

# brockport fire station #5

SWEDEN, NEW YORK

## INDEX

01	COVER/CODE COMPLIANCE
02	SITE PLAN
03	FOUNDATION PLAN
04	STRUCTURAL DETAILS
05	FLOOR PLAN
06	CEILING PLAN
07	SECTION A & B
08	SECTION C & D
09	SOUTH & WEST ELEVATIONS
10	NORTH & EAST ELEVATIONS
11	INTERIORS & MECH DETAILS
12	MECHANICAL PLAN
13	ELECTRICAL PLAN
14	SPECIFICATIONS
15	SPECIFICATIONS
16	SPECIFICATIONS
17	SPECIFICATIONS
18	SPECIFICATIONS
19	SPEC & ELECT DETAILS

## CODE COMPLIANCE

1. Occupancy:	Mixed Use B (Personnel)/S2 (Apparatus) NYSBC 304.1 & 311.3
2. Construction Type:	Type IIB Non-Combustible NYSBC 602.2 & Tbl 601
3. Separation:	Non-Separated Mixed Use NYSBC 508.3.2
4. Allowed Area:	23,000 SF <sub>(tabular)</sub> NYSBC table 503 (2,467 SF Proposed)
5. Occupant Load:	Log 123 SF /100 SF Per Person = 2 People NYSBC tbl 1004.1.1 Heat 112 SF /300 SF Per Person = 1 People NYSBC tbl 1004.1.1 Meet 338 Net SF /15 SF Per Person = 23 People NYSBC tbl 1004.1.1 <u>Park 1,233 SF /200 SF Per Person = 7 People NYSBC tbl 1004.1.1</u> Total 33 People Total Occupant Load
6. Fire Sprinkler:	Not Required S2 < 5,000 SF NYSBC 903.2.9.1 & < 100 People NYSBC 903.2.1.3
7. Fire Alarm:	Not Required B < 100 People NYSBC 907.2.2.1 (Point Addressable Proposed)
8. Corridor Rating:	Non-rated when occupant load <30 people NYSBC tbl 1017.1
9. Dead End Corridor:	Not >20' NYSBC 1017.3
10. Wind Exposure:	90 MPH Exposure B NYSBC 1609
11. Design Loads:	Snow=40 PSF/Floor=100 PSF/Apparatus=650 PLF NYSBC 1608.2 & tbl 1607.1
12. Occupancy Category:	IV - Essential NYSBC tbl 1604.5
13. Importance Factors:	Ie=1.50/Is=1.20/Iw=1.15
14. Spectral Response:	S <sub>s</sub> =26% NYSBC 1613.5(1)/S <sub>i</sub> =7% NYSBC 1613.5(2)
15. Soil Type:	D - Stiff Soil NYSBC tbl 1613.5.2
16. Seismic Category:	C NYSBC tbl 1613.5.2, 1613.5.3(1)&(2), and NYSBC 1613.5.6(1)&(2)
17. Plumbing Fixtures:	Occupants of each sex = Occupant Load X 50% of each sex NYSPC 403.3 WC/Urinal 1 Per 25 Male & 1 Per 25 Female = 2 WCs NYSPC tbl 403 Lavatories 1 Per 40 Male & 1 Per 40 Female = 2 Lavs NYSPC tbl 403 Drinking Fnt 1 Per 100 People = 2 DFs NYSPC tbl 403 Service Sink 1 minimum (2 proposed) = 2 Sinks NYSPC tbl 403
18. Oil/Grit Separator:	Minimum Static Water Capacity of 96 gallon or 12 CF NYSPC 1003.4.2.2
19. Fume Control System:	1.5 CFM/SF Parking Bay Activated by Fume Sensor NYSMC 404.1
20. Gas Appliances:	Ignition to be 18" above floor when in garage NYSMC 304.3

## ABBREVIATIONS

AL	ALUMINUM (STOREFRONT) DOOR
ATS	AUTOMATIC TRANSFER SWITCH
AWN	AWNING WINDOW
BCT	BASE CABINET
CF	CEILING FAN
CFM	CUBIC FEET/MINUTE
CJ	CONTROL JOINT
CLG	CEILING
CO	CLEAN OUT
CR	CLOTHES ROD/SHELF
CS	CORPORATION STOP
CST	CASEMENT WINDOW
DCO	DECK-PLATE CLEAN OUT
DF	DRINKING FOUNTAIN
DS	DOWN SPOUT
EF	EXHAUST FAN
EW	EACH WAY
FAP	FIRE ALARM PANEL
FD	FLOOR DRAIN
FHB	FROST-PROOF HOSE BIB
GAP	GENERTOR ANNUNCIATOR PANEL
G	GAS (NATURAL GAS)
GB	GRAB BAR
GF	GAS FURNACE
GFI	GROUND FAULT INTERRUPTER
HB	HOSE BIB
HD	HAND DRYER
HM	HOLLOW METAL DOOR
KS	KITCHEN SINK
LAV	LAVATORY (WALL HUNG)
NL	NIGHT LIGHT
MH	MANHOLE
MR	MIRROR
MS	MOP SINK
MV	MIXING VALVE (SHOWER)
OHE	OVERHEAD ELECTRIC
OS	OIL SEPARATOR
PT	PRESSURE TREATED
RA	RETURN AIR
SA	SUPPLY AIR
SBC	SINK BASE CABINET
SD	SHOWER DRAIN
SDR	SOAP DISPENCER
SAN	SANITARY SEWER
SG	SPANDREL GLASS
SHR	SHOWER
SR	SHOWER ROD
STM	STORM SEWER
TP	TOILET PARTITION
TPH	TOILET PAPER HOLDER
UH	UNIT HEATER
UGE	UNDERGROUND ELECTRIC
UP	UTILITY POLE
US	UTILITY SINK
UR	URINAL
V	VENT
VCT	VINYL COMPOSITE TILE FLOOR
VTR	VENT THRU ROOF
WC	WATER CLOSET
WCT	WALL CABINET
WD	WOOD DOOR
WH	WATER HEATER
WP	WEATHER PROOF
WCO	WALL-PLATE CLEAN OUT

DATE: 3/2013 SHEET: 1 of 19

## BROCKPORT FIRE STATION #5

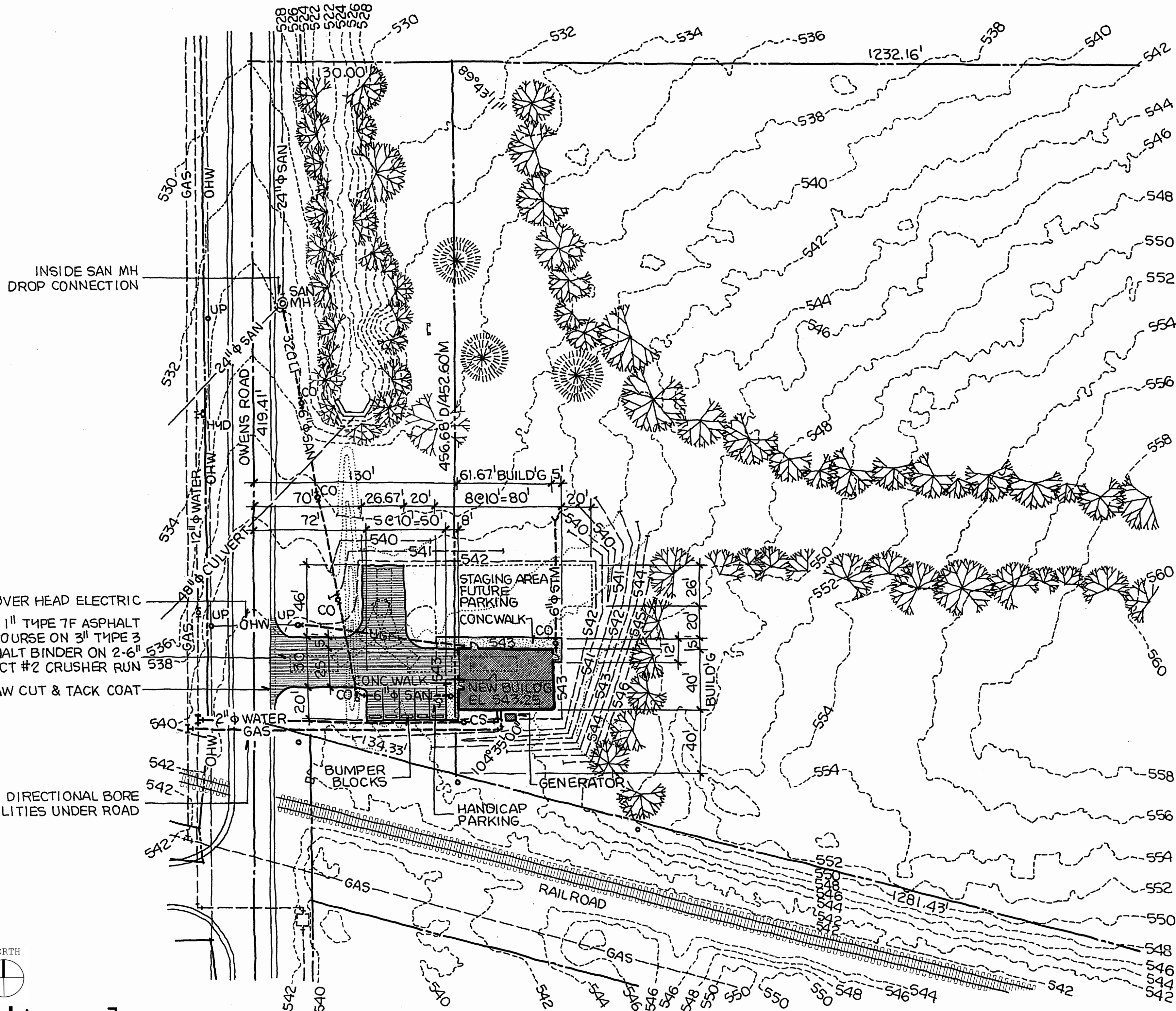
80 Owens Road  
Sweden, New York

project

## DAVID STRABEL R.A.

24 Tudor Road  
Brockport, New York 14420  
585-637-5346

architect



DATE: 3/2013 SHEET: 2 of 19

**BROCKPORT  
FIRE STATION #5**

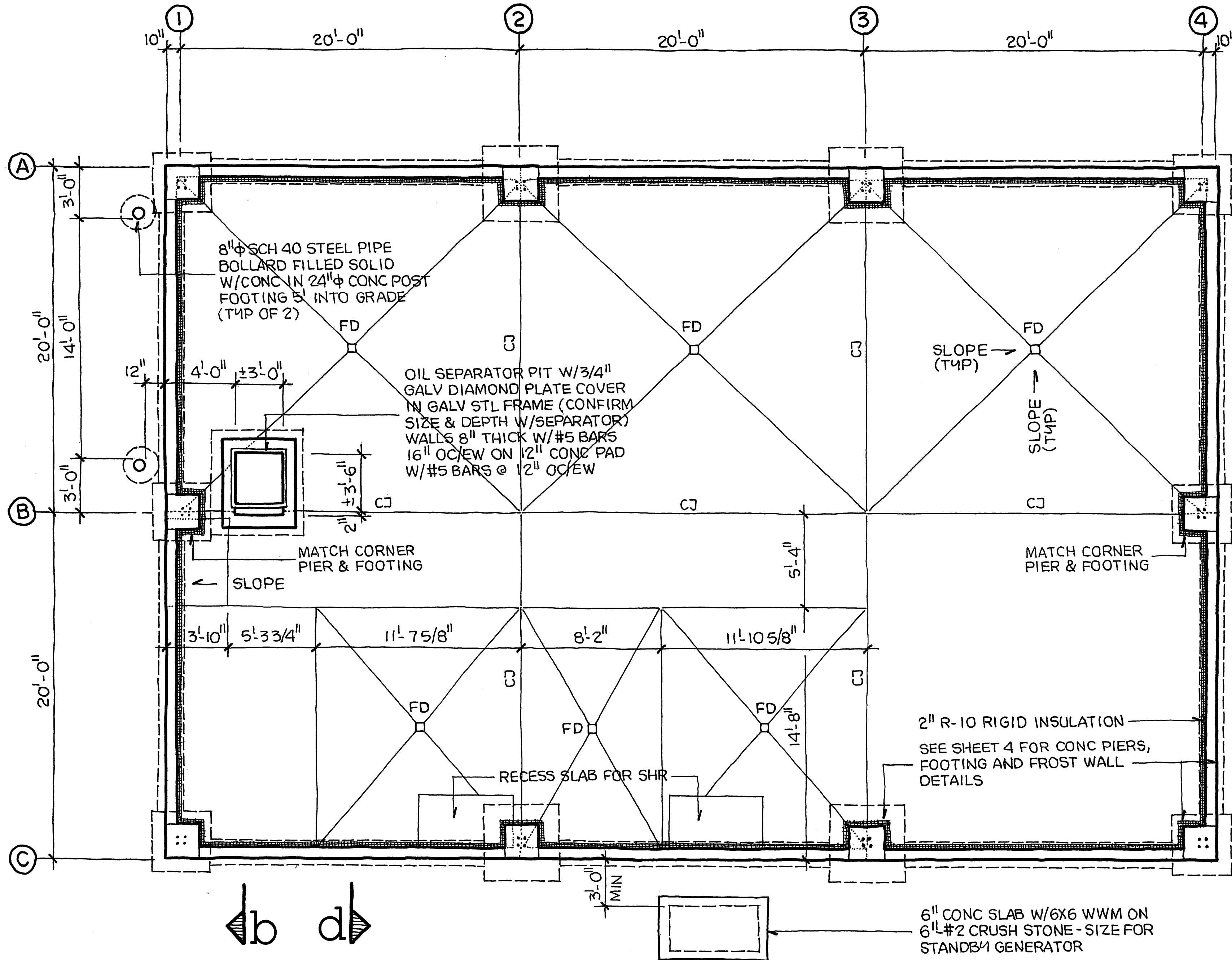
80 Owens Road  
Sweden, New York

project

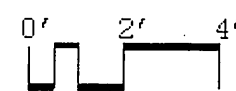
DAVID STRABEL R.A.

24 Tudor Road  
Brockport, New York 14420  
585-637-5346

architect



foundation plan



DATE: 3/2013 SHEET: 3 of 19

**BROCKPORT  
FIRE STATION #5**

80 Owens Road  
Sweden, New York

project

**DAVID STRABEL R.A.**

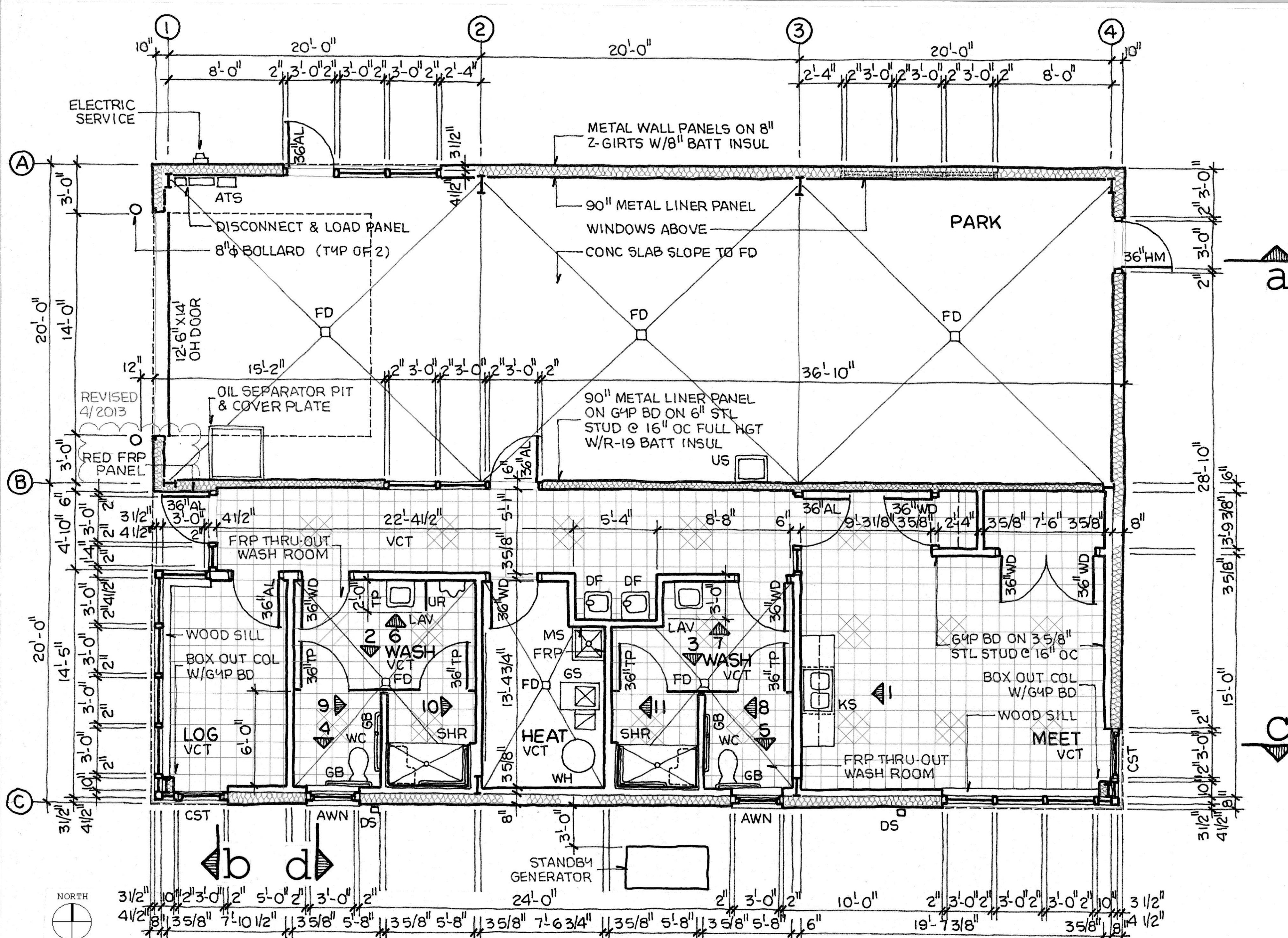
24 Tudor Road  
Brockport, New York 14420  
585-637-5346

architect









**FLOOR PATTERN**  
 A. FLOOR TILE GRID TO ALIGN W/CEILING TILE GRID.  
 B. ACCENT SQUARES TO ALIGN W/LIGHT FIXTURES.

**LEGEND**

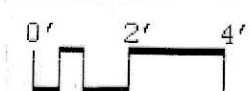
- 12"X12" FLOOR TILE BEIGE
- 12"X12" ACCENT TILE RED

