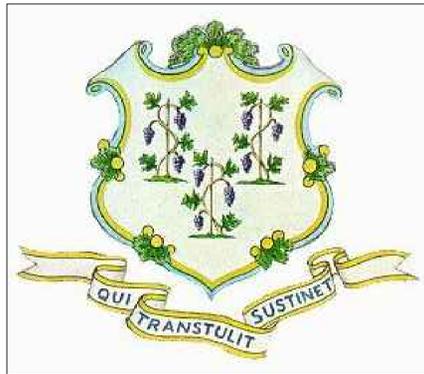


# THE STATE OF CONNECTICUT DEPARTMENT OF HOUSING (DOH) COMMUNITY DEVELOPMENT BLOCK GRANT - DISASTER RECOVERY (CDBG-DR) OWNER OCCUPIED REHABILITATION and REBUILDING PROGRAM (OORR)

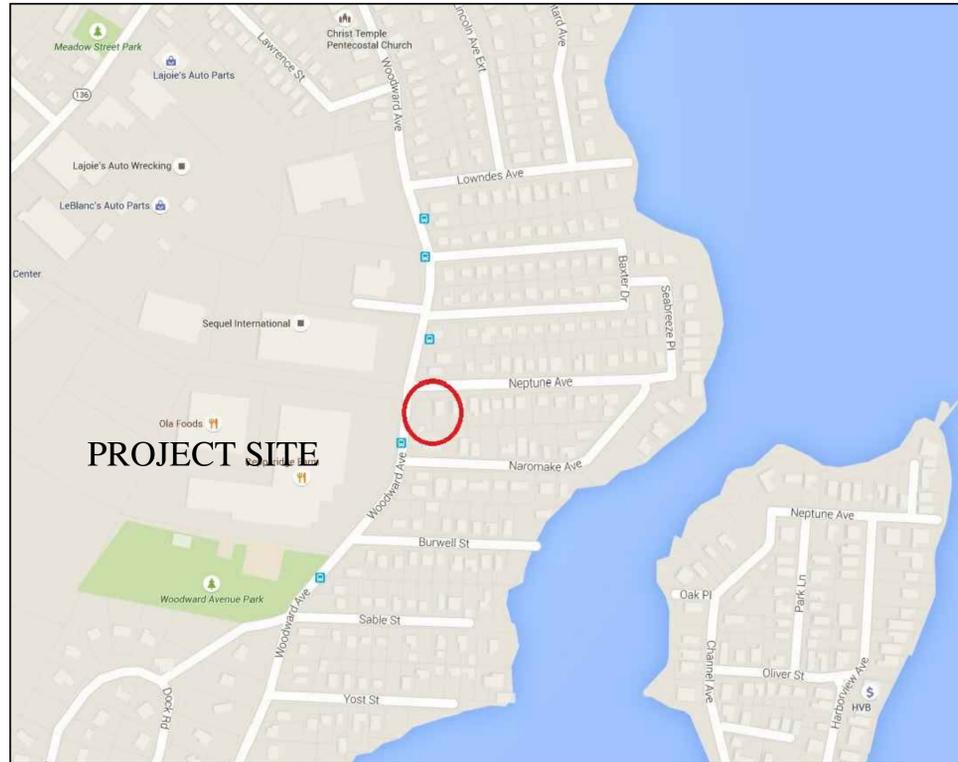


October 09, 2015

csa project 1347-47  
ISSUED FOR: DOH Review



## Kaminski Residence Rehabilitation and Mitigation Application No. 2228 4 Neptune Ave Norwalk, CT 06854



LOCATION PLAN

not to scale



### Drawing List

Title Sheet	
A-0.0	GENERAL INFORMATION
P-1	PLOT PLAN
S-1.0	GENERAL NOTES AND TYPICAL DETAILS
S-1.1	FOUNDATION + FRAMING PLANS
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A-3.0	DETAILS & SCHEDULES
AD-1.0	ALTERNATE DEMOLITION PLANS
AA-1.0	ALTERNATE FLOOR PLANS
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MEP-1.0	MEP DEMOLITION FLOOR PLANS
P-1.0	PLUMBING FLOOR PLANS
P-5.0	PLUMBING SPECIFICATIONS
M-1.0	MECHANICAL FLOOR PLANS
M-5.0	MECHANICAL SPECIFICATIONS
E-1.0	ELECTRICAL FLOOR PLANS
E-5.0	ELECTRICAL SCHEDULES AND DETAILS
E-5.1	ELECTRICAL SPECIFICATIONS



#### Architect

Capital Studio Architects, LLC  
1379 Main Street  
East Hartford, Connecticut 06108  
tel: 860.289.3262 fax: 860.289.3163

#### Civil / Site Engineer

Design Professionals, Inc.  
PO Box 1167  
425 Sullivan Avenue  
South Windsor, CT 06074  
tel: 860.291.8755 fax: 860.291.8757

#### Environmental Consultant

Eagle Environmental, Inc.  
8 South Main Street, Suite 3  
Terryville, Connecticut 06786  
tel: 860.589.8257 fax: 860.585.7034

#### Structural Engineer

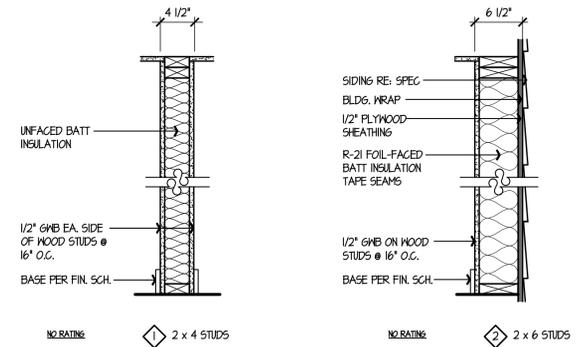
GNCB Engineers  
130 Elm Street, P.O. Box 802  
Old Saybrook, CT 06475  
tel: 860.388.1224

#### MEP Engineer

Consulting Engineering Services  
811 Middle Street  
Middletown, CT 06457  
tel: 860.632.1682

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

**KAMINSKI RESIDENCE REHABILITATION and MITIGATION  
APPLICATION No. 2228  
4 Neptune Ave  
Norwalk, CT 06854**



**5 PARTITION TYPES**  
A-0.0 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 1-800-422-4455 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

date	description	no.
revisions		

**GENERAL INFORMATION**

**A-0.0**

date	04 OCT 2015
drawn	P5R
scale	AS SHOWN
checked	JP/DH
project no.	1341-41
application no.	2228

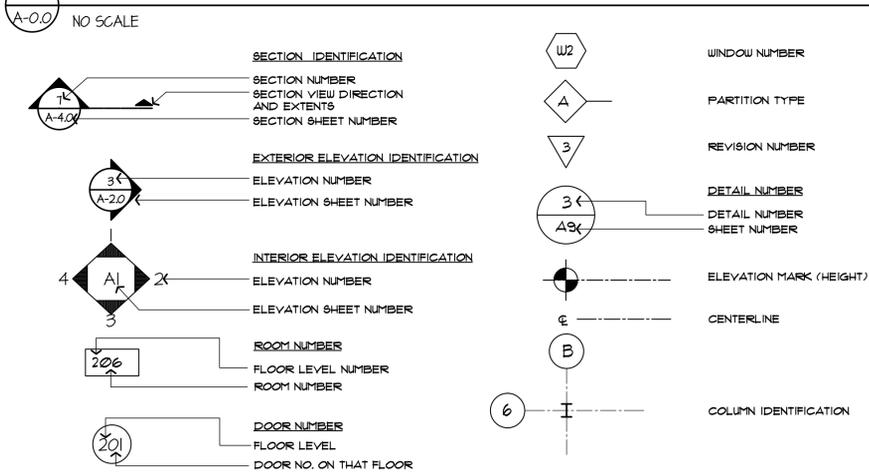
**1 GENERAL CONSTRUCTION and DEMOLITION NOTES**  
A-0.0 NO SCALE

A.C.T.	ACOUSTICAL CEILING TILE	I.D.	INSIDE DIAMETER INSULATION
AL.T.	ALTERNATE	JAN.	JANITOR JOINT
ALUM.	ALUMINUM	LAM.	LAMINATED LOW POINT LOCKER
ARCH.	ARCHITECTURAL	L.P.	LOCKER
ASB.	ASBESTOS	MAS.	MASONRY MATERIAL
A.T.	ASPHALT TILE	MAX.	MAXIMUM
@	AT	M.C.	MASONRY COURSE
B.C.	BRICK COURSE	MECH.	MECHANICAL
BD.	BOARD	MEM.	MEMBRANE
B.F.	BOTTOM OF FOOTING	MFR.	MANUFACTURER
BLDG.	BUILDING	MIN.	MINIMUM
CAB.	CABINET	MIR.	MIRROR
C.C.	CENTER TO CENTER	MISC.	MISCELLANEOUS
C.T.	CERAMIC TILE	M.O.	MASONRY OPENING
C.J.	CONTROL JOINT	N.I.C.	NOT IN CONTRACT NUMBER
C.L.	CENTER LINE	N.T.S.	NOT TO SCALE
C.L.G.	CEILING	O/C	ON CENTER
C.O.	CASED OPENING	O.D.	OUTSIDE DIAMETER
COL.	COLUMN	OPNG.	OPENING
COMP.	COMPACTED	OPP.	OPPOSITE
CONC.	CONCRETE	PERF.	PERFORATED
CONN.	CONNECTION	P.T.	PRESSURE TREATED
CONT.	CONTINUOUS	R.	RISER (RADIUS)
CORR.	CORRIDOR	R.B.	RUBBER BASE
CSK.	COUNTERSINK	REF.	REFERENCE
D.F.	DRINKING FOUNTAIN	R.L.	REINFORCING
DET.	DETAIL	RM.	ROOM
DNG.	DRAWING	SIM.	SIMILAR
DN.	DOWN	SPEC.	SPECIFICATION
DP.	DAMP PROOFING	STL.	STEEL
ELECT.	ELECTRICAL	STRUC.	STRUCTURAL
E.J.	EXPANSION JOINT	STOR.	STORAGE
ELEV.	ELEVATION (ELEVATOR)	SUSP.	SUSPENDED
E.P.	ELECTRICAL PANEL	TERR.	TERRAZZO (TERRACE)
EQUIP.	EQUIPMENT	T&G.	TONGUE AND GROOVE
ETR.	EXISTING TO REMAIN	THRESH.	THRESHOLD
E.W.C.	ELECTRIC WATER COOLER	T.	TREAD
EXP.	EXPANSION	T/S	TOP OF SLAB
F.A.P.	FIRE ALARM PANEL	T/STL	TOP OF STEEL
F.D.	FLOOR DRAIN	T/W	TOP OF WALL
F.E.	FIRE EXTINGUISHER	TYP.	TYPICAL
F.H.C.	FIREHOSE CABINET	V.C.T.	VINYL COMPOSITE TILE
FIN.	FINISH	V.B.	VINYL BASE
FLOOR	FLOOR	VERT.	VERTICAL
F/M	FACE OF MASONRY	VEST.	VESTIBULE
F/F	FACE OF FRAMING	V.I.F.	VERIFY IN FIELD
FDN	FOUNDATION	V.W.C.	VINYL WALL COVERING
F.R.	FIRE RATED	W	WITH
FTG.	FOOTING	W.C.	WATER CLOSET
FUR.	FURNACE	WD.	WOOD
G.M.U.	GLAZED MASONRY UNIT	WIND.	WINDOW
GALV.	GYP. WALLBOARD	WP.	WATER PROOFING
GALV.	GALVANIZED	WH.	WATER HEATER
GL.	GLASS		
GLZ.	GLAZING		
GYP. BD.	GYP. WALL BOARD		
HGT.	HEIGHT		
H.M.	HOLLOW METAL		
H.P.	HIGH POINT		
HDWD.	HARDWOOD		
HDWR.	HARDWARE		

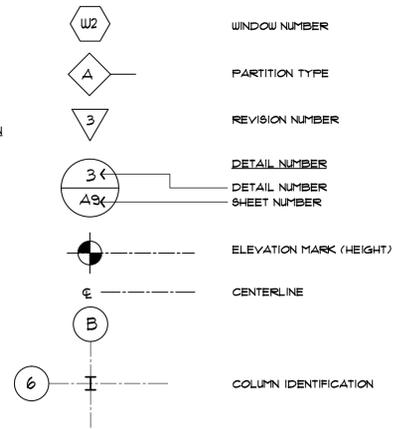
**2 ABBREVIATIONS**  
A-0.0 NO SCALE

	BRICK		RIGID INSULATION
	STONE		BATT INSULATION
	CONCRETE		FINISH WOOD (ELEVATION)
	MASONRY BLOCK		FINISH WOOD (SECTION)
	PLYWOOD		WOOD BLOCKING (CONT)
	GYP. BOARD		WOOD BLOCKING (NOT CONT)
	STEEL (SECTION)		STEEL ANGLE
	CERAMIC TILE		STEEL BEAM
	EARTH		GRAVEL

**4 MATERIALS LEGEND**



**3 SYMBOLS LEGEND**  
A-0.0 NO SCALE

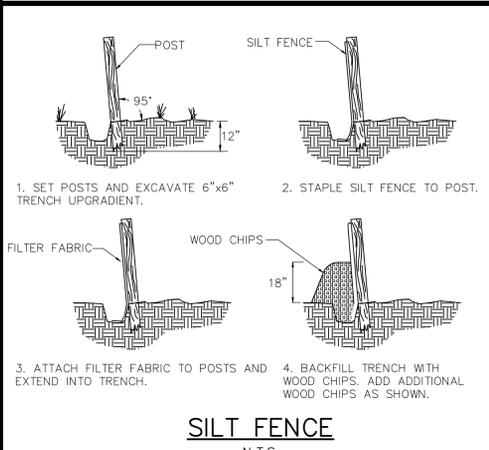
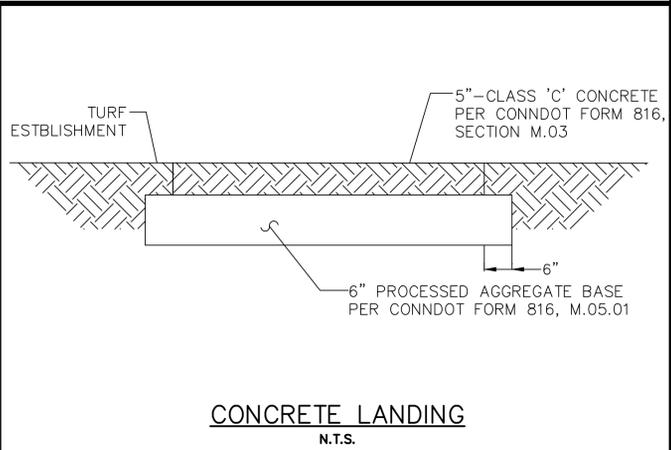


**1 GENERAL CONSTRUCTION and DEMOLITION NOTES**  
A-0.0 NO SCALE

# Zoning Information

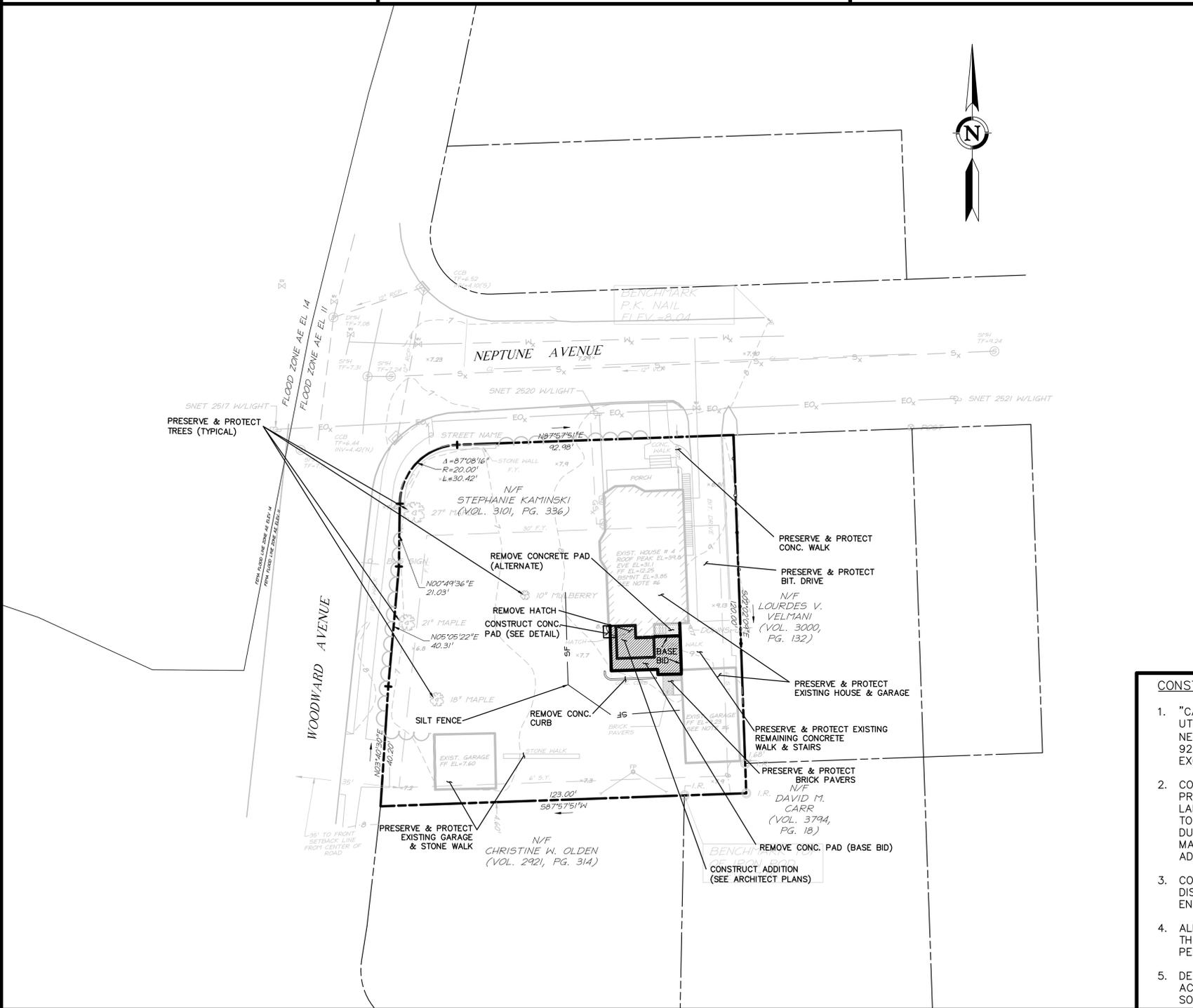
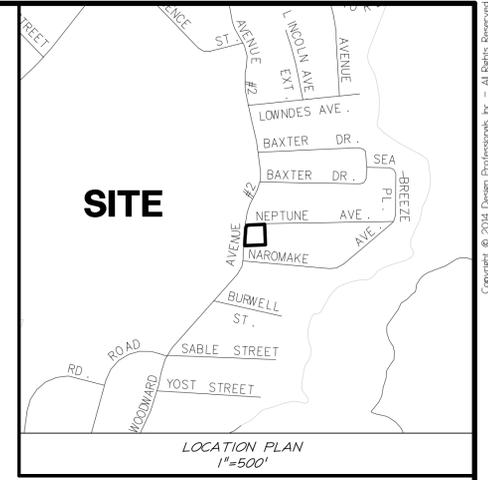
ZONE: C ZONE			
ITEM	REQUIRED	EXISTING CONDITIONS	PROPOSED CONDITIONS
Minimum Lot Area	5,000 s.f.	13,944 s.f.	13,944 s.f.
Minimum Lot Width	50 feet	108.19 feet	108.19 feet
Minimum Front Yard	30 feet**	10.07 feet*	10.07 feet*
Minimum Side Yard	6 feet	1.68 feet*	1.68 feet*
Maximum Building Height	30 feet	22.3 feet	22.3 feet
Maximum Bldg Coverage	25%-30%	30.7%*	28.8%

\*Existing Non-conforming  
 \*\*Subject to Section 118-900F



# LEGEND

EXISTING COMMUNICATION	DESCRIPTION
C <sub>x</sub>	OVERHEAD COMM. LINES (CABLE, TEL, ETC.)
D <sub>1</sub>	DOMESTIC WATER
W <sub>1</sub>	WATER MAIN
W <sub>2</sub>	WATER SERVICE
W <sub>3</sub>	WATER VALVE
W <sub>4</sub>	FIRE HYDRANT
L	LIGHTING
PL	POLE MOUNTED LIGHT
N	NATURAL GAS
G <sub>x</sub>	GAS MAIN
E <sub>1</sub>	ELECTRICAL LINES, OVERHEAD
E <sub>2</sub>	ELECTRICAL LINES, UNDERGROUND
U	UTILITY POLE
P	PROPERTY LINE
IP	IRON PIN
M	MONUMENT
R	ROADS
GR	GUARD RAIL
SF	SITE FEATURES
X	BARBED WIRE FENCE
CL	CHAIN LINK FENCE
R	RAIL FENCE
S	STOCKADE FENCE
W	WIRE FENCE
T	TREE
TL	TREE LINE
SS	SANITARY SEWER
SM	SANITARY SEWER MAIN
SMH	SANITARY SEWER MANHOLE
SD	STORM SEWER
SDP	STORM DRAIN PIPE
SDM	STORM DRAIN MANHOLE
CI	CURB INLET
CB	CATCH BASIN
TO	TOPOGRAPHY
C	CONTOUR
X	SPOT ELEVATION
W	WETLANDS
WL	WETLANDS LINE



# SEDIMENTATION AND EROSION CONTROL:

- ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" BY THE CONNECTICUT COUNCIL FOR SOIL AND WATER CONSERVATION.
- EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO CONSTRUCTION, AND SHALL BE MAINTAINED OR REPLACED AS NECESSARY.
- CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTATION AND MAINTENANCE OF ALL SEDIMENTATION AND EROSION CONTROL MEASURES SHOWN ON THESE PLANS. ANY PROPOSED CHANGES TO THIS PLAN MUST BE APPROVED BY THE ENGINEER AND/OR THE TOWN OF NORWALK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR SWEEPING EXISTING ROADS & DRIVEWAYS AS DEEMED NECESSARY.
- AREAS TO BE LEFT BARE FOR MORE THAN 15 DAYS SHALL BE TREATED WITH AIR DRIED WOOD CHIP MULCH OR SEEDED WITH PERENNIAL RYE-GRASS, UNTIL FINAL GRADING AND STABILIZATION EFFORTS TAKE PLACE.

