

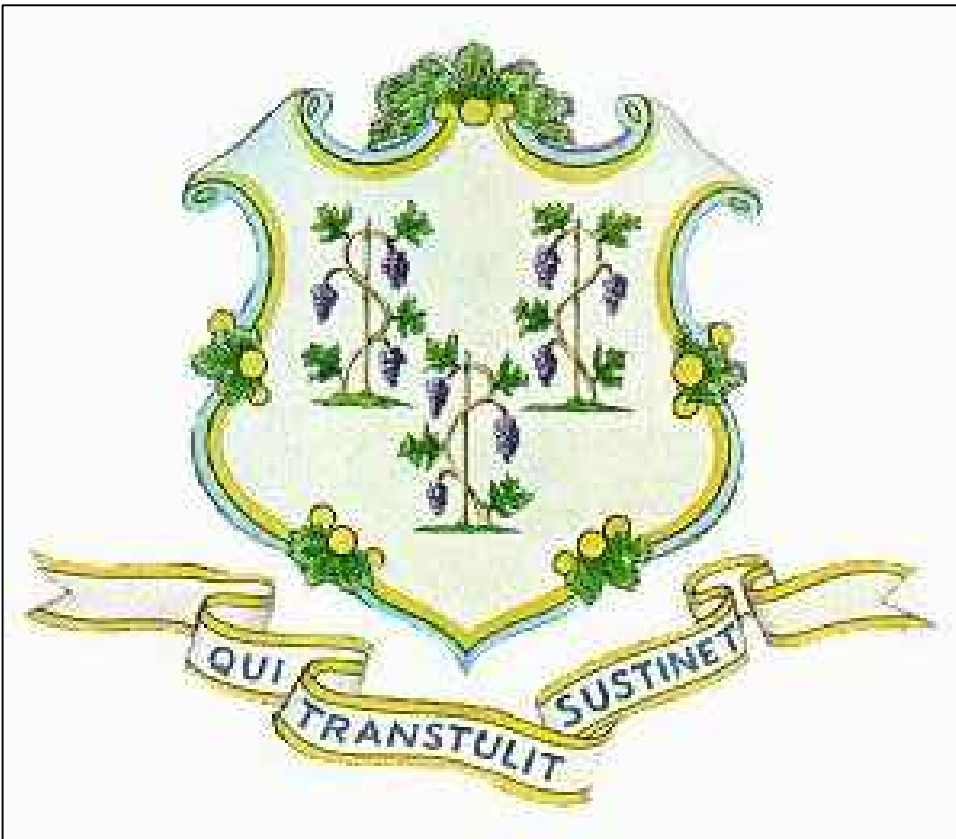
THE STATE OF CONNECTICUT
DEPARTMENT OF HOUSING (DOH)
COMMUNITY DEVELOPMENT BLOCK GRANT - DISASTER RECOVERY (CDBG-DR)
OWNER OCCUPIED REHABILITATION and REBUILDING PROGRAM (OORR)



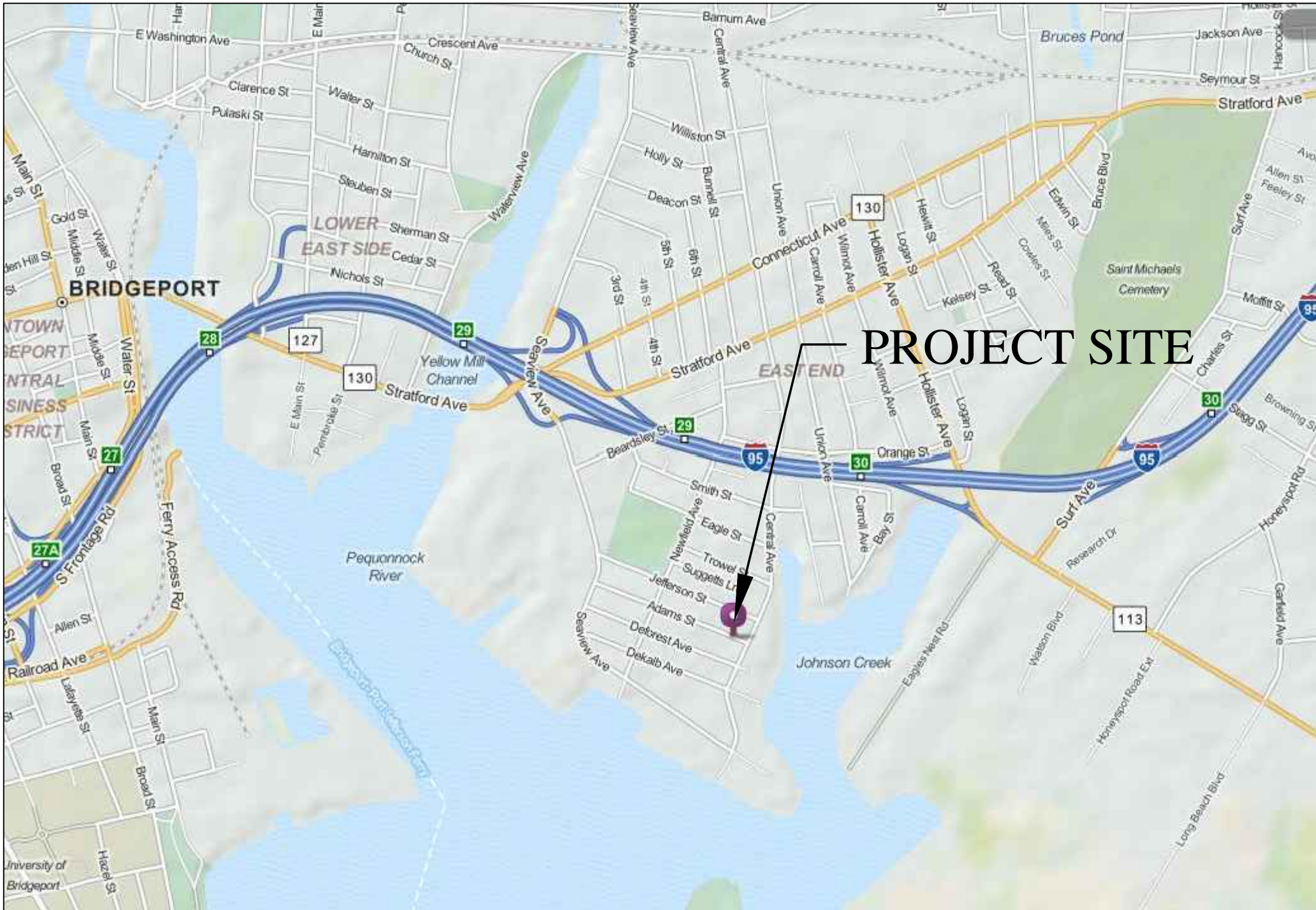
July 28, 2015

csa project 1347-45

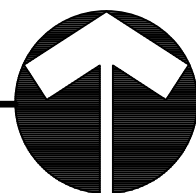
Issued for:
Bidding and Construction



Lloyd Residence Rehabilitation
and Mitigation
Application No. 2433
261 Adams Street
Bridgeport, CT 06607



LOCATION PLAN
not to scale



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PO Box 1167
425 Sullivan Avenue
South Windsor, CT 06074
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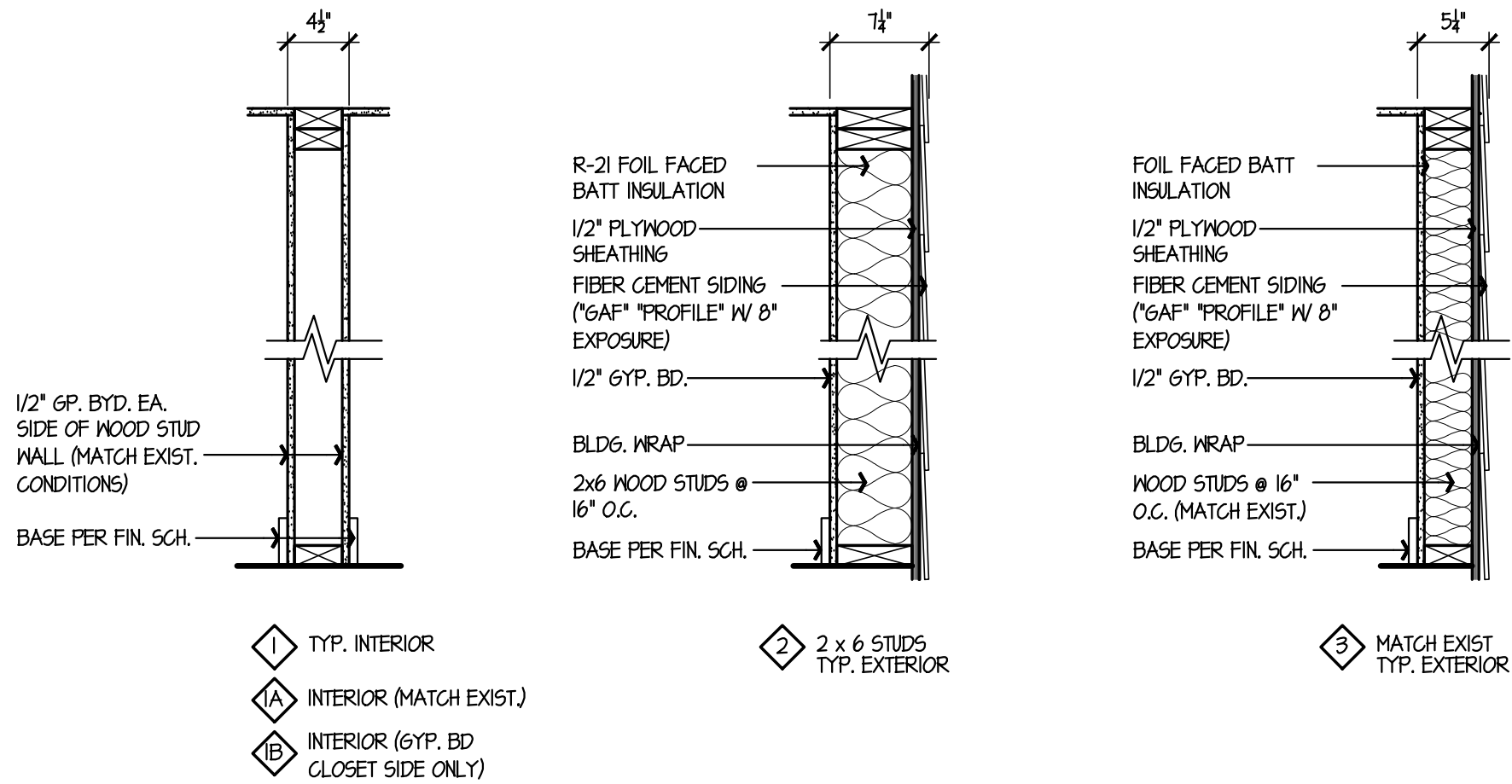
Environmental Consultant
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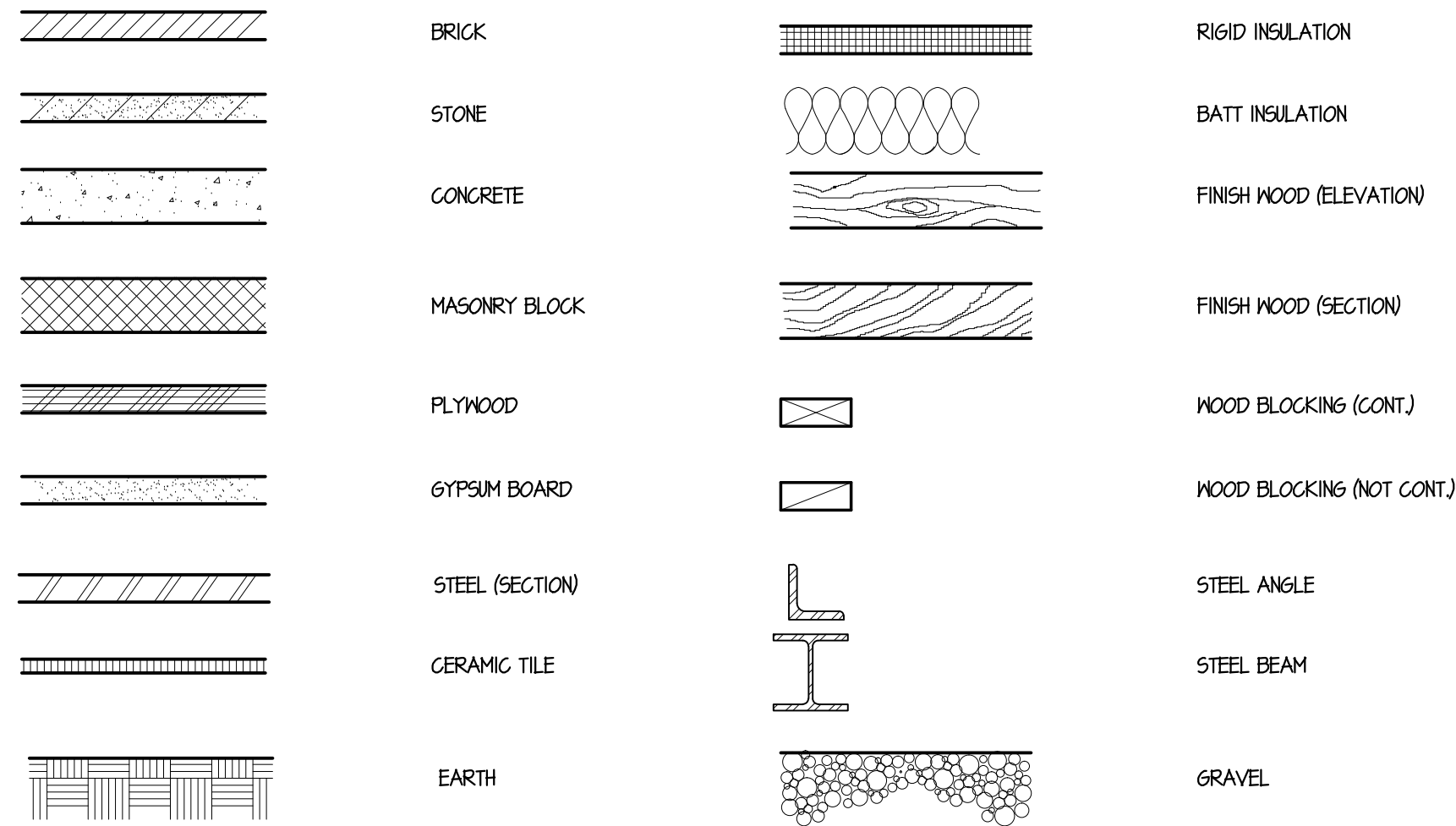
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Consulting Engineering Services
811 Middle Street
Middletown, CT 06457
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THE STATE OF
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HOUSING (DOH)
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DEVELOPMENT BLOCK
GRANT - DISASTER
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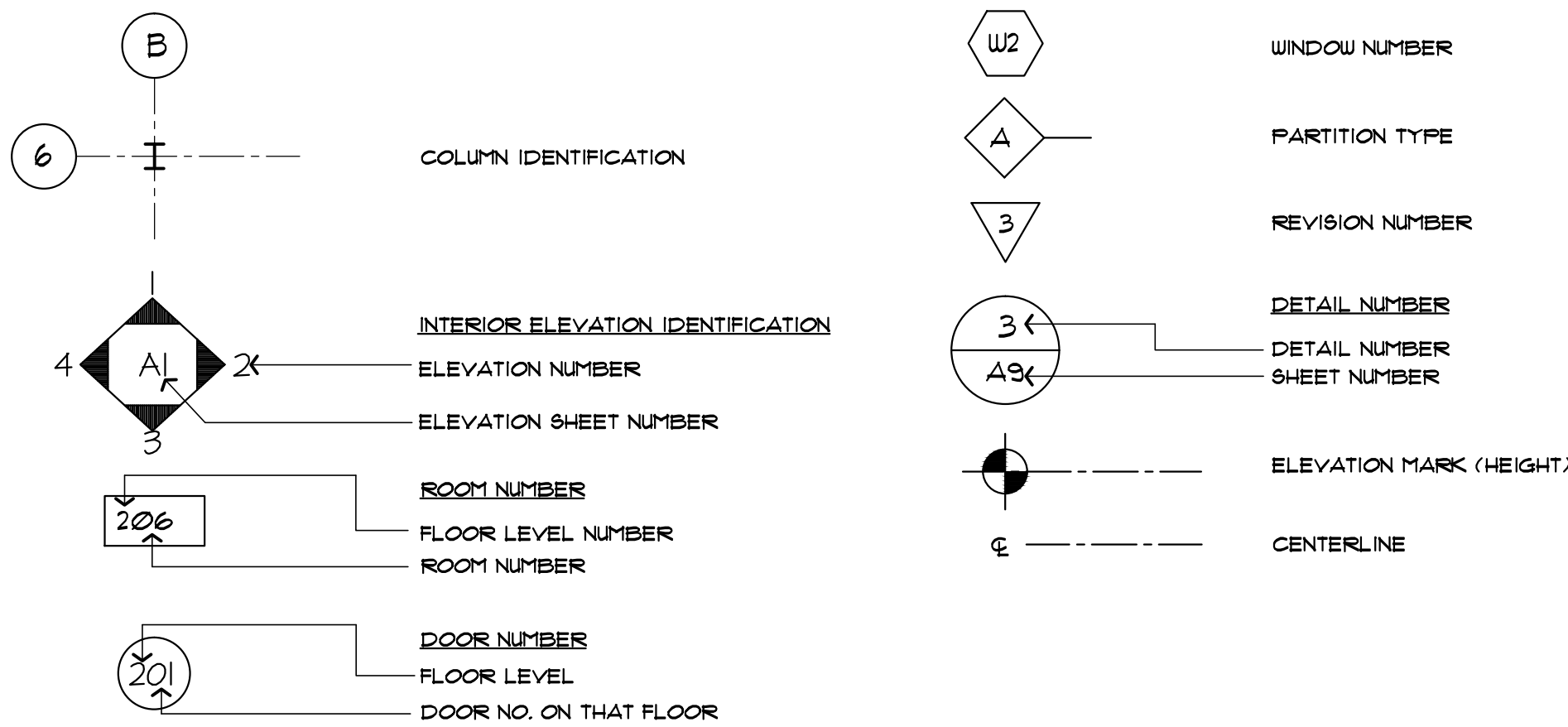
GENERAL
RENOVATIONS for the
LLOYD RESIDENCE
APPLICATION No. 2433
261 Adams Street
Bridgeport, CT 06607



5
A-0.0
PARTITION TYPES
NO SCALE



4
A-0.0
MATERIALS LEGEND
NO SCALE



3
A-0.0
SYMBOLS LEGEND
NO SCALE

A.C.T. ACOUST. ALT. ALUM. ARCH. ASB. A.T. @	ACOUSTICAL CEILING TILE ACOUSTIC ALTERNATE ALUMINUM ARCHITECTURAL ASBESTOS ASPHALT TILE AT	I.D. INSUL. JAN. JT. L.A.M. L.P. L.C.K.R.	INSIDE DIAMETER INSULATION JANITOR JOINT LAMINATED LOW POINT LOCKER
B.G. B.D. B.F. B.L.D.G.	BRICK COURSE BOARD BOTTOM OF FOOTING BUILDING	M.A.S. M.A.T. M.A.X. M.C. M.E.C.H. M.E.M. M.F.R. M.I.N. M.I.R. M.I.S.C. M.O.	MASONRY MATERIAL MAXIMUM MASONRY COURSE MECHANICAL MEMBRANE MANUFACTURER MINIMUM MIRROR MISCELLANEOUS MASONRY OPENING
C.A.B. C/C C.T. C.J. C.L. C.L.G. C.O. C.O.L. C.O.M.P. C.O.N.C. C.O.N.N. C.O.N.T. C.O.R.R. C.O.S.K.	CABINET CENTER TO CENTER CERAMIC TILE CONTROL JOINT CENTER LINE CEILING CASED OPENING COLUMN COMPACTED CONCRETE CONNECTION CONTINUOUS CORRIDOR COUNTERSINK	N.I.C. N.O. N.T.S. O/C O.D. O.P.N.G. O.P.P.	NOT IN CONTRACT NUMBER NOT TO SCALE ON CENTER OUTSIDE DIAMETER OPENINGS OPPOSITE
D.F. D.E.T. D.W.G. D.N. D.P.	DRINKING FOUNTAIN DETAIL DRAWING DOWN DAMP-PROOFING	P.E.R.F. P.N.T.D. P.T.	PERFORATED PAINTED PRESSURE TREATED
E.L.E.C.T. E.J. E.L.E.V. E.P. E.Q.U.I.P. E.W.C. E.X.P.	ELECTRICAL EXPANSION JOINT ELEVATION (ELEVATOR) ELECTRICAL PANEL EQUIPMENT ELECTRIC WATER COOLER EXPOSURE (EXPANSION)	R. R.B. R.E. R.E.I.N.F. R.L. R.M.	RISER (RADIUS) RUBBER BASE REFERENCE REINFORCING RAIN LEADER ROOM
F.A.P. F.D. F.E. F.H.G. F.I.N. F.L. F/M F/F F.D.N. F.R. F.T.G.	FIRE ALARM PANEL FLOOR DRAIN FIRE EXTINGUISHER FIREHOSE CABINET FINISH FLOOR FACE OF MASONRY FACE OF FRAMING FOUNDATION FIRE RATED FOOTING	S.I.M. S.P.E.C. S.T.L. S.T.R.U.C.T. S.T.O.R. S.U.S.P.	SIMILAR SPECIFICATION STEEL STRUCTURAL STORAGE SUSPENDED
G.M.U. G.A.L.V. G.L. G.L.Z. G.Y.P. BD.	GLAZED MASONRY UNIT GALVANIZED GLASS GLAZING GYPSUM WALL BOARD	T.E.R.R. T.&G. T.H.R.E.S.H. T. T/S T/S.T.L. T/W T.Y.P.	TERRAZZO (TERRACE) TONGUE AND GROOVE THRESHOLD TREAD TOP OF SLAB TOP OF STEEL TOP OF WALL TYPICAL
H.G.T. H.M. H.P. H.W.D. H.W.R.	HEIGHT HOLLOW METAL HIGH POINT HARDWOOD HARDWARE	V.C.T. V.B. V.E.R.T. V.E.S.T. V.I.F. V.W.C.	VINYL COMPOSITE TILE VINYL BASE VERTICAL VESTIBULE VERIFY IN FIELD VINYL WALL COVERING
		W/ W.C. W.D. W.I.N.D. W.P.	WITH WATER CLOSET WOOD WINDOW WATERPROOFING

2
A-0.0
ABBREVIATIONS
NO SCALE

- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH APPLICABLE STATE OF CONNECTICUT BUILDING AND FIRE CODES AND SAFETY CODES. BEFORE WORK BEGINS CONTRACTOR IS TO CONTACT CALL BEFORE YOU DIG AT 1-800-922-4455 TO LOCATE ALL UNDERGROUND UTILITIES.
- WORK PERMITS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL SECURE ALL REQUIRED LOCAL AND STATE OF CONNECTICUT PERMITS PRIOR TO COMMENCING WORK. ALL COSTS OF SECURING PERMITS SHALL BE PAID BY THE OWNER.
- ALL MATERIALS AND EQUIPMENT THAT WILL BE USED IN THE CONSTRUCTION OF THIS PROJECT ARE SUBJECT TO THE APPROVAL OF THE OWNER. ALL MATERIALS AND EQUIPMENT REQUIRED BY NOTES OR SPECIFICATIONS SHALL BE SUBMITTED IN THE FORM OF SAMPLES AND SHOP DRAWINGS FOR APPROVAL BY ARCHITECT. WHERE COLOR SELECTIONS ARE MADE, COMPLETE SAMPLES SHALL BE FURNISHED TO THE ARCHITECT.
- ALL EXISTING OR NEW CONSTRUCTION DISTURBED OR DAMAGED DURING THE COURSE OF THIS WORK SHALL BE RESTORED TO MATCH EXISTING ADJACENT SURFACES OR ORIGINAL CONSTRUCTION.
- PRECAUTION MUST BE EXERCISED AT ALL TIMES FOR THE PROTECTION OF PERSONS AND PROPERTY. THE SAFETY PROVISIONS OF APPLICABLE LAWS AND CONSTRUCTION CODES MUST BE OBSERVED. CONTRACTOR SHALL TAKE OR CAUSE TO BE TAKEN SUCH ADDITIONAL SAFETY AND HEALTH MEASURES AS ARE REASONABLY NECESSARY. MACHINERY, EQUIPMENT AND OTHER HAZARDS GUARDED IN ACCORDANCE WITH SAFETY PROVISIONS OF THE "MANUAL OF ACCIDENT PREVENTION IN CONSTRUCTION" PUBLISHED BY THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA, TO THE EXTENT THAT SUCH PROVISIONS ARE NOT IN CONTRADICTION OF APPLICABLE LAWS.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT AND PRESERVE IN OPERATIONAL CONDITION ALL UTILITIES TRAVERSING THE WORK AREA. DAMAGE TO ANY UTILITY DUE TO WORK UNDER THIS CONTRACT SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER AT NO ADDITION COST TO THE OWNER. UTILITY SHUT DOWNS MUST BE COORDINATED WITH THE OWNER.
- EACH BIDDER WILL BE HELD TO HAVE EXAMINED THE PREMISES AND SATISFIED HIMSELF WITH THE CONDITIONS WHICH WOULD IN ANY MANNER AFFECT THE WORK UNDER THE CONTRACT AND NO LATER CLAIMS FOR EXTRA COMPENSATION FOR LABOR, MATERIALS AND EQUIPMENT WHICH COULD HAVE BEEN FORSEEN BY SUCH EXAMINATION WILL BE RECOGNIZED.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASUREMENTS FOR HIS WORK AT THE SITE AND SHALL VERIFY ALL MEASUREMENTS AND DIMENSION GIVEN ON THE DRAWINGS. DO NOT SCALE DRAWINGS.
- DO NOT PROCEED WITH CHANGE IN SCOPE OF WORK WITHOUT WRITTEN APPROVAL FROM OWNER OR ARCHITECT.
- ALL DEMOLITION SHOWN ON THESE DRAWINGS IS DIAGRAMMATIC. CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION AND RELOCATION WORK NECESSARY TO PROPERLY COMPLETE THE PROJECT, REGARDLESS IF DEMOLITION WORK IS SHOWN OR NOT ON DRAWINGS.
- THE CONTRACTOR IS RESPONSIBLE FOR LEGAL DISPOSAL OF ALL CONSTRUCTION WASTE AND REMOVED ELEMENTS, UNLESS NOTED OTHERWISE ON DRAWINGS. DEBRIS SHALL BE DISPOSED OF ON A DAILY BASIS.
- THE CONTRACTOR SHALL PROVIDE ALL STRUCTURAL SHORINGS, BRACING AND SHEATHING AS REQUIRED FOR SAFETY AND FOR PROPER EXECUTION OF WORK AND HAVE SAME REMOVED WHEN WORK IS COMPLETED.
- THE OWNER RETAINS THE RIGHT TO SALVAGE ANY DEMOLISHED OR CONTRACTOR REMOVED MATERIAL(S). CONTACT OWNER BEFORE REMOVAL FROM SITE

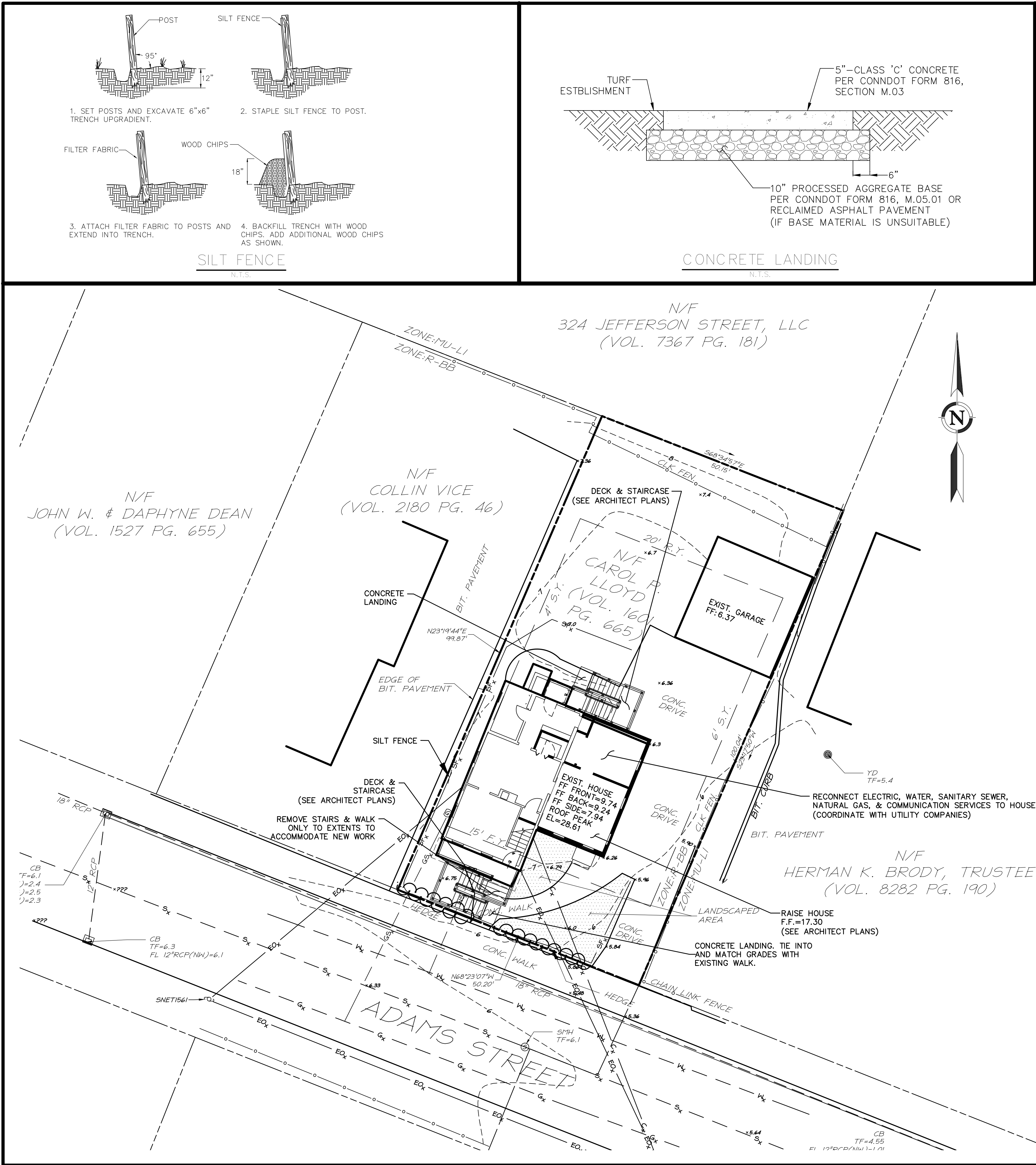
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A-0.0
GENERAL CONSTRUCTION and DEMOLITION NOTES
NO SCALE

date	description	no.
revisions		

GENERAL
INFORMATION

A-0.0

date	28 JULY 2015
drawn	NMF
scale	AS SHOWN
checked	JP/DH
project no.	1347-45
application no.	2433



Zoning Information			
ZONE: R-BB Residential			
ITEM	REQUIRED	EXISTING CONDITIONS	PROPOSED CONDITIONS
Minimum Lot Area	7,500 s.f.	5,013 s.f. *	5,013 s.f. *
Minimum Lot Frontage	60 feet	50.20 feet	50.20 feet
Minimum Front Yard Setback	15 feet	9.0 feet **	9.0 feet **
Minimum Side Yard Setback	(1)	3.1 feet **	3.1 feet **
Minimum Rear Yard Setback	20 feet ***	49.5 feet	49.5 feet
Maximum Building Height to ridge of roof	35 feet	28.6 feet	36.2 feet
Maximum Site Coverage	70%	56.3%	53.6%
Maximum Building Coverage	55% ****	28.1%	28.1%

- (1) Minimum side lot line from one side is 6'. Both sides shall add up to 20% of the lot width.
- * Property is existing non-conforming with regards to minimum lot area requirements.
- ** Property is existing non-conforming with regards to front and side yard setback requirements.
- *** Rear yard setback is 20 feet minimum or 20% of the lot depth.
- **** Maximum building coverage is 55% not to exceed 4,125 square feet.

LEGEND	
EXISTING	DESCRIPTION
COMMUNICATION	
C _x	OVERHEAD COMM. LINES (CABLE, TEL, ETC.)
DOMESTIC WATER	
W _x	WATER MAIN
WS _x	WATER SERVICE
⊠	WATER VALVE
⚡	FIRE HYDRANT
LIGHTING	
☆	POLE MOUNTED LIGHT
NATURAL GAS	
G _x	GAS MAIN
POWER	
EO _x	ELECTRICAL LINES, OVERHEAD
EU _x	ELECTRICAL LINES, UNDERGROUND
⌚	UTILITY POLE
PROPERTY	
---	PROPERTY LINE
○	IRON PIN
□	MONUMENT
ROADS	
—○—○—○—○—	GUARD RAIL
SITE FEATURES	
x x	BARBED WIRE FENCE
○—○—○—○—	CHAIN LINK FENCE
= =	RAIL FENCE
□ □	STOCKADE FENCE
+ +	WIRE FENCE
⊗ OR ⊙	TREE
—	TREE LINE
SANITARY SEWER	
S _x	SANITARY SEWER MAIN
⊙	SANITARY SEWER MANHOLE
STORM SEWER	
D _x	STORM DRAIN PIPE
⊙	STORM DRAIN MANHOLE
⊠	CURB INLET
⊠	CATCH BASIN
TOPOGRAPHY	
---	CONTOUR
X 61.95	SPOT ELEVATION
WETLANDS	
▲▲▲▲	WETLANDS LINE

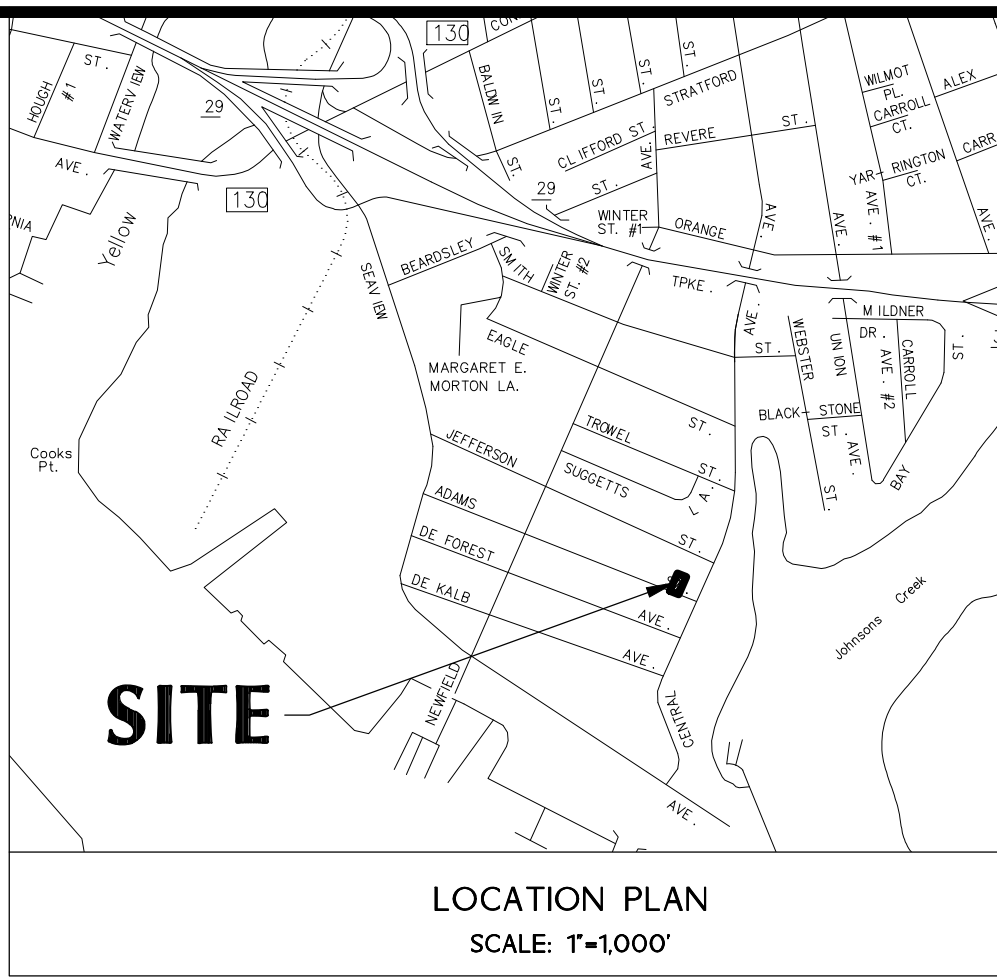
- NOTES:
- PROPERTY IS IN THE R-BB ZONE.
 - LOT IS NON-CONFORMING TO CURRENT ZONING REGULATIONS WITH RESPECT TO FRONT, SIDE AND REAR YARD REQUIREMENTS.
 - PARCEL CONTAINS 5,013 SQUARE FEET OR 0.115 ACRES.
 - HORIZONTAL DATUM IS BASED ON NAD 83 DATUM AND VERTICAL DATUM IS BASED ON NAVD 88 DATUM.
 - PROPERTY DOES FALL WITHIN THE LIMITS OF A FLOOD HAZARD ZONE AS EL 13 AS DEPICTED ON: "FIRM FLOOD INSURANCE RATE MAP CITY OF BRIDGEPORT, CONNECTICUT, FAIRFIELD COUNTY, PANEL 441 OF 626, COMMUNITY PANEL NUMBER 0901004MIG, EFFECTIVE DATE: JULY 8, 2013, PREPARED BY FEDERAL EMERGENCY MANAGEMENT AGENCY FEDERAL INSURANCE ADMINISTRATION.
 - UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES OR GOVERNMENTAL AGENCIES, FROM PAROLE TESTIMONY AND FROM OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED AS APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO DESIGN PROFESSIONALS, INC. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION.
 - CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" FOR UNDERGROUND UTILITY MARKING AT LEAST TWO FULL WORKING DAYS PRIOR TO START OF CONSTRUCTION: 1-800-922-4455 OR WWW.CBDIG.COM.

- MAP REFERENCES:
- BOUNDARY & TOPOGRAPHIC SURVEY PREPARED FOR CAROL P. LLOYD 261 ADAMS STREET BRIDGEPORT, CONNECTICUT 06607 SCALE 1" = 10' SHEET V-1 DATE: 12/10/14 PREPARED BY DESIGN PROFESSIONALS, INC.

- SURVEY NOTES:
- THIS SURVEY AND MAP HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THRU 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.
 - TYPE OF SURVEY IS AN IMPROVEMENT LOCATION SURVEY - RECORD - AND IS INTENDED TO DEPICT THE LOCATION OF IMPROVEMENTS RELATIVE TO PROPERTY LINES.
 - THIS IS A DEPENDENT RESURVEY BASED ON MAP REFERENCE #1.
 - HORIZONTAL ACCURACY MEETS CLASS A-2 STANDARDS AND VERTICAL ACCURACY MEETS CLASS T-2 STANDARDS.

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

LAWRENCE R. GEISSLER, JR., L.S.
12327
LIC. NO.



21 BERRY DRIVE
P.O. BOX 1107
SOUTH WINDSOR, CT 06074
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design professionals
CIVIL & TRAFFIC ENGINEERS / PLANNERS / SURVEYORS
GIS ANALYSTS / LANDSCAPE ARCHITECTS

PREPARED FOR:
CAROL P. LLOYD
261 ADAMS STREET
BRIDGEPORT, CT 06607

PROJECT NO:
3400-2439

DATE 8/14/15	DESIGNED BY MEH	DRAWN BY MEH	CHECKED BY BPW
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PLOT PLAN

SCALE:
1" = 10'

SHEET
P-1

GENERAL STRUCTURAL NOTES

LIVE LOADS

FIRST FLOOR 40 PSF

SNOW LOADS

GROUND SNOW LOAD, Pg = 30 PSF
FLAT/SLOPED ROOF SNOW LOAD, P/ps = 30 PSF

WIND LOADS

IMPORTANCE FACTOR, I = 1.0
WIND EXPOSURE CATEGORY: C
BASIC WIND SPEED = 100 MPH (3 SEC. GUST) BRIDGEPORT, CT

FLOOD HAZARD

- FEMA AE FLOOD ZONE WITH FLOOD ELEVATION OF 13.0 (NAVD 1988 DATUM) FEET PLUS 1-FOOT FREEBOARD. ALL HORIZONTAL STRUCTURE AT LOWEST DECK TO BE AT OR ABOVE FLOOD ELEVATION.
- ALL FRAMING BELOW FLOOD ELEVATION SHALL BE PRESSURE TREATED OR OTHERWISE FLOOD DAMAGE RESISTANT PER FEMA TECHNICAL BULLETIN 2.
- FINISH FLOOR ELEVATION 17.3 PER STATE OF CT DEPT. OF HOUSING COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM REQUIREMENT.

GENERAL

- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE 2009 INTERNATIONAL RESIDENTIAL CODE PORTION OF THE 2005 STATE OF CONNECTICUT STATE BUILDING CODE.
- DIMENSIONS AND DETAILS SHALL BE CHECKED AGAINST ARCHITECTURAL DRAWINGS.
- THE CONTRACTOR SHALL VERIFY AND COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS, SLEEVES AND ANCHORAGE AS REQUIRED BY ALL TRADES. OPENINGS NOT SPECIFICALLY SHOWN SHALL BE APPROVED BY THE ENGINEER.
- FOUNDATION ELEMENTS SHALL BE TEMPORARILY BRACED AGAINST EARTH PRESSURE, WIND AND OTHER LATERAL FORCES.

REINFORCED CONCRETE

- ALL CONCRETE SHALL BE DESIGNED IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE'S BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-02)
- ALL CONCRETE IS DESIGNED BY ULTIMATE STRENGTH METHODS AND SHALL BE NORMAL WEIGHT, AIR ENTRAINED (5% TO 6%) WITH A 28-DAY COMPRESSIVE STRENGTH AS FOLLOWS:

FOUNDATIONS	3,000 PSI
EXTERIOR SLAB ON GRADE	4,500 PSI
- ALL REINFORCING SHALL BE HIGH STRENGTH DEFORMED BARS, ASTM A 615 GRADE 60.
- DETAIL ALL BARS IN ACCORDANCE WITH "ACI DETAILING MANUAL. ON THE PLACING DRAWINGS, SHOW THE NUMBER AND LOCATION OF ALL BAR SUPPORTS AND ACCESSORIES NECESSARY TO SUPPORT REINFORCEMENT IN POSITIONS INDICATED.
- MINIMUM CONCRETE PROTECTION FOR REINFORCEMENT WHEN NOT OTHERWISE INDICATED SHALL BE:

CONCRETE POURED AGAINST EARTH	3"
CONCRETE POURED IN FORMS, BUT EXPOSED TO EARTH OR WEATHER:	
a. BARS #5 AND SMALLER	1-1/2"
b. BARS LARGER THAN #5	2"
- (2) #5 BARS, 1 EACH FACE, WITH 2 FT. PROJECTION AROUND ALL OPENINGS, TYP.
- PIERS SHALL HAVE NO JOINTS IN A HORIZONTAL PLANE.
- EPOXY ADHESIVE TO BE HILTI HIT OR EQUAL.