DATE: 3/2013 SHEET: 5 of 19

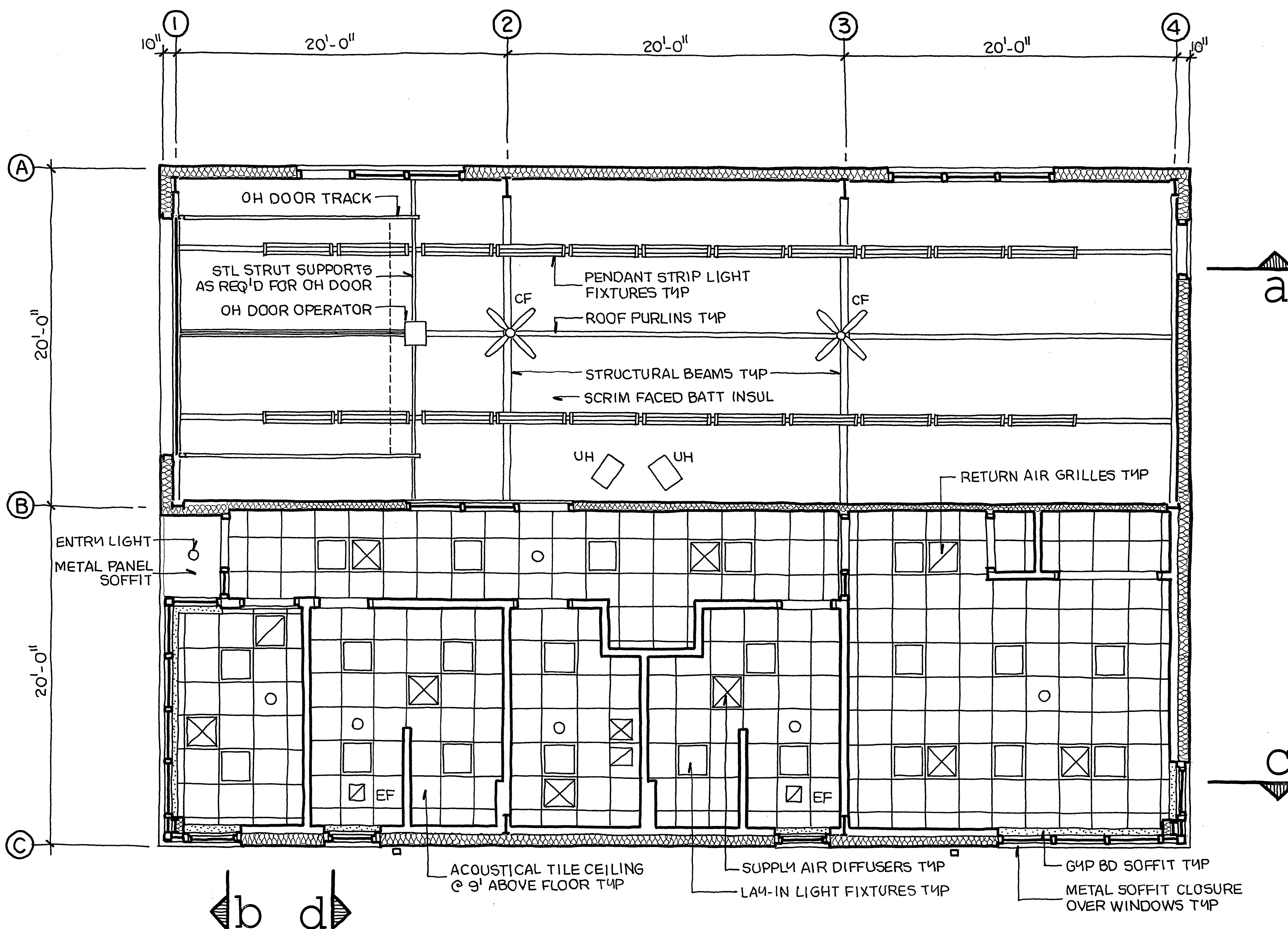
**BROCKPORT  
 FIRE STATION #5**  
 80 Owens Road  
 Sweden, New York

**project**  
 DAVID STRABEL R.A.  
 24 Tudor Road  
 Brockport, New York 14420  
 585-637-5346  
**architect**

floor plan

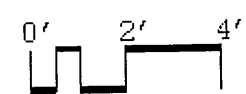






NORTH

ceiling plan



DATE: 3/2013 SHEET: 6 of 19

**BROCKPORT  
FIRE STATION #5**

80 Owens Road  
Sweden, New York

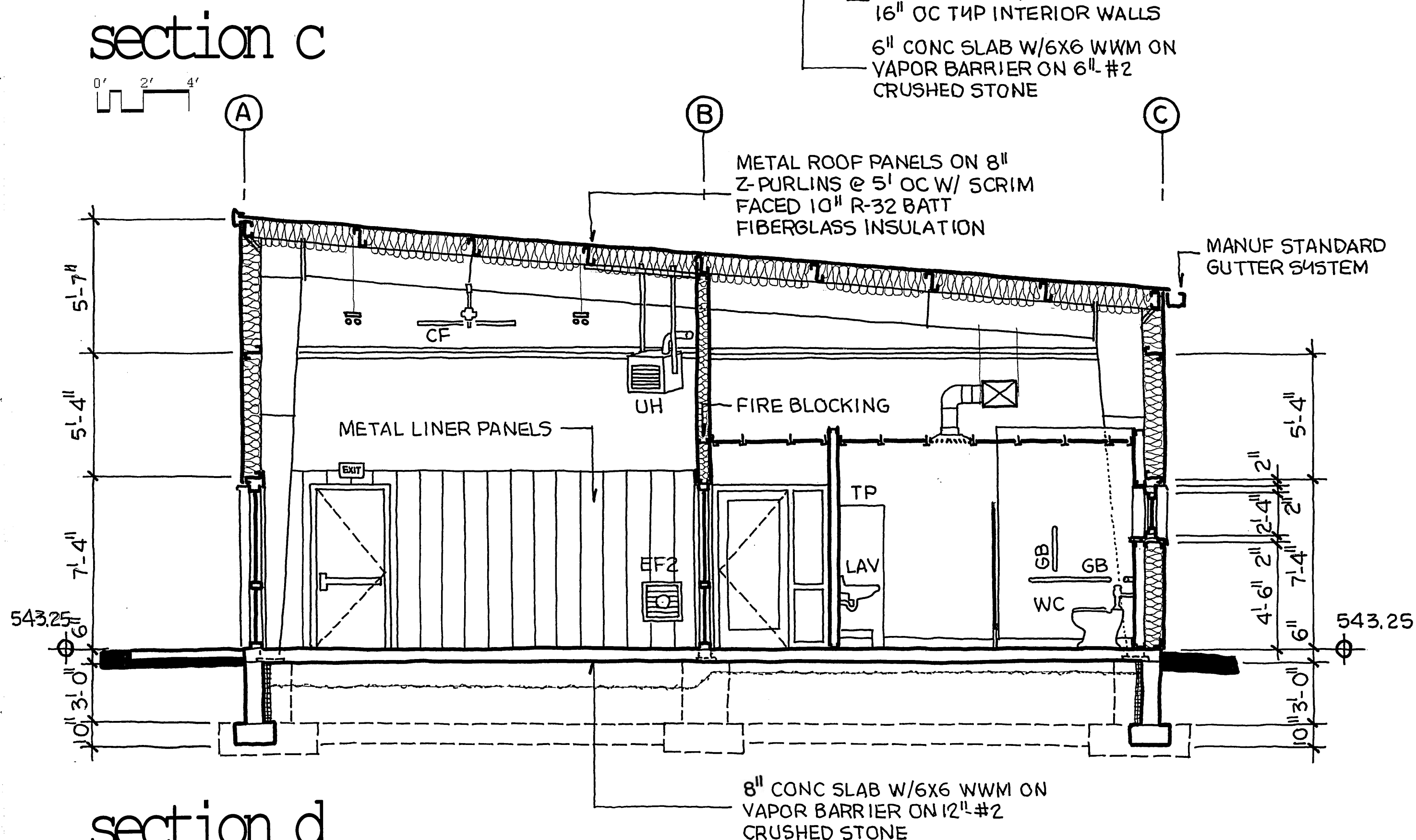
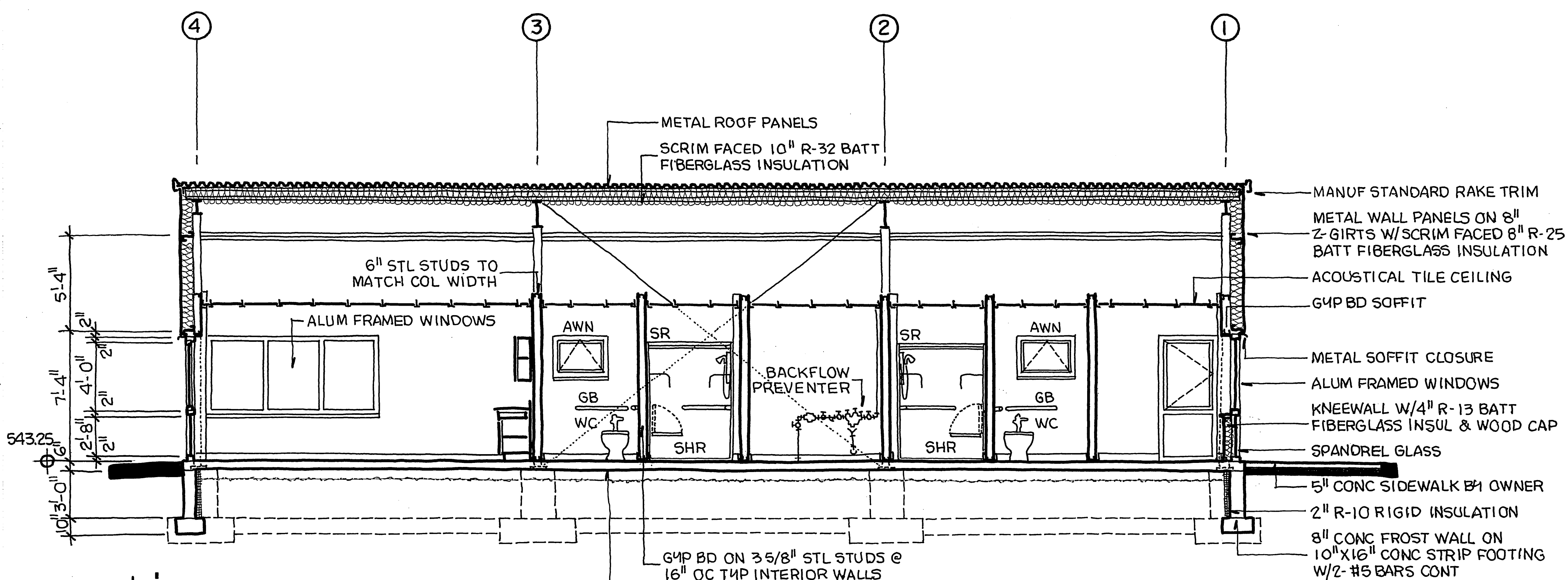
project

**DAVID STRABEL R.A.**

24 Tudor Road  
Brockport, New York 14420  
585-637-5346

architect





DATE: 3/2013 SHEET: 8 of 19

**BROCKPORT  
FIRE STATION #5**

80 Owens Road  
Sweden, New York

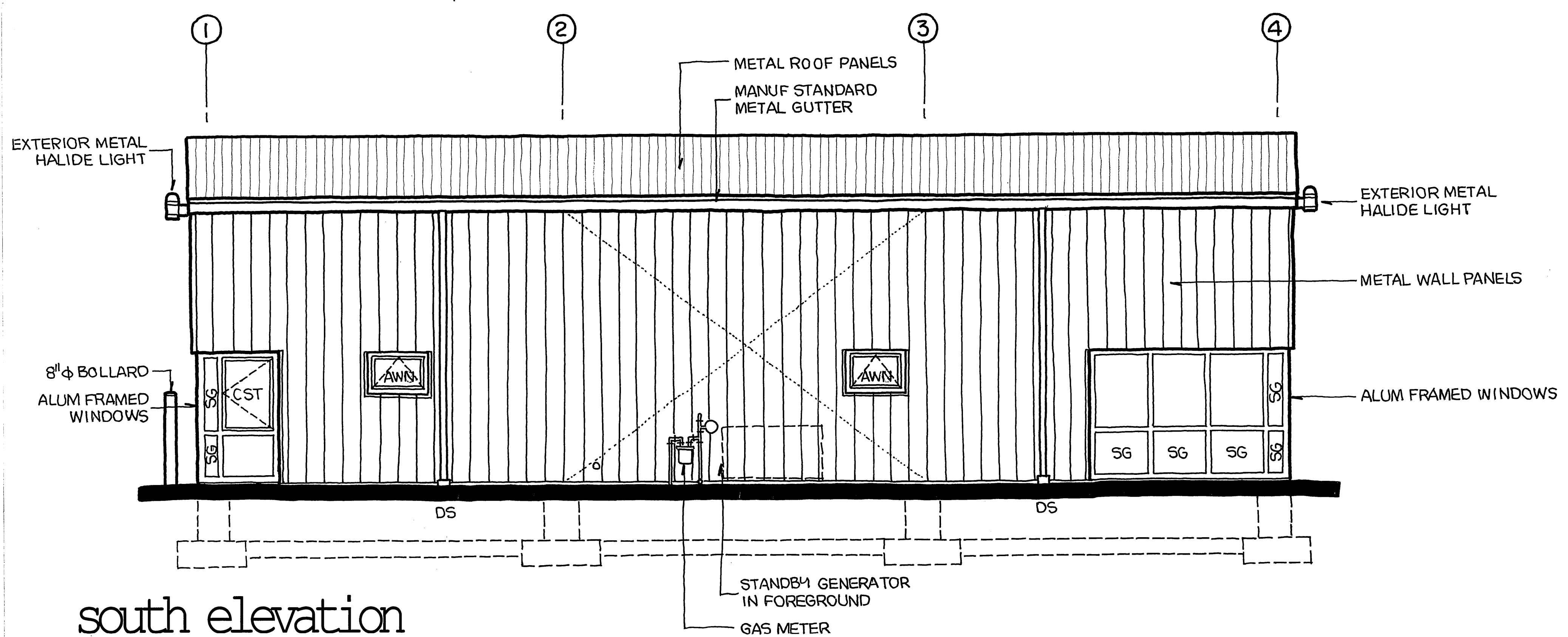
project

DAVID STRABEL R.A.

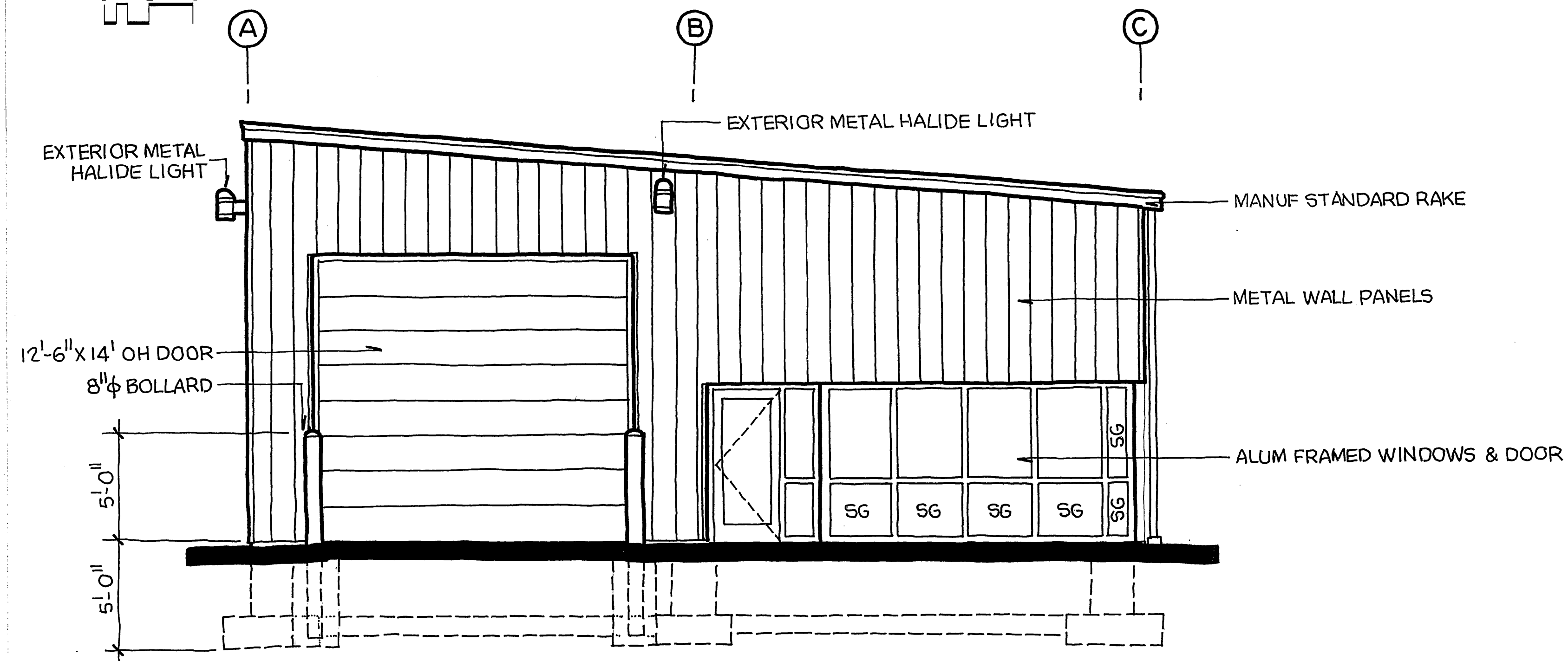
24 Tudor Road  
Brockport, New York 14420  
585-637-5346

