLE CHARGER OR WELDER. INSTALLED ON THE WALL AT FOUR FEET AFF. UNLESS DIRECTED OTHERWISE. EACH OUTLET ON A SEPARATE BREAKER

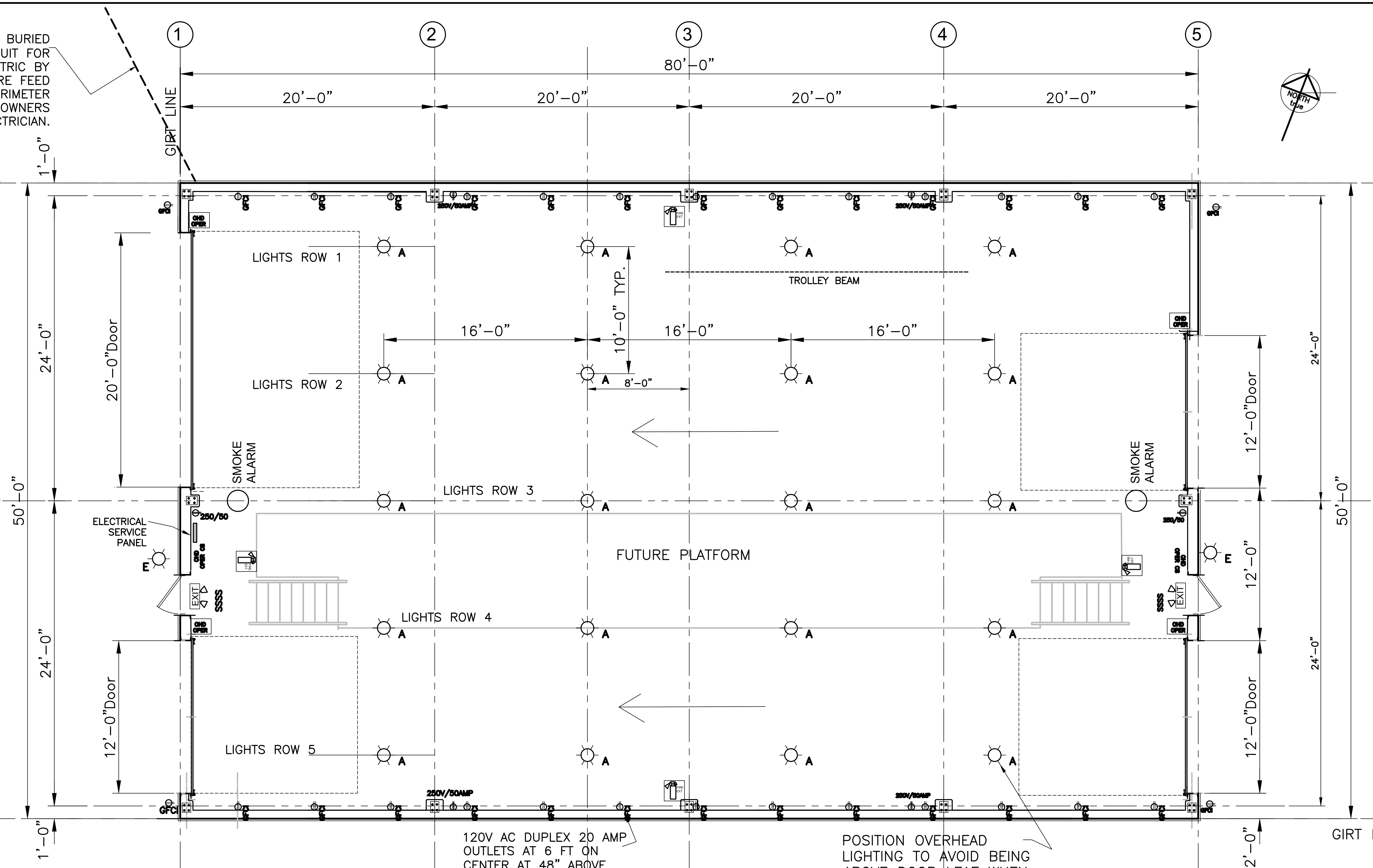
EXIT — COMBINATION LED EXIT SIGN WITH EMERGENCY LIGHT

SSSS — LIGHT SWITCHES
4 GANGED 3–WAY SWITCHES
SEPARATE SWITCHES FOR
1. SWITCH NORTH ROW 1 OF GENERAL LIGHT FIXTURES A
2. DIMMER FOR ROWS 2 AND 3 OF GENERAL LIGHT FIXTURES A
3. DIMMER FOR ROWS 4 AND 5 OF GENERAL LIGHT FIXTURES A
4. ALL EXTERIOR LIGHTS E

OHD OPER — OVERHEAD DOOR OPERATOR PROVIDED BY DOOR MFR AS PART OF DOOR SUPPLY, WITH PROGRAMMABLE REMOTE CONTROL UNITS

OHD OPER CS — OVERHEAD DOOR OPERATOR CONTROL STATION

FIRE EXTINGUISHER, ABC, PROVIDED BY OWNER



120V AC DUPLEX 20 AMP OUTLETS AT 6 FT ON CENTER AT 48" ABOVE FLOOR, NORTH AND SOUTH WALLS

POSITION OVERHEAD LIGHTING TO AVOID BEING ABOVE DOOR LEAF WHEN IN THE "UP" POSISTION

THE CONTRACTOR IS RESPONSIBLE FOR FINAL SELECTION, SIZING AND COMPATIBILITY OF COMPONENTS AND FIXTURES, AND PROVIDNG A COMPLETE INSTALLATION MEETING REQUIRED STATE AND FEDERAL CODES AND STANDARDS.

THE ELECTRICAL PLAN IS PROVIDED TO SHOW THE OWNER'S INTENTION FOR GENERAL LAYOUT AND COMPONENTS TO BE INCLUDED, AND IS SCHEMATIC, NO ELECTRICAL DESIGN HAS BEEN PERFORMED.

ELECTRICAL PLAN

0 4 8
SCALE IN FEET

STATE OF MAINE — STEPHEN T. RUELL — No. 4396 — LICENSED PROFESSIONAL ENGINEER

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Nav Aids Storage Building
ELECTRICAL PLAN
METAL OR WOOD FRAME OPTIONS

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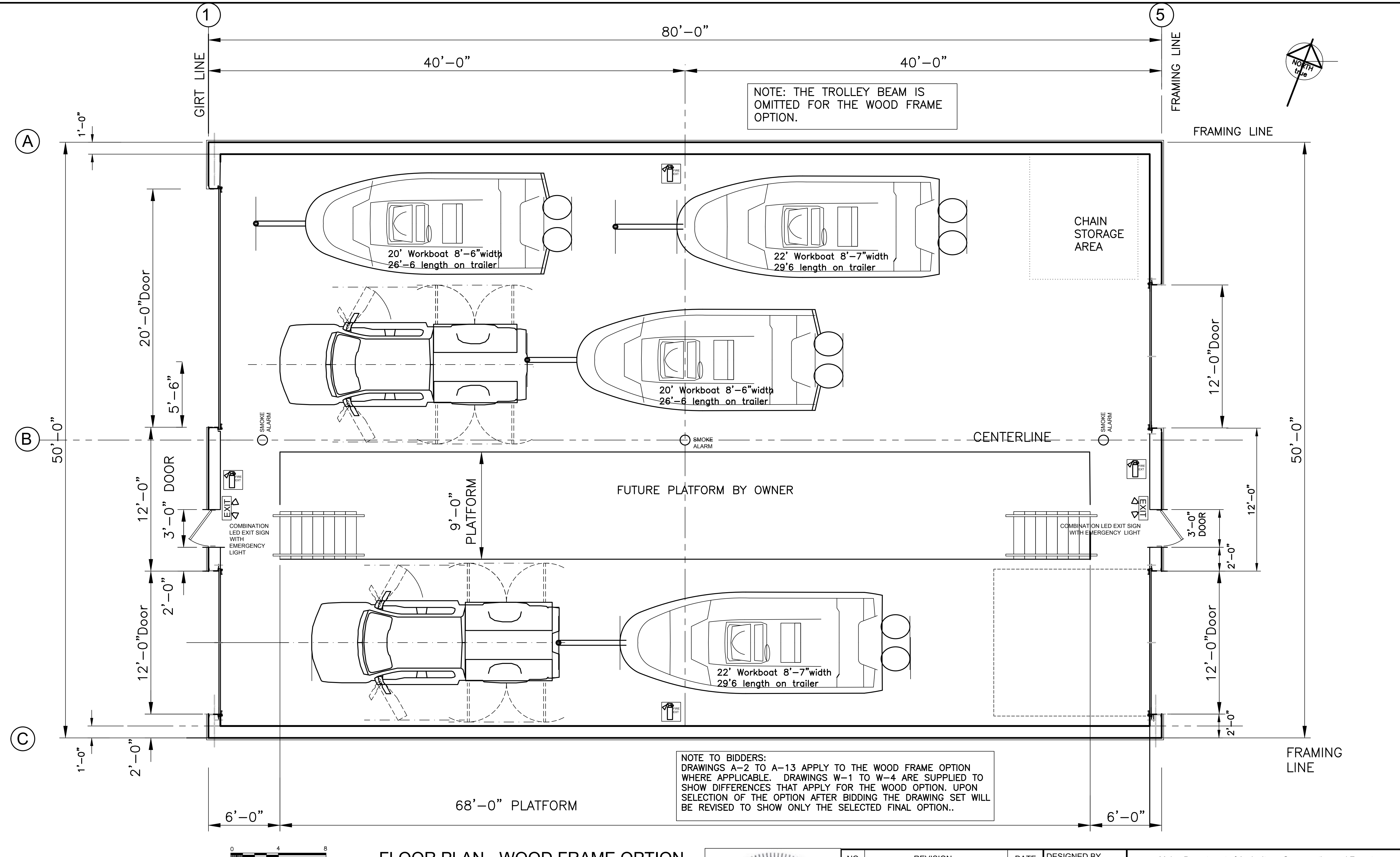

FLOOR PLAN - WOOD FRAME OPTION

DOOR NOTES:

1. ALL OVERHEAD DOORS SHALL BE OVERHEAD DOOR THERMACORE NODEL 591 OR APPROVED EQUAL, TO BE SUPPLIED WITH STANDARD LIFT TRACK KITS AND COMMERCIAL GRADE OPERATORS WITH REMOTE CONTROLS. COORDINATE BUILDING FRAME STRUTURE DIMENSIONS WITH TRACK CLEARANCE REQUIREMENTS
2. MANDOORS SHALL BE 3'–0" X 6'–8" STANDARD COMMERCIAL GRADE FIBERGLASS DOORS WITH FIBERGLASS FRAMES, HALF GLASS, STAINLESS STEEL BALL BEARING HINGES, AND COMMERCIAL GRADE PASSAGE SET. OWNER WILL SUPPLY DEAD BOLT LOCK FOR INSTALLATION BY CONTRACTOR. CORDINATE WITH OWNER,

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Nav Aids Storage Building
FLOOR PLAN - WOOD FRAMED

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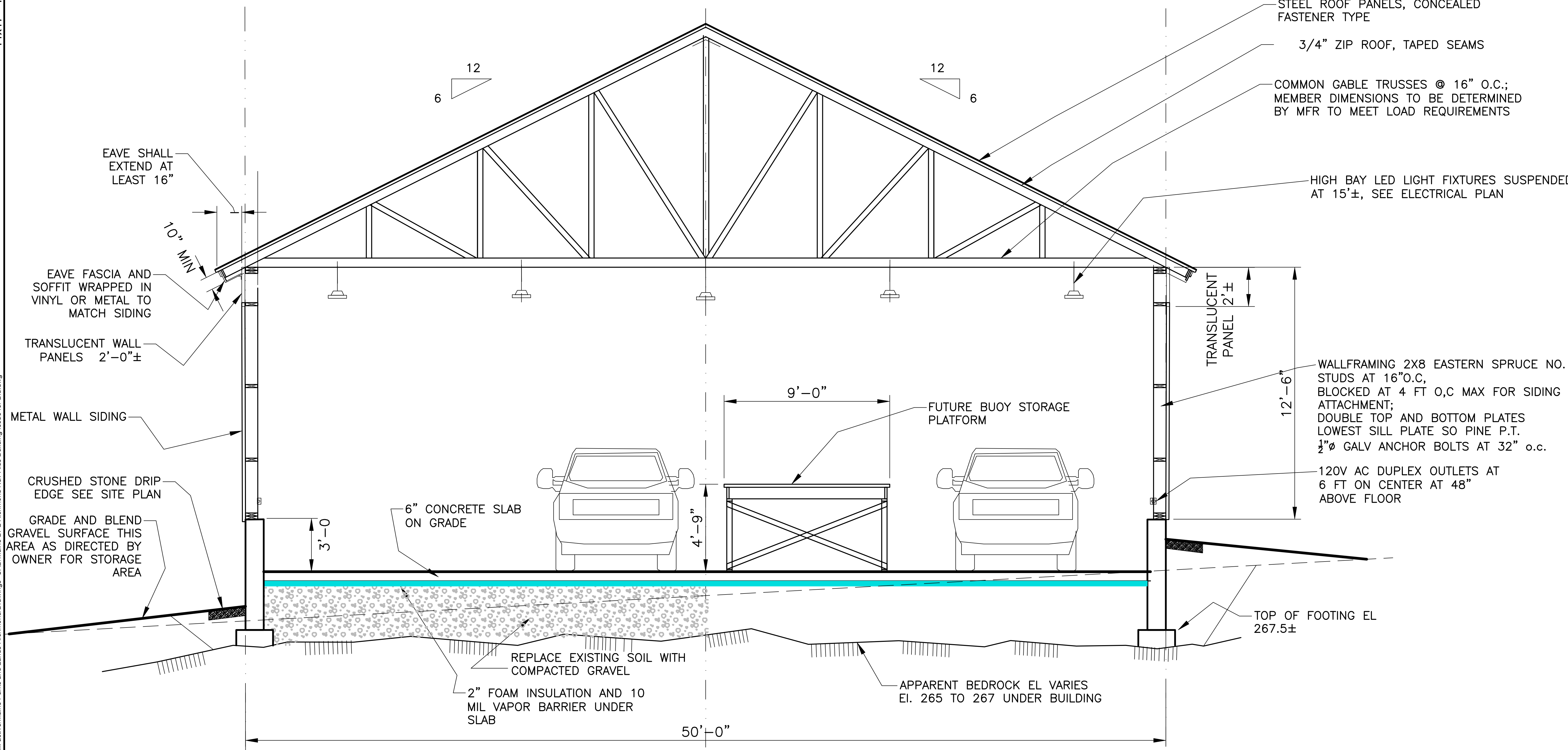
W-1
REV. 1