# CONSTRUCTION NOTES:

- "CALL BEFORE YOU DIG" - CONTRACTOR SHALL NOTIFY UTILITY COMPANIES OF PENDING EXCAVATION AT OR NEAR PUBLIC UTILITIES. CONTRACTOR SHALL CALL (800) 922-4455 AT LEAST 72 HOURS PRIOR TO BEGINNING EXCAVATION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESERVATION AND PROTECTION OF ALL UTILITIES, LANDSCAPING, SIDEWALK, PAVEMENT, ETC. DESIGNATED TO REMAIN. SHOULD ANY FEATURES BE DAMAGED DURING THE CONSTRUCTION EFFORT, CONTRACTOR SHALL MAKE ARRANGEMENTS FOR REPLACEMENT AT NO ADDITIONAL COST.
- CONTRACTOR SHALL VERIFY LAYOUT DIMENSIONS. DISCREPANCIES SHALL BE REPORTED TO THE DESIGN ENGINEER AND ARCHITECT PRIOR TO CONSTRUCTION.
- ALL WORK SHALL BE COMPLETED IN CONFORMANCE WITH THE REQUIREMENTS OF ALL FEDERAL, STATE, AND LOCAL PERMITS ISSUED FOR THIS PROJECT.
- DEWATERING, IF REQUIRED, SHALL BE CONDUCTED IN ACCORDANCE WITH THE CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, AS REVISED.

- NOTES:**
- PROPERTY IS IN THE C ZONE.
  - PARCEL CONTAINS 13,944 SQUARE FEET OR 0.320 ACRES.
  - HORIZONTAL DATUM IS BASED ON NAD 83 DATUM AND VERTICAL DATUM IS BASED ON NAVD 88 DATUM.
  - PROPERTY FALLS WITHIN THE LIMITS OF A FLOOD HAZARD ZONE AE (ELEV+11) AS DEPICTED ON "FIRM FLOOD INSURANCE RATE MAP CITY OF NORWALK, CONNECTICUT, FAIRFIELD COUNTY, PANEL 533 OF 626 COMMUNITY PANEL NUMBER 090105033G, EFFECTIVE DATE JULY 8, 2013. PREPARED BY FEDERAL EMERGENCY MANAGEMENT AGENCY FEDERAL INSURANCE ADMINISTRATION.
  - FOR INFORMATION CONCERNING THE WATER & ELECTRIC CONTACT SOUTH NORWALK ELECTRIC & WATER: (203) 854-4446.
  - 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.CBYD.COM.

- MAP REFERENCES:**
- MAP OF HARBOR VIEW PARK SOUTH NORWALK, CONN. PROPERTY OF THE HARBOR VIEW REALTY CO. JULY, 1906 SURVEYED AND PLATTED BY SAMUEL W. HOYT JR., SURVEYOR. MAP NO. 200 N.L.R.
  - MAP OF PROPERTY SHOWING LINE CHANGE PREPARED FOR BERNARD & DOMINICA DAIGLE NORWALK, CONN SCALE 1/4"=20' NOV 3, 1981 BY CLEMENT J. ARCAMONE, LAND SURVEYOR. MAP NO. 9538 N.L.R.

**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 A PROPERTY & TOPOGRAPHIC SURVEY AND IS INTENDED TO DEPICT THE LOCATION OF IMPROVEMENTS RELATIVE TO PROPERTY LINES.
- THIS IS A DEPENDENT RESURVEY BASED ON MAPS & DEEDS REFERENCED HEREON.
- 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.

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**design Professionals**  
 CIVIL & TRAFFIC ENGINEERS / PLANNERS / SURVEYORS  
 GIS ANALYSTS / LANDSCAPE ARCHITECTS

PREPARED FOR:  
 Stephanie Kaminski  
 4 Neptune Avenue  
 Norwalk, CT 06854

PROJECT NO.:  
 34002228  
 DATE:  
 10/9/15  
 DESIGN BY:  
 RMM  
 CHECKED BY:  
 RMM  
 CREDIT BY:  
 LRC/KA

**STEPHANIE KAMINSKI**  
 4 NEPTUNE AVENUE  
 NORWALK, CONNECTICUT

NO.	DATE	REVISIONS	BY	URG	LRC
1	10/27/15	ADD ADDITIONAL BID LIMITS			

**PLOT PLAN**

SCALE: 0' 10' 20' 40'  
 T = 20'

SHEET  
**1**

**LIVE LOADS**  
FIRST FLOOR 40 PSF

**SNOW LOADS**  
GROUND SNOW LOAD, P<sub>g</sub> = 30 PSF  
FLAT/SLOPED ROOF SNOW LOAD, P<sub>f</sub>/P<sub>s</sub> = 30 PSF

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

**FLOOD HAZARD**  
1. FEMA AE FLOOD ZONE WITH FLOOD ELEVATION OF 11.0 (NAVD 1988 DATUM) FEET PLUS 1-FOOT FREEBOARD. ALL HORIZONTAL STRUCTURE AT LOWEST DECK TO BE AT OR ABOVE FLOOD ELEVATION.

2. ALL FRAMING BELOW FLOOD ELEVATION SHALL BE PRESSURE TREATED OR OTHERWISE FLOOD DAMAGE RESISTANT PER FEMA TECHNICAL BULLETIN 2.

3. FINISH FLOOR ELEVATION 12.1 PER STATE OF CT DEPT. OF HOUSING COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM REQUIREMENT.

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

**REINFORCED CONCRETE**  
1. ALL CONCRETE SHALL BE DESIGNED IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE'S BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-02)

2. 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:

WALLS AND FOUNDATIONS	3,000 PSI
INTERIOR SLAB	3,500 PSI
EXTERIOR SLAB	4,500 PSI

3. ALL REINFORCING SHALL BE HIGH STRENGTH DEFORMED BARS, ASTM A 615 GRADE 60.  
4. 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.  
5. 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"

6. CONCRETE ELEMENTS SHALL HAVE NO JOINTS IN A HORIZONTAL PLANE.  
7. TWO-#4 BARS ABOVE OPENINGS IN CONCRETE WALLS, TYP.  
8. EPOXY ADHESIVE TO BE HILTI HIT OR EQUAL.

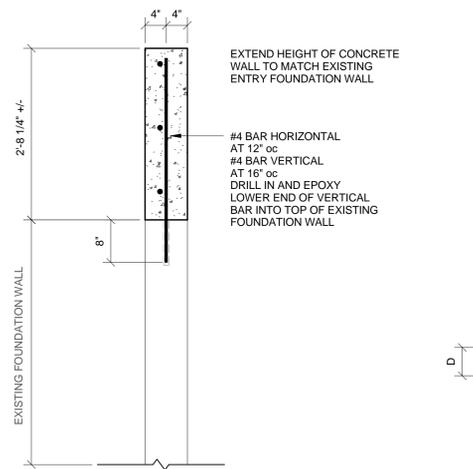
**FOUNDATION**

1. TEST BORING WORK WAS NOT CONDUCTED AT THIS SITE. AT THE START OF CONSTRUCTION, EXCAVATE TEST PITS TO DETERMINE THE EXISTING CONDITIONS BELOW GRADE, INCLUDING FOUNDATION DEPTH AND CONDITION, AND SOIL STRATA.

2. ALL FOOTINGS SHALL BEAR ON UNDISTURBED NATURAL MATERIAL OR CONTROLLED STRUCTURAL FILL HAVING AN ALLOWABLE BEARING VALUE OF 5 KIPS PER SQ. FOOT TOTAL LOAD PRESSURE AND SHALL BEAR AT LEAST 3'-6" MIN. BELOW FINISH GRADE.

3. 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.

4. IN GENERAL, AN OFF-SITE STRUCTURAL FILL IS NEEDED BELOW NEW FOOTINGS TO REPLACE UNSUITABLE MATERIALS.



EXTEND CONCRETE WALL HEIGHT

**WOOD**

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

BENDING, REPETITIVE USE	F <sub>b</sub> =	1,035 psi
BENDING, SINGLE USE	F <sub>b</sub> =	900
TENSION PARALLEL TO GRAIN	F <sub>t</sub> =	575
COMPRESSION PARALLEL TO GRAIN	F <sub>c</sub> (Par.) =	1,350
SHEAR PARALLEL TO GRAIN	F <sub>v</sub> =	180
COMPRESSION PERPENDICULAR TO GRAIN	F <sub>c</sub> (Per.) =	625
MODULUS OF ELASTICITY	E	= 1,700,000

2. WHERE FRAMING CLIPS OR JOIST HANGERS ARE USED, FASTENERS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.  
3. 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.  
4. ALL OPENINGS SHALL BE FRAMED WITH DOUBLE MEMBERS UNLESS OTHERWISE NOTED ON PLANS.  
5. ALL ENGINEERED LUMBER SHALL CONFORM WITH THE FOLLOWING ALLOWABLE UNIT STRESSES UNLESS OTHERWISE NOTED:

LAMINATED VENEER LUMBER (LVL) MODULUS OF ELASTICITY, MIN.	E	= 1,900,000 psi
BENDING, SINGLE USE	F <sub>b</sub> =	2,600
COMPRESSION PARALLEL TO GRAIN	F <sub>c</sub> (Par.) =	2,510
HORIZONTAL SHEAR	F <sub>v</sub> =	285
COMPRESSION PERPENDICULAR TO GRAIN/ PARALLEL TO GLUE LINE TENSION STRESS	F <sub>t</sub> =	1,555

6. BUILT-UP LVL'S TO BE CONSTRUCTED PER MANUFACTURER'S SPECIFICATIONS.  
7. ALL PENETRATIONS THROUGH ENGINEERED LUMBER SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO PROCEEDING.  
8. ALL EXPOSED STAIR LANDING/STAIRS/DECK/PORCH FRAMING TO BE PRESSURE TREATED WOOD.  
9. 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

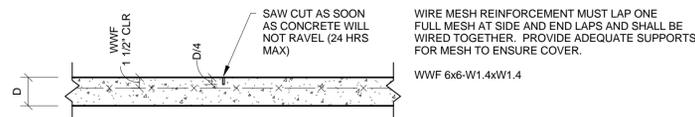
**PLYWOOD: UNLESS OTHERWISE NOTED**

APA SUBFLOOR SHEATHING	8d
3/4" T&G STURD-I-FLOOR	
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"



TYPICAL SLAB ON GRADE

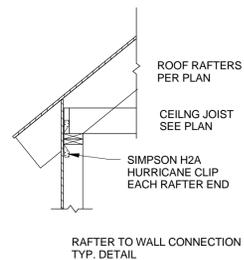
**APPLY AT ALL TYPICAL AND SIMILAR CONDITIONS**

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			

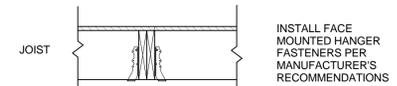
**NOTE:**  
GNCB DRAWINGS WERE COMPILED USING THE FOLLOWING REFERENCE PLANS:

DRAWINGS BY:  
CAPITAL STUDIO ARCHITECTS LLC  
1379 MAIN STREET  
EAST HARTFORD, CT 06108

FOR:  
GENERAL RENOVATIONS FOR THE  
KAMINSKI RESIDENCE  
4 NEPTUNE AVENUE  
NORWALK, CT 06854

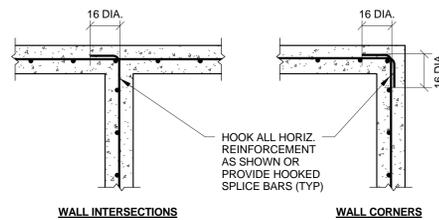


RAFTER TO WALL CONNECTION- CEILING

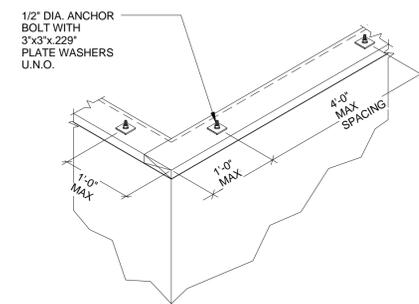


WOOD BEAM FLUSH FRAMING

FLUSH FRAMING DETAIL



TYPICAL CONCRETE WALL REINFORCING DETAILS



**TYPICAL ANCHOR BOLT DETAIL**  
**NOTES:**  
1. PROVIDE MINIMUM 7" EMBEDMENT.  
2. MAXIMUM PERMITTED HOLE SIZE FOR ANCHOR BOLT IS 9/16".  
3. SINGLE SPLICE PLATE TIED WITH SIMPSON ST6224 STRAP.

FOUNDATION - ANCHOR BOLTS

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

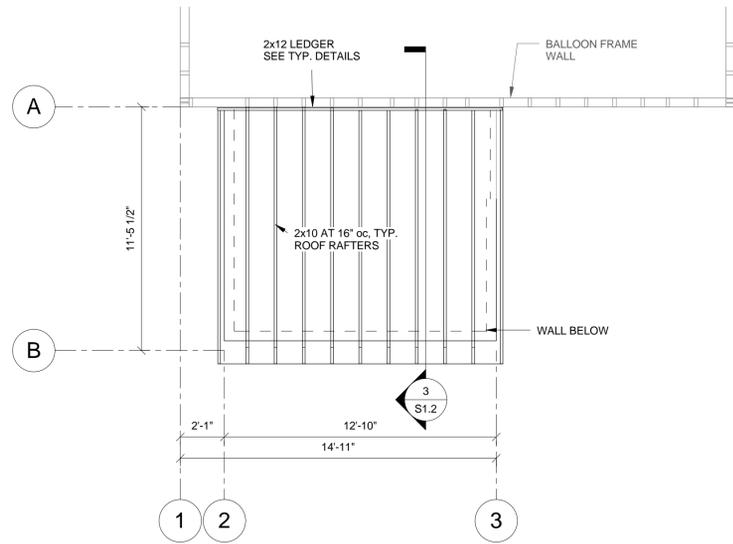
**GENERAL RENOVATIONS for the KAMINSKI RESIDENCE**  
APPLICATION No. 2228  
4 Neptune Avenue  
Norwalk, CT 06854

**Consultants:**  
**GNCB** CONSULTING ENGINEERS, P.C.  
130 ELMA STREET  
POST OFFICE BOX 802  
OLD SAYBROOK  
CONNECTICUT 06475  
PHONE: 860.388.1224  
FAX: 860.388.4613  
GNCBENGINEERS.COM

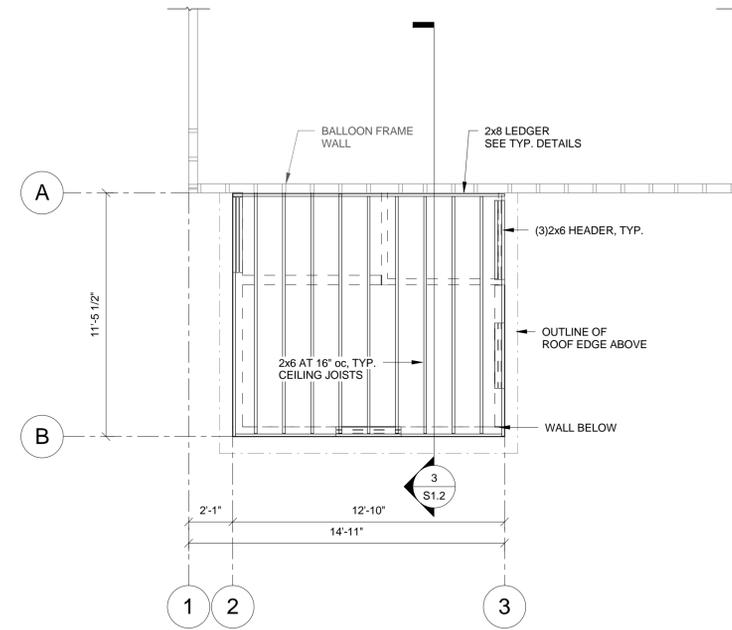
**GENERAL NOTES & TYPICAL DETAILS**

**S1.0**

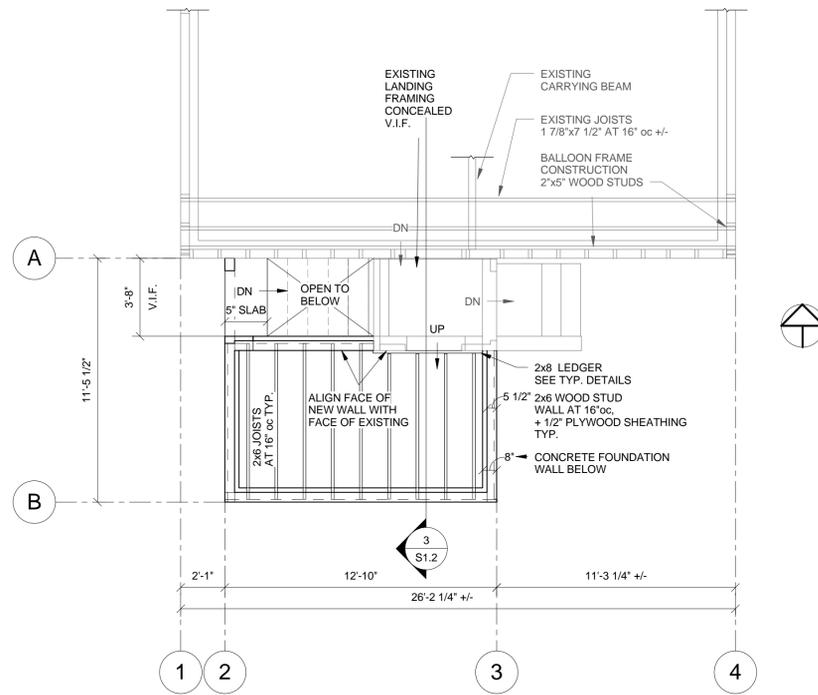
date	08/28/2015
drawn	RLB
scale	As indicated
checked	CCB
project no.	1341-41 GNCB 15013
application no.	2228