architect





south elevation



west elevation

DATE: 3/2013 SHEET: 9 of 19

**BROCKPORT  
FIRE STATION #5**

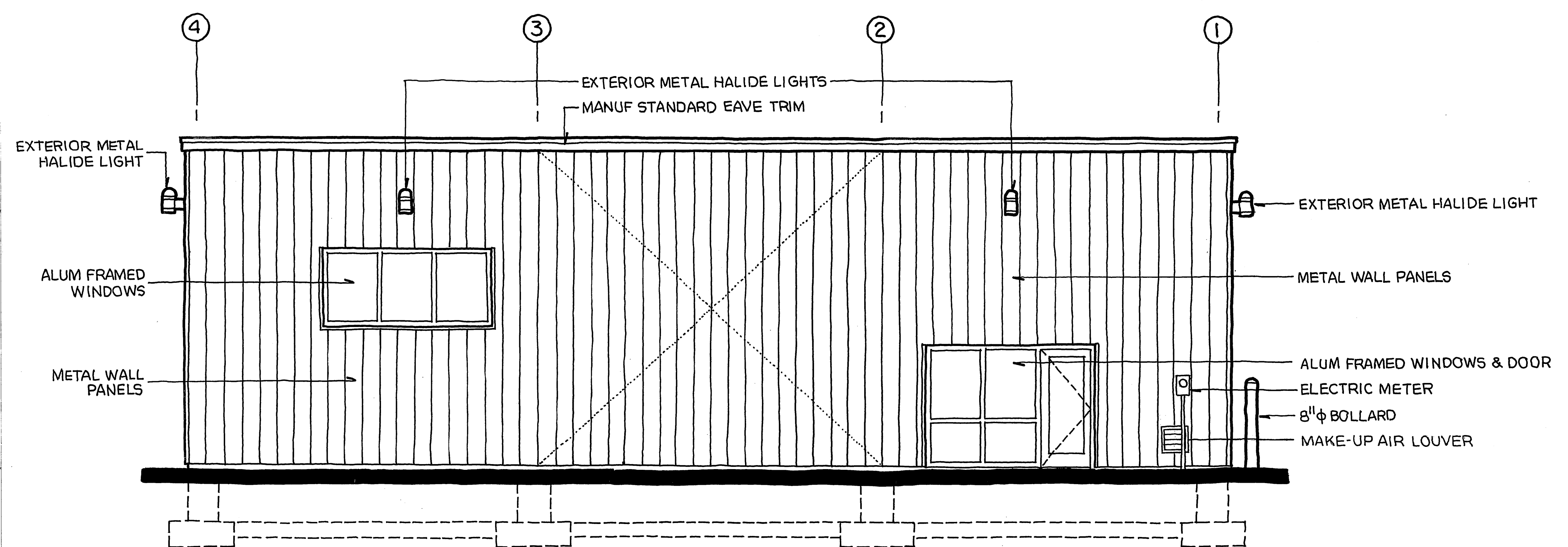
80 Owens Road  
Sweden, New York

project

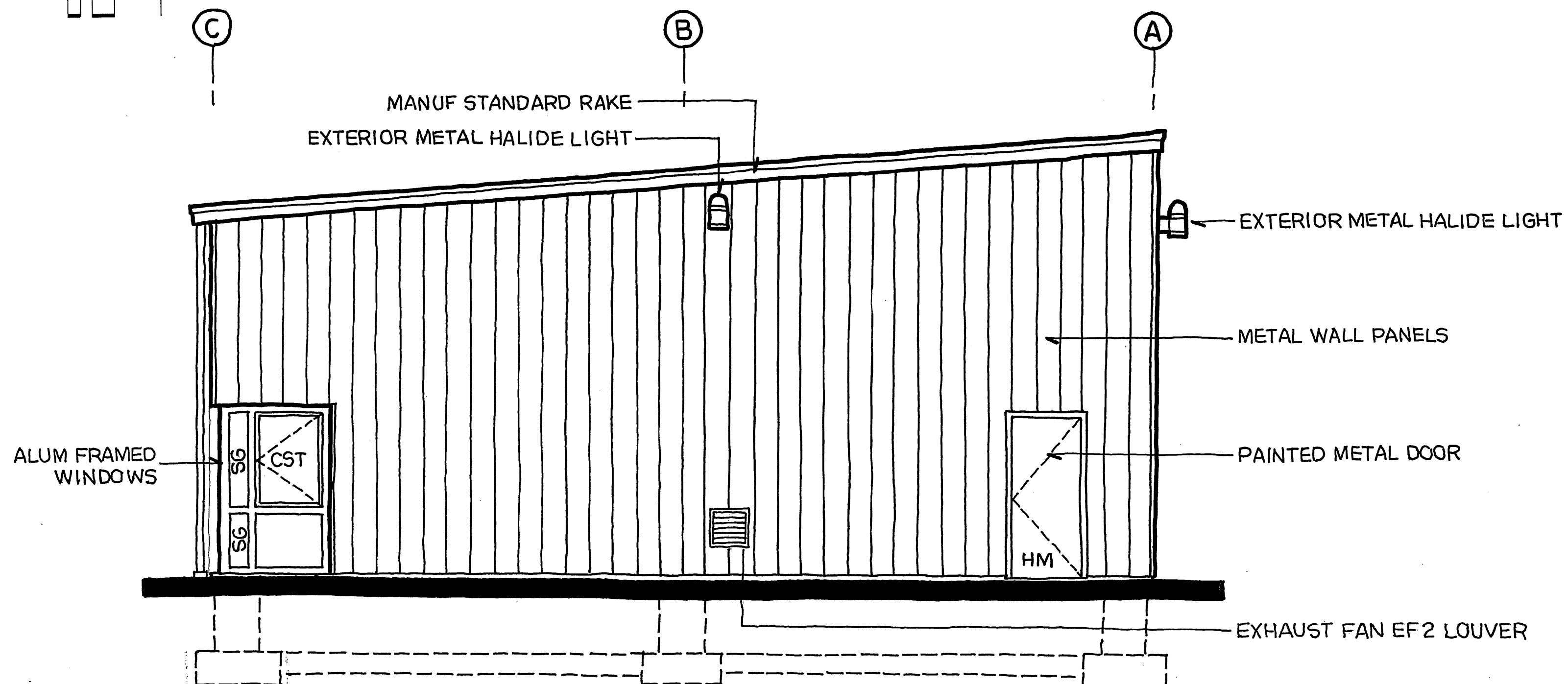
DAVID STRABEL R.A.

24 Tudor Road  
Brockport, New York 14420  
585-637-5346

architect



north elevation



east elevation

DATE: 3/2013 SHEET: 10 of 19

**BROCKPORT  
FIRE STATION #5**

80 Owens Road  
Sweden, New York

project

DAVID STRABEL R.A.

24 Tudor Road  
Brockport, New York 14420  
585-637-5346

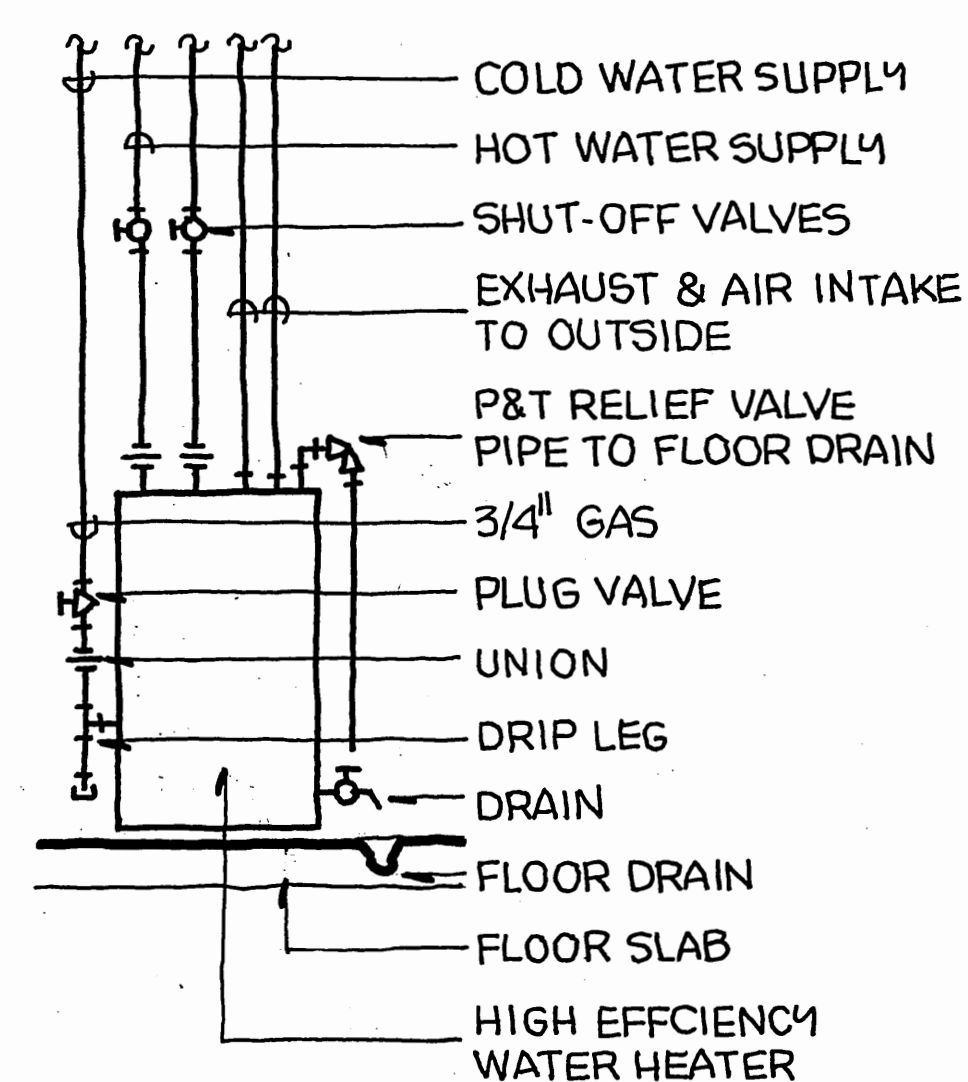
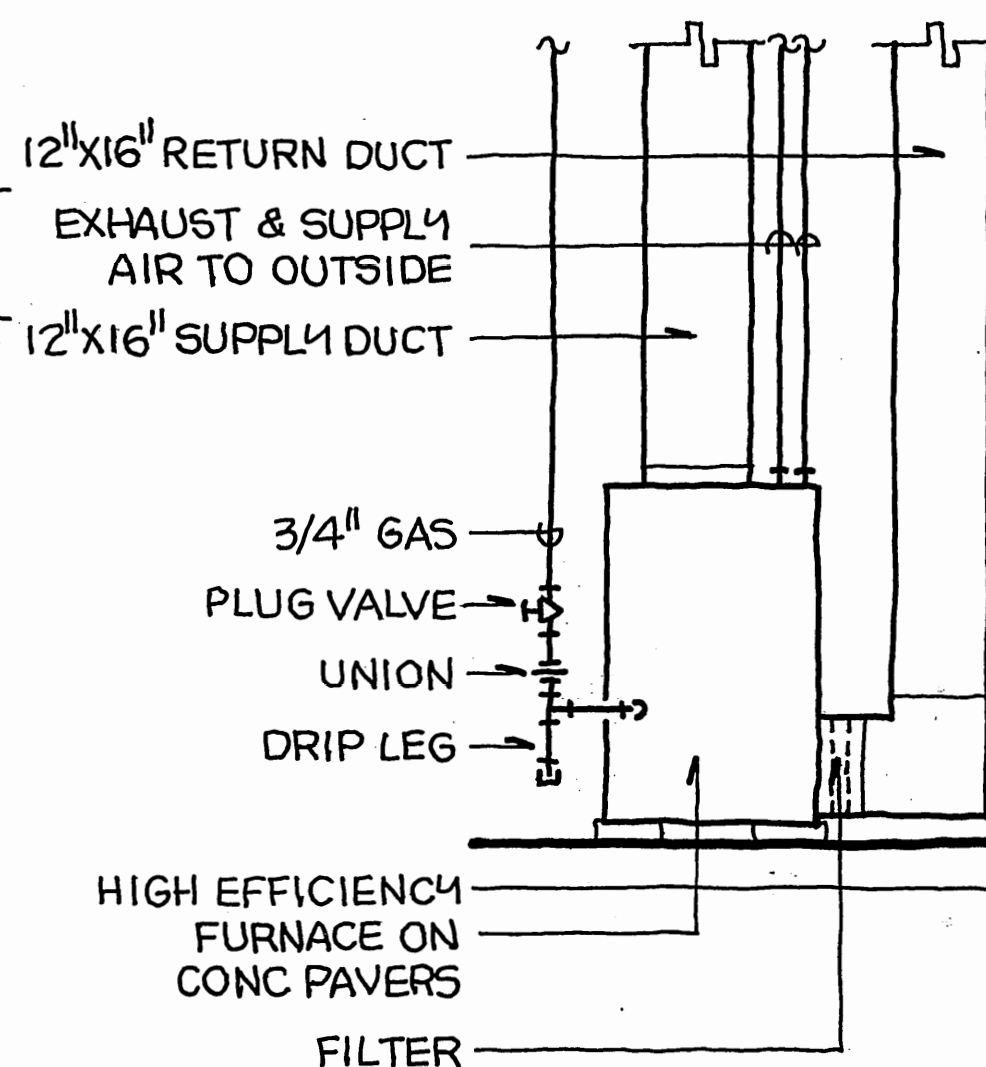
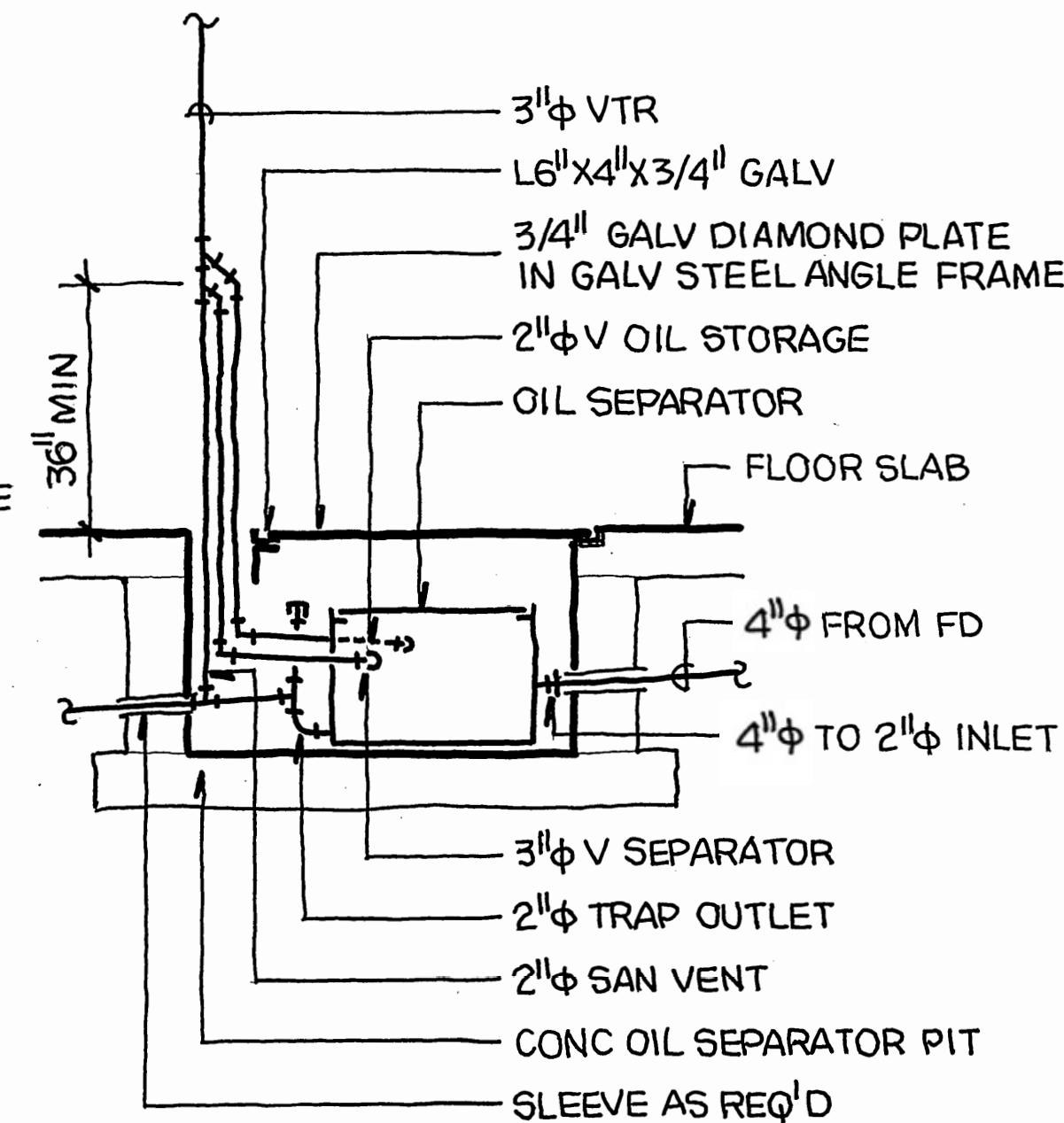
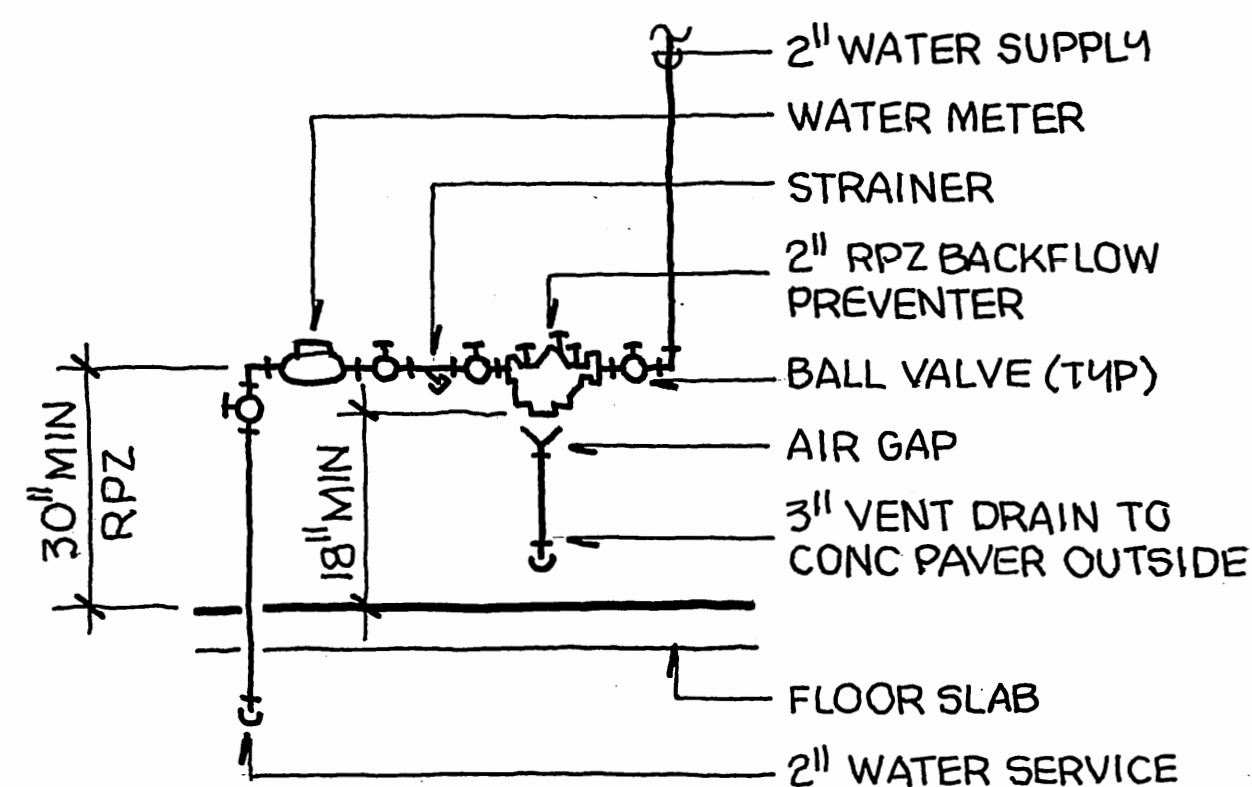
architect