BUILDING TRANSVERSE SECTION
WOOD FRAME OPTION

0 4 8
SCALE IN FEET

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Nav Aids Storage Building
BUILDING CROSS SECTION
WOOD FRAMED

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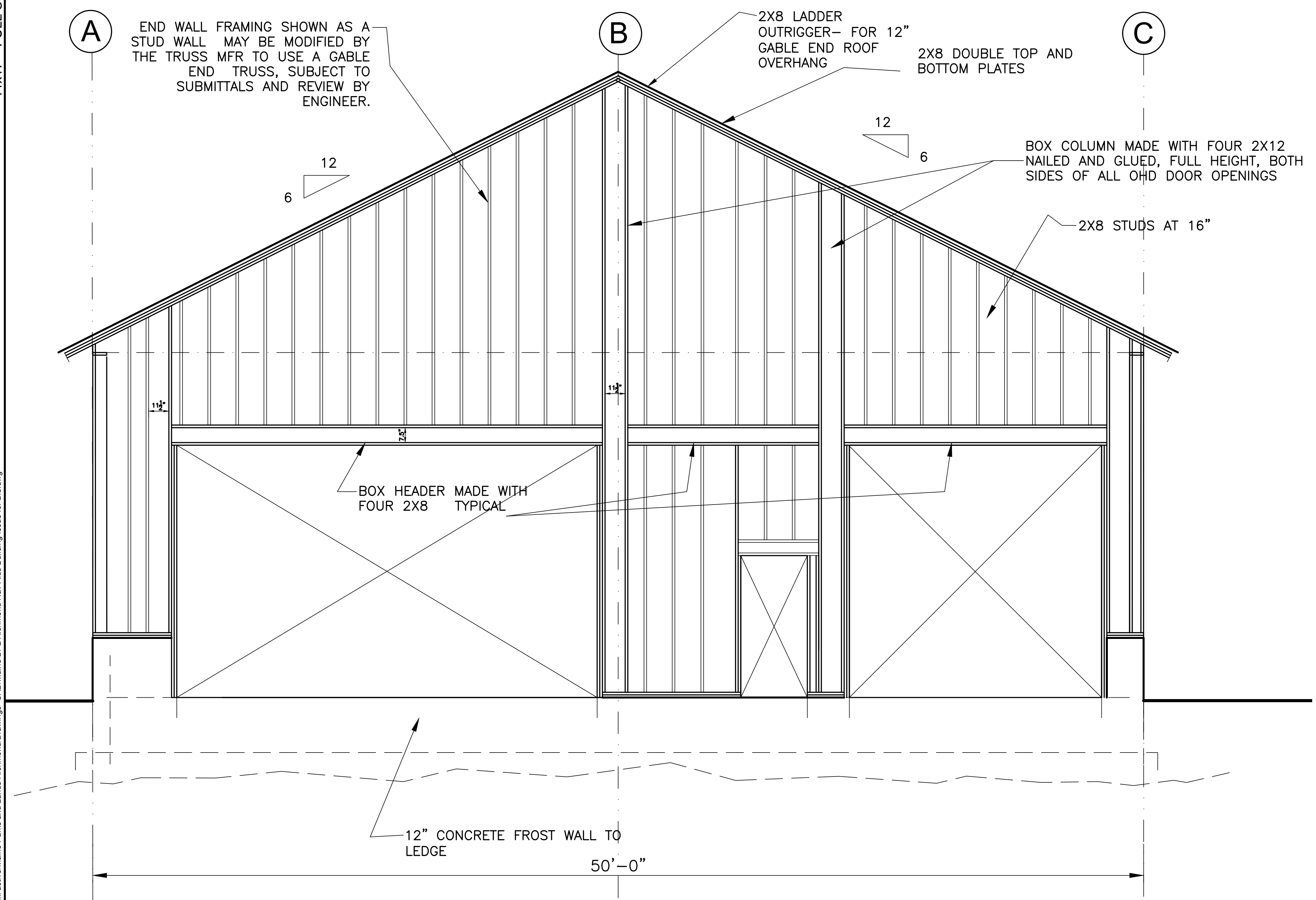
PinnacleHillEngineering@gmail.com

W-2
REV. 1



WEST ELEVATION WOOD FRAMING DETAIL

EAST WALL SIMILAR

0 4 8
SCALE IN FEET

WOOD FRAMED OPTION –ROOF NOTES

1. Truss Manufacturer with minimum of 5 years commercial production of trusses shall design and fabricate trusses. Design per IBC Code Latest Edition

2. Design Loads

Design Snow load = 47 psf per ASCE 7. Using ground snow load Pg = 70 psf, I= 1.0, Ce=1.0, Ct=1.2, Cs = 0.8 for unheated, unobstructed slippery roof, Design for unbalanced and balanced loads

Design Wind load per ASCE 7. Wind speed 85 mph, Exposure C

Roof design shall include a superimposed dead load = 12 psf in addition to the building supplied.

Temporary Live Load 25 psf during construction

3. Submit truss shop drawings to Owner prior to fabrication.

4. Provide all necessary connectors, hold downs, bracing and instructions for erection of roof trusses and temporary and permanent bracing.

5. Space trusses at 16" on center, centered over bearing studs in bearing walls.

6. Anchor trusses to bearing walls with metal connector plates capable of resisting wind uplift forces per IBC.

7. Roof Sheathing –$\frac{5}{8}$" APA Span Rated Roof sheathing, Huber Zip Roof, tape all seams with Zip Tape, Nail per IBC Code and Truss manufacturer instructions.

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Nav Aids Storage Building
BUILDING END WALL FRAMING
WOOD FRAMED

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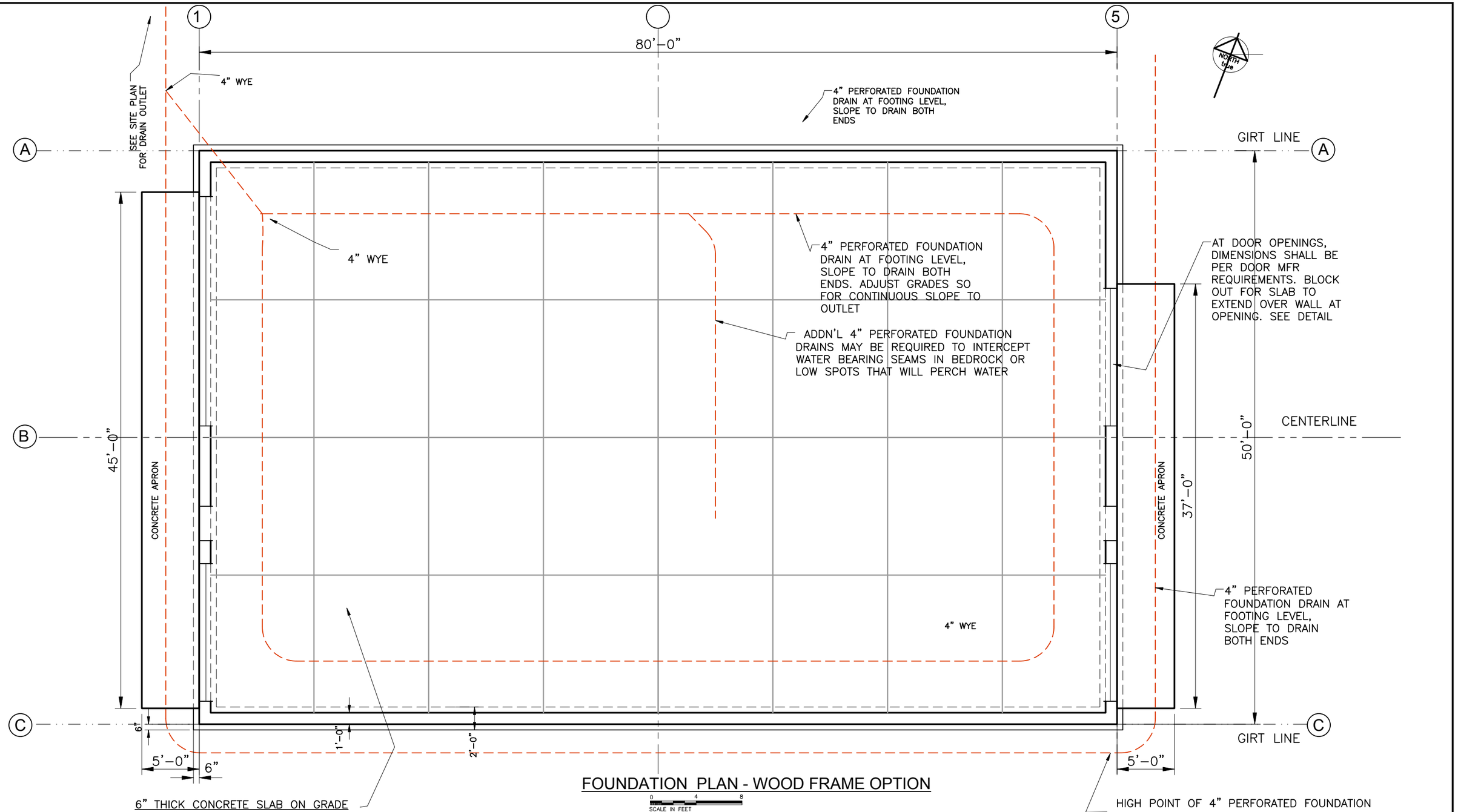

FOUNDATION PLAN - WOOD FRAME OPTION

SCALE IN FEET: 0 4 8

6" THICK CONCRETE SLAB ON GRADE

1. 2" FOAM INSULATION UNDER SLAB WITH 10 MIL POLY VAPOR BARRIER
2. CONCRETE 4000 PSI AT 28 DAYS
3. REBAR #5@16" EACH WAY SUPPORTED ON CHAIRS OR CONCRETE BRICKS.
4. CUT CONTROL JOINTS SAME DAY, 1 1/2" DEEP ON 10' X 12 FT GRID
5. DO NOT USE LIQUID CURING AGENT, WET CURE WITH BURLAP OR POLY TARPS
6. APPLY EPOXY COATING AFTER CURING

HIGH POINT OF 4" PERFORATED FOUNDATION

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FOUNDATION PLAN - WOOD FRAMED