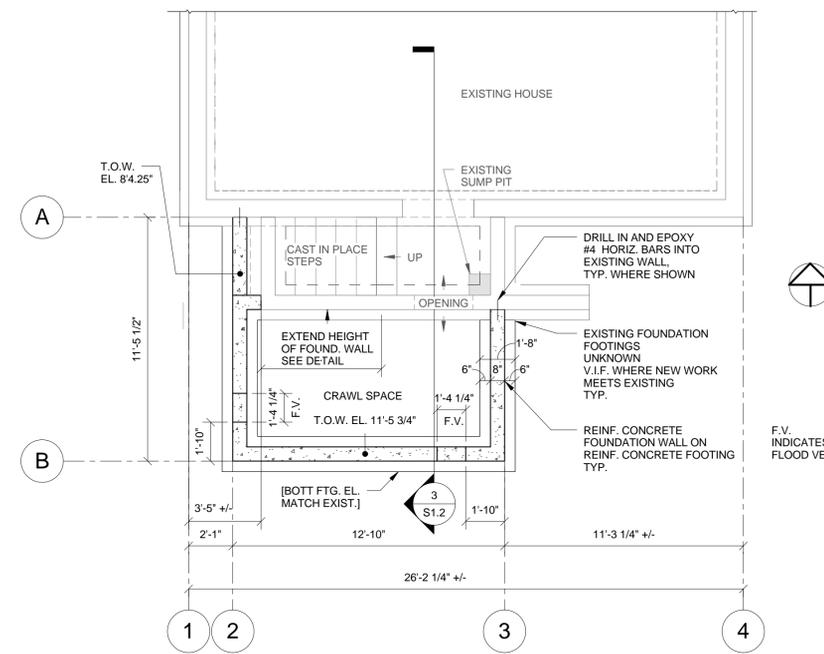
4 ROOF FRAMING PLAN  
1/4" = 1'-0"



3 CEILING FRAMING PLAN  
1/4" = 1'-0"



2 FIRST FLOOR FRAMING PLAN  
1/4" = 1'-0"



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



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

**GENERAL RENOVATIONS for the KAMINSKI RESIDENCE APPLICATION No. 2228**  
4 Neptune Avenue  
Norwalk, CT 06854

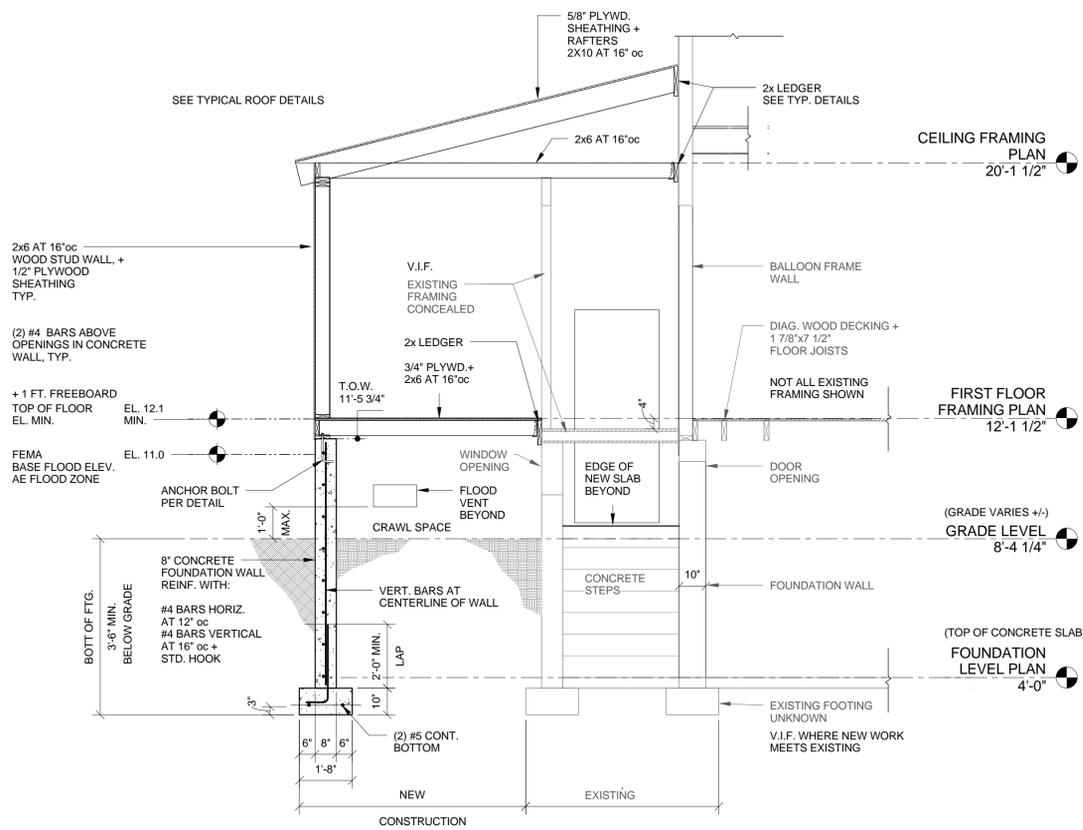
Consultants:

<b>GNCB</b>	130 ELMA 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		

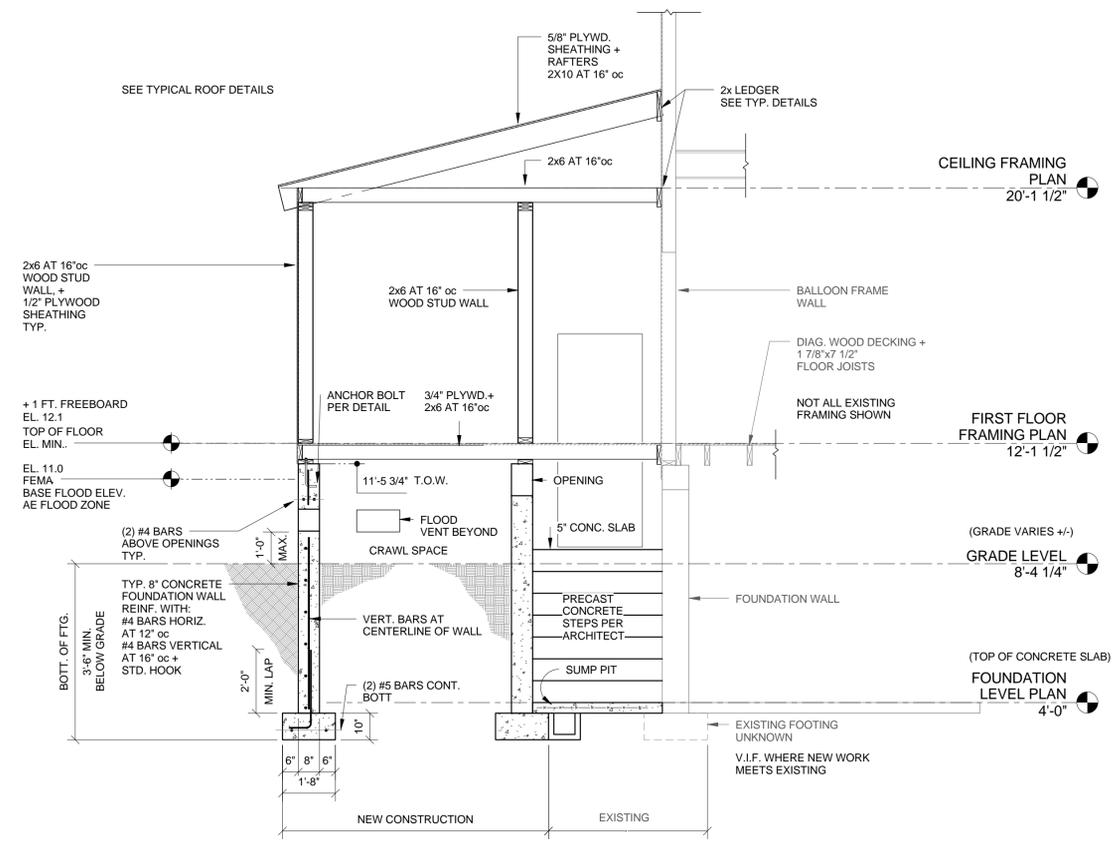
FOUNDATION + FRAMING PLANS

**S1.1**

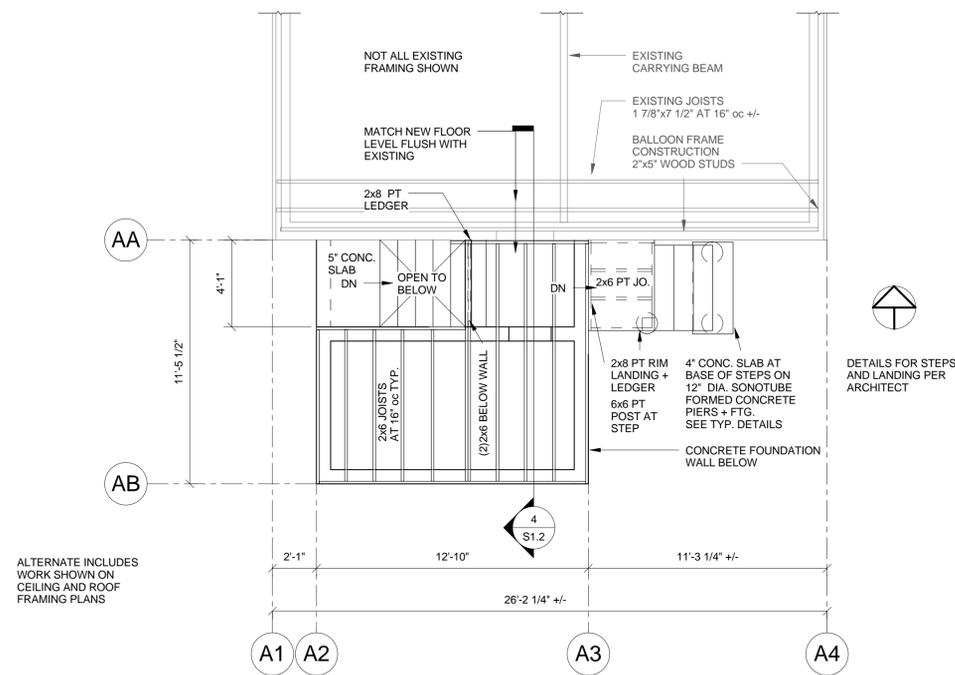
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drawn	RLB
scale	As indicated
checked	CCB
project no.	1341-41 GNCB 15013
application no.	2228



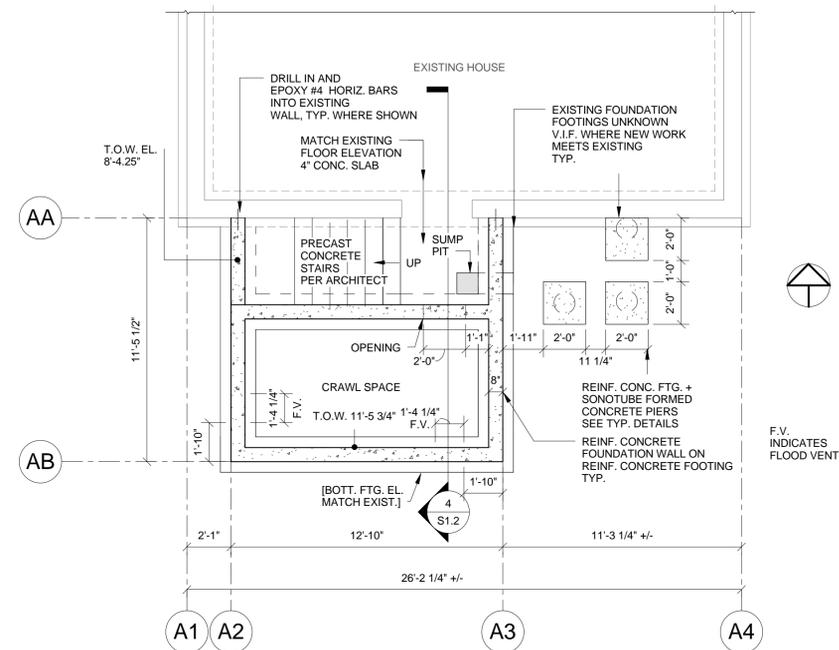
3 SECTION 1  
3/8" = 1'-0"



4 SECTION 1 ALTERNATE  
3/8" = 1'-0"



2 FIRST FLOOR FRAMING PLAN ALTERNATE  
1/4" = 1'-0"



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

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

**GENERAL RENOVATIONS for the KAMINSKI RESIDENCE**  
APPLICATION No. 2228  
4 Neptune Avenue  
Norwalk, CT 06854

Consultants:

<b>GNCB</b>	130 ELMA STREET POST OFFICE BOX 802 OLD SAYBROOK CONNECTICUT 06475 PHONE: 860.388.1224 FAX: 860.388.4613 GNCBENGINEERS.COM	
date	description	no.
revisions		

FOUNDATION + FRAMING PLAN ALTERNATE

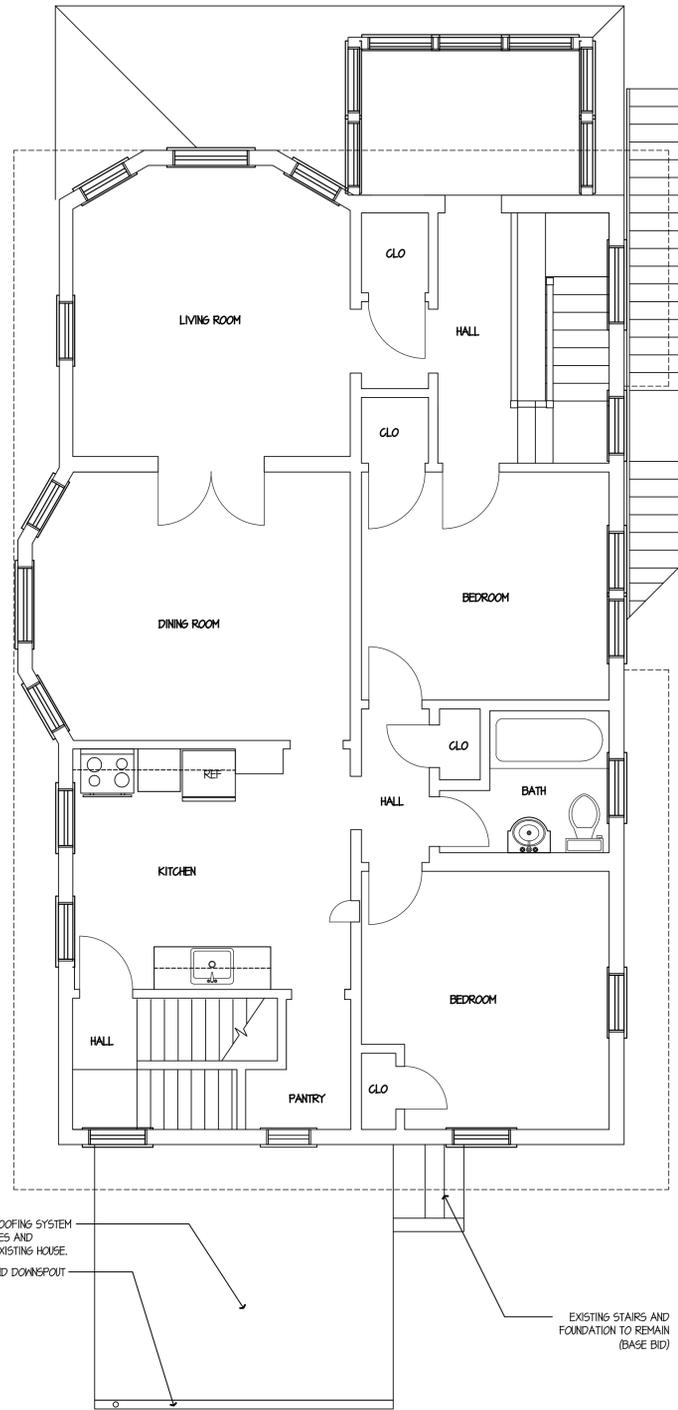
SECTIONS

**S1.2**

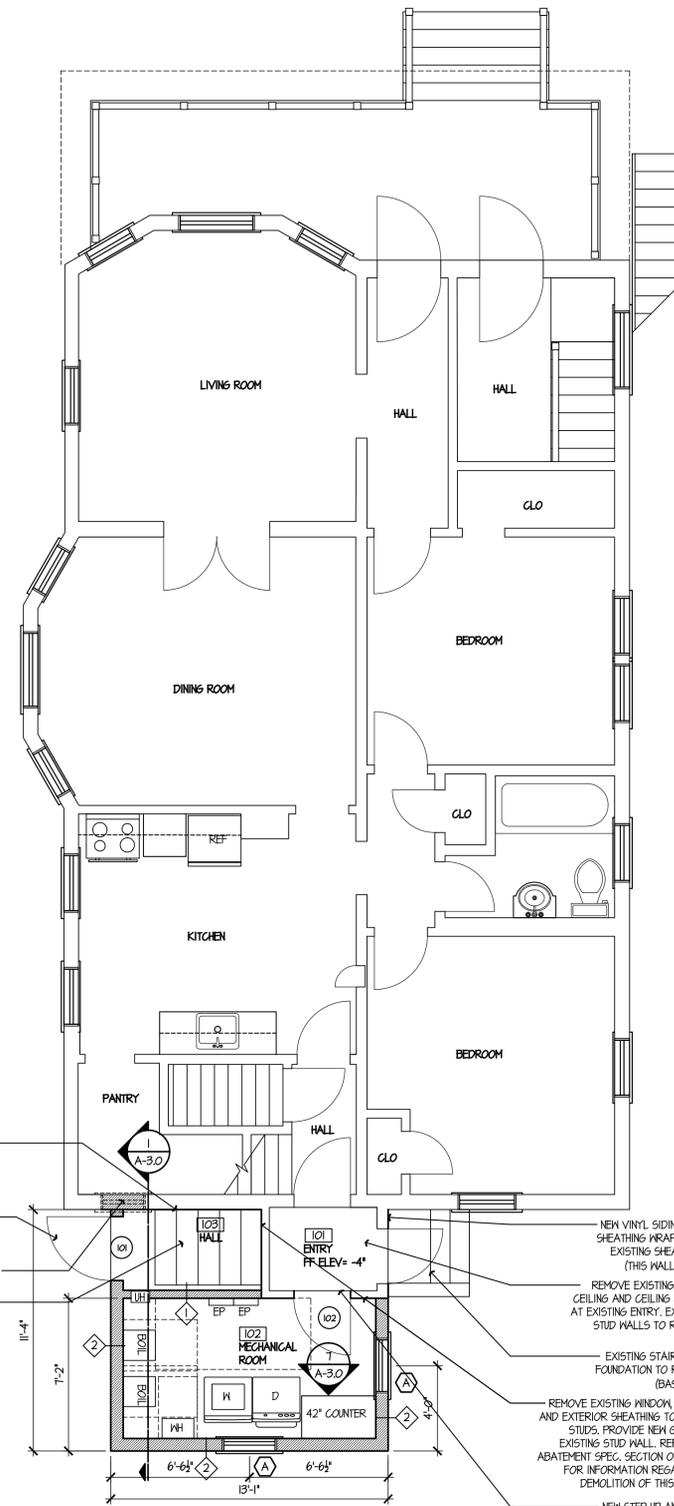
date	08/28/2015
drawn	RLB
scale	As indicated
checked	CCB
project no.	1341-41 GNCB 15013
application no.	2228