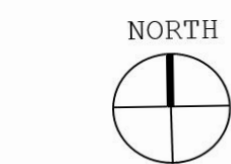
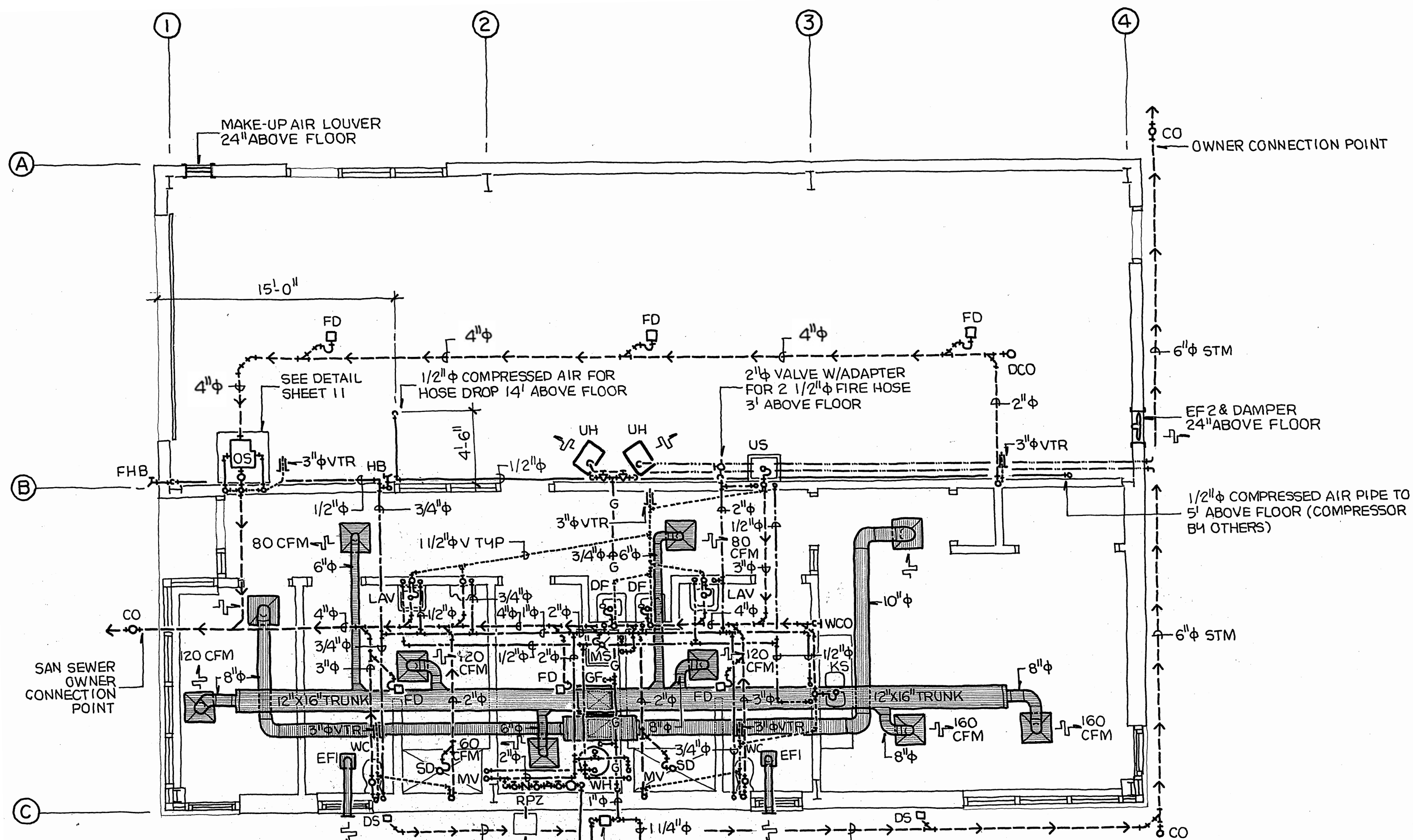


4 5 REVERSE IMAGE

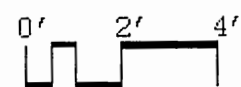
6

10 11 REVERSE IMAGE





# mechanical plan



STANDBY GENERATOR  
NEW GAS SERVICE & METER  
BY CONTRACTOR

GENERATOR	320 CFH
FURNACE	60 CFH
WATER HEATER	50 CFH
UNIT HEATER	40 CFH
UNIT HEATER	40 CFH
TOTAL	510 CFH

## legend

- SAN SEWER (BELOW SLAB) UNO
- SAN VENT (ABOVE CEILING)
- COLD WATER (ABOVE CEILING)
- HOT WATER (ABOVE CEILING)
- G — GAS PIPE (ABOVE CEILING)
- ⊠ SUPPLY AIR DIFFUSER
- ⊡ RETURN AIR GRILLE
- ▨ SHEET METAL DUCTWORK

DATE: 3/2013 SHEET: 12 of 19

### BROCKPORT FIRE STATION #5

80 Owens Road  
Sweden, New York

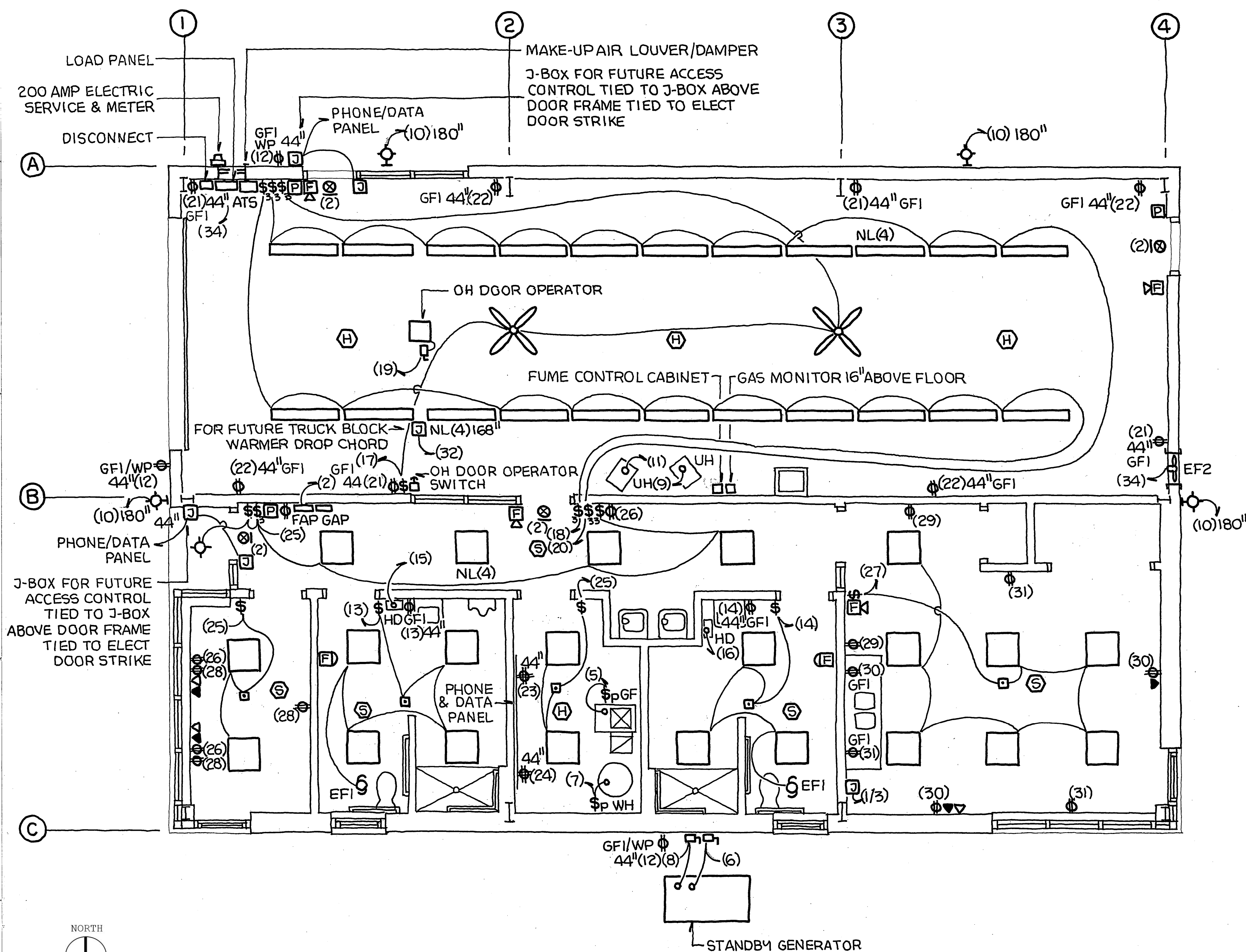
## project

DAVID STRABEL R.A.

24 Tudor Road  
Brockport, New York 14420  
585-637-5346

## architect



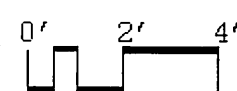


## Legend

- (#) CIRCUIT NUMBER
- \$ SWITCH
- \$3 3-WAY SWITCH
- \$p SWITCH W/PILOT LIGHT
- OCCUPANCY SENSOR
- DISCONNECT
- ⊕ DUPLEX RECEPTACLE
- ⊕ QUAD RECEPTACLE
- JUNCTION BOX
- ⊙ EXTERIOR LIGHT
- ⊙ ENTRY LIGHT
- ▭ PENDANT LIGHT
- LAY-IN LIGHT
- ⊖ EXHAUST FAN
- ⊗ EXIT/EM LIGHT
- ⊖ SMOKE DETECTOR
- ⊖ HEAT DETECTOR
- ⊖ FIRE ALARM PULL STATION
- ⊖ FIRE ALARM STROBE
- ⊖ FIRE ALARM HORN/STROBE
- ▽ PHONE JACK
- ▼ DATA JACK



## electrical plan



SEE SHEET 19 FOR ELECTRICAL DIAGRAM & LOAD PANEL

DATE: 3/2013 SHEET: 13 of 19

### BROCKPORT FIRE STATION #5

80 Owens Road  
Sweden, New York

## project

DAVID STRABEL R.A.

24 Tudor Road  
Brockport, New York 14420  
585-637-5346

## architect

SCOPE OF WORK

1. WORK BY CONTRACTOR: The work to be performed consists principally of furnishing all labor and equipment for the construction of the Sweden Public Safety Building complete including foundation excavation, RPZ, gas and electric services; less the site work, storm sewer, sanitary sewer and water service to the building shell as described in the plans, specifications and other Contract Documents.
2. WORK BY OWNER: Work to be Performed by Owner through the Town of Sweden Highway Department includes;

A. Clearing and grubbing site, and removing and stock-piling topsoil.

B. Installation of curb cut and parking base.

C. Installation of sanitary and storm sewer and water to within 5’ of the proposed building with associated trenching, piping, bedding and backfill.

D. Installation of concrete walkways and base.

E. Installation of asphalt pavement.

F. Provide pavement stripping and bumper blocks.

G. Rough and fine grading and seeding.

BUILDING CODE CONFORMANCE

1. COMPLIANCE: These drawings have been prepared in accordance with the latest edition of the BCNYS and ECCCNY. To the best of the Architect’s knowledge, belief and professional judgment these plans and construction requirements are in compliance with these codes.
2. INTERPRETATION: The Contractor shall comply with all applicable state and local building, electrical, mechanical, sanitary, and energy conservation codes and be responsible to the local building department and that departments interpretation of the code should it differ from these drawings.

WORKMANSHIP & MATERIALS

1. RESPONSIBILITY: These drawings indicate finished structure. The Contractor shall be responsible for construction means, methods, techniques, sequences, and procedures.
2. INSTALLATION: The Contractor shall supply materials and equipment of good quality and new, free of defects and properly applied, installed, erected, connected, used, cleaned and conditioned in accordance with manufacturer’s specification, industry/trade standards and regulatory agency approvals in a good workmanship manner. Where reference is made to various test standards for materials, such standards shall be the latest edition or addendum.
3. PRODUCTS: To the fullest extent possible, the Contractor shall provide products of the same generic kind, from a single source, for each unit of work. In accordance with Section 103 of General Municipal Law, these drawings and specifications are non-proprietary and all requirements are the minimum standard of quality allowed. It is the Contractor’s responsibility to select proprietary products which comply with the drawings and specifications and which are compatible with one another. All material kinds, types, brands and manufacturers are to be approved by the Architect prior to installation (see Submittals).
4. MINIMUM REQUIREMENT: The Contractor shall provide each item mentioned, indicated or implied to achieve the intended Work according to the methods of best construction practice.
5. ARCHITECT’S AUTHORITY: The Contractor shall abide by all orders, directions and requirements of the Architect, and shall perform all work to the satisfaction of the Architect. The Architect shall determine the amount, quality, acceptability and fitness of all parts of the Work, shall interpret the Plans, Specifications, Contract Documents and any Change Orders, and shall decide all other questions in connection with the Work. Upon request the Architect shall confirm in writing an oral order, direction, requirement or determination.

6. CORRECTION OF WORK: All Work, all materials incorporated in the Work or not, all processes of manufacture, and all methods of construction shall be at all times and places subject to the inspection by the Architect who shall be the final judge of the quality and suitability of the Work. Should they fail to meet his approval, they shall be forthwith reconstructed, made good, replaced and/or corrected, as the case may be, by the Contractor at his/her own expense.
7. GUARANTEE: The Contractor shall guarantee that the Work is in accordance with the Contract Documents, that materials and equipment furnished will be new and of good quality unless permitted otherwise and that the Work will be free of defects for a period of one year from the date of substantial completion. During the guarantee period, the Contractor shall within three days’ notice of defect, take necessary action to correct such defect at the Contractor’s expense. The Contractor will be bound to this guarantee by a signed Guarantee Certificate.

PROJECT CONDITIONS

1. JOB SITE: The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish, and disposed of in accordance with local law. At completion of project each Contractor shall remove all waste and surplus materials, non-permanent protection and labels, tools, construction equipment and clean all work including glass, exposed finishes and fixtures.
2. TEMPORARY FACILITIES: The Contractor shall provide all temporary facilities, including equipment, utilities, construction and support structures, security and protection necessary to complete his/her work. Provide all bracing, shoring, guying, or other means to avoid excessive stress and to hold structural elements in place during construction. Maintain, expand and modify as required. Comply with applicable laws and regulations.
3. CUTTING AND PATCHING: The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly. Do not cut structural members.
4. TEMPORARY UTILITIES: The Contractor shall provide temporary power and lighting, temporary heat (if required), temporary water, trash dumpster and toilet facilities. The Contractor shall provide his/her own telephone.
5. PRECAUTIONS: The Contractor shall comply with OSHA Section 107 Safety Standards, and take reasonable precautions for safety and protection to prevent damage, injury or loss to employees on the work and other persons who may be affected thereby, the work and materials to be incorporated therein, other property at the site or adjacent thereto.
6. REMEDY: The Contractor, at his/her own expense, shall promptly remedy damage and loss to property at the site, caused in whole or in part by the Contractor or anyone directly or indirectly employed by the Contractor.

DOCUMENTS

1. COPYRIGHT: These drawings are an instrument of service and may not be altered, reproduced, copied, or used for construction without the written permission of the Architect. Unauthorized alterations or additions to these drawings are a violation of New York State education law article 145, section 7209.
2. DIMENSIONS: These drawings are not to be scaled for dimensions, The Builder is to use dimensions given. Dimensions shown are actual, to face of stud or concrete, unless noted otherwise.
3. DISCREPANCIES: In the event of discrepancies between these drawings and specifications, and pertinent codes, regulations, and reference standard, the more stringent provision shall govern. Notify the Architect immediately of any discrepancies.
4. VERIFICATION: The Contractor shall verify all notes and dimensions and existing field conditions before starting work and shall be responsible for errors and or omissions thereafter.

5. INTENT: These drawings and specifications are cooperative. The Contractor is responsible for all items of his work necessary for the proper completion of the project in conformance with the intent of these drawings, including those items which are not specifically covered in these drawings or specifications. Anything shown on the drawings and not mentioned in the specifications, or mentioned in the specifications and not shown on the drawings, shall have the same effect as if shown or mentioned, respectively, in both.
6. SUBMITTALS: The Contractor shall promptly review, approve in writing and submit to the Architect three copies of all shop drawings, product data, samples and similar submittals required by the Contract Documents. Submittals are required to establish conformance of portions of the work with the Contract Document and are either approved by the Architect or not approved. Two copies will be returned to the Contractor and the Architect will retain one copy. Do not fabricated, order or install any product, material or equipment without approved submittals. Regardless of such approval, the responsibility for correct dimensions, installation and performance remains with the Contractor. Every product, material, and equipment to be used on this project needs to be submitted for approval.
7. RECORD DRAWINGS: The Contractor shall maintain a complete set of prints, shop drawings and product data for record purposes. Give particular attention to work that will be concealed and difficult to measure and record at a later date, and work which may require servicing or replacement during the life of the building. Sign and date each mark-up. Include with record set all maintenance and operations manuals, spare parts, data, equipment and product warranties. Turn record set over to Owner at completion.

EXCAVATION

1. SITE CONDITIONS:

A. The Contractor shall maintain safe vehicular and pedestrian access to the site.

B. The Contractor shall have in place snow fence type barricade surrounding construction site before any excavation activity takes place. Barricade shall be left in place through duration of project.

C. The Contractor shall protect all existing site amenities and utilities not designated for removal.

D. The Contractor shall maintain site conditions, which shall prevent tracking or flowing of sediment onto public right-of-ways, keep clean and free the road from dirt, mud, stone, debris, and other hauled materials as a result of his/her work.

E. The Contractors’ staging and parking areas are to be coordinated with the Owner.
2. BUILDING EXCAVATION:

A. Excavation for the building foundations shall be by the Contractor and shall consist, in general, of the excavation of whatever substance is encountered as necessary for the building construction.

B. All suitable materials removed in excavation shall be used in the construction of subgrade as appropriate. Coordinate with Owner.

DATE: 3/2013 SHEET: 14 of 19

BROCKPORT  
FIRE STATION #5

80 Owens Road  
Sweden, New York

project

DAVID STRABEL R.A.

24 Tudor Road  
Brockport, New York 14420  
585-637-5346

architect



CONCRETE

1. CONCRETE: All concrete shall be normal weight nominal air dry density of 145 PCF, truck mixed, and have a 28-day minimum compressive strength of 4,000 PSI.
- A. Cement; Portland cement shall be ASTM C150-78a, type 1.