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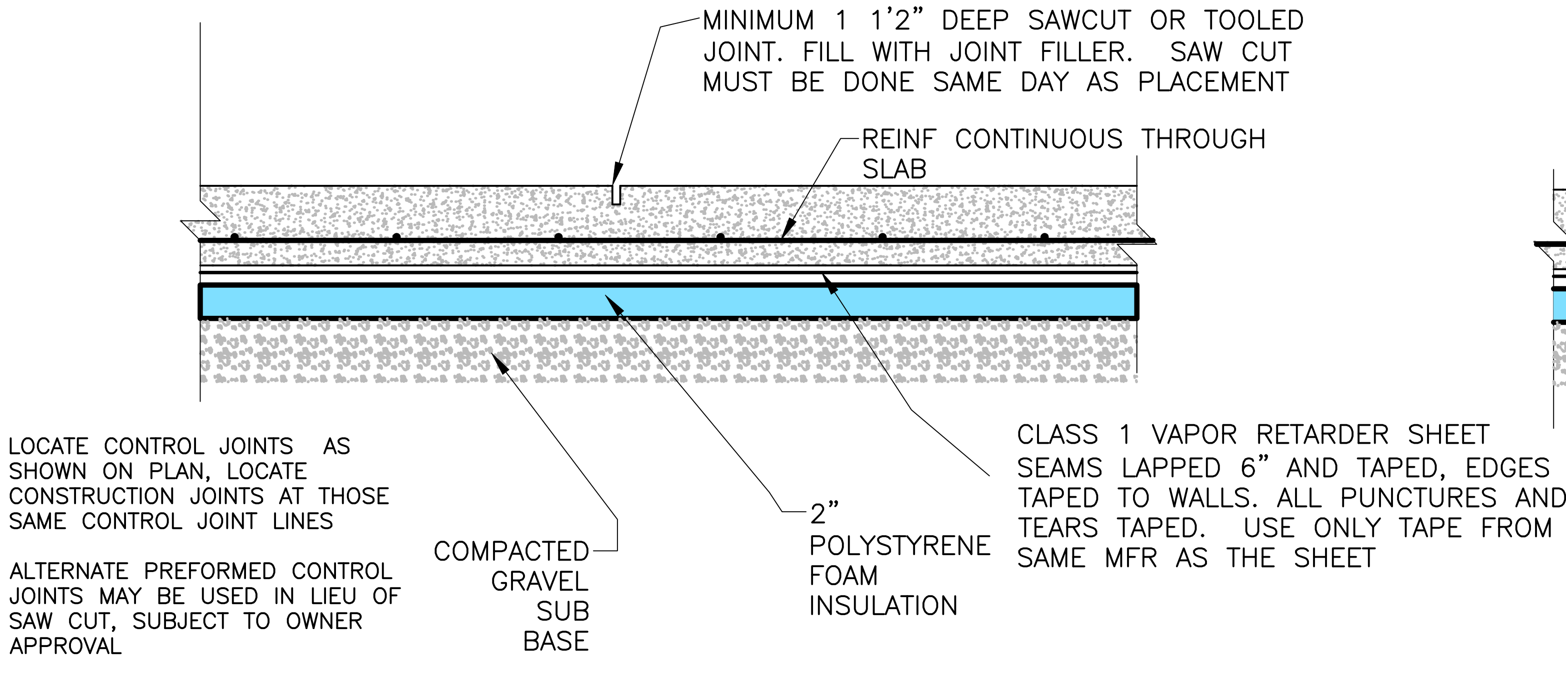
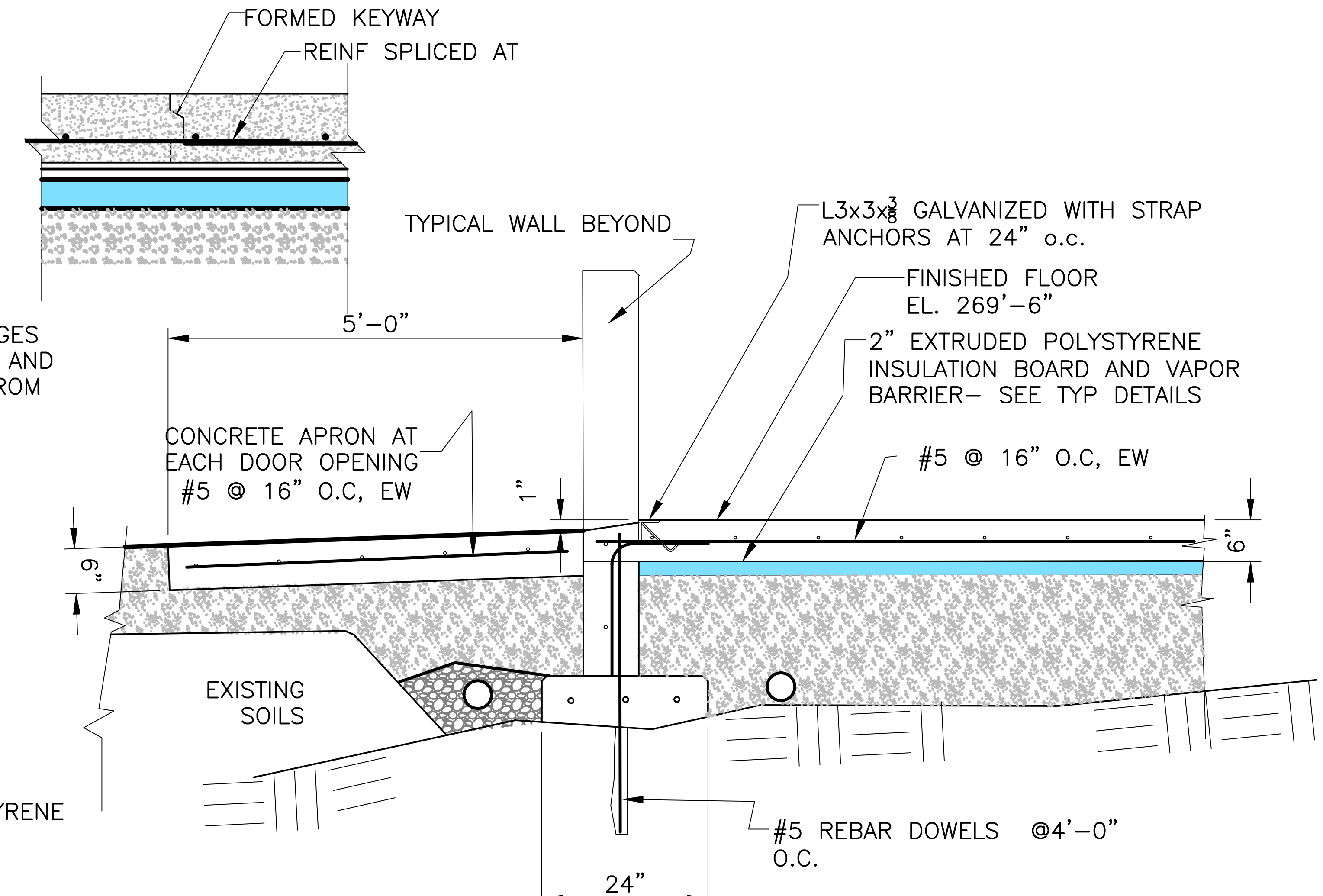
REV. 1

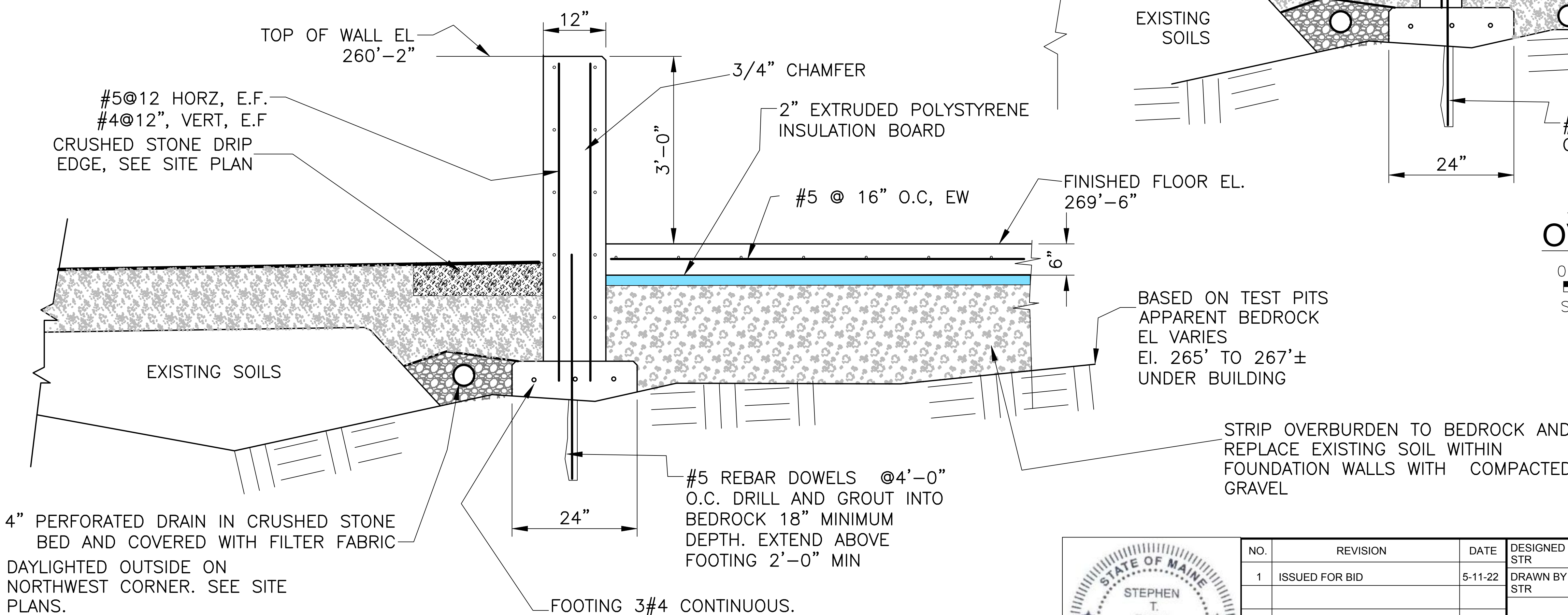


SLAB DETAILS not to scale



SLAB DETAIL AT OVER EAD DOORS

0 1 2 3 4
SCALE IN FEET



0 1 2 3 4
SCALE IN FEET

TYPICAL FOUNDATION WALL DETAIL

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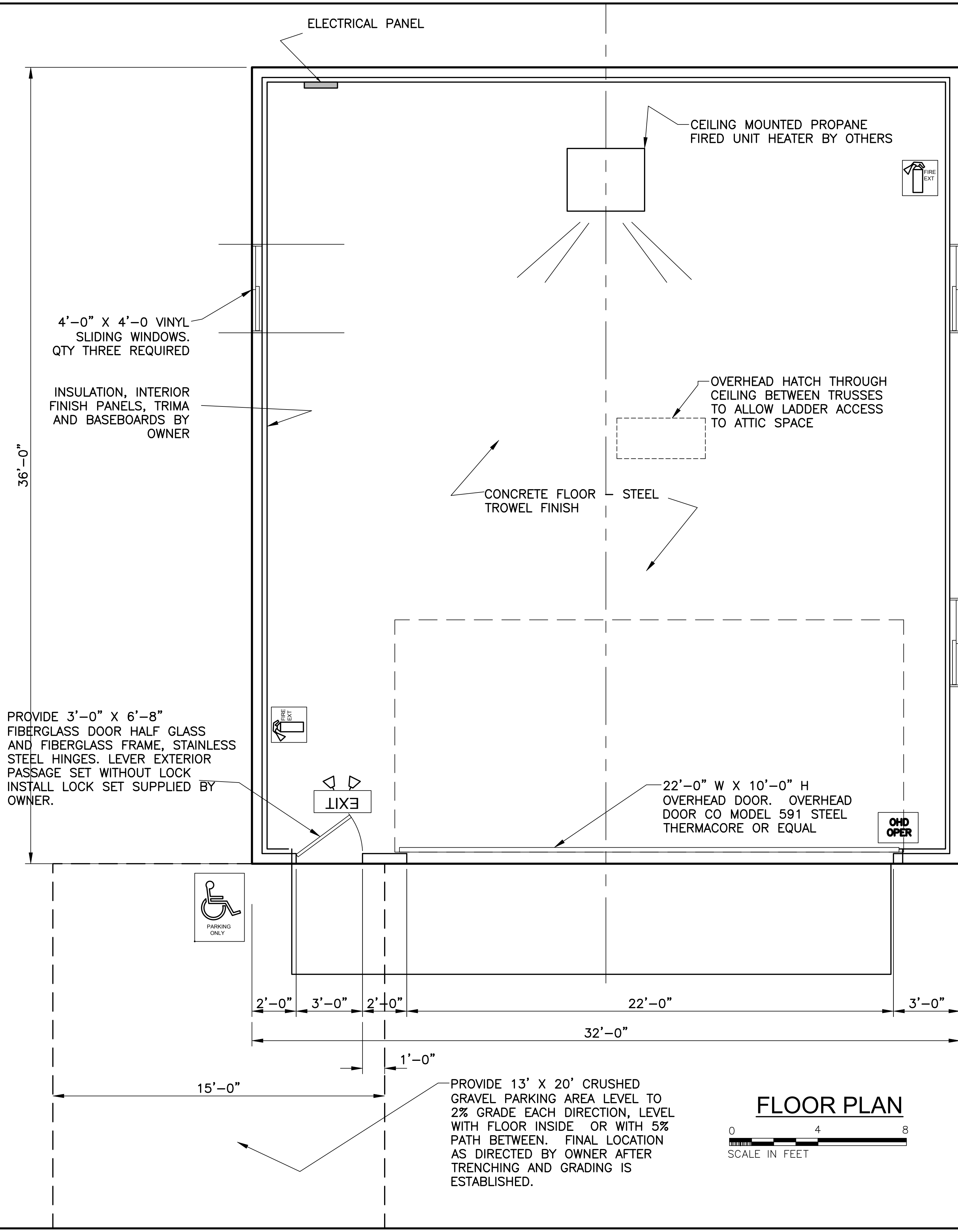
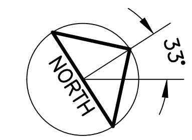
Nav Aids Storage Building
FOUNDATION DETAILS
WOOD FRAMED

PINNACLE HILL ENGINEERING
33 Pinnacle Road
Canaan, ME 04924
PinnacleHillEngineering@gmail.com

W-5
REV. 1



FLOOR PLAN



General Notes

1. Scope of Work

SiteWork

- Excavation of building foundation, backfilling and compaction
- Excavation of trenches for utilities and drainage lines, provide drainage piping, conduits and catch basin.
- Drilling and blasting of trenches where bedrock is shallow or at the surface.
- Construction of concrete pads for propane tank and emergency generator.
- Place and finish grade gravel in parking lot
- Level Spreader
- Loam and Seed

Building Construction

- Construct wood framed Carpenters shop complete except for items noted as by Owner.
- Roofing. – Standing seam metal roof installed per manufacturers instruction for full warranty.
- Siding – Metal ribbed panels as specified, installed per maunfucturers instructions for fasteners, underlayment closure strips, etc.
- Roofing and siding trim to match roofing and siding in gage, color, sheen and durability.
- Doors and windows as shown
- Electrical system installed by licensed electrician

2. Finishes

a. It is the Owners intent that the exterior siding, roofing, exterior trim, doors and windows will all be factory finished so that future field painting will not be required.

b. All doors shall be factory prefinished in the color selected by the Owner from the Mfr standard colors.

c. All components shall be protected throughout delivery, storage and installation. Any field touchup required for damaged coatings, shall be done by the Contractor to the satisfaction of the Owner.

