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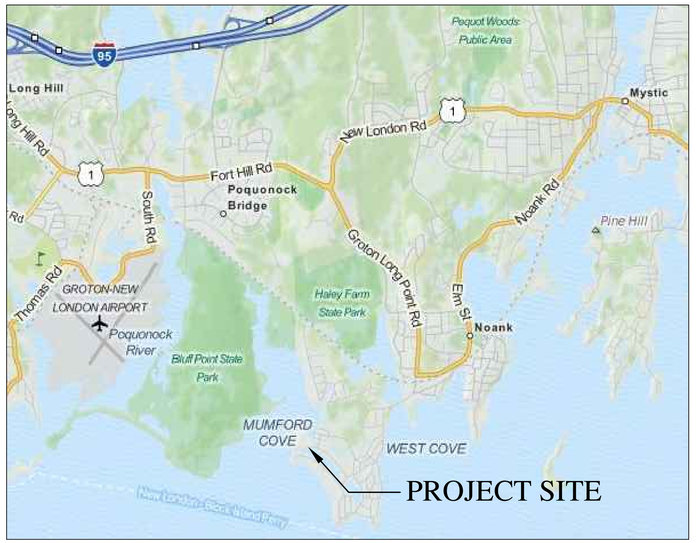
THE STATE OF CONNECTICUT
DEPARTMENT OF HOUSING (DOH)
COMMUNITY DEVELOPMENT BLOCK GRANT - DISASTER RECOVERY (CDBG-DR)
OWNER OCCUPIED REHABILITATION and REBUILDING PROGRAM (OORR)

May 20, 2016

csa project 1347-44
Issued for:
Bidding and Construction

Jennings Residence
Rehabilitation and Mitigation
Application No. 2184
87 Atlantic Avenue
Groton, CT 06340



LOCATION PLAN
not to scale

Drawing List

Title Sheet	
A-0.0	GENERAL INFORMATION
P-1	PLOT PLAN
S-1.0	GENERAL NOTES & TYPICAL DETAILS
S-1.1	FOUNDATION PLAN
S-1.2	FIRST FLOOD FRAMING PLAN
S-2.1	SECTIONS
S-2.2	TYPICAL DETAILS
D-1.0	DEMOLITION PLAN
A-1.0	FLOOR PLANS
A-2.0	ELEVATIONS
A-3.0	SECTION
A-4.0	STAIR AND DECK DETAILS
A-4.1	STAIR AND DECK DETAILS
A-5.0	SCHEDULE
MEP-1.0	MEP DEMOLITION FLOOR PLANS
P-1.0	PLUMBING FLOOR PLANS
P-1.1	PLUMBING ALTERNATE GROUND and FIRST FLOOR PLANS
P-5.0	PLUMBING SCHEDULE, DETAILS and SPECIFICATIONS
M-1.0	MECHANICAL FLOOR PLANS
M-5.0	MECHANICAL SYMBOLS and SPECIFICATIONS
E-1.0	ELECTRICAL FLOOR PLANS
E-1.1	ELECTRICAL ALTERNATE GROUND and FIRST FLOOR PLANS
E-5.0	ELECTRICAL SYMBOLS, DETAILS and SCHEDULES
E-5.1	ELECTRICAL SPECIFICATIONS

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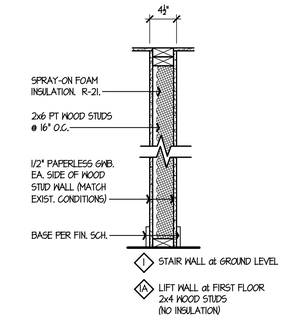
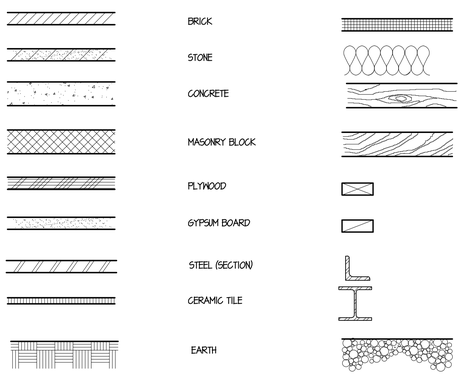


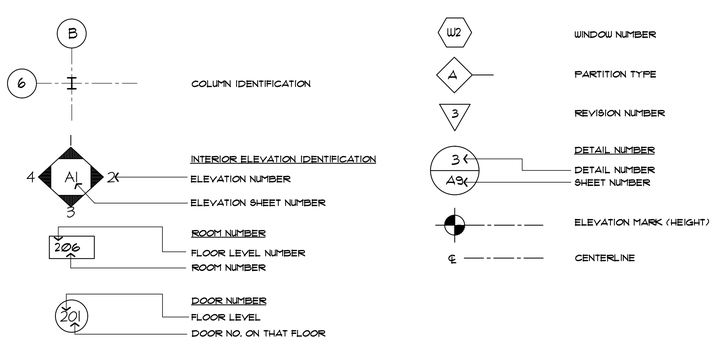
5 / A-0.0 PARTITION TYPE

SCALE: 1"=1'-0"