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

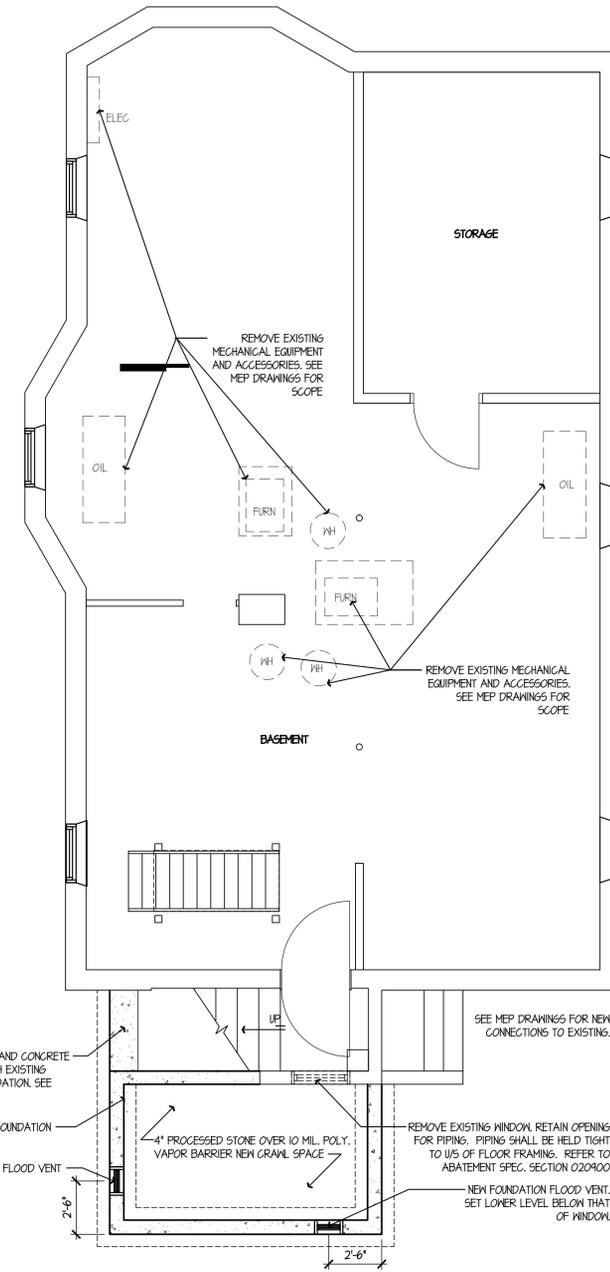
**KAMINSKI RESIDENCE  
REHABILITATION and MITIGATION**  
APPLICATION No. 2228  
4 Neptune Ave  
Norwalk, CT 06854



**3 SECOND FLOOR**  
SCALE: 1/4" = 1'-0"



**2 FIRST FLOOR**  
SCALE: 1/4" = 1'-0"



**1 BASEMENT**  
SCALE: 1/4" = 1'-0"



date	description	no.
	revisions	

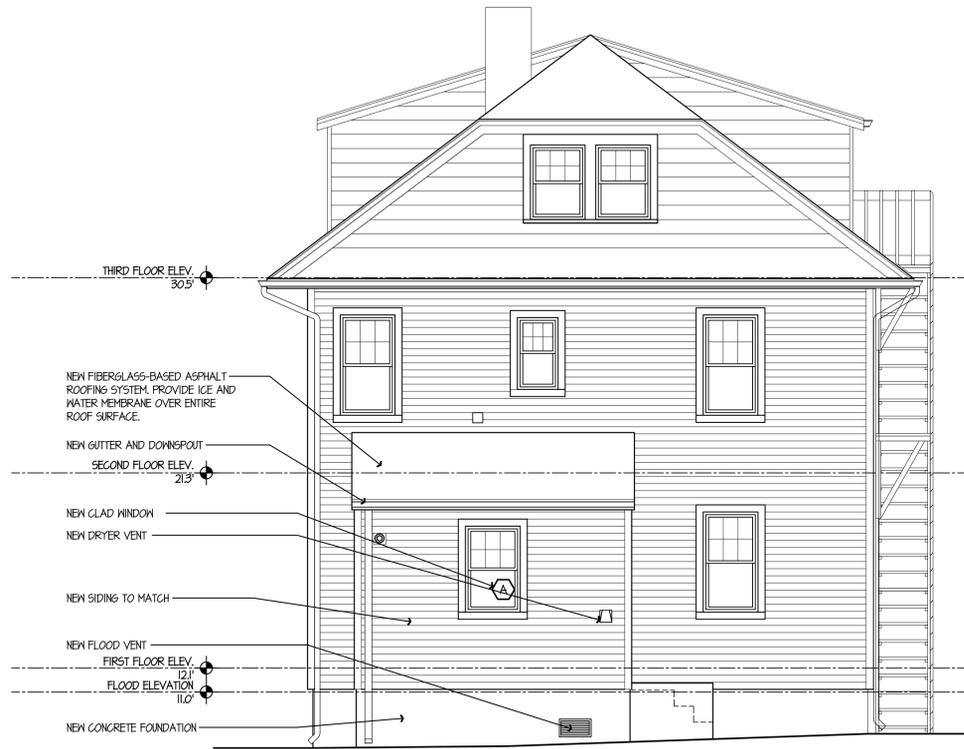
**PROPOSED FLOOR PLANS**

**A-1.0**

date	09 OCT 2015
drawn	P5R
scale	AS SHOWN
checked	JP/DH
project no.	1341-41
application no.	2228

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

KAMINSKI RESIDENCE REHABILITATION and MITIGATION  
APPLICATION No. 2228  
4 Neptune Ave  
Norwalk, CT 06854



3 SOUTH ELEVATION  
A-2.0 SCALE: 1/4" = 1'-0"



1 PARTIAL EAST ELEVATION  
A-2.0 SCALE: 1/4" = 1'-0"



4 WEST ELEVATION  
A-2.0 SCALE: 1/4" = 1'-0"

date	description	no.
	revisions	

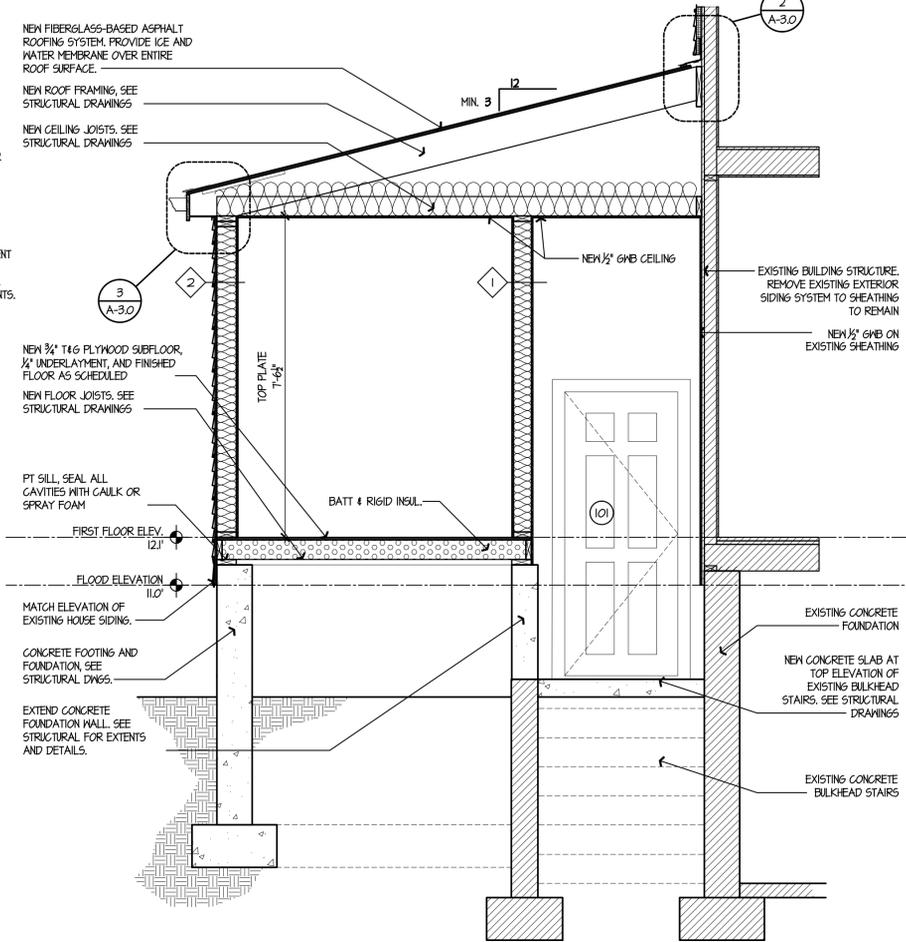
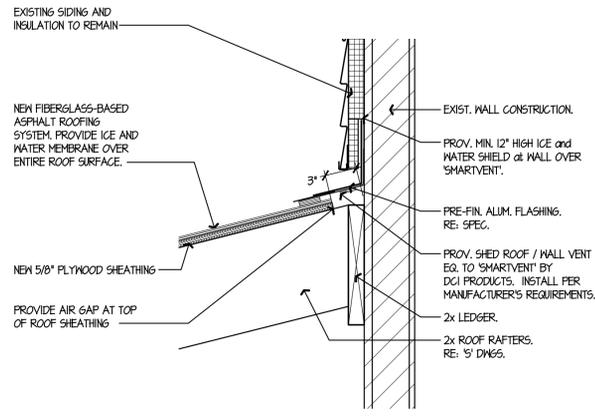
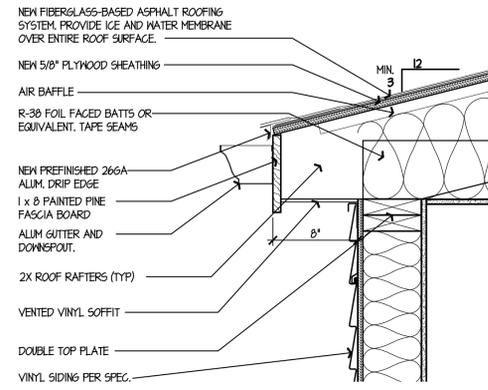
**PROPOSED ELEVATIONS**

**A-2.0**

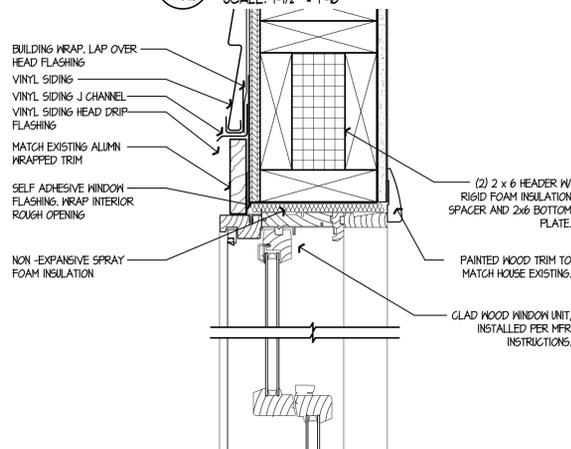
date	09 OCT 2015
drawn	P5R
scale	AS SHOWN
checked	JP/DH
project no.	1341-41
application no.	2228

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

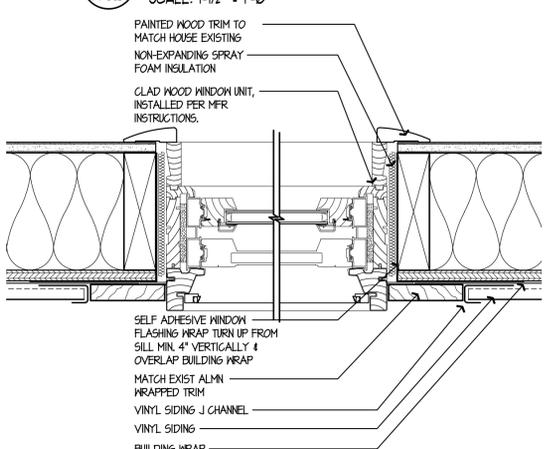
KAMINSKI RESIDENCE REHABILITATION and MITIGATION  
APPLICATION No. 2228  
4 Neptune Ave  
Norwalk, CT 06854



3 DETAIL  
A-3.0 SCALE: 1-1/2" = 1'-0"

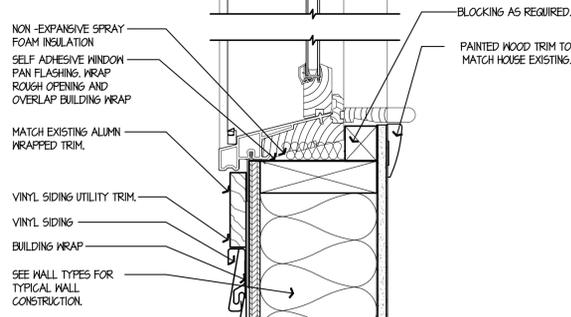


2 DETAIL  
A-3.0 SCALE: 1-1/2" = 1'-0"

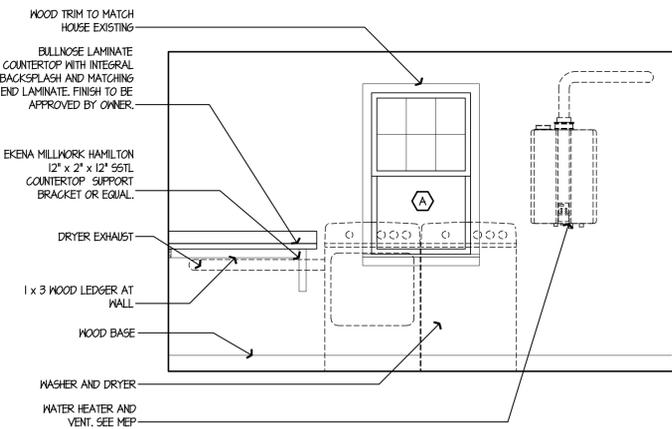


1 BUILDING SECTION  
A-3.0 1/2" = 1'-0"

5 JAMB DETAIL  
A-3.0 3" = 1'-0"



6 HEAD/SILL DETAIL  
A-3.0 3" = 1'-0"



1 INTERIOR ELEVATION  
A-3.0 1/2" = 1'-0"

DOOR SCHEDULE

LABEL	TYPE	STYLE	SIZE (W x H)	NOTES
101	ENTRY DOOR	NA	3'-0" x 6'-8"	1-3/4" INSULATED FIBERGLASS PANELLED DOOR WITH ENTRY HARDWARE
102	INTERIOR DOOR	NA	3'-0" x 6'-8"	1-3/8" INTERIOR PANELLED DOOR WITH PASSAGE HARDWARE.

PROVIDE ALL STOPS, SILENCERS AND HARDWARE TO COMPLETE INSTALLATION.

FINISH SCHEDULE

ROOM NAME	No.	FLOOR		WALLS	CEILING	CLG. HT.	REMARKS
		FLOORING	BASE				
ENTRY	101	EXISTING	WOOD (MATCH EXIST)	PAINT	6NB-PTD.	8'-5"	
MECHANICAL ROOM	102	VINYL	WOOD (MATCH EXIST)	PAINT	6NB-PTD.	7'-6"	
HALL	103	CONCRETE	NONE	PAINT	6NB-PTD.	10'-10"	

WINDOW SCHEDULE

DESIGNATION	MANUFACTURER	MODEL	SIZE DESIGNATION	RO	HEAD HEIGHT	REMARKS
A	ANDERSON	400 SERIES DOUBLE HUNG UNIT	TW2636	2-0 1/2" x 3'-0 1/2"	6'-0"	RE: SPEC

date	description	no.
	revisions	

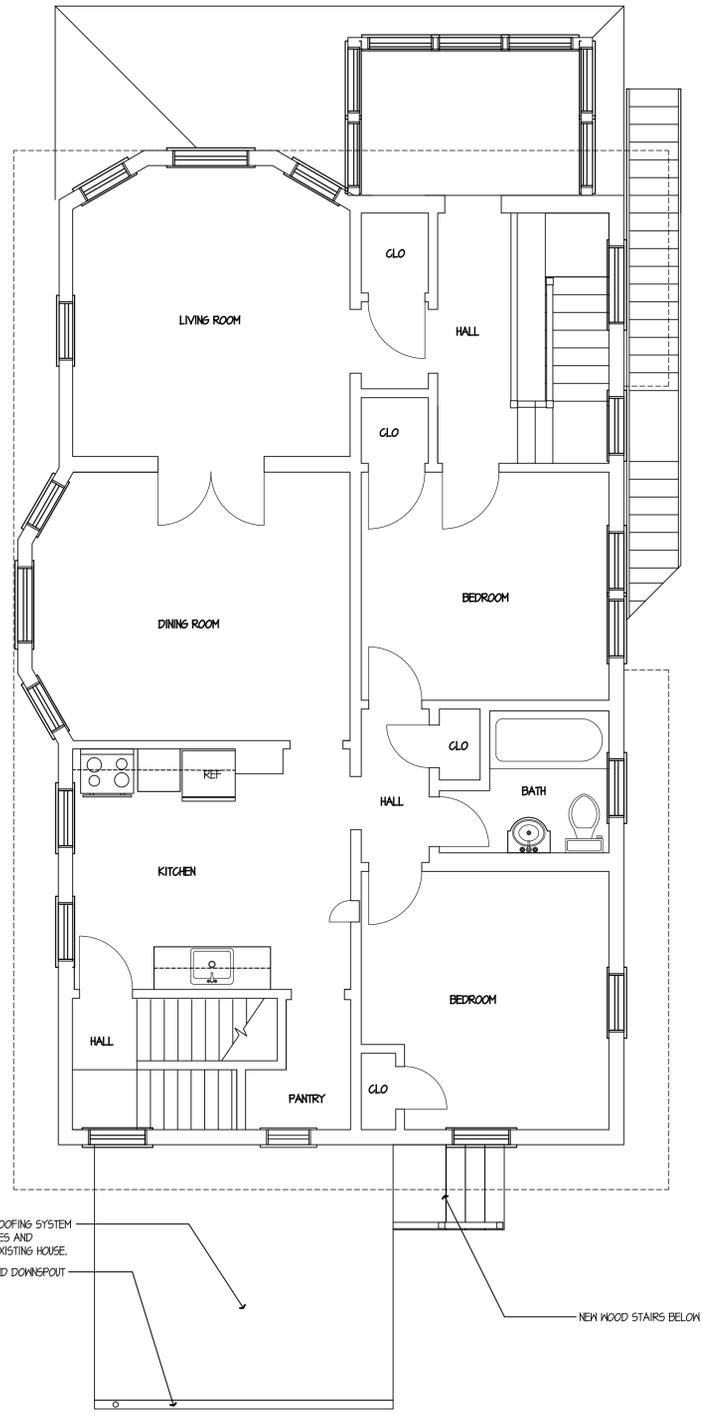
DETAILS & SCHEDULES

A-3.0

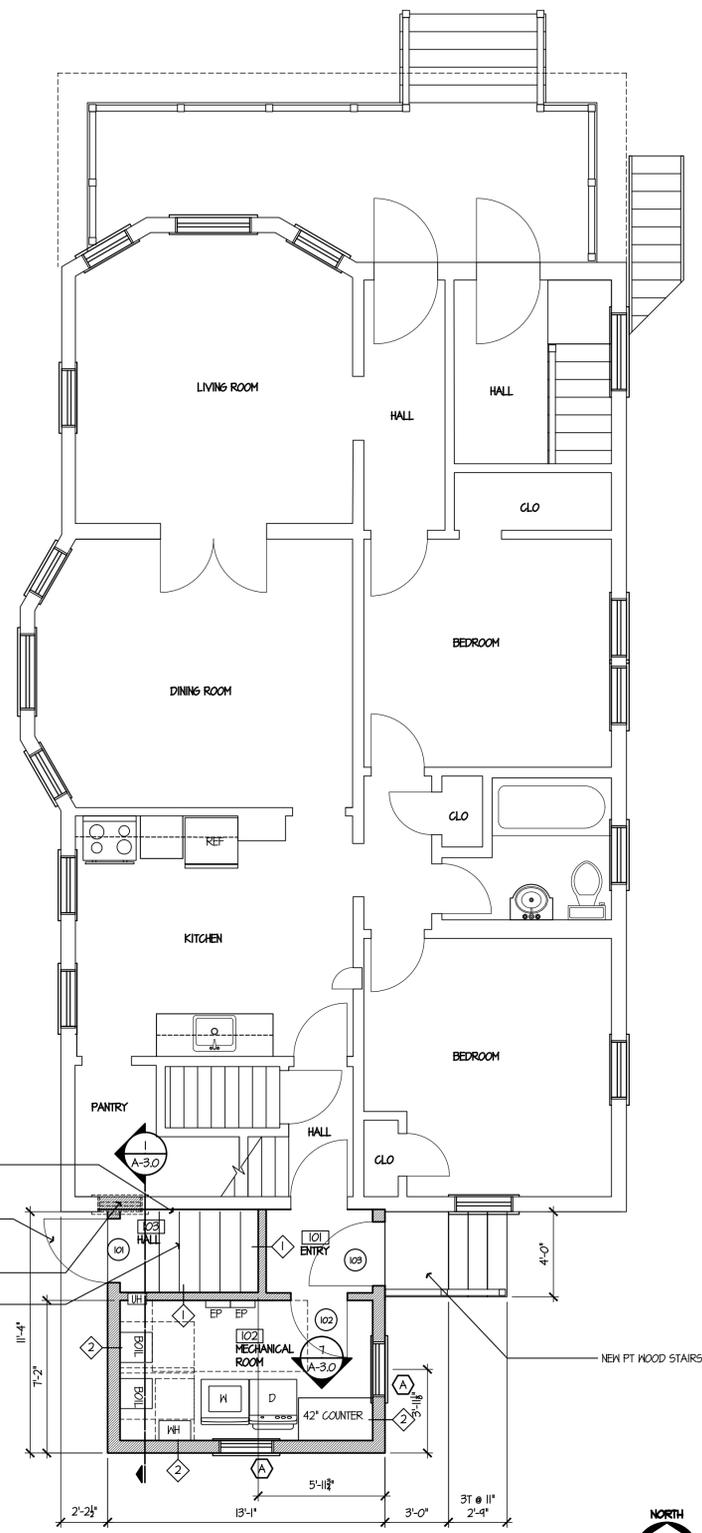
date	04 OCT 2015
drawn	P5R
scale	AS SHOWN
checked	JP/DH
project no.	1341-41
application no.	2228