FOUNDATION

- FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL ENGINEERING INVESTIGATION REPORT FOR PROJECT 15013 DATED JULY 13, 2015 PREPARED BY GNCB CONSULTING ENGINEERS, P.C., OLD SAYBROOK, CT. REFER TO TEST BORING LOCATION PLAN ON DRAWINGS.
- ALL FOOTINGS/GRADE BEAMS SHALL BEAR ON UNDISTURBED NATURAL SAND OR COMPACTED STRUCTURAL FILL HAVING AN ALLOWABLE BEARING VALUE OF 4 KIPS PER SQ. FOOT TOTAL LOAD PRESSURE AND SHALL BEAR AT LEAST 3'-6" MIN. BELOW FINISH GRADE.
- ELEVATIONS OF BOTTOM OF FOOTING SHOWN ON PLANS ARE FOR BIDDING PURPOSES AND SHALL BE LOWERED IF NECESSARY TO THE REQUIRED BEARING MATERIAL AS FOUND UPON EXCAVATION. IF THE REQUIRED BEARING MATERIAL IS NOT ENCOUNTERED AT ELEVATIONS SHOWN, NOTIFY ENGINEER IMMEDIATELY.
- REFER TO GNCB GEOTECHNICAL REPORT AND PROJECT SPECIFICATIONS FOR FILL REQUIREMENTS BELOW THE BUILDING. IN GENERAL, AN OFF-SITE STRUCTURAL FILL IS NEEDED BELOW NEW FOOTINGS TO REPLACE UNSUITABLE MATERIALS. (ALSO REFER TO DIAGRAM ON SHEET S1.1, ENTITLED "LIMITS OF COMPACTED STRUCTURAL FILL BELOW NEW FOOTINGS") GRANULAR FILL MATERIAL IS NEEDED TO FILL ANY AREAS TO BACKFILL NEW FOOTINGS.

STEEL

- STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, MANUAL OF STEEL CONSTRUCTION ALLOWABLE STRESS DESIGN OR LOAD AND RESISTANCE FACTOR DESIGN, AND THE AISC CODE OF STANDARD PRACTICE.
- ALL STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS NOTED OTHERWISE ON THE DRAWINGS:

ANCHOR RODS	ASTM F1554	GRADE 55
MISC. PLATES AND CONNECTION MATERIALS	ASTM A36	Fy 36 ksi
STEEL PIPE COLUMN	ASTM A501	Fy 36 ksi
- ALL WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY (AWS) STRUCTURAL WELDING CODE-STEEL D1.1, LATEST EDITION. USE E70XX ELECTRODES UNLESS NOTED OTHERWISE.
- PROVIDE ALL PLATES, CLIP ANGLES, CLOSURE PIECES, STRAP ANCHORS, MISC. PIECES, AND HOLES REQUIRED TO COMPLETE THE STRUCTURE.
- ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIP GALVANIZED.
- BOLTS TO BE GALVANIZED.

WOOD

- ALL FRAMING LUMBER SHALL BE DRY (19% MAXIMUM MOISTURE CONTENT) DOUGLAS-FIR #2 OR BETTER, WITH THE FOLLOWING ALLOWABLE UNIT STRESSES:

BENDING, REPETITIVE USE	Fb =	1,035 psi
BENDING, SINGLE USE	Fb =	900
TENSION PARALLEL TO GRAIN	Ft =	575
COMPRESSION PARALLEL TO GRAIN	Fc (Par.) =	1,350
SHEAR PARALLEL TO GRAIN	Fv =	180
COMPRESSION PERPENDICULAR TO GRAIN	Fc (Per.) =	625
MODULUS OF ELASTICITY	E =	1,700,000
- WHERE FRAMING CLIPS OR JOIST HANGERS ARE USED, FASTENERS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.
- FOR PLYWOOD NAILED TO FRAMING, 10d NAILS SHALL BE SPACED AT 4"oc, UNLESS NOTED OTHERWISE AT EDGES, 10" OC AT INTERMEDIATE SUPPORTS, UNLESS SHOWN OTHERWISE.
- ALL OPENINGS SHALL BE FRAMED WITH DOUBLE MEMBERS UNLESS OTHERWISE NOTED ON PLANS.
- ALL ENGINEERED LUMBER SHALL CONFORM WITH THE FOLLOWING ALLOWABLE UNIT STRESSES UNLESS OTHERWISE NOTED:

LAMINATED VENEER LUMBER (LVL)	E =	1,900,000 psi
MODULUS OF ELASTICITY, MIN.	Fb =	2,600
BENDING, SINGLE USE	Fc (Par) =	2,510
COMPRESSIONAL PARALLEL TO GRAIN	Fv =	285
HORIZONTAL SHEAR	Fc (Per) =	750
COMPRESSION PERPENDICULAR TO GRAIN/ PARALLEL TO GLUE LINE	Ft =	1,555
- BUILT-UP LVL'S TO BE CONSTRUCTED PER MANUFACTURER'S SPECIFICATIONS.
- ALL PENETRATIONS THROUGH ENGINEERED LUMBER SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO PROCEEDING.
- ALL EXPOSED STAIR LANDING/STAIRS/DECK/PORCH FRAMING TO BE PRESSURE TREATED WOOD.
- FRAMING CONNECTORS AND NAILS AT EXPOSED DECK TO BE STAINLESS STEEL, OR OTHER FINISH APPROVED BY ENGINEER.

NAILING SCHEDULE - UNLESS OTHERWISE NOTED

CONNECTION	NAILING
JOIST TO SILL OR GIRDER, TOE NAIL	3-8d
BRIDGING TO JOIST, TOE NAIL EACH END	2-8d
SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL	16d AT 16"oc
TOP PLATE TO STUD, END NAIL	2-16d
STUD TO SOLE PLATE, TOE NAIL	4-8d
DOUBLED STUDS, FACE NAIL	16d AT 24"oc
DOUBLED TOP PLATES, FACE NAIL	16d AT 16"oc
TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2-16d
CONTINUOUS HEADER, TWO PIECES	16d AT 16"oc
	ALONG EACH EDGE
CEILING JOISTS TO PLATE, TOE NAIL	3-8d
CONTINUOUS HEADER TO STUD, TOE NAIL	4-8d
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3-16d
CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3-16d
RAFTER TO PLATE, TOE NAIL	3-8d
BUILT-UP CORNER STUDS	16d AT 24"oc
BUILT-UP GIRDER AND BEAMS (U.O.N.)	20d AT 32"oc AT TOP
	AND BOTTOM AND STAGGERED
	2-20d AT ENDS AND AT
	EACH SPLICE

PLYWOOD: UNLESS OTHERWISE NOTED

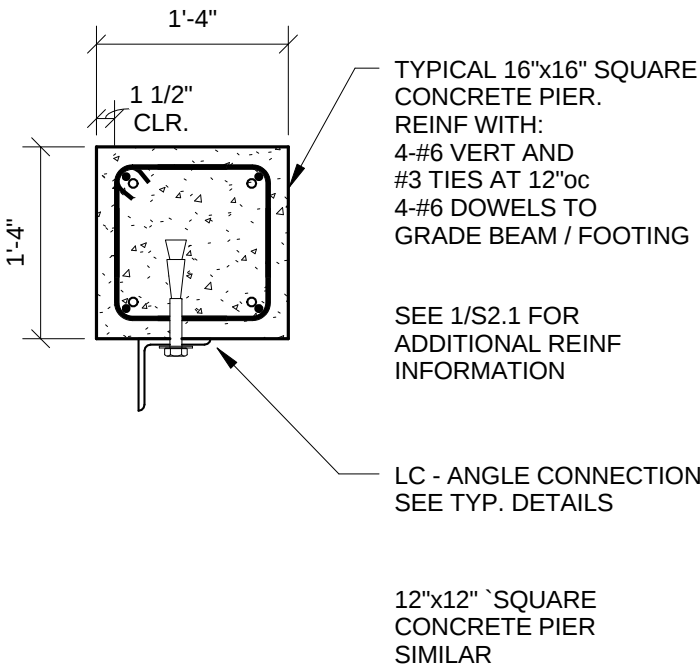
APA SUBFLOOR SHEATHING	
3/4" T&G STURD-I-FLOOR	8d
WALL SHEATHING 1/2"	10d
ROOF SHEATHING 5/8"	8d

NOTES:

SCHEDULE BASED UPON COMMON WIRE NAILS.
LARGER NAIL SIZES REQUIRED FOR BOX OR PNEUMATIC DRIVEN FASTENERS.
SUBSTITUTING PNEUMATIC NAILS OF EQUAL DIAMETER OR LARGER IS ACCEPTABLE.
SUBMIT PRODUCT DATA AND ALL PERTINENT EVALUATION REPORTS FOR ALL PROPOSED FASTENERS IF DIFFERENT THAN INDICATED ON THE STRUCTURAL DRAWINGS.

COMMON WIRE NAIL DIAMETERS

6d	0.113"
8d	0.131"
10d	0.148"
12d	0.148"
16d	0.162"
20d	0.192"

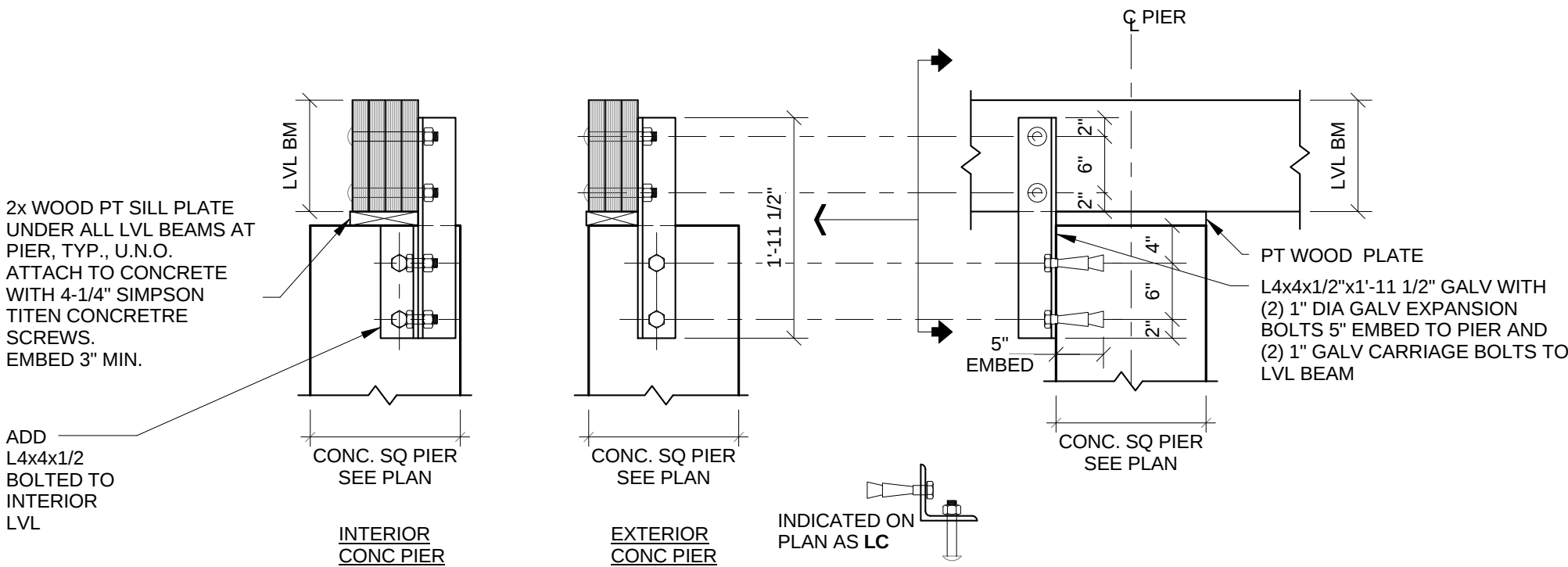


16"x16" CONCRETE PIER PLAN VIEW

APPLY AT ALL TYPICAL AND SIMILAR CONDITIONS

FRAMING CONDITION	CONNECTOR	COMMENTS	GRAPHIC
JOISTS FRAMING TO LEDGER ON FLOOR RIM	LEDGERLOKS AT STAGGERED TOP AND BOTTOM 8"oc		
DECK POST BASE			
TYPICAL EXTERIOR BASE OF STAIR FRAMING			

TYPICAL FRAMING DETAILS



BEAM TO CONCRETE PIER CONNECTION (ANGLE)

REVISED: AUG. 12, 2015



THE STATE OF
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REBUILDING PROGRAM
(OORR)

GENERAL
RENOVATIONS for the
LLOYD RESIDENCE
APPLICATION No.
2433
261 Adams Street
Bridgeport, CT 06607

Consultants:



date	description	no.
	revisions	

GENERAL NOTES & TYPICAL DETAILS

S1.0

date	JULY 24, 2015
drawn	RLB
scale	As indicated
checked	CCB
project no.	1347-45
application no.	2433

GNCB# 15013

THE STATE OF
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2433
261 Adams Street
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Consultants:

GNCB	130 ELAM STREET POST OFFICE BOX 802 OLD SAYBROOK CONNECTICUT 06475 PHONE: 860.388.1224 FAX: 860.388.4613 GNCBENGINEERS.COM
Consulting Engineers, P.C.	
date	description
revisions	no.

NOTE:
DIMENSIONS SHOWN ON THE
STRUCTURAL DRAWINGS ARE
OBTAINED FROM THE ARCHITECTURAL
DRAWINGS AND ARE INCLUDED AS
INFORMATION COMPLEMENTARY TO
THE ARCHITECTURAL DRAWINGS.

LAYOUT OF THE BUILDING FOUNDATION
OR OTHER ITEMS MAY BE MADE USING
THE DIMENSIONS SHOWN ON THE
STRUCTURAL DRAWINGS ONLY IF THE
CONTRACTOR HAS COMPARED THESE
DRAWINGS WITH THE ARCHITECTURAL
DRAWINGS AND HAS RECEIVED
CLARIFICATION FROM THE ARCHITECT
REGARDING ANY ERRORS, INCONSISTENCIES
OR OMISSIONS.

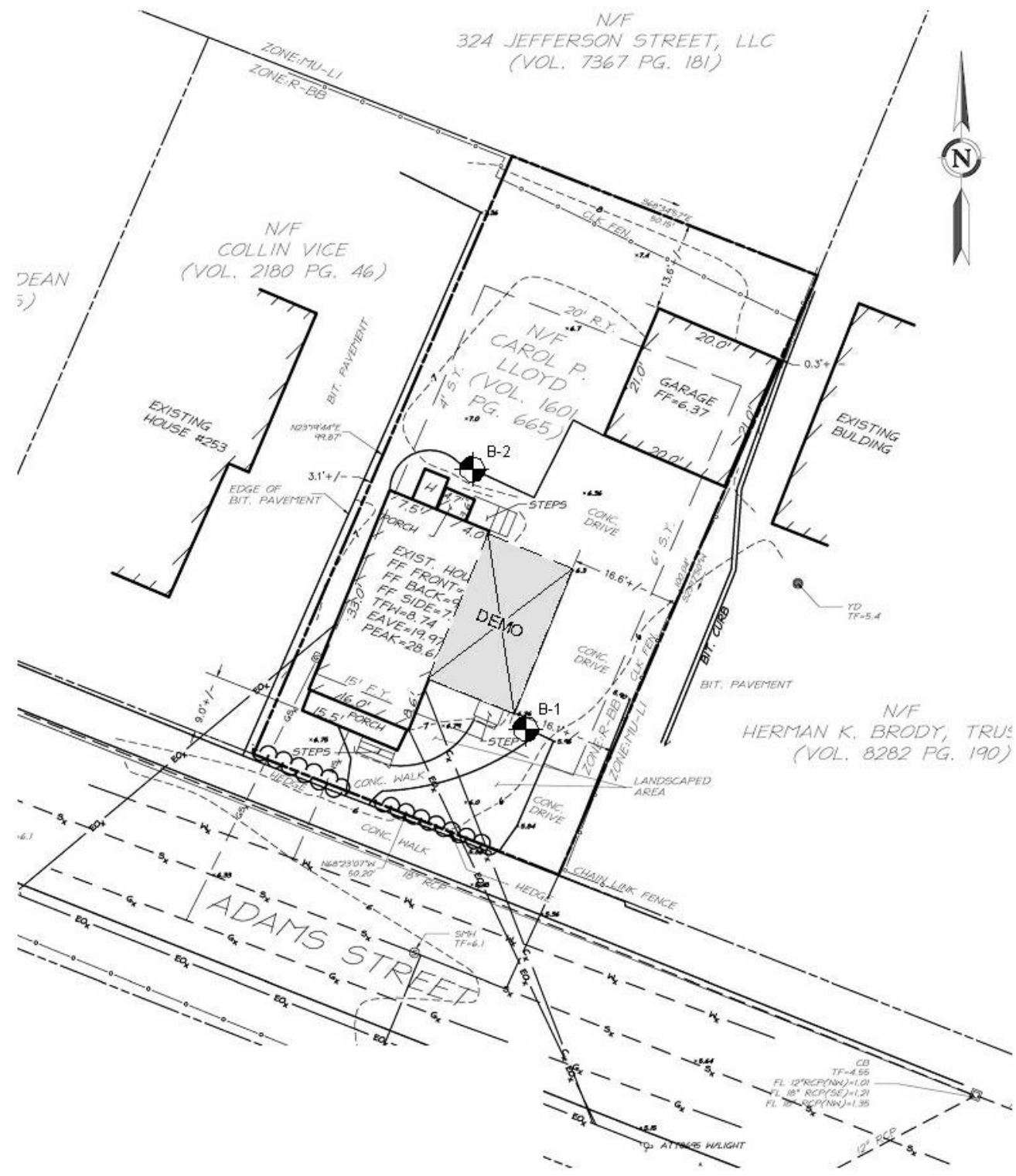
THE CONTRACTOR SHALL CHECK ALL DIMENSIONS
AND DETAILS AGAINST THE ARCHITECTURAL
DRAWINGS AND FIELD CONDITIONS.

NOTE: REMOVE ALL OLD
FOUNDATIONS ONCE
BUILDING IS LIFTED.

FOUNDATION PLAN +
TEST BORING LOCATION PLAN

S1.1

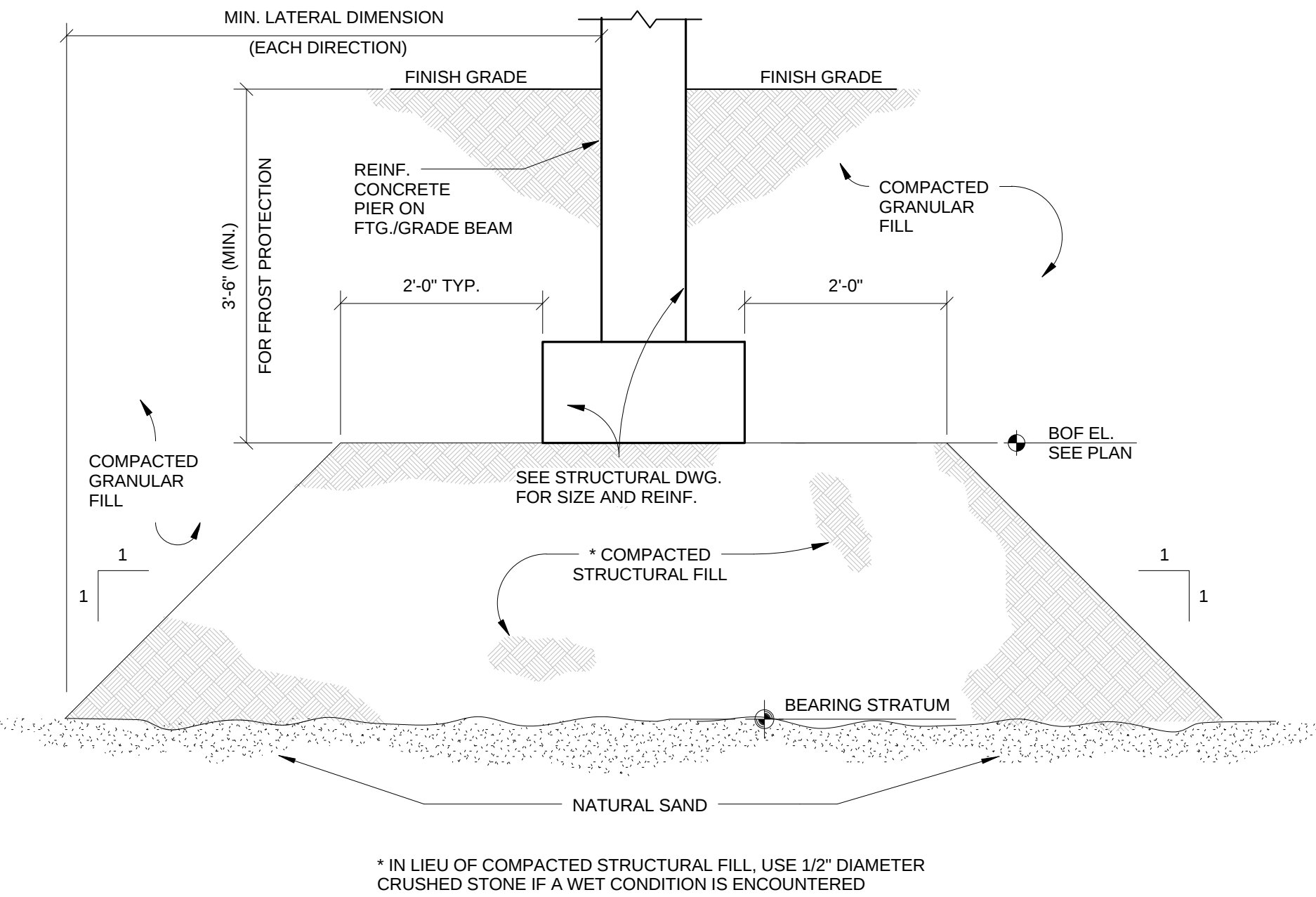
date	JULY 24, 2015
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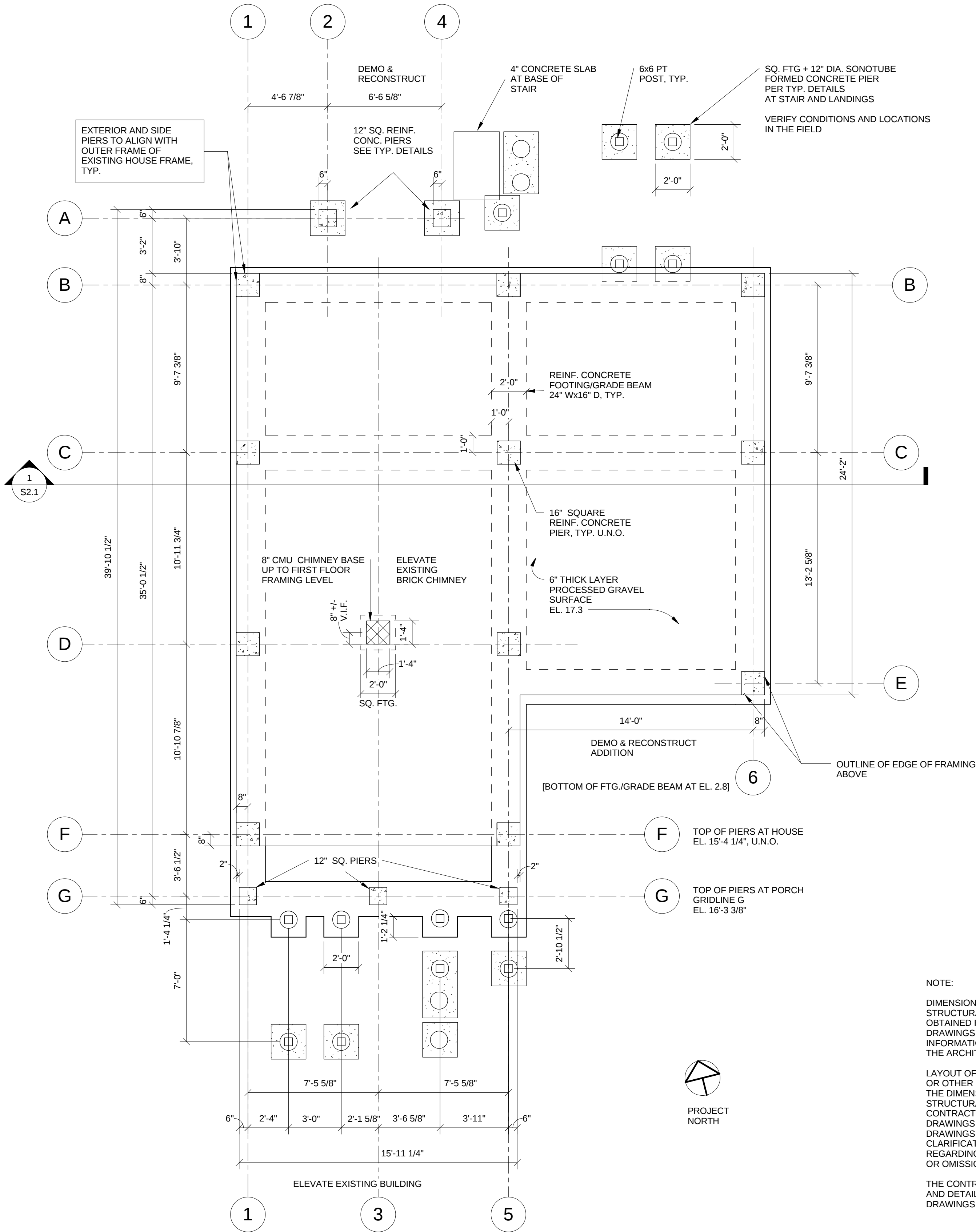
LEGEND
TEST BORING INFORMATION

B-X	B-1	B-2
ELEVATION TOP OF :	ELEVATION TOP OF :	ELEVATION TOP OF :
X GROUND SURFACE	7.0	6.5
X SAND	1.0	1.5
X GROUND WATER LEVEL	2.0	0.5

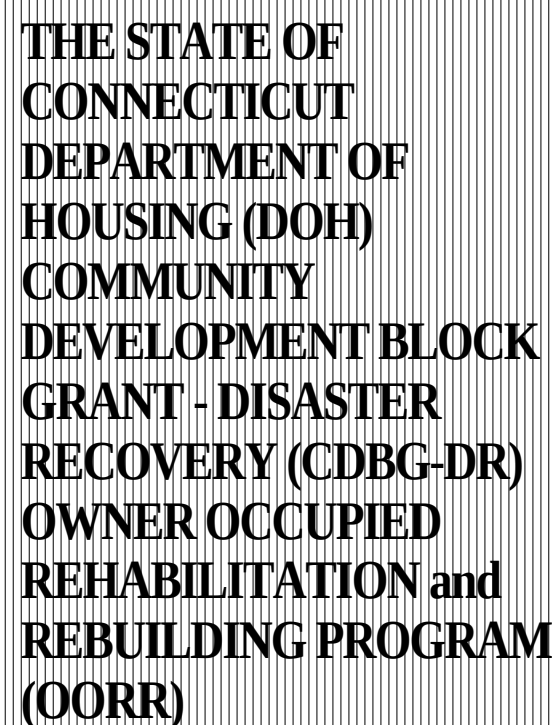
TEST BORING PLAN



LIMITS OF COMPACTED STRUCTURAL FILL
BELOW FOOTINGS/GRADE BEAMS



FOUNDATION PLAN
1/4" = 1'-0"



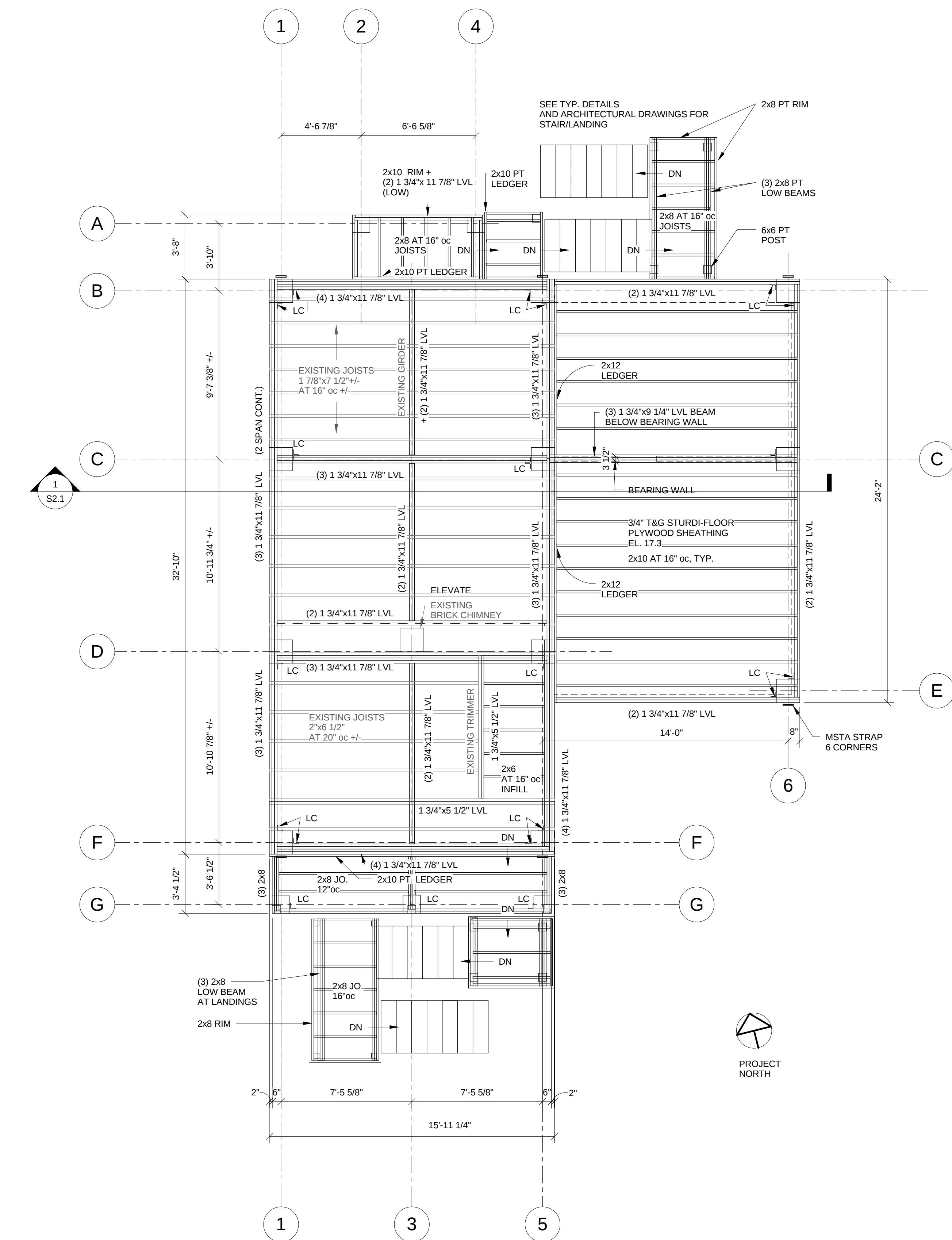
Consultants:

GNCB  130 ELM STREET
 POST OFFICE BOX 802
 OLD SAYBROOK
 CONNECTICUT 06475
 PHONE: 860 388 1224
 FAX: 860 388 4613
 GNCBENGINEERS.COM

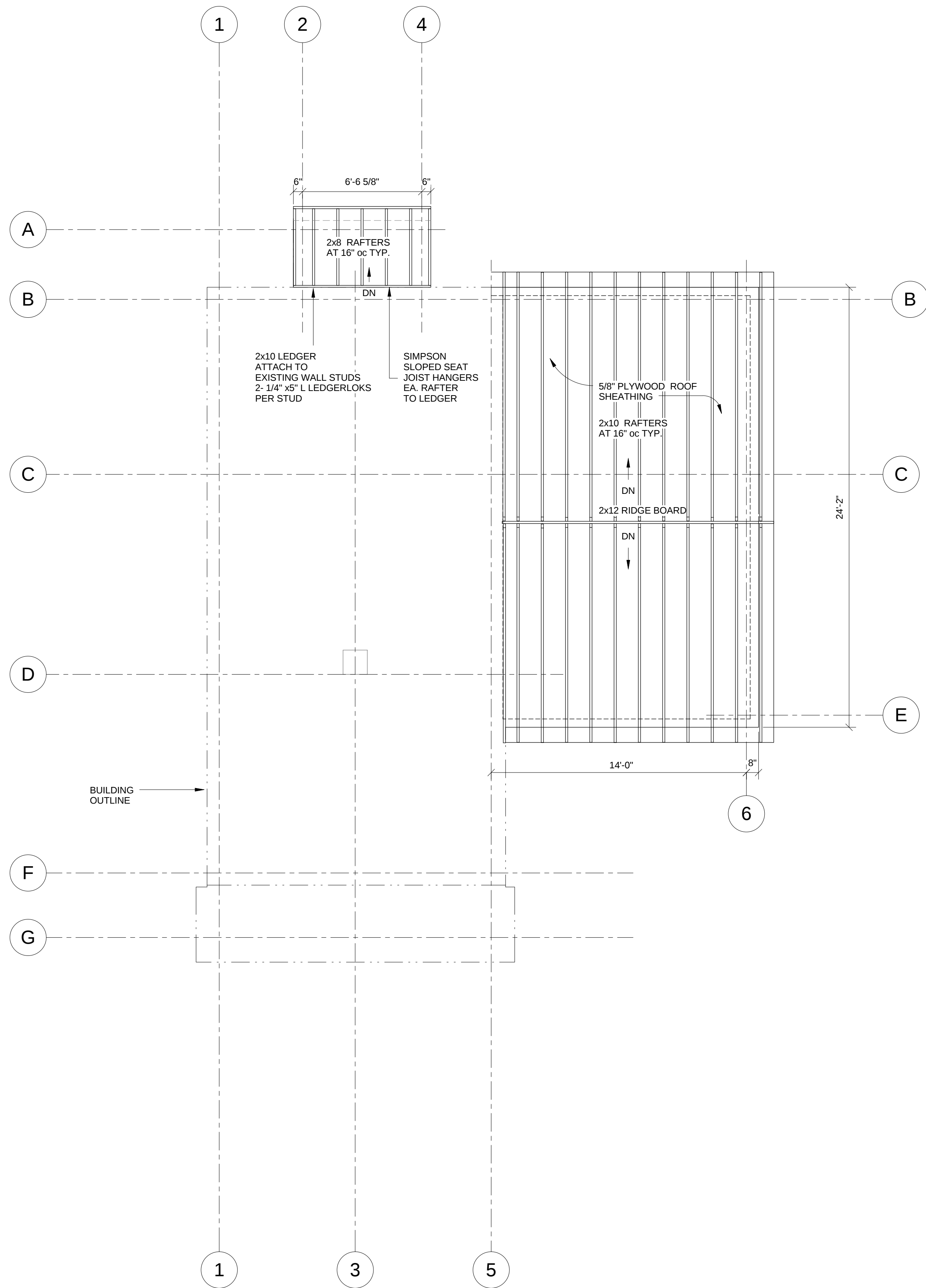
Consulting Engineers, P.C.

S1.2

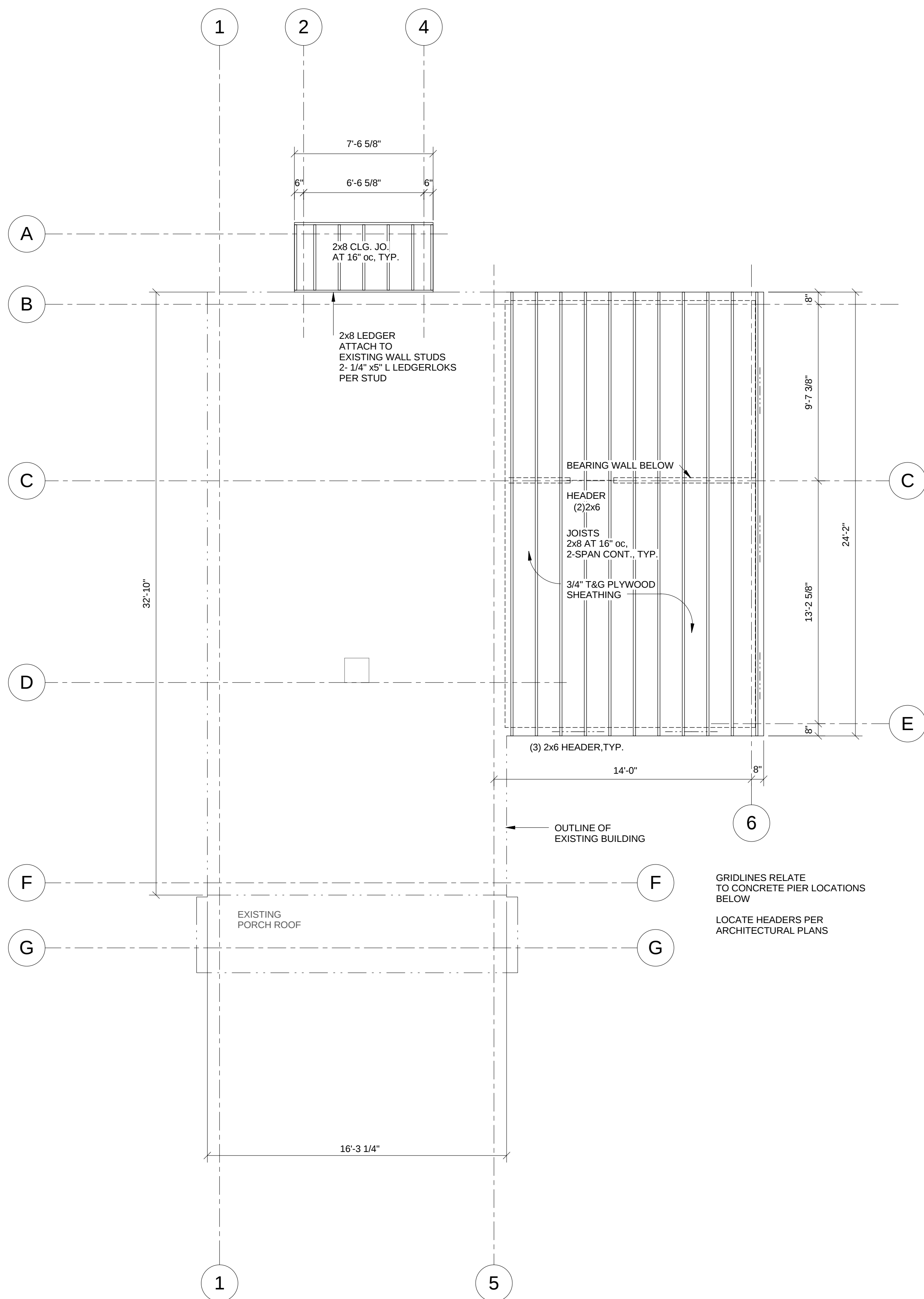
date JULY 24, 2015
drawn RLB
scale 1/4" = 1'-0"
checked CCB
project no. 1347-45 GNCB# 15013
application no. 2433



① FIRST FLOOR FRAMING
1/4" = 1'-0"



2 ROOF FRAMING PLAN
1/4" = 1'-0"



1 ATTIC FLOOR FRAMING PLAN
1/4" = 1'-0"



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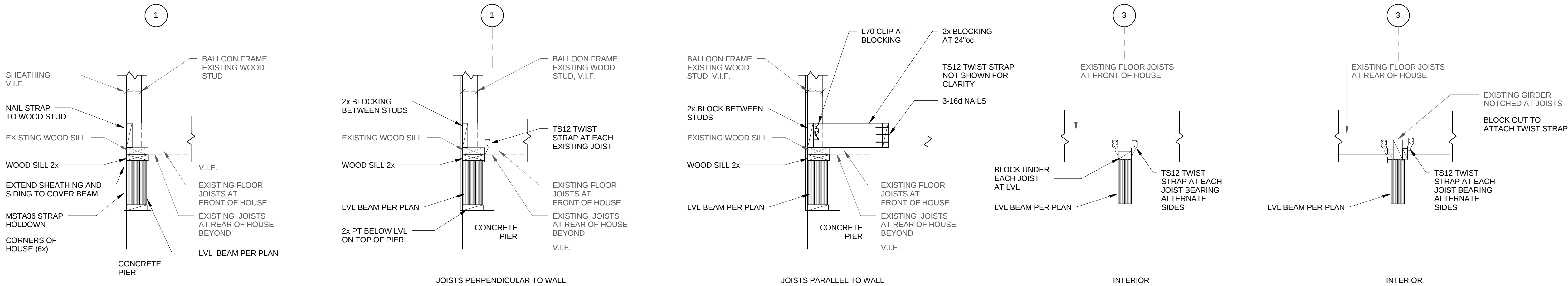
GENERAL
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Consultants:		
GNCB  130 ELM STREET POST OFFICE BOX 802 OLD SAYBROOK CONNECTICUT 06475 PHONE: 860 388 1224 FAX: 860 388 4613 GNCBENGINEERS.COM		
Consulting Engineers, P.C.		
date	description	no.
revisions		