B. Aggregate; Washed natural sand conforming to ASTM C-33 and course aggregate shall consist of well graded crushed stone or washed gravel conforming to ASTM C-33, 3/4" size.

C. Water; Water content shall not exceed 5.5 gallons/bag of cement for Class A concrete.

D. Water Reducer; Add water reducing admixture per manufacturer's recommendation.

E. Air Entrainment; Add air entrainment admixture to produce maximum air by volume of;

1. 5% to 7% Class A concrete used in foundations.

2. 3% maximum for Class A concrete used in floor slabs

F. Slump; Maximum slump shall be;

1. 3" for concrete used in floor slab.

2. 4" for concrete used on foundation walls.

G. Curing Compound (floor); Spray applied water base clear hydrocarbon resin ASTM C309, Type 1, Class B.

H. Calcium; No calcium chloride allowed.
2. CONCRETE PLACEMENT: All placement of concrete and reinforcing to be in accordance with ACI 318-83 (including ACI recommendations for hot and cold weather conditions) and CRSI "Recommended Practice for Placing Reinforcing Bars".
4. REINFORCING:

A. Reinforcing Bars; All bars shall be new ASTM A615-79, Grade 60.

B. Welded Wire Mesh; Steel welded wire fabric shall be new ASTM A185-79. Furnish in flat sheets. Lap 1 1/2 squares in all directions at joints.

C. Bar Supports; Bar supports shall be galvanized or stainless steel. Bar supports in contact with exposed surfaces shall be galvanized and plastic tipped.

D. Clearances; Reinforcing clearance from adjacent surfaces shall conform to the following unless otherwise detailed;

1. In contact with ground; 3"

2. Slabs on grade; 2 1/2"

3. Exposed to weather; 2"
5. FINISH: Where exposed above grade, either interior or exterior, concrete shall have a smooth finish as obtained by the use of smooth forms. Grind off fins, joint marks, bulges and other prominent grain markings. Fill and grind off honeycombed or depressed areas and leave smooth and washed clean.

A. Floor Finish; Hard steel trowel unless otherwise indicated.
8. RIGID INSULATION: 2" R-10 ASTM C578 Type V extruded polystyrene foam insulation.
9. BOLLARDS: 6" DIA. X 8' schedule 40 galvanized steel pipe. Set posts 48" into concrete. Fill posts solid with concrete to top and crown. Paint safety yellow.

PRE-ENGINEERED METAL BUILDING

1. DESIGN CRITERIA: Except as shown or specified otherwise, building design shall conform to the Metal Building Manufacturers Association's (MBMA) "Design Practices" and "Code of Standard Practice", and with the following criteria:

A. Design Loads; Snow=40 PSF/Wind=20 PSF

B. Occupancy Category; IV - Essential

C. Wind Exposure; 90 MPH Exposure B

D. Importance Factors; Ie=1.50/Is=1.20/Iw=1.15

E. Spectral Response; Ss=26%/S1=7%
2. SUBMITTALS: Submit manufacturer's standard shop drawings, erection drawings and calculations for approval.

3. MATERIALS:

A. Structural Steel; ASTM A36, A529 or A572.

B. Cold-Rolled Steel; ASTM A446, Grade A.

C. Cold-Formed Steel: ASTM A570.

D. Steel Tubing: ASTM A500, Grade B or A501.

E. Steel Plate and Bar Stock: ASTM A529 or A572.

F. Anchor Bolts and Tie Rods: ASTM A36/A675, Grade 70.

G. High Strength Bolts: ASTM A325.

H. Common (Standard) Bolts: ASTM A307.
4. ASSEMBLY & INSTALLATION ACCESSORIES: Building manufacturer's standard reinforcements, extensions, clips, brackets, miscellaneous fasteners and anchoring devices, spacers, furring strips, closures, flashings, expansion joints, thermal breaks, adhesives, and other components needed for a complete, permanently weatherproof installation. Materials shall be non-deteriorating, corrosion resistant, and compatible with adjoining materials.
5. CONNECTIONS: Fasteners shall be of size and in quantities to securely and permanently join building components, and shall be complete with necessary hardware and accessories as required for the application. Connections shall allow for expansion and contraction in accordance with the approved design. Screw bolts shall have metal-backed sealing washers. Except as otherwise indicated, provide the following fastener types for the following locations:

A. Roofing Panels to Structural Members: Screw bolts.

B. Wall Panels to Structural Members: Standard bolted connection.

C. Wall Panels to Wall Panels: Sheet metal screws.

D. Interior Liner Panels to Supports: Cadmium plated steel fasteners of required type for secure attachment.

E. Trim: Same fasteners as adjacent panels.
6. SEALANTS, GASKETS AND CLOSURES:

A. Tape Sealant; Flat shaped, elastomeric, non-hardening, ribbon sealant; type recommended by building manufacturer for the particular use and conditions of application.

B. Tube or Pumpable Sealant; Polybutenebutyl or acrylic terpolymer base sealant. Color to be selected by Owner.

C. Gaskets; Rubber, building manufacture's standard shapes.

D. Closures; Closed cell foam or rubber material, formed to match panel profiles, sized to provide weathertightness.
7. GALVANIZING: ASTM A653, coating designation G-90.
8. COLOR FINISH: Factory applied color finish system on exposed surfaces of steel components specified to receive color finish, complying with the following requirements:

A. Surface Preparation; Galvanized steel shall be given a chemical conversion treatment conforming to Federal Spec MIL-C-490A, Type 1, Grade 1.

B. Coating; Precision coated with thermosetting polymerized enamel to a dry film of one mil ± 0.2 mil, prior to forming of panels.

C. Finish Pigmentation; Inorganic pigments selected for maximum durability and resistance to fading.

D. Colors: Colors to be selected by Owner.
9. PRIMARY BUILDING FRAMING: Columns, roof beams and rigid frames shall be factory fabricated, with required holes in webs and flanges accurately punched or drilled. Enlarging or gouging holes at the site will not be permitted. Base plates, splice plates, stiffener plates, and other required plates shall be shop fabricated and welded in place where applicable.

A. Rigid Frames; Clear span, solid web framing, tapered or uniform depth, welded-up plate section columns and beams.

B. Rigid Frame Tie Rods and Anchor Bolts; 22,000 PSI allowable tensile stress.

C. Endwall Framing; Corner posts, endposts and rake beams; hot rolled sections, cold formed shapes, or built-up shapes of welded plate construction.
10. SECONDARY BUILDING FRAMING:

A. Purlins & Girts; Cold formed steel Zee-shapes.

B. Eave Members; Cold formed steel C-shapes.

C. Sill Members: Roll formed galvanized steel base angle.

- D. Overhead Door & Opening Frames: Frames shall be fabricated from structural shapes and bars as required to receive overhead doors, with corners fully welded and ground smooth, and with provisions for bracing to building framing.
11. ERECTION: Erect and install the metal building and appurtenances in accordance with the manufacturer's printed instructions, secure and weathertight, and exposed materials are free of visible dents, scratches, tool marks, cuts, and other imperfections. Install building systems free of rattles, wind whistles, and noise due to thermal movement. Provide temporary bracing as required.
12. ROOFING & WALL PANELS: Panels shall include all related components and accessories necessary for a complete system. Metal sheets shall be prefinished (coil coated) prior to forming and panel fabrication. Panels shall be fabricated in maximum lengths possible as necessary to minimize end laps.

A. Roof Panels; 24 gauge, roll formed color finished (Grey) G90 galvalume metal sheets with rib-lap seams, factory applied sidejoint sealant and self-drilling, self-sealing, exposed screw bolt fasteners.

1. Roof Accessories: Materials shall be the same materials used for the panels. Configurations shall be the standard with the building manufacturer for the specified roofing panels. Include all eave trim, gable/rake trim, gutters, downspouts and closure pieces.

2. Pipe Flashing: Pleated, one-piece, ethylene propylene diene monomer rubber units with aluminum alloy reinforcing ring bonded to base flange, sized for pipe diameter.

B. Wall Panels; 26 gauge, roll formed color finished (light grey) G90 galvalume metal sheets with overlapping side ribs, factory applied sidejoint sealant and self-drilling, self-sealing, exposed screw bolt fasteners.

1. Exterior Wall Accessories: Materials shall be the same materials used for the panels, unless otherwise indicated or required by the application. Coatings and finishes shall match wall panels. Include all corner trim/assemblies, opening trim, base angle/trim/flashings, and soffits.
- C. Interior Liner Panels; 29 gage, roll formed color finished, G60 coated galvanized steel with overlapping side ribs, from slab to top of 7' level wall girt.

12. INSULATION:

A. Batt Insulation; 8" R-25 for walls and 10" R-32 for roof fiberglass batt insulation with UL listed, vapor retarder material consisting of white metallized polypropylene film, scrim reinforcement with Water Vapor Transmission Rate (ASTM E 96, Procedure A) 0.02 US perm, and surface burning characteristics not exceeding 25 flame spread rating and 50 smoke developed rating per ASTM E84.

B. Insulation Blocks; Rigid thermal (break) blocks cut from high density extruded polystyrene board stock having a UL flame spread rating (ASTM E-84) of 25 or less and a smoke developed rating no greater than 450.

DATE: 3/2013 SHEET: 15 of 19

BROCKPORT  
FIRE STATION #5  
80 Owens Road  
Sweden, New York

project

DAVID STRABEL R.A.  
24 Tudor Road  
Brockport, New York 14420  
585-637-5346

architect

## DOORS & WINDOWS

1. MAN DOORS: Comply with ANSI/SDI-100 and ANSI 117.1 (ADA/handicap accessibility). Fit doors to frames and floors with clearances specified in SDI-100. Set units plumb, level true to line, without warp or rack in frames or panels.
- A. Steel Frames; Conceal fastenings, mitered corners, finish with rust inhibitive primer for gloss paint finish.
1. Interior; 18 gauge, knock-down construction.
2. Exterior; 16 gauge, knock-down construction.
- B. Exterior Hollow Metal Door (HM); 1 3/4" insulated 16 gauge ASTM A525 G60 galvanizing seamless steel doors with maximum U-value of .24 BTUH/SF/°F per ASTM C236, factory primed and field painted.
1. Hinges: (3) 4 1/2" 5-knuckle ball-bearing hinges.
2. Closer: Overhead surface mounted ANSI A156.1 grade 1.
3. Weatherstripping: Compressible, replaceable, molded neoprene gaskets ASTM D2000.
4. Panic Bar/Lockset: Rim latching exit device ANSI grade 1, low profile aluminum cross bar with hardened steel latch bolt, no hardware outside.
- C. Interior Wood Doors (WD); 1 3/4" thick, clear maple single-panel, solid core and stiles, NWMA and AWI quality standards with transparent stain finish.
1. Hinges: (3) 4 1/2" 5-knuckle ball-bearing hinges.
- a. Wash Rooms; Spring hinge center.
2. Lockset/Latchset:
- a. Closets; Fixed lever handles.
- b. Wash Rooms; Lever-handled passage set ANSI A 156.5, F75 function.
- c. Heat Room; Lever-handled keyed cylinder type lockset ANSI A 156.5, F86 function.
2. ALUMINUM DOORS (AL) & WINDOWS (Storefront System):
- A. Performance; Comply with requirements of AAMA 101, and for structural requirements ASTM E 330, air infiltration ASTM E 283, and water penetration ASTM E 547. Maximum U 0.6 BTUH/SF/°F @ 15 MPH wind velocity. Doors and hardware to be ADA compliant.
- B. Framing System; Nominal 2"x4 1/2" thermally broke, 0.08" ASTM B 221 extruded aluminum with closed cell polyurethane insulated panel cores, concealed fasteners, reinforcing and flashings.
- C. Vent/Operable Windows; 2" screw-spline joint sash matching framing system 0.01 CFM/SF infiltration max with interior screen panel.
1. Awning (AW): 4 bar hinge & cam lock ANSI/AAMA CW-PG75.
2. Casement (CST): Casement hinges, cam lock, roto operator, 2 point egress lock, ANSI/AAMA CW-PG60.
- D. Exterior Doors; 1 3/4" doors with narrow 5" stiles and top rail and 10" bottom rail thermally broken with 1" exterior glazing and snap-in glazing stops.
1. Hinges: Mortised heavy duty continuous gear hinges ANSI A156.1.
2. Closers: Overhead surface mounted ANSI A156.1 grade 1.
3. Weatherstripping; Compressible, replaceable, molded neoprene gaskets ASTM D2000.
4. Door Strikes: 16V DC electric with adjustable fail-secure/fail-safe. Provide control wiring to junction box above framing system for future access control system.
5. Panic Bars: Rim latching exit device ANSI grade 1, low profile aluminum cross bar with hardened steel latch bolt and level-handled keyed mortise cylinder ANSI A 156.5, F81/82 function.
6. Thresholds: Mill finish extruded aluminum.
- E. Interior Doors; 1 3/4" doors with narrow 5" stiles and top rail and 10" bottom rail.
1. Hinges: 5 knuckle, 2-ball bearing butts ANSI A156.1.
2. Closers: Overhead surface mounted ANSI A156.1 grade 1.
3. Lockset/Latchset:
- a. Log & Meeting Rooms; Lever-handled keyed cylinder type lockset ANSI A 156.5, F84 function.
- b. Apparatus; Lever-handled passage set ANSI A 156.5, F75 function.
- E. Finish; "Bright Red" 25 year fluorocarbon finish finish.
- F. Glazing; Comply with ANSI Z97.1 and 16 CFR, with snap-in aluminum glazing stops and uniform glazing gaskets.
1. Exterior: 1" hermetically sealed, insulated double 1/4" tempered dark tint "Low-E" glass.
2. Spandrel (SG): Match exterior glass.
3. Interior: 1/4" clear tempered glass.
3. OVER HEAD DOOR:
- A. Compliance; Assembly to comply with ANSI A 216.1, NAGDM 101 & 102, and ASTM E 84-80.
- B. Door Sections; Hot dip galvanized steel with horizontal stiffening ribs, foamed-in-place polyurethane core, 2" nom. thickness, roll-formed water channel drip-free opening joints with continuous EPDM rubber tub seals between sections.
- C. Track; 3" heavy gauge hot dipped galvanized steel.
- D. Hardware; Heavy duty galvanized fasteners, fully adjustable roller brackets, rollers with steel ball bearings in case-hardened steel races, and helical wound torsion spring with a min life of 20,000 cycles.
- E. Finish; Baked-on two coat polyester enamel, "Bright Red".
- F. Operator; Trolley/Drawbar Operator with NEMA compliant 1PH 120V,  $\pm$  1/2 HP motor sized for  $> 3/4' < 1 1/4'$  per second without overload, with reversing magnetic motor controller, adjustable safety clutch momentary-contact 3 push buttons labeled OPEN, CLOSE, STOP interior remote control station and quantity of three, three channel unit radio remote control units. Operator to have secondary emergency release mechanism with an auxiliary steel chain hoist which can be engaged/disengaged from floor level.
- ## FINISHES
1. STEEL STUDS: 3 5/8" typical (6" @ south apparatus bay wall and kitchen cabinet wall) ASTM C 645, 20 gauge electro-galvanized steel studs with matching runners and caps.
- A. Installation; Align accurately according to partition layout. Attach securely floor and ceiling runners 24" O.C. to concrete slabs with power driven anchors. Provide (2) beads of caulking between runner and floor and runner and roof purlin for full height south apparatus bay wall. All other interior walls to 6" above ceiling. Provide blocking as required for fixtures, grab bars, toilet partitions and cabinets. Brace top of walls as required.
- B. Insulation; Foil faced fiberglass batt insulation, 10" R-38 over entry, 6" R-19 in south apparatus bay wall, 4" R-13 behind spandrel glass.
2. GYPSUM WALLBOARD:
- A. Wallboard; 5/8" standard, bevel edged gypsum wallboard complying with ASTM C36 for walls including taping, casing beads and trim. 5/8" water resistant backing board complying with ASTM C630 in heating and wash rooms. Installation to comply with ANSI A97.1 "Specifications for Finishing Wallboard".
- B. Screws; Type W, 1 1/4" GWB screws.

## FINISHES

1. STEEL STUDS: 3 5/8" typical (6" @ south apparatus bay wall and kitchen cabinet wall) ASTM C 645, 20 gauge electro-galvanized steel studs with matching runners and caps.
  - A. Installation; Align accurately according to partition layout. Attach securely floor and ceiling runners 24" O.C. to concrete slabs with power driven anchors. Provide (2) beads of caulking between runner and floor and runner and roof purlin for full height south apparatus bay wall. All other interior walls to 6" above ceiling. Provide blocking as required for fixtures, grab bars, toilet partitions and cabinets. Brace top of walls as required.
  - B. Insulation; Foil faced fiberglass batt insulation, 10" R-38 over entry, 6" R-19 in south apparatus bay wall, 4" R-13 behind spandrel glass.
2. GYPSUM WALLBOARD:
  - A. Wallboard; 5/8" standard, bevel edged gypsum wallboard complying with ASTM C36 for walls including taping, casing beads and trim. 5/8" water resistant backing board complying with ASTM C630 in heating and wash rooms. Installation to comply with ANSI A97.1 "Specifications for Finishing Wallboard".
  - B. Screws; Type W, 1 1/4" GWB screws.
3. WOOD SILLS: 1/2" edged clear maple veneer plywood.
4. FRP PANELS (FRP): Fiber Reinforced Plastic (FRP) panels, Class A, White, install directly to drywall, floor to ceiling. Provide all seam covers for panel joints, corners, and top and bottom J-trim.

- 5. ACOUSTICAL CEILING:
  - A. Mineral-Base Tile; Standard 24"X24"X3/4" wet-formed mineral base white fissured finish ceiling tile with flame spread <25 and smoke development <50 per ASTM E84.
  - B. Direct-Hung Inverted Tee Steel Suspension System: White runners roll-formed pre-painted or electrolytic zinc-coated cold-rolled steel sheet.
- 6. RESILIENT TILE:
  - A. Tile; 12"X12"X1/8" Type IV, Composition 1, asbestos free, Class 1 for solid colors, Class 2 for patterns, ASTM E648 and ASTM E84 <50. Colors to be selected. 12" accent boarder color to be used in meeting and log room.
  - B. Adhesives; Waterproof polyurethane based.
  - C. Edge Guards; Extruded or molded heavy-duty vinyl or rubber minimum 2" wide anchorage flange, ADA compliant, color to be selected.
  - C. Resilient Base; 6"X1/8" vinyl composition cove base. Job molded at exterior corners and cut and mitered at interior corners. Color as indicated.
- 7. PAINTING:
  - A. Paint and Stain; Only one paint brand and one stain brand shall be used throughout the project. Paint and stain colors to be selected by Owner.
  - B. Paint Schedule;
    - 1. Interior Drywall:
      - 1 coat latex wall primer, and
      - 2 coats alkyd semi-gloss, eggshell enamel.
    - 2. Exterior Steel Doors:
      - 1 coat synthetic acrylic rust inhibiting primer, and
      - 2 coats urethane alkyd high gloss.
    - 3. Interior Wood Sills and Doors:
      - 2 coats clear sealer

DATE: 3/2013 SHEET: 16 of 19

BROCKPORT  
FIRE STATION #5

80 Owens Road  
Sweden, New York

# project

DAVID STRABEL R.A

24 Tudor Road  
Brockport, New York 14420  
585-637-5346

# architect



SPECIALTIES

1.