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

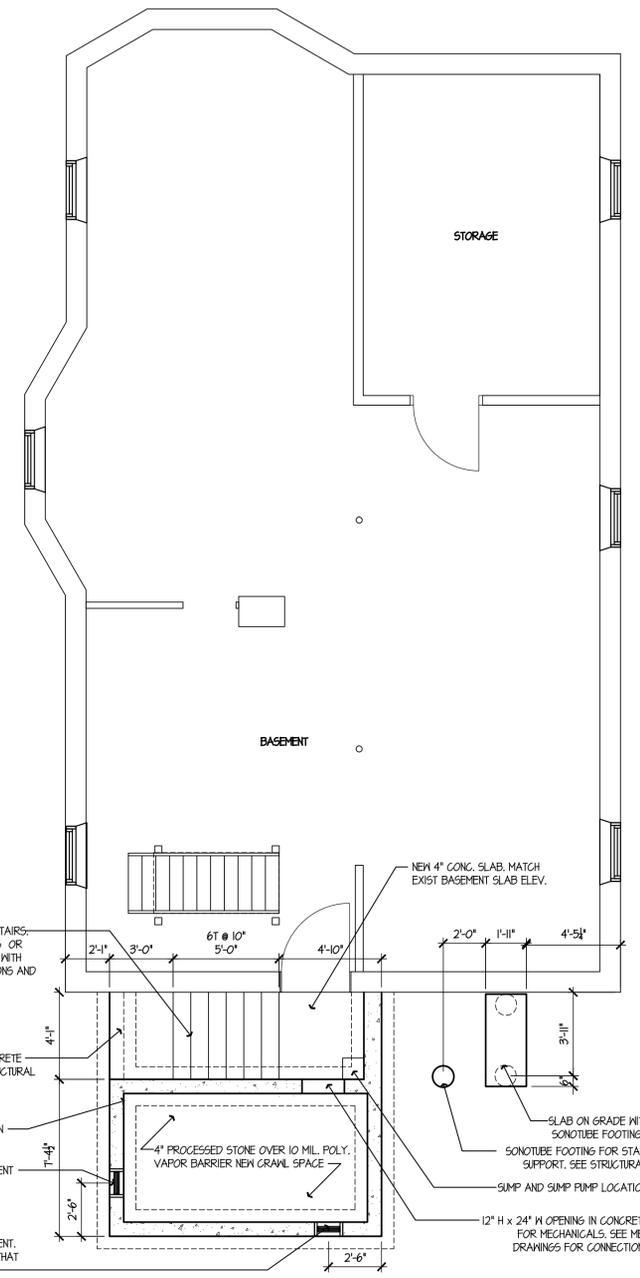
KAMINSKI RESIDENCE  
REHABILITATION and MITIGATION  
APPLICATION No. 2228  
4 Neptune Ave  
Norwalk, CT 06854



3 ALTERNATE SECOND FLOOR  
AA-10 SCALE: 1/4" = 1'-0"



2 ALTERNATE FIRST FLOOR  
AA-10 SCALE: 1/4" = 1'-0"



1 ALTERNATE BASEMENT  
AA-10 SCALE: 1/4" = 1'-0"

date	description	no.
revisions		

ALTERNATE FLOOR PLANS

AA-1.0

date	04 OCT 2015
drawn	P5R
scale	AS SHOWN
checked	JP/DH
project no.	1341-41
application no.	2228

DOOR SCHEDULE

LABEL	TYPE	STYLE	SIZE (W x H)	NOTES
101	ENTRY DOOR	NA	3'-0" x 6'-8"	1-3/4" INSULATED FIBERGLASS PANELLED DOOR WITH ENTRY HARDWARE
102	INTERIOR DOOR	NA	2'-8" x 6'-8"	1-3/8" INTERIOR PANELLED DOOR WITH PASSAGE HARDWARE.
103	ENTRY DOOR	NA	3'-0" x 6'-8"	1-3/4" INSULATED FIBERGLASS SINGLE LITE PANELLED DOOR WITH ENTRY HARDWARE

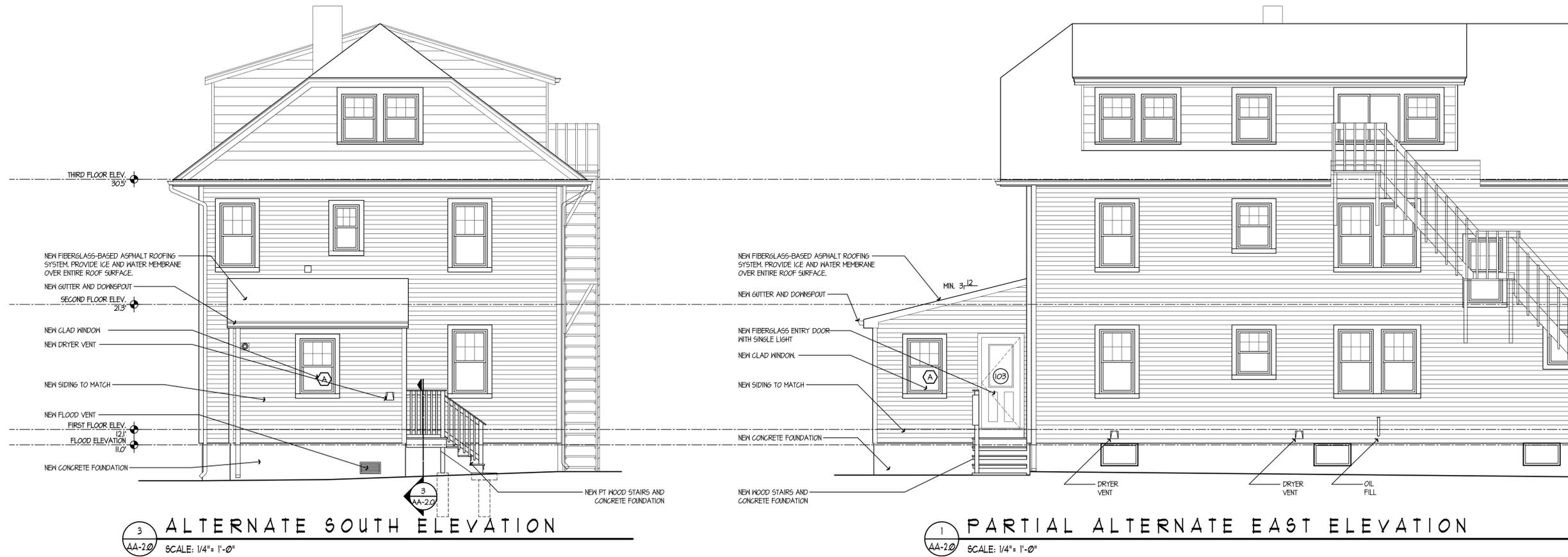
PROVIDE ALL STOPS, SILENCERS AND HARDWARE TO COMPLETE INSTALLATION.

FINISH SCHEDULE

ROOM NAME	No.	FLOOR		WALLS	CEILING	CLG. HT.	REMARKS
		FLOORING	BASE				
ENTRY	101	NEW VINYL	NEW WOOD (MATCH EXIST.)	PAINT	GWB-PTD.	8'-5"	
MECHANICAL ROOM	102	NEW VINYL	NEW WOOD (MATCH EXIST.)	PAINT	GWB-PTD.	7'-6"	
HALL	103	CONCRETE	NONE	PAINT	GWB-PTD	10'-10"	

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

KAMINSKI RESIDENCE REHABILITATION and MITIGATION  
APPLICATION No. 2228  
4 Neptune Ave  
Norwalk, CT 06854

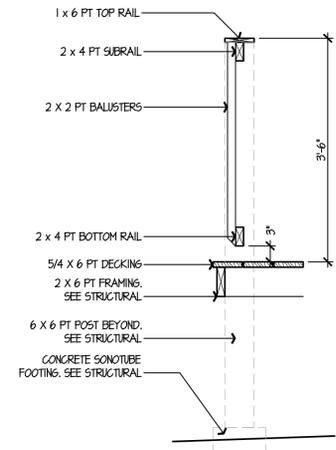


3 ALTERNATE SOUTH ELEVATION  
AA-2.0 SCALE: 1/4" = 1'-0"

1 PARTIAL ALTERNATE EAST ELEVATION  
AA-2.0 SCALE: 1/4" = 1'-0"



4 ALTERNATE WEST ELEVATION  
AA-2.0 SCALE: 1/4" = 1'-0"



3 RAILING DETAIL  
AA-2.0 3/4" = 1'-0"

date	description	no.
revisions		

**ALTERNATE ELEVATIONS**

**AA-2.0**

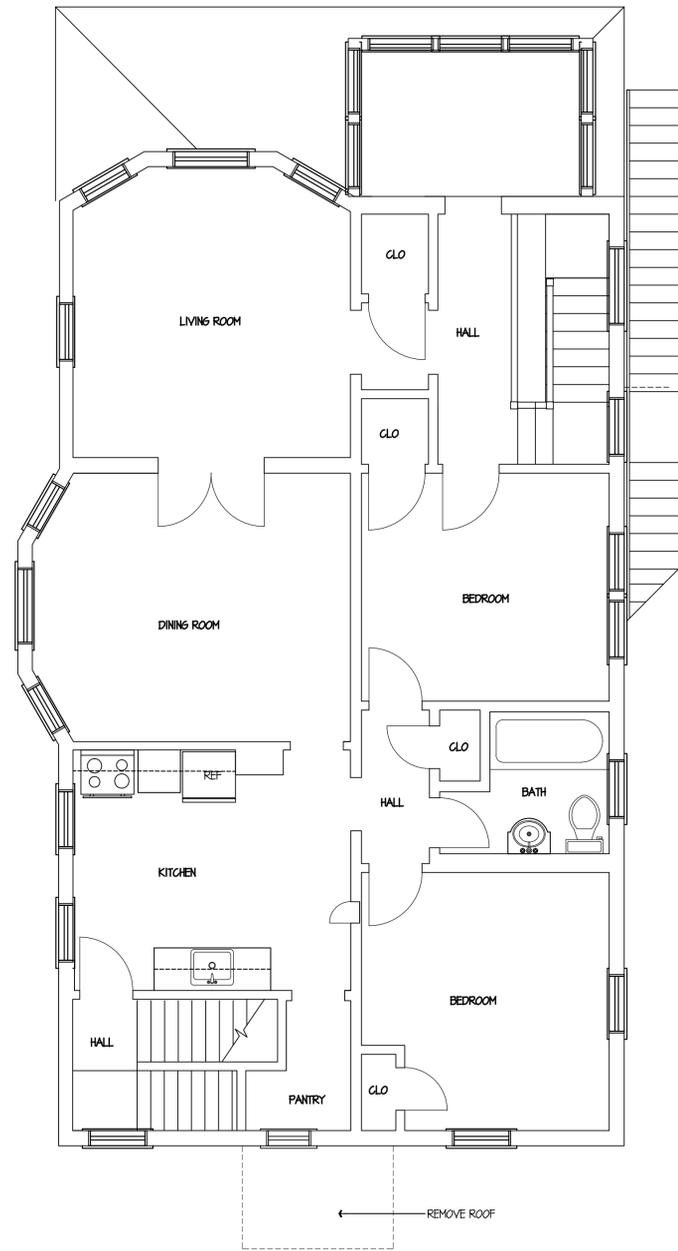
date	description
09 OCT 2015	drawn P5R
	scale AS SHOWN
	checked JP/DH
	project no. 1341-41
	application no. 2228

**WINDOW SCHEDULE**

DESIGNATION	MANUFACTURER	MODEL	SIZE DESIGNATION	RO	HEAD HEIGHT	REMARKS
(A)	ANDERSON	400 SERIES DOUBLE HUNG UNIT	TH2636	2'-8 1/2" x 3'-8 1/2"	6'-0"	RE. SPEC.

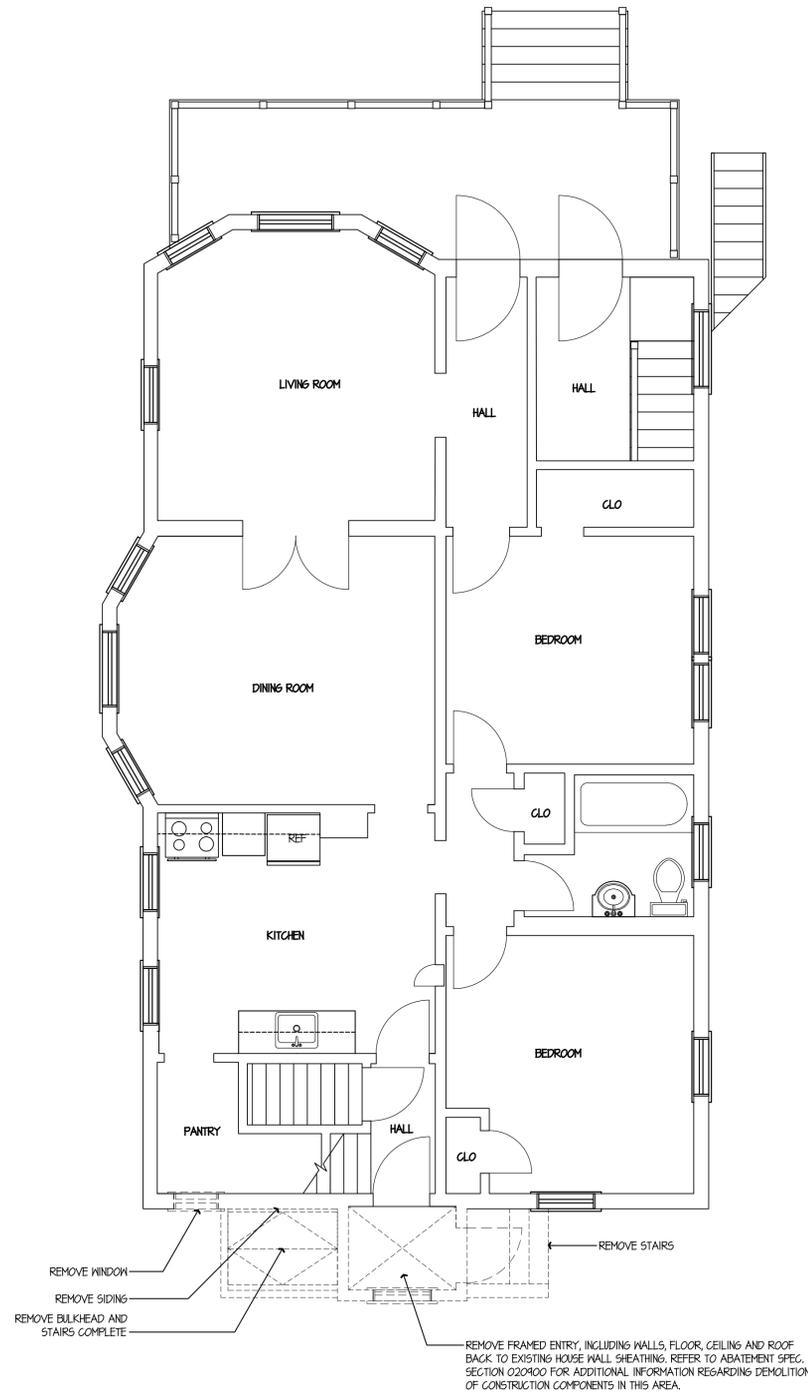
THE STATE OF CONNECTICUT  
DEPARTMENT OF HOUSING (DOH)  
COMMUNITY DEVELOPMENT BLOCK GRANT - DISASTER RECOVERY (CDBG-DR)  
OWNER OCCUPIED REHABILITATION and REBUILDING PROGRAM (OORR)

KAMINSKI RESIDENCE REHABILITATION and MITIGATION  
APPLICATION No. 2228  
4 Neptune Ave  
Norwalk, CT 06854



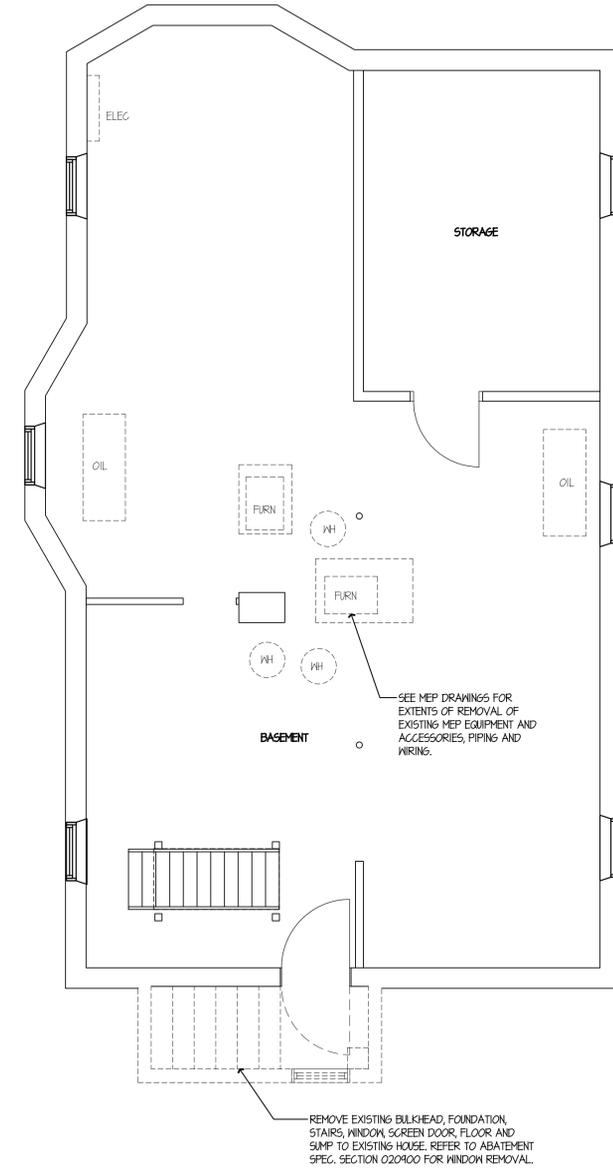
3  
AD-10  
ALTERNATE SECOND FLOOR DEMO PART PLAN