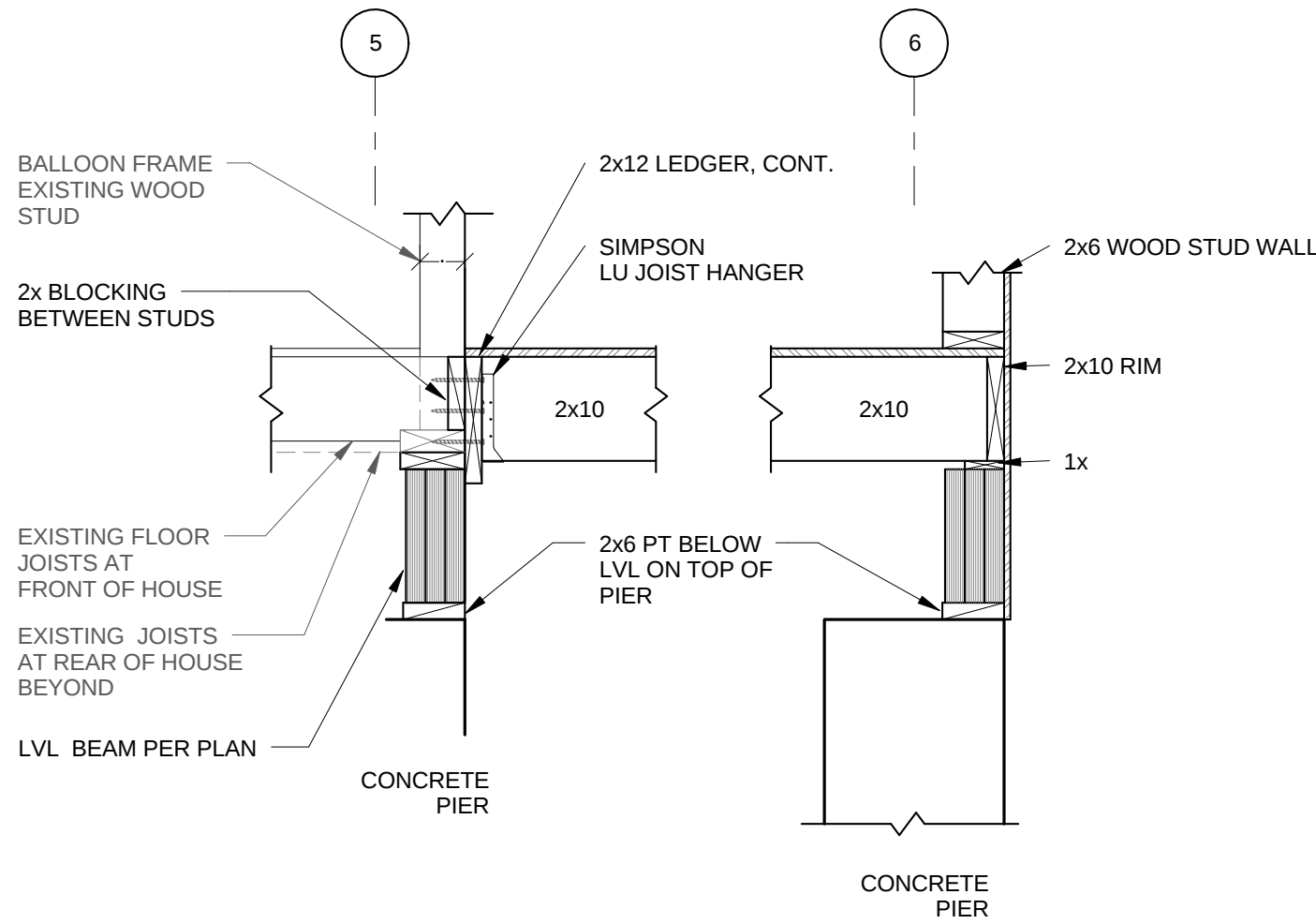
ATTIC FLOOR + ROOF FRAMING PLANS

S1.3

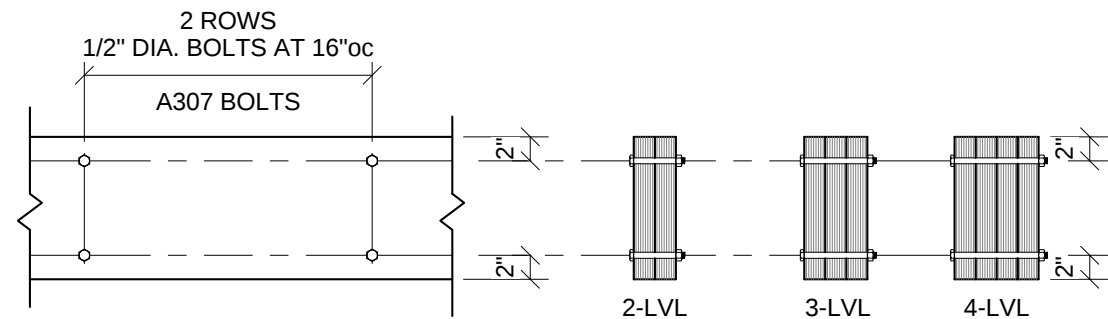
date	JULY 24, 2015
drawn	RLB
scale	1/4" = 1'-0"
checked	CCB
project no.	1347-45
application no.	2433
GNCB# 15013	



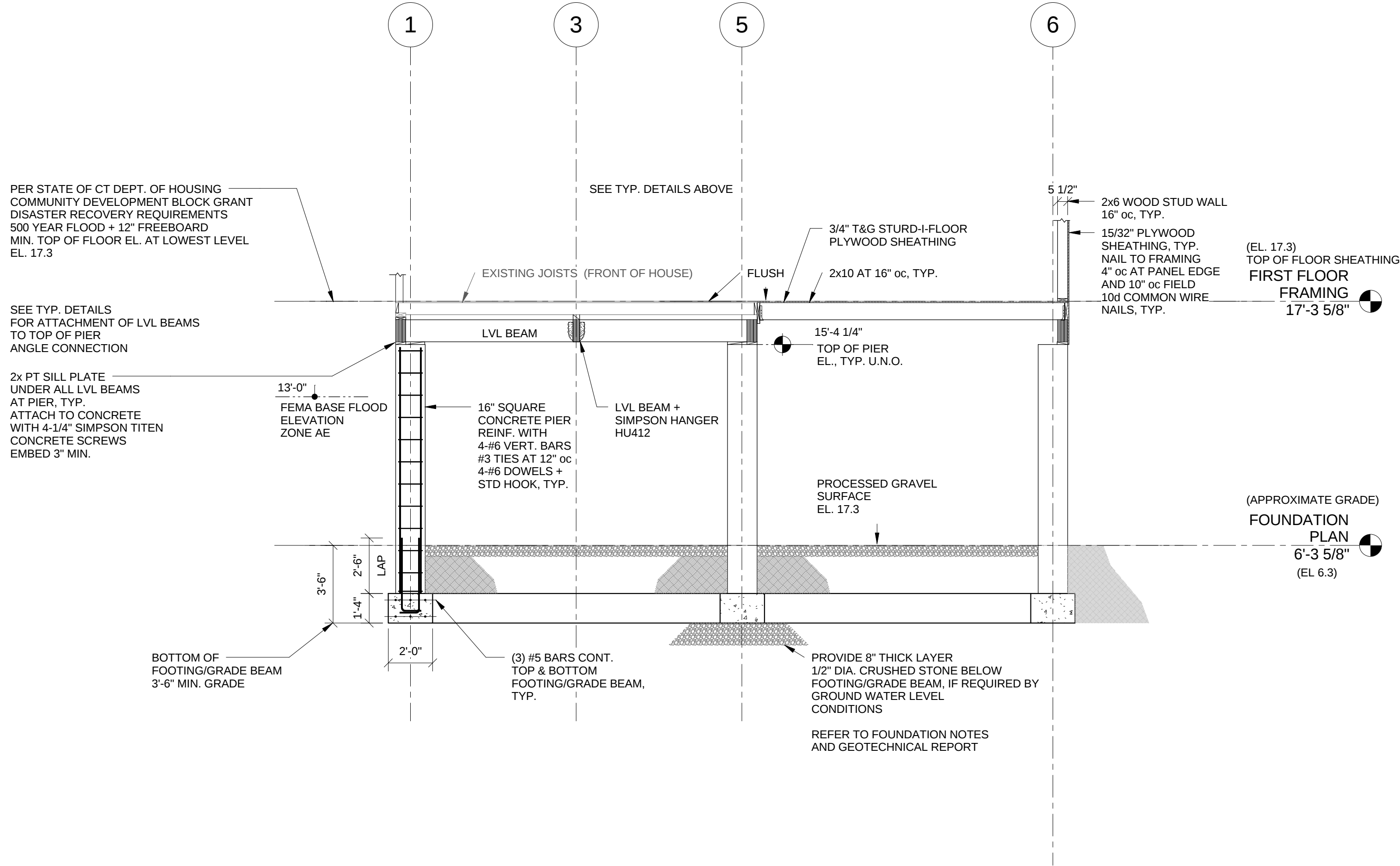
TYPICAL EXISTING FLOOR TO NEW BEAM CONNECTION



TYPICAL EXISTING/NEW FLOOR DETAIL



MULTI MEMBER LVL CONNECTION



SECTION 1
1/4" = 1'-0"



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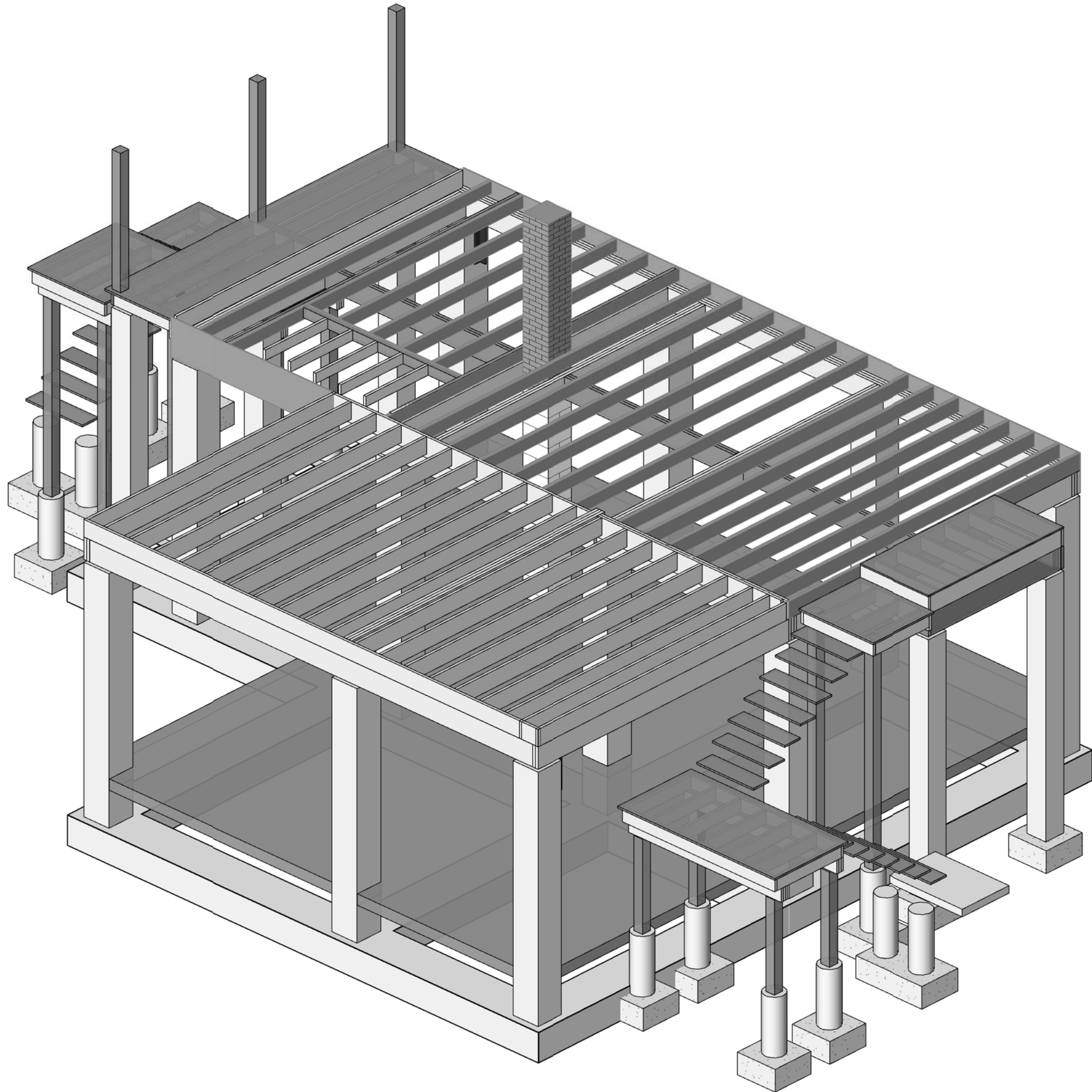
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GNCB  130 ELM STREET POST OFFICE BOX 802 OLD SAYBROOK CONNECTICUT 06475 PHONE: 860.388.1224 FAX: 860.388.4613 GNCBENGINEERS.COM		
date	description	no.
revisions		

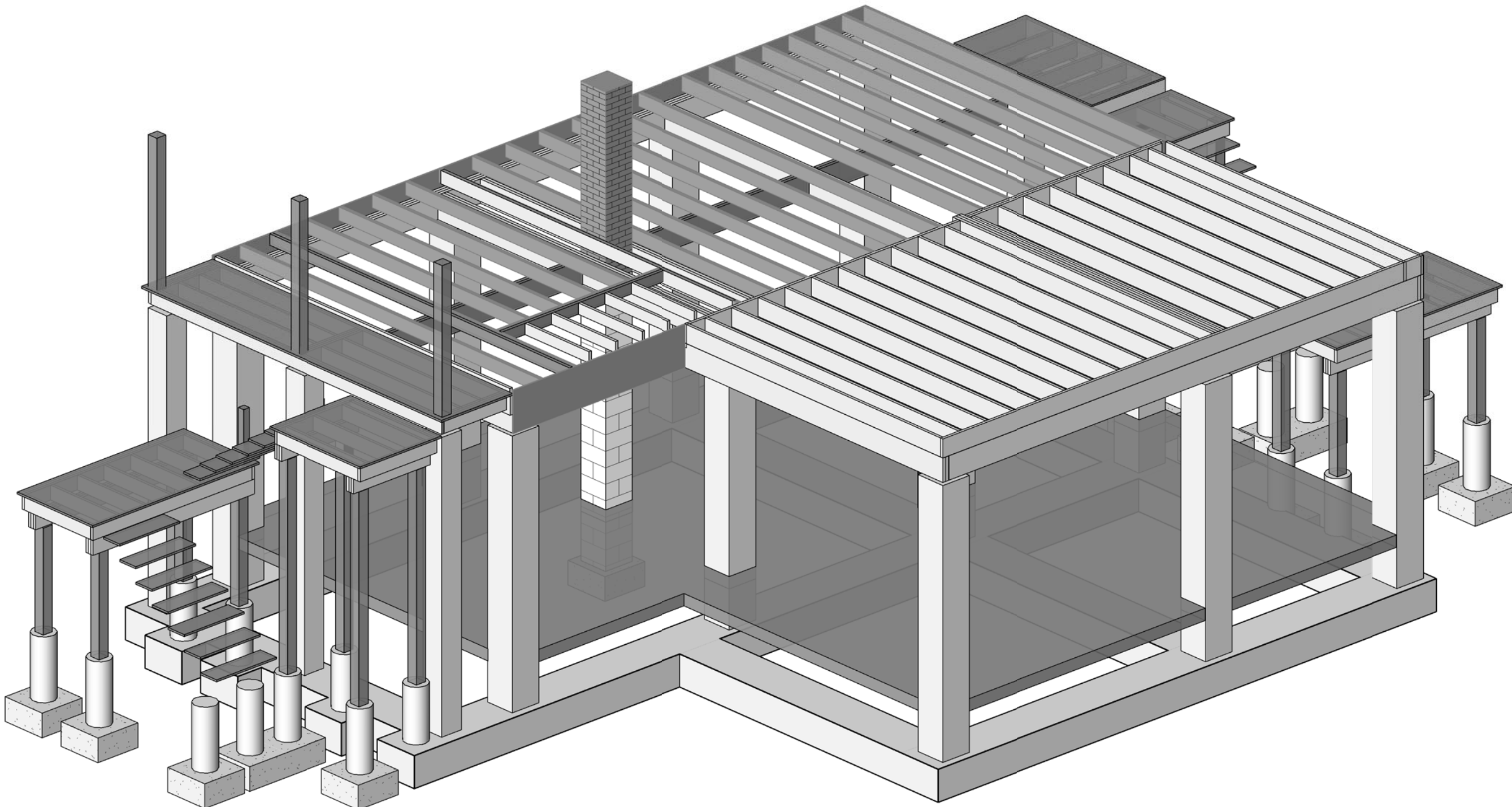
SECTION - TYPICAL DETAILS

S2.1

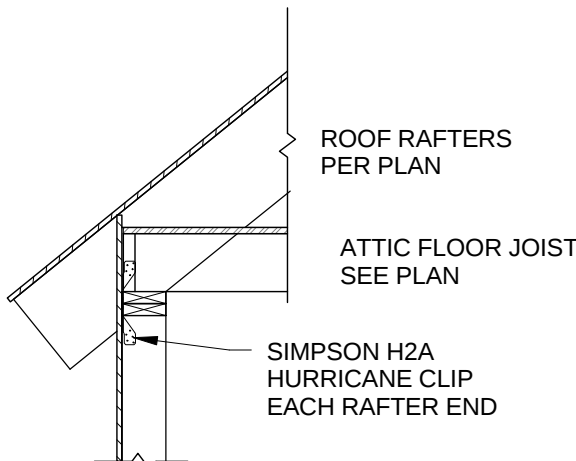
date	JULY 24, 2015
drawn	RLB
scale	As indicated
checked	CCB
project no.	1347-45 GNCB# 15013
application no.	2433



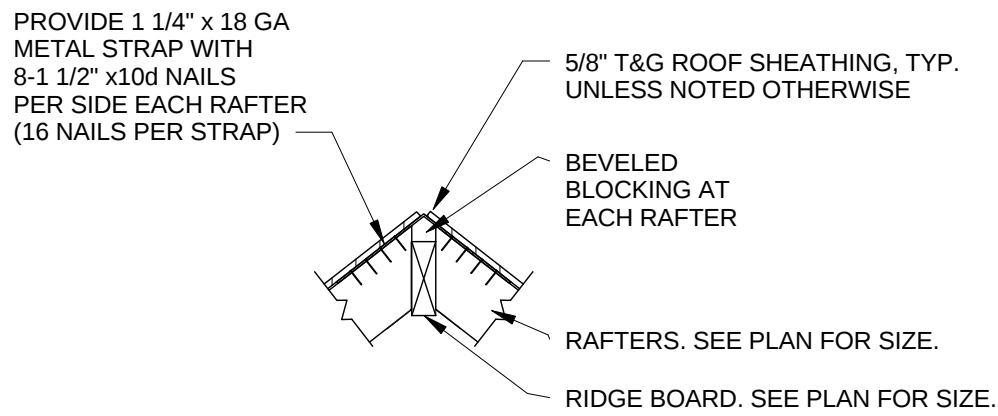
2 3D SHEET VIEW 2



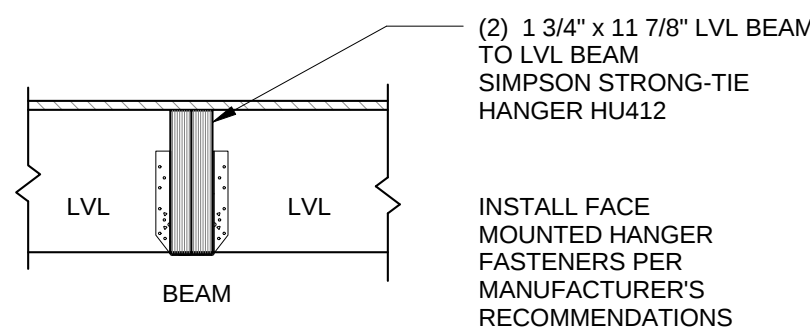
1 3D SHEET VIEW 1



RAFTER TO WALL CONNECTION- CEILING



ROOF RIDGEBOARD - RAFTERS



WOOD BEAM FLUSH FRAMING

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Consultants:		
GNCB Consulting Engineers, P.C.	130 ELM STREET POST OFFICE BOX 802 OLD SAYBROOK CONNECTICUT 06475 PHONE: 860.388.1224 FAX: 860.388.4613 GNCBENGINEERS.COM	
	date	description
revisions		
no.		

3-D VIEW - TYPICAL DETAILS

S2.2

date	JULY 24, 2015
drawn	RLB
scale	As indicated
checked	CCB
project no.	1347-45
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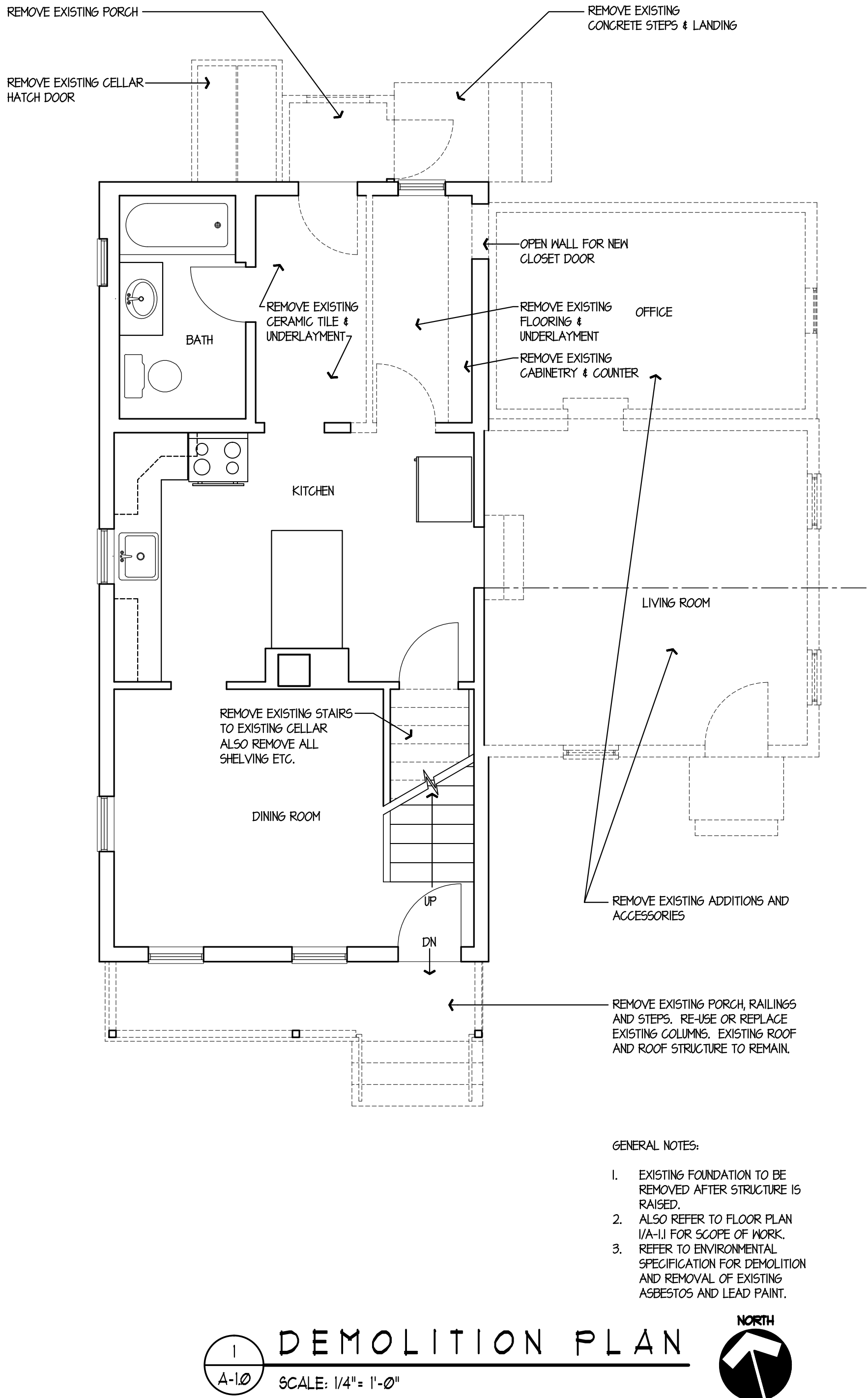
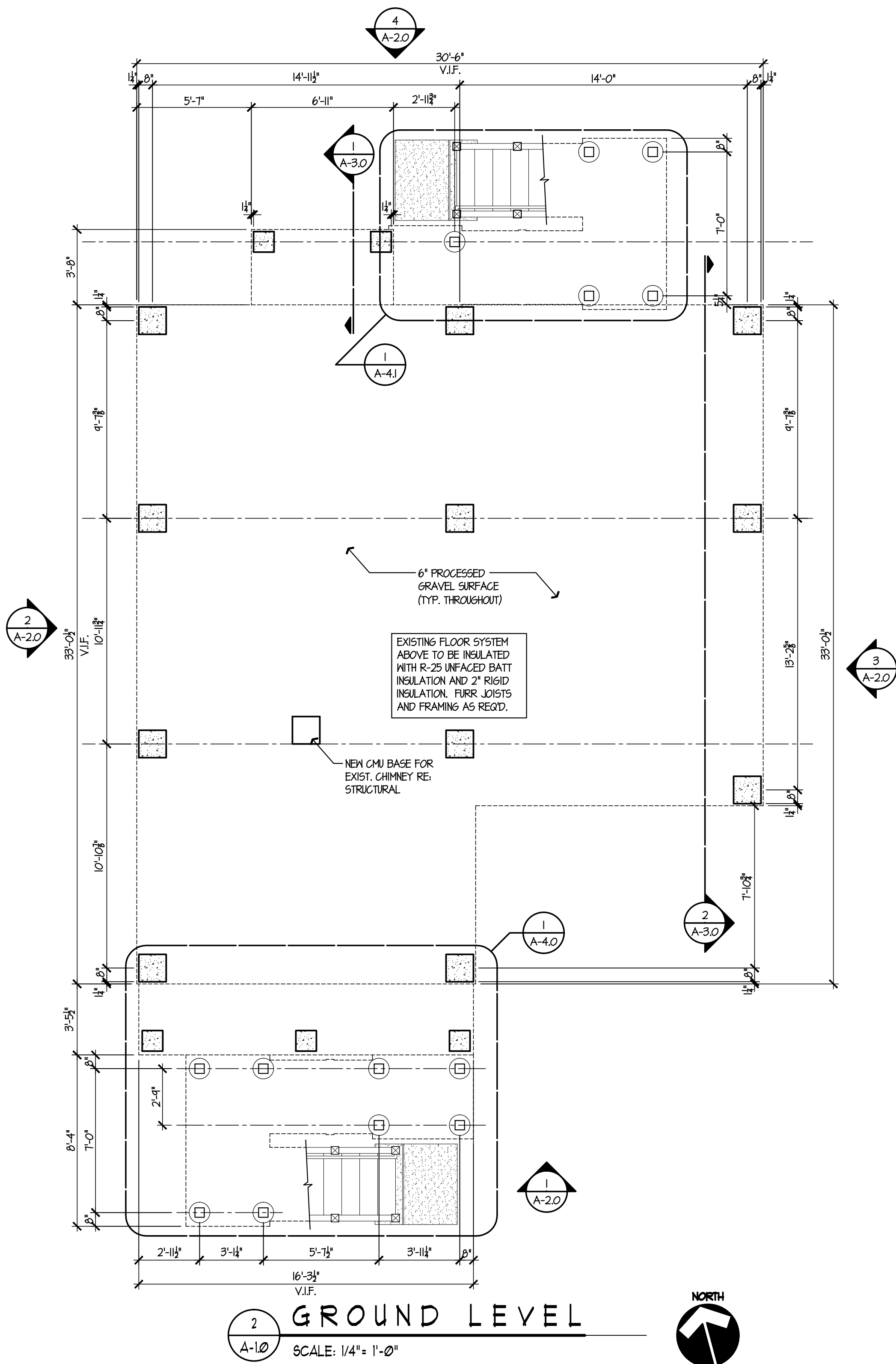
GENERAL
RENOVATIONS for the
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261 Adams Street
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date	description	no.
revisions		

DEMOLITION
PLAN &
GROUND
FLOOR PLAN

A-1.0

date	28 JULY 2015
drawn	NMF
scale	AS SHOWN
checked	JP/DH
project no.	1347-45
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WINDOW SCHEDULE

LABEL	UNIT	TYPE	MIN. ROUGH OPENING (W x H)
(A)	TK2442	DOUBLE HUNG	2' 6-1/8" x 4' 4-7/8"

WINDOW NOTES:

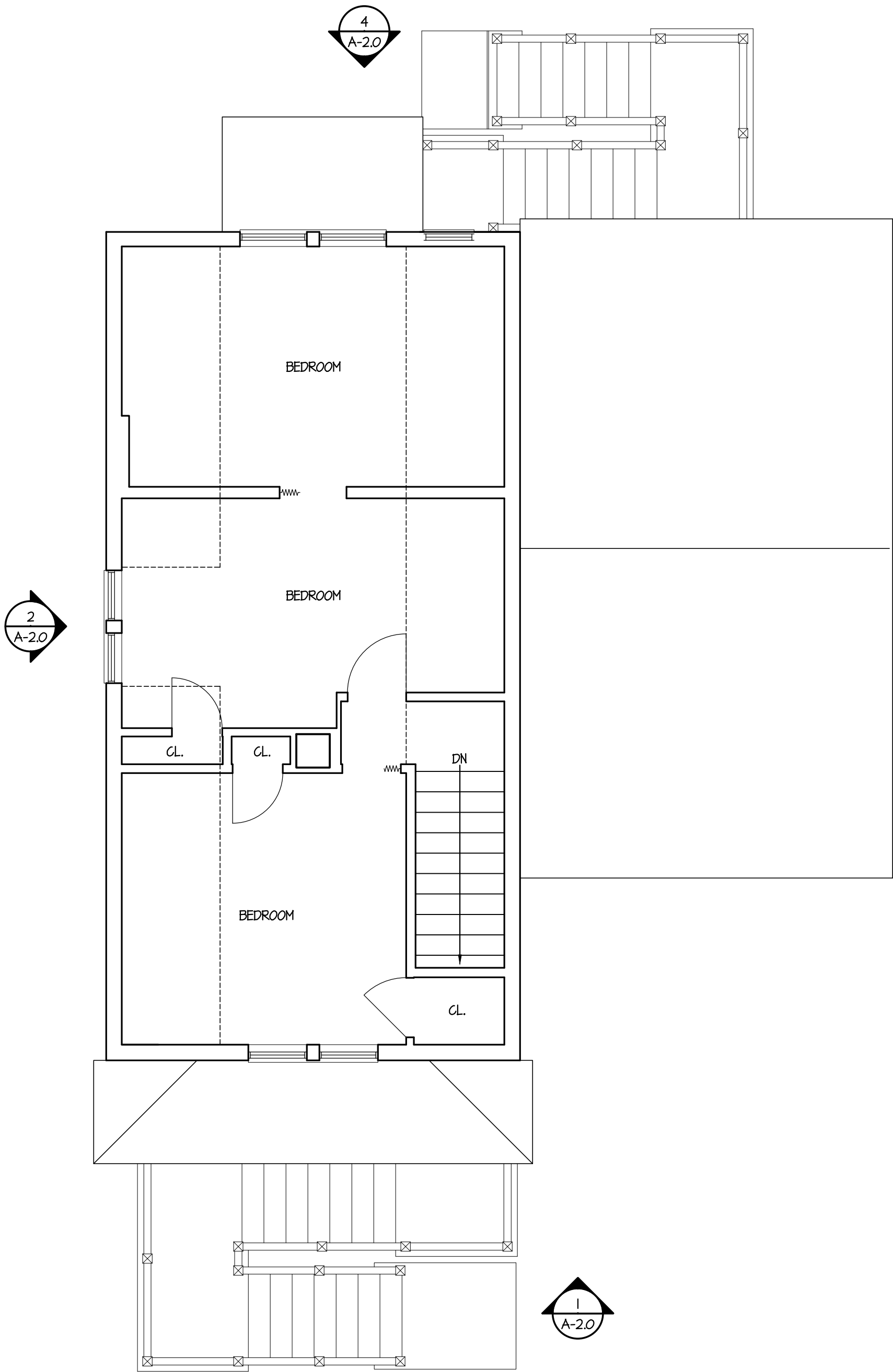
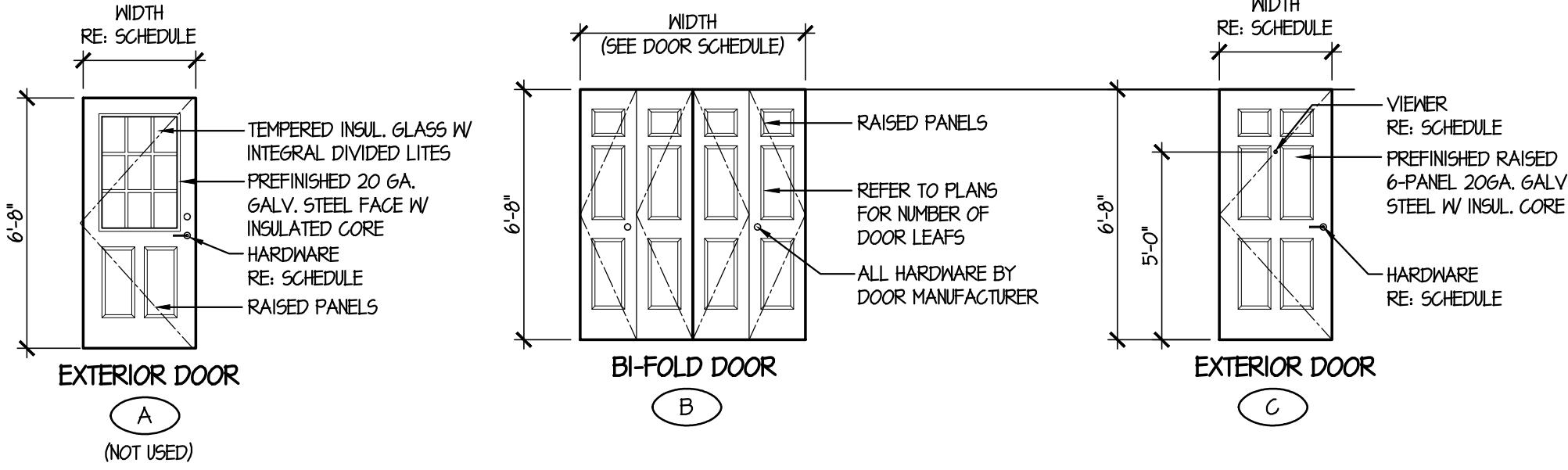
1. ALL WINDOW UNITS ARE ANDERSEN CORPORATION SERIES 400 WITH STORMMATCH PROTECTION.
2. VERIFY ALL ROUGH OPENINGS WITH MANUFACTURER.

DOOR SCHEDULE

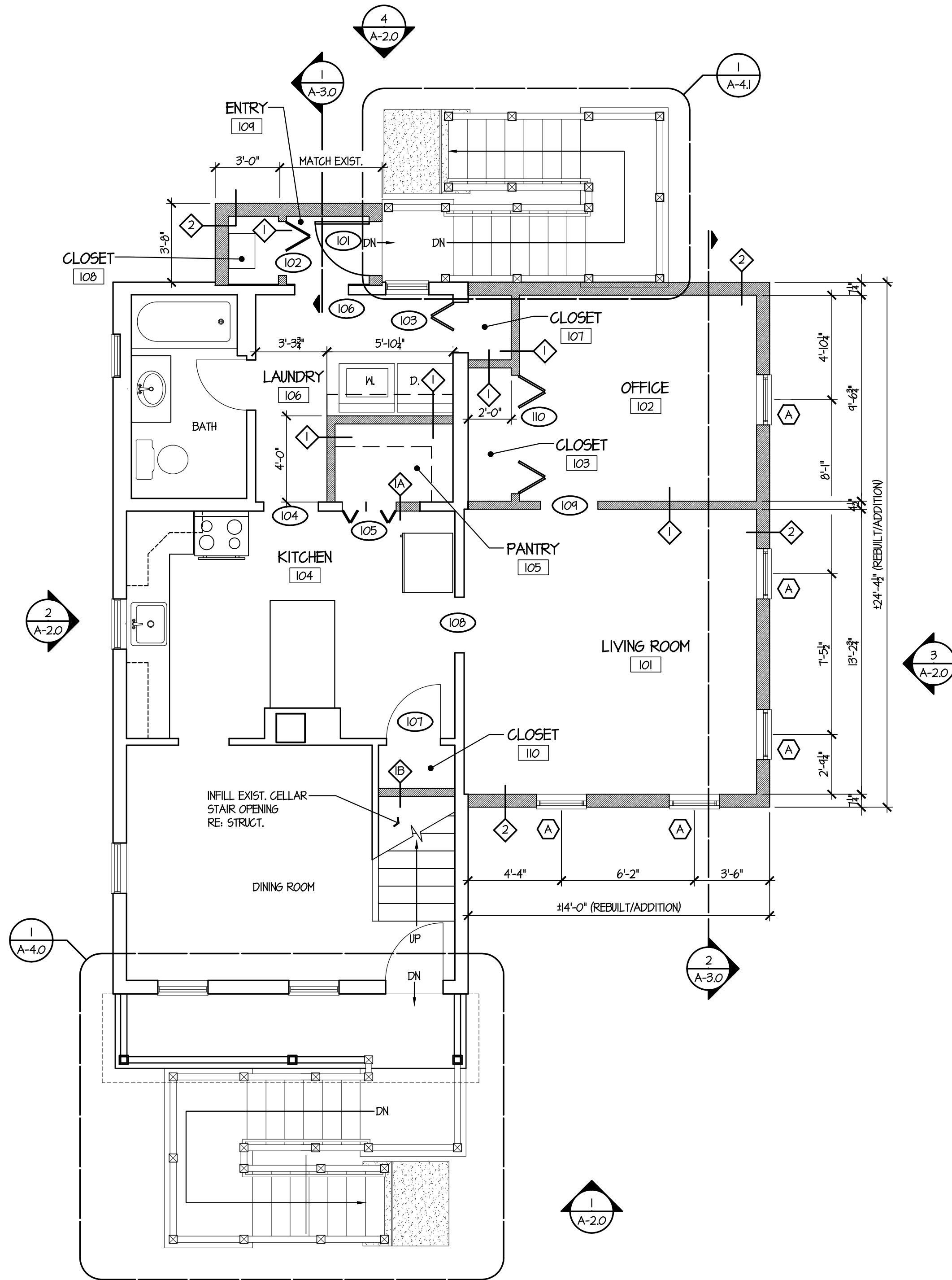
LABEL	TYPE	STYLE	SIZE (W x H)	HARDWARE	NOTES
(101)	EXTERIOR	C*	2'-6" x 6'-8"	LOCKSET WEAR/BOLT	W/SELF-STORING STORM DOOR TRIM TO MATCH EXIST.
(102)	INTERIOR BIFOLD	B	2'-6" x 6'-8"	SUPPLIED BY MFR.	TRIM TO MATCH EXISTING
(103)	INTERIOR BIFOLD	B	2'-4" x 6'-8"	SUPPLIED BY MFR.	TRIM TO MATCH EXISTING
(104)	EXIST. CASÉD OPENING	NA	2'-6" x 6'-8"	NA	REPAIR AND/OR REPLACE TRIM AS REQ'D
(105)	INTERIOR BIFOLD	B	2'-6" x 6'-8"	SUPPLIED BY MFR.	TRIM TO MATCH EXISTING
(106)	CASÉD OPENING	NA	2'-6" x 6'-8"	NA	REMOVE EXIST. DOOR FRAME & TRIM PROVIDE NEW FRAME & TRIM
(107)	EXISTING	NA	2'-8" x 6'-8"	EXIST.	INSTALL NEW TRIM ON INTERIOR SIDE AS REQ'D
(108)	EXIST. CASÉD OPENING	NA	2'-7" x 6'-8"	NA	REPLACE TRIM WHERE REQ'D (MATCH EXIST.)
(109)	CASÉD OPENING	NA	2'-8" x 6'-8"	NA	TRIM TO MATCH EXISTING
(110)	INTERIOR BIFOLD	B	5'-6" x 6'-8"	SUPPLIED BY MFR.	TRIM TO MATCH EXISTING

* - SEE SPECIFICATION SECTION ON ALLOWANCES FOR EXTERIOR DOORS

DOOR STYLES



2 2nd FLOOR PLAN
SCALE: 1/4" = 1'-0"



1 1st FLOOR PLAN
SCALE: 1/4" = 1'-0"

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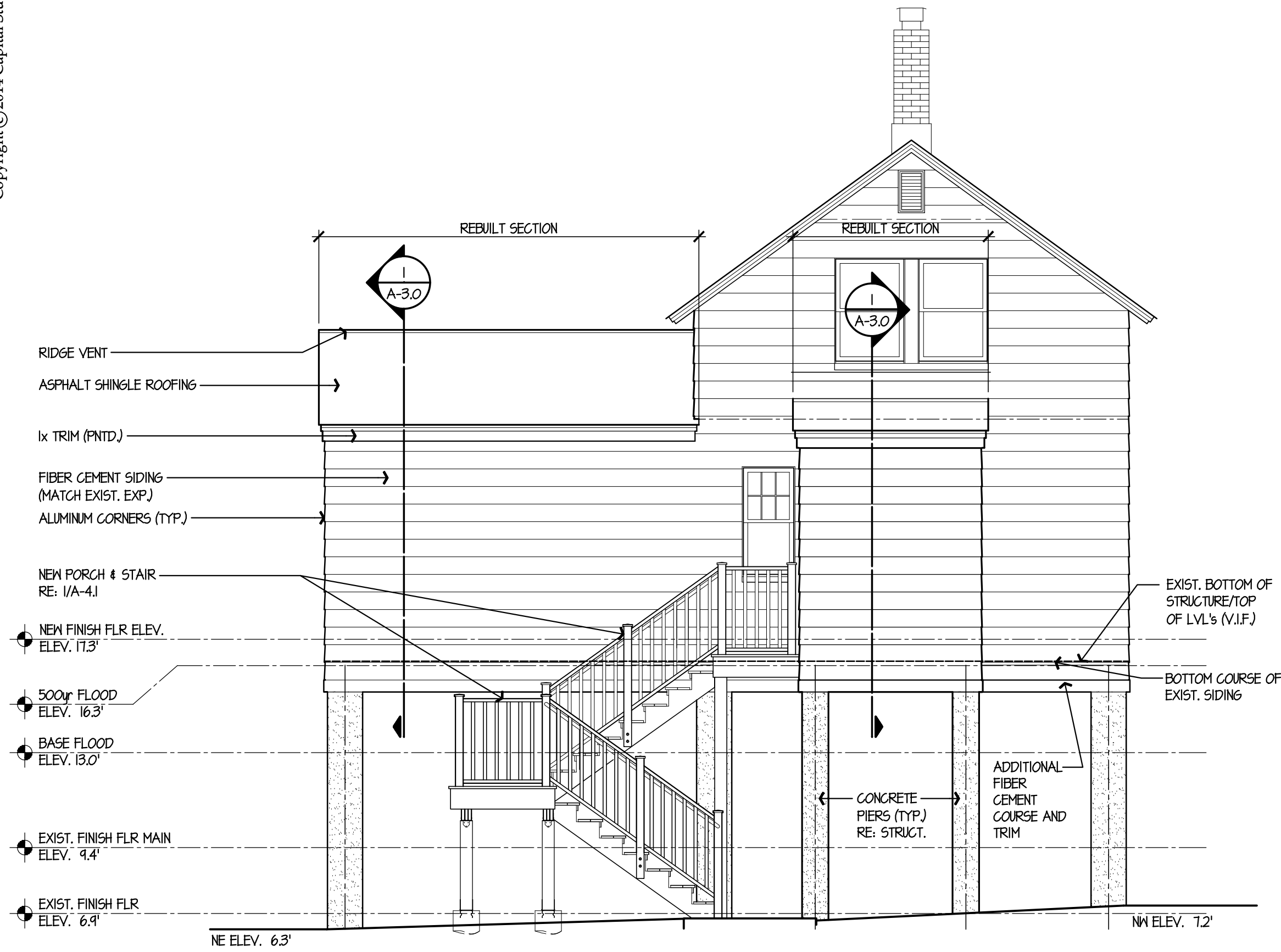
FLOOR PLANS &
SCHEDULES