3. Work by Owner and Not in Contract

Heating System
Insulation of walls and ceiling
Interior wall panels and trim
Door lock is supplied by Owner

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Maine Department of Agriculture, Conservation and Forestry
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Richmond Maintenance Facility

Carpentry Shop
FLOOR PLAN

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33 Pinnacle Road
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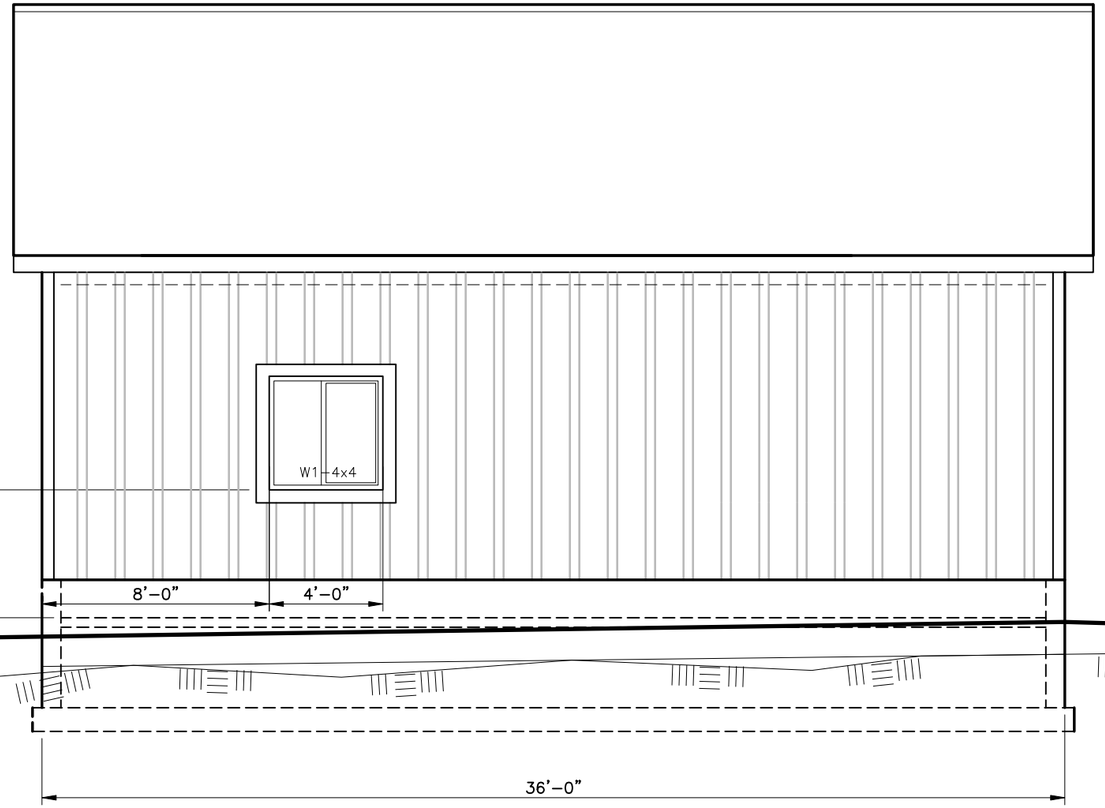
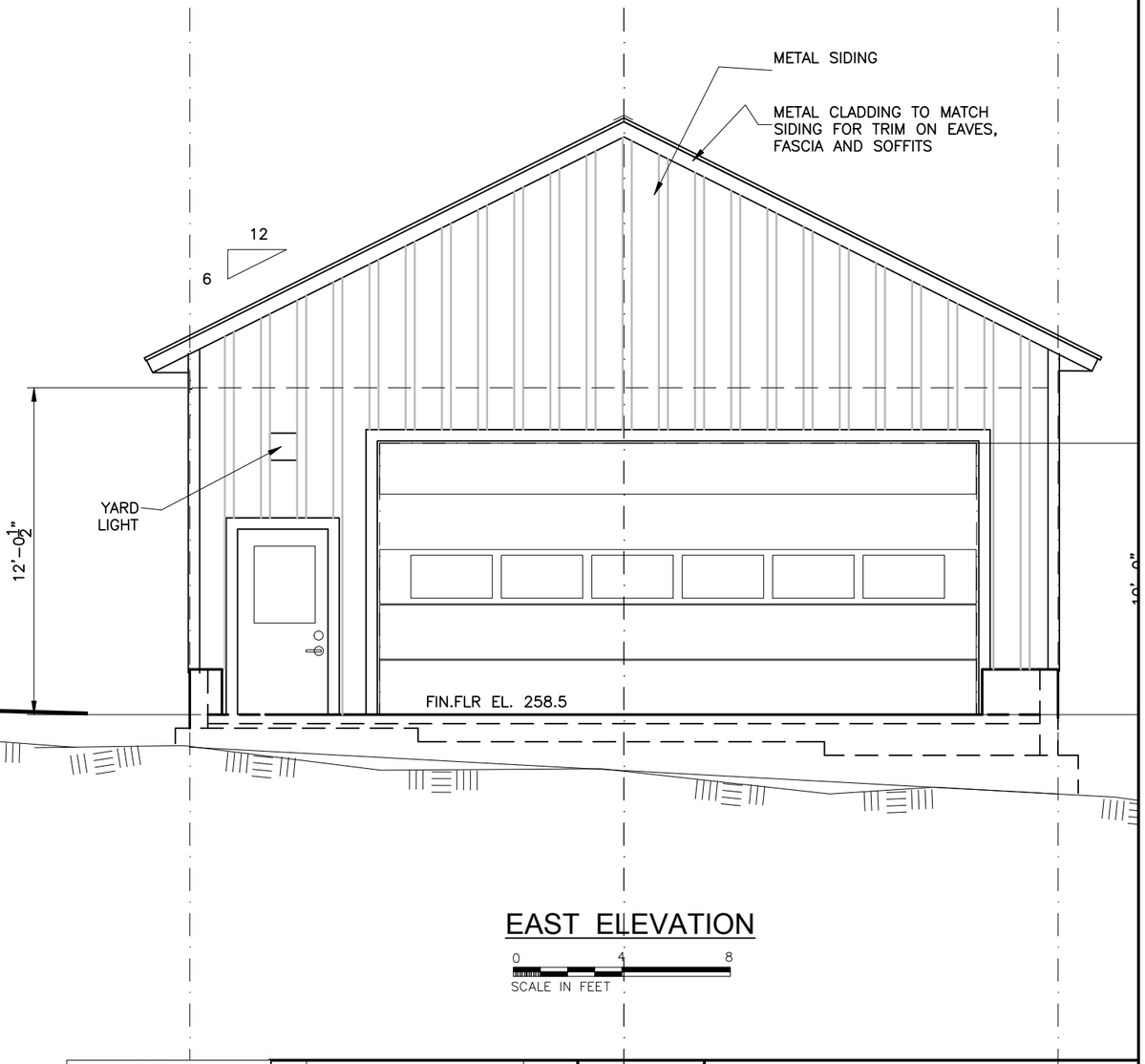
B-1
REV. 2



SOUTH ELEVATION

0 4 8

SCALE IN FEET



EAST ELEVATION

0 4 8

SCALE IN FEET

STATE OF MAINE
STEPHEN T. RUELL
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Maine Department of Agriculture, Conservation and Forestry
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Richmond Maintenance Facility

Carpentry Shop
SOUTH & EAST EXTERIOR ELEVATIONS

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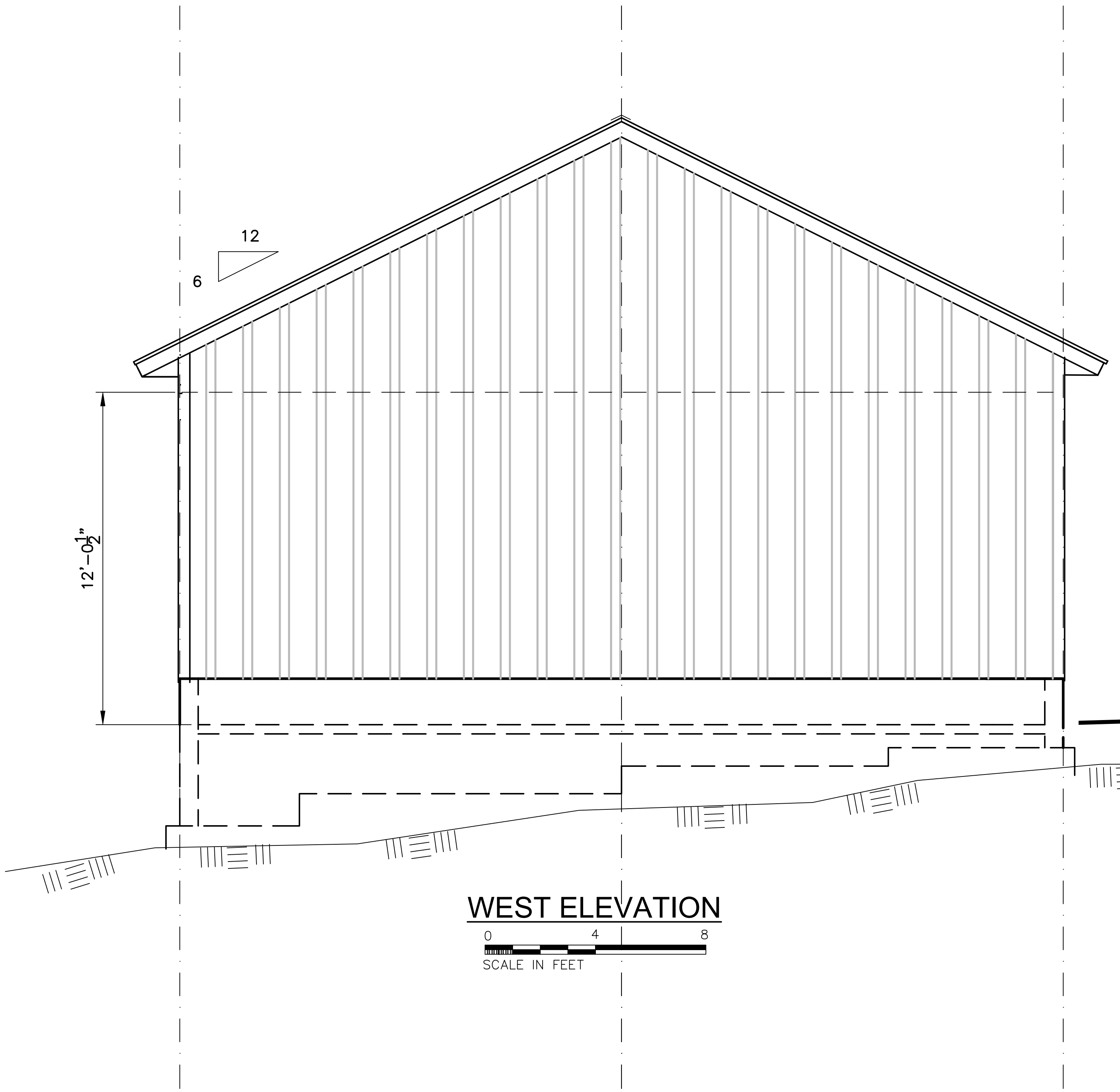
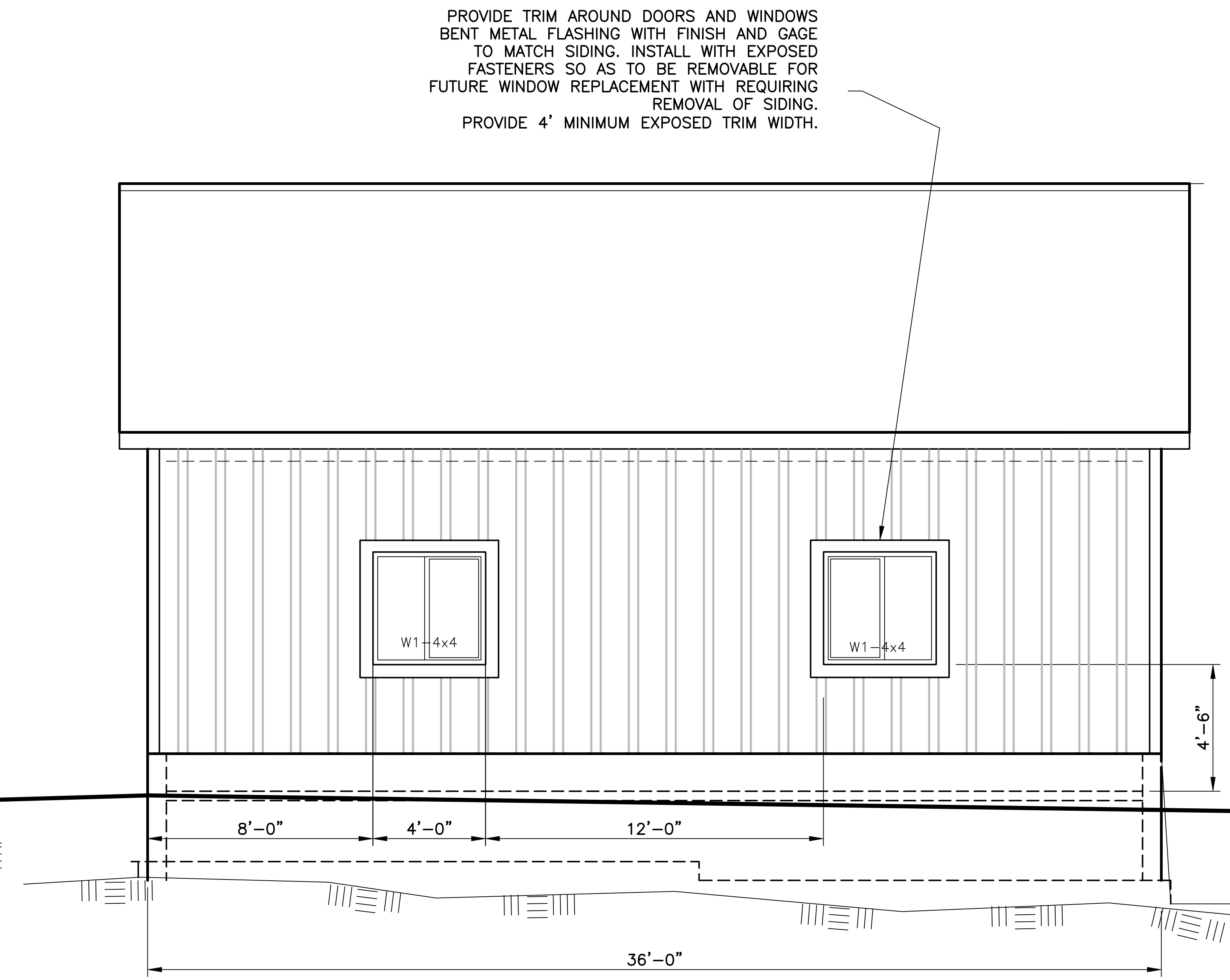