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



2  
AD-10  
ALTERNATE FIRST FLOOR DEMO PART PLAN

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



1  
AD-10  
ALTERNATE BASEMENT FLOOR DEMO PART PLAN

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

date	description	no.
revisions		

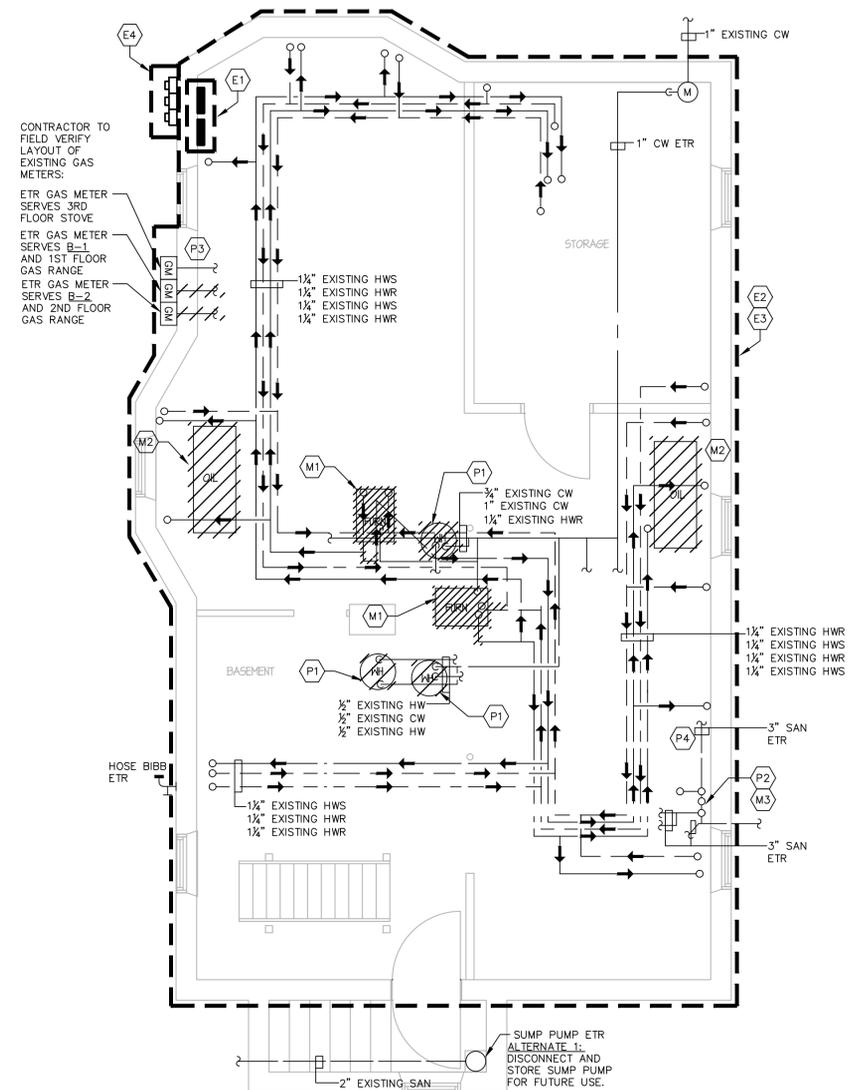
**ALTERNATE DEMO PLANS**

**AD-1.0**

date	04 OCT 2015
drawn	PSR
scale	A5 SHOWN
checked	JP/DH
project no.	1347-47
application no.	2228

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

GENERAL RENOVATIONS for the KAMINSKI RESIDENCE  
APPLICATION No. 2228  
4 Neptune Ave  
Norwalk, CT 06854



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



**PLUMBING DEMOLITION KEY NOTES**

- (P1) REMOVE EXISTING WATER HEATER, ASSOCIATED PIPING AND SPECIALTIES. CW AND HW PIPING SHALL BE REMOVED BACK TO NEAREST ACTIVE MAIN. WATER HEATER TO BE SALVAGED AND GIVEN TO OWNER.
- (P2) REMOVE ALL SUPPLY AND DRAINAGE PIPING SERVING WASHING MACHINE BACK TO NEAREST MAIN AND CAP PIPING AT MAIN.
- (P3) REMOVE ALL EXISTING NATURAL GAS PIPING SERVING MECHANICAL EQUIPMENT AND FIRST AND SECOND FLOOR GAS RANGES. NATURAL GAS PIPING SERVING GAS RANGE ON THIRD FLOOR ETR.
- (P4) HW PIPING SERVING EXISTING WASHERS SHALL BE REMOVED IN ENTIRETY.

**MECHANICAL DEMOLITION KEY NOTES**

- (M1) REMOVE EXISTING BOILER AND ALL ASSOCIATED PIPING, SPECIALTIES, AND CONTROLS BACK TO NEAREST ACTIVE MAIN. COORDINATE WITH OWNER FOR SALVAGING OF BOILER.
- (M2) REMOVE EXISTING FUEL OIL TANK AND ALL ASSOCIATED PIPING.
- (M3) REMOVE DRYER VENT.

**ELECTRICAL DEMOLITION KEY NOTES**

- (E1) REMOVE EXISTING ELECTRICAL PANELS CURRENTLY POWERING 1ST AND 2ND FLOOR BRANCH CIRCUITS. SERVICE ENTRANCE FEEDER AND BRANCH CIRCUITS SHALL BE MADE SAFE AND PROTECTED FOR FUTURE EXTENSION AND RECONNECTION.
- (E2) REMOVE EXISTING LOWER LEVEL WASHER AND DRYER 120V AND 240V RECEPTACLES AND ALL ASSOCIATED WIRING BACK TO THE PANEL OF ORIGIN.
- (E3) REMOVE EXISTING ELECTRICAL CONNECTION TO OIL FURNACES. REMOVE ALL ASSOCIATED MATERIAL AND WIRING BACK TO THE PANEL OF ORIGIN.
- (E4) ALTERNATE BID DEMOLITION REMOVE EXISTING ELECTRIC SERVICE TO THE RESIDENCE, INCLUDING WEATHER HEAD AND ALL ASSOCIATED WIRING FROM WEATHER HEAD TO METER CENTER, METERS, AND METER SOCKETS.

**CES**  
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CES #2014064.00

date	description	no.
	revisions	

**MEP DEMOLITION FLOOR PLANS**

**MEP-1.0**

date	OCTOBER 9, 2015
drawn	ANK/VCM
scale	AS SHOWN
checked	DTB
project no.	2014064.00
application no.	2228

**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 NEW COMBINATION BOILER PROVIDED BY MECHANICAL. SEE DETAIL 1/P-5.0 FOR MORE DETAILS.
- P2 CONNECT NEW CW PIPING TO EXISTING. CONTRACTOR TO FIELD VERIFY EXACT LOCATION PRIOR TO FABRICATION AND INSTALLATION.
- P3 CONNECT NEW HW PIPING SERVING THE 1ST FLOOR AND SECOND FLOOR TO EXISTING. CONTRACTOR TO FIELD VERIFY EXACT LOCATION PRIOR TO FABRICATION AND INSTALLATION.
- P4 PROVIDE NEW GAS METER FOR WH-1 AND DRYER. COORDINATE EXACT LOCATION WITH UTILITY PRIOR TO BIDDING AND INSTALLATION.
- P5 1" CONDENSATE SPILL TO OUTSIDE OF BUILDING AT GRADE.
- P6 NEW WATER HEATER. SEE DETAIL 1/P5.0 FOR MORE DETAILS
- P7 ALL PLUMBING PIPING SHALL GO THROUGH EXISTING WINDOW.



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

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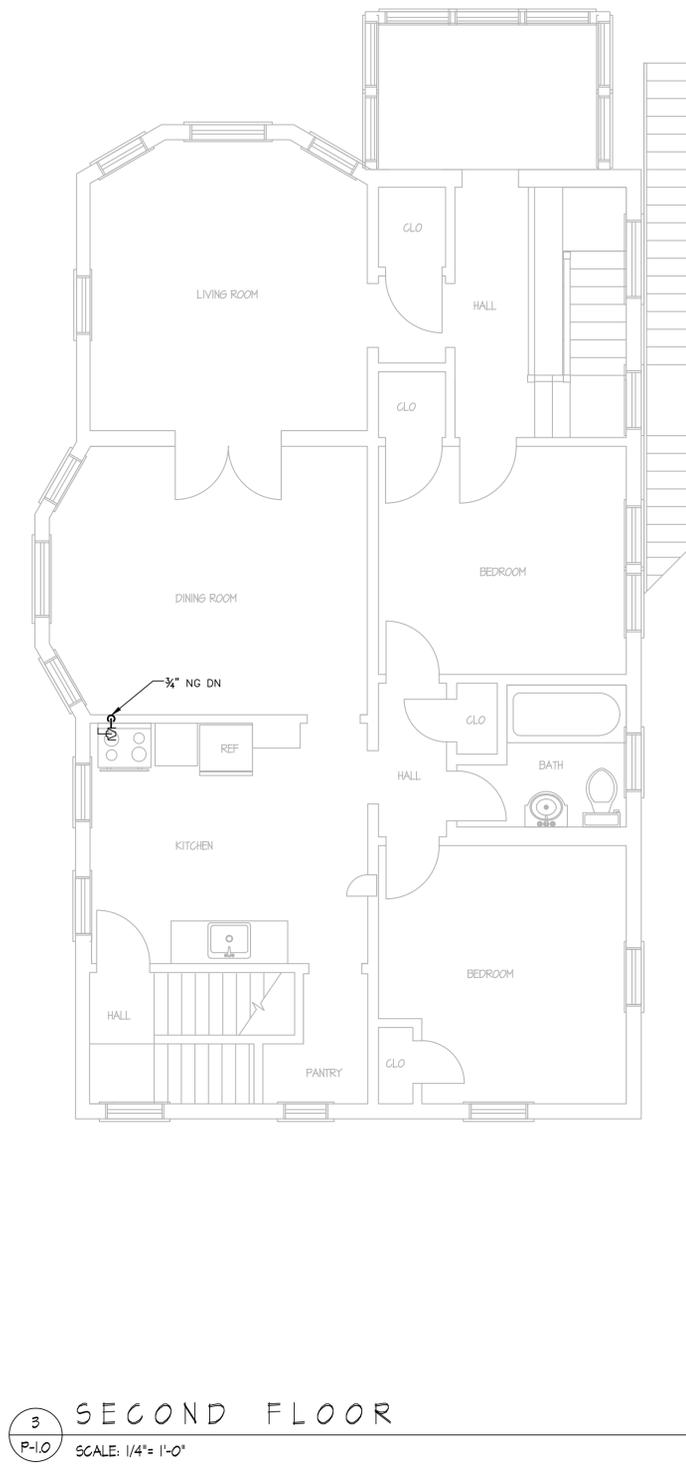
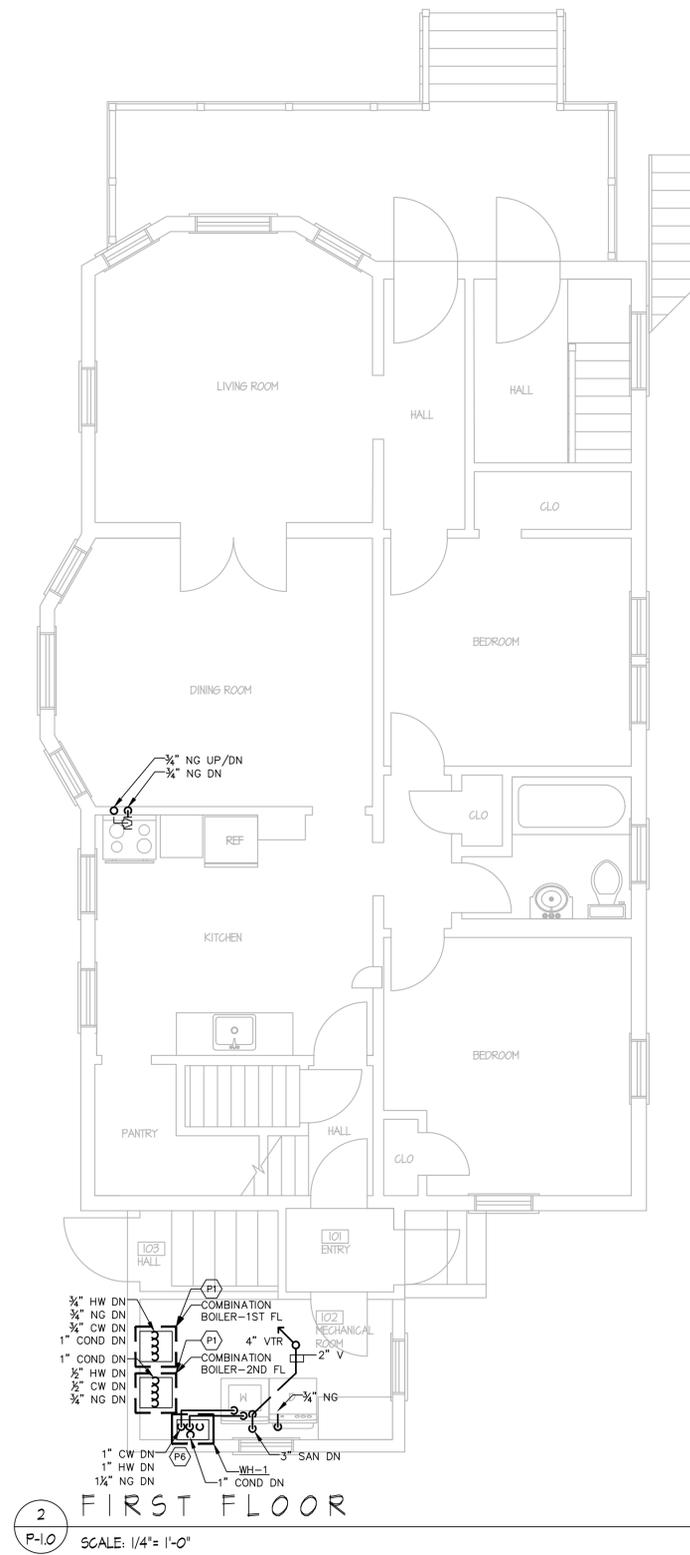
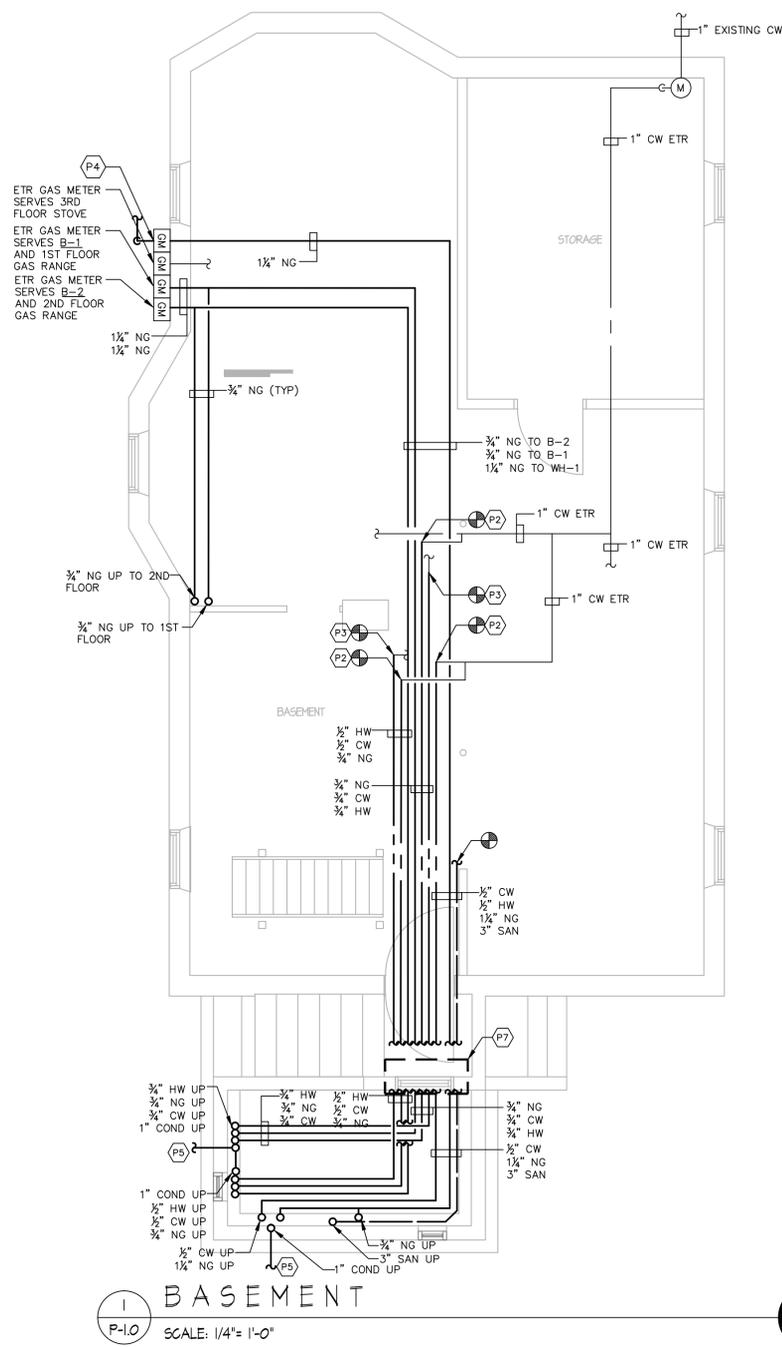


date	description	no.
	revisions	

**PLUMBING FLOOR PLANS**

**P-1.0**

date	22 JUN 2015
drawn	ANK
scale	AS SHOWN
checked	DTB
project no.	2014064.00
application no.	2228



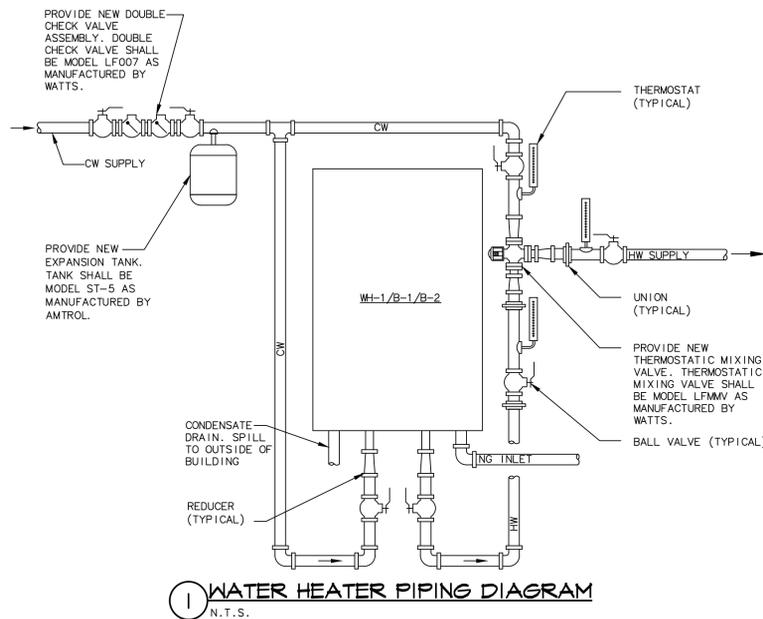
PLUMBING SYMBOL LEGEND	
SYMBOL	DESCRIPTION
	WATER METER
	THERMOMETER
	PRESSURE REGULATOR
	CONNECT NEW TO EXISTING
	VENT THRU ROOF

PLUMBING ABBREVIATIONS	
ABBREVIATION	DESCRIPTION
BTU	BRITISH THERMAL UNIT
CO	CLEANOUT
CW	COLD WATER
COND	CONDENSATE
DN	DOWN
ET	EXPANSION TANK
HB	HOSE BIBB
HW	HOT WATER
LPG	LIQUIFIED PETROLEUM GAS
TYP	TYPICAL
V	VENT
VTR	VENT THRU ROOF

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
	NEW COND
	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

WATER HEATER SCHEDULE-GAS FIRED										
SYMBOL	MANUFACTURER/ MODEL NUMBER	TYPE	LOCATION	FUEL TYPE	BTUH INPUT	GPM	EWT (°F)	LWT (°F)	ELEC DATA AMPS-VOLTS-PH	REMARKS
WH-1	RINNAI/RUC80i	I	MECH RM	NATURAL GAS	152,000	6.6	45	105	8A-120V-1	ALL

**NOTES:**  
 1. INSTANTANEOUS TYPE HEATER  
**REMARKS:**  
 1. REFER TO DETAIL FOR PIPING ARRANGEMENT.  
 2. PROVIDE PVC INTAKE AND VENT. INSTALL INTAKE AND VENTING PER INSTALLATION INSTRUCTION.