A-1.1

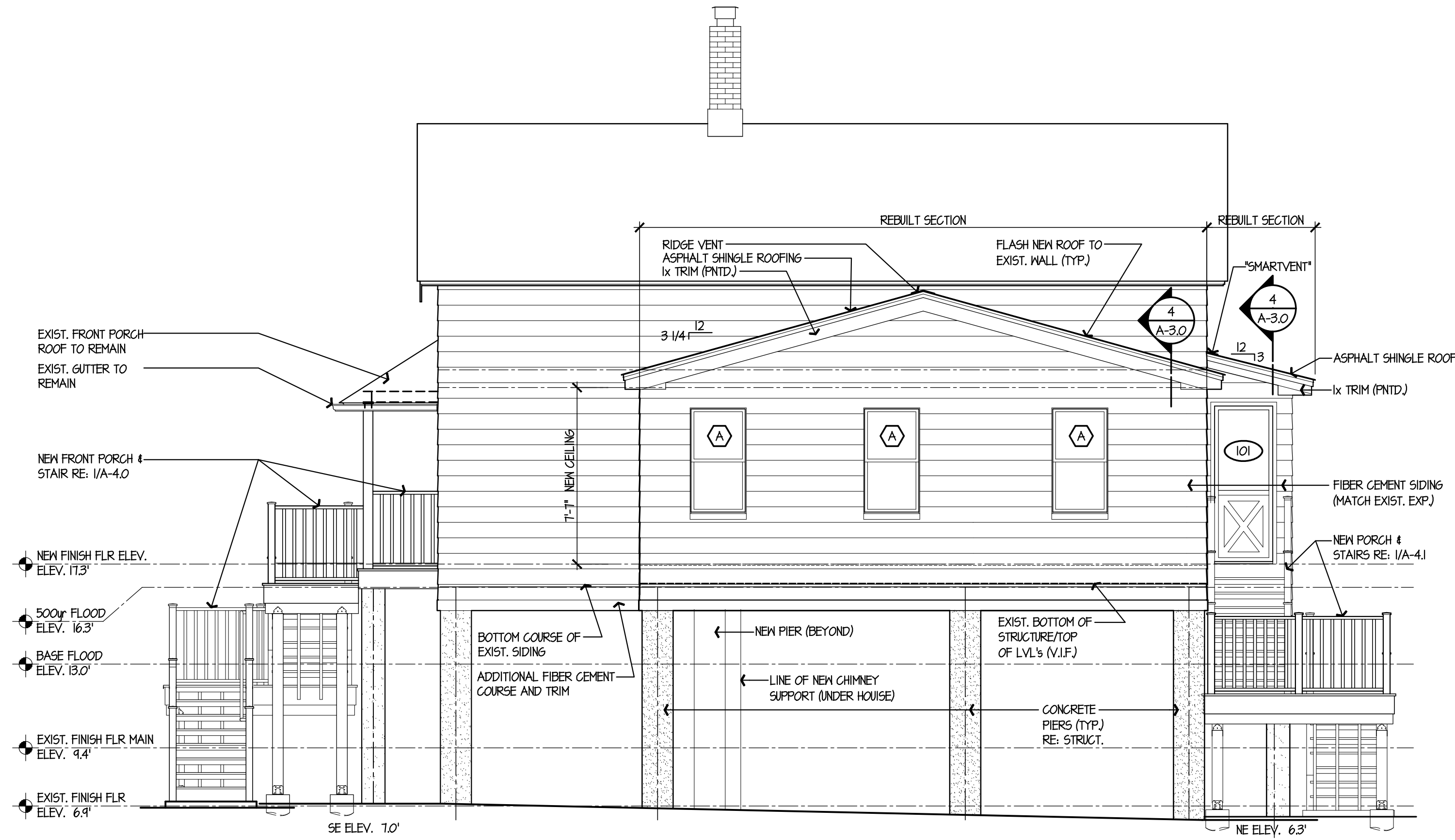
date	28 JULY 2015
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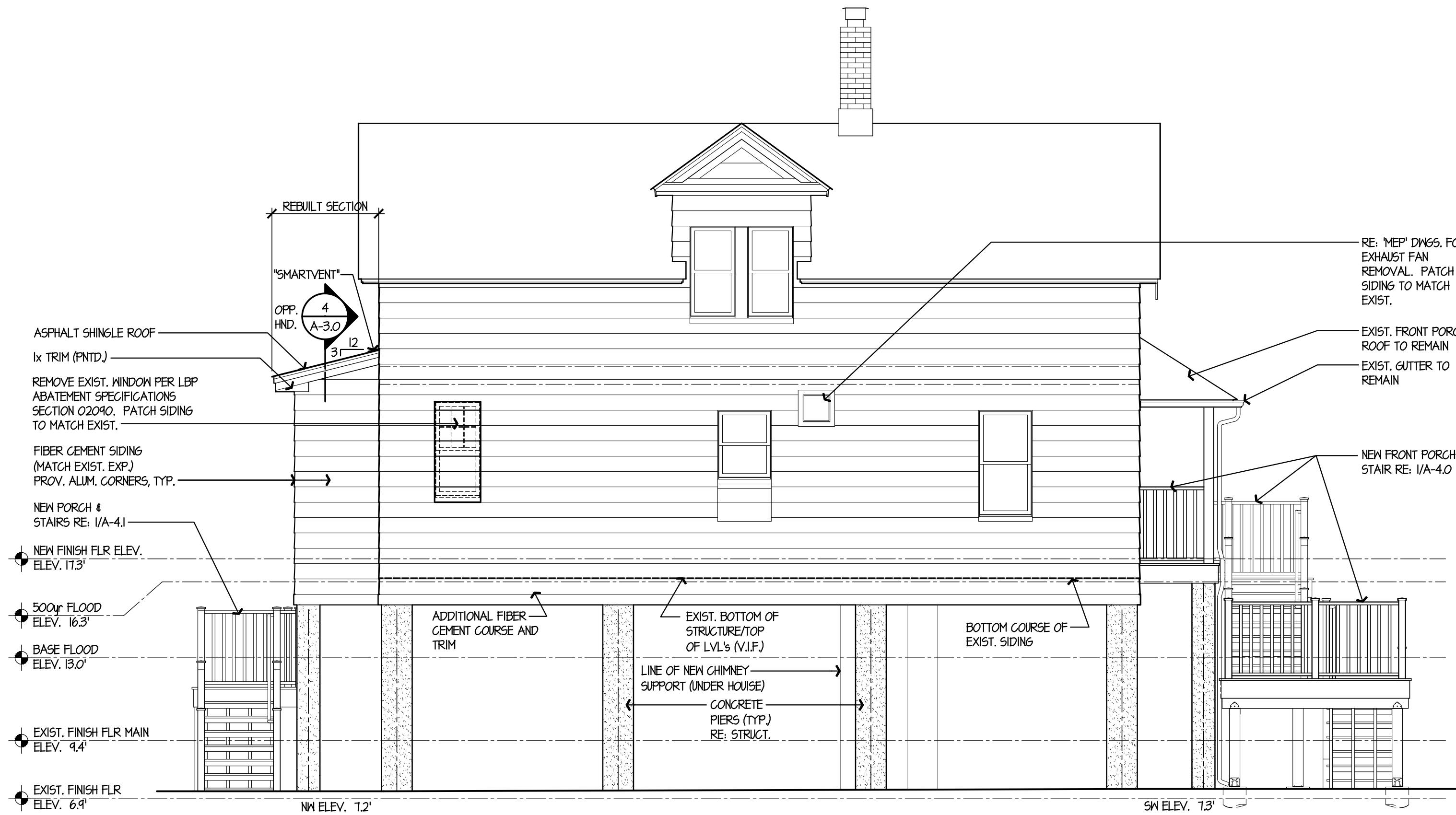
GENERAL
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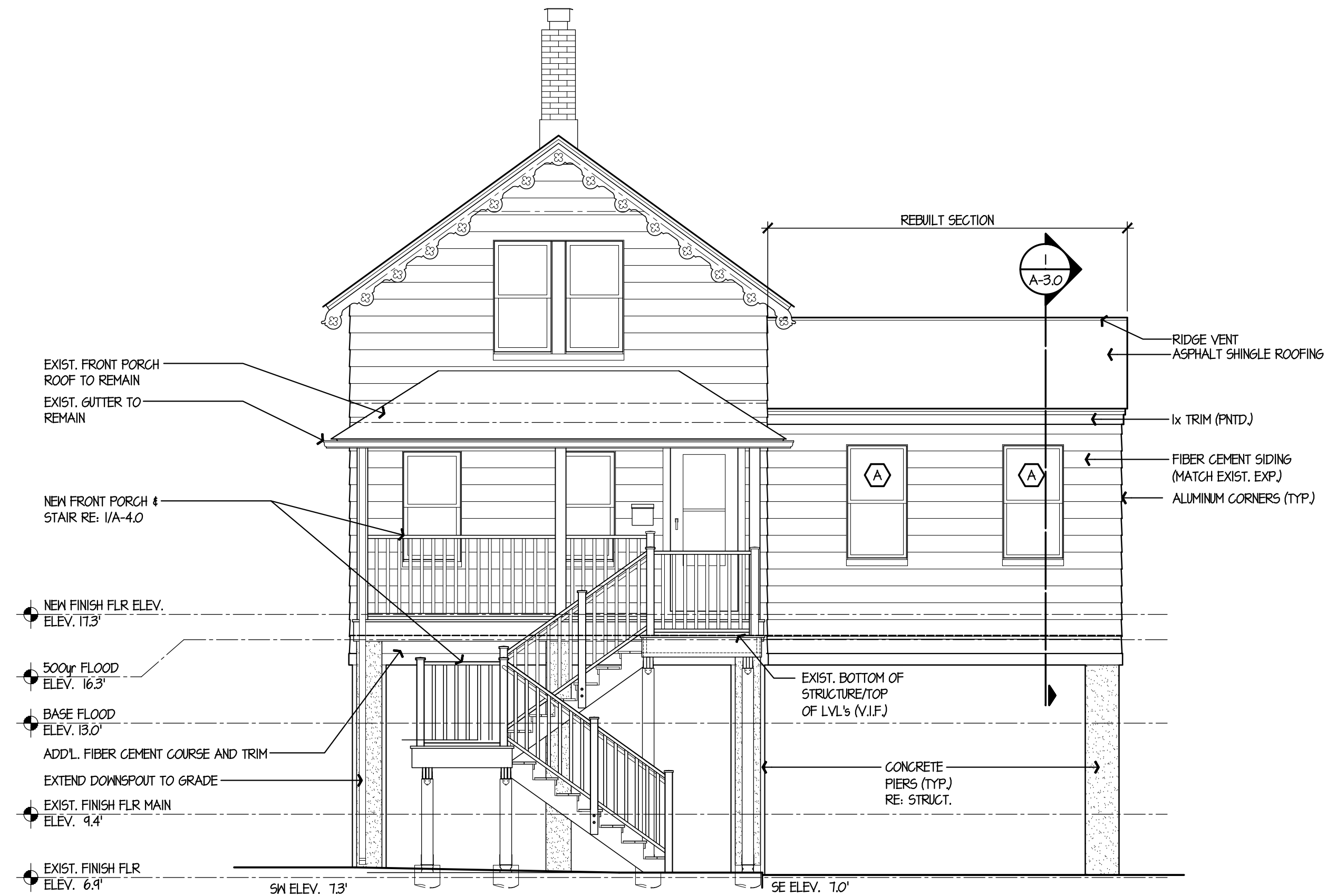
4 NORTH ELEVATION
SCALE: 1/4" = 1'-0"



3 EAST ELEVATION
SCALE: 1/4" = 1'-0"



2 WEST ELEVATION
SCALE: 1/4" = 1'-0"



1 SOUTH ELEVATION
SCALE: 1/4" = 1'-0"

date	description	no.
revisions		

ELEVATIONS

A-2.0

date	28 JULY 2015
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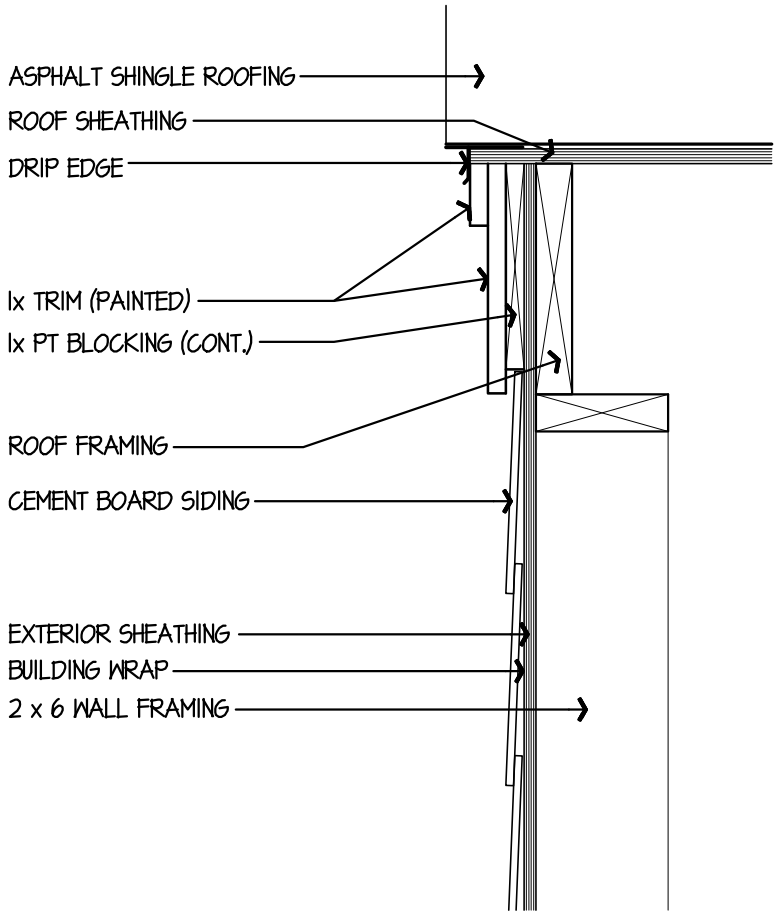
GENERAL
RENOVATIONS for the
LLOYD RESIDENCE
APPLICATION No. 2433
261 Adams Street
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date	description	no.
revisions		

SECTIONS,
DETAILS &
SCHEDULES

A-3.0

date 28 JULY 2015
drawn NMF
scale AS SHOWN
checked JP/DH
project no. 1347-45
application no. 2433

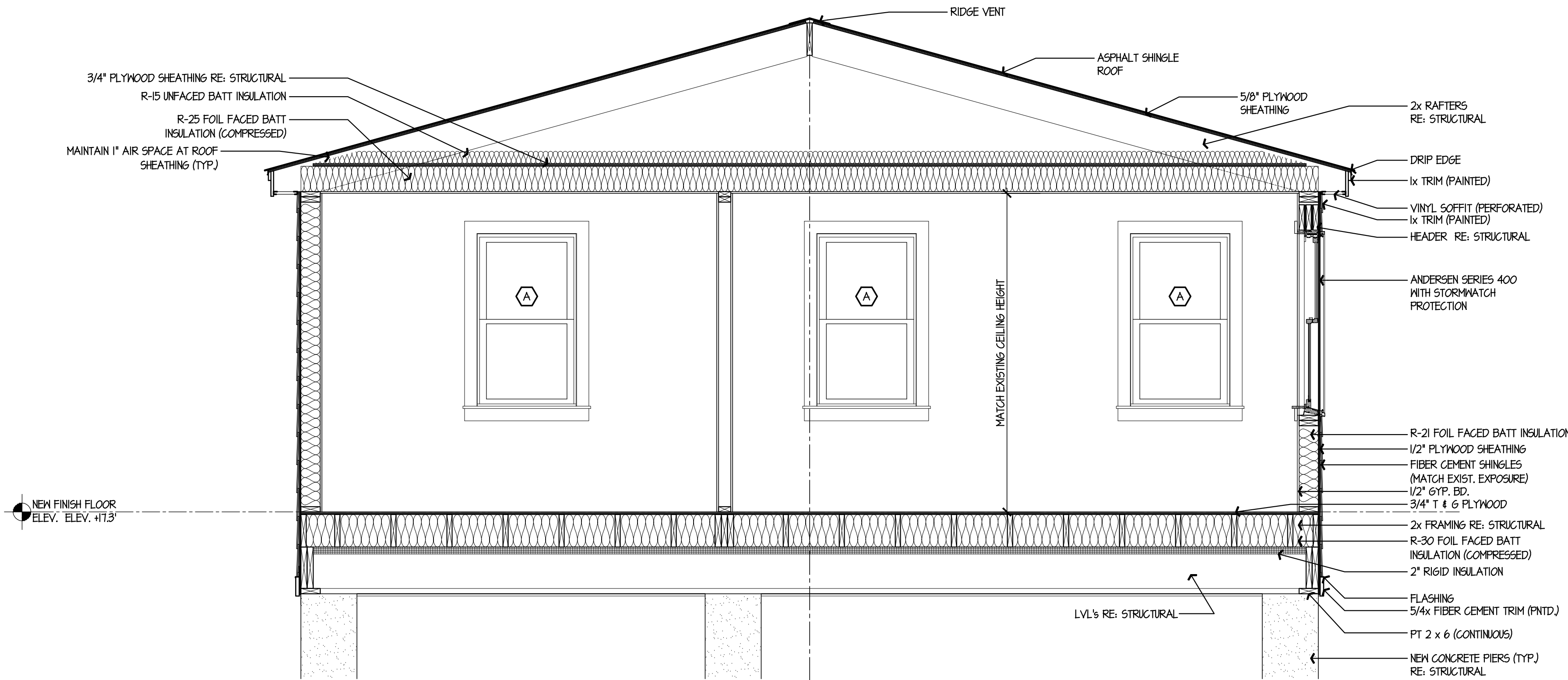


4 GABLE DETAIL
SCALE: 1-1/2"=1'-0"

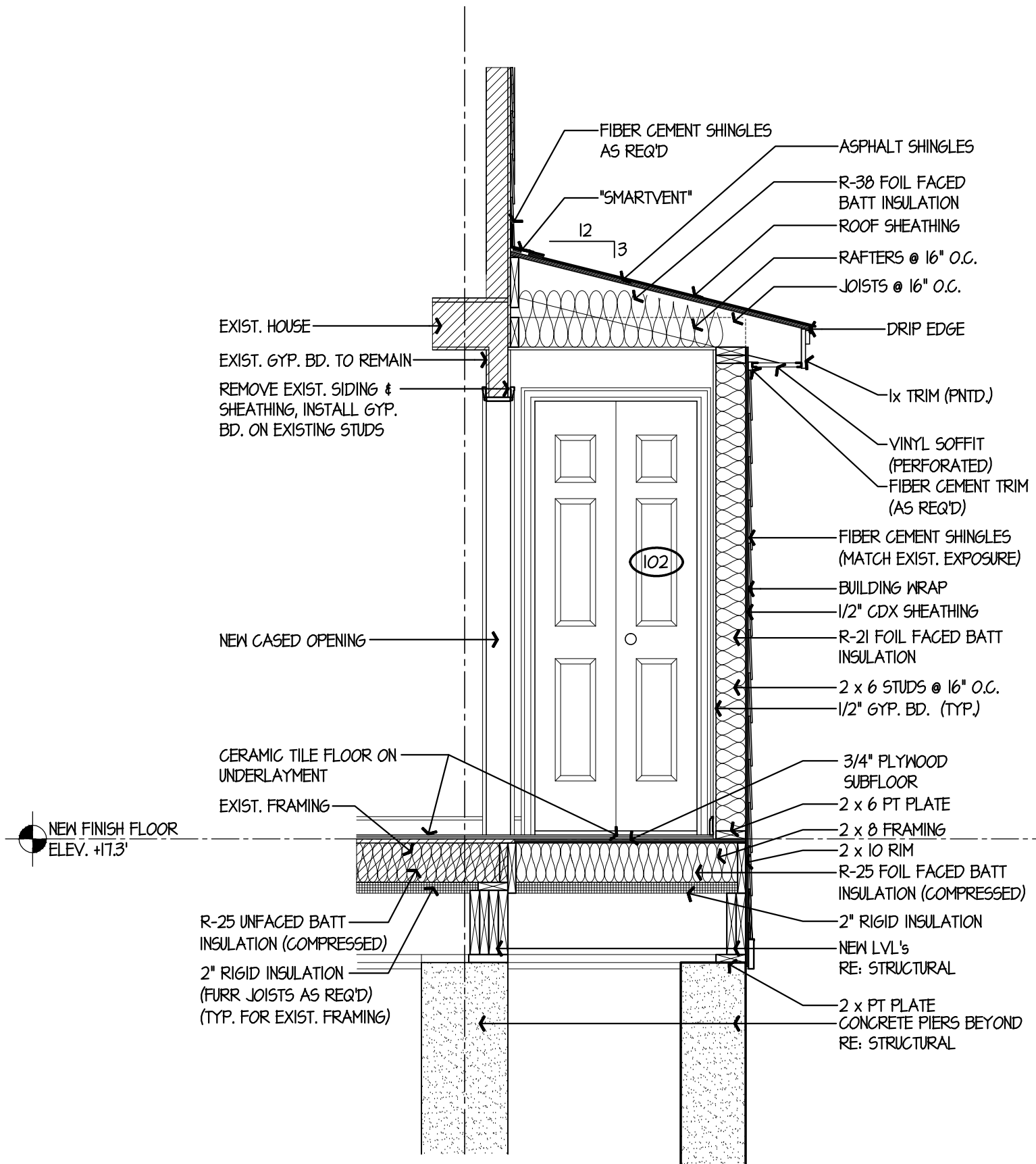
LEVEL	ROOM NAME and NUMBER	FLOOR				WALL			BASE		CEILING			REMARKS
		LAMINATE	EXISTING LAMINATE	CERAMIC TILE	RESILIENT FLOORING	DRYWALL (PRIME 1 COAT, 2 FINISH COATS)	TILE	NONE	WOOD BASE (MATCH EXISTING)	NONE	DRYWALL (PAINTED)	NONE	 REFERENCES ALL WALL SURFACES AS ORIENTED ON FLOOR PLAN  PLAN NORTH REFERENCES NORTH WALL SURFACE AS ORIENTED ON FLOOR PLAN NOTE: ALL FINISH CLASSIFICATIONS TO MEET ALL APPLICABLE FIRE CODE REQUIREMENTS & STANDARDS	
1st FLOOR	101 LIVING ROOM	●				●			●		●			INSTALL 6YTP. BD. ON UNDERSIDE OF STAIRS & PREVIOUSLY UNFINISHED WALLS. FURR AS REQ'D. REPAIR EXIST. WALLS
	102 OFFICE	●				●			●		●			
	103 CLOSET	●				●			●		●			
	104 KITCHEN		●			●			●		●			
	105 PANTRY	●				●			●		●			
	106 LAUNDRY			●		●			●		●			
	107 CLOSET			●		●			●		●			
	108 CLOSET			●		●			●		●			
	109 ENTRY			●		●			●		●			
	110 CLOSET	●				●			●		●			

NOTE:
1. ALL FINISHES SUBJECT TO THE APPROVAL OF THE OWNER, INCLUDING MATERIALS, PATTERNS, COLORS, ETC.
2. EXCESS MATERIALS TO BE TURNED OVER TO THE HOME OWNER.
3. PROVIDE (1) COAT PRIMER, (2) FINISH COATS.

3 FINISH SCHEDULE
NO SCALE



2 SECTION thru REBUILT ADDITION
SCALE: 1/2"=1'-0"



1 SECTION
SCALE: 1/2"=1'-0"

**GENERAL
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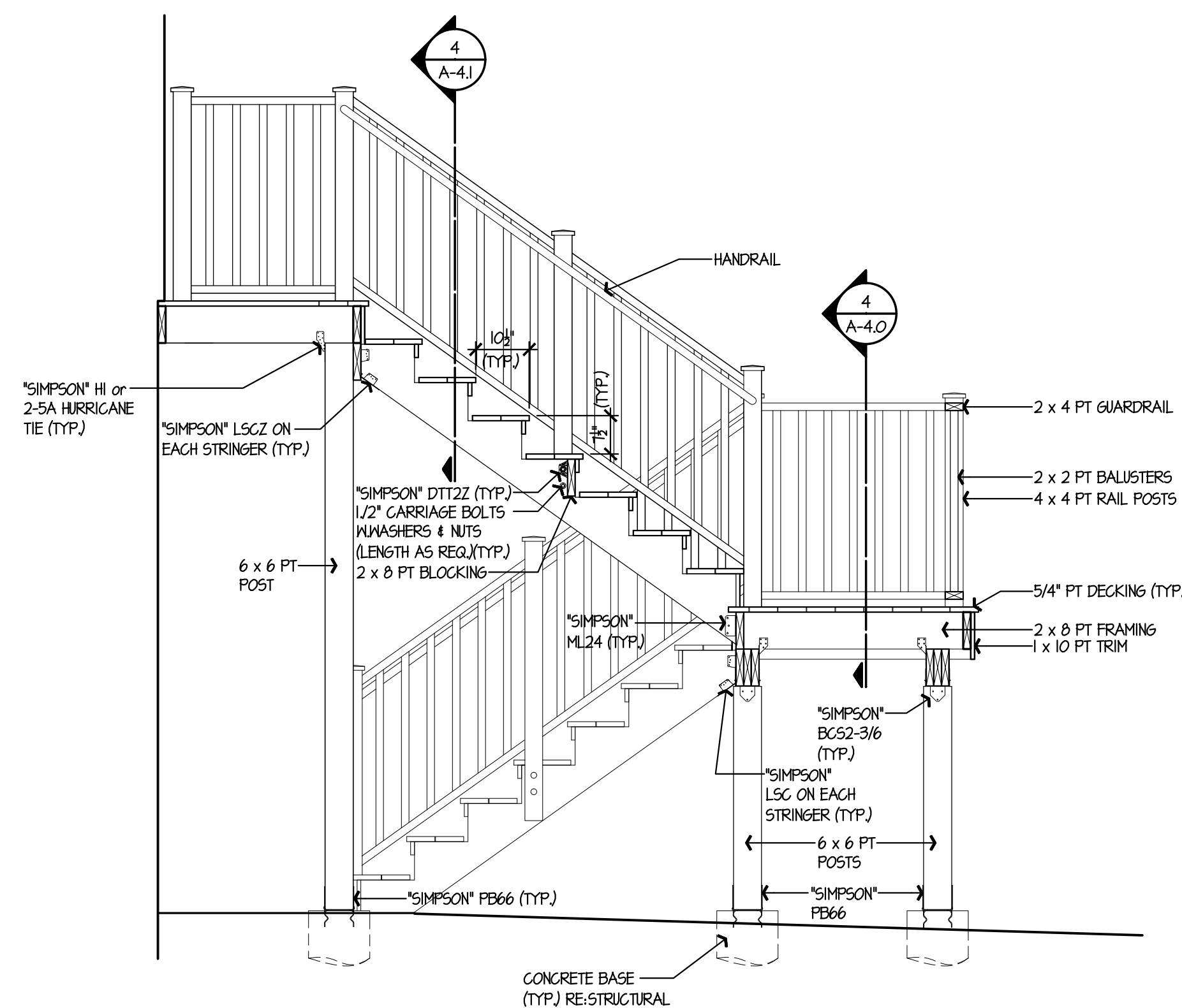
FRONT PORCH & STAIRS

date	28 JULY 2015
drawn	NWF
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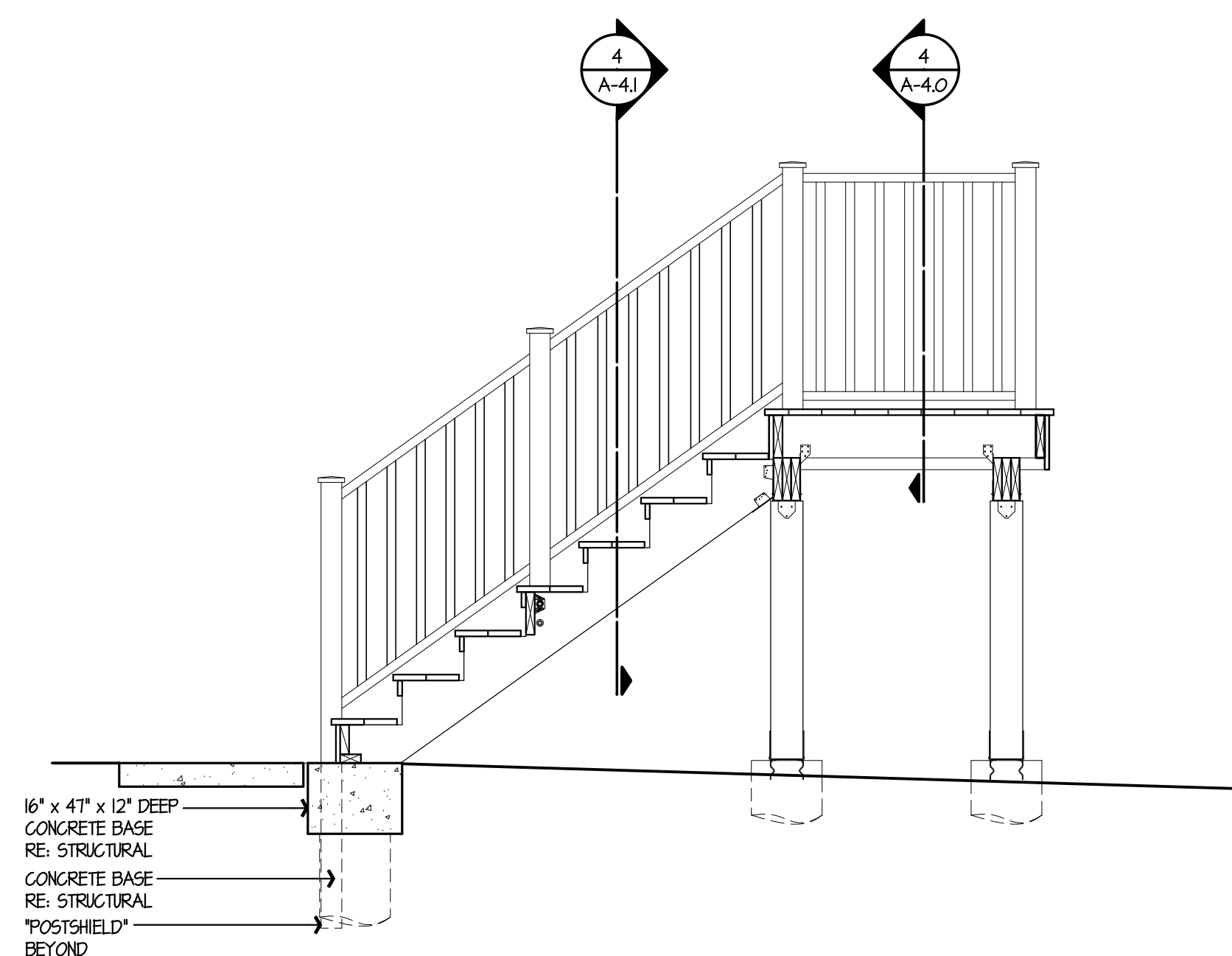


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REBUILDING PROGRAM
(OORR)**

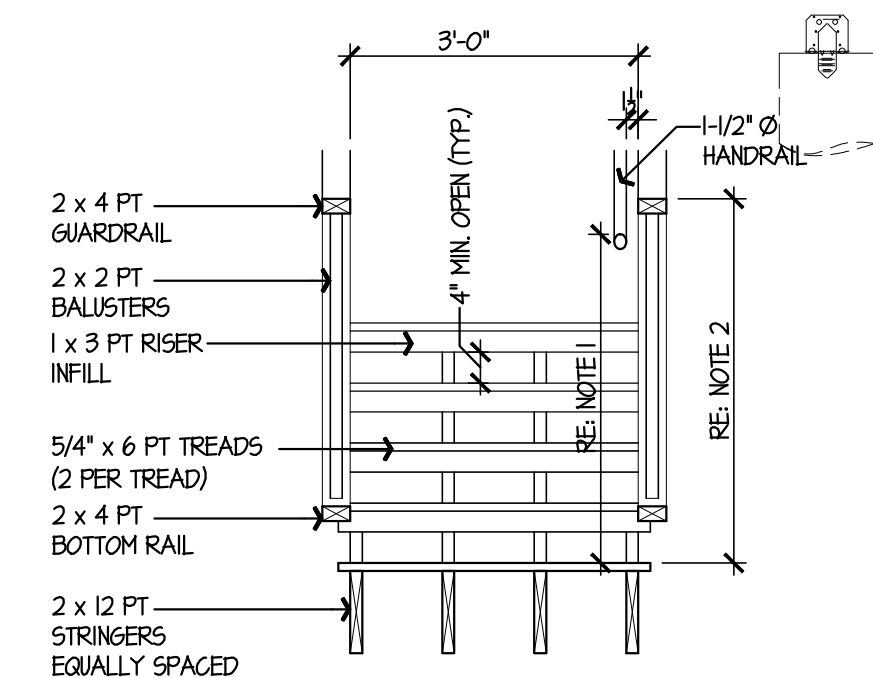
**GENERAL
RENOVATIONS for the
LLOYD RESIDENCE
APPLICATION No. 2433
261 Adams Street
Bridgeport, CT 06607**



6 STAIR SECTION
A-4.1 SCALE: 1/2"=1'-0"



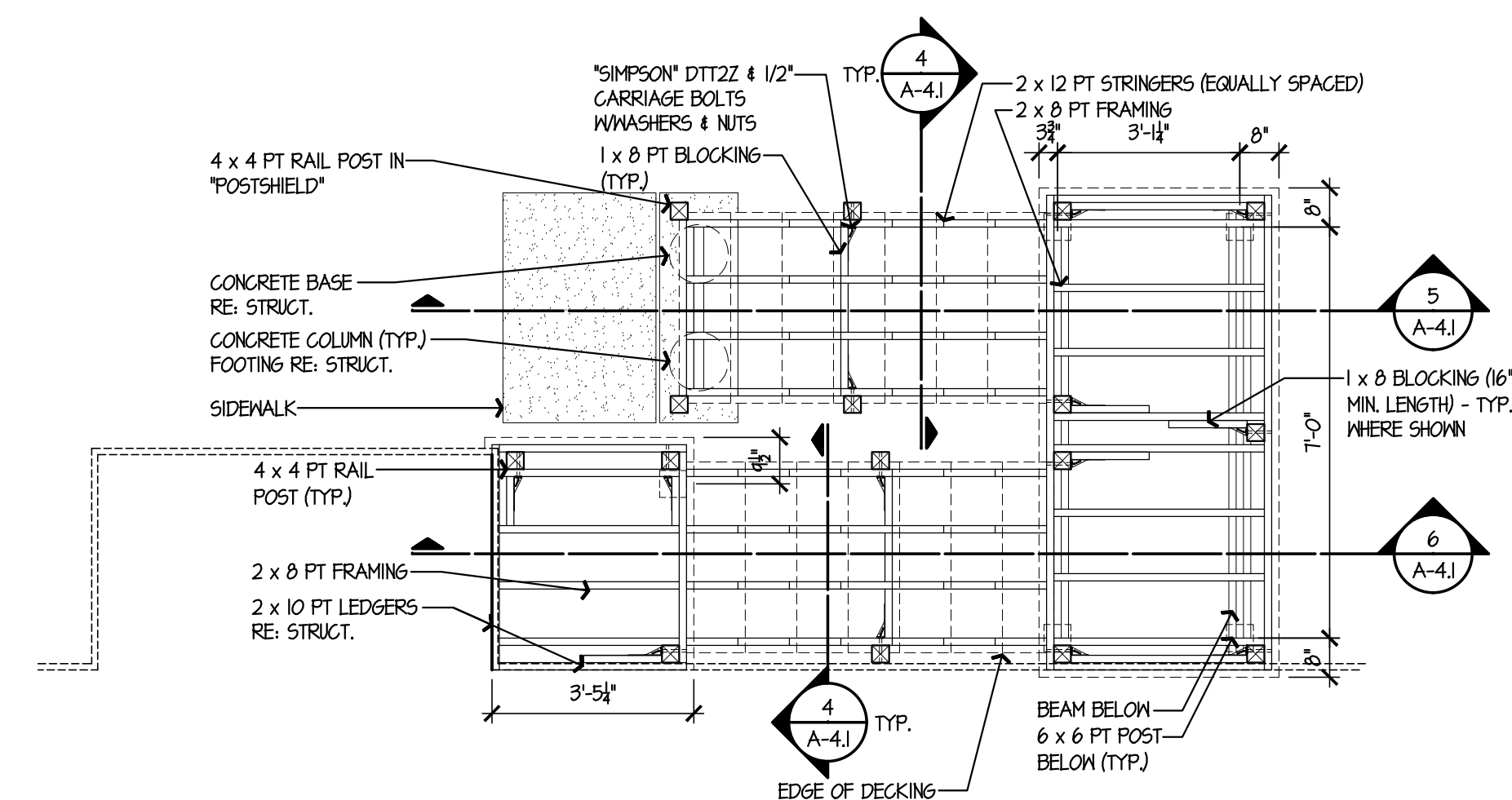
5 STAIR SECTION
A-4.1 SCALE: 1/2"=1'-0"



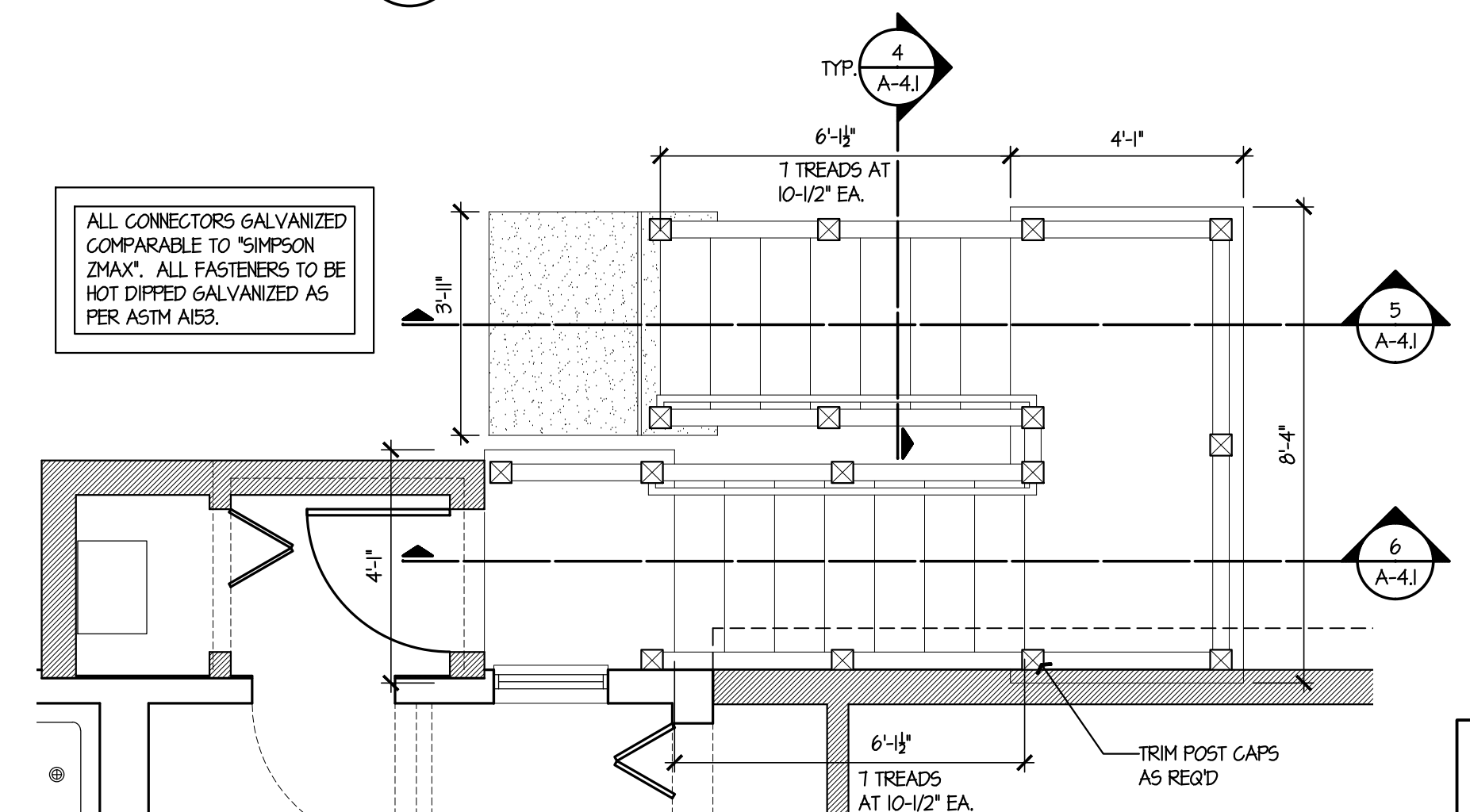
NOTE 1 - HANDRAIL MIN. HEIGHT 34" - MAX HEIGHT 38"
NOTE 2 - GUARDRAIL MIN. HEIGHT 36"

HANDRAIL TO BE LOCATED MIN. 1-1/2" BELOW GUARDR.