KITCHEN CABINETS:

A.

Cabinets; To be selected by Owner from manufacturer’s standard Shaker style clear maple design and finish. Provide submittals for approval.

1.

Certification: ANSI/KCMAA161.1-2000.

2.

Face Frames: 3/4” X 1 5/8” solid hardwood, pressure fitted, glued, double doweled and stapled.

3.

Doors: 3/4” hardwood rails and stiles with mortise-and-tenon joints and floating center solid wood panel and fully concealed, self closing, hidden hinges.

4.

Drawer Faces: 3/4” hardwood.

5.

Tops, Bottoms, Floors & End Panels: 1/2”-#45 laminated high density engineered wood.

6.

Backs: 1/8” hardboard substrate.

7.

Shelves: 3/4”-#48 industrial grade laminated particleboard.

8.

Drawers Boxes: 1/2” engineered wood with melamine finish, rabbeted, glued and stapled, with epoxy coated, double side mounted, self-closing, hidden, full access roller drawer glides.

9.

Pulls: Black wire.

B.

Counter Tops; Black post-Formed plastic laminate (PF-45) on engineered wood pre-manufactured with a rolled front drip edge and built-in backsplash.

2.

TOILET PARTITIONS (TP): Seamless steel panel with baked enamel finish, color to be selected, ASTM A591, Class C, galvanized and bonderized floor supported panel with chrome plated hinges and door hardware. Screen size 84” tall by dimensions on plans. Doors 36” wide minimum.

3.

TOILET ACCESSORIES: Provide all toilet accessories and their mounting hardware, fabricated of posts fabricated of chromium plated heavy forged brass. All accessories and mounting locations to be in accordance with ADA.

a.

Grab Bars (GB); Surface-mounted, heavy duty, 1 1/2” φ X 2” projection X lengths shown.

b.

Mirrors (MR): 24”X42” surface-mounted, channel-framed tilt, 1/4” laminated glass mirror.

c.

Toilet Paper Holder (TPH); Surface-mounted, 20 gauge min., dual-roll, drop-style, vandal-resistant, lockable, controlled delivery.

d.

Soap Dispenser (SD); Countertop-mounted, vandal resistant, push valve operation with 40 OZ. capacity reservoir below counter.

e.

Signage; Provide 1/8” thick ‘ES’ plastic sign for “Men” and “Women” toilet room, meeting ADA requirements. Color and lettering to be selected by Owner.
- E.

Wall Sleeves; Steel sleeves through foundation walls shall run the full width of the wall.

F.

Hose Bibs; 3/4” anti-syphon type with brass casing, integral backflow preventer, nickel brass face and straight inlet connection. Extended stem frost-proof at exterior locations.

G.

Installation; Grade horizontal piping to drain. Take care that no sags, humps or air pockets are left. Pitch piping upwards in direction of flow. Provide air chambers on water supplies to individual fixtures and at top of risers. Insulate all cold water and hot water piping.

H.

Testing; Fill to 125PSI hydrostatic pressure for 24 hours. There shall be no noticeable loss of pressure. Fixtures shall not be connected into system during test.

3.

SOIL & WASTE PIPING:

A.

Above Ground Piping; Copper tube, type DWV, Cast bronze, drainage pattern solder joint fittings and service weight cast iron where shown.

B.

Underground Building Drain Piping; Cast iron, hub and spigot soil pipe, service weight. Cast iron hub and spigot soil pipe fittings with neoprene gaskets.

C.

Cleanouts; Inside caulk, threaded countersunk bronze plug, square scorated top, neoprene gasket.

D.

Floor Drain; 3” cast iron, two piece body with p-trap. Adjustable 6” nickel bronze strainer.

E.

Installation; Grade “horizontal” piping 1/4” per foot, never less than 1/8” per foot. Connect upper ends of drainage lines to vent system. Terminate vent one foot above roof line.

F.

Testing; Hydrostatically test to 10’ water column for 2 hours.

4.

GAS PIPING: Comply with the requirements of FGCNYC and NFPA 54 National Fuel Gas Code.

A.

Interior Steel Pipe; ASTM A120, Schedule 40, seamless, black steel pipe, beveled ends.

B.

Fittings; Malleable-Iron Threaded Fittings: ANSI B16.3, Class 150, standard pattern, for threaded joints. Thread shall conform to ANSI B1.20.1.

C.

Joint Compound; Suitable for the gas being handled.

D.

Buried Polyethylene (PE) Piping; Yellow PE direct bury piping complying with NFPA-58 and NFPA-54, ASTM D-2513, Category 1 and ASME B31.8-1995.

E.

Unions; ANSI B16.39, Class 150, black malleable iron, female pattern: brass to iron seat; ground joint.

F.

Dielectric Unions; ANSI B16.39, Class 250; malleable iron and cast bronze with threaded or soldered end connections suitable for pipe to be joined, designed to isolate galvanic and stray current corrosion.

G.

Plug Valves; 150 psi WOG, bronze body, straightaway pattern, square head, threaded ends.

H.

Installation; Install exposed piping at right angles or parallel to building walls. Use fittings for all changes in direction and all branch connections. Provide supports and hangers as required. Conceal piping above ceiling.

I.

Terminal Equipment Connections; Install gas valve upstream and within 6’ of gas appliance. Install a union downstream from the gas cock to permit removal. Install sediment trap tee fitting with the bottom outlet plugged as close to the inlet of the gas appliance as practical. Drip leg shall be a minimum of 3 pipe diameters in length.

5.

OIL SEPARATOR (OS): Minimum static water capacity of 96 gallon or 12 CF (NYSPC 1003.4.2.2) all welded 1/4” steel separator, 25 GPM intermittent flow, 2” tapped inlet and outlet with tapped outlet vent connection, 3” tapped internal fume vent, 1 1/2” tapped oil draw-off connection for adjustable oil draw off, visible double-wall outside trap seal, removable filter screen, permanent separator oil screen, 3/8” steel plate cover secured with stainless steel bolts, extra heavy leak-proof gasket and interior acid coating. Mount in recessed pit with 3/4” galvanized steel non-skid diamond tread plate in steel angle support frame reinforced for heavy traffic.
6.

WATER HEATER (WH): 50 gallon, natural gas fired, 0.70 energy factor, 40,000 BTU input, 43 GPH recovery @ 90°F, Energy Star rated, fan-assisted pressurized combustion chamber, electronic ignition and controls, low NOx burner, powered anode rod, drain and temperature/pressure relief valves, CSA certified and ASME rated.

7.

PLUMBING FIXTURES: Comply with NYS Conservation Law 15-0314. Sink and Lavatory facets 3 GPM at 30 PSI. Fittings, trim and accessories to be copper or brass unless noted otherwise. Escutcheons to be cast brass, bright chrome plated with set screws.

A.

Water Closets (WC); Floor type, 18” high ADA compliant white vitreous china, elongated bowel with white solid plastic, open front, no cover seat, concealed floor mount masonry wall hanger, low consumption, manual 1.6 GPF flush valve.

B.

Urinal (UR); Wall mounted, white vitreous china, washout flush with elongated flushing rim, concealed floor mount masonry wall hanger, flush wall-mounted electronic infra-red sensor operated low consumption, manual 1.0 GPF flush valve. Mount unit in accordance with ADA.

C.

Lavatories (LAV); Wall hung white vitreous china, ADA compliant, with concealed floor mount wall hanger, front overflow, 4” centers, with chrome plated, self-mixing no-scald, brass, ADA compliant faucet, chrome plated strainer, 1 1/2” brass adjustable P-trap, drainpipe and tailpiece with slip couplings meeting ADA dimensions.

D.

Roll-In Shower (SHR); ADA compliant, slip-resistant 60”X36” white molded reinforced fiberglass with sanitary-grade white polyester resin gloss cured ASTM D-2583 finish stall, complete with 37”X33” L-shaped 1 1/2” φ stainless steel grab bar, solid white HDPE fold-up seat, 3/4” threshold, brass self-caulking drain, chrome plated no-scald shower mixing valve, de-mountable hand held shower head, 1” φ stainless steel curtain rod and white shower curtain.

E.

Drinking Fountain (DF); Two-level wall mounted #14 gauge type 304, stainless steel with contoured basin, front push-buttons, in-line flow regulator (20 to 105 PSI), and drain, trap assemblies, mounting plate, ADA compliant NSF/ANSI 61 certified.

F.

Kitchen Sink (KS); Self rim, double compartment, stainless steel with single lever spray hose faucet.

G.

Utility Sink (US); Wall hung type with concealed floor mount wall hangers, 18”X24”X8” deep stainless steel sink with chrome plated no-scald, brass, goose-neck style faucet, chrome plated pop-up grid drain and strainer, 1 1/2” brass adjustable P-trap, drainpipe and tailpiece with slip couplings.

H.

Mop Sink (MS); 24”X24”X10” molded stone, 3” drain with P-trap, brass drain fittings, chrome plated service faucet with vacuum breaker and 3/4” hose coupling discharge, pale hook and top brace. Provide hose and hose bracket, a bumper guard and mop hanger.

PLUMBING

1.

COMPLIANCE: Comply with the applicable plumbing standards of PCNYS, State Sanitary Code, Department of Health and any local codes or regulations that apply pertaining to plumbing materials.

2.

DOMESTIC WATER PIPING:

A.

Interior Water Piping System; Copper tube, type “L”, hard drawn temper. Wrought copper, solder joints for fittings, 95-5 tin antimony solder joints.

B.

Valves; 150 PSI SWP, 400 PSI WOG, Bronze, two piece body, TFE seats, brass ball, screwed or solder end, balancing stop plate.

C.

Backflow Preventer (RPZ): 2”φ horizontal bronze reduced pressure zone “air-in/water-out” combined backsiphonage and backpressure release discharge with both checks fouled, with stainless steel relief valve seats and replaceable check seats, 3” air gap AWWA C-511-92.

D.

Insulation; 1” fiberglass insulation, ASTM C-547, class 1, vapor barrier for all piping, ASTM C-921, type 1, premolded PVC fitting covers for all fittings. All piping insulation to be composite (jacket, insulation and adhesive) fire and smoke hazard rating as tested under procedure ASTM E-84, NFPA 255 and UL 723, flame spread rating <25 and smoke developed rating <50.

DATE: 3/2013 SHEET: 17 of 19

BROCKPORT  
FIRE STATION #5

80 Owens Road  
Sweden, New York

project

DAVID STRABEL R.A.

24 Tudor Road  
Brockport, New York 14420  
585-637-5346

architect

MECHANICAL

1. COMPLIANCE: Comply with applicable portions of the MCNYS and ECCCNYS. All ductwork and accessories to conform with SMACNA standards. All equipment shall conform to ASHRAE and NFPA requirements.
2. FORCED AIR FURNACES (GF): Upright Furnace, 80 MBH input, 75 MBH output, 900 CFM @ 0.5” ESP, 1/2 HP, 110V AGA certified and U.L. approved, natural gas fired, 90% AFUE efficiency range, with in-shot monoport low Nox burner, induced combustion blower, stainless steel rigid pressed-joint serpentine design primary and secondary heat exchangers, and multi-speed pre-lubricated PSC motor blower assembly. Unit shall be complete with heavy gauge steel sectionalized casing sprayed with protective enamel finish, insulated internally with 1” thick 1 1/2 PCF matt faced fiberglass with adhesive per NFPA 90A.
- A. Venting; Direct vent, schedule 40 PVC, 100% outside combustion air and direct exhaust.
- B. Fan section; Fans shall be double inlet, double width, multi-blade, centrifugal type, UL approved.
- C. Controls; Gas solenoid valve, electronic pilot ignition, high temperature limit control, flue blockage pressure switch, blower door interlock switch, flame sensor, thermally activated flame rollout switch and fan relay. Units shall be prewired and include built-in 40VA transformer with terminal strip for thermostat and furnace control box connections.
- D. Filters; Filters shall be 2” deep, pleated media throw-away type with 25-30% ASHRAE Dust Spot Efficiency. Maximum pressure drop 0.2” W.G. when clean. Maximum face velocity shall be 350 FPM. Filters shall be easily accessible for changing.
- E. Thermostat; Low voltage, programmable type with two offset periods per day.
3. UNIT HEATERS (UH): 40 MBH input, 37.5 MBH output, 800 CFM, 1/3 HP, 110V AGA certified an U.L. approved, propane fired, 90% AFUE efficiency range, self-contained package, complete with cabinet, stainless steel heat exchanger and burner, intermittent pilot ignition, induced combustion blower, adjustable discharge, steel hubbed aluminum blade propeller fan driven by 110V TEFC motor. Unit to have remote line voltage thermostat and hanger supports with vibration isolators.
4. EXHAUST FANS (EF1): Ceiling exhaust fan, 150 CFM @ .5”, 110V, with permanently lubricated 1,000 RPM motor, galvanized steel housing, integral backdraft damper, side discharge duct flange, and white egg crate ceiling grill. 6” ϕ vent to sidewall discharge with back-damper and screened louver cap. Fan shall be controlled by occupancy sensors in respective toilet rooms with 10 minute delay.
5. FUME CONTROL SYSTEM: (NYSMC 404.1).
- A. Exhaust Fan & Damper (EF2); Thru-wall, direct drive, shutter mounted, speed controllable, 18” ϕ stamped aluminum propeller, 1800 CFM @ 1,000 RPM, 110V/60 Hz/1 PH, fully enclosed air-over 1/15 HP shaded pole motor in 20” square cold rolled galv. steel frame with high-torque 110V motorized extruded aluminum parallel, multi-blade damper with gray polyester finish and wire cage interior guard.
- B. Make-Up Air Damper; 20” square cold rolled galv. steel frame with high-torque 110V motorized extruded aluminum parallel, multi-blade damper with gray polyester finish.
- C. Gas Monitor/Transmitter; Diffusion-type electrochemical sensors in NEMA3 enclosure 16” above floor, 50’ radius coverage, diesel (NO<sub>2</sub>) @ 1 PPM setpoint & carbon monoxide (CO) @ 35 PPM setpoint with adjustable DC output alarm relay.
6. SHEETMETAL DUCTWORK AND ACCESSORIES:
- A. Ductwork; Ductwork, fittings, hangers and supports shall conform to SMACNA HVAC Duct Construction Standards and shall comply with NFPA .90A. All ductwork to be galvanized steel, low pressure class from -2” W.G. to +2” W.G. All joints to be air tight.
- B. Insulation; Flexible fibrous glass insulation with factory applied reinforced aluminum foil vapor barrier, "K" value at 75°F, maximum 0.29. Standard duct wrap, 1 LB density.

- C. Flexible Connections; Construct of neoprene coated flameproof fabric crimped into duct flanges for attachment to duct and equipment. Make air tight joints.
- D. Volume Dampers; Provide single blade type in accordance with SMACNA standards. Provide quadrant locks for each damper.
- E. Backdraft Dampers; Adjustable counterbalanced gravity relief, extruded aluminum frame and blades with PVC blade seals, operable in range of .01 to .05” W.G.
- F. Diffusers; Supply air, rectangular, four-way, louver faced, high capacity 24” X 24” lay-in ceiling grid steel diffuser with integral slot operated opposing blade volume damper, white painted finish, size as required for volume.
- G. Grilles; Return air, rectangular, double deflection, short front blades, 3/4” blade spacing with neck mounted opposing blade damper, 24” X 24” lay-in ceiling grid metal grille, white painted finish, size as required for volume.
- H. Installation; Coordinate layout with ceiling and lighting layout and similar finished work. Install ducts with fewest possible joints. Install insulation on supply air ducts only. Vacuum duct system prior to final acceptance to remove dust and debris.

ELECTRICAL

1. COMPLIANCE: Provide all work in accordance BCNYS, ECCCNYS and National Electric Code (NEC).
- A. Underwriter’s Certificate; The Contractor shall secure a certificate of final inspection and approval from the local board of fire underwriters.
2. PANEL BOARDS & CIRCUIT BREAKERS:
- A. Panelboard; Surface mounted code gauge steel cabinet with wiring gutters as per NEC. Panelboard shall be deadfront, safety type, trims shall be hinged with a single door, nameplate, directory on inside which shall be typewritten to indicate circuits used and lock with keys.
- B. Circuit Breakers; Molded case snap-on type, 20 AMP/1P minimum. Size breakers as required per circuit. Provide branch circuit breakers as required by drawings. Provide 4 spare 20 AMP/1P circuit breakers.
3. STANDBY GENERATOR: 22KW 125 AMP 120/240V 1PH 60Hz @ 1800 RPM, 2.7 liter 4 cylinder, liquid cooled, natural gas fired engine direct drive heavy duty drive alternator with 200 AMP automatic transfer switch, solid state digital controller, isochronous electronic governor, sound attenuated exterior painted galvannealed steel enclosure, closed coolant recovery system, ±1% frequency compensating voltage regulator, block warmer, remote annunciator panel 12V/30AMP battery charger, battery, UL, CSA, NFPA and NEMA certified. Programmed generator exercise from transfer switch. Install on concrete pad 6” larger than generator.
4. WIRE AND CONDUIT: All conductors shall be U.L. listed, insulated for 600 volts and marked in accordance with NEC. Provide type “THW” service lateral cables, otherwise provide dual rated type “THHN/THWN” Copper Conductors. Aluminum conductors are not acceptable. Wire sizes #10 and smaller shall be solid. Wire sizes #8 and larger shall be stranded. Minimum size wire shall be #12.
- A. Type MC Cable; All wiring shall be MC cable or shall be installed in EMT or rigid steel conduit unless otherwise allowed. MC cable to be insulated conductors, type XHHW with flexible metal armor conforming to U.L. requirements for type MC metal-clad cables.
- B. Connectors; Malleable iron set screw or 2 screw clamp type, and anti-short bushing.
- C. Wire Size; Unless otherwise noted or required, all branch circuits shall be 2-#12AWG + #12GRD to a 20A/1P circuit breaker.
5. GROUNDING: Provide complete grounding system in accordance with all applicable codes and utility company requirements. The grounding conductors shall be new connections. Remove used wiring.