- 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, APURTANCES, 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.

- MEANS AND METHODS ALL TRADES**
- INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
  - DO NOT BURY 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 THE 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 PIECES 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 MAINTAIN ABSOLUTE WATER TIGHT.
  - 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 [OR LP] 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.
    - VALVE TAGS SHALL BE 1-1/2" DIAMETER, 19-GAGE POLISHED BRASS WITH STAMP-ENGRAVED LETTERING ATTACH VALVES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
    - 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
    - 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.
    - 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.



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revisions		

**PLUMBING SPECIFICATIONS**

<b>P-5.0</b>	
date	22 JUN 2015
drawn	ANK
scale	NOT TO SCALE
checked	DTB
project no.	2014064.00
application no.	2228

**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/MS.0 FOR COMBINATION BOILER DETAIL. PROVIDE CONTROL WIRING TO EXISTING THERMOSTATS. EXISTING THERMOSTAT ON FIRST FLOOR SHALL CORRESPOND TO B-1, THERMOSTAT ON SECOND FLOOR SHALL CORRESPOND TO B-2.
- (M2) CONNECT NEW HWS/HWR PIPING TO EXISTING PIPING SERVING FIRST FLOOR. PIPING SHALL BE 1/2". CONTRACTOR TO FIELD VERIFY EXACT SIZE AND LOCATION PRIOR TO FABRICATION AND INSTALLATION.
- (M3) CONNECT NEW HWS/HWR PIPING TO EXISTING PIPING SERVING SECOND FLOOR. PIPING SHALL BE 1/2". CONTRACTOR TO FIELD VERIFY EXACT SIZE AND LOCATION PRIOR TO FABRICATION AND INSTALLATION.
- (M4) PROVIDE 4" DRYER EXHAUST DUCT. DUCT SHALL BE ALUMINUM RIDGED FLEXIBLE DUCTWORK. TERMINATE THROUGH ROOF. PROVIDE IN-VATE TECHNOLOGIES, INC MODEL #425 22 GAUGE ALUMINIZED STEEL DRYERBOX.
- (M5) PROVIDE 3" PVC INTAKE AND VENT. TERMINATE THROUGH WALL MANUFACTURER'S CONCENTRIC VENT.
- (M6) ALL MECHANICAL PIPING SHALL GO THROUGH EXISTING WINDOW.
- (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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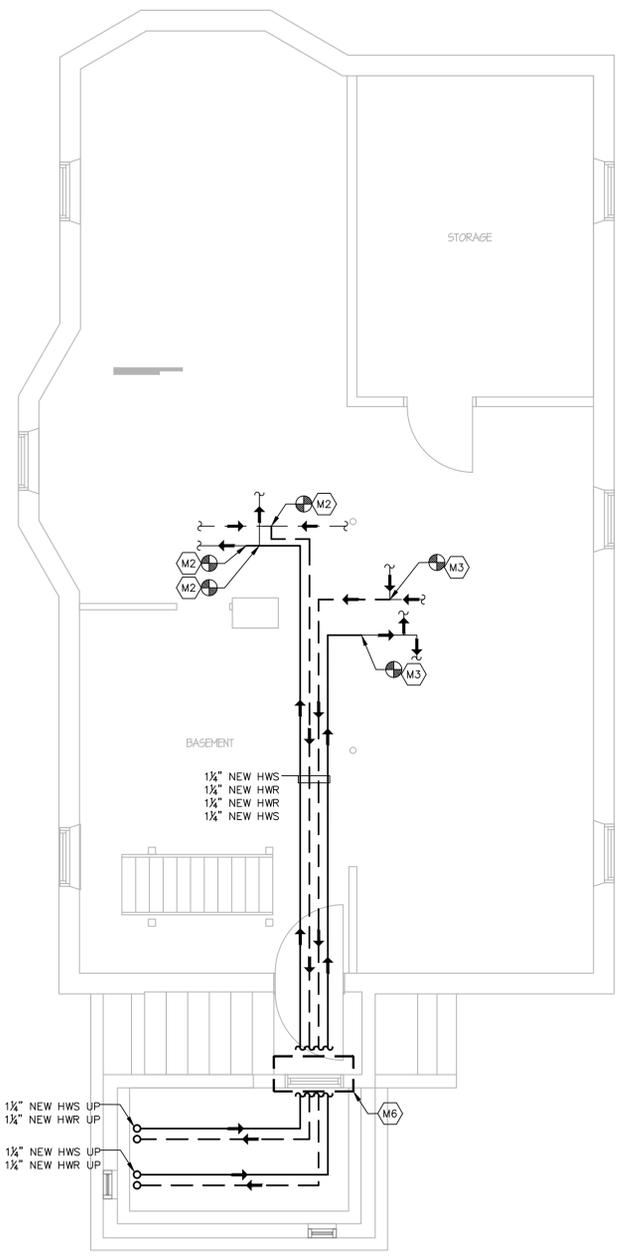


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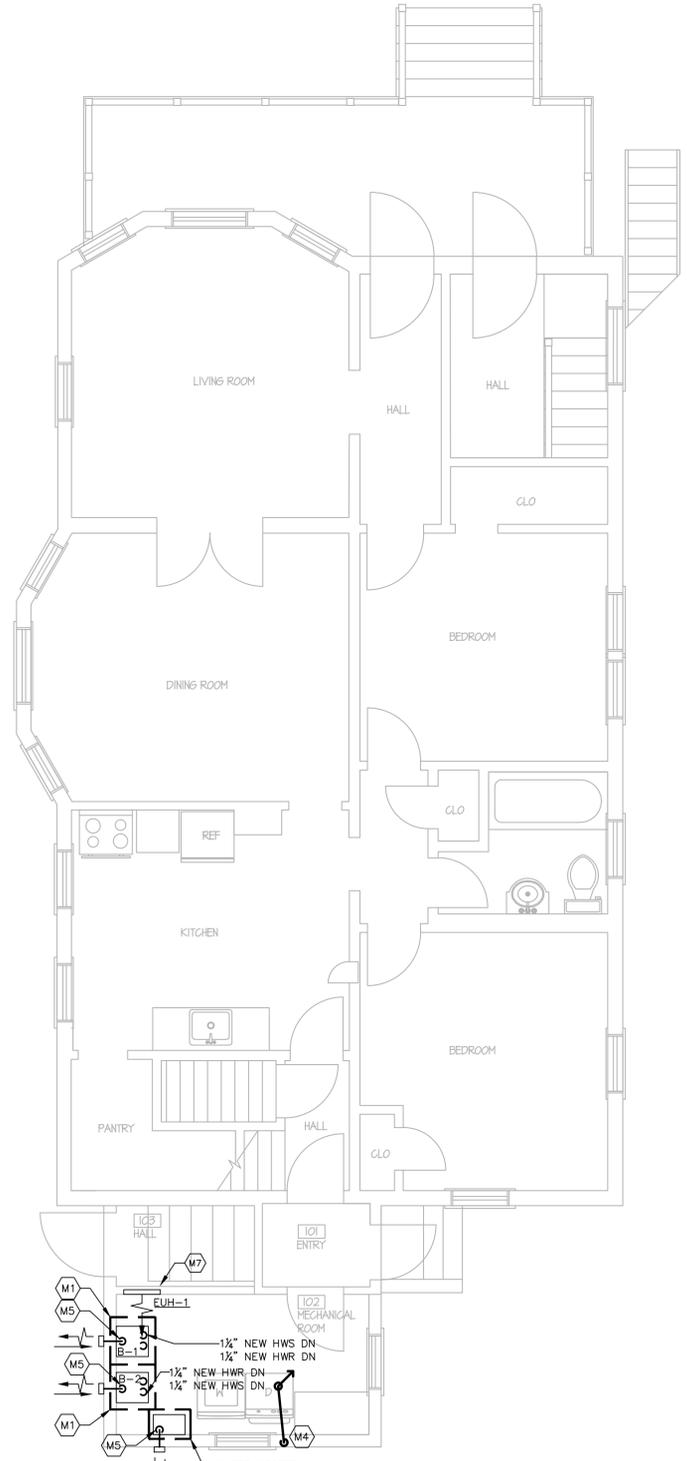
**MECHANICAL FLOOR PLANS**

**M-1.0**

date	22 JUN 2015
drawn	ANK
scale	AS SHOWN
checked	DTB
project no.	2014064.00
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**1 BASEMENT**  
M-1.0 SCALE: 1/4"= 1'-0" NORTH



**2 FIRST FLOOR**  
M-1.0 SCALE: 1/4"= 1'-0" NORTH

### MECHANICAL PIPING LEGEND

SYMBOL	DESCRIPTION
---	NEW V
---	NEW HWS
---	EXISTING HWS
---	NEW HWR
---	EXISTING HWR
---	DETAIL LINE
---	NEW HW
---	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

### MECHANICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
⊕	THERMOSTAT
↔	RETURN/EXHAUST/OUTSIDE AIR ARROW
→	SUPPLY ARROW
⊕	EXHAUST VENT
⊕	CONNECTION TO EXISTING
ETR	EXISTING TO REMAIN

### MECHANICAL ABBREVIATIONS

ABBREVIATION	DESCRIPTION
BTU	BRITISH THERMAL UNIT
CAP	CAPACITY
ET-#	EXPANSION TANK
EWT	ENTERING WATER TEMPERATURE
HD	HEAD
HP	HORSE POWER
LWT	LEAVING WATER TEMPERATURE
MIN	MINIMUM
N.T.S.	NOT TO SCALE
N/A	NOT APPLICABLE
NC	NOISE CRITERIA
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
OA	OUTSIDE AIR
P-#	PUMP
SPEC	SPECIFICATION
TEMP	TEMPERATURE
TYP	TYPICAL

### BOILER SCHEDULE

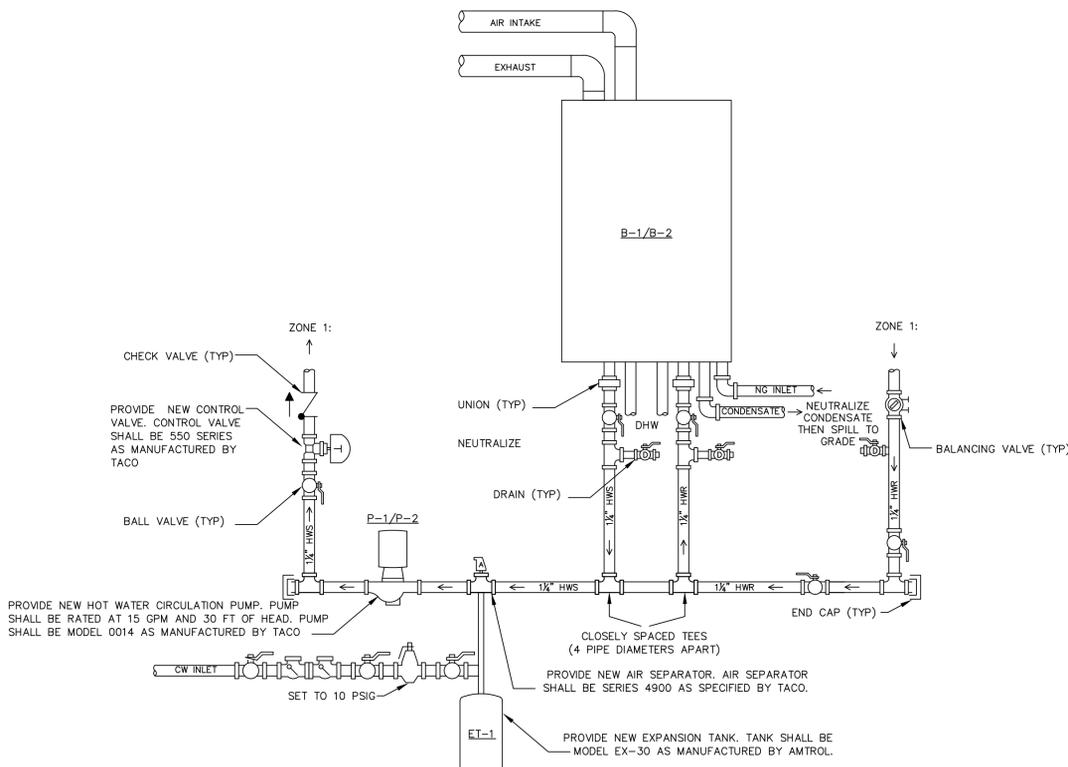
SYMBOL	MANUFACTURER/ MODEL NUMBER	MEDIA	GROSS OUTPUT (MBH)	GROSS INPUT (MBH)	EWT/LWT (°F)	FUEL DATA		DOMESTIC HOT WATER DATA			BURNER DATA			FLOW (GPM)	PRESSURE DROP (FT H2O)	REMARKS
						TYPE	RATE (MBH)	GPM	EWT (°F)	LWT (°F)	AMPS	VOLTS	PHASE			
B-1	LAARS/MASCOT LX 150	HW	142.5	150	160/180	NATURAL GAS	150	5	45	105	1.5	120	1	3.7	-	ALL
B-2	LAARS/MASCOT LX 150	HW	142.5	150	160/180	NATURAL GAS	150	5	45	105	1.5	120	1	3.7	-	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 OR SENSOR.  
 4. PROVIDE WITH MANUFACTURER SUPPLY WATER TEMPERATURE SENSOR.

HW = HOT WATER

- GENERAL PROCEDURES ALL TRADES
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  - DESCRIPTION
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  - 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 TO BE DONE 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.
    - 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, 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.
    - SHOP DRAWINGS INCLUDE EQUIPMENT SUBMITTALS, FABRICATION AND INSTALLATION DRAWINGS, SETTING DIAGRAMS, SCHEDULES, PATTERNS, TEMPLATES AND SIMILAR DRAWINGS. INCLUDE THE FOLLOWING WORK:
      - 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.
      - 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.
  - 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. 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 THE 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. DITCH AND 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 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 CEILING, 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 FITTERS 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 ICC EXCEPT THAT PIPE INSULATION SHALL NOT BE LESS THAN 1 1/2" THICK AND FLEXIBLE DUCTWORK INSULATION SHALL NOT BE LESS THAN 1 1/2" THICK. ALL INSULATION MATERIALS, ADHESIVES, CONTROLS, 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 MANUFACTURER'S 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 ENGINEER. 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.



NOTE: ALL PIPING ACCESSORIES SUCH AS VALVES, AIR SEPARATOR, ETC SHALL BE FULL PIPE SIZE.  
 P-1 SHALL CORRESPOND TO B-1. P-2 SHALL CORRESPOND TO B-2.  
**BOILER PIPING DETAIL**  
 N.T.S.



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

GENERAL RENOVATIONS for the KAMINSKI RESIDENCE  
 APPLICATION No. 2228  
 4 Neptune Ave  
 Norwalk, CT 06854

**CES**  
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 CES #201406400

date	description	no.
	revisions	

**M-5.0**

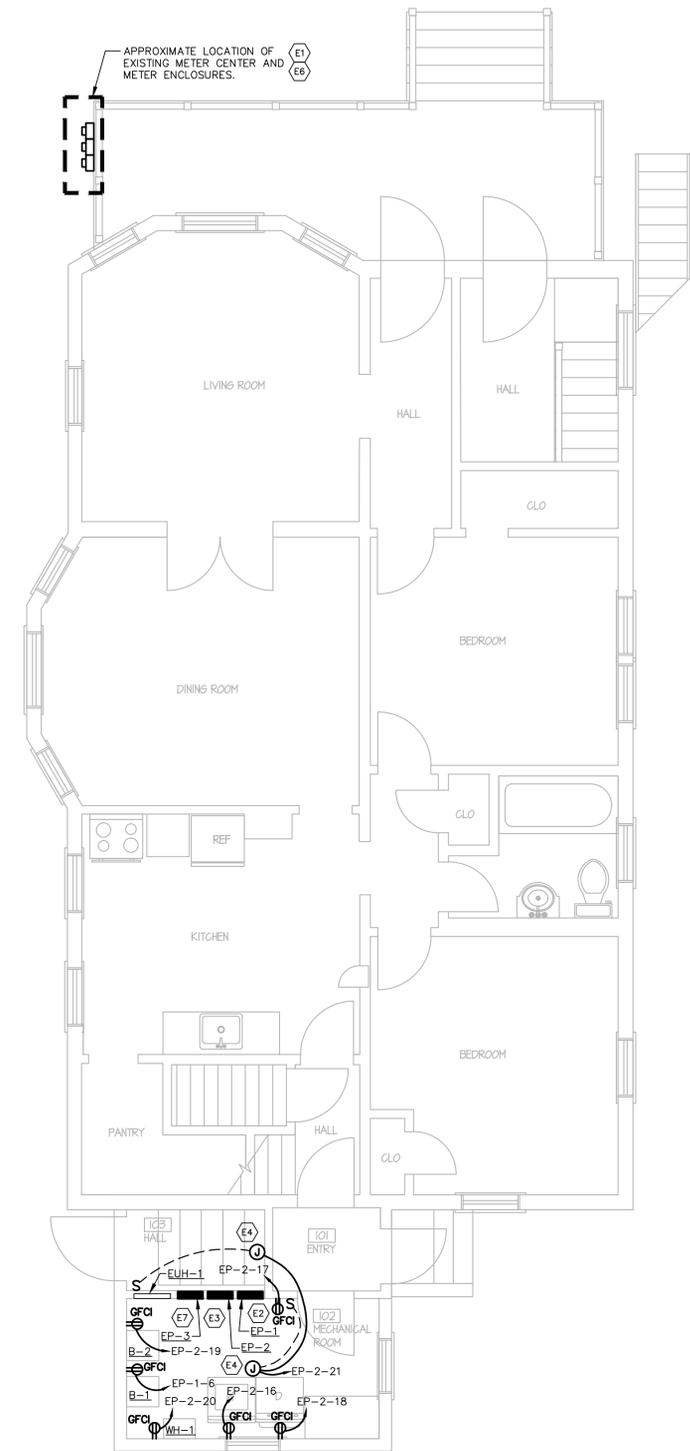
date	22 JUN 2015
drawn	ANK
scale	NOT TO SCALE
checked	DTB
project no.	2014064.00
application no.	2228

ELECTRICAL KEY NOTES	
E1	EXISTING ELECTRIC SERVICE SHALL BE EXTENDED FROM THE EXISTING METER ENCLOSURES TO THE NEW LOCATION OF MAIN ELECTRICAL PANELS 'EP-1' AND 'EP-2'. PROVIDE ALL ASSOCIATED PARTS AND MATERIALS FOR A COMPLETE EXTENSION AND RECONNECTION. REFER TO RISER DIAGRAM FOR MORE INFORMATION. REFER TO FLOORPLAN FOR APPROXIMATE LOCATIONS. COORDINATE ADDITIONAL REQUIREMENTS WITH THE UTILITY COMPANY.
E2	PROVIDE NEW PANEL 'EP-1' 100A/MCB, 2P, 120/240V, 20-POLE, 3-WIRE. REFER TO BASE BID RISER DIAGRAM FOR ADDITIONAL INFORMATION.
E3	PROVIDE NEW PANEL 'EP-2' 100A/MCB, 2P, 120/240V, 24-POLE, 3-WIRE. REFER TO BASE BID RISER DIAGRAM FOR ADDITIONAL INFORMATION.
E4	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 AND COORDINATE INSTALLATION BASED ON ALLOWANCE PROVIDED UNDER THIS PROJECT. REFER TO PANELBOARD SCHEDULE FOR CIRCUIT INFORMATION. REFER TO DRAWINGS FOR WIRING INFORMATION.
E5	PROVIDE EXTENSION OF EXISTING 1ST AND 2ND FLOOR BRANCH CIRCUITS FROM THIS APPROXIMATE LOCATION TO NEW ELECTRICAL PANELS 'EP-1' AND 'EP-2' LOCATED IN THE NEW MECHANICAL ROOM #102. PROVIDE (2) NEW SPLICE/JUNCTION BOXES AT THIS APPROXIMATE LOCATION. PROVIDE APPROPRIATELY SIZED WIRING BASED ON CIRCUIT BREAKER SIZE. PROVIDE ALL ASSOCIATED PARTS AND MATERIALS FOR A COMPLETE EXTENSION AND RECONNECTION. REFER TO FLOORPLAN FOR QUANTITIES AND APPROXIMATE LOCATION OF NEW ELECTRICAL PANELS.
E6	<u>ALTERNATE BID</u> PROVIDE NEW ELECTRIC SERVICE TO THE RESIDENCE FOR EXISTING METERS AND THE NEW ADDITIONAL METER BEING ADDED AS PART OF ALTERNATE BID. NEW METER SHALL BE DEDICATED TO THE NEW MECHANICAL ROOM #102. PROVIDE NEW 4-HIGH METER CENTER AND BREAKER CABINET. REFER TO MULTI-TENANT METER DETAIL SHOWN IN DRAWING E-5.0. COORDINATE THE PROVISION OF A NEW WEATHER HEAD, WIRING AND CONDUIT (FROM WEATHER HEAD TO NEW METER CENTER), METERS, AND METER SOCKETS. COORDINATE THE EXTENSION AND RECONNECTION OF EXISTING 1ST AND 2ND FLOOR BRANCH CIRCUITS AND FEEDERS TO NEW ELECTRICAL PANELS 'EP-1' AND 'EP-2' AS PER KEYNOTE 5 UNDER THE BASE BID. REFER TO DISTRIBUTION RISER AND KEYNOTE E7 FOR ADDITIONAL ALTERNATE BID INFORMATION. COORDINATE WITH THE UTILITY COMPANY ALL WORK AND PARTS ASSOCIATED WITH PROVIDING A NEW SERVICE.
E7	<u>ALTERNATE BID</u> PROVIDE NEW ELECTRICAL PANEL 'EP-3' 120/240V, 125A/1P, 100MCB, 12-POLE, 3-WIRE, AT THIS APPROXIMATE LOCATION. PROVIDE 3#3+1#6G.2"C FROM METER CENTER LOCATION TO LOCATION OF NEW ELECTRICAL PANEL 'EP-3'. PROVIDE ALL ASSOCIATED PARTS AND MATERIALS FOR A COMPLETE EXTENSION AND RECONNECTION. REFER TO FLOORPLAN FOR QUANTITIES AND APPROXIMATE LOCATION OF NEW ELECTRICAL PANELS. ELECTRICAL CIRCUITS EP-2-16, EP-2-17, EP-2-18, EP-2-20, EP-2-21, AND EP-2-22 SHALL BE TRANSFERRED TO PANEL 'EP-3'. SEE PANELBOARD SCHEDULES IN DRAWING E-5.0 FOR ADDITIONAL INFORMATION.