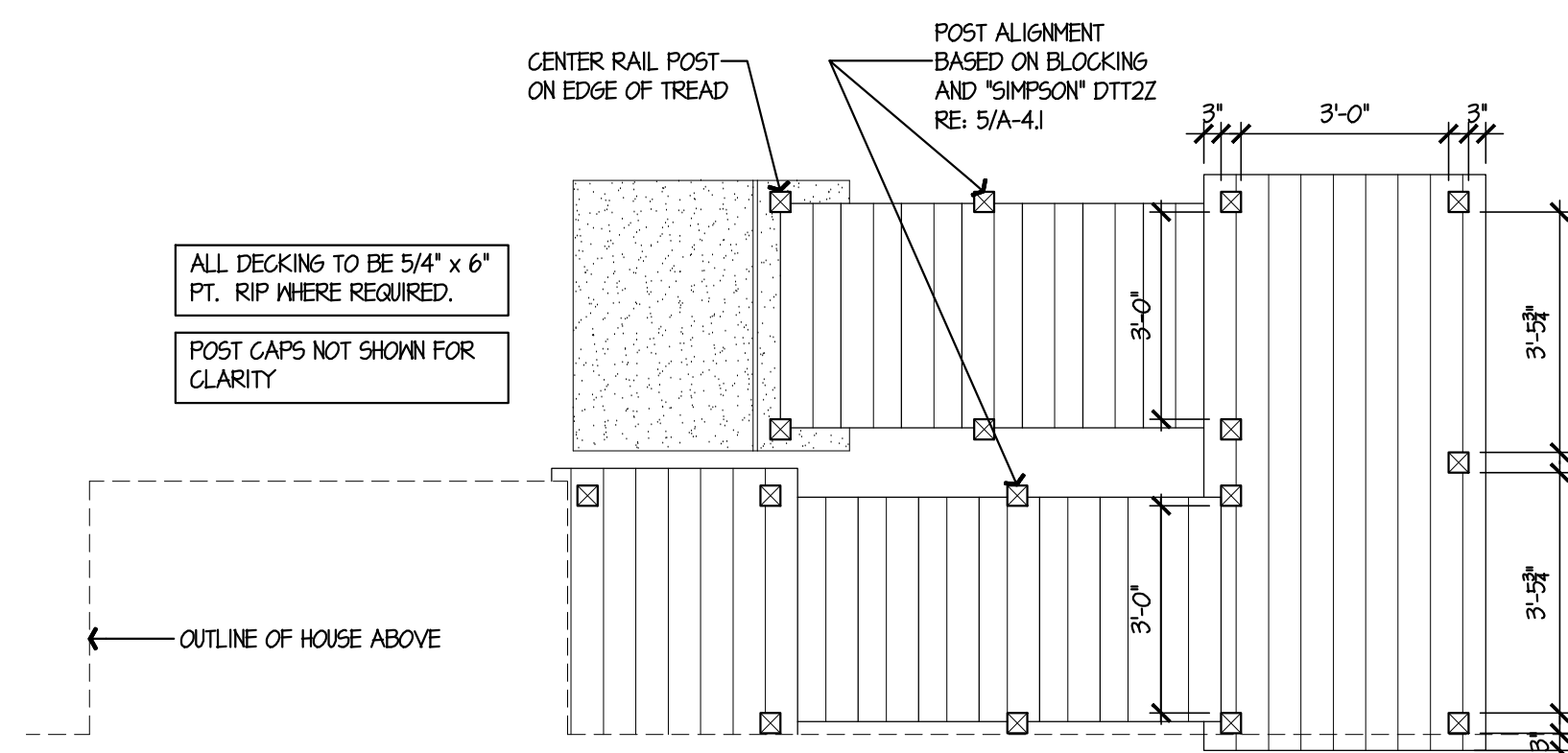
4 STAIR SECTION
A-4.1 SCALE: 1/2"=1'-0"



3 FRAMING PLAN
A-4.1 SCALE: 3/8"=1'-0"



1 REAR STAIR
A-4.1 SCALE: 3/8"=1'-0"



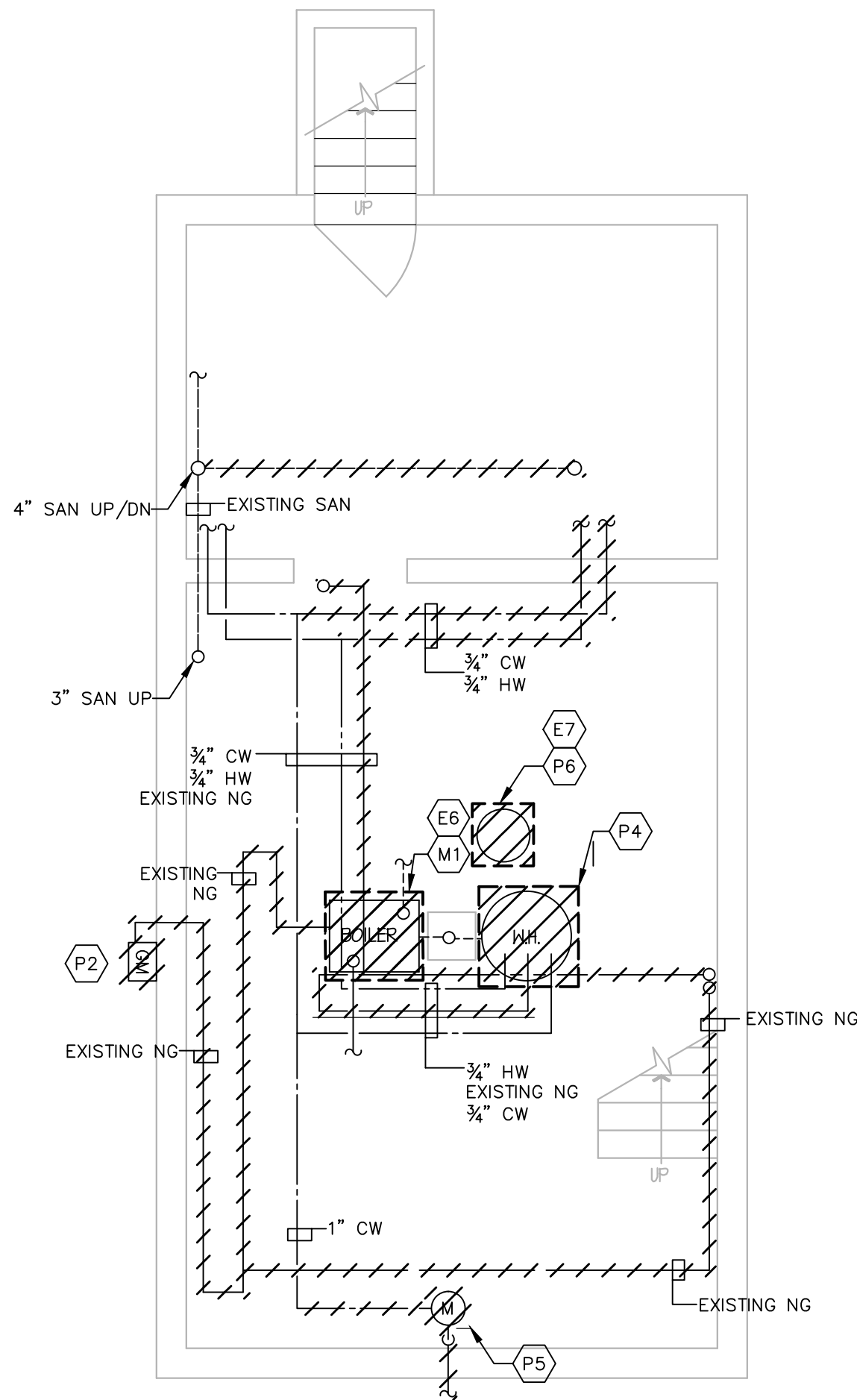
2 DECKING
A-4.1 SCALE: 3/8"=1'-0"

date	description	no.
revisions		

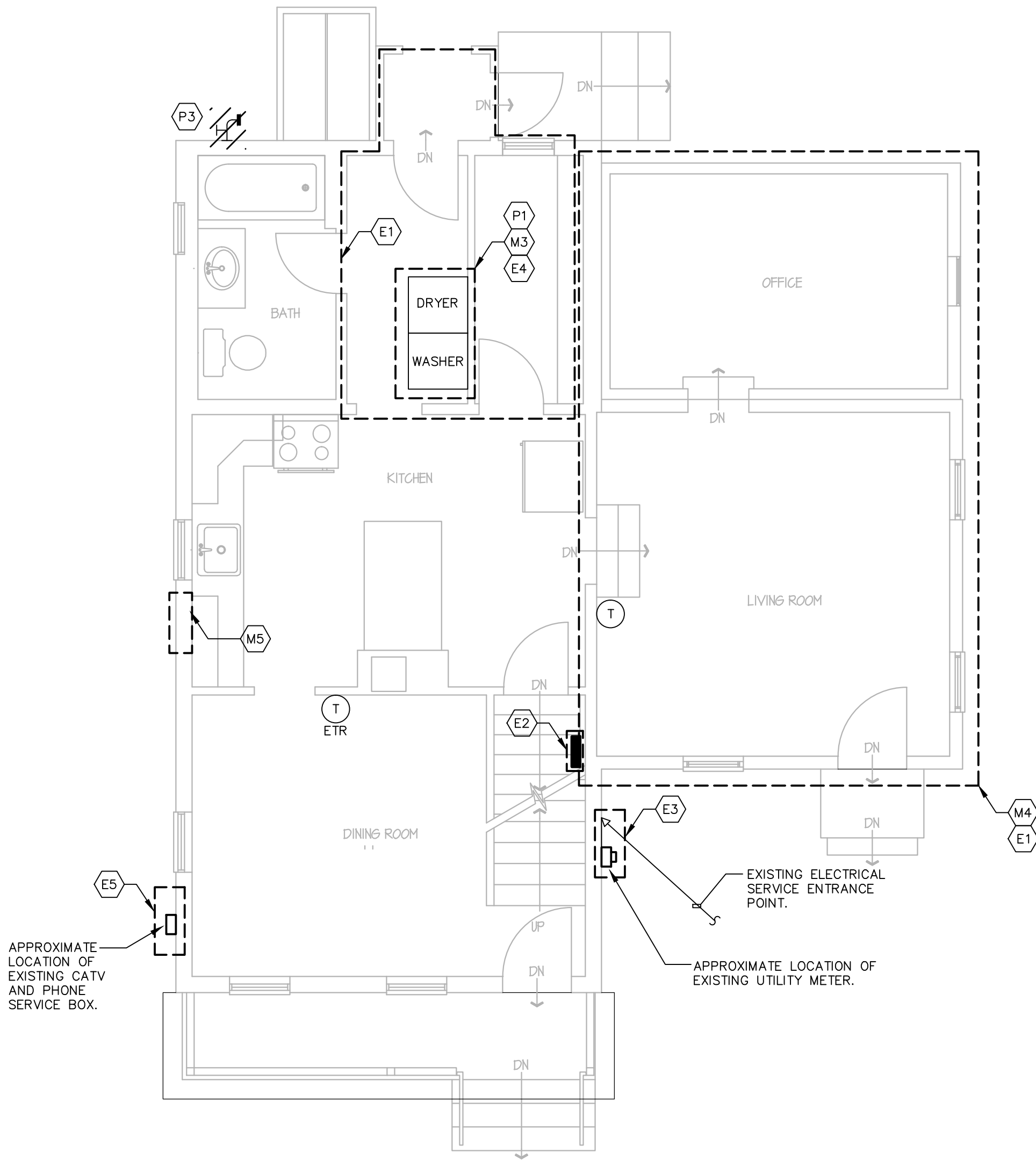
REAR STAIRS

A-4.1

date	28 JULY 2015
drawn	NWF
scale	AS SHOWN
checked	JP/DH
project no.	1347-45
application no.	2433



1 BASEMENT SCHEMATIC
MEP-1.0 SCALE: 1/4"= 1'-0" NORTH



2 1st FLOOR PLAN
MEP-1.0 SCALE: 1/4"= 1'-0" NORTH

PLUMBING DEMOLITION KEY NOTES	
P1	REMOVE ALL SUPPLY AND DRAINAGE PIPING SERVING WASHING MACHINE. REFER TO NEW WORK PLAN FOR NEW LOCATION OF WASHING MACHINE.
P2	REMOVE GAS METER AND ALL ASSOCIATED PIPING.
P3	REMOVE EXISTING HOSE BIBB AND ALL ASSOCIATED PIPING BACK TO NEAREST ACTIVE MAIN.
P4	REMOVE EXISTING WATER HEATER, ASSOCIATED PIPING AND SPECIALTIES. CW AND HW SHALL BE REMOVED BACK TO NEAREST ACTIVE MAIN.
P5	REMOVE WATER METER AND ALL ASSOCIATED PIPING BACK TO STREET. REMOVE PIPING AFTER METER AS INDICATED.
P6	REMOVE EXISTING SUMP PUMP AND ALL ASSOCIATED PIPING AND CONTROLS.

MECHANICAL DEMOLITION KEY NOTES	
M1	REMOVE EXISTING BOILER AND ALL ASSOCIATED PIPING, SPECIALTIES, AND CONTROLS. REMOVE HWS AND HWR BACK TO NEAREST ACTIVE MAIN.
M3	REMOVE DRYER VENT. REFER TO NEW WORK PLAN FOR NEW LOCATION OF DRYER.
M4	REMOVE RADIATORS AND HYDRONIC PIPING SERVING THIS AREA IN ITS ENTIRETY BACK TO BOILER. REMOVE EXISTING THERMOSTAT AND ALL ASSOCIATED CONTROL WIRING.
M5	REMOVE EXISTING KITCHEN HOOD FAN AND ALL ASSOCIATED CONTROL WIRING AND POWER.

ELECTRICAL DEMOLITION KEY NOTES	
E1	REMOVE ALL ELECTRICAL LIGHTS, LIGHTING SWITCHES, POWER OUTLETS AND ALL ASSOCIATED WIRING BACK TO PANEL OF ORIGIN.
E2	REMOVE EXISTING MAIN ELECTRICAL PANEL. REMOVE ALL ASSOCIATED WIRING OUT TO UTILITY METER. REFER TO KEYNOTE 3 FOR MORE INFORMATION.
E3	REMOVE EXISTING ELECTRIC SERVICE TO THE RESIDENCE, INCLUDING WEATHER HEAD AND ALL ASSOCIATED WIRING FROM WEATHER HEAD TO METER, METER, METER SOCKET, FEEDER AND CONNECTION TO MAIN PANEL IN THE RESIDENCE.
E4	REMOVE EXISTING WASHER AND DRYER 120V AND 240V RECEPTACLES AND ALL ASSOCIATED WIRING BACK TO THE PANEL OF ORIGIN.
E5	REMOVE EXISTING CATV/PHONE SERVICE TO THE RESIDENCE. COORDINATE THE EXTENT OF REMOVAL WITH CATV/PHONE COMPANY.
E6	REMOVE EXISTING ELECTRICAL FEED TO BOILER. REMOVE ALL ASSOCIATED WIRING BACK TO THE PANEL OF ORIGIN.
E7	REMOVE EXISTING ELECTRICAL FEED TO SUMP PUMP. REMOVE ALL ASSOCIATED WIRING BACK TO THE PANEL OF ORIGIN.



COMMUNITY
DEVELOPMENT
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DISASTER RECOVERY
for the
OWNER OCCUPIED
RECOVERY and
REHABILITATION
PROGRAM
for the
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DEPARTMENT OF
HOUSING

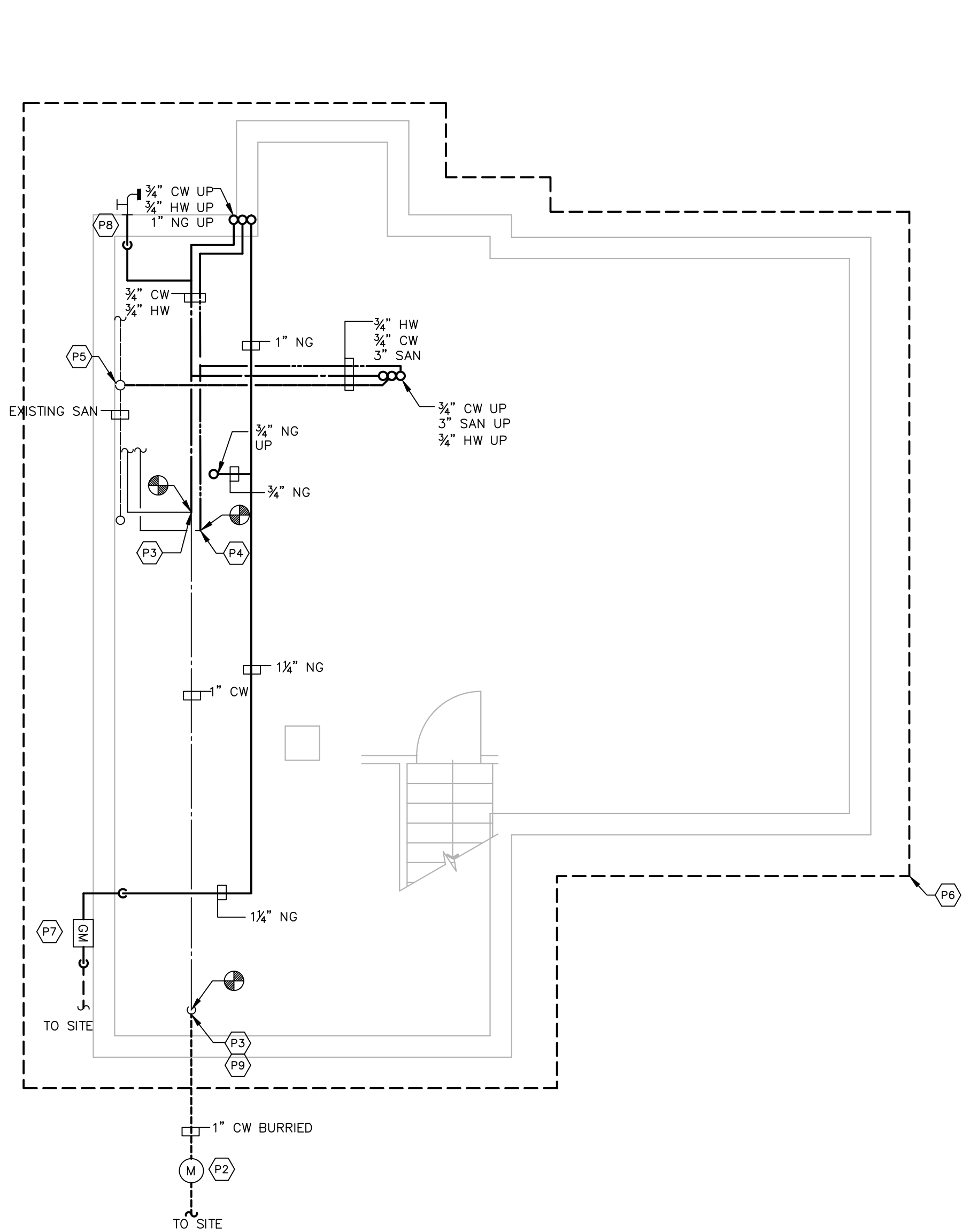
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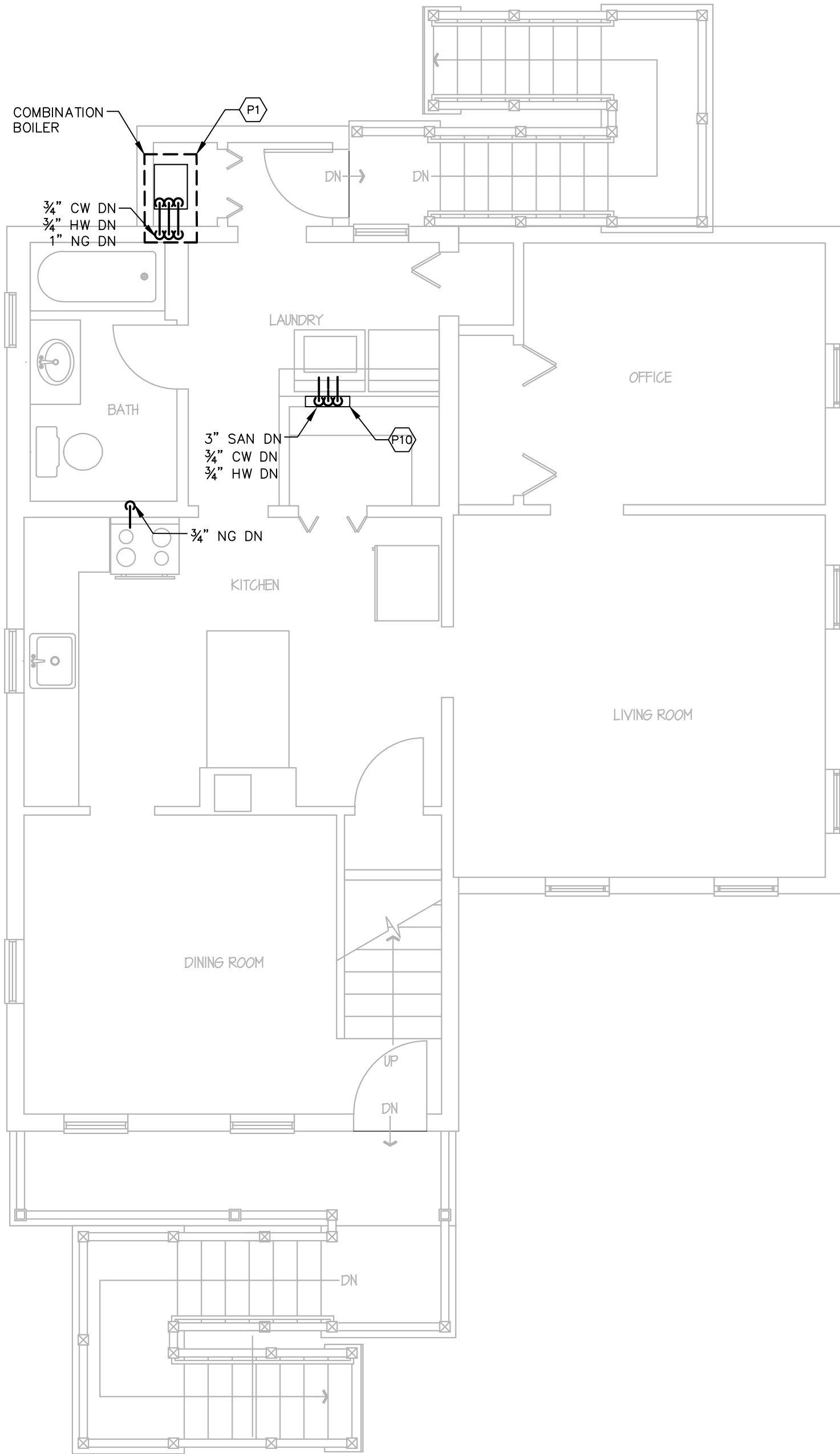
MEP
DEMOLITION
FLOOR PLANS

MEP-1.0

date	JULY 10, 2015
drawn	ANK /VCM
scale	AS SHOWN
checked	DTB
project no.	2014064.00
application no.	2433



1 GROUND LEVEL
P-1.0 SCALE: 1/4" = 1'-0" NORTH



2 1st FLOOR PLAN
P-1.0 SCALE: 1/4" = 1'-0" NORTH

GENERAL NOTES ALL TRADES	
1.	PLUMBING ITEMS INCLUDING BUT NOT LIMITED TO PIPING, EQUIPMENT, ETC SHALL BE INSTALLED ABOVE THE FLOOD PLANE AS DETERMINED BY THE ARCHITECTURAL PLANS.
2.	WORK SHALL BE COORDINATED WITH ARCHITECTURAL PLANS INCLUDING ACCESS PANELS FOR VALVES AND EQUIPMENT, ETC.

PLUMBING KEY NOTES	
P1	PROVIDE COMBINATION BOILER. SEE DETAIL 1/P-5.0 FOR MORE DETAILS.
P2	PROVIDE NEW WATER METER NEAR PROPERTY LINE ON STREET. METER SHALL BE INSTALLED IN METER PIT. VERIFY ALL INSTALLATION LOCATIONS AND PIT REQUIREMENTS WITH UTILITY COMPANY PRIOR TO BIDDING AND INSTALLATION.
P3	CONNECT NEW CW PIPING TO EXISTING. CONTRACTOR TO FIELD VERIFY EXACT LOCATION PRIOR TO FABRICATION AND INSTALLATION.
P4	CONNECT NEW HW PIPING TO EXISTING. CONTRACTOR TO FIELD VERIFY EXACT LOCATION PRIOR TO FABRICATION AND INSTALLATION.
P5	PROVIDE SANITARY WASTE PIPE EXTENSION TO BURIED SANITARY WASTE AS REQUIRED FOR RAISING OF HOUSE. CONTRACTOR TO FIELD VERIFY PIPING LOCATION AND SIZE PRIOR TO BIDDING AND INSTALLATION.
P6	ALL NEW AND EXISTING DOMESTIC COLD WATER SUPPLY PIPING EXPOSED BELOW THE PROPERTY SHALL BE INSULATED WITH 1/2" FIBERGLASS INSULATION WITH CONTINUOUS PVC JACKETING. ALL HOT AND COLD WATER PIPING EXPOSED BELOW THE PROPERTY SHALL BE HEAT TRACED WITH SELF REGULATION HEAT TRACE CABLE MODEL H612 AS MANUFACTURED BY PENTAIR. CABLE SHALL BE 120V INPUT AND HAVE AN OUTPUT OF 6W PER FOOT. PROVIDE ONE HEAT TAPE FOR HOT WATER PIPING AND ONE HEAT TAPE FOR COLD WATER PIPING. PROVIDE ALL NECESSARY ACCESSORIES NEEDED FOR COMPLETE AND OPERATIONAL SYSTEM. PROVIDE ONE 20A/120V DEDICATED POWER CIRCUIT FOR EVERY 150 FEET OF HEAT TRACE CABLE.
P7	PROVIDE NEW GAS METER. COORDINATE EXACT LOCATION WITH UTILITY PRIOR TO BIDDING AND INSTALLATION.
P8	PROVIDE NEW EXTERIOR WALL HYDRANT 3' ABOVE FINAL FINISHED GRADE. PROVIDE LOW POINT DRAIN ON PIPING DROP FROM HOUSE. SEE DETAIL 2/P5.0 FOR MORE DETAILS. CONNECT CW PIPING SERVING HOSE BIBB TO NEAREST ACTIVE MAIN.
P9	PROVIDE PRESSURE RELIEF VALVE AND ISOLATION VALVE ON RISE.
P10	PROVIDE WATER-TITE MODEL #W2700 HA WASHING MACHINE OUTLET BOX.

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PLUMBING
FLOOR PLANS

P-1.0

date	JULY 10, 2015
drawn	ANK
scale	AS SHOWN
checked	DTB
project no.	2014064.00
application no.	2433

PLUMBING PIPING LEGEND

SYMBOL	DESCRIPTION
-----	NEW CW BURRIED
-----	NEW CW
-----	EXISTING CW
-----	NEW SAN BURRIED
-----	NEW SAN
-----	EXISTING SAN
-----	NEW HW
-----	EXISTING HW
-----	NEW NG BURRIED
-----	NEW NG
-----	EXISTING NG
-----	NEW V
-----	EXISTING V
-----	DETAIL LINE
-----	90° ELBOW DOWN
-----	90° ELBOW UP
-----	TEE UP
-----	TEE DOWN
-----	DROP AND RUN
-----	TEE OFF TOP OF PIPE
-----	TEE OFF BOTTOM OF PIPE
-----	CLEANOUT
-----	FLOOR CLEANOUT
-----	HOSE BIBB

PLUMBING SYMBOL LEGEND

SYMBOL	DESCRIPTION
(M)	WATER METER
-----	THERMOMETER
-----	PRESSURE REGULATOR
-----	CONNECT NEW TO EXISTING
-----	VENT THRU ROOF
CM	GAS METER

PLUMBING ABBREVIATIONS

ABBREVIATION	DESCRIPTION
BTU	BRITISH THERMAL UNIT
CO	CLEANOUT
CW	COLD WATER
DN	DOWN
ET	EXPANSION TANK
HB	HOSE BIBB
HW	HOT WATER
HWR	HOT WATER RECIRCULATION
NG	NATURAL GAS
TYP	TYPICAL
V	VENT
VTR	VENT THRU ROOF

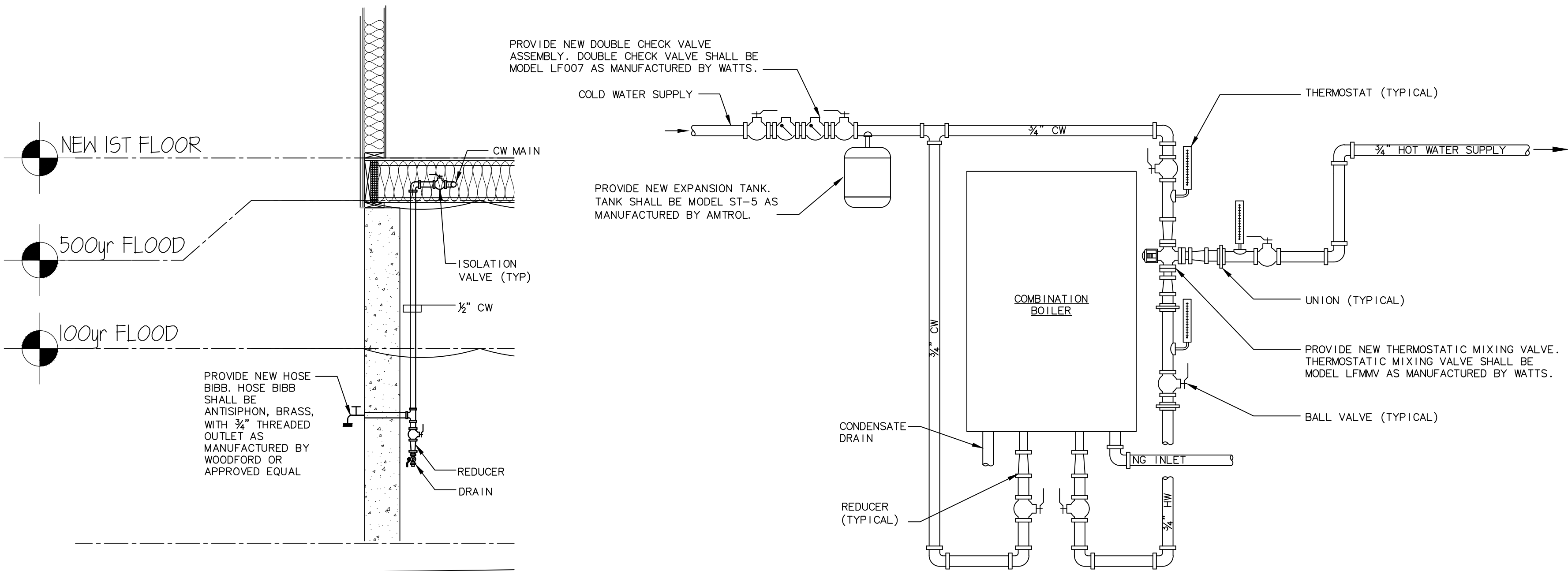
- GENERAL PROCEDURES ALL TRADES
1. THESE SPECIFICATIONS ARE APPLICABLE TO ALL PLUMBING DRAWINGS UNLESS NOTED OTHERWISE.
2. DESCRIPTION
- A. THIS PROJECT COMPRISES ALTERATIONS AND RENOVATIONS TO THE EXISTING BUILDING. THE EXISTING BUILDING IS CURRENTLY OCCUPIED AND THE PROJECT WILL PROCEED IN A MANNER WHICH WILL MINIMIZE ANY INCONVENIENCE TO THE BUILDING OCCUPANTS.
- B. SCOPE OF WORK CONSISTS OF INSTALLATION OF MATERIALS TO BE FURNISHED UNDER THE CONTRACT DOCUMENTS AND WITHOUT LIMITING GENERALITY THEREOF CONSISTS OF FURNISHING LABOR, MATERIALS, EQUIPMENT, HOISTING, PLANT, TRANSPORTATION, RIGGING, STAGING, APPURTENANCES, AND SERVICES NECESSARY AND/OR INCIDENTAL TO PROPERLY COMPLETE ALL WORK AS SHOWN ON THE DRAWINGS AND AS DESCRIBED HEREIN.
3. DEFINITIONS: THE FOLLOWING DEFINITIONS APPLY TO THIS CONTRACT
- A. FURNISH: THE TERM "FURNISH" MEANS TO "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."
- B. INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."
- C. PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."
- D. REMOVE: THE TERM REMOVE MEANS TO DISCONNECT/FROM ITS PRESENT POSITION, REMOVE FROM THE PREMISES AND TO DISPOSE OF IN A LEGAL MANNER."
- E. SUBSTITUTIONS: "SUBSTITUTIONS" ARE REQUESTS FOR CHANGES IN PRODUCTS, MATERIALS AND METHODS OF CONSTRUCTION AS PROPOSED BY THE CONTRACTOR AFTER AWARD OF THE CONTRACT.
4. DRAWINGS
- A. PROVIDE ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY TO COMPLETE THE WORK OUTLINED ON THESE CONTRACT DOCUMENTS. THE CONTRACTOR IS TO NOTE THAT THESE DOCUMENTS ARE DIAGRAMMATIC ONLY AND THAT FINAL PLACEMENT OF EQUIPMENT OR DEVICES IN THE FIELD MAY NOT DIRECTLY CORRESPOND TO THAT WHICH IS SHOWN ON THE DRAWINGS. IF A CONFLICT IN POSITIONING OCCURS BETWEEN THE DRAWINGS AND THE FIELD CONDITIONS, THE CONTRACTOR SHALL IMMEDIATELY TO ASCERTAIN WHAT THE INTENT WAS BY THE DESIGN PROFESSIONAL.
5. SURVEY AND MEASUREMENTS:
- A. PRIOR TO SUBMITTING BID, VISIT SITE AND IDENTIFY EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT WORK TO BE PERFORMED. NO COMPENSATION WILL BE GRANTED FOR ADDITIONAL WORK CAUSED BY UNFAMILIARITY WITH SITE CONDITIONS THAT ARE VISIBLE OR READILY IDENTIFIED BY EXPERIENCED OBSERVERS. INCLUDE IN THE BID ALL DEMOLITION WORK REQUIRED.
- B. DO NOT SCALE DRAWINGS. SCALE INDICATED ON DRAWINGS IS FOR ESTABLISHING REFERENCE POINTS ONLY. ACTUAL FIELD CONDITIONS SHALL GOVERN ALL DIMENSIONS.
- C. PRIOR TO ORDERING ANY MATERIALS AND EQUIPMENT, THOROUGHLY REVIEW THE SITE CONDITIONS TO DETERMINE IF ADEQUATE CLEARANCES AND ACCESS IS ALLOWED TO INSTALL THE COMPONENTS. ORDER EQUIPMENT BROKEN DOWN AS NECESSARY TO ALLOW FOR PROPER RIGGING THROUGH THE PROJECT AREA. PROVIDE ALL NECESSARY ALTERATIONS TO THE STRUCTURE OF THE BUILDING AS NECESSARY TO RIG THE EQUIPMENT IN PLACE.
- D. ARRANGE INSTALLATION TO PROVIDE ACCESS TO EQUIPMENT FOR EASY MAINTENANCE AND REPAIR.
6. CODES AND STANDARDS: ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST STATE OF CONNECTICUT ACCEPTED VERSION OF THE FOLLOWING
- A. INTERNATIONAL RESIDENTIAL CODE
- B. INTERNATIONAL BUILDING CODE
- C. INTERNATIONAL PLUMBING CODE
- D. INTERNATIONAL MECHANICAL CODE
- E. NATIONAL ELECTRIC CODE (NFPA 70)
- F. THE LIFE SAFETY CODE (NFPA 101)
7. PERMITS AND FEES: THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS; AND PAY ALL GOVERNMENT AND STATE SALES TAXES AND FEES WHERE APPLICABLE, AND OTHER COSTS, INCLUDING UTILITY CONNECTIONS OR EXTENSIONS IN CONNECTION WITH THE WORK, FILE ALL NECESSARY DRAWINGS, PREPARE ALL DOCUMENTS AND OBTAIN ALL NECESSARY APPROVALS OF ALL GOVERNMENTAL AND STATE DEPARTMENTS HAVING JURISDICTION, OBTAIN ALL REQUIRED CERTIFICATES OF INSPECTION FOR HIS WORK, AND DELIVER A COPY TO THE OWNER AND ENGINEER BEFORE REQUEST FOR ACCEPTANCE AND FINAL PAYMENT FOR THE WORK.
8. SHOP DRAWINGS:
- A. SUBMIT NEWLY PREPARED INFORMATION, DRAWN TO ACCURATE SCALE OF 1/4"=1'-0". HIGHLIGHT, ENIRCLE, OR OTHERWISE INDICATE DEVIATIONS FROM THE CONTRACT DOCUMENTS. DO NOT REPRODUCE CONTRACT DOCUMENTS OR COPY STANDARD INFORMATION AS THE BASIS OF SHOP DRAWINGS. STANDARD INFORMATION PREPARED WITHOUT SPECIFIC REFERENCE TO THE PROJECT IS NOT CONSIDERED SHOP DRAWINGS.
- B. SHOP DRAWINGS INCLUDE EQUIPMENT SUBMITTALS, FABRICATION AND INSTALLATION DRAWINGS, SETTING DIAGRAMS, SCHEDULES, PATTERNS, TEMPLATES AND SIMILAR DRAWINGS. INCLUDE THE FOLLOWING INFORMATION:
- a. DIMENSIONS.
- b. IDENTIFICATION OF PRODUCTS AND MATERIALS INCLUDED.
- c. COMPLIANCE WITH SPECIFIED STANDARDS AND PERFORMANCE DATA AS INDICATED.
- d. NOTATION OF COORDINATION REQUIREMENTS.
- e. NOTATION OF DIMENSIONS ESTABLISHED BY FIELD MEASUREMENT.
- f. SUBMIT 3 BLACK-LINE PRINTS AND 2 ADDITIONAL PRINTS WHERE REQUIRED FOR MAINTENANCE MANUALS, PLUS THE NUMBER OF PRINTS NEEDED BY THE ENGINEER FOR DISTRIBUTION. ONE PRINT WILL BE RETAINED; THE REMAINDER RETURNED. ONE OF THE PRINTS RETURNED SHALL BE MARKED-UP AND MAINTAINED AS A "RECORD DOCUMENT".
- g. DO NOT USE SHOP DRAWINGS WITHOUT AN APPROPRIATE FINAL STAMP INDICATING ACTION TAKEN IN CONNECTION WITH CONSTRUCTION.
- h. DO NOT ORDER ANY MATERIALS OR EQUIPMENT PRIOR TO RECEIVING FINAL APPROVED SHOP DRAWINGS.
- i. PROVIDE SUBMITTALS AS INDICATED IN SPECIFIC SPECIFICATION SECTIONS.
9. USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND THE METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK.
10. THE CONTRACTOR SHALL COORDINATE ALL INTERRUPTIONS OF SERVICES AND LIMITATIONS OF ACCESS WITH THE OWNER NO LESS THAN 5 DAYS PRIOR TO THE INTERRUPTION.
11. OPERATION AND MAINTENANCE
- A. UPON COMPLETION OF ALL WORK AND TESTS, THE CONTRACTOR SHALL INSTRUCT THE OWNER OR THE OWNER'S REPRESENTATIVE IN THE OPERATION, ADJUSTMENT AND MAINTENANCE OF ALL EQUIPMENT FURNISHED. THE CONTRACTOR SHALL GIVE AT LEAST SEVEN (7) DAYS NOTICE TO THE OWNER AND THE ENGINEER IN ADVANCE OF THIS PERIOD.
- B. THE CONTRACTOR SHALL PREPARE THREE (3) COPIES OF A COMPLETE OPERATION AND MAINTENANCE MANUAL, BOUND IN BOOKLET FORM. ORGANIZE OPERATING AND MAINTENANCE DATA INTO SUITABLE SETS OF MANAGEABLE SIZE. BIND PROPERLY INDEXED DATA IN INDIVIDUAL HEAVY-DUTY 3-RING VINYL-COVERED BINDERS, WITH POCKET FOLDERS FOR FOLD SHEET INFORMATION AND DESIGNATION PARTITIONS WITH IDENTIFICATION TABS. MARK APPROPRIATE IDENTIFICATION ON FRONT AND SPINE OF EACH BINDER.
- C. OPERATION AND MAINTENANCE MANUAL SHALL INCLUDE THE FOLLOWING:
- a. MANUFACTURER'S PRINTED OPERATING AND MAINTENANCE PROCEDURES.
- b. MAINTENANCE PROCEDURES FOR ROUTINE PREVENTATIVE MAINTENANCE AND TROUBLESHOOTING.
- c. COPIES OF WARRANTIES.
- d. APPROVED SHOP DRAWINGS AND PRODUCT DATA.
- e. BALANCE REPORTS.
- f. INCLUDE IN THE MANUAL, A TABULATED EQUIPMENT SCHEDULE FOR ALL EQUIPMENT. SCHEDULE SHALL INCLUDE PERTINENT DATA SUCH AS: MAKE, MODEL NUMBER, SERIAL NUMBER, VOLTAGE, NORMAL OPERATING CURRENT, BELT SIZE, FILTER QUANTITIES AND SIZES, BEARING NUMBER, ETC. SCHEDULE SHALL INCLUDE MAINTENANCE TO BE DONE AND FREQUENCY.
- g. MAINTENANCE AND INSTRUCTION MANUALS SHALL BE SUBMITTED TO THE OWNER AT THE SAME TIME AS THE SEVEN (7) DAY NOTICE IS GIVEN PRIOR TO THE INSTRUCTION PERIOD.
12. AS-BUILT DRAWINGS
- A. PREPARE AS-BUILT DRAWINGS TO A SCALE OF 1/4"=1'-0" OR LARGER; DETAILING THE ACTUAL INSTALLATION OF MAJOR ELEMENTS, COMPONENTS, AND SYSTEMS OF MECHANICAL EQUIPMENT AND MATERIALS. WHERE SHOP DRAWINGS ARE USED, RECORD A CROSS-REFERENCE AT THE CORRESPONDING LOCATION ON THE AS-BUILT DRAWINGS. GIVE PARTICULAR ATTENTION TO CONCEALED ELEMENTS THAT WOULD BE DIFFICULT TO MEASURE AND RECORD AT A LATER DATE.
- B. MARK NEW INFORMATION THAT IS IMPORTANT TO THE OWNER, BUT WAS NOT SHOWN ON CONTRACT DRAWINGS OR SHOP DRAWINGS.
- C. NOTE RELATED CHANGE ORDER NUMBERS WHERE APPLICABLE.
- D. ORGANIZE AS-BUILT DRAWINGS INTO MANAGEABLE SETS, BIND WITH DURABLE PAPER COVER SHEETS, AND PRINT SUITABLE TITLES, DATES AND OTHER IDENTIFICATION ON THE COVER OF EACH SET.
13. OBTAIN IN OWNER'S NAME WRITTEN EQUIPMENT AND MATERIAL WARRANTIES OFFERED

- IN MANUFACTURER'S PUBLISHED PRODUCT DATA WITHOUT EXCLUSION OR LIMITATION.
14. GUARANTEE WORK OF THESE CONTRACT DOCUMENTS IN WRITING FOR NOT LESS THAN ONE (1) YEAR FROM DATE OF FINAL NOTICE OF ACCEPTANCE. REPAIR OR REPLACE DEFECTIVE MATERIALS, EQUIPMENT, WORKMANSHIP AND INSTALLATION THAT DEVELOP WITHIN THIS PERIOD, PROMPT AND TO OWNER'S SATISFACTION AND CORRECT DAMAGE CAUSED IN MAKING NECESSARY REPAIRS AND REPLACEMENTS UNDER GUARANTEE WITHIN CONTRACT PRICE.
15. SUBMIT TO THE OWNER AN OFFICIAL CERTIFICATE OF INSURANCE FOR THEIR RECORDS.
- MEANS AND METHODS ALL TRADES
1. INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
2. DO NOT BURN WASTE MATERIALS. DO NOT BURY DEBRIS OR EXCESS MATERIALS ON THE OWNER'S PROPERTY. DO NOT DISCHARGE VOLATILE, HARMFUL OR DANGEROUS MATERIALS INTO DRAINAGE SYSTEMS. REMOVE AND DISPOSE OF ALL WASTE MATERIALS, PACKAGING MATERIAL, SKIDS ETC. FROM THE SITE AND DISPOSE OF IN A LAWFUL MANNER IN ACCORDANCE WITH MUNICIPAL, STATE AND FEDERAL REGULATIONS.
3. MATERIALS AND EQUIPMENT SHALL BE UL LISTED WHERE STANDARD HAS BEEN ESTABLISHED.
4. CAREFULLY INSPECT ALL BUILDING ELEMENTS PRIOR TO CUTTING OR DRILLING INTO WALL, FLOORS OR CEILINGS. PATCH AND PAINT SURFACES DISTURBED BY WORK UNDER THIS CONTRACT AS REQUIRED TO RESTORE THEM TO THEIR ORIGINAL CONDITION.
5. SCAFFOLDING, RIGGING, HOISTING: THE CONTRACTOR SHALL FURNISH ALL SCAFFOLDING, RIGGING, HOISTING AND SERVICES NECESSARY FOR ERECTION AND DELIVERY INTO THE PREMISES ANY EQUIPMENT AND APPARATUS FURNISHED UNDER THIS DIVISION. REMOVE SAME FROM PREMISES WHEN NO LONGER REQUIRED.
6. EXCAVATION AND BACKFILLING: IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE SIZES, DEPTHS, FILL AND BEDDING REQUIREMENTS AND ANY OTHER EXCAVATION WORK REQUIRED UNDER THESE SPECIFICATIONS
7. WATERPROOFING: WHERE ANY WORK PIERCES WATERPROOFING, INCLUDING WATERPROOF CONCRETE, ROOFS, EXTERIOR WALL AND FLOORS IN WET AREAS, THE METHOD OF INSTALLATION SHALL BE REVIEWED BY THE ENGINEER BEFORE WORK IS DONE. THE CONTRACTOR SHALL FURNISH ALL NECESSARY SLEEVES, CAULKING AND FLASHING REQUIRED TO MAKE OPENINGS ABSOLUTELY WATERTIGHT.
8. PROVIDE FIRESTOPPING AROUND ALL FIRE PROTECTION, PLUMBING, MECHANICAL AND ELECTRICAL PENETRATIONS THROUGH FIRE RATED PARTITIONS. PROVIDE ASBESTOS FREE FIRESTOPPING SYSTEM CAPABLE OF MAINTAINING AN EFFECTIVE BARRIER AGAINST FLAME AND GASES. SYSTEM SHALL BE UL LISTED AND COMPLY WITH ASTM E 814.
9. ACCESS DOORS SHALL BE PROVIDED IN CEILINGS, WALLS AND FLOORS AT ALL DAMPERS, VALVES, CONTROL DEVICES, AND OTHER APPARATUS AND EQUIPMENT REQUIRING PERIODIC SERVICE AND INSPECTION. COORDINATE TYPE AND LOCATION WITH ARCHITECTURAL PLANS.
10. SEISMIC RESTRAINTS SHALL BE INSTALLED AS REQUIRED PER BUILDING CODE AND FIRE SAFETY CODE. RESTRAINTS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 13 AND SMACNA STANDARDS. SUBMIT SHOP DRAWINGS INCLUDING SEISMIC CALCULATIONS WITH PROFESSIONAL ENGINEER'S SEAL FOR REVIEW BY ENGINEER.