WEST ELEVATION



NORTH ELEVATION

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Carpentry Shop
NORTH & WEST ELEVATIONS

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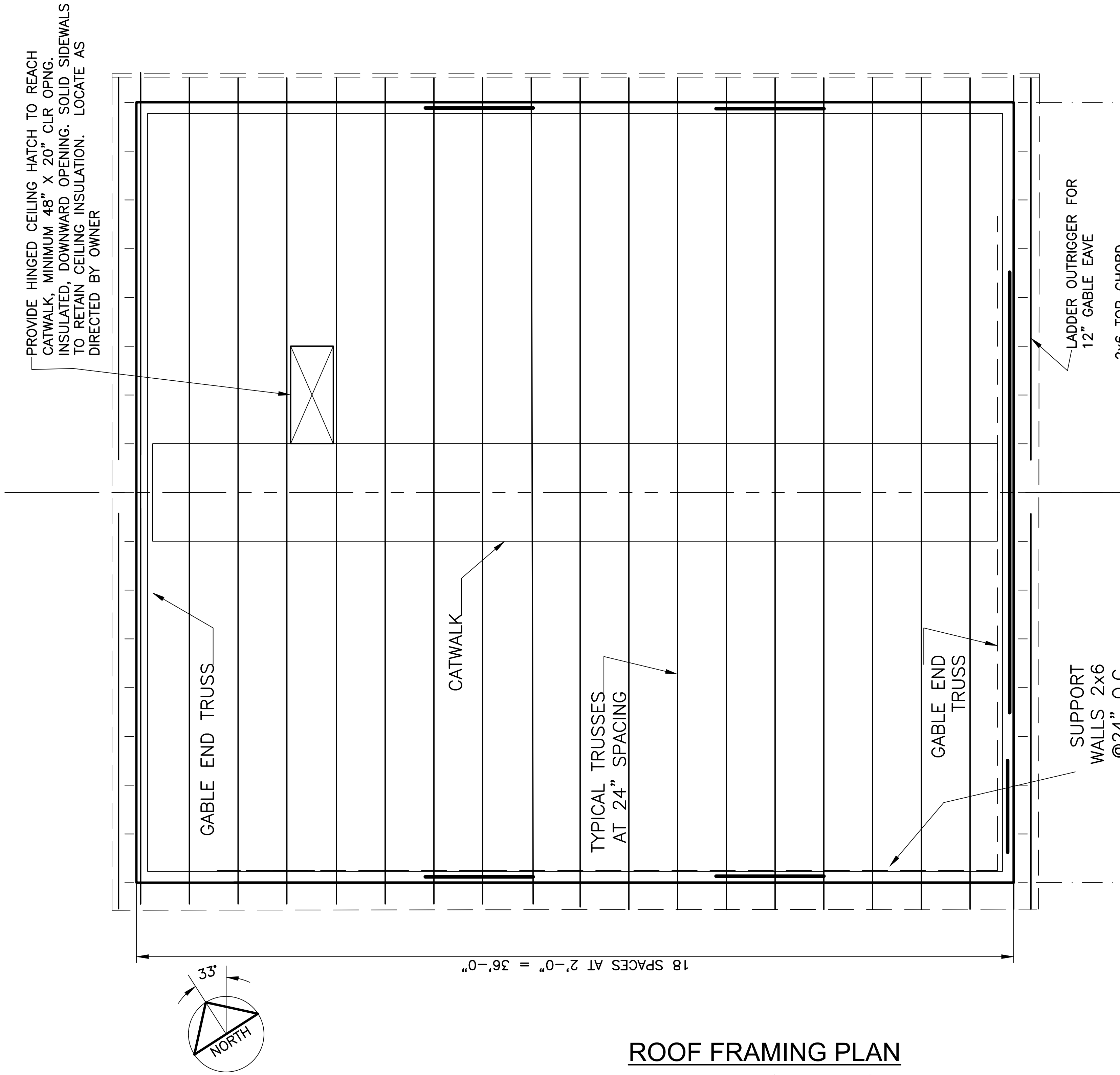
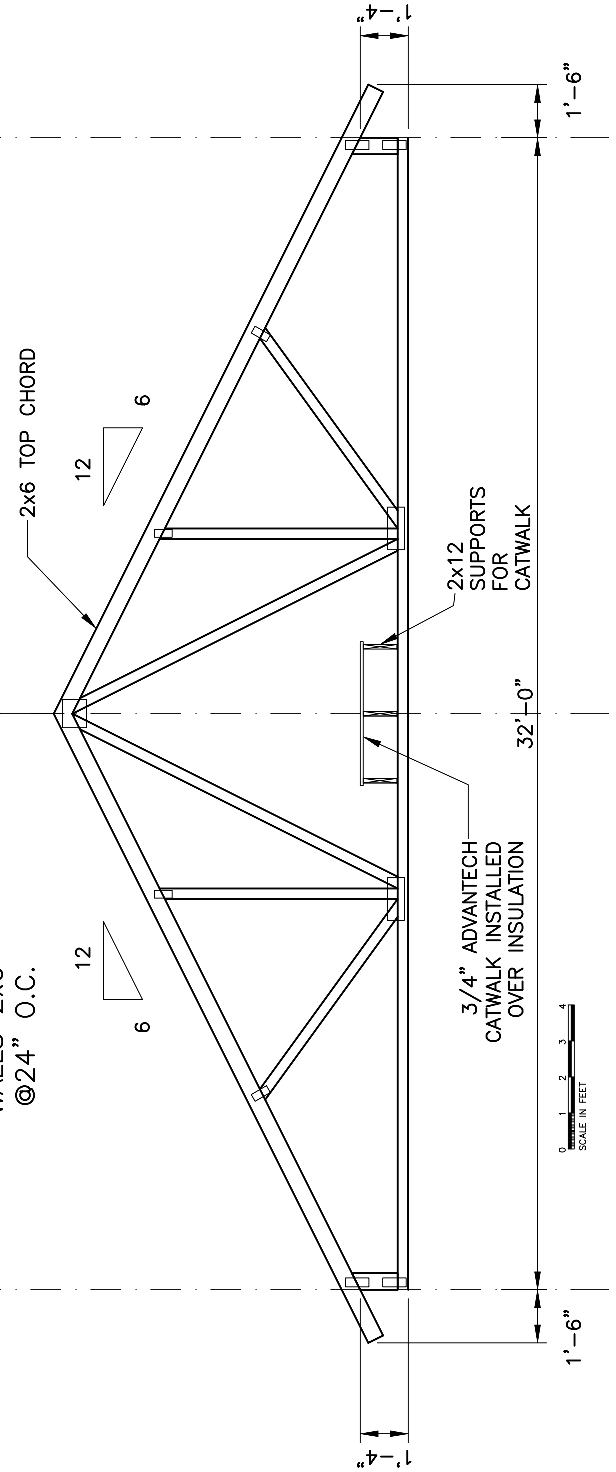
REV. 2



ROOF FRAMING PLAN

0 4 8
SCALE IN FEET



ROOF TRUSS

ROOF NOTES

1. Truss Manufacturer with minimum of 5 years commercial production of trusses shall design and fabricate trusses. Design per IBC Code Latest Edition

2. Design Loads

Roof truss design superimposed dead load = 12 psf

Temporary Live Load 25 psf during construction

Unoccupied Attic

Design Snow load per ASCE 7. Using ground snow load Pg = 70 psf, I= 1.0, Ce=1.0, Ct=1.1, Cs = 0.7 for Ventilated, unobstructed slippery roof, Design for Unbalanced and balanced loads

Design Wind load per ASCE 7. Wind speed 85 mph, Exposure C

3. Submit truss shop drawings prior to fabrication.

4. Provide all necessary connectors, hold downs, bracing and instructions for erection of roof trusses and temporary and permanent bracing.

5. Space trusses at 24" on center, centered over bearing studs in bearing walls.

6. Anchor trusses to bearing walls with metal connector plates capable of resisting wind uplift forces per IBC.

7. Roof Sheathing –5/8" APA Span Rated Roof sheathing, Huber Zip Roof, tape all seams with Zip Tape, Nail per IBC Code and Truss manufacturer instructions.

8. Roofing. – Standing seam metal roof installed per manufacturers instruction for full warranty. Underlayment and nailing of underlayment as instructed by roof mfr. Do not staple underlayment if that will void the warranty..

9. Siding – Metal ribbed panels as specified, installed per maunfucturers instruceions for fasteners, underlayment closure strips, etc.

10 Roofing and siding trim– all trim and siding shall be metal with finish to match roofing and siding in gage, color, sheen and durability.

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Carpentry Shop
ROOF FRAMING PLAN

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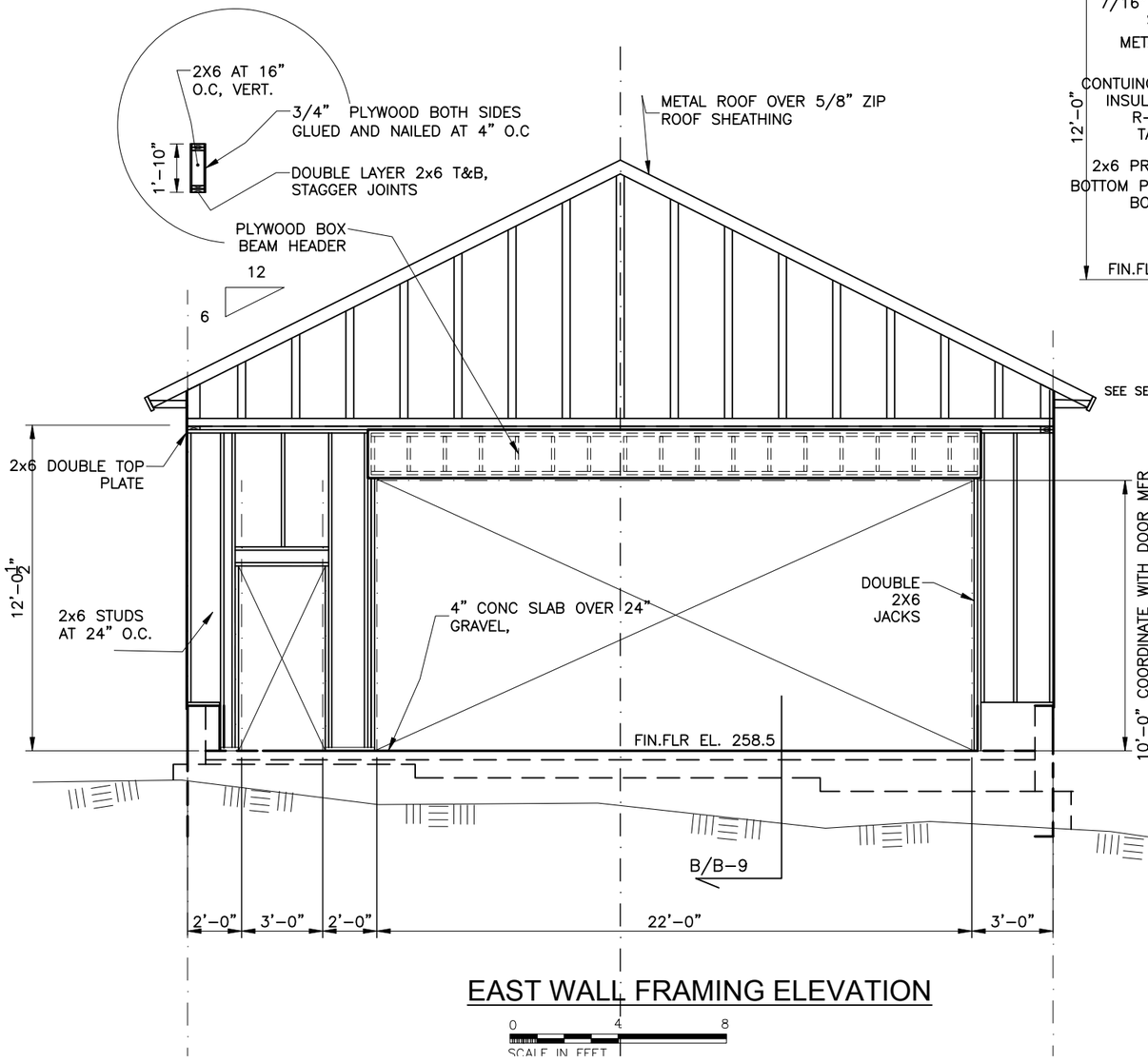
REV. 2