GENERAL NOTES ALL TRADES	
1.	ELECTRICAL ITEMS INCLUDING BUT NOT LIMITED TO WIRING, EQUIPMENT, SWITCHES, OUTLETS, ETC SHALL BE INSTALLED ABOVE THE FLOOD PLANE AS DETERMINED BY THE ARCHITECTURAL PLANS.
2.	WORK SHALL BE COORDINATED WITH ARCHITECTURAL PLANS.
3.	CONTRACTOR SHALL FIELD VERIFY ACTUAL CONDITIONS PRIOR TO PROVIDING ALL EQUIPMENT AND PIPING.
4.	CIRCUITS SHALL BE #12 FOR 20A-1P CIRCUIT BREAKERS AND #14 FOR 15A-1P CIRCUIT BREAKERS IN PANEL INDICATED UNLESS NOTED OTHERWISE
5.	ELECTRICAL TRADE ALTERNATE BID SHALL INCLUDE ALL WORK ASSOCIATED WITH THE BASE BID AS PART OF THIS PROJECT.



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



2 FIRST FLOOR  
E-1.0 SCALE: 1/4" = 1'-0" NORTH



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date	description	no.
revisions		

ELECTRICAL FLOOR PLANS

<b>E-1.0</b>	
date	OCTOBER 9, 2015
drawn	VCM
scale	AS SHOWN
checked	DTB
project no.	2014064.00
application no.	2228

PANELBOARD SCHEDULE - BASE BID

PANELBOARD	LOCATION	MAIN	VOLTAGE	PHASE	WIRE	FEEDER	SE RATED	MOUNTING	MIN SCR	REMARKS
EP-1	MECH ROOM 102	100A/2P MCB	120/240	1	3	3#3+1#8G,2"C	N/A	RECESSED	14,000	

CKT	DESCRIPTION	P	AT	AF	CIRCUITRY	KVA	CKT	DESCRIPTION	P	AT	AF	CIRCUITRY	KVA		
1	EXISTING**	1	15	15	14-2*	0.25	2	EXISTING	2	30	30	10-3*	5.0		
3	EXISTING**	1	15	15	14-2*	0.25	4	-	-	-	-	-	-		
5	EXISTING**	1	15	15	14-2*	0.25	6	'B-1' - MECH RM	1	20	20	12-2	0.3		
7	EXISTING**	1	15	15	14-2*	0.25	8	'P-1' - MECH RM	1	20	20	12-2	0.2		
9	EXISTING**	1	15	15	14-2*	0.25	10	SPARE**	1	20	20	-	-		
11	SPARE**	1	20	20	-	-	12	SPARE**	1	20	20	-	-		
13	SPARE**	1	20	20	-	-	14	SPARE**	1	20	20	-	-		
15	SPACE	-	-	-	-	-	16	SPACE	-	-	-	-	-		
17	SPACE	-	-	-	-	-	18	SPACE	-	-	-	-	-		
19	SPACE	-	-	-	-	-	20	SPACE	-	-	-	-	-		
						SUBTOTAL KVA	1.25							SUBTOTAL KVA	5.5
						TOTAL KVA								TOTAL KVA	6.75

\* 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:

- PROVIDE WITH EQUIPMENT GROUND BUS.
- PROVIDE WITH 100% RATED NEUTRAL BUS.
- BRANCH CIRCUIT BREAKERS SHALL BE PLUG-ON TYPE.
- PROVIDE WITH HINGED DOOR WITH IN DOOR TRIM.
- PROVIDE A TYPED WRITTEN PANELBOARD DIRECTORY AND A DIRECTORY HOLDER ON THE INSIDE COVER OF DOOR.
- PROVIDE WITH COPPER BUS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TYPES AND QUANTITIES OF CIRCUIT BREAKERS INDICATED ON THE DRAWINGS.
- CIRCUITRY SPECIFIED IS FOR WIRING FROM PANEL TO FIRST DEVICE. CONTRACTOR TO PROVIDE CALL MULTI-CONDUCTOR CABLES AS REQUIRED FOR 3 & 4 WAY SWITCHES IF APPLICABLE.
- EXISTING CIRCUITS 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 IF APPLICABLE. CIRCUITS SHOWN REFLECT EXISTING CONDITIONS. CIRCUITS SHOWN ON PANELBOARD FOR DEVICES AND FIXTURES NO LONGER EXISTING SHALL BE REMOVED AND BE DESIGNATED AS SPACES IN PANEL. EC SHALL PROVIDE SPACE COVER IF NECESSARY.
- 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.

PANELBOARD SCHEDULE - BASE BID

PANELBOARD	LOCATION	MAIN	VOLTAGE	PHASE	WIRE	FEEDER	SE RATED	MOUNTING	MIN SCR	REMARKS
EP-2	MECH ROOM 102	100A/2P MCB	120/240	1	3	3#3+1#8G,2"C	N/A	RECESSED	14,000	

CKT	DESCRIPTION	P	AT	AF	CIRCUITRY	KVA	CKT	DESCRIPTION	P	AT	AF	CIRCUITRY	KVA		
1	EXISTING**	1	15	15	14-2*	0.25	2	EXISTING	2	30	30	10-3*	5.0		
3	EXISTING**	1	15	15	14-2*	0.25	4	-	-	-	-	-	-		
5	EXISTING**	1	15	15	14-2*	0.25	6	EXISTING**	1	15	15	14-2*	0.25		
7	EXISTING**	1	15	15	14-2*	0.25	8	EXISTING**	1	15	15	14-2*	0.25		
9	EXISTING**	1	20	20	12-2*	0.9	10	EXISTING**	1	15	15	14-2*	0.25		
11	EXISTING**	1	20	20	12-2*	1.2	12	EXISTING**	1	20	20	12-2*	0.18		
13	EXISTING**	1	20	20	12-2*	1.0	14	EXISTING**	1	20	20	12-2*	0.36		
15	'P-2' - MECH RM	1	20	20	12-2	0.2	16	WASHER - MECH RM**	1	20	20	12-2	1.0		
17	RECEPTACLE - MECH RM**	1	20	20	12-2	0.3	20	'WH-1' - MECH RM	1	20	20	12-2	0.96		
19	'B-2' - MECH RM	1	20	20	12-2	0.3	20	'WH-1' - MECH RM	1	20	20	12-2	0.96		
21	LIGHTING - MECH RM, HALL**	1	15	15	14-2	0.15	22	'EUH-1' - MECH RM	1	20	20	12-2	1.5		
23	SPARE**	1	20	20	-	-	24	SPARE**	1	20	20	-	-		
						SUBTOTAL KVA	4.93							SUBTOTAL KVA	10.75
						TOTAL KVA								TOTAL KVA	15.68

\* 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:

- PROVIDE WITH EQUIPMENT GROUND BUS.
- PROVIDE WITH 100% RATED NEUTRAL BUS.
- BRANCH CIRCUIT BREAKERS SHALL BE PLUG-ON TYPE.
- PROVIDE WITH HINGED DOOR WITH IN DOOR TRIM.
- PROVIDE A TYPED WRITTEN PANELBOARD DIRECTORY AND A DIRECTORY HOLDER ON THE INSIDE COVER OF DOOR.
- PROVIDE WITH COPPER BUS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TYPES AND QUANTITIES OF CIRCUIT BREAKERS INDICATED ON THE DRAWINGS.
- CIRCUITRY SPECIFIED IS FOR WIRING FROM PANEL TO FIRST DEVICE. CONTRACTOR TO PROVIDE CALL MULTI-CONDUCTOR CABLES AS REQUIRED FOR 3 & 4 WAY SWITCHES IF APPLICABLE.
- EXISTING CIRCUITS SHALL BE EXTENDED AND RECONNECTED TO THE NEW LOCATION OF PANEL 'EP-2'. EC SHALL FIELD VERIFY CIRCUIT QUANTITIES AND CIRCUIT BREAKERS REQUIRED TAKING INTO ACCOUNT THE REMOVAL OF PREVIOUSLY EXISTING CIRCUITS IN THE DEMOLITION PHASE IF APPLICABLE. CIRCUITS SHOWN REFLECT EXISTING CONDITIONS. CIRCUITS SHOWN ON PANELBOARD FOR DEVICES AND FIXTURES NO LONGER EXISTING SHALL BE REMOVED AND BE DESIGNATED AS SPACES IN PANEL. EC SHALL PROVIDE SPACE COVER IF NECESSARY.
- 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.

PANELBOARD SCHEDULE - ALTERNATE BID

PANELBOARD	LOCATION	MAIN	VOLTAGE	PHASE	WIRE	FEEDER	SE RATED	MOUNTING	MIN SCR	REMARKS
EP-3	MECH ROOM 102	100A/2P MCB	120/240	1	3	3#3+1#8G,2"C	N/A	RECESSED	14,000	

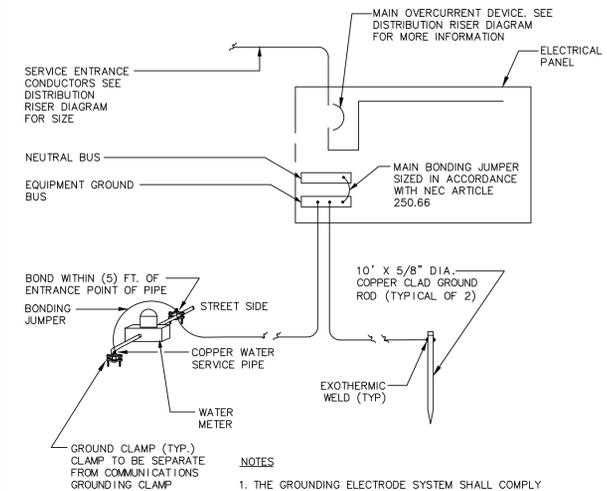
  

CKT	DESCRIPTION	P	AT	AF	CIRCUITRY	KVA	CKT	DESCRIPTION	P	AT	AF	CIRCUITRY	KVA		
1	'P-2' - MECH RM	1	20	20	12-2	0.2	2	WASHER - MECH RM**	1	20	20	12-2	1.0		
3	RECEPTACLE - MECH RM**	1	20	20	12-2	0.18	4	DRYER - MECH RM**	1	20	20	12-2	1.0		
5	'B-2' - MECH RM	1	20	20	12-2	0.3	6	'WH-1' - MECH RM	1	20	20	12-2	0.96		
7	LIGHTING - MECH RM, HALL**	1	15	15	14-2	0.15	8	'EUH-1' - MECH RM	1	20	20	12-2	1.5		
9	SPARE**	1	20	20	-	-	10	SPARE**	1	20	20	-	-		
11	SPARE**	1	20	20	-	-	12	SPARE**	1	20	20	-	-		
						SUBTOTAL KVA	0.83							SUBTOTAL KVA	4.46
						TOTAL KVA								TOTAL KVA	5.29

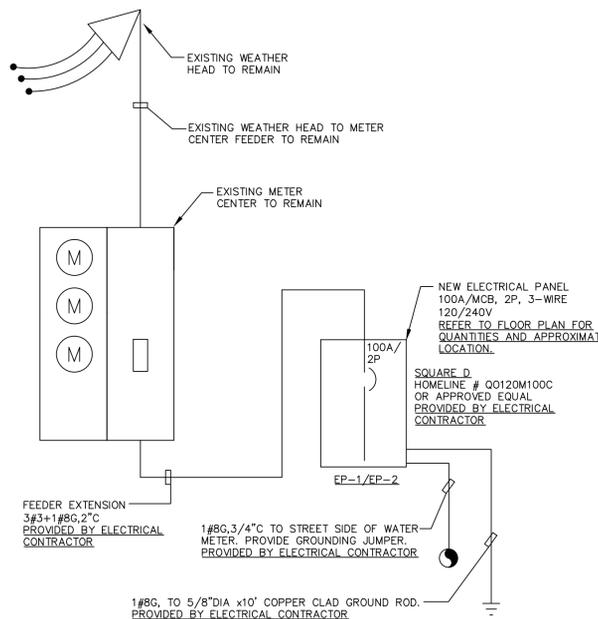
\* CONTRACTOR SHALL FIELD VERIFY THE WIRING SIZE OF EXISTING CIRCUITS AND PROVIDE APPROPRIATELY SIZED AFCI CIRCUIT BREAKERS.  
 \*\* CIRCUIT SHALL BE PROVIDED WITH CIRCUIT BREAKER OF AFCI TYPE.

PANELBOARD REMARKS:

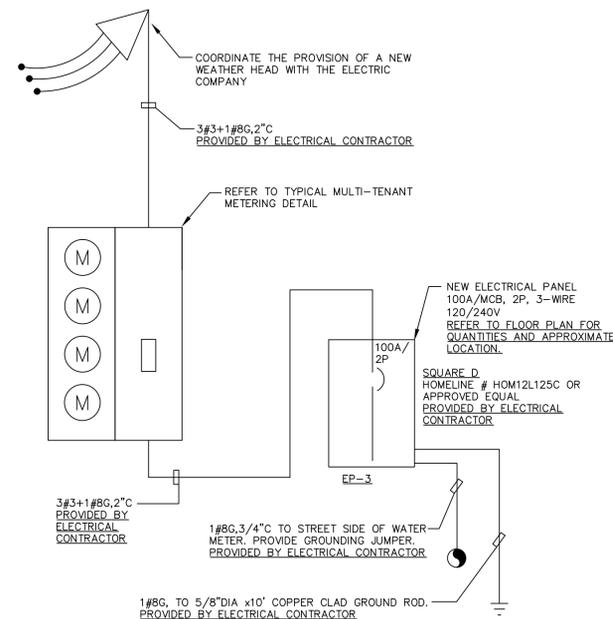
- PROVIDE WITH EQUIPMENT GROUND BUS.
- PROVIDE WITH 100% RATED NEUTRAL BUS.
- BRANCH CIRCUIT BREAKERS SHALL BE PLUG-ON TYPE.
- PROVIDE WITH HINGED DOOR WITH IN DOOR TRIM.
- PROVIDE A TYPED WRITTEN PANELBOARD DIRECTORY AND A DIRECTORY HOLDER ON THE INSIDE COVER OF DOOR.
- PROVIDE WITH COPPER BUS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TYPES AND QUANTITIES OF CIRCUIT BREAKERS INDICATED ON THE DRAWINGS.
- CIRCUITRY SPECIFIED IS FOR WIRING FROM PANEL TO FIRST DEVICE. CONTRACTOR TO PROVIDE CALL MULTI-CONDUCTOR CABLES AS REQUIRED FOR 3 & 4 WAY SWITCHES IF APPLICABLE.
- ELECTRICAL CIRCUITS EP-2-16, EP-2-17, EP-2-18, EP-2-20, EP-2-21, AND EP-2-22 NO LONGER APPLY TO PANEL 'EP-2' UNDER THE BASE BID AND SHALL BE TRANSFERRED TO PANEL 'EP-3'
- 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 MAIN ELECTRIC GROUNDING DETAIL  
N.T.S.



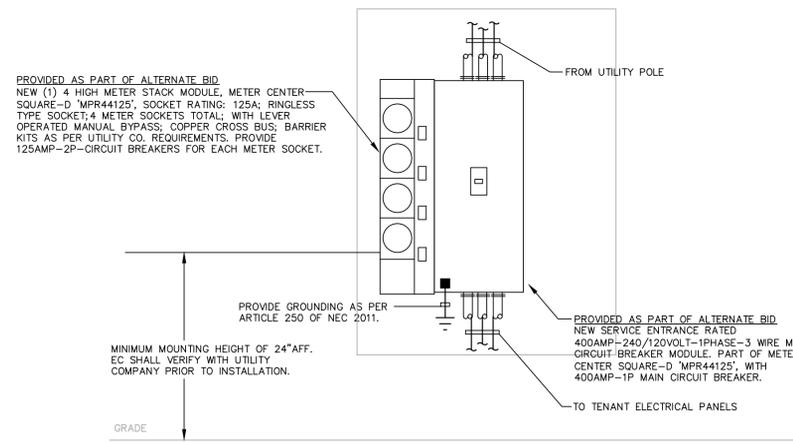
BASE BID - TYPICAL ELECTRICAL PANEL  
SERVICE ENTRANCE / DISTRIBUTION RISER DIAGRAM  
N.T.S.



ALTERNATE BID - TYPICAL ELECTRICAL PANEL  
SERVICE ENTRANCE / DISTRIBUTION RISER DIAGRAM  
N.T.S.

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

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	
SINGLE POLE SWITCH	
GFCI DUPLEX RECEPTACLE	

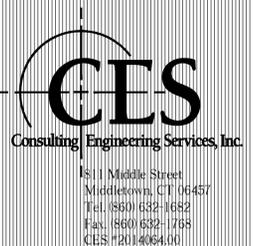


TYPICAL MULTI-TENANT METERING DETAIL  
N.T.S.



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

GENERAL RENOVATIONS for the KAMINSKI RESIDENCE  
APPLICATION No. 2228  
4 Neptune Ave  
Norwalk, CT 06854



date	description	no.
	revisions	

ELECTRICAL SCHEDULES AND DETAILS

E-5.0

date	OCTOBER 9, 2015
drawn	VCM
scale	NOT TO SCALE
checked	DTB
project no.	2014064.00
application no.	2228

**GENERAL PROCEDURES ALL TRADES**

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 THEREOF CONSISTS OF FURNISHING LABOR, MATERIALS, EQUIPMENT, HOISTING, PLANT, TRANSPORTATION, RIGGING, STAGING, AFFIXATIONS, AND SERVICES NECESSARY AND/OR REQUIRED TO 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 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 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"=10". 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.
      1. 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 SHIMMER 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 ELECTRODES 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.
8. 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.
  - D. 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. 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 MATS 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.



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

**GENERAL RENOVATIONS for the KAMINSKI RESIDENCE APPLICATION No. 2228 4 Neptune Ave Norwalk, CT 06854**

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**ELECTRICAL SPECIFICATIONS**

**E-5.1**

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