6. OUTLET BOXES: Provide boxes of the proper size, type, shape, class and construction to suit specific conditions and in accordance with all code requirements. All junction and outlet boxes shall be galvanized steel, U.L. listed, sized for device. Outlet boxes exposed to moisture, exterior, wet or damp locations shall be cadmium cast alloy complete with threaded hubs and gasketed screw fastened covers.
7. DEVICES AND PLATES: All devices to be U.L. listed.
- A. Switches; 20 AMP, 125 V, silent type, toggle switch with side and back clamp type wiring and grounded mounting strap.
- B. Receptacles; 20 AMP, 125 V, two pole, three wire grounding type duplex with double-wipe, polarized, parallel slots, side and back clamp type wiring with grounded mounting strap. Face to be nylon.
- C. Exterior Receptacles; GFI weatherproof per NEC.
- D. GFI Receptacles; 20 AMP, 120V, 2 pole, three wire grounding type duplex side and back clamp type wiring with grounded mounting strap. Face to be nylon. Designed to trip at maximum 6mA leakage current to ground. Install within 6’ of sinks and apparatus bay.
- E. Occupancy Sensors; Ceiling type, 120V/1000W, 360° viewing angle, passive infra-red with adjustable time delay from 30 seconds to 30 minutes, adjustable sensitivity, manual off switch.
- F. Plates for Boxes, Outlets and Devices; Brushed stainless steel.
8. MOUNTING: Mount switches 42” AFF. Mount receptacles 18” AFF unless to be mounted above counter or as otherwise noted. Mount receptacles above counter horizontally.
9. CEILING FANS (CF): 60”ϕ ± 10,000 CFM high efficiency Energy Star rated single speed 110V steel fan, white.
10. LIGHTING: Provide all lighting fixtures complete and furnished with lamps. All fixtures UL rated.
- A. Pendant Strip Fluorescent; 48” die-formed heavy gauge steel fixtures, white, 2 lamp 48” T8 32W, 120V with electronic rapid start ballast.
- B. Recessed Entry; 6”ϕ downlight with black baffle.
- C. Lay-In Fluorescent; 24”X24” parabolic lens troffer grid mount fixture, white reflector, 2 Lamp T8 UBend 32W, 120V with electronic rapid start ballast.
- D. Exterior Metal Halide; 175W MH 120V wall mount, wet-location, direct down-light in 12”ϕX18” dome-topped die-cast “Black” acrylic powder-coated aluminum housing with high power factor all-weather ballast, swivel arm canopy, stepped baffle, anodized aluminum reflector and tempered glass lens. 15’ fixture mounting height to cast 0.5 foot-candle at ground 24’ from building. Circuit thru 24 hour timer.
- E. Exit Sign/Emergency; Universal mount, self-contained 120V combination 4” LED red-letter exit light/2-adjustable head emergency light, in flame retardant injection-molded thermoplastic housing with test button, electronic charger 90 minute sealed maintenance-free 6V lead-calcium battery.

DATE: 3/2013 SHEET: 18 of 19

BROCKPORT  
FIRE STATION #5

80 Owens Road  
Sweden, New York

project

DAVID STRABEL R.A.

24 Tudor Road  
Brockport, New York 14420  
585-637-5346

architect



11. HAND DRYERS (HD): 110V high performance, vandal resistant surface mount automatic hand dryer with universal 1/10 HP, 6200 RPM motor with resilient mountings and sealed permanently lubricated ball bearings, 2300W heating element, electronic sensor operation with 90 second shut-off, non-corrosive backboard with 4 screw internal wall mounting, non-exposed stainless steel tamper-resistance air intake grills, adjustable supply air nozzle, 1/4" white porcelain enameled cast-iron tamper-resistant cover, U.L. listed and 10 year limited parts warranty.
12. TELEPHONE SERVICE: Provide CAT 3, 3 pair/24 AWG unshielded cable & RJ-11 (6P2C) jacks, terminate & test from jack to 20 port punch down. Provide underground conduit for telcom company service, and conduit and pull-boxes for complete path with nylon pull chord to punch down. Provide treated plywood board for phone & data equipment. Telephone service to be provided by Owner.
13. DATA CABELING: CAT 5, 4 pair/24 AWG 100 Ω unshielded cable & RJ-45 (8P8C) jacks, terminate & test from jack to punch down. System and service by Owner.
14. FIRE ALARM SYSTEM: Complete and finished, power limited, fire detection and evaluation system complying with NFPA-72. The fire alarm system shall monitor the integrity of all alarm initiating and indicating appliances, and shall be provided with automatically charged standby batteries to maintain system operation for 24 hours in the normal supervisory mode plus have sufficient capacity to operate in the alarm mode for 5 minutes at the conclusion of this supervisory time period. Batteries shall be supervised for connection to the system and a low voltage threshold. The automatic battery charger shall be voltage threshold. The automatic battery charger shall be capable of charging fully discharged system batteries. Actuation of an alarm initiating device shall activate all audio and visual alarm appliances, and digital communicator to outside monitoring service. All devices shall comply with ANSI Handicap Code and be U.L. listed.

A. Smoke Detectors; Photoelectric detectors and shall be interchangeable with ionization detectors using the same types bases. The detector shall operate on a 2-wire zone end-of-line resistor.

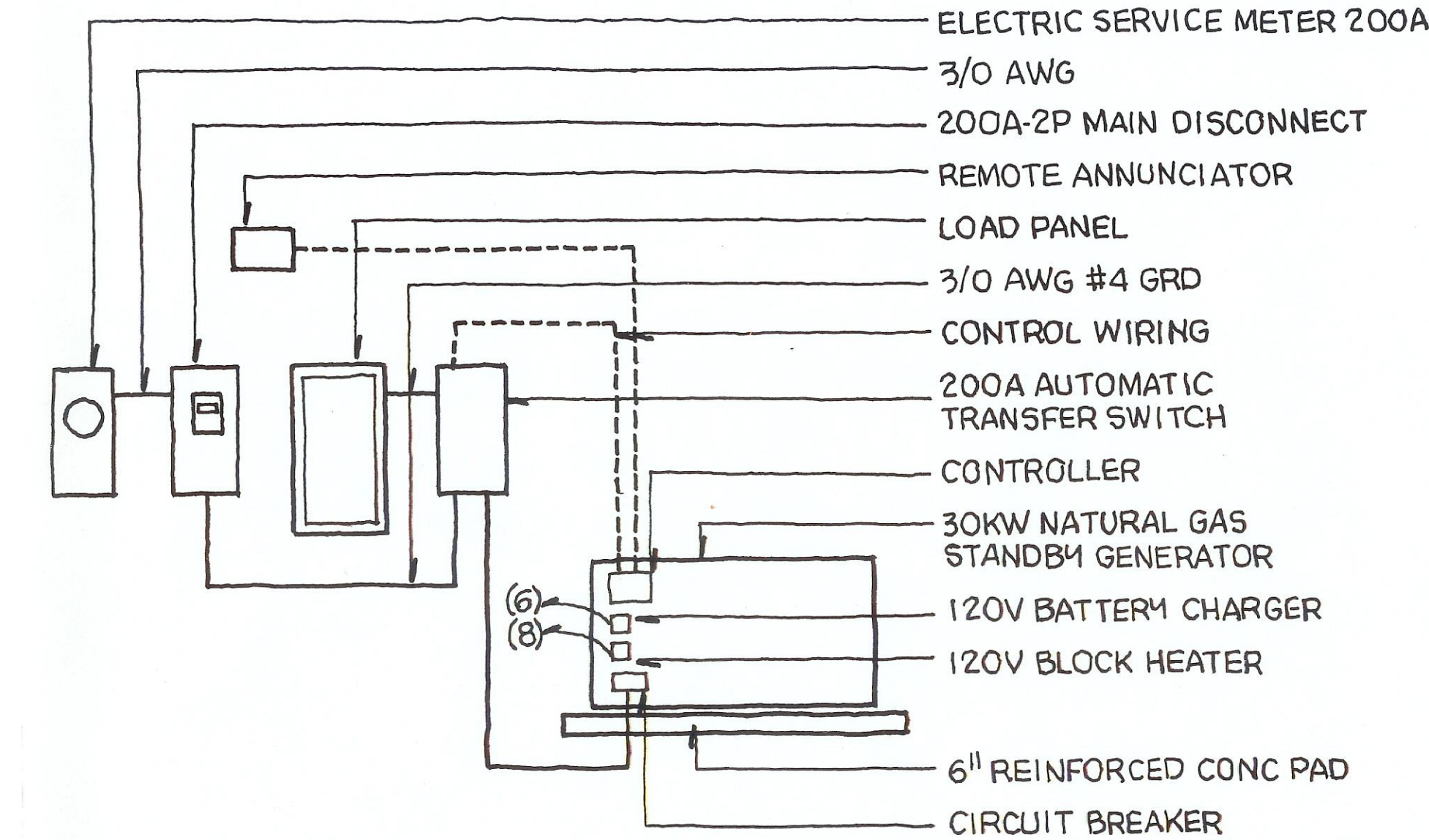
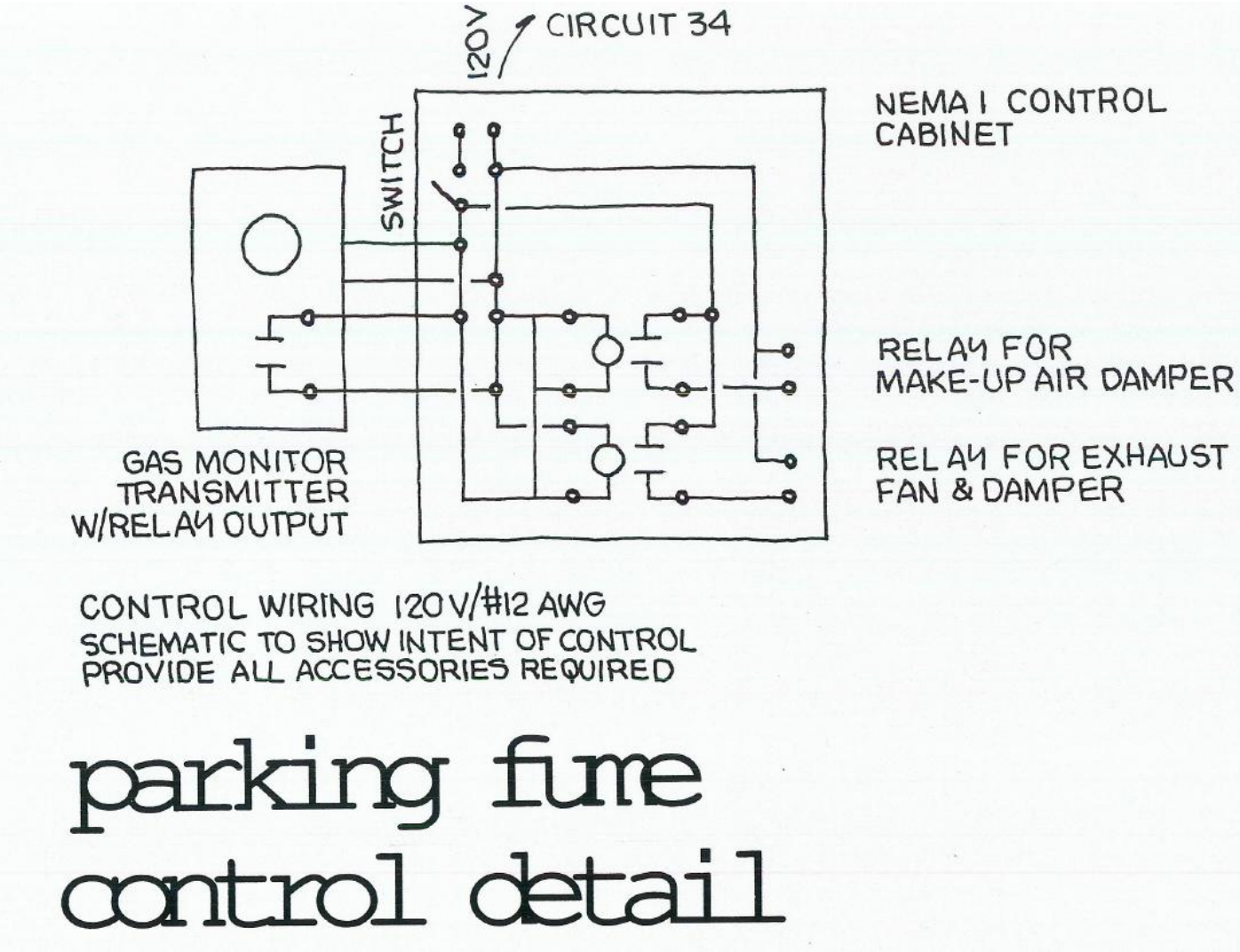
B. Manual Fire Alarm Stations; Manual pull stations shall be non-coded type, steel construction, baked-red enamel finish with white lettering. Stations shall be single action and when operated shall remain mechanically "Locked" until reset.

C. Heat Detectors; Automatic heat detectors shall be combination rate-of-rise and fixed-temperature type.

D. Audio/Visual Unit; Audible alarm indicating appliances shall be 24 volt DC horns of metal construction with a minimum sound pressure level output of 87 dB at 10 feet. Fire alarm horns shall be finished in baked-on red enamel paint. Horns shall be adaptable for surface or semi-flush mounting and be suitable for use within combination audio/visual units.

E. Visual Flashing Lamps (Xenon Strobe); Solid state Xenon flashtube with pyramid LEXAN lens and built-in reflector to improve lighting characteristics. Visual units shall be of the stand-alone type or be incorporated as part of the Audio/Visual unit.

LOAD PANEL							
#	Circuit	Wire	CB	CB	Wire	Circuit	#
1	Future Range	#6	50	20	#12	Fire Alarm/Exit Lights*	2
3	↓			20	#12	Night Lights*	4
5	Furnace	#12	15	20	#12	GEN Battery Charger	6
7	Water Heater	#12	15	20	#12	GEN Block Warmer	8
9	Unit Heater	#12	20	20	#12	Exterior Lights **	10
11	Unit Heater	#12	20	20	#12	Exterior Power	12
13	Wash Room	#12	20	20	#12	Wash Room	14
15	Hand Dryer	#12	20	20	#12	Hand Dryer	16
17	Ceiling Fans	#12	20	20	#12	Bay Lights	18
19	OH Door Operator	#12	15	20	#12	Bay Lights	20
21	Bay Power	#12	20	20	#12	Bay Power	22
23	Tel/Data Power	#12	20	20	#12	Tel/Data Power	24
25	Log/Heat/Vest Light	#12	20	20	#12	Log Room Power	26
27	Meeting Lights	#12	20	20	#12	Log Room Power	28
29	Meeting Power	#12	20	20	#12	Meeting Power	30
31	Meeting Power	#12	20	20	#12	Truck Block Warmer	32
33	Spare		20	20	#12	Fume Control System	34
35	Space					Space	36
37	↓						38
39							40
41	↓						42
Voltage: 120/240V * Lock-Out Breaker ** Thru Timer Main Circuit Breaker 200 Amp Surface Mount Panel							



DATE: 3/2013 SHEET: 19 of 19

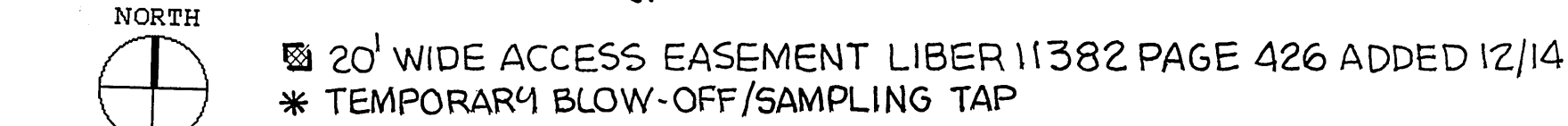
**BROCKPORT**  
**FIRE STATION #5**  
80 Owens Road  
Sweden, New York