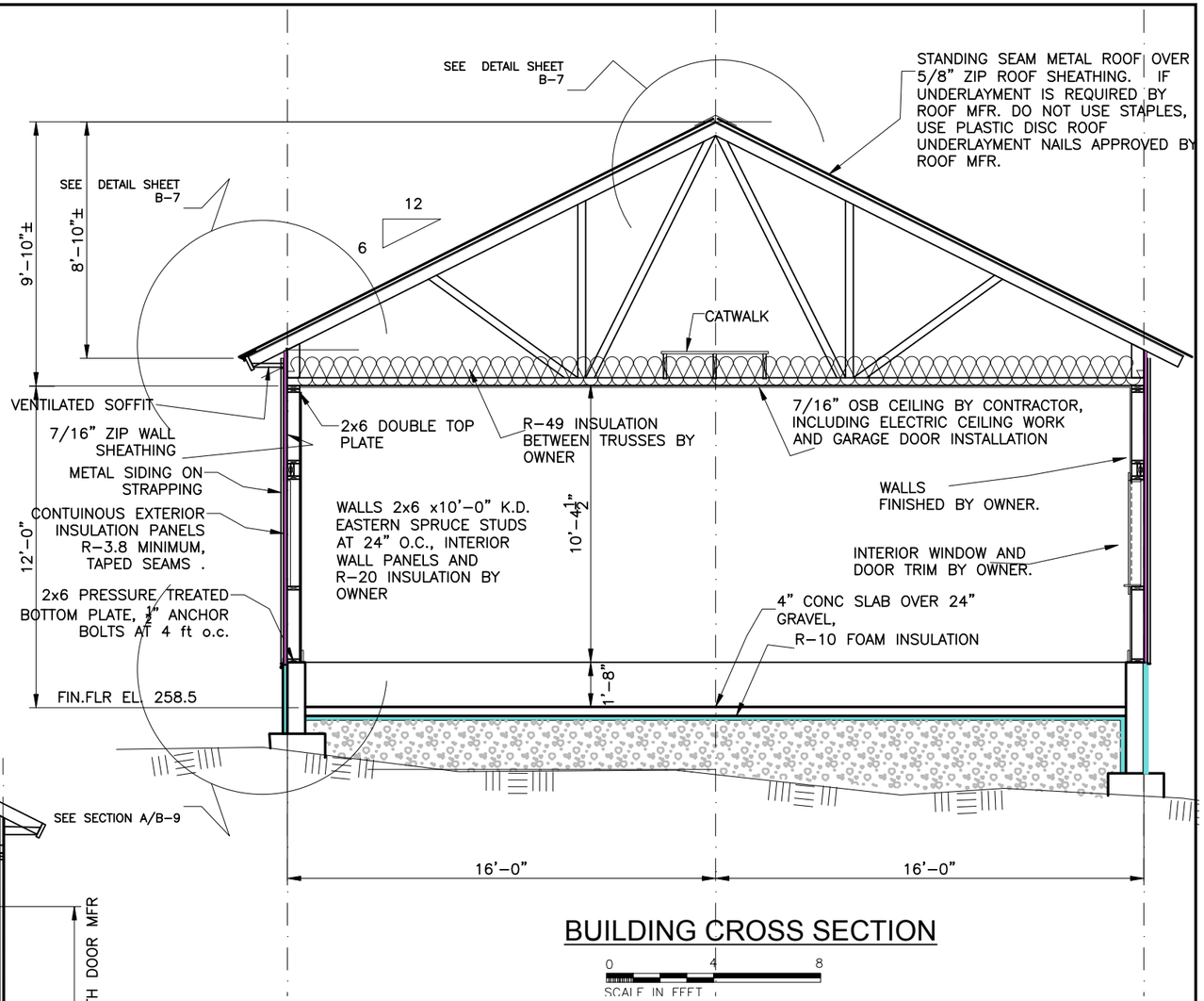
PLOT - FULL SCALE



EAST WALL FRAMING ELEVATION

0 4 8

SCALE IN FEET



BUILDING CROSS SECTION

0 4 8

SCALE IN FEET

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Carpentry Shop
FRAMING ELEVATIONS

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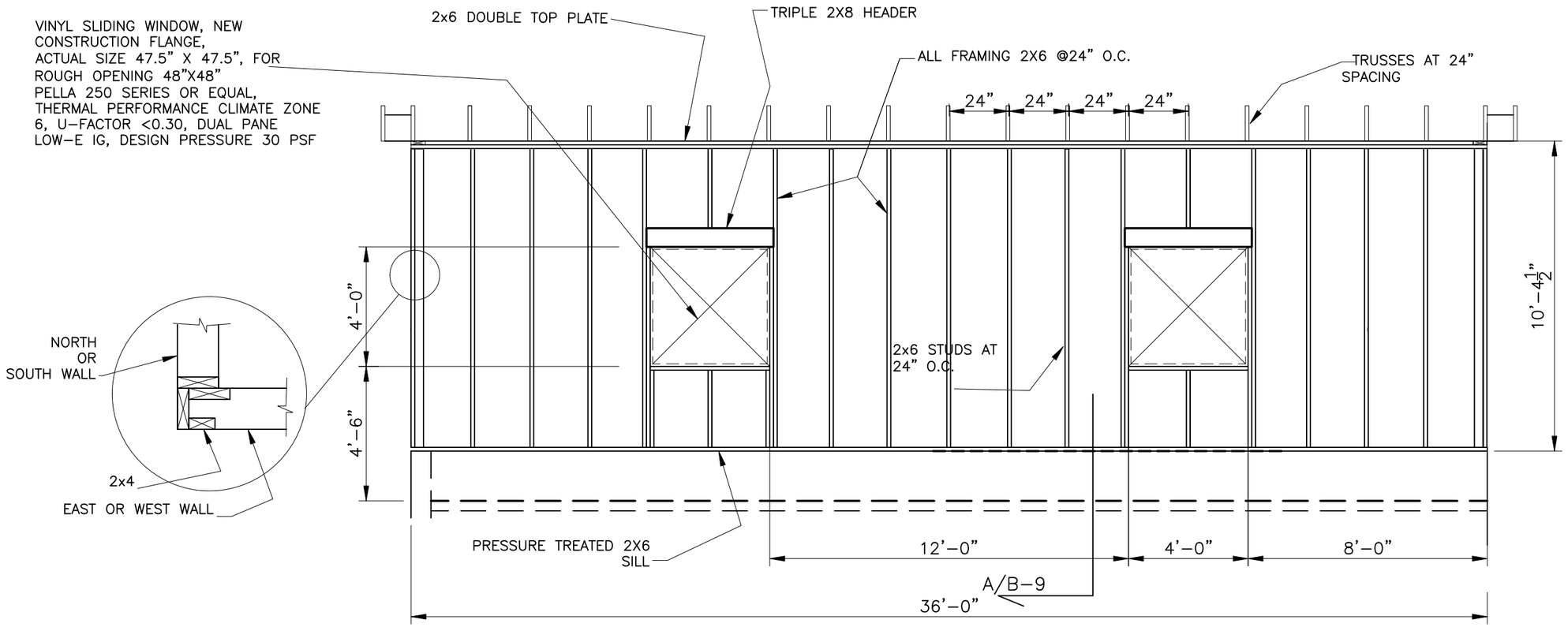
REV. 2

AUTOCAD 2011



NORTH WALL FRAMING ELEVATION

0 4 8

SCALE IN FEET

(SOUTH WALL SIMILAR EXCEPT WINDOWS)

STATE OF MAINE
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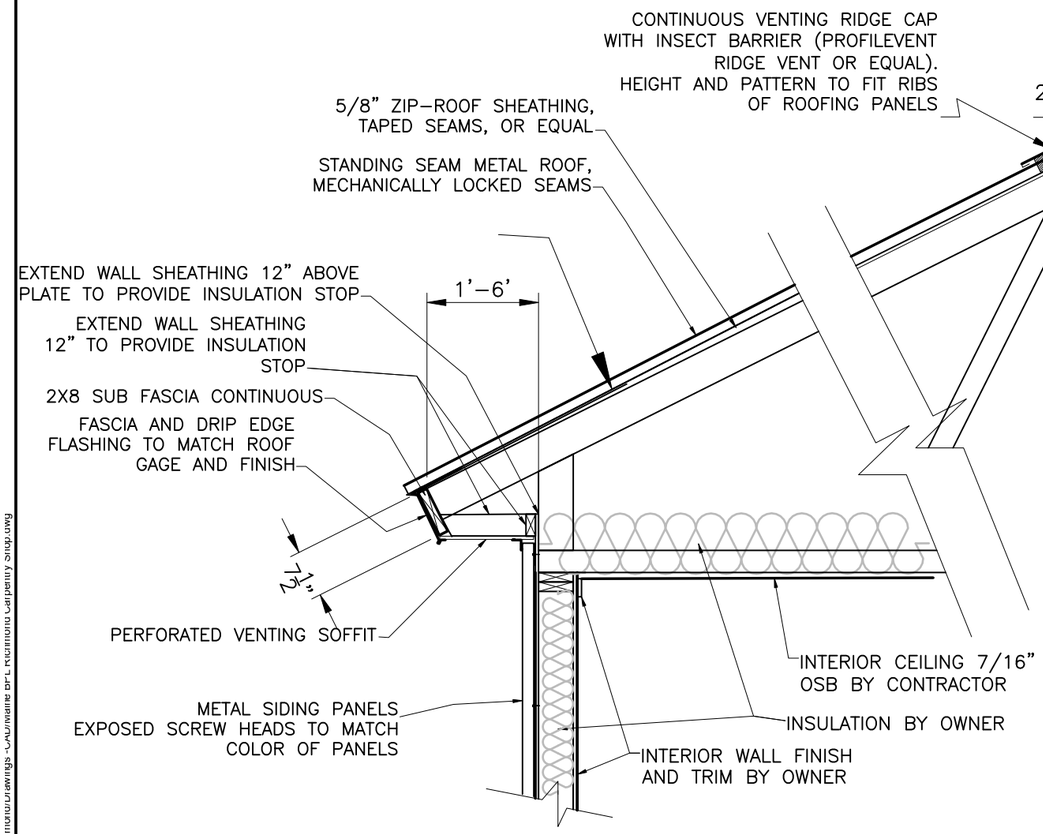
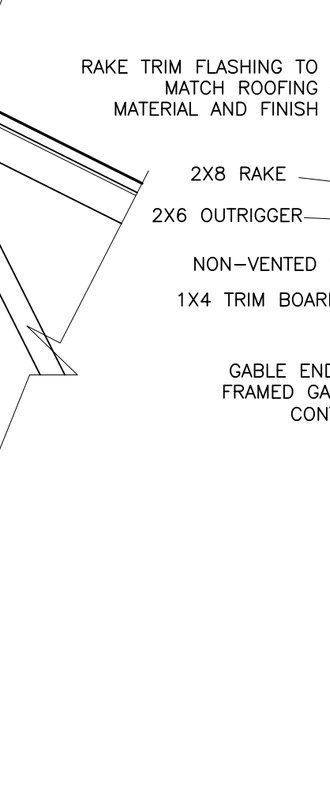
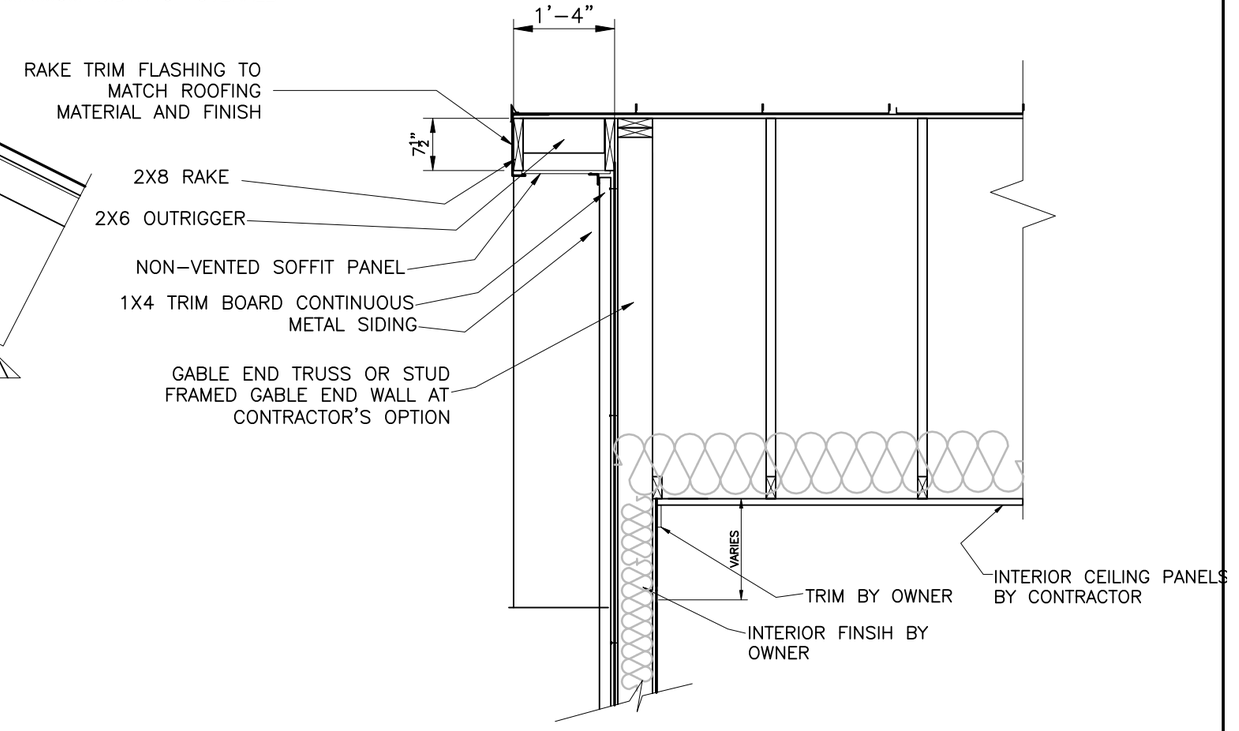
REV. 2



EAVE AND RIDGE DETAIL





RAKE DETAIL

STATE OF MAINE
STEPHEN T. RUELL
No. 4396
LICENSED PROFESSIONAL ENGINEER

NO.	REVISION	DATE
1	BGS REVIEW	2-11-22
2	ISSUED FOR BID	5-11-22

DESIGNED BY -
DRAWN BY STR
-
DATE REVISED 5-11-22

Maine Department of Agriculture, Conservation and Forestry
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Richmond Maintenance Facility