PLUMBING

1. PIPING:

- A. DOMESTIC WATER PIPING SHALL BE COPPER TUBING TYPE L. SOLDER FILLER METALS SHALL BE 95-5 TIN-ANTIMONY SOLDER JOINTS.
- B. WASTE AND VENT PIPING SHALL BE PVC, TYPE DWV PIPE AND FITTINGS WITH SOLVENT CEMENTED JOINTS.
- C. WASTE AND VENT PIPING SHALL BE HUBLESS, SERVICE WEIGHT, CAST-IRON, SOIL PIPE AND FITTINGS, WITH NEOPRENE GASKETS. BURIED PIPING SHALL BE HUB AND SPIGOT FITTINGS.
- D. NATURAL GAS PIPING SHALL BE SCHEDULE 40, CARBON STEEL PIPE, WITH THREADED JOINTS AND FITTINGS OR TYPE L COPPER TUBING.
2. INSULATION:
- A. INSULATION SHALL BE IN ACCORDANCE WITH LATEST EDITION OF THE IECC EXCEPT THAT PIPE INSULATION SHALL NOT BE LESS THAN 1" THICK. ALL INSULATION MATERIALS, ADHESIVES, COATINGS, AND OTHER ACCESSORIES SHALL HAVE FLAME SPREAD RATINGS OF 25 OR LESS, AND SMOKE DEVELOPED RATINGS OF 50 OR LESS AS TESTED BY ASTM E 84 (NFPA 255) METHOD. ALL INSULATION MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS AND IN ACCORDANCE WITH THE LATEST EDITION OF SMACNA AND ASHRAE STANDARDS.
- B. PIPE INSULATION SHALL BE FIBERGLASS WITH VAPOR BARRIER JACKET. PROVIDE INSULATION FOR THE FOLLOWING PIPING SYSTEMS:
- a. DOMESTIC COLD WATER PIPING
- b. DOMESTIC HOT WATER PIPING
- C. ALL EXPOSED DOMESTIC WATER PIPE SHALL BE WRAPPED WITH A PVC VAPOR BARRIER JACKET AS MANUFACTURED BY ZESTON OR APPROVED EQUAL. PVC JACKETING SHALL BE FINISHED TO BE WATER TIGHT.
3. PIPING INSTALLATION:
- A. INSTALL PIPING IN ACCORDANCE WITH ALL APPLICABLE CODES AND GOOD PRACTICES.
- B. INSTALL UNIONS OR FLANGES IN PIPES ADJACENT TO EACH VALVE, CONTROL DEVICE AND AT FINAL CONNECTIONS EACH PIECE OF EQUIPMENT.
- C. INSTALL DIELECTRIC UNIONS TO JOIN DISSIMILAR METALS.
- D. INSTALL AND ANCHOR PIPING TO ENSURE PROPER EXPANSION AND CONTRACTION.
- E. ANCHOR PIPING TO ENSURE PROPER DIRECTION OF EXPANSION AND CONTRACTION.
- F. SUPPORT PIPING TO PREVENT VIBRATION OR SAGGING. PROVIDE HANGER SPACING ACCORDING TO DISTANCES LISTED IN APPLICABLE CODES AND REGULATIONS.
4. PLUMBING IDENTIFICATION
- A. PLUMBING IDENTIFICATION WORK SHALL COMPLY WITH ANSI A13.1. NAMES, ABBREVIATIONS AND OTHER DESIGNATIONS USED IN MECHANICAL IDENTIFICATION WORK, SHALL CORRESPOND WITH DESIGNATIONS SHOWN, SPECIFIED OR SCHEDULED.
- B. VALVE TAGS SHALL BE 1-1/2" DIAMETER, 19-GAGE POLISHED BRASS WITH STAMP-ENGRAVED LETTERING, ATTACH VALVES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- C. PROVIDE VALVE TAG ON EVERY VALVE, EXCLUDING DRAIN VALVES.
- D. PIPE IDENTIFICATION, PLASTIC PIPE MARKERS, FACTORY FABRICATED, FLEXIBLE, SEMI-RIGID PLASTIC, PERFORMED TO FIT AROUND PIPE OR PIPE COVERING, MINIMUM INFORMATION INDICATING FLOW DIRECTION ARROW AND IDENTIFICATION OF FLUID BEING CONVEYED.
5. TESTING AND ADJUSTING
- A. ALL WATER PIPING SHALL BE TESTED IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE. THE SYSTEM SHALL BE PROVED TIGHT UNDER WATER PRESSURE OF 100 PSIG. THE PRESSURE SHALL BE APPLIED GRADUALLY AND THEN HELD FOR A MINIMUM OF TWO HOURS.
- B. ALL WASTE PIPING SHALL BE TESTED IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE. THE SYSTEM SHALL BE FILLED WITH WATER TO A HEAD OF NOT LESS THAN 10 FEET. THE WATER LEVEL AT THE TOP OF THE TEST HEAD OF WATER SHALL NOT DROP FOR AT LEAST 15 MINUTES.
- C. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT FOR ALL TESTING.



2 HOSE BIBB CW SUPPLY DETAIL
N.T.S.

1 WATER HEATER PIPING DIAGRAM
N.T.S.



COMMUNITY
DEVELOPMENT
BLOCK GRANT -
DISASTER RECOVERY
for the
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GENERAL
RENOVATIONS for the
LLOYD RESIDENCE
APPLICATION No. 2433
261 Adams Street
Bridgeport, CT 06607

date	description	no.
revisions		

PLUMBING
SPECIFICATIONS

P-5.0

date	JULY 10, 2015
drawn	ANK
scale	AS SHOWN
checked	DTB
project no.	2014064.00
application no.	2433

PLUMBING PIPING LEGEND

SYMBOL	DESCRIPTION
-----	NEW CW BURIED
-----	NEW CW
-----	EXISTING CW
-----	NEW SAN BURIED
-----	NEW SAN
-----	EXISTING SAN
-----	NEW HW
-----	EXISTING HW
-----	NEW NG BURIED
-----	NEW NG
-----	EXISTING NG
-----	NEW V
-----	EXISTING V
-----	DETAIL LINE
-----	90° ELBOW DOWN
-----	90° ELBOW UP
-----	TEE UP
-----	TEE DOWN
-----	DROP AND RUN
-----	TEE OFF TOP OF PIPE
-----	TEE OFF BOTTOM OF PIPE
-----	CLEANOUT
-----	FLOOR CLEANOUT
-----	HOSE BIBB

PLUMBING SYMBOL LEGEND

SYMBOL	DESCRIPTION
(M)	WATER METER
(T)	THERMOMETER
(R)	PRESSURE REGULATOR
(C)	CONNECT NEW TO EXISTING
(V)	VENT THRU ROOF
(GM)	GAS METER

PLUMBING ABBREVIATIONS

ABBREVIATION	DESCRIPTION
BTU	BRITISH THERMAL UNIT
CO	CLEANOUT
CW	COLD WATER
DN	DOWN
ET	EXPANSION TANK
HB	HOSE BIBB
HW	HOT WATER
HWR	HOT WATER RECIRCULATION
NG	NATURAL GAS
TYP	TYPICAL
V	VENT
VTR	VENT THRU ROOF

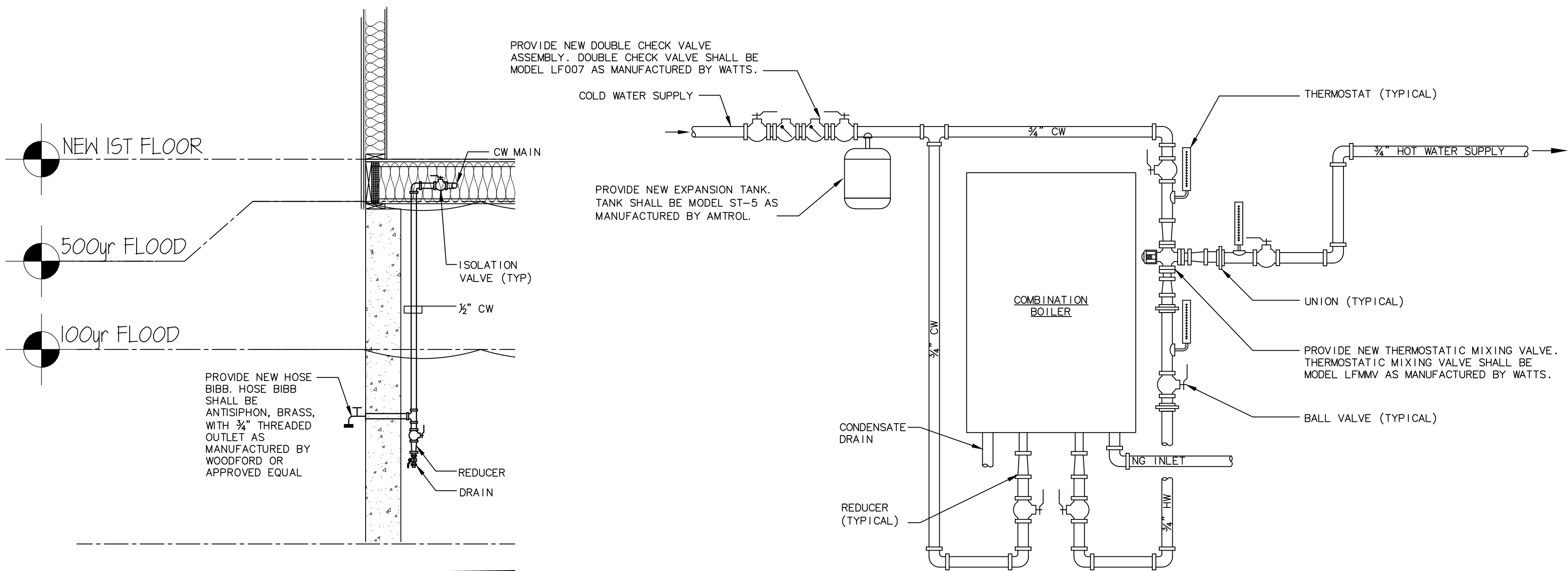
- GENERAL PROCEDURES ALL TRADES
- THESE SPECIFICATIONS ARE APPLICABLE TO ALL PLUMBING DRAWINGS UNLESS NOTED OTHERWISE.
 - DESCRIPTION
 - THIS PROJECT COMPRISES ALTERATIONS AND RENOVATIONS TO THE EXISTING BUILDING. THE EXISTING BUILDING IS CURRENTLY OCCUPIED AND THE PROJECT WILL PROCEED IN A MANNER WHICH WILL MINIMIZE ANY INCONVENIENCE TO THE BUILDING OCCUPANTS.
 - SCOPE OF WORK CONSISTS OF INSTALLATION OF MATERIALS TO BE FURNISHED UNDER THE CONTRACT DOCUMENTS AND WITHOUT LIMITING GENERALITY THEREOF CONSISTS OF FURNISHING LABOR, MATERIALS, EQUIPMENT, HOISTING, PLANT, TRANSPORTATION, RIGGING, STAGING, APPURTENANCES, AND SERVICES NECESSARY AND/OR INCIDENTAL TO PROPERLY COMPLETE ALL WORK AS SHOWN ON THE DRAWINGS AND AS DESCRIBED HEREIN.
 - DEFINITIONS: THE FOLLOWING DEFINITIONS APPLY TO THIS CONTRACT
 - FURNISH: THE TERM "FURNISH" MEANS TO "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."
 - INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."
 - PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."
 - REMOVE: THE TERM REMOVE MEANS TO DISCONNECT FROM ITS PRESENT POSITION, REMOVE FROM THE PREMISES AND TO DISPOSE OF IN A LEGAL MANNER."
 - SUBSTITUTIONS: "SUBSTITUTIONS" ARE REQUESTS FOR CHANGES IN PRODUCTS, MATERIALS AND METHODS OF CONSTRUCTION AS PROPOSED BY THE CONTRACTOR AFTER AWARD OF THE CONTRACT.
 - DRAWINGS
 - PROVIDE ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY TO COMPLETE THE WORK OUTLINED ON THESE CONTRACT DOCUMENTS. THE CONTRACTOR IS TO NOTE THAT THESE DOCUMENTS ARE DIAGRAMMATIC ONLY AND THAT FINAL PLACEMENT OF EQUIPMENT OR DEVICES IN THE FIELD MAY NOT DIRECTLY CORRESPOND TO THAT WHICH IS SHOWN ON THE DRAWINGS. IF A CONFLICT IN POSITIONING OCCURS THE CONTRACTOR IS TO NOTIFY THE ENGINEER IMMEDIATELY TO ASCERTAIN WHAT THE INTENT WAS BY THE DESIGN PROFESSIONAL.
 - SURVEY AND MEASUREMENTS:
 - PRIOR TO SUBMITTING BID, VISIT SITE AND IDENTIFY EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT WORK TO BE PERFORMED. NO COMPENSATION WILL BE GRANTED FOR ADDITIONAL WORK CAUSED BY UNFAMILIARITY WITH SITE CONDITIONS THAT ARE VISIBLE OR READILY IDENTIFIED BY EXPERIENCED OBSERVERS. INCLUDE IN THE BID ALL DEMOLITION WORK REQUIRED.
 - DO NOT SCALE DRAWINGS. SCALE INDICATED ON DRAWINGS IS FOR ESTABLISHING REFERENCE POINTS ONLY. ACTUAL FIELD CONDITIONS SHALL GOVERN ALL DIMENSIONS.
 - PRIOR TO ORDERING ANY MATERIALS AND EQUIPMENT, THOROUGHLY REVIEW THE SITE CONDITIONS TO DETERMINE IF ADEQUATE CLEARANCES AND ACCESS IS ALLOWED TO INSTALL THE COMPONENTS. ORDER EQUIPMENT BROKEN DOWN AS NECESSARY TO ALLOW FOR PROPER RIGGING THROUGH THE PROJECT AREA. PROVIDE ALL NECESSARY ALTERATIONS TO THE STRUCTURE OF THE BUILDING AS NECESSARY TO RIG THE EQUIPMENT IN PLACE.
 - ARRANGE INSTALLATION TO PROVIDE ACCESS TO EQUIPMENT FOR EASY MAINTENANCE AND REPAIR.
 - CODES AND STANDARDS: ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST STATE OF CONNECTICUT ACCEPTED VERSION OF THE FOLLOWING
 - INTERNATIONAL RESIDENTIAL CODE
 - INTERNATIONAL BUILDING CODE
 - INTERNATIONAL PLUMBING CODE
 - INTERNATIONAL MECHANICAL CODE
 - NATIONAL ELECTRIC CODE (NFPA 70)
 - THE LIFE SAFETY CODE (NFPA 101)
 - PERMITS AND FEES: THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS; AND PAY ALL GOVERNMENT AND STATE SALES TAXES AND FEES WHERE APPLICABLE; AND OTHER COSTS, INCLUDING UTILITY CONNECTIONS OR EXTENSIONS IN CONNECTION WITH THE WORK, FILE ALL NECESSARY DRAWINGS, PREPARE ALL DOCUMENTS AND OBTAIN ALL NECESSARY APPROVALS OF ALL GOVERNMENTAL AND STATE DEPARTMENTS HAVING JURISDICTION, OBTAIN ALL REQUIRED CERTIFICATES OF INSPECTION FOR HIS WORK, AND DELIVER A COPY TO THE OWNER AND ENGINEER BEFORE REQUEST FOR ACCEPTANCE AND FINAL PAYMENT FOR THE WORK.
 - SHOP DRAWINGS:
 - SUBMIT NEWLY PREPARED INFORMATION, DRAWN TO ACCURATE SCALE OF 1/4"=1'-0". HIGHLIGHT, ENCIRCLE, OR OTHERWISE INDICATE DEVIATIONS FROM THE CONTRACT DOCUMENTS. DO NOT REPRODUCE CONTRACT DOCUMENTS OR COPY STANDARD INFORMATION AS THE BASIS OF SHOP DRAWINGS. STANDARD INFORMATION PREPARED WITHOUT SPECIFIC REFERENCE TO THE PROJECT IS NOT CONSIDERED SHOP DRAWINGS.
 - SHOP DRAWINGS INCLUDE: EQUIPMENT SUBMITTALS, FABRICATION AND INSTALLATION DRAWINGS, SETTING DIAGRAMS, SCHEDULES, PATTERNS, TEMPLATES AND SIMILAR DRAWINGS. INCLUDE THE FOLLOWING INFORMATION:
 - DIMENSIONS.
 - IDENTIFICATION OF PRODUCTS AND MATERIALS INCLUDED.
 - COMPLIANCE WITH SPECIFIED STANDARDS AND PERFORMANCE DATA AS INDICATED.
 - NOTATION OF COORDINATION REQUIREMENTS.
 - IDENTIFICATION OF DIMENSIONS ESTABLISHED BY FIELD MEASUREMENT.
 - SUBMIT 3 BLACK-LINE PRINTS AND 2 ADDITIONAL PRINTS WHERE REQUIRED FOR MAINTENANCE MANUALS, PLUS THE NUMBER OF PRINTS NEEDED BY THE ENGINEER FOR DISTRIBUTION. ONE PRINT WILL BE RETAINED; THE REMAINDER RETURNED. ONE OF THE PRINTS RETURNED SHALL BE MARKED-UP AND MAINTAINED AS A "RECORD DOCUMENT".
 - DO NOT USE SHOP DRAWINGS WITHOUT AN APPROPRIATE FINAL STAMP INDICATING ACTION TAKEN IN CONNECTION WITH CONSTRUCTION.
 - DO NOT ORDER ANY MATERIALS OR EQUIPMENT PRIOR TO RECEIVING FINAL APPROVED SHOP DRAWINGS.
 - PROVIDE SUBMITTALS AS INDICATED IN SPECIFIC SPECIFICATION SECTIONS.
 - USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND THE METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK.
 - THE CONTRACTOR SHALL COORDINATE ALL INTERRUPTIONS OF SERVICES AND LIMITATIONS OF ACCESS WITH THE OWNER NO LESS THAN 5 DAYS PRIOR TO THE INTERRUPTION.
 - OPERATION AND MAINTENANCE
 - UPON COMPLETION OF ALL WORK AND TESTS, THE CONTRACTOR SHALL INSTRUCT THE OWNER OR THE OWNER'S REPRESENTATIVE IN THE OPERATION, ADJUSTMENT AND MAINTENANCE OF ALL EQUIPMENT FURNISHED. THE CONTRACTOR SHALL GIVE AT LEAST SEVEN (7) DAYS NOTICE TO THE OWNER AND THE ENGINEER IN ADVANCE OF THIS PERIOD.
 - THE CONTRACTOR SHALL PREPARE THREE (3) COPIES OF A COMPLETE OPERATION AND MAINTENANCE MANUAL, BOUND IN BOOKLET FORM. ORGANIZE OPERATING AND MAINTENANCE DATA INTO SUITABLE SETS OF MANAGEABLE SIZE. BIND PROPERLY INDEXED DATA IN INDIVIDUAL HEAVY-DUTY, 3-RING VINYL-COVERED BINDERS, WITH POCKET FOLDERS FOR FOLDED SHEET INFORMATION AND DESIGNATION WITH IDENTIFICATION TABS. MARK APPROPRIATE IDENTIFICATION ON FRONT AND SPINE OF EACH BINDER.
 - OPERATION AND MAINTENANCE MANUAL SHALL INCLUDE THE FOLLOWING:
 - MANUFACTURER'S PRINTED OPERATING AND MAINTENANCE PROCEDURES.
 - MAINTENANCE PROCEDURES FOR ROUTINE PREVENTATIVE MAINTENANCE AND TROUBLESHOOTING.
 - COPIES OF WARRANTIES.
 - APPROVED SHOP DRAWINGS AND PRODUCT DATA.
 - BALANCE REPORTS.
 - INCLUDE IN THE MANUAL, A TABULATED EQUIPMENT SCHEDULE FOR ALL EQUIPMENT. SCHEDULE SHALL INCLUDE PERTINENT DATA SUCH AS: MAKE, MODEL NUMBER, SERIAL NUMBER, VOLTAGE, NORMAL OPERATING CURRENT, BELT SIZE, FILTER QUANTITIES AND SIZES, BEARING NUMBER, ETC. SCHEDULE SHALL INCLUDE MAINTENANCE TO BE DONE AND FREQUENCY.
 - MAINTENANCE AND INSTRUCTION MANUALS SHALL BE SUBMITTED TO THE OWNER AT THE SAME TIME AS THE SEVEN (7) DAY NOTICE IS GIVEN PRIOR TO THE INSTRUCTION PERIOD.
 - AS-BUILT DRAWINGS
 - PREPARE AS-BUILT DRAWINGS TO A SCALE OF 1/4"=1'-0" OR LARGER, DETAILING THE ACTUAL INSTALLATION OF MAJOR ELEMENTS, COMPONENTS, AND SYSTEMS OF MECHANICAL EQUIPMENT AND MATERIALS. WHERE SHOP DRAWINGS ARE USED, RECORD A CROSS-REFERENCE TO THE CORRESPONDING LOCATION ON THE AS-BUILT DRAWINGS. GIVE PARTICULAR ATTENTION TO CONCEALED ELEMENTS THAT WOULD BE DIFFICULT TO MEASURE AND RECORD AT A LATER DATE.
 - MARK NEW INFORMATION THAT IS IMPORTANT TO THE OWNER, BUT WAS NOT SHOWN ON CONTRACT DRAWINGS OR SHOP DRAWINGS.
 - NOTE RELATED CHANGE ORDER NUMBERS WHERE APPLICABLE.
 - ORGANIZE AS-BUILT DRAWINGS INTO MANAGEABLE SETS, BIND WITH DURABLE PAPER COVER SHEETS, AND PRINT SUITABLE TITLES, DATES AND OTHER IDENTIFICATION ON THE COVER OF EACH SET.
 - OBTAIN IN OWNER'S NAME WRITTEN EQUIPMENT AND MATERIAL WARRANTIES OFFERED

- IN MANUFACTURER'S PUBLISHED PRODUCT DATA WITHOUT EXCLUSION OR LIMITATION.
- GUARANTEE WORK OF THESE CONTRACT DOCUMENTS IN WRITING FOR NOT LESS THAN ONE (1) YEAR FROM DATE OF FINAL NOTICE OF ACCEPTANCE. REPAIR OR REPLACE DEFECTIVE MATERIALS, EQUIPMENT, WORKMANSHIP AND INSTALLATION THAT DEVELOP WITHIN THIS PERIOD, PROMPT AND TO OWNER'S SATISFACTION AND CORRECT DAMAGE CAUSED IN MAKING NECESSARY REPAIRS AND REPLACEMENTS UNDER GUARANTEE WITHIN CONTRACT PRICE.
 - SUBMIT TO THE OWNER AN OFFICIAL CERTIFICATE OF INSURANCE FOR THEIR RECORDS.

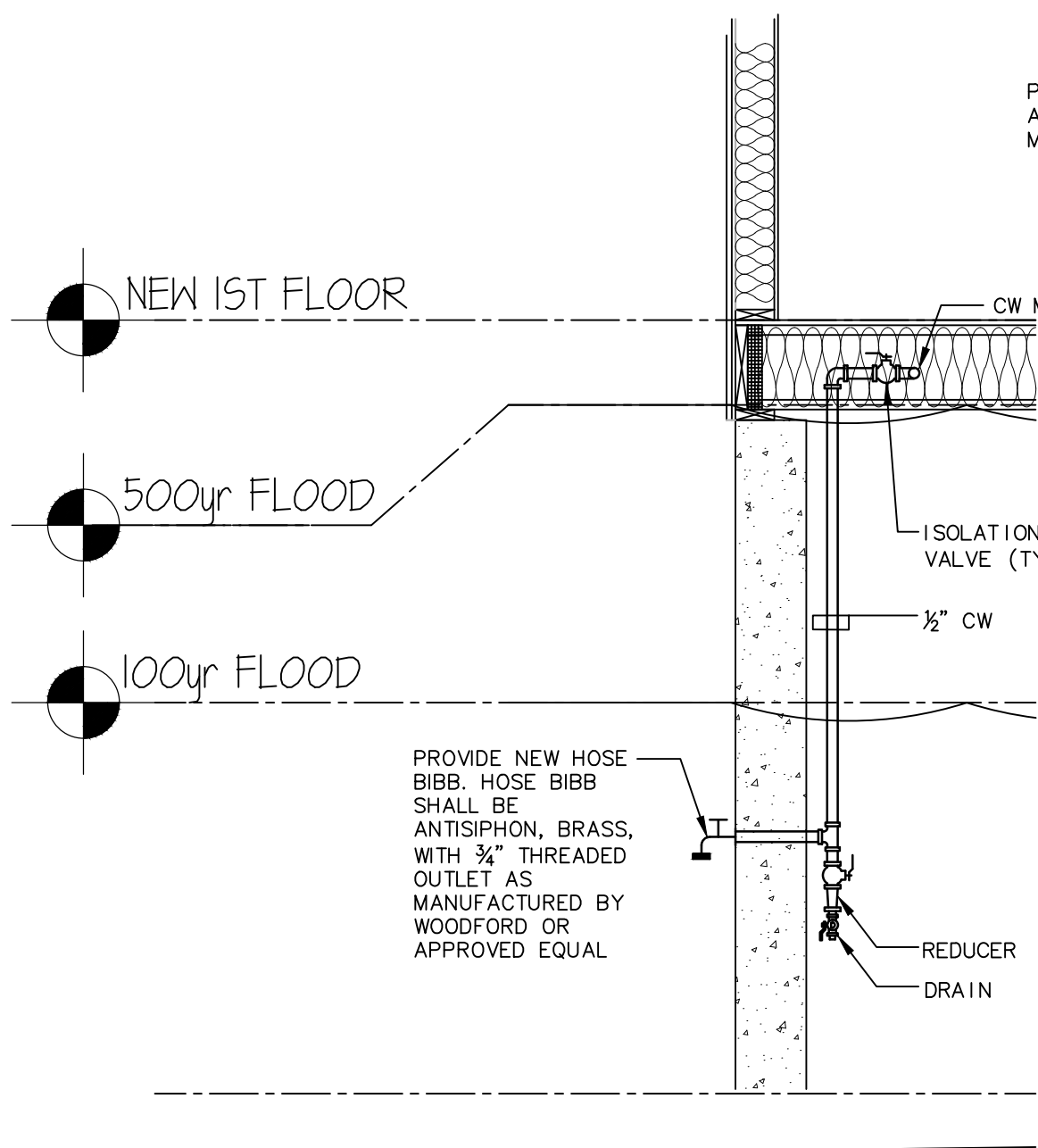
MEANS AND METHODS ALL TRADES

 - INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
 - DO NOT BURN WASTE MATERIALS. DO NOT BURY DEBRIS OR EXCESS MATERIALS ON THE OWNER'S PROPERTY. DO NOT DISCHARGE VOLATILE, HARMFUL OR DANGEROUS MATERIALS INTO DRAINAGE SYSTEMS. REMOVE AND DISPOSE OF ALL WASTE MATERIALS, PACKAGING MATERIAL, SKIDS ETC. FROM THE SITE AND DISPOSE OF IN A LAWFUL MANNER IN ACCORDANCE WITH MUNICIPAL, STATE AND FEDERAL REGULATIONS.
 - MATERIALS AND EQUIPMENT SHALL BE UL LISTED WHERE STANDARD HAS BEEN ESTABLISHED.
 - CAREFULLY INSPECT ALL BUILDING ELEMENTS PRIOR TO CUTTING OR DRILLING INTO WALL, FLOORS OR CEILINGS. PATCH AND PAINT SURFACES DISTURBED BY WORK UNDER THIS CONTRACT AS REQUIRED TO RESTORE THEM TO THEIR ORIGINAL CONDITION.
 - SCAFFOLDING, RIGGING, HOISTING: THE CONTRACTOR SHALL FURNISH ALL SCAFFOLDING, RIGGING, HOISTING AND SERVICES NECESSARY FOR ERECTION AND DELIVERY INTO THE PREMISES ANY EQUIPMENT AND APPARATUS FURNISHED UNDER THIS DIVISION. REMOVE SAME FROM PREMISES WHEN NO LONGER REQUIRED.
 - EXCAVATION AND BACKFILLING: IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE SIZES, DEPTHS, FILL AND BEDDING REQUIREMENTS AND ANY OTHER EXCAVATION WORK REQUIRED UNDER THESE SPECIFICATIONS.
 - WATERPROOFING: WHERE ANY WORK PIERCES WATERPROOFING, INCLUDING WATERPROOF CONCRETE, ROOFS, EXTERIOR WALL AND FLOORS IN WET AREAS, THE METHOD OF INSTALLATION SHALL BE REVIEWED BY THE ENGINEER BEFORE WORK IS DONE. THE CONTRACTOR SHALL FURNISH ALL NECESSARY SLEEVES, CAULKING AND FLASHING REQUIRED TO MAKE OPENINGS ABSOLUTELY WATERTIGHT.
 - PROVIDE FIRESTOPPING AROUND ALL FIRE PROTECTION, PLUMBING, MECHANICAL AND ELECTRICAL PENETRATIONS THROUGH FIRE RATED PARTITIONS. PROVIDE ASBESTOS FREE FIRESTOPPING SYSTEM CAPABLE OF MAINTAINING AN EFFECTIVE BARRIER AGAINST FLAME AND GASES. SYSTEM SHALL BE UL LISTED AND COMPLY WITH ASTM E 814.
 - ACCESS DOORS SHALL BE PROVIDED IN CEILINGS, WALLS AND FLOORS AT ALL DAMPERS, VALVES, CONTROL DEVICES, AND OTHER APPARATUS AND EQUIPMENT REQUIRING PERIODIC SERVICE AND INSPECTION. COORDINATE TYPE AND LOCATION WITH ARCHITECTURAL PLANS.
 - SEISMIC RESTRAINTS SHALL BE INSTALLED AS REQUIRED PER BUILDING CODE AND FIRE SAFETY CODE. RESTRAINTS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 13 AND SMACNA STANDARDS. SUBMIT SHOP DRAWINGS INCLUDING SEISMIC CALCULATIONS WITH PROFESSIONAL ENGINEER'S SEAL FOR REVIEW BY ENGINEER.

- PLUMBING
- PIPING:
 - DOMESTIC WATER PIPING SHALL BE COPPER TUBING TYPE L. SOLDER FILLER METALS SHALL BE 95-5 TIN-ANTIMONY SOLDER JOINTS.
 - WASTE AND VENT PIPING SHALL BE PVC, TYPE DWV PIPE AND FITTINGS WITH SOLVENT CEMENTED JOINTS.
 - WASTE AND VENT PIPING SHALL BE HUBLESS, SERVICE WEIGHT, CAST-IRON, SOIL PIPE AND FITTINGS, WITH NEOPRENE GASKETS. BURIED PIPING SHALL BE HUB AND SPIGOT FITTINGS.
 - NATURAL GAS PIPING SHALL BE SCHEDULE 40, CARBON STEEL PIPE, WITH THREADED JOINTS AND FITTINGS OR TYPE L COPPER TUBING.
 - INSULATION:
 - INSULATION SHALL BE IN ACCORDANCE WITH LATEST EDITION OF THE IECC EXCEPT THAT PIPE INSULATION SHALL NOT BE LESS THAN 1" THICK. ALL INSULATION MATERIALS, ADHESIVES, COATINGS, AND OTHER ACCESSORIES SHALL HAVE FLAME SPREAD RATINGS OF 25 OR LESS, AND SMOKE DEVELOPED RATINGS OF 50 OR LESS AS TESTED BY ASTM E 84 (NFPA 255) METHOD. ALL INSULATION MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND IN ACCORDANCE WITH THE LATEST EDITION OF SMACNA AND ASHRAE STANDARDS.
 - PIPE INSULATION SHALL BE FIBERGLASS WITH VAPOR BARRIER JACKET. PROVIDE INSULATION FOR THE FOLLOWING PIPING SYSTEMS:
 - DOMESTIC COLD WATER PIPING
 - DOMESTIC HOT WATER PIPING
 - ALL EXPOSED DOMESTIC WATER PIPE SHALL BE WRAPPED WITH A PVC VAPOR BARRIER JACKET AS MANUFACTURED BY ZESTON OR APPROVED EQUAL. PVC JACKETING SHALL BE FINISHED TO BE WATER TIGHT.
 - PIPING INSTALLATION:
 - INSTALL PIPING IN ACCORDANCE WITH ALL APPLICABLE CODES AND GOOD PRACTICES.
 - INSTALL UNIONS OR FLANGES IN PIPES ADJACENT TO EACH VALVE, CONTROL DEVICE AND AT FINAL CONNECTIONS EACH PIECE OF EQUIPMENT.
 - INSTALL DIELECTRIC UNIONS TO JOIN DISSIMILAR METALS.
 - INSTALL AND ANCHOR PIPING TO ENSURE PROPER EXPANSION AND CONTRACTION.
 - ANCHOR PIPING TO ENSURE PROPER DIRECTION OF EXPANSION AND CONTRACTION.
 - SUPPORT PIPING TO PREVENT VIBRATION OR SAGGING. PROVIDE HANGER SPACING ACCORDING TO DISTANCES LISTED IN APPLICABLE CODES AND REGULATIONS.
 - PLUMBING IDENTIFICATION
 - PLUMBING IDENTIFICATION WORK SHALL COMPLY WITH ANSI A13.1. NAMES, ABBREVIATIONS AND OTHER DESIGNATIONS USED IN MECHANICAL IDENTIFICATION WORK, SHALL CORRESPOND WITH DESIGNATIONS SHOWN, SPECIFIED OR SCHEDULED.
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 - PROVIDE VALVE TAG ON EVERY VALVE, EXCLUDING DRAIN VALVES.
 - PIPE IDENTIFICATION, PLASTIC PIPE MARKERS, FACTORY FABRICATED, FLEXIBLE, SEMI-RIGID PLASTIC, PERFORMED TO FIT AROUND PIPE OR PIPE COVERING, MINIMUM INFORMATION INDICATING FLOW DIRECTION ARROW AND IDENTIFICATION OF FLUID BEING CONVEYED.
 - TESTING AND ADJUSTING
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 - ALL WASTE PIPING SHALL BE TESTED IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE. THE SYSTEM SHALL BE FILLED WITH WATER TO A HEAD OF NOT LESS THAN 10 FEET. THE WATER LEVEL AT THE TOP OF THE TEST HEAD OF WATER SHALL NOT DROP FOR AT LEAST 15 MINUTES.
 - THE CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT FOR ALL TESTING.



① WATER HEATER PIPING DIAGRAM
N.T.S.



② HOSE BIBB CW SUPPLY DETAIL
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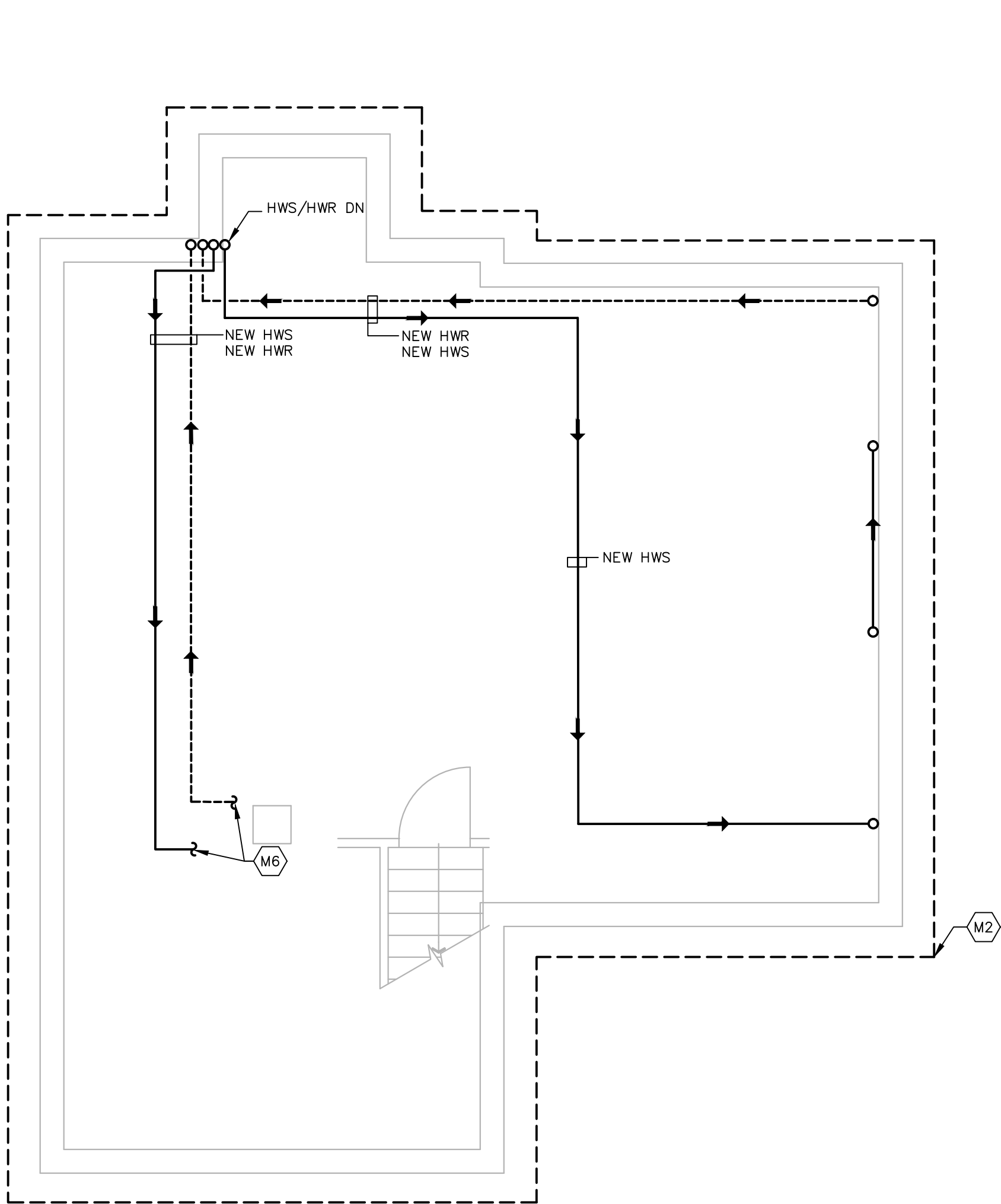
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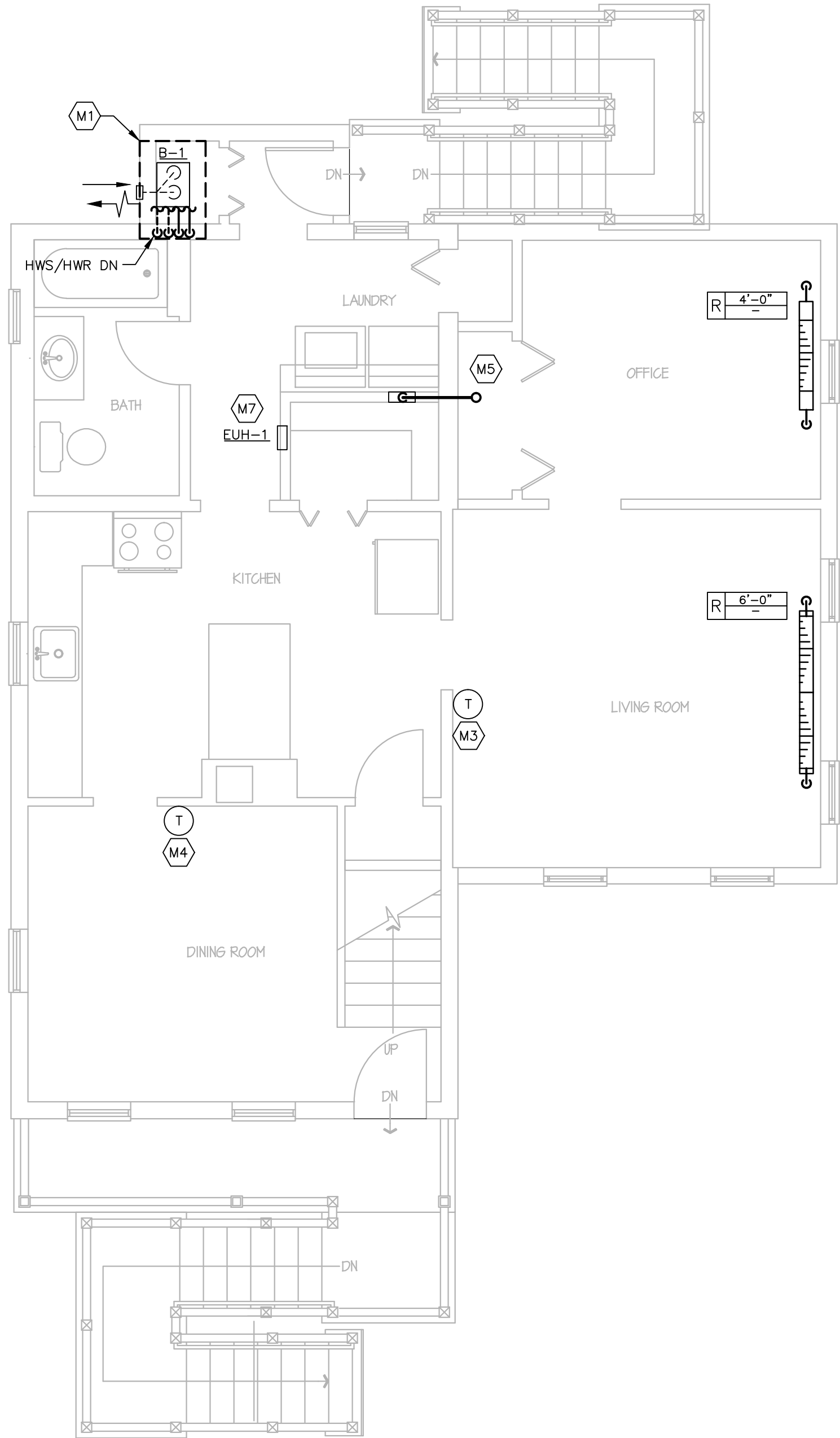
PLUMBING
LEGENDS,
DETAILS AND
SCHEDULES

P-5.0

date	JULY 10, 2015
drawn	ANK
scale	AS SHOWN
checked	DTB
project no.	2014064.00
application no.	2433



1 GROUND LEVEL
M-1.0 SCALE: 1/4"= 1'-0" NORTH



2 1st FLOOR PLAN
M-1.0 SCALE: 1/4"= 1'-0" NORTH

GENERAL NOTES ALL TRADES

- MECHANICAL ITEMS INCLUDING BUT NOT LIMITED TO PIPING, EQUIPMENT, ETC SHALL BE INSTALLED ABOVE THE FLOOD PLANE AS DETERMINED BY THE ARCHITECTURAL PLANS.
- WORK SHALL BE COORDINATED WITH ARCHITECTURAL PLANS INCLUDING ACCESS PANELS FOR VALVES AND EQUIPMENT, THERMOSTAT AND SENSOR LOCATIONS, ETC.