**project**

**DAVID STRABEL R.A.**  
24 Tudor Road  
Brockport, New York 14420  
585-637-5346

**architect**



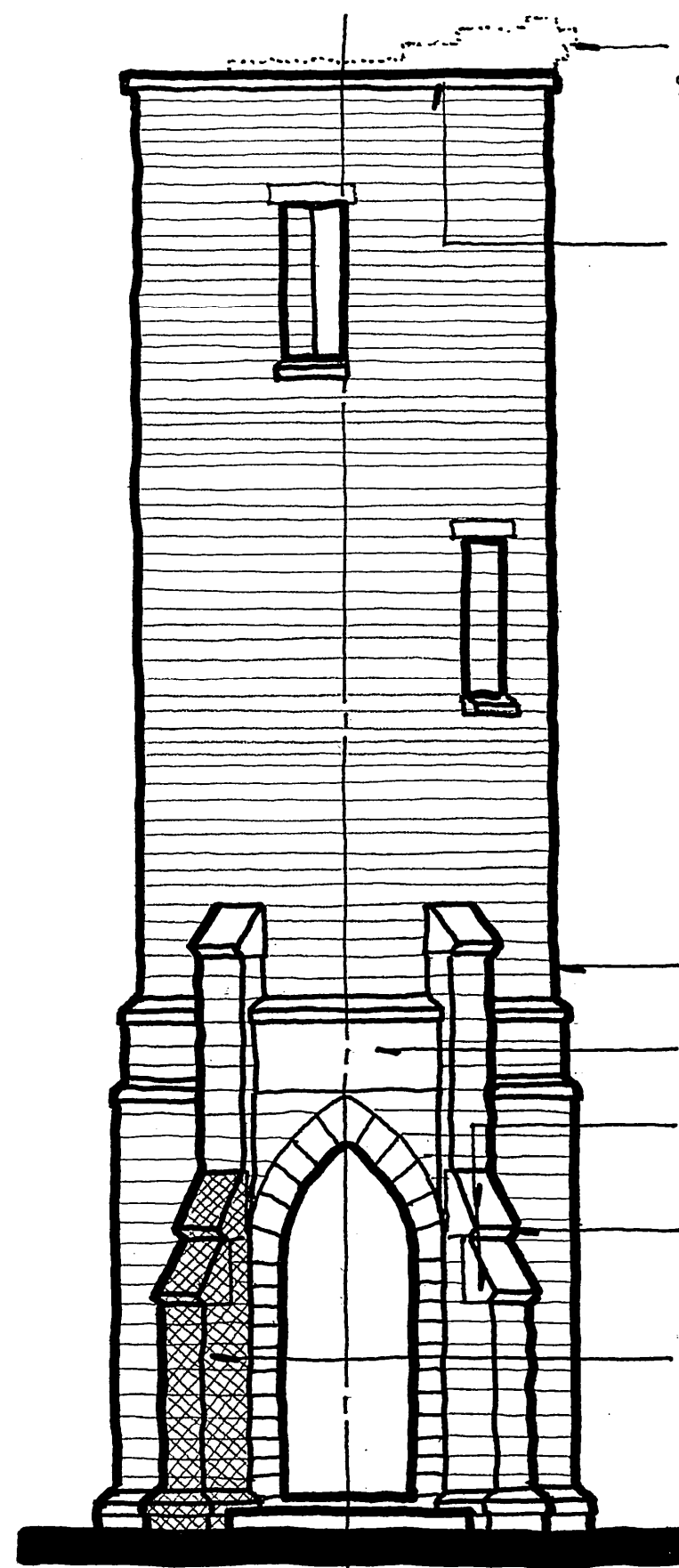


thrust blocks

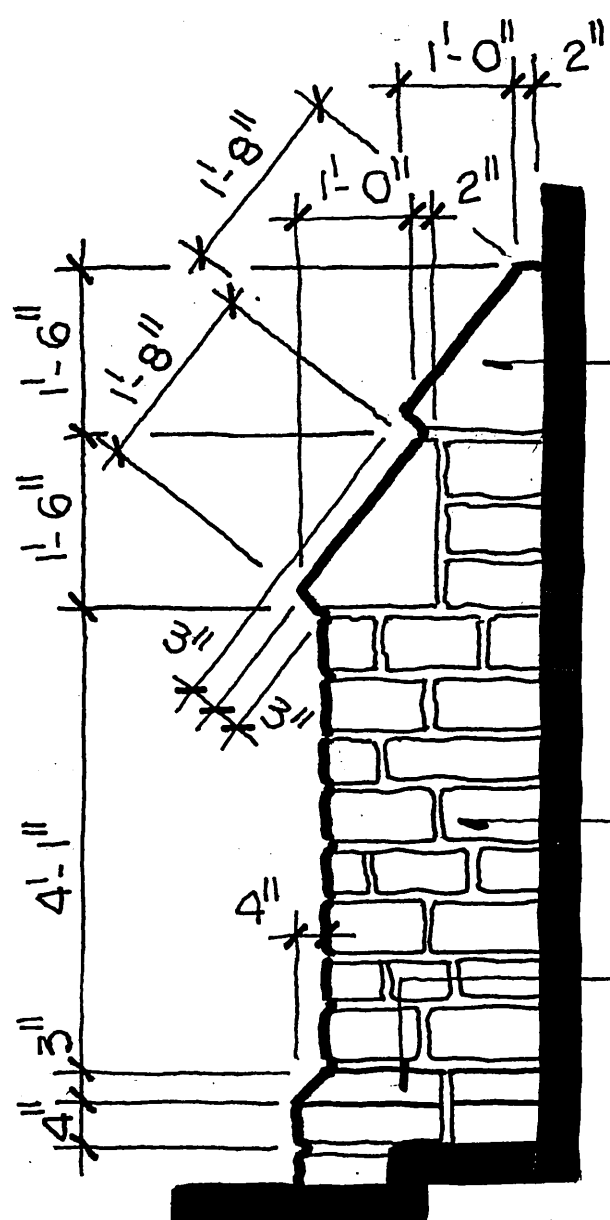
architect

HYDRAULIC CALCULATIONS  
PER ON-LINE HAZEN-WILLIAMS  
CALCULATOR  
6"  $\phi$  PVC MAIN  
350 LF EQUIV PIPE LENGTH  
13.62 FT/SEC VELOCITY  
1,226 GPM FLOW RATE  
14 PSI PRESSURE LOSS

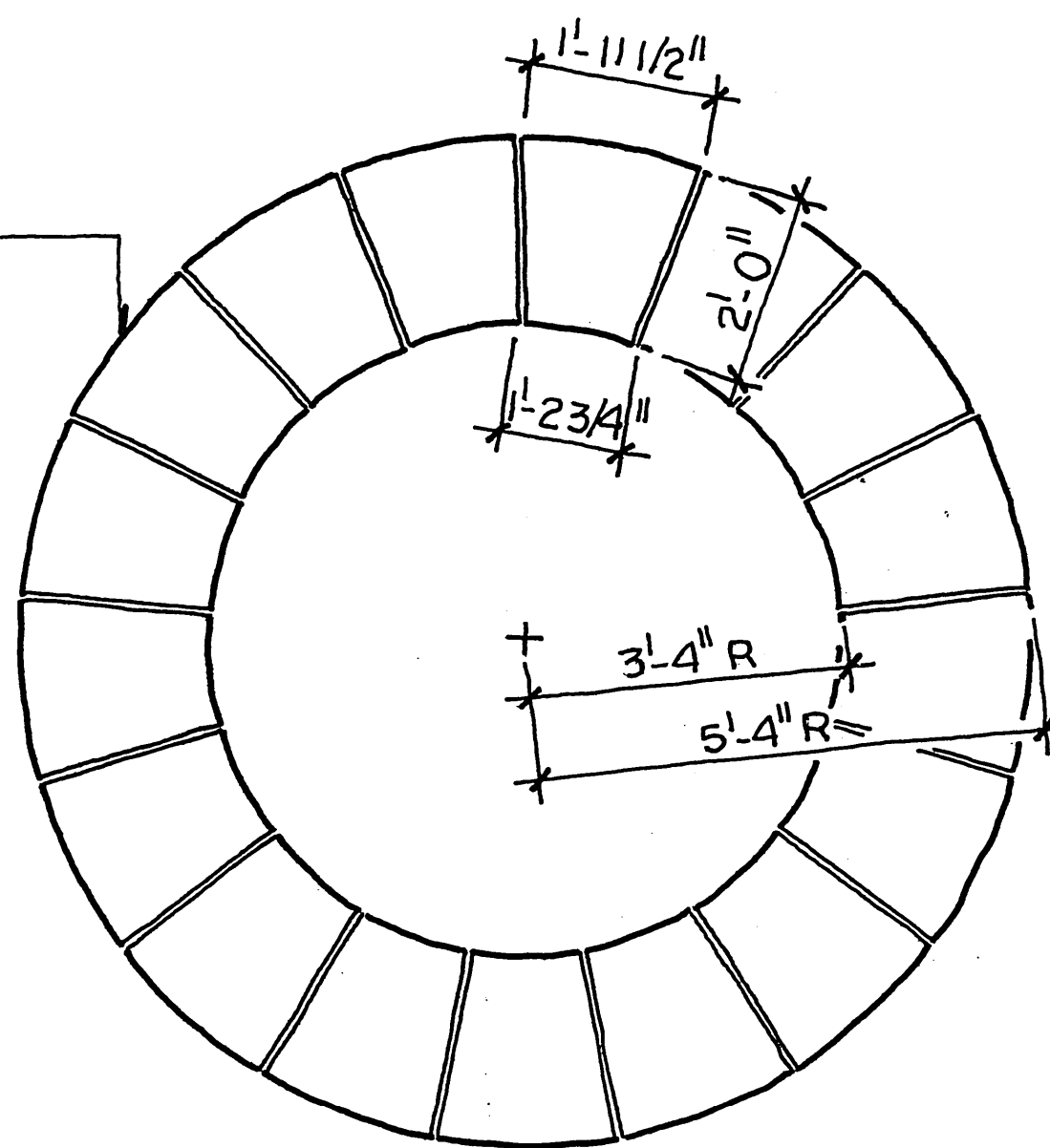




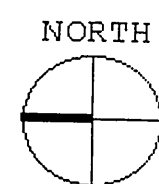
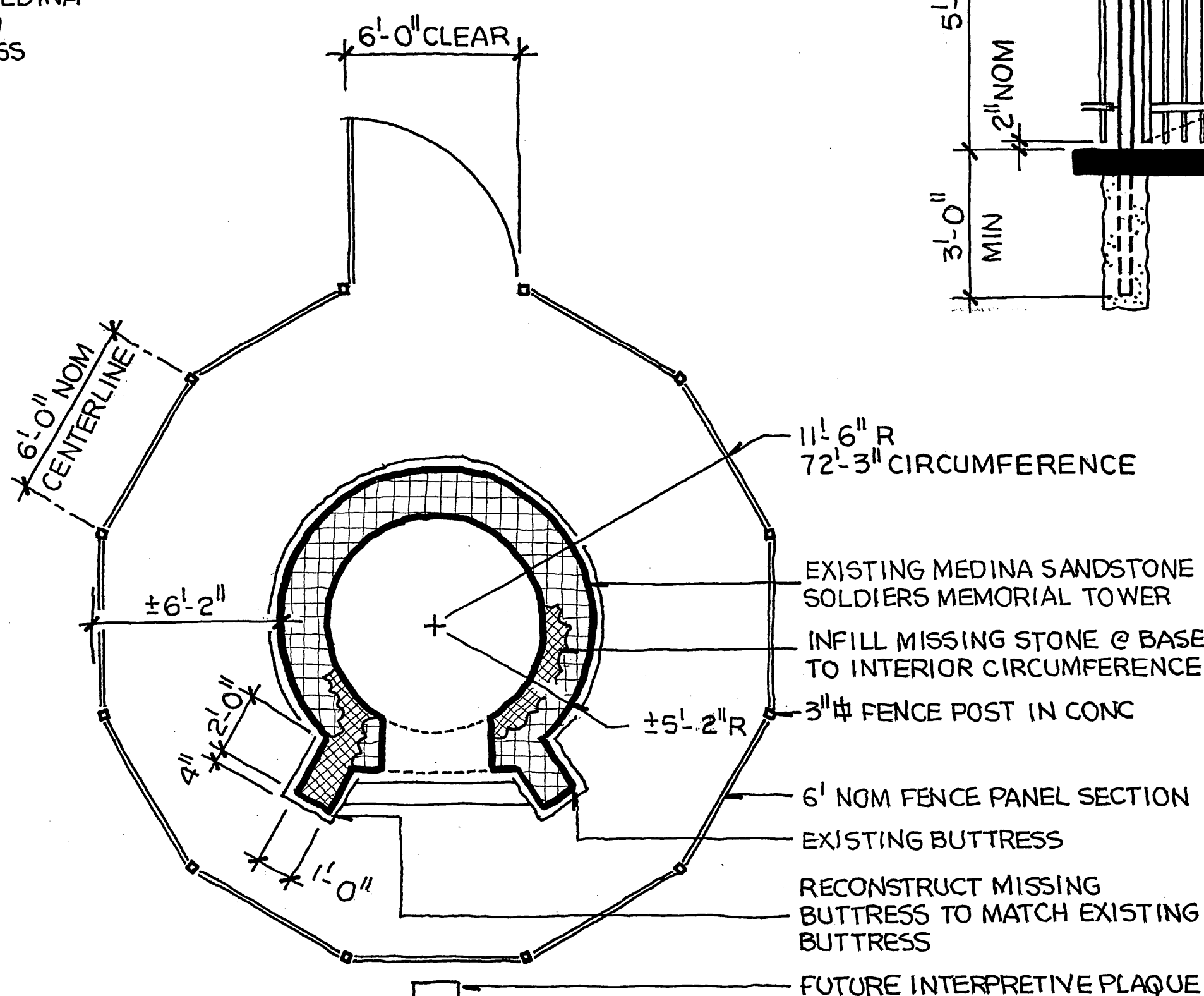
elevation



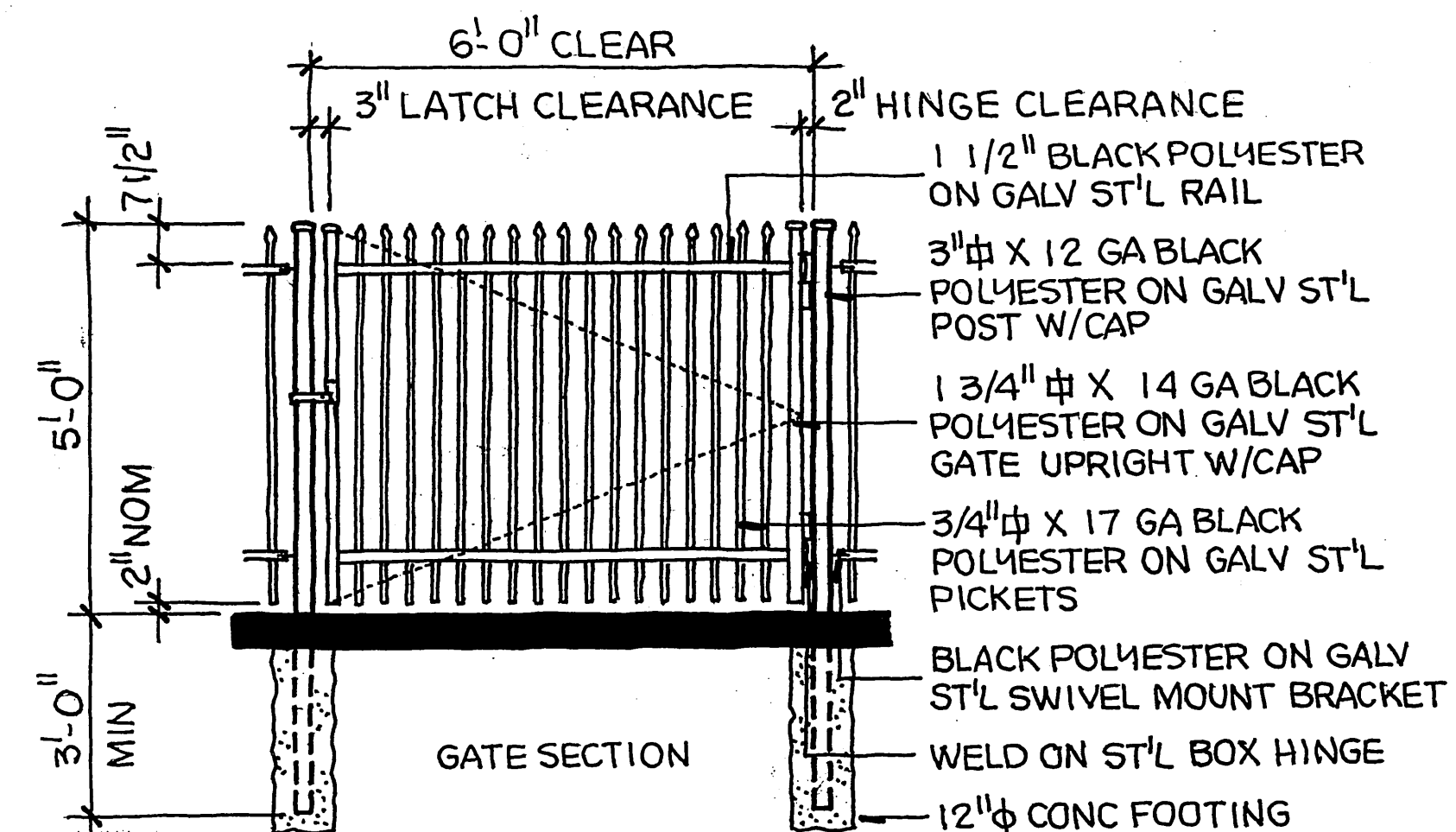
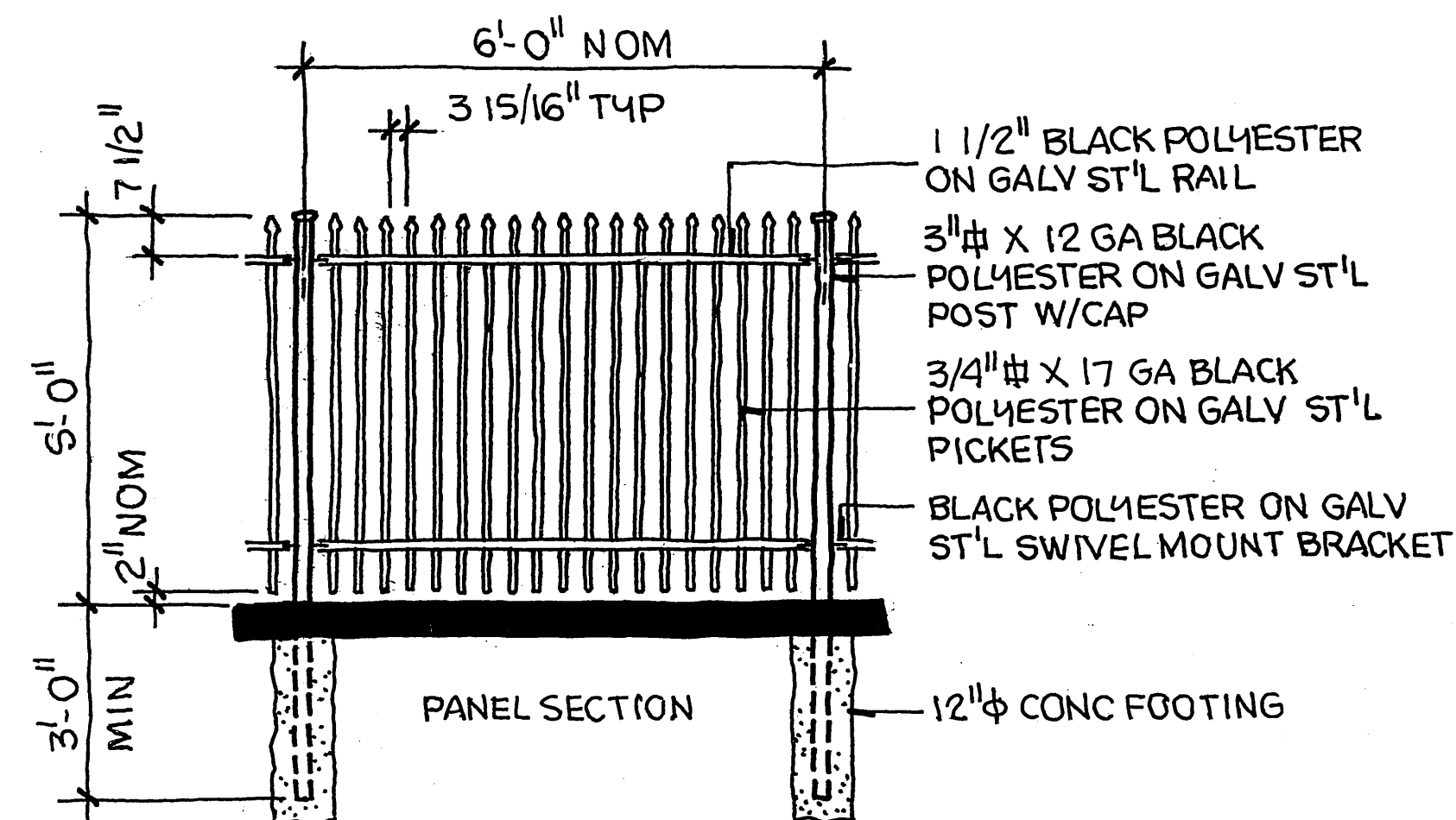
buttress



coping



plan



fence

DATE: 7/2013 SHEET: 1 of 1

**SOLDIERS MEMORIAL TOWER STABILIZATION**

80 Owens Road  
Sweden, New York

**project**

**DAVID STRABEL R.A.**

24 Tudor Road  
Brockport, New York 14420  
585-637-5346

**architect**