Carpentry Shop
ROOF DETAILS

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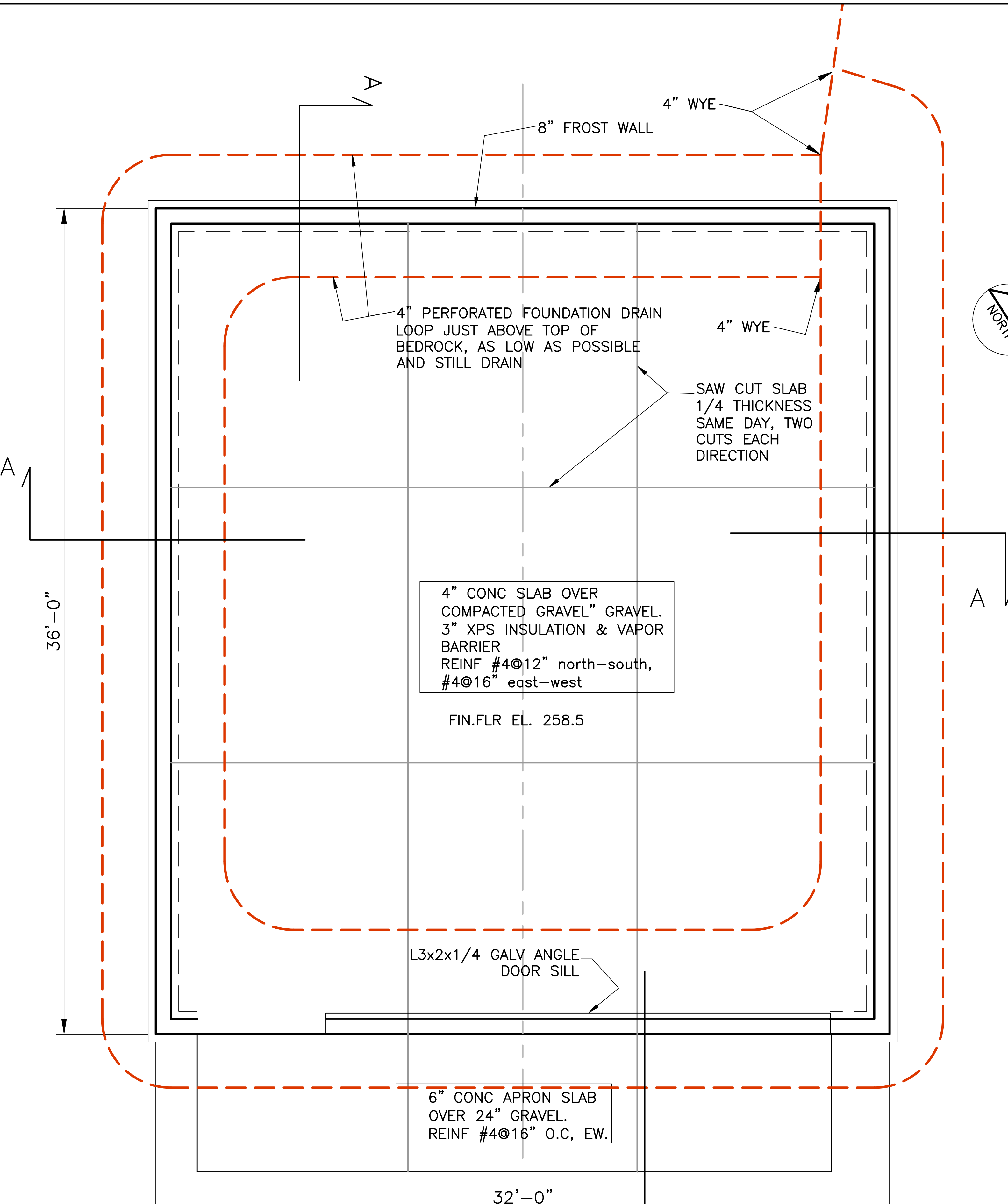
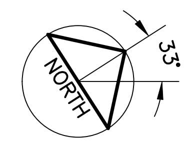
REV. 2

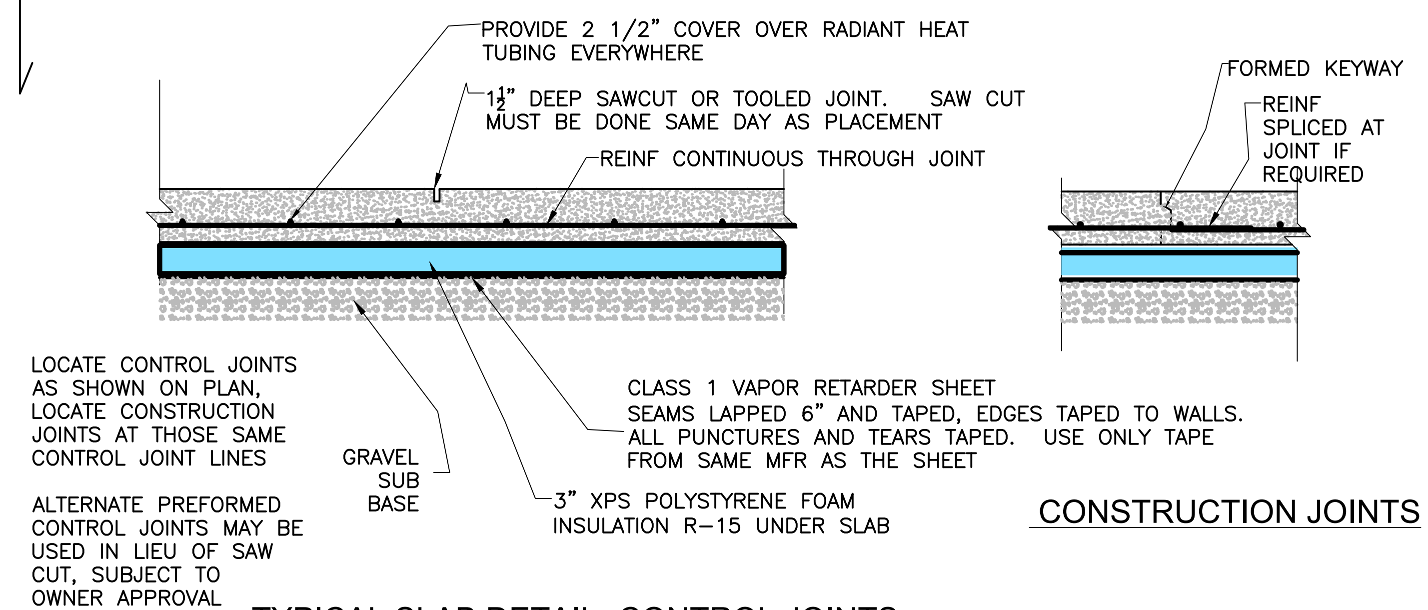


FOUNDATION PLAN

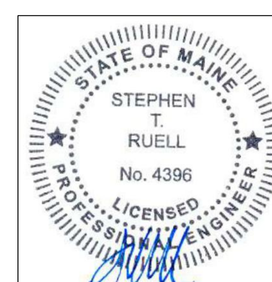


CONCRETE NOTES

1. ALL FOOTING CONCRETE IS PLACED DIRECTLY AGAINST ROCK SURFACES CLEANED TO REMOVE DIRT OR LOOSE ROCK.
2. CONCRETE: 4000 PSI @ 28 DAYS, AIR ENTRAINED 5% TO 7%
3. REINFORCEMENT: 60,000 PSI, ASTM A615
4. HOOKS: ACI STANDARD
5. REBAR COVER: 2" UNLESS NOTED OTHERWISE
6 CONCRETE ANCHORS UNLESS OTHERWISE SPECIFIED: HILTI "HAS" SUPER OR STD ADHESIVE ANCHOR OR APPROVED EQUAL. INSTALL TO MANUFACTURER'S RECOMMENDED DEPTH FOR ANCHOR SIZE.
7. MOIST CURE MINIMUM OF 7 DAYS. CONFORM TO ACI 301 AND ACI 318 FOR CONSTRUCTION METHODS, AND PLACEMENT SPECIFICATIONS. DO NOT USE LIQUID CURING AGENTS WHICH WILL INHIBIT BOND OF FUTURE FLOOR COATINGS AS DESIGNATED BY THE OWNER.
8. UNLESS NOTED OTHERWISE PROVIDE 3/4"" CHAMFER ON ALL EXPOSED EDGES.
9. FIELD BEND REINFORCING BARS TO CLEAR INCIDENTAL BOXOUTS WHERE REQUIRED.
10. VERTICAL CONCRETE SURFACES SHALL HAVE A SMOOTH FORMED FINISH. FILL AIR HOLES AND VOIDS LARGER THAN ¼". REMOVE FINS AND DRESS SURFACE, FILL AIR POCKETS AND RAT HOLES. SNAP TIES SHALL BE REMOVED TO BELOW SURFACE AND HOLES FILLED.
11. HORIZONTAL CONCRETE SURFACES ON INTERIOR SHALL HAVE A SMOOTH STEEL TROWEL FINISH (U.N.O.).
12. HORIZONTAL CONCRETE SURFACES ON EXTERIOR SHALL HAVE A WOOD FLOAT OR BROOM FINISH (U.N.O.)



TYPICAL SLAB DETAIL- CONTROL JOINTS



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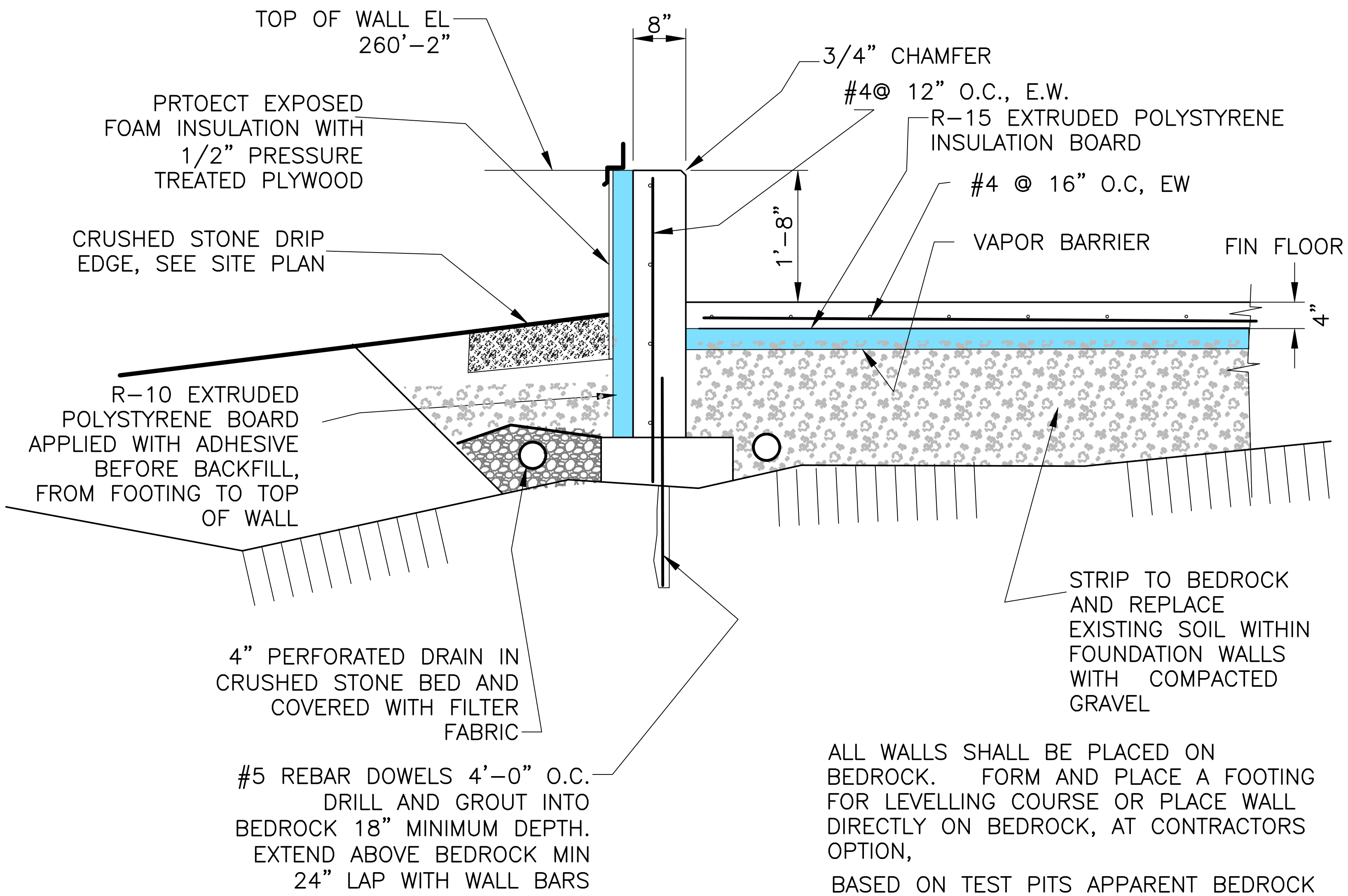
REV. 2

DRAIN SHALL BE DAYLIGHTED OUTSIDE ON NORTHWEST CORNER. SEE SITE PLANS.