MECHANICAL KEY NOTES

- M1 PROVIDE COMBINATION BOILER. SEE DETAIL 1/M5.0 FOR COMBINED BOILER DETAIL
- M2 PROVIDE HYDRONIC PIPING AS NECESSARY TO CONNECT EXISTING AND NEW HYDRONIC PIPING AND RADIATORS TO NEW COMBINATION BOILER. HYDRONIC PIPING SERVING THE EXISTING FIRST AND SECOND FLOOR SHALL BE ASSIGNED TO ZONE 1. HYDRONIC PIPING SERVING THE NEW ADDITION ON THE FIRST FLOOR SHALL BE ASSIGNED TO ZONE 2. CONTRACTOR TO FIELD VERIFY EXACT SIZE AND LOCATION PRIOR TO FABRICATION AND INSTALLATION.
- M3 PROVIDE NEW 7 DAY FULLY PROGRAMMABLE THERMOSTAT. CONNECT TO EXISTING ELECTRICAL AND CONTROLS.
- M4 EXISTING THERMOSTAT TO REMAIN. WIRE TO NEW COMBINATION BOILER.
- M5 PROVIDE 4" DRYER EXHAUST DUCT. DUCT SHALL BE ALUMINUM RIDGED FLEXIBLE DUCTWORK. TERMINATE THROUGH ROOF OF NEW ADDITION. PROVIDE IN-O-VATE TECHNOLOGIES, INC MODEL #425 22 GAUGE ALUMINIZED STEEL DRYERBOX.
- M6 CONNECT NEW HWS AND HWR TO EXISTING HWS AND HWR. CONTRACTOR TO FIELD VERIFY EXACT SIZE AND LOCATION PRIOR TO FABRICATION AND INSTALLATION.
- M7 PROVIDE SMALL FAN-FORCED WALL HEATER. WALL HEATER SHALL BE 120V, 1500/750 WATT WITH A CAPACITY OF 5120/2560 BTU/HR. WALL HEATER SHALL BE MODEL NUMBER FFH1612 AS MANUFACTURED BY FAHRENHEAT OR APPROVED EQUAL

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MECHANICAL
FLOOR PLANS

M-1.0

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drawn ANK
scale AS SHOWN
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MECHANICAL ABBREVIATION LIST

ABBREVIATION	DESCRIPTION
BTU	BRITISH THERMAL UNIT
CAP	CAPACITY
ET-#	EXPANSION TANK
EWT	ENTERING WATER TEMPERATURE
HD	HEAD
HP	HORSE POWER
HPR	HIGH PRESSURE STEAM CONDENSATE RETURN
HPS	HIGH PRESSURE STEAM CONDENSATE SUPPLY
LWT	LEAVING WATER TEMPERATURE
MIN	MINIMUM
N.T.S.	NOT TO SCALE
N/A	NOT APPLICABLE
NC	NOISE CRITERIA
NO	NOT IN CONTRACT
NOM	NOMINAL
OA	OUTSIDE AIR
P-#	PUMP
PD	PRESSURE DROP (FEET OF WATER OR INCHES OF WATER)
SPEC	SPECIFICATION
TEMP	TEMPERATURE
TYP	TYPICAL

MECHANICAL PIPING LEGEND

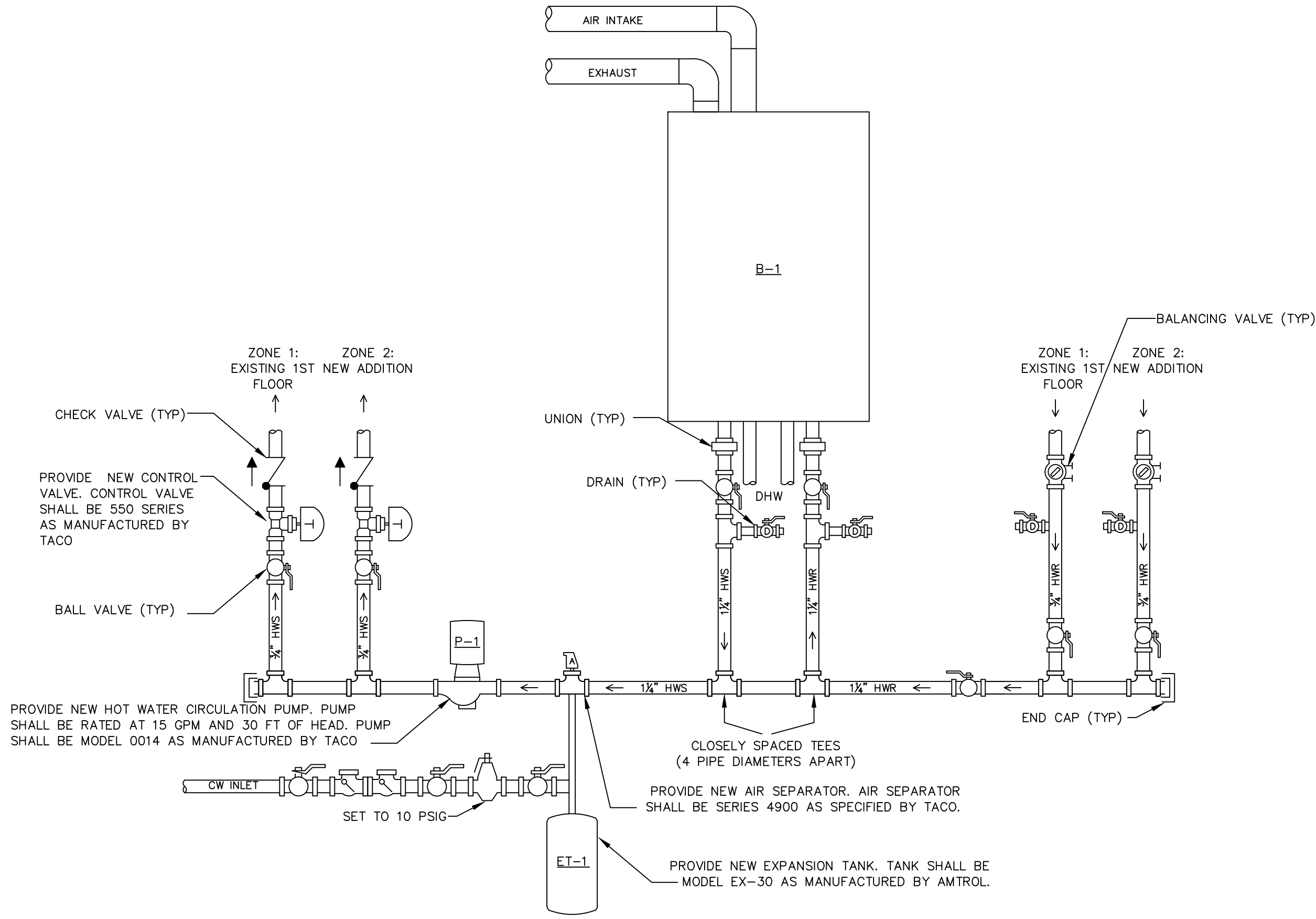
SYMBOL	DESCRIPTION
-----	NEW V
=====	NEW HWS
-----	EXISTING HWS
-----	NEW HWR
-----	EXISTING HWR
-----	DETAIL LINE
-----	BALL VALVE
-----	CHECK VALVE
-----	DIRECTION OF FLOW
-----	END CAP
-----	90° ELBOW DOWN
-----	90° ELBOW UP
-----	TEE UP
-----	TEE DOWN
-----	DROP AND RUN
-----	TEE OFF TOP OF PIPE
-----	TEE OFF BOTTOM OF PIPE

HVAC SYMBOLS LEGEND

SYMBOLS	DESCRIPTION
Ⓢ	THERMOSTAT
↶	RETURN/EXHAUST/OUTSIDE AIR ARROW
→	SUPPLY ARROW
Ⓢ	EXHAUST VENT
Ⓢ	CONNECTION TO EXISTING
ETR	EXISTING TO REMAIN

BOILER SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NUMBER	MEDIA	GROSS OUTPUT (MBH)	GROSS INPUT (MBH)	EWT/LWT (°F)	FUEL DATA		DOMESTIC HOT WATER DATA			BURNER DATA			FLOW (GPM)	PRESSURE DROP (FT H2O)	REMARKS
						TYPE	RATE (MBH)	GPM	EWT (°F)	LWT (°F)	AMPS	VOLTS	PHASE			
B-1	LAARS/MASCOT LX 150	HW	142.5	150	160/180	NG	150	5	45	105	1.5	120	1	—	—	ALL
REMARKS: 1. BURNER FIRING SHALL BE MODULATING WITH A 5:1 TURN DOWN RATIO. 2. PROVIDE WITH CONDENSATE NEUTRALIZATION KIT. 3. PROVIDE WITH MANUFACTURER OA SENSOR. 4. PROVIDE WITH MANUFACTURER SUPPLY WATER TEMPERATURE SENSOR. HW = HOT WATER																



NOTE: ALL PIPING ACCESSORIES SUCH AS VALVES, AIR SEPARATOR, ETC SHALL BE FULL PIPE SIZE.

1 BOILER PIPING DETAIL N.T.S.

- GENERAL PROCEDURES ALL TRADES
- THESE SPECIFICATIONS ARE APPLICABLE TO ALL MECHANICAL DRAWINGS UNLESS NOTED OTHERWISE.
 - DESCRIPTION
 - THIS PROJECT COMPRISES ALTERATIONS AND RENOVATIONS TO THE EXISTING BUILDING. THE EXISTING BUILDING IS CURRENTLY OCCUPIED AND THE PROJECT WILL PROCEED IN A MANNER WHICH WILL MINIMIZE ANY INCONVENIENCE TO THE BUILDING OCCUPANTS.
 - SCOPE OF WORK CONSISTS OF INSTALLATION OF MATERIALS TO BE FURNISHED UNDER THE CONTRACT DOCUMENTS AND WITHOUT LIMITING GENERALLY THEREOF CONSISTS OF FURNISHING LABOR, MATERIALS, EQUIPMENT, HOISTING, PLANT, TRANSPORTATION, RIGGING, STAGING, APPURTENANCES, AND SERVICES NECESSARY AND/OR INCIDENTAL TO PROPERLY COMPLETE ALL WORK AS SHOWN ON THE DRAWINGS AND AS DESCRIBED HEREIN.
 - DEFINITIONS: THE FOLLOWING DEFINITIONS APPLY TO THIS CONTRACT
 - FURNISH: THE TERM "FURNISH" MEANS TO "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."
 - INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."
 - PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."
 - REMOVE: THE TERM REMOVE MEANS TO DISCONNECT/FROM ITS PRESENT POSITION, REMOVE FROM THE PREMISES AND TO DISPOSE OF IN A LEGAL MANNER.
 - SUBSTITUTIONS: "SUBSTITUTIONS" ARE REQUESTS FOR CHANGES IN PRODUCTS, MATERIALS AND METHODS OF CONSTRUCTION AS PROPOSED BY THE CONTRACTOR AFTER AWARD OF THE CONTRACT.
 - DRAWINGS
 - PROVIDE ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY TO COMPLETE THE WORK OUTLINED ON THESE CONTRACT DOCUMENTS. THE CONTRACTOR IS TO NOTE THAT THESE DOCUMENTS ARE DIAGRAMMATIC ONLY AND THAT FINAL PLACEMENT OF EQUIPMENT OR DEVICES IN THE FIELD MAY NOT DIRECTLY CORRESPOND TO THAT WHICH IS SHOWN ON THE DRAWINGS. IF A CONFLICT IN POSITIONING OCCURS THE CONTRACTOR IS TO NOTIFY THE ENGINEER IMMEDIATELY TO ASCERTAIN WHAT THE INTENT WAS BY THE DESIGN PROFESSIONAL.
 - SURVEY AND MEASUREMENTS:
 - PRIOR TO SUBMITTING BID, VISIT SITE AND IDENTIFY EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT THE WORK TO BE PERFORMED. NO COMPENSATION WILL BE GRANTED FOR ADDITIONAL WORK CAUSED BY UNFAMILIARITY WITH SITE CONDITIONS THAT ARE VISIBLE OR READILY IDENTIFIED BY EXPERIENCED OBSERVERS. INCLUDE IN THE BID ALL DEMOLITION WORK REQUIRED.
 - DO NOT SCALE DRAWINGS. SCALE INDICATED ON DRAWINGS IS FOR ESTABLISHING REFERENCE POINTS ONLY. ACTUAL FIELD CONDITIONS SHALL GOVERN ALL DIMENSIONS.
 - PRIOR TO ORDERING ANY MATERIALS AND EQUIPMENT, THOROUGHLY REVIEW THE SITE CONDITIONS TO DETERMINE NECESSARY CLEARANCES AND ACCESS IS ALLOWED TO INSTALL THE COMPONENTS. ORDER EQUIPMENT BROKEN DOWN AS NECESSARY TO ALLOW FOR PROPER RIGGING THROUGH THE PROJECT AREA. PROVIDE ALL NECESSARY ALTERATIONS TO THE STRUCTURE OF THE BUILDING AS NECESSARY TO RIG THE EQUIPMENT IN PLACE.
 - ARRANGE INSTALLATION TO PROVIDE ACCESS TO EQUIPMENT FOR EASY MAINTENANCE AND REPAIR.
 - CODES AND STANDARDS: ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST STATE OF CONNECTICUT ACCEPTED VERSION OF THE FOLLOWING
 - INTERNATIONAL RESIDENTIAL CODE
 - INTERNATIONAL BUILDING CODE
 - INTERNATIONAL PLUMBING CODE
 - INTERNATIONAL MECHANICAL CODE
 - NATIONAL ELECTRIC CODE (NFPA 70)
 - THE LIFE SAFETY CODE (NFPA 101)
 - PERMITS AND FEES: THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS; AND PAY ALL GOVERNMENT AND STATE SALES TAXES AND FEES WHERE APPLICABLE, AND OTHER COSTS, INCLUDING UTILITY CONNECTIONS OR EXTENSIONS IN CONNECTION WITH THE WORK, FILE ALL NECESSARY DRAWINGS, PREPARE ALL DOCUMENTS AND OBTAIN ALL NECESSARY APPROVALS OF ALL GOVERNMENTAL AND STATE DEPARTMENTS HAVING JURISDICTION, OBTAIN REQUIRED CERTIFICATES OF INSPECTION FOR HIS WORK, AND DELIVER A COPY TO THE OWNER AND ENGINEER BEFORE REQUEST FOR ACCEPTANCE AND FINAL PAYMENT FOR THE WORK.
 - SHOP DRAWINGS:
 - SUBMIT NEWLY PREPARED INFORMATION, DRAWN TO ACCURATE SCALE OF 1/4"=1'-0". HIGHLIGHT, ENCIRCLE, OR OTHERWISE INDICATE DEVIATIONS FROM THE CONTRACT DOCUMENTS. DO NOT REPRODUCE CONTRACT DOCUMENTS OR COPY STANDARD INFORMATION AS THE BASIS OF SHOP DRAWINGS. STANDARD INFORMATION PREPARED WITHOUT SPECIFIC REFERENCE TO THE PROJECT IS NOT CONSIDERED SHOP DRAWINGS.
 - SHOP DRAWINGS INCLUDE EQUIPMENT SUBMITTALS, FABRICATION AND INSTALLATION DRAWINGS, SETTING DIAGRAMS, SCHEDULES, PATTERNS, TEMPLATES AND SIMILAR DRAWINGS. INCLUDE THE FOLLOWING INFORMATION:
 - DIMENSIONS.
 - IDENTIFICATION OF PRODUCTS AND MATERIALS INCLUDED.
 - COMPLIANCE WITH SPECIFIED STANDARDS AND PERFORMANCE DATA AS INDICATED.
 - NOTATION OF COORDINATION REQUIREMENTS.
 - NOTATION OF DIMENSIONS ESTABLISHED BY FIELD MEASUREMENT.
 - SUBMIT 3 BLACK-LINE PRINTS AND 2 ADDITIONAL PRINTS WHERE REQUIRED FOR MAINTENANCE MANUALS, PLUS THE NUMBER OF PRINTS NEEDED BY THE ENGINEER FOR DISTRIBUTION. ONE PRINT WILL BE RETAINED; THE REMAINDER RETURNED. ONE OF THE PRINTS RETURNED SHALL BE MARKED-UP AND MAINTAINED AS A "RECORD DOCUMENT".
 - DO NOT USE SHOP DRAWINGS WITHOUT AN APPROPRIATE FINAL STAMP INDICATING ACTION TAKEN IN CONNECTION WITH CONSTRUCTION.
 - DO NOT ORDER ANY MATERIALS OR EQUIPMENT PRIOR TO RECEIVING FINAL APPROVED SHOP DRAWINGS.
 - USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND THE METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK.
 - THE CONTRACTOR SHALL COORDINATE ALL INTERRUPTIONS OF SERVICES AND LIMITATIONS OF ACCESS WITH THE OWNER NO LESS THAN 9 DAYS PRIOR TO THE INTERRUPTION.
 - OPERATION AND MAINTENANCE
 - UPON COMPLETION OF ALL WORK AND TESTS, THE CONTRACTOR SHALL INSTRUCT THE OWNER OR THE OWNER'S REPRESENTATIVE IN THE OPERATION, ADJUSTMENT AND MAINTENANCE OF ALL EQUIPMENT FURNISHED. THE CONTRACTOR SHALL GIVE AT LEAST SEVEN (7) DAYS NOTICE TO THE OWNER AND THE ENGINEER IN ADVANCE OF THIS PERIOD.
 - THE CONTRACTOR SHALL PREPARE THREE (3) COPIES OF A COMPLETE OPERATION AND MAINTENANCE MANUAL, BOUND IN BOOKLET FORM, ORGANIZE OPERATING AND MAINTENANCE DATA INTO SUITABLE SETS OF MANAGEABLE SIZE. BIND PROPERLY INDEXED DATA IN INDIVIDUAL HEAVY-DUTY 3-RING VINYL-COVERED BINDERS, WITH POCKET FOLDERS FOR FOLDED SHEET INFORMATION AND DESIGNATION PARTITIONS WITH IDENTIFICATION TABS. MARK APPROPRIATE IDENTIFICATION ON FRONT AND SPINE OF EACH BINDER.
 - OPERATION AND MAINTENANCE MANUAL SHALL INCLUDE THE FOLLOWING:
 - MANUFACTURER'S PRINTED OPERATING AND MAINTENANCE PROCEDURES.
 - MAINTENANCE PROCEDURES FOR ROUTINE PREVENTATIVE MAINTENANCE AND TROUBLESHOOTING.
 - COPIES OF WARRANTIES.
 - APPROVED SHOP DRAWINGS AND PRODUCT DATA.
 - BALANCE REPORTS.
 - INCLUDE IN THE MANUAL, A TABULATED EQUIPMENT SCHEDULE FOR ALL EQUIPMENT. SCHEDULE SHALL INCLUDE PERTINENT DATA SUCH AS: MAKE, MODEL NUMBER, SERIAL NUMBER, VOLTAGE, NORMAL OPERATING CURRENT, BELT SIZE, FILTER QUANTITIES AND SIZES, BEARING NUMBER, ETC. SCHEDULE SHALL INCLUDE MAINTENANCE TO BE DONE AND FREQUENCY.
 - MAINTENANCE AND INSTRUCTION MANUALS SHALL BE SUBMITTED TO THE OWNER AT THE SAME TIME AS THE SEVEN (7) DAY NOTICE IS GIVEN PRIOR TO THE INSTRUCTION PERIOD.
 - AS-BUILT DRAWINGS
 - PREPARE AS-BUILT DRAWINGS TO A SCALE OF 1/4"=1'-0" OR LARGER; DETAILING THE ACTUAL INSTALLATION OF MAJOR ELEMENTS, COMPONENTS, AND SYSTEMS OF MECHANICAL EQUIPMENT AND MATERIALS. IF SHOP DRAWINGS ARE USED, RECORD A CROSS-REFERENCE AT THE CORRESPONDING LOCATION ON THE AS-BUILT DRAWINGS. GIVE PARTICULAR ATTENTION TO CONCEALED ELEMENTS THAT WOULD BE DIFFICULT TO MEASURE AND RECORD AT A LATER DATE.
 - MARK NEW INFORMATION THAT IS IMPORTANT TO THE OWNER, BUT WAS NOT SHOWN ON CONTRACT DRAWINGS OR SHOP DRAWINGS.
 - NOTE RELATED CHANGE ORDER NUMBERS WHERE APPLICABLE.
 - ORGANIZE AS-BUILT DRAWINGS INTO MANAGEABLE SETS, BIND WITH DURABLE PAPER COVER SHEETS, AND PRINT SUITABLE TITLES, DATES AND OTHER IDENTIFICATION ON THE COVER OF EACH SET.
 - OBTAIN IN OWNER'S NAME WRITTEN EQUIPMENT AND MATERIAL WARRANTIES FOLLOWING

- IN MANUFACTURER'S PUBLISHED PRODUCT DATA WITHOUT EXCLUSION OR LIMITATION.
- GUARANTEE WORK OF THESE CONTRACT DOCUMENTS IN WRITING FOR NOT LESS THAN ONE (1) YEAR FROM DATE OF FINAL NOTICE OF ACCEPTANCE. REPAIR OR REPLACE DEFECTIVE MATERIALS, EQUIPMENT, WORKMANSHIP AND INSTALLATION THAT DEVELOP WITHIN THIS PERIOD, PROMPT AND TO OWNER'S SATISFACTION AND CORRECT DAMAGE CAUSED IN MAKING NECESSARY REPAIRS AND REPLACEMENTS OF IN A LAWFUL MANNER IN ACCORDANCE WITH MUNICIPAL, STATE AND FEDERAL REGULATIONS.
 - SUBMIT TO THE OWNER AN OFFICIAL CERTIFICATE OF INSURANCE FOR THEIR RECORDS.

MEANS AND METHODS ALL TRADES

 - INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
 - DO NOT BURN WASTE MATERIALS. DO NOT BURY DEBRIS OR EXCESS MATERIALS ON THE OWNERS PROPERTY. DO NOT DISCHARGE VOLATILE, HARMFUL OR DANGEROUS MATERIALS INTO DRAINAGE SYSTEMS. REMOVE AND DISPOSE OF ALL WASTE MATERIALS, PACKAGING MATERIAL, SKIDS ETC. FROM THE SITE AND DISPOSE OF IN A LAWFUL MANNER IN ACCORDANCE WITH MUNICIPAL, STATE AND FEDERAL REGULATIONS.
 - MATERIALS AND EQUIPMENT SHALL BE UL LISTED WHERE STANDARD HAS BEEN ESTABLISHED.
 - CAREFULLY INSPECT ALL BUILDING ELEMENTS PRIOR TO CUTTING OR DRILLING INTO WALL, FLOORS OR CEILINGS. PATCH AND PAINT SURFACES DISTURBED BY WORK UNDER THIS CONTRACT AS REQUIRED TO RESTORE THEM TO THEIR ORIGINAL CONDITION.
 - SCAFFOLDING, RIGGING, HOISTING: THE CONTRACTOR SHALL FURNISH ALL SCAFFOLDING, RIGGING AND SERVICES NECESSARY FOR ERECTION AND DELIVERY INTO THE PREMISES ANY EQUIPMENT AND APPARATUS FURNISHED UNDER THIS DIVISION. REMOVE SAME FROM PREMISES WHEN NO LONGER REQUIRED.
 - EXCAVATION AND BACKFILLING: IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE SIZES, DEPTHS, FILL AND BEDDING REQUIREMENTS AND ANY OTHER EXCAVATION WORK REQUIRED UNDER THESE SPECIFICATIONS
 - WATERPROOFING: WHERE ANY WORK PIERCES WATERPROOFING, INCLUDING WATERPROOF CONCRETE, ROOFS, EXTERIOR WALL AND FLOORS IN WET AREAS, THE METHOD OF INSTALLATION SHALL BE REVIEWED BY THE ENGINEER BEFORE WORK IS DONE. THE CONTRACTOR SHALL FURNISH ALL NECESSARY SLEEVES, CAULKING AND FLASHING REQUIRED TO MAKE OPENINGS ABSOLUTELY WATERTIGHT.
 - PROVIDE FIRESTOPPING AROUND ALL FIRE PROTECTION, PLUMBING, MECHANICAL AND ELECTRICAL PENETRATIONS THROUGH FIRE RATED PARTITIONS. PROVIDE ASBESTOS FREE FIRESTOPPING SYSTEM CAPABLE OF MAINTAINING AN EFFECTIVE BARRIER AGAINST FLAME AND GASES. SYSTEM SHALL BE UL LISTED AND COMPLY WITH ASTM E 814.
 - ACCESS DOORS SHALL BE PROVIDED IN CEILINGS, WALLS AND FLOORS AT ALL DAMPERS, VALVES, CONTROL DEVICES, AND OTHER APPARATUS AND EQUIPMENT REQUIRING PERIODIC SERVICE AND INSPECTION. COORDINATE TYPE AND LOCATION WITH ARCHITECTURAL PLANS.
 - SEISMIC RESTRAINTS SHALL BE INSTALLED AS REQUIRED PER BUILDING CODE AND FIRE SAFETY CODE. RESTRAINTS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 13 AND SMACNA STANDARDS. SUBMIT SHOP DRAWINGS INCLUDING SEISMIC CALCULATIONS WITH PROFESSIONAL ENGINEER'S SEAL FOR REVIEW BY ENGINEER.

HVAC SPECIFICATIONS

- PIPING AND FITTINGS
 - HVAC HYDRONIC PIPING: FOR PIPE SIZES 2" DIAMETER AND LESS, PIPING SHALL BE TYPE L COPPER TUBING WITH 95-5 TIN-ANTIMONY SOLDER JOINTS. FOR PIPE SIZES LARGER THAN 2" DIAMETER, PIPING SHALL BE SCHEDULE 40 CARBON STEEL WITH THREADED, WELDED OR FLANGED JOINTS.
 - CONDENSATE DRAIN [AND PUMPED CONDENSATE]: SHALL BE SCHEDULE 40 PVC WITH SOLVENT WELD FITTINGS OR TYPE L COPPER TUBING WITH 95-5 TIN-ANTIMONY SOLDER FILLER METALS.
- FLUE AND COMBUSTION AIR PIPING
 - ALL NATURAL GAS FIRED EQUIPMENT COMBUSTION AIR PIPING, FLUE AND JOINTS SHALL BE SCHEDULE 40 POLYVINYL CHLORIDE (PVC). JOINTS SHALL BE SOLVENT WELD.
- INSULATION:
 - INSULATION THICKNESS SHALL BE IN ACCORDANCE WITH LATEST EDITION OF ATHE IECC EXCEPT THAT PIPE INSULATION SHALL NOT BE LESS THAN 1" THICK AND, FLEXIBLE DUCTWORK INSULATION SHALL NOT BE LESS THAN 1-1/2" THICK. ALL INSULATION MATERIALS, ADHESIVES, COATINGS, AND OTHER ACCESSORIES SHALL HAVE FLAME SPREAD RATINGS OF 25 OR LESS, AND SMOKE DEVELOPED RATINGS OF 50 OR LESS AS TESTED BY ASTM E-84 (NFPA 255) METHOD. ALL INSULATION MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND IN ACCORDANCE WITH THE LATEST EDITION OF SMACNA AND ASHRAE STANDARDS.
 - PIPE INSULATION SHALL BE FIBERGLASS WITH VAPOR BARRIER JACKET. PROVIDE INSULATION FOR THE FOLLOWING PIPING SYSTEMS:
 - HVAC HYDRONIC SUPPLY AND RETURN PIPING
- PIPING INSTALLATIONS
- INSTALL PIPING IN ACCORDANCE WITH ALL APPLICABLE CODES AND GOOD PRACTICES.
- INSTALL UNIONS OR FLANGES IN PIPES ADJACENT TO EACH VALVE, CONTROL DEVICE AND AT FINAL CONNECTIONS EACH PIECE OF EQUIPMENT.
- INSTALL DIELECTRIC UNIONS TO JOIN DISSIMILAR METALS.
- INSTALL AND ANCHOR PIPING TO ENSURE PROPER EXPANSION AND CONTRACTION.
- PROVIDE MANUAL AIR VENTS AT ALL HIGH POINTS AND DRAIN VALVES AT ALL LOW POINTS.
- ANCHOR PIPING TO ENSURE PROPER DIRECTION OF EXPANSION AND CONTRACTION.
- SUPPORT PIPING TO PREVENT VIBRATION OR SAGGING. PROVIDE HANGER SPACING ACCORDING TO DISTANCES LISTED IN APPLICABLE CODES AND REGULATIONS.
- TESTING , ADJUSTING AND BALANCING
 - THE MECHANICAL CONTRACTOR SHALL PROVIDE THE SERVICES OF AN INDEPENDENT TESTING, ADJUSTING, AND BALANCING (TAB) AGENCY TO PROVIDE TAB SERVICES FOR THE MECHANICAL SYSTEMS. THE TAB AGENCY SHALL BE CERTIFIED BY NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB) OR THE ASSOCIATED AIR BALANCE COUNCIL (AABC) IN THOSE TESTING AND BALANCING DISCIPLINES REQUIRED FOR THIS PROJECT. THE TAB AGENCY SHALL HAVE AT LEAST ONE PROFESSIONAL ENGINEER REGISTERED IN THE STATE IN WHICH THE SERVICES ARE TO BE PERFORMED AND CERTIFIED BY NEBB OR AABC AS A TEST AND BALANCE ENGINEER.
 - PRIOR TO TESTING, ADJUSTING, AND BALANCING, THE MECHANICAL CONTRACTOR SHALL VERIFY THAT THE SYSTEMS HAVE BEEN INSTALLED AND ARE OPERATING AS SPECIFIED. APPROVED SHOP DRAWINGS, AS BUILT DRAWINGS, AND ALL OTHER DATA REQUIRED FOR EACH SYSTEM AND/OR COMPONENT TO BE TESTED SHALL BE MADE AVAILABLE AT THE JOB SITE DURING THE ENTIRE TAB EFFORT. THE OWNER SHALL BE NOTIFIED IN WRITING OF ALL EQUIPMENT, COMPONENTS, OR BALANCING DEVICES, THAT ARE DAMAGED, INCORRECTLY INSTALLED, OR MISSING, AS WELL AS ANY DESIGN DEFICIENCIES THAT WILL PREVENT PROPER TESTING, ADJUSTING, AND BALANCING. TESTING, ADJUSTING, AND BALANCING SHALL NOT COMMENCE UNTIL APPROVED BY THE OWNER.
 - PERFORM TESTING AND BALANCING PROCEDURES ON EACH SYSTEM IDENTIFIED, IN ACCORDANCE WITH THE DETAILED PROCEDURES OUTLINED IN EITHER NEBB: "PROCEDURAL STANDARDS FOR TESTING, ADJUSTING, AND BALANCING OF ENVIRONMENTAL SYSTEMS" OR AABC: "NATIONAL STANDARDS FOR TOTAL SYSTEM BALANCE." THE TAB AGENCY SHALL TEST, ADJUST, AND BALANCE THE FOLLOWING MECHANICAL SYSTEMS:
 - ALL AIR HANDLING EQUIPMENT
 - ALL PUMPING SYSTEMS
 - ALL SUPPLY AIR SYSTEMS
 - ALL RETURN AIR SYSTEMS
 - ALL HYDRONIC SYSTEMS
 - VERIFY OPERATION OF ALL TEMPERATURE CONTROL SYSTEMS
 - TEST SYSTEMS FOR PROPER SOUND AND VIBRATION LEVELS
 - SUBMIT TESTING, ADJUSTING, AND BALANCING REPORTS BEARING THE SEAL AND SIGNATURE OF THE TAB PROFESSIONAL. PREPARE A REPORT OF RECOMMENDATIONS FOR CORRECTING UNSATISFACTORY MECHANICAL PERFORMANCES WHEN A SYSTEM CANNOT BE SUCCESSFULLY BALANCED.
 - PROVIDE ALL NECESSARY CONTROL DEVICES, EQUIPMENT, MATERIALS, LABOR, WIRE AND CONDUIT TO PERFORM THE SEQUENCES OF OPERATION AS INDICATED. WIRING AND CONDUIT SHALL BE INSTALLED IN ACCORDANCE WITH DIVISION 16. ALL CONTROL WIRING INSTALLED WITHIN AIR PLENUM SPACES TO BE TEFLON COATED RATED FOR PLENUM CEILING.



COMMUNITY DEVELOPMENT BLOCK GRANT - DISASTER RECOVERY for the OWNER OCCUPIED RECOVERY and REHABILITATION PROGRAM for the CONNECTICUT DEPARTMENT OF HOUSING

GENERAL RENOVATIONS for the LLOYD RESIDENCE APPLICATION No. 2433 261 Adams Street Bridgeport, CT 06607

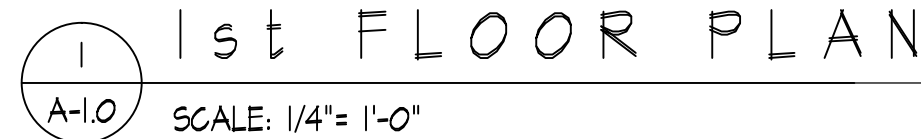
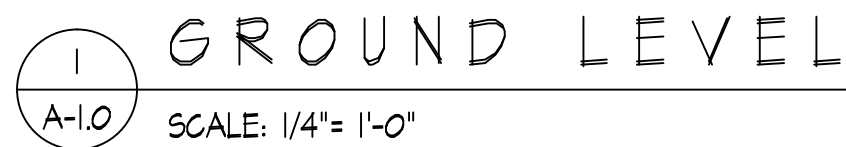
date	description	no.
revisions		

MECHANICAL SPECIFICATIONS

M-5.0

date	JULY 10, 2015
drawn	ANK
scale	AS SHOWN
checked	DTB
project no.	2014064.00
application no.	2433

**GENERAL
RENOVATIONS for the
LLOYD RESIDENCE
APPLICATION No. 2433
261 Adams Street
Bridgeport, CT 06607**



ELECTRICAL KEY NOTES

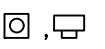
E1	PROVIDE 120VAC/20AMP GFCI RECEPTACLE FOR COMBINATION BOILER-WATER HEATER. PROVIDE 12-2 WIRE FEED TO NEW 20A 1-POLE BREAKER IN PANEL "EP-1".
E2	PROVIDE NEW ELECTRIC SERVICE TO THE RESIDENCE. PROVIDE NEW WEATHER HEAD, WIRING (FROM WEATHER HEAD TO METER), METER, METER SOCKET, NEW FEEDER TO PANEL "EP-1", AND CONNECTION TO PANEL "EP-1". REFER TO DISTRIBUTION RISER DIAGRAM FOR MORE INFORMATION. COORDINATE WITH THE UTILITY COMPANY ALL WORK AND PARTS ASSOCIATED WITH PROVIDING A NEW SERVICE.
E3	PROVIDE 12-2 WIRING AND JUNCTION BOX TO THIS LOCATION. WIRING AND JUNCTION BOX SHALL BE PROTECTED FOR FUTURE USE AND INSTALLATION OF LIGHTING FIXTURE. OWNER SHALL PROVIDE LIGHTING FIXTURE BASED ON ALLOWANCE PROVIDED UNDER THIS PROJECT. REFER TO PANELBOARD SCHEDULE FOR CKT INFORMATION. REFER TO DWGS FOR WIRING INFORMATION.
E4	NEW TELEPHONE SERVICE SHALL BE PROVIDED. CONNECT TO EXISTING TELEPHONE DISTRIBUTION EQUIPMENT AND CABLING. COORDINATE WITH THE TELEPHONE COMPANY ALL WORK AND PARTS ASSOCIATED WITH PROVIDING A NEW SERVICE.
E5	NEW CATV SERVICE SHALL BE PROVIDED. CONNECT TO EXISTING CATV DISTRIBUTION EQUIPMENT AND CABLING. COORDINATE WITH THE CATV COMPANY ALL WORK AND PARTS ASSOCIATED WITH PROVIDING A NEW SERVICE.
E6	PROVIDE NEW ELECTRICAL PANEL "EP-1", 100A/MCB, 2P, 120/240V, 30-POLE, 3-WIRE. PROVIDE EXTENSION OF PREVIOUSLY EXISTING CIRCUITS TO THE LOCATION OF NEW PANEL "EP-1". PROVIDE ALL ASSOCIATED MATERIALS FOR A COMPLETE RECONNECTION OF ALL ASSOCIATED AND EXISTING CIRCUITS FOR THE ENTIRE RESIDENCE. REFER TO PANELBOARD SCHEDULE FOR THE ADDITION OF NEW CIRCUITS AND MORE INFORMATION.
E7	PROVIDE NEW SPLICE/JUNCTION BOX FOR EXTENSION OF EXISTING BRANCH CIRCUITS TO LOCATION OF NEW ELECTRICAL PANEL "EP-1". REFER TO FLOOR PLAN FOR APPROXIMATE LOCATION. REFER TO PANELBOARD SCHEDULES FOR CIRCUITRY INFORMATION.

date	description	no.
revisions		

ELECTRICAL FLOOR PLANS

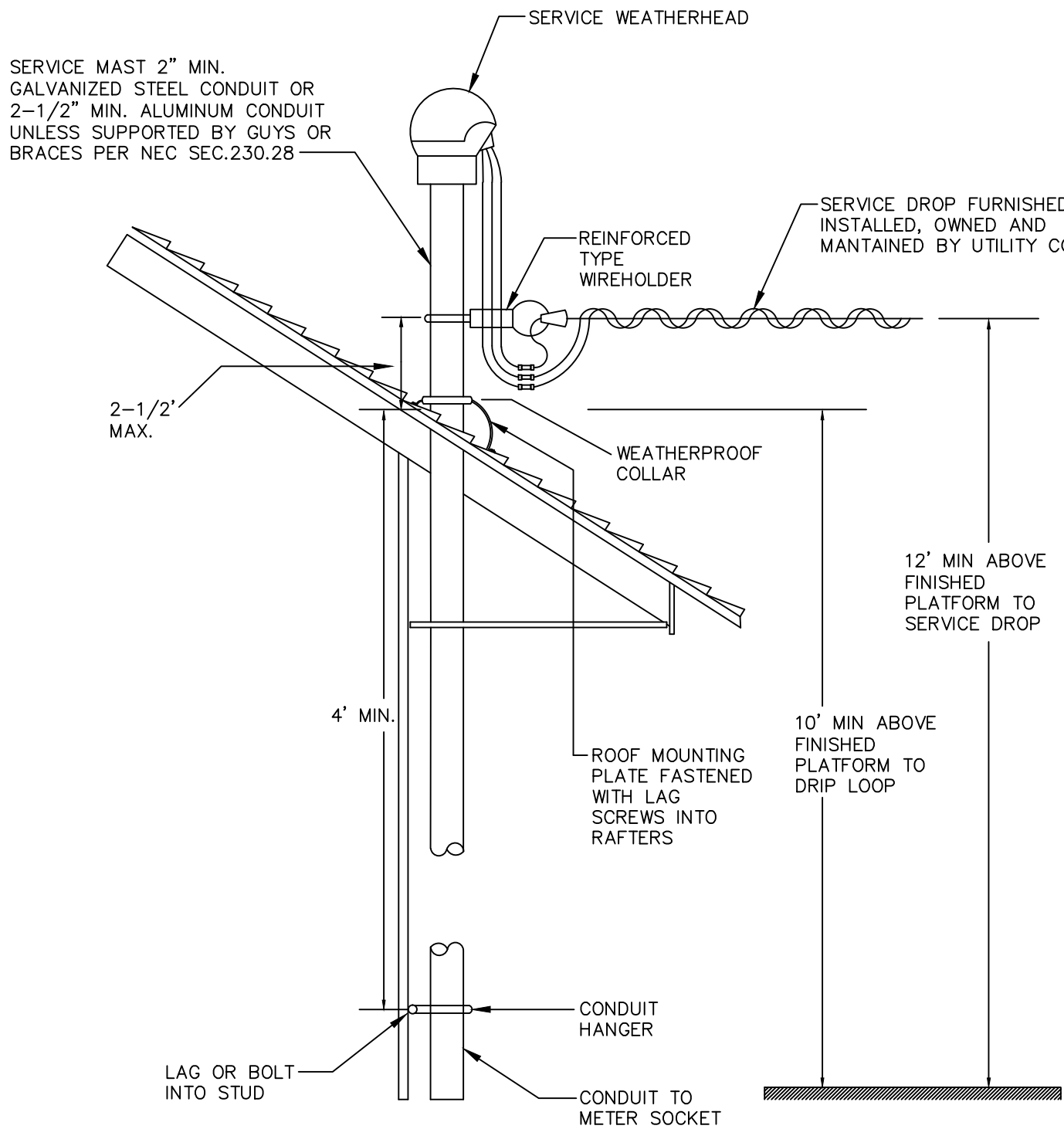
E-1.0

date JULY 10, 2015
drawn VCM
scale AS SHOWN
checked DTB
project no. 2014064.00
application no. 2433

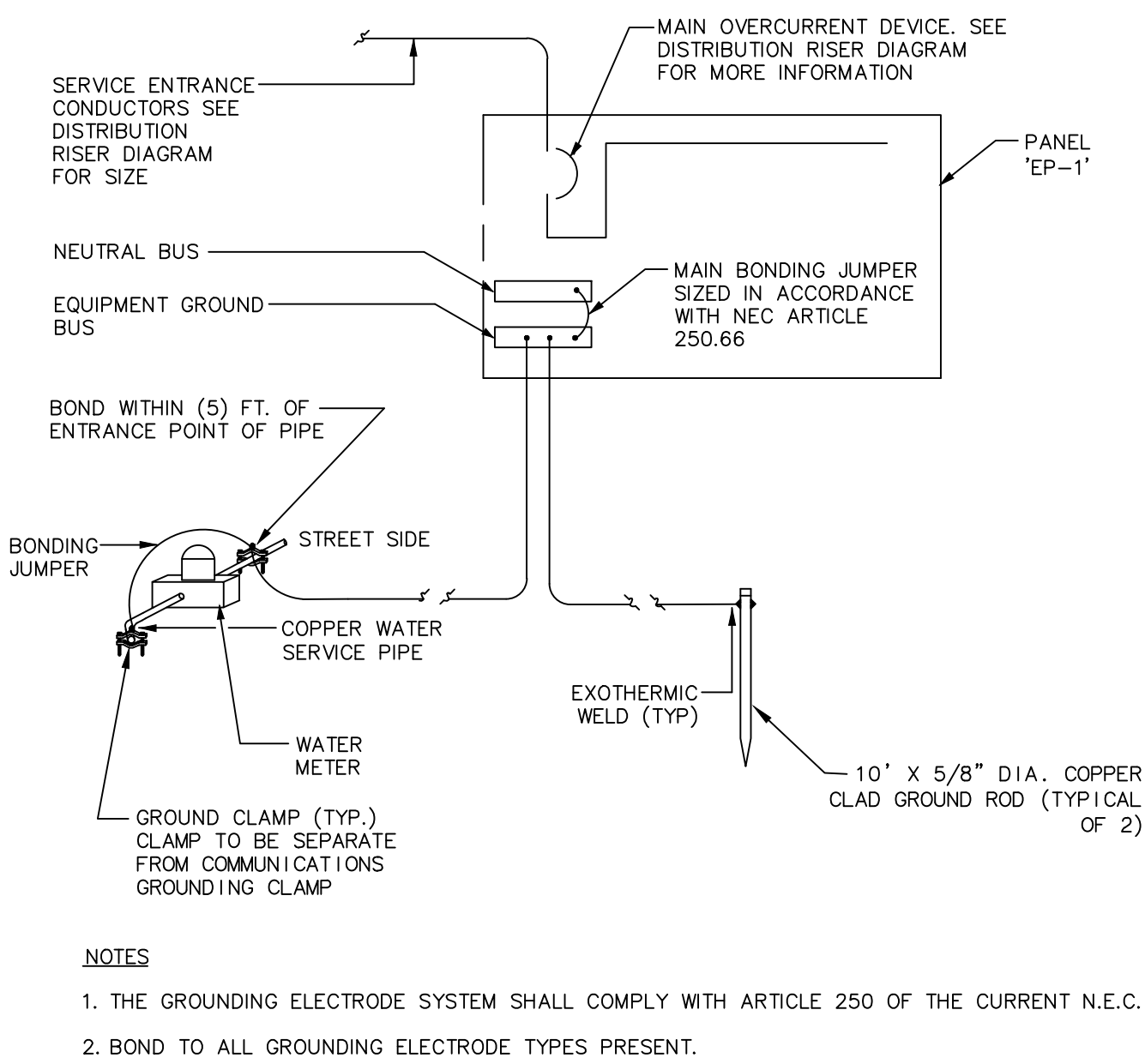
ELECTRICAL SYMBOL LIST	
SYMBOL	DESCRIPTION
	RECESSED PANELBOARD
	ELECTRICAL METER
	BRANCH CIRCUIT WIRING, CONCEALED IN WALLS OR CEILINGS
	HOMERUN TO PANELBOARD, UNLESS INDICATED OTHERWISE, SHALL BE CONNECTED TO A 1 POLE, 20 AMP CIRCUIT BREAKER
	BRANCH CIRCUIT WIRING, SWITCHED
	JUNCTION BOX
	SPECIAL PURPOSE RECEPTACLE
	THREE POLE SWITCH
	SINGLE POLE SWITCH
	GFCI DUPLEX RECEPTACLE
	GFCI DUPLEX RECEPTACLE, WEATHER PROTECTED