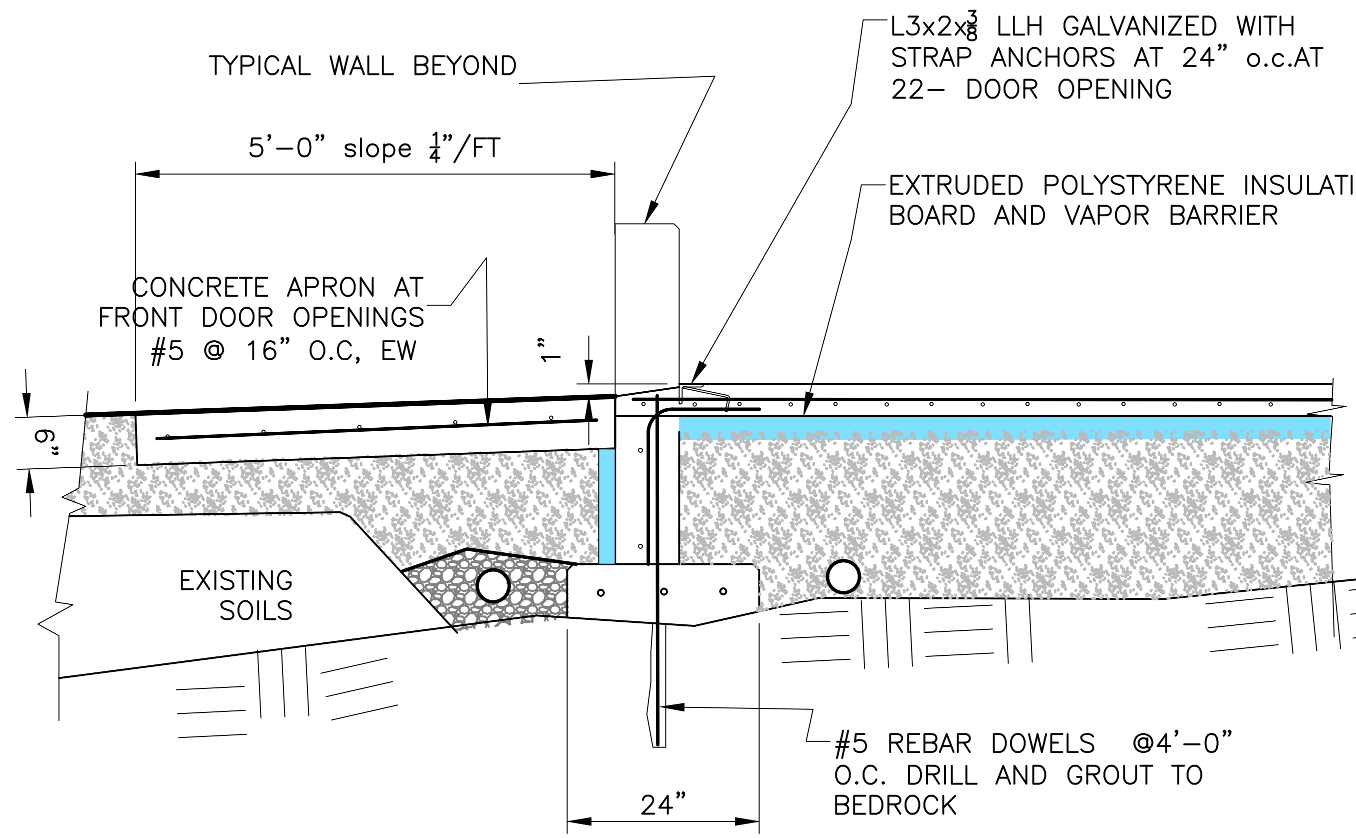
ALL WALLS SHALL BE PLACED ON BEDROCK. FORM AND PLACE A FOOTING FOR LEVELLING COURSE OR PLACE WALL DIRECTLY ON BEDROCK, AT CONTRACTORS OPTION,

BASED ON TEST PITS APPARENT BEDROCK EL VARIES BUT APPEARS TO BE BETWEEN EL. 254' TO 257'± UNDER BUILDING

FOUNDATION SECTION -A

0 4 8

SCALE IN FEET



FOUNDATION SECTION -B

STATE OF MAINE STEPHEN T. RUELL No. 4396 PROFESSIONAL ENGINEER LICENSED

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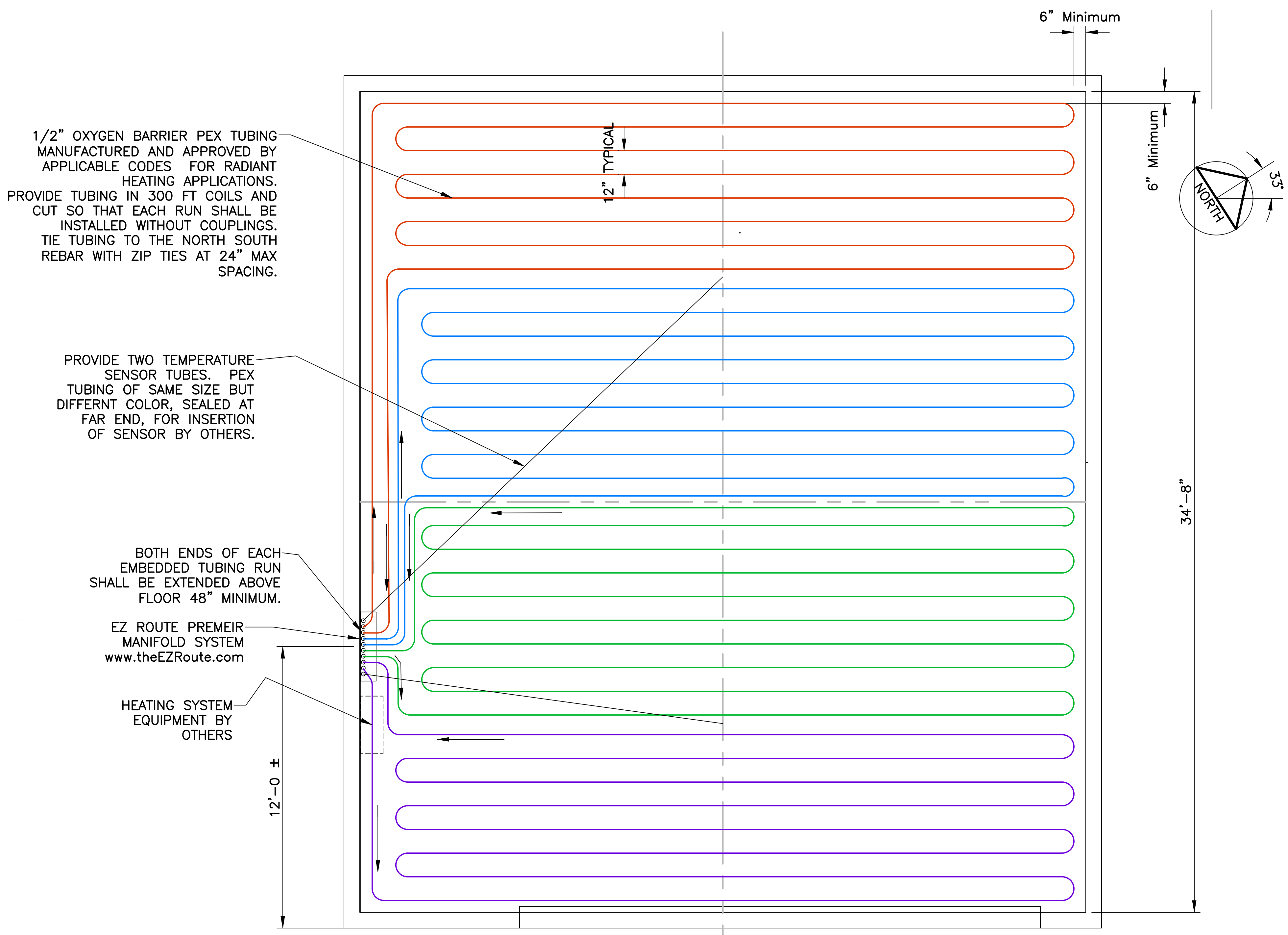
REV. 2



LABEL ALL ENDS OF TUBINGWITH LOOP NUMBER AND FLOW DIRECTION. CONNECT ENDS OF LOOPS INTO ONE CONTINUOUS CIRCUIT. PROVIDE TEST MANIFOLD AND PRESSURE TEST BEFORE CONCRETE PLACEMENT 40–100 PSI FOR 1 HOUR OR AS REQUIRED BY CODE. KEEP UNDER PRESSURE THROUGHOUT PLACEMENT TO PROVIDE FOR LEAK DETECTION AND REPAIR IF DAMAGE OCCURS DURING CONCRETE PLACEMENT

FLOOR SLAB HEATING PLAN

0 4 8

SCALE IN FEET

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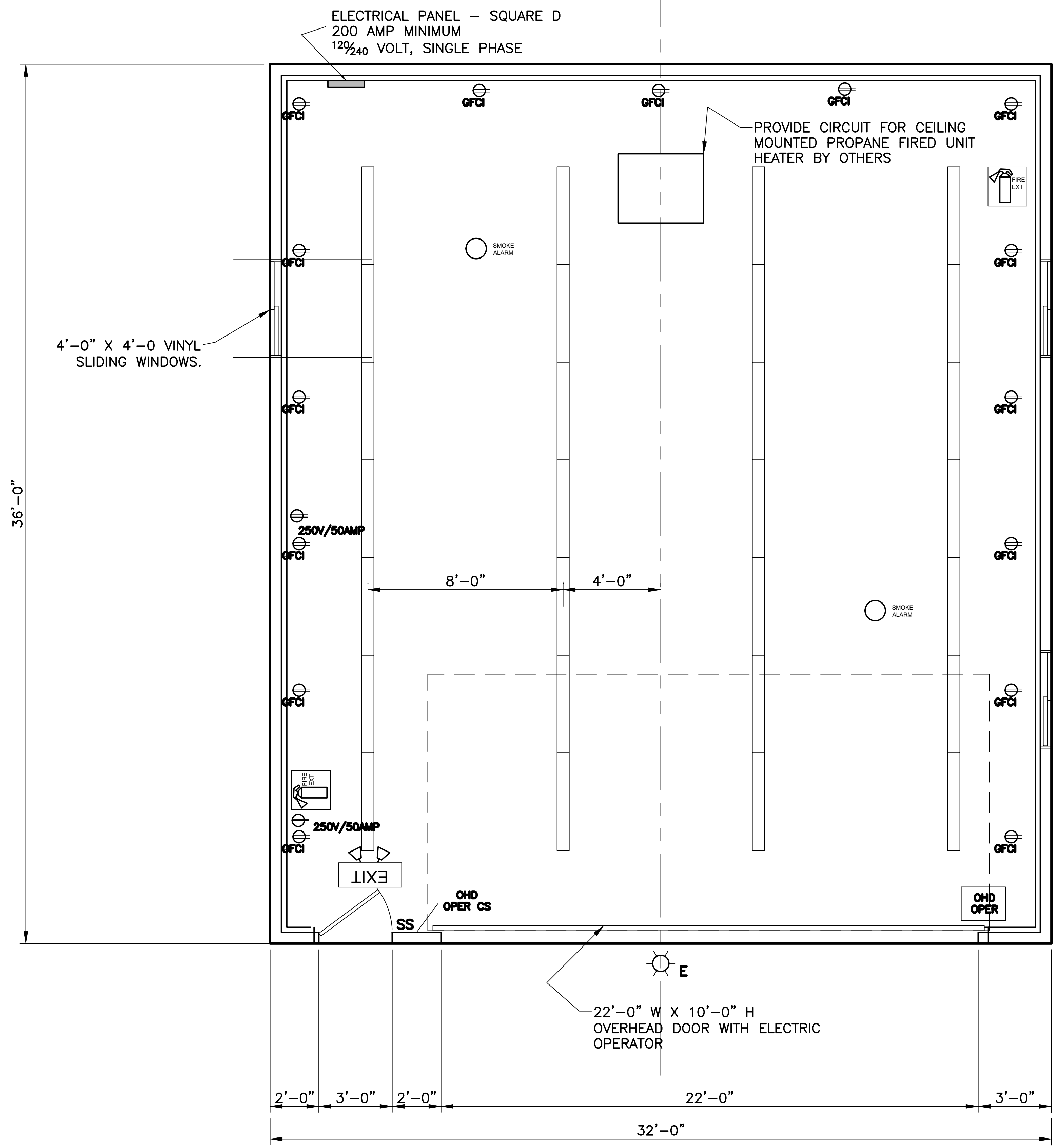
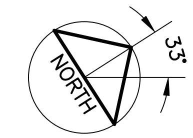
REV. 2



ELECTRICAL PLAN

0 4 8
SCALE IN FEET



PF

- ELECTRICAL PANEL – SQUARE D 200 AMP MINIMUM 120/240 VOLT, SINGLE PHASE
- GENERAL SHOP LIGHTING TO PROVIDE 100 LUMENS/SQ. FT, SURFACE MOUNTED ON CEILING. PROVIDE LITHONIA LIGHTING CSS LED STRIP LIGHTS, 80 CRI, 4000K COOL WHITE, OR EQUAL
- E — EXTERIOR LIGHTING –LED SURFACE MOUNTED EXTERIOR FIXTURE LITHONIA WSR–LED 1 10A700/30K SR2 120 DDBXD DOWNWARD ILLUMINATION ("DARK SKY" TYPE)
- GFCI — GFCI DUPLEX RECEPTACLE OR PROTECTED BY GFCI BREAKER, 20 AMP TAMPER PROOF, MOUNT AT 24" AFF OR HIGHER
- 250V/50AMP — PROVIDE 250 VOLT 50 AMP RECEPTACLE (NEMA 6–50 SOCKET) FOR ELECTRIC VEHICLE CHARGER OR WELDER. INSTALLED ON THE WALL AT FOUR FEET AFF. UNLESS DIRECTED OTHERWISE. SEPARATE BREAKER
- SSS — LIGHT SWITCHES
  3 SEPARATE SWITCHES FOR
  1. 1/2 OF CEILING LIGHT FIXTURES
  2. 1/2 OF CEILING LIGHT FIXTURES
  3. EXTERIOR LIGHTS
- SMOKE ALARM — SMOKE ALARM, 120VAC WITH BATTERY BACKUP, WIRED TO OWNERE SECURITY SYSTEM
- OHD OPER — OVERHEAD DOOR OPERATOR PROVIDED BY DOOR MFR AS PART OF DOOR SUPPLY, WITH PROGRAMMABLE REMOTE CONTROL UNITS
- OHD OPER CS — OVERHEAD DOOR OPERATOR CONTROL STATION
- FIRE EXT — FIRE EXTINGUISHER, ABC, PROVIDED BY OWNER
- EXIT — COMBINATION LED EXIT SIGN WITH EMERGENCY LIGHT

THE CONTRACTOR IS RESPONSIBLE FOR FINAL SELECTION, SIZING AND COMPATIBILITY OF COMPONENTS AND FIXTURES, AND PROVIDNG A COMPLETE INSTALLATION MEETING REQUIRED STATE AND FEDERAL CODES AND STANDARDS.

THE ELECTRICAL PLAN IS PROVIDED TO SHOW THE OWNER'S INTENTION FOR GENERAL LAYOUT AND COMPONENTS TO BE INCLUDED, AND IS SCHEMATIC, NO ELECTRICAL DESIGN HAS BEEN PERFORMED.

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REV. 2