ELECTRICAL ABBREVIATIONS					
A / AMP	AMPERE	GFCI	GROUND FAULT INTERRUPTER	PNL	PANEL
AC	ALTERNATING CURRENT	JB	JUNCTION BOX	PVC	POLYVINYL CHLORIDE CONDUIT
ACU	AIR CONDITIONING UNIT	KVA	KILOVOLT AMPERE	RE	REMOVE EXISTING
AFF	ABOVE FINISHED FLOOR	KW	KILOWATT	RGS	RIGID GALVANIZED STEEL CONDUIT
AFG	ABOVE FINISHED GRADE	MAX	MAXIMUM	RL	RELOCATE EXISTING
AWG	AMERICAN WIRE GAUGE	MCCB	MOLDED CASE CIRCUIT BREAKER	RM	ROOM
BSMT	BASEMENT	MIN	MINIMUM	RR	REMOVE AND REPLACE ON NEW SURFACE
C	CONDUIT	MLO	MAIN LUGS ONLY	SPEC	SPECIFICATION
CATV	CABLE TELEVISION	NA	NOT APPLICABLE	SWBD	SWITCHBOARD
C/B	CIRCUIT BREAKER	NEC	NATIONAL ELECTRIC CODE	TELE	TELECOMMUNICATIONS/TELEPHONE
CKT	CIRCUIT	NIC	NOT IN CONTRACT	TV	TELEVISION
-	DEGREE	NL	NEW LOCATION OF EXISTING RELOCATED	T/TX	TRANSFORMER
DIA/Ø	DIAMETER	NR	NEW TO REPLACE EXISTING	TYP	TYPICAL
DN	DOWN	NTS	NOT TO SCALE	V	VOLTS
DWG	DRAWING	P	POLE	VA	VOLT AMPERE
ETR	EXISTING TO REMAIN	PE	PRIMARY ELECTRICAL SERVICE	VAC	VOLTS ALTERNATING CURRENT
ELEC	ELECTRICAL	PF	POWER FACTOR	W	WATT, WIRE
EWB	ELECTRIC WATER HEATER	PH/Ø	PHASE	WP	WEATHERPROOF

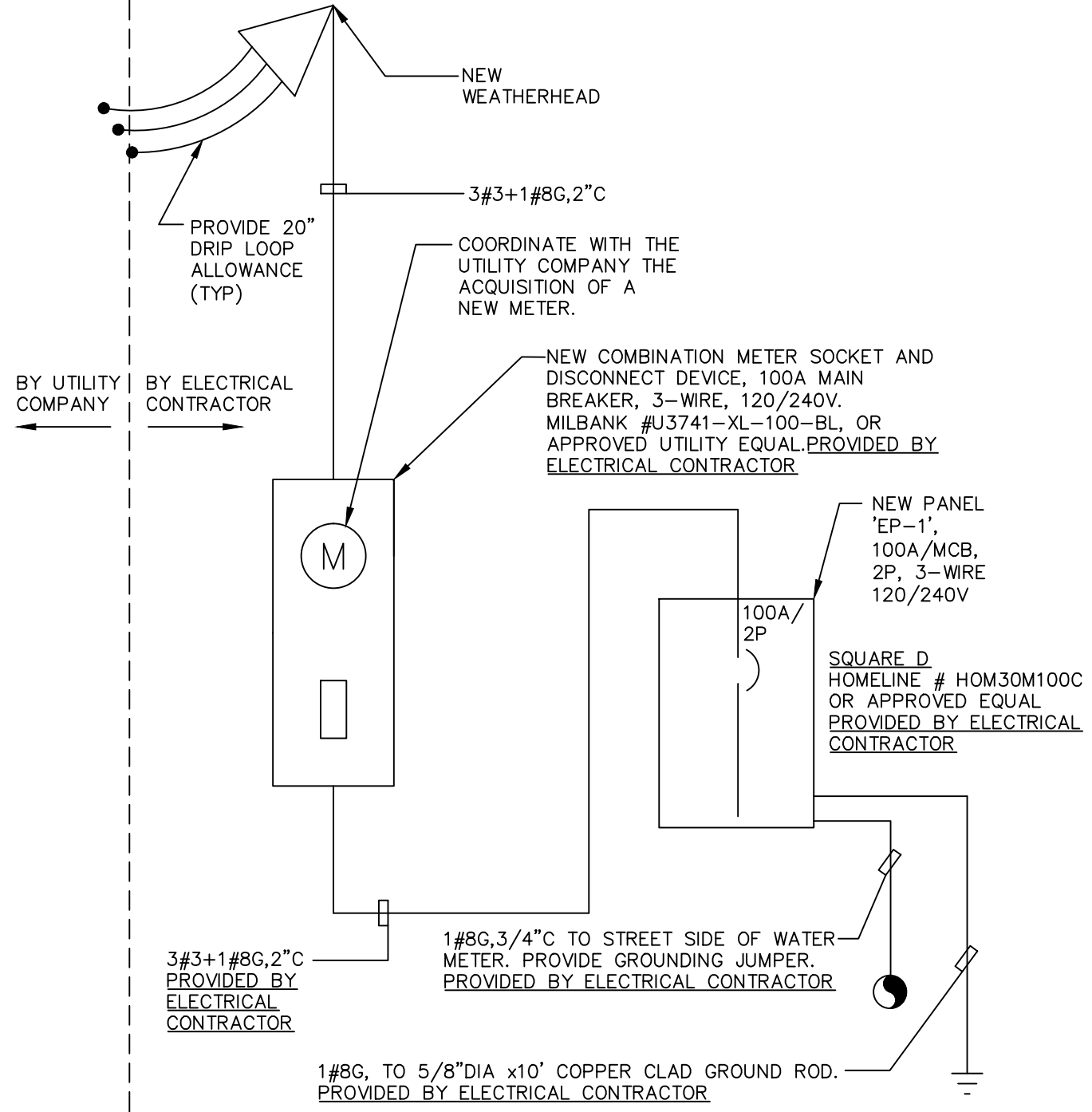
PANELBOARD SCHEDULE																						
PANELBOARD		LOCATION		MAIN		VOLTAGE		PHASE		WIRE		FEEDER		SE RATED		MOUNTING		MIN SCR		REMARKS		
EP-1		LAUNDRY RM		100A/2P MCB		120/240		1		3		3#3+1#8G,2"C		N/A		RECESSED		10,000		-		
CKT	DESCRIPTION			P	AT	AF	CIRCUITRY			KVA	CKT	DESCRIPTION			P	AT	AF	CIRCUITRY			KVA	
1	SEE NOTE 9**			1	15	15	12-2			0.20	2	SEE NOTE 9**			1	15	15	14-2			0.20	
3	SEE NOTE 9**			1	20	20	12-2			0.36	4	SEE NOTE 9**			1	15	15	14-2			0.20	
5	SEE NOTE 9**			1	20	20	12-2			0.36	6	SEE NOTE 9**			1	15	15	14-2			0.20	
7	SEE NOTE 9**			1	15	15	14-2			0.20	8	SEE NOTE 9**			2	20	20	12-2			1.0	
9	SEE NOTE 9**			1	15	15	14-2			0.20	10	-			-	-	-	-			-	
11	SEE NOTE 9**			1	15	15	14-2			0.20	12	EUH-1 (WALL HEATER)			1	20	20	12-2			1.5	
13	SEE NOTE 9**			1	20	20	12-2			0.36	14	WASHER**			1	20	20	12-2			1.0	
15	SEE NOTE 9**			1	20	20	12-2			0.36	16	DRYER			2	30	30	10-3			5.0	
17	B-1 (COMBINATION BOILER)			1	15	15	14-2			0.24	18	-			-	-	-	-			-	
19	P-1 (BOILER PUMP)			1	20	20	12-2			0.24	20	RCPT -BACK STAIRS/B-1 RM**			1	20	20	12-2			0.36	
21	LTG -LAUNDRY/BACK STAIRS**			1	15	15	14-2			0.50	22	RCPT - FRONT PORCH**			1	20	20	12-2			0.18	
23	LTG - FRONT PORCH**			1	15	15	14-2			0.15	24	LTG - CELLAR**			1	15	15	14-2			0.30	
25	LTG -LVG RM/OFFICE/CORR**			1	15	15	14-2			0.24	26	RCPT - CELLAR**			1	20	20	12-2			0.36	
27	RCPT - LIVING RM**			1	20	20	12-2			0.90	28	RCPT - OFFICE**			1	20	20	12-2			0.90	
29	SPARE **			1	20	20	-			-	30	SPARE **			1	15	15	-			-	
							SUBTOTAL KVA			4.51								SUBTOTAL KVA			11.56	
																		TOTAL KVA			16.07	
* CONTRACTOR SHALL FIELD VERIFY THE WIRING SIZE OF EXISTING CIRCUITS AND PROVIDE APPROPRIATELY SIZED AFCI CIRCUIT BREAKERS.																						
** CIRCUIT SHALL BE PROVIDED WITH CIRCUIT BREAKER OF AFCI TYPE.																						
PANELBOARD REMARKS:																						
1. PROVIDE WITH EQUIPMENT GROUND BUS.																						
2. PROVIDE WITH 100% RATED NEUTRAL BUS.																						
3. BRANCH CIRCUIT BREAKERS SHALL BE PLUG-ON TYPE.																						
4. PROVIDE WITH HINGED DOOR WITH IN DOOR TRIM.																						
5. PROVIDE A TYPED WRITTEN PANELBOARD DIRECTORY AND A DIRECTORY HOLDER ON THE INSIDE COVER OF DOOR.																						
6. PROVIDE WITH COPPER BUS.																						
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TYPES AND QUANTITIES OF CIRCUIT BREAKERS INDICATED ON THE DRAWINGS.																						
8. CIRCUITRY SPECIFIED IS FOR WIRING FROM PANEL TO FIRST DEVICE. CONTRACTOR TO PROVIDE CALL MULTI-CONDUCTOR CABLES AS REQUIRED FOR 3 & 4 WAY SWITCHES.																						
9. CIRCUITS UNDER THIS NOTE ARE EXISTING AND SHALL BE EXTENDED AND RECONNECTED TO THE NEW LOCATION OF PANEL 'EP-1'. EC SHALL FIELD VERIFY CIRCUIT QUANTITIES AND CIRCUIT BREAKERS REQUIRED TAKING INTO ACCOUNT THE REMOVAL OF PREVIOUSLY EXISTING CIRCUITS IN THE DEMOLITION PHASE. CIRCUITS SHOWN UNDER THIS NOTE REFLECT EXISTING CONDITIONS. CIRCUITS SHOWN ON PANELBOARD FOR DEVICES AND FIXTURES NO LONGER EXISTING SHALL BE REMOVED AND BE DESIGNATED AS SPACES IN PANEL OR REUTILIZED. EC SHALL PROVIDE SPACE COVER IF NECESSARY.																						
10. CIRCUIT BREAKERS UNDER THIS PROJECT THAT ARE 120V/1P AND ASSOCIATED WITH NEW, OR EXISTING TO-BE-EXTENDED AND RECONNECTED CIRCUITS SHALL BE OF AFCI TYPE. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY QUANTITIES AND CIRCUIT LOCATIONS, AND PROVIDE AFCI CIRCUIT BREAKERS AS NECESSARY.																						



TYPICAL ELECTRICAL SERVICE MAST DETAIL
N.T.S.



TYPICAL MAIN ELECTRIC GROUNDING DETAIL
N.T.S.



SERVICE ENTRANCE / DISTRIBUTION RISER DIAGRAM
N.T.S.



COMMUNITY
DEVELOPMENT
BLOCK GRANT -
DISASTER RECOVERY
for the
OWNER OCCUPIED
RECOVERY and
REHABILITATION
PROGRAM
for the
CONNECTICUT
DEPARTMENT OF
HOUSING

GENERAL
RENOVATIONS for the
LLOYD RESIDENCE
APPLICATION No. 2433
261 Adams Street
Bridgeport, CT 06607

date	description	no.
revisions		

ELECTRICAL SPECIFICATIONS

E-5.0

date	JULY 10, 2015
drawn	VCM
scale	AS SHOWN
checked	DTB
project no.	2014064.00
application no.	2433

- GENERAL PROCEDURES ALL TRADES
ARE APPLICABLE TO ALL PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS UNLESS NOTED OTHERWISE.
1. THESE SPECIFICATIONS ARE APPLICABLE TO ALL PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS UNLESS NOTED OTHERWISE.
2. DESCRIPTION

A. THIS PROJECT COMPRISES ALTERATIONS AND RENOVATIONS TO THE EXISTING BUILDING. THE EXISTING BUILDING IS CURRENTLY OCCUPIED AND THE PROJECT WILL PROCEED IN A MANNER WHICH WILL MINIMIZE ANY INCONVENIENCE TO THE BUILDING OCCUPANTS.

B. SCOPE OF WORK CONSISTS OF INSTALLATION OF MATERIALS TO BE FURNISHED UNDER THE CONTRACT DOCUMENTS AND WITHOUT LIMITING GENERALITY THEREOF CONSISTS OF FURNISHING OR LABORING, EQUIPMENT, HOISTING, PLANT, TRANSPORTATION, RIGGING, STAGING, APPURTENANCES, AND SERVICES NECESSARY AND/OR INCIDENTAL TO PROPERLY COMPLETE ALL WORK AS SHOWN ON THE DRAWINGS AND AS DESCRIBED HEREIN.
3. DEFINITIONS: THE FOLLOWING DEFINITIONS APPLY TO THIS CONTRACT

A. FURNISH: THE TERM "FURNISH" MEANS TO "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."

B. INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."

C. PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."

D. REMOVE: THE TERM REMOVE MEANS TO DISCONNECTFROM ITS PRESENT POSITION, REMOVE FROM THE PREMISES AND TO DISPOSE OF IN A LEGAL MANNER."

E. SUBSTITUTIONS: "SUBSTITUTIONS" ARE REQUESTS FOR CHANGES IN PRODUCTS, MATERIALS AND METHODS OF CONSTRUCTION AS PROPOSED BY THE CONTRACTOR AFTER AWARD OF THE CONTRACT.
4. DRAWINGS

A. PROVIDE ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY TO COMPLETE THE WORK OUTLINED ON THESE CONTRACT DOCUMENTS. THE CONTRACTOR IS TO NOTE THAT THESE DOCUMENTS ARE DIAGRAMMATIC ONLY AND THAT FINAL PLACEMENT OF EQUIPMENT OR DEVICES IN THE FIELD MAY NOT DIRECTLY CORRESPOND TO THAT WHICH IS SHOWN ON THE DRAWINGS. IF A CONFLICT IN POSITIONING OCCURS THE CONTRACTOR IS TO NOTIFY THE ENGINEER IMMEDIATELY TO ASCERTAIN WHAT THE INTENT WAS BY THE DESIGN PROFESSIONAL.
5. SURVEY AND MEASUREMENTS:

A. PRIOR TO SUBMITTING BID, VISIT SITE AND IDENTIFY EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT WORK TO BE PERFORMED. NO COMPENSATION WILL BE GRANTED FOR ADDITIONAL WORK CAUSED BY UNFAMILIARITY WITH SITE CONDITIONS THAT ARE VISIBLE OR READILY IDENTIFIED BY EXPERIENCED OBSERVERS. INCLUDE IN THE BID ALL DEMOLITION WORK REQUIRED.

B. DO NOT SCALE DRAWINGS. SCALE INDICATED ON DRAWINGS IS FOR ESTABLISHING REFERENCE POINTS ONLY. ACTUAL FIELD CONDITIONS SHALL GOVERN ALL DIMENSIONS.

C. PRIOR TO ORDERING ANY MATERIALS AND EQUIPMENT, THOROUGHLY REVIEW THE SITE CONDITIONS TO DETERMINE IF ADEQUATE CLEARANCES AND ACCESS IS ALLOWED TO INSTALL THE COMPONENTS. ORDER EQUIPMENT BROKEN DOWN AS NECESSARY TO ALLOW FOR PROPER RIGGING THROUGH THE PROJECT AREA. PROVIDE ALL NECESSARY ALTERATIONS TO THE STRUCTURE OF THE BUILDING AS NECESSARY TO RIO THE EQUIPMENT IN PLACE.

D. ARRANGE INSTALLATION TO PROVIDE ACCESS TO EQUIPMENT FOR EASY MAINTENANCE AND REPAIR.
6. CODES AND STANDARDS: ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST STATE OF CONNECTICUT ACCEPTED VERSION OF THE FOLLOWING

A. INTERNATIONAL RESIDENTIAL CODE

B. INTERNATIONAL BUILDING CODE

C. INTERNATIONAL PLUMBING CODE

D. INTERNATIONAL MECHANICAL CODE

E. NATIONAL ELECTRIC CODE (NFPA 70)

F. THE LIFE SAFETY CODE (NFPA 101)
7. PERMITS AND FEES: THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS, AND PAY ALL GOVERNMENT AND STATE SALES TAXES AND FEES WHERE APPLICABLE, AND OTHER COSTS, INCLUDING UTILITY CONNECTIONS OR EXTENSIONS IN CONNECTION WITH THE WORK, FILE ALL NECESSARY DRAWINGS, PREPARE ALL DOCUMENTS AND OBTAIN ALL NECESSARY APPROVALS OF ALL GOVERNMENTAL AND STATE DEPARTMENTS HAVING JURISDICTION, OBTAIN ALL REQUIRED CERTIFICATES OF INSPECTION FOR HIS WORK, AND DELIVER A COPY TO THE OWNER AND ENGINEER BEFORE REQUEST FOR ACCEPTANCE AND FINAL PAYMENT FOR THE WORK.
8. SHOP DRAWINGS:

A. SUBMIT NEWLY PREPARED INFORMATION, DRAWN TO ACCURATE SCALE OF 1/4"=1'-0", HIGHLIGHT, ENIRCLE, OR OTHERWISE INDICATE DEVIATIONS FROM THE CONTRACT DOCUMENTS. DO NOT REPRODUCE CONTRACT DOCUMENTS OR COPY STANDARD INFORMATION AS THE BASIS OF SHOP DRAWINGS. STANDARD INFORMATION PREPARED WITHOUT SPECIFIC REFERENCE TO THE PROJECT IS NOT CONSIDERED SHOP DRAWINGS.

B. SHOP DRAWINGS INCLUDE EQUIPMENT SUBMITTALS, FABRICATION AND INSTALLATION DRAWINGS, SETTING DIAGRAMS, SCHEDULES, PATTERNS, TEMPLATES AND SIMILAR DRAWINGS. INCLUDE THE FOLLOWING INFORMATION:

a. DIMENSIONS.

b. IDENTIFICATION OF PRODUCTS AND MATERIALS INCLUDED.

c. COMPLIANCE WITH SPECIFIED STANDARDS AND PERFORMANCE DATA AS INDICATED.

d. NOTATION OF COORDINATION REQUIREMENTS.

e. NOTATION OF DIMENSIONS ESTABLISHED BY FIELD MEASUREMENT.

f. SUBMIT 3 BLACK-LINE PRINTS AND 2 ADDITIONAL PRINTS WHERE REQUIRED FOR MAINTENANCE MANUALS, PLUS THE NUMBER OF PRINTS NEEDED BY THE ENGINEER FOR DISTRIBUTION. ONE PRINT WILL BE RETAINED; THE REMANDER RETURNED. ONE OF THE PRINTS RETURNED SHALL BE MARKED-UP AND MAINTAINED AS A "RECORD DOCUMENT."

g. DO NOT USE SHOP DRAWINGS WITHOUT AN APPROPRIATE FINAL STAMP INDICATING ACTION TAKEN IN CONNECTION WITH CONSTRUCTION.

h. DO NOT ORDER ANY MATERIALS OR EQUIPMENT PRIOR TO RECEIVING FINAL APPROVED SHOP DRAWINGS.

i. PROVIDE SUBMITTALS AS INDICATED IN SPECIFIC SPECIFICATION SECTIONS.
9. USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND THE METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK.
10. THE CONTRACTOR SHALL COORDINATE ALL INTERRUPTIONS OF SERVICES AND LIMITATIONS OF ACCESS WITH THE OWNER NO LESS THAN 5 DAYS PRIOR TO THE INTERRUPTION.
11. OPERATION AND MAINTENANCE

A. UPON COMPLETION OF ALL WORK AND TESTS, THE CONTRACTOR SHALL INSTRUCT THE OWNER OR THE OWNER'S REPRESENTATIVE IN THE OPERATION, ADJUSTMENT AND MAINTENANCE OF ALL EQUIPMENT FURNISHED. THE CONTRACTOR SHALL GIVE AT LEAST SEVEN (7) DAYS NOTICE TO THE OWNER AND THE ENGINEER IN ADVANCE OF THIS PERIOD.

B. THE CONTRACTOR SHALL PREPARE THREE (3) COPIES OF A COMPLETE OPERATION AND MAINTENANCE MANUAL, BOUND IN BOOKLET FORM. ORGANIZE OPERATING AND MAINTENANCE DATA INTO SUITABLE SETS OF MANAGEABLE SIZE. BIND PROPERLY INDEXED DATA IN INDIVIDUAL HEAVY-DUTY 3-RING VINYL-COVERED BINDERS, WITH POCKET FOLDERS FOR FOLDED SHEET INFORMATION AND DESIGNATION PARTITIONS WITH IDENTIFICATION TABS. MARK APPROPRIATE IDENTIFICATION ON FRONT AND SPINE OF EACH BINDER.

C. OPERATION AND MAINTENANCE MANUAL SHALL INCLUDE THE FOLLOWING:

a. MANUFACTURER'S PRINTED OPERATING AND MAINTENANCE PROCEDURES.

b. MAINTENANCE PROCEDURES FOR ROUTINE PREVENTATIVE MAINTENANCE AND TROUBLESHOOTING.

c. COPIES OF WARRANTIES.

d. APPROVED SHOP DRAWINGS AND PRODUCT DATA.

e. BALANCE REPORTS.

f. INCLUDE IN THE MANUAL, A TABULATED EQUIPMENT SCHEDULE FOR ALL EQUIPMENT. SCHEDULE SHALL INCLUDE PERTINENT DATA SUCH AS: MAKE, MODEL NUMBER, SERIAL NUMBER, VOLTAGE, NORMAL OPERATING CURRENT, BELT SIZE, FILTER QUANTITIES AND SIZES, BEARING NUMBER, ETC. SCHEDULE SHALL INCLUDE MAINTENANCE TO BE DONE AND FREQUENCY.

g. MAINTENANCE AND INSTRUCTION MANUALS SHALL BE SUBMITTED TO THE OWNER AT THE SAME TIME AS THE SEVEN (7) DAY NOTICE IS GIVEN PRIOR TO THE INSTRUCTION PERIOD.
12. AS-BUILT DRAWINGS

A. PREPARE AS-BUILT DRAWINGS TO A SCALE OF 1/4"=1'-0" OR LARGER; DETAILING THE ACTUAL INSTALLATION OF MAJOR ELEMENTS, COMPONENTS, AND SYSTEMS OF MECHANICAL EQUIPMENT AND MATERIALS. WHERE SHOP DRAWINGS ARE USED, RECORD A CROSS-REFERENCE AT THE CORRESPONDING LOCATION ON THE AS-BUILT DRAWINGS. GIVE PARTICULAR ATTENTION TO CONCEALED ELEMENTS THAT WOULD BE DIFFICULT TO MEASURE AND RECORD AT A LATER DATE.

B. MARK NEW INFORMATION THAT IS IMPORTANT TO THE OWNER, BUT WAS NOT SHOWN ON CONTRACT DRAWINGS OR SHOP DRAWINGS.

C. NOTE RELATED CHANGE ORDER NUMBERS WHERE APPLICABLE.

D. ORGANIZE AS-BUILT DRAWINGS INTO MANAGEABLE SETS, BIND WITH DURABLE PAPER COVER SHEETS, AND PRINT SUITABLE TITLES, DATES AND OTHER IDENTIFICATION ON THE COVER OF EACH SET.
13. OBTAIN IN OWNER'S NAME WRITTEN EQUIPMENT AND MATERIAL WARRANTIES OFFERED

- IN MANUFACTURER'S PUBLISHED PRODUCT DATA WITHOUT EXCLUSION OR LIMITATION.
14. GUARANTEE WORK OF THESE CONTRACT DOCUMENTS IN WRITING FOR NOT LESS THAN ONE (1) YEAR FROM DATE OF FINAL NOTICE OF ACCEPTANCE. REPAIR OR REPLACE DEFECTIVE MATERIALS, EQUIPMENT, WORKMANSHIP AND INSTALLATION THAT DEVELOP WITHIN THIS PERIOD, PROMPT AND TO OWNER'S SATISFACTION AND CORRECT DAMAGE CAUSED IN MAKING NECESSARY REPAIRS AND REPLACEMENTS UNDER GUARANTEE WITHIN CONTRACT PRICE.
15. SUBMIT TO THE OWNER AN OFFICIAL CERTIFICATE OF INSURANCE FOR THEIR RECORDS.

MEANS AND METHODS ALL TRADES

1. INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS

2. DO NOT BURN WASTE MATERIALS. DO NOT BURY DEBRIS OR EXCESS MATERIALS ON THE OWNER'S PROPERTY. DO NOT DISCHARGE VOLATILE, HARMFUL OR DANGEROUS MATERIALS INTO DRAINAGE SYSTEMS. REMOVE AND DISPOSE OF ALL WASTE MATERIALS, PACKAGING MATERIAL, SKIDS ETC. FROM THE SITE AND DISPOSE OF IN A LAWFUL MANNER IN ACCORDANCE WITH MUNICIPAL, STATE AND FEDERAL REGULATIONS.

3. MATERIALS AND EQUIPMENT SHALL BE UL LISTED WHERE STANDARD HAS BEEN ESTABLISHED.

4. CAREFULLY INSPECT ALL BUILDING ELEMENTS PRIOR TO CUTTING OR DRILLING INTO WALL, FLOORS OR CEILINGS. PATCH AND PAINT SURFACES DISTURBED BY WORK UNDER THIS CONTRACT AS REQUIRED TO RESTORE THEM TO THEIR ORIGINAL CONDITION.

5. SCAFFOLDING, RIGGING, HOISTING: THE CONTRACTOR SHALL FURNISH ALL SCAFFOLDING, RIGGING, HOISTING AND SERVICES NECESSARY FOR ERECTION AND DELIVERY INTO THE PREMISES ANY EQUIPMENT AND APPARATUS FURNISHED UNDER THIS DIVISION. REMOVE SAME FROM PREMISES WHEN NO LONGER REQUIRED.

6. EXCAVATION AND BACKFILLING: IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE SIZES, DEPTHS, FILL AND BEDDING REQUIREMENTS AND ANY OTHER EXCAVATION WORK REQUIRED UNDER THESE SPECIFICATIONS

7. WATERPROOFING: WHERE ANY WORK PIERCES WATERPROOFING, INCLUDING WATERPROOF CONCRETE, ROOFS, EXTERIOR WALL AND FLOORS IN WET AREAS, THE METHOD OF INSTALLATION SHALL BE REVIEWED BY THE ENGINEER BEFORE WORK IS DONE. THE CONTRACTOR SHALL FURNISH ALL NECESSARY SLEEVES, CAULKING AND FLASHING REQUIRED TO MAKE OPENINGS ABSOLUTELY WATERTIGHT.

8. PROVIDE FIRESTOPPING AROUND ALL FIRE PROTECTION, PLUMBING, MECHANICAL AND ELECTRICAL PENETRATIONS THROUGH FIRE RATED PARTITIONS. PROVIDE ASBESTOS FREE FIRESTOPPING SYSTEM CAPABLE OF MAINTAINING AN EFFECTIVE BARRIER AGAINST FLAME AND GASES. SYSTEM SHALL BE UL LISTED AND COMPLY WITH ASTM E 814.

9. ACCESS DOORS SHALL BE PROVIDED IN CEILINGS, WALLS AND FLOORS AT ALL DAMPERS, VALVES, CONTROL DEVICES, AND OTHER APPARATUS AND EQUIPMENT REQUIRING PERIODIC SERVICE AND INSPECTION. COORDINATE TYPE AND LOCATION WITH ARCHITECTURAL PLANS.

10. SEISMIC RESTRAINTS SHALL BE INSTALLED AS REQUIRED PER BUILDING CODE AND FIRE SAFETY CODE. RESTRAINTS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 13 AND SMACNA STANDARDS. SUBMIT SHOP DRAWINGS INCLUDING SEISMIC CALCULATIONS WITH PROFESSIONAL ENGINEER'S SEAL FOR REVIEW BY ENGINEER.

ELECTRICAL SPECIFICATIONS

1. CONTACT THE POWER COMPANY FOR NECESSARY COORDINATION OF SERVICE REQUIREMENTS AND PAY FOR ALL RELATED CHARGES FOR THE SERVICE INSTALLATION. PROVIDE ALL NECESSARY EQUIPMENT, GROUNDING, CONDUITS, WIRE, TRENCHING, SAND AND BACKFILL, ETC., FOR THE POWER COMPANY SERVICE CONNECTIONS AND ACTIVATION OF SERVICE FOR THE PROJECT. ALL EQUIPMENT SHALL MEET THE POWER COMPANIES REQUIREMENTS AND SHALL BE SUBMITTED TO THE POWER COMPANY PRIOR TO ORDERING OR INSTALLATION.
2. CONTACT THE TELEPHONE COMPANY FOR NECESSARY COORDINATION OF SERVICE REQUIREMENTS AND PAY FOR ALL RELATED CHARGES FOR THE SERVICE INSTALLATION. PROVIDE ALL BOXES, TERMINATIONS, CONDUITS AND WIRING PER DRAWINGS.
3. CONTACT THE CABLE TELEVISION COMPANY FOR NECESSARY COORDINATION OF SERVICE REQUIREMENTS AND PAY FOR ALL RELATED CHARGES FOR THE SERVICE INSTALLATION. PROVIDE ALL BOXES, TERMINATION, CONDUITS AND WIRING PER DRAWINGS.
4. SERVICE-DISCONNECTING MEANS SHALL BE OF THE TYPE AS INDICATED WITH EXTERNAL HANDLE FOR MANUAL OPERATION. WHEN SERVICE DISCONNECTING MEANS IS A PART OF AN ASSEMBLY, THE ASSEMBLY SHALL BE LISTED AS SUITABLE FOR SERVICE ENTRANCE EQUIPMENT. ENCLOSURES SHALL BE SHEET METAL WITH HINGED COVER FOR SURFACE MOUNTING UNLESS OTHERWISE INDICATED.
5. PANELBOARD/LOAD CENTER:

A. PROVIDE CIRCUIT BREAKER TYPE PANELBOARD/LOAD CENTER WITH BUS RATING AS INDICATED ON DRAWINGS.

B. MINIMUM INTEGRATED SHORT CIRCUIT RATING: 10,000A RMS SYMMETRICAL.

C. MOLDED CASE CIRCUIT BREAKER: NEMA AB, PLUG ON TYPE THERMAL MAGNETIC TRIP CIRCUIT BREAKERS, WITH COMMON TRIP HANDLES PER POLES, LISTED AS TYPE SWD FOR LIGHTING CIRCUITS, CLASS A GROUND FAULT INTERRUPTER CIRCUIT BREAKER AS INDICATED ON DRAWINGS, ARC-FAULT CIRCUIT INTERRUPTER TYPE CIRCUIT BREAKERS AS INDICATED ON DRAWINGS.

D. ENCLOSURE: GENERAL PURPOSE.

E. BOX: FLUSH TYPE WITH DOOR AND PULL RING LATCH, FINISH IN MANUFACTURER STANDARD GRAY ENAMEL.
6. MOUNT PANELBOARDS, CIRCUIT BREAKERS, AND DISCONNECTING SWITCHES SO HEIGHT OF OPERATING HANDLE AT ITS HIGHEST POSITION IS MAXIMUM 78 INCHES ABOVE FLOOR.
7. ALL BACKBOARDS SHALL UTILIZE FIRE RETARDANT 3/4 INCH PLYWOOD, SIZED AS INDICATED ON THE DRAWINGS.
8. GROUNDING SHALL BE COMPLETED IN ACCORDANCE WITH NFPA 70.

A. GROUND EXPOSED, NON-CURRENT-CARRYING METALLIC PARTS OF ELECTRICAL EQUIPMENT, GROUNDING CONDUCTOR IN NONMETALLIC RACEWAYS, GROUNDING CONDUCTOR OF NONMETALLIC SHEATHED CABLES, AND NEUTRAL CONDUCTOR OF WIRING SYSTEMS.

B. MAKE GROUND CONNECTION AT MAIN SERVICE EQUIPMENT, AND EXTEND GROUNDING CONDUCTOR TO POINT OF ENTRANCE OF METALLIC WATER SERVICE. MAKE CONNECTION TO WATER PIPE BY SUITABLE GROUND CLAMP WITH METER JUMPER OR LUG CONNECTION TO PLUGGED TEE. IF FLANGED PIPES ARE ENCOUNTERED, MAKE CONNECTION WITH LUG BOLTED TO STREET SIDE OF FLANGED CONNECTION. SUPPLEMENT METALLIC WATER SERVICE GROUNDING SYSTEM WITH ADDITIONAL MADE ELECTRODE IN COMPLIANCE WITH NFPA 70. MAKE GROUND CONNECTION TO DRIVEN GROUND RODS ON EXTERIOR OF BUILDING. GROUND RODS SHALL BE OF COPPER-CLAD STEEL CONFORMING TO UL 467 NOT LESS THAN 19.1 MM (3/4 INCH) IN DIAMETER BY 2.4 METER (8 FEET) IN LENGTH OF THE SECTIONAL TYPE DRIVEN FULL LENGTH INTO THE EARTH WHERE GROUND FAULT PROTECTION IS EMPLOYED, ENSURE THAT CONNECTION OF GROUND AND NEUTRAL DOES NOT INTERFERE WITH CORRECT OPERATION OF FAULT PROTECTION.
9. WIRING SHALL BE COMPLETED IN ACCORDANCE WITH NFPA 70.

A. CONDUCTORS NO. 8 AWG AND LARGER DIAMETER SHALL BE STRANDED ANNEALED COPPER. CONDUCTORS NO. 10 AWG AND SMALLER DIAMETER SHALL BE SOLID ANNEALED COPPER. CONDUCTOR SIZES AND AMPACITIES SHOWN ARE BASED ON COPPER UNLESS INDICATED OTHERWISE. UNLESS SPECIFIED OR INDICATED OTHERWISE OR REQUIRED BY NFPA 70. UNLESS OTHERWISE INDICATED WIRING METHODS SHALL BE:

a. SERVICE ENTRANCE WIRING AND WIRING TO DISTRIBUTION PANELS. WIRES SHALL BE IN PVC CONDUIT AND SHALL BE 600-VOLT, TYPE THWN/THHN ANNEALED COPPER.

b. BRANCH CIRCUITING INSIDE THE BUILDING IN DRY AREAS SHALL BE 600 VOLT, TYPE NM-B.

c. BRANCH CIRCUITING OUTSIDE THE BUILDING AND IN WET/DAMP AREAS SHALL BE 600 VOLT, TYPE UF-B.

d. WIRES SUBJECT TO DAMAGE SHALL BE IN PVC CONDUIT.
- B. MAKE ALL SPLICES IN ACCESSIBLE LOCATIONS. MAKE SPLICES IN CONDUCTORS NO. 10 AWG AND SMALLER DIAMETER WITH INSULATED, PRESSURE-TYPE CONNECTOR. MAKE SPLICES IN CONDUCTORS NO. 8 AWG AND LARGER DIAMETER WITH SOLDERLESS CONNECTOR, AND COVER WITH INSULATION MATERIAL EQUIVALENT TO CONDUCTOR INSULATION.
- C. PHASE CONDUCTORS SHALL BE IDENTIFIED BY COLOR CODING. THE COLOR OF THE INSULATION ON PHASES A AND B RESPECTIVELY (FOR SINGLE PHASE) OF DIFFERENT VOLTAGE SYSTEMS SHALL BE AS FOLLOWS: 120/240 VOLT, SINGLE/PHASE: BLACK AND RED.

9. BOXES:

A. ALL OUTLETS, SWITCH AND JUNCTION BOXES SHALL BE NONMETALLIC BOXES.

B. BOXES SHALL BE SIZED IN ACCORDANCE WITH NFPA 70.

C. EXTERIOR BOXES SHALL BE GASKETED AND WATERTIGHT.

10. OUTLETS AND SWITCHES:

A. ALL OUTLETS AND SWITCHES SHALL BE WHITE.

B. MOUNT LIGHTING SWITCHES 48 INCHES ABOVE FINISHED FLOOR, RECEPTACLES 18 INCHES ABOVE FINISHED FLOOR, AND OTHER DEVICES AS INDICATED. MEASURE MOUNTING HEIGHTS OF WIRING DEVICES AND OUTLETS TO TOP OF DEVICE OR OUTLET.

C. SINGLE AND DUPLEX RECEPTACLES SHALL BE RATED 15 AMPERES, 125 VOLTS, TWO-POLE, THREE-WIRE, GROUNDING TYPE WITH POLARIZED PARALLEL SLOTS. RECEPTACLE SHALL BE SIDE OR BACK WIRED WITH TWO SCREWS PER TERMINAL. THE THIRD GROUNDING POLE SHALL BE CONNECTED TO THE METAL MOUNTING YOKE.

a. SWITCHED RECEPTACLES SHALL BE THE SAME AS OTHER RECEPTACLES SPECIFIED EXCEPT THAT THE UNGROUNDED POLE OF EACH SUITABLE RECEPTACLE SHALL BE PROVIDED WITH A SEPARATE TERMINAL. ONLY THE TOP RECEPTACLE OF A DUPLEX RECEPTACLE SHALL BE WIRED FOR SWITCHING APPLICATION.

C. RECEPTACLES WITH GROUND FAULT CIRCUIT INTERRUPTERS SHALL HAVE THE CURRENT RATING AS INDICATED, AND SHALL BE UL CLASS A TYPE UNLESS OTHERWISE SHOWN. GROUND FAULT CIRCUIT PROTECTION SHALL BE PROVIDED AS REQUIRED BY NFPA 70 AND AS INDICATED ON THE DRAWINGS.

D. WEATHERPROOF RECEPTACLES SHOWN SHALL BE MOUNTED IN A BOX WITH A

- GASKETED, WEATHERPROOF, WATERPROOF COVER PLATE AND GASKETED CAP OVER EACH RECEPTACLE OPENING.
- E. WALL SWITCHES SHALL BE OF THE TOTALLY ENCLOSED TUMBLER TYPE. WIRING TERMINALS SHALL BE OF THE SCREW TYPE OR OF SOLDERLESS PRESSURE TYPE HAVING SUITABLE CONDUCTOR-RELEASE ARRANGEMENT. SWITCHES SHALL BE RATED 15 AMPERE 120/277-VOLT FOR USE ON ALTERNATING CURRENT ONLY.
- F. DIMMING SWITCHES SHALL BE SLIDE TYPE, SOLID-STATE, FLUSH MOUNTED, AND SIZED FOR THE LOADS.
- G. DEVICE PLATES SHALL BE ONE-PIECE TYPE AND BE PROVIDED FOR ALL RECEPTACLES, OUTLETS, SWITCHES AND FITTINGS. PLATES ON UNFINISHED WALLS AND ON FITTINGS SHALL BE OF IMPACT RESISTANT PLASTIC HAVING ROUNDED OR BEVELED EDGES. PLATES ON FINISHED WALLS SHALL BE IMPACT-RESISTANT PLASTIC. PLATES SHALL BE INSTALLED WITH ALL FOUR EDGES IN CONTINUOUS CONTACT WITH FINISHED WALL SURFACES WITHOUT THE USE OF NUTS OR SIMILAR DEVICES. PLATES SHALL BE INSTALLED WITH AN ALIGNMENT TOLERANCE OF 1/16 INCH. THE USE OF SECTIONAL-TYPE DEVICE PLATES WILL NOT BE PERMITTED. PLATES INSTALLED IN WET LOCATIONS SHALL BE GASKETED AND PROVIDED WITH A HINGED, GASKETED COVER, UNLESS OTHERWISE SPECIFIED.

11. PROVIDE ALL NECESSARY JUNCTION BOXES, PULL BOXES, PULL WIRES, COVER PLATES AND OTHER MISCELLANEOUS EQUIPMENT WHICH IS NOT SHOWN ON THE CONTRACT DOCUMENTS BUT NECESSARY TO COMPLETE THE WORK.
12. PROVIDE ALL NECESSARY WIRE, CONDUIT AND EQUIPMENT TO SUPPLY POWER TO THE HEATING, VENTILATION AND AIR CONDITIONING EQUIPMENT, PLUMBING EQUIPMENT AND FIRE PROTECTION EQUIPMENT. CONTROL WIRING AND CONDUIT SHALL BE PROVIDED UNDER DIVISION 15.
13. COORDINATE ALL WORK WITH OTHER TRADES AND ARRANGE INSTALLATION TO AVOID CLASHES BETWEEN EQUIPMENT, WORK OF OTHER TRADES AND BUILDING STRUCTURE.



COMMUNITY DEVELOPMENT BLOCK GRANT - DISASTER RECOVERY for the OWNER OCCUPIED RECOVERY and REHABILITATION PROGRAM for the CONNECTICUT DEPARTMENT OF HOUSING

GENERAL RENOVATIONS for the LLOYD RESIDENCE APPLICATION No. 2433 261 Adams Street Bridgeport, CT 06607

date	description	no.
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revisions

ELECTRICAL LEGENDS, DETAILS AND SCHEDULES

E-5.1

date	JULY 10, 2015
drawn	VM
scale	AS SHOWN
checked	DTB
project no.	2014064.00
application no.	2433