4 / A-0.0 MATERIALS LEGEND

NO SCALE



3 / A-0.0 SYMBOLS LEGEND

NO SCALE

A.C.T.	ACOUSTICAL CEILING TILE
ACOUST.	ACOUSTIC
ALT.	ALTERNATE
ALUM.	ALUMINUM
ARCH.	ARCHITECTURAL
ASB.	ASBESTOS
A.T.	ASPHALT TILE
@	AT
B.C.	BRICK COURSE
BD.	BOARD
B.F.	BOTTOM OF FOOTING
BLDG.	BUILDING
CAB.	CABINET
C/C	CENTER TO CENTER
C.T.	CERAMIC TILE
C.J.	CONTROL JOINT
C.L.	CENTER LINE
CLG.	CEILING
C.O.	CASED OPENING
COL.	COLUMN
COMP.	COMPACTED
CONC.	CONCRETE
CONN.	CONNECTION
CONT.	CONTINUOUS
CORR.	CORRIDOR
CSK.	COUNTERSINK
D.F.	DRINKING FOUNTAIN
DET.	DETAIL
DWG.	DRAWING
DN.	DOWN
DP.	DAMPPROOFING
ELECT.	ELECTRICAL
E.J.	EXPANSION JOINT
ELEV.	ELEVATION (ELEVATOR)
E.P.	ELECTRICAL PANEL
EQUIP.	EQUIPMENT
E.W.C.	ELECTRIC WATER COOLER
EXP.	EXPOSURE (EXPANSION)
F.A.P.	FIRE ALARM PANEL
F.D.	FLOOR DRAIN
F.E.	FIRE EXTINGUISHER
F.H.C.	FIREHOSE CABINET
FIN.	FINISH
FL.	FLOOR
F/M	FACE OF MASONRY
F/F	FACE OF FRAMING
FDN	FOUNDATION
F.R.	FIRE RATED
FTG.	FOOTING
G.M.U.	GLAZED MASONRY UNIT
GALV.	GALVANIZED
GL.	GLASS
GLZ.	GLAZING
GYP. BD.	GYPSUM WALL BOARD
HGT.	HEIGHT
H.M.	HOLLOW METAL
H.P.	HIGH POINT
HDWD.	HARDWOOD
HDWR.	HARDWARE

I.D.	INSIDE DIAMETER
INSUL.	INSULATION
JAN.	JANITOR
JT.	JOINT
LAM.	LAMINATED
L.P.	LOW POINT
LCKR.	LOCKER
MAS.	MASONRY
MAT.	MATERIAL
MAX.	MAXIMUM
M.C.	MASONRY COURSE
MECH.	MECHANICAL
MEM.	MEMBRANE
MFR.	MANUFACTURER
MIN.	MINIMUM
MIR.	MIRROR
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
N.T.S.	NOT TO SCALE
O/C	ON CENTER
O.D.	OUTSIDE DIAMETER
OPNG.	OPENING
OPP.	OPPOSITE
PERF.	PERFORATED
PNTD.	PAINTED
PT	PRESSURE TREATED
R.	RISER (RADIUS)
R.B.	RUBBER BASE
RE	REFERENCE
REINF.	REINFORCING
R.L.	RAIN LEADER
RM.	ROOM
SIM.	SIMILAR
SPEC.	SPECIFICATION
STL.	STEEL
STRUCT.	STRUCTURAL
STOR.	STORAGE
SUSP.	SUSPENDED
TERR.	TERRAZZO (TERRACE)
T&G.	TONGUE AND GROOVE
THRESH.	THRESHOLD
T.	TREAD
T/S	TOP OF SLAB
T/STL	TOP OF STEEL
T/W	TOP OF WALL
TYP.	TYPICAL
V.C.T.	VINYL COMPOSITE TILE
V.B.	VINYL BASE
VERT.	VERTICAL
VEST.	VESTIBULE
V.I.F.	VERIFY IN FIELD
V.W.C.	VINYL WALL COVERING
W/	WITH
W.C.	WATER CLOSET
WD.	WOOD
WIND.	WINDOW
W.P.	WATERPROOFING

2 / A-0.0 ABBREVIATIONS

NO SCALE

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH APPLICABLE STATE OF CONNECTICUT BUILDING AND FIRE CODES AND SAFETY CODES. BEFORE WORK BEGINS CONTRACTOR IS TO CONTACT CALL BEFORE YOU DIG AT 1-800-922-4455 TO LOCATE ALL UNDERGROUND UTILITIES.
2. 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.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. DO NOT PROCEED WITH CHANGE IN SCOPE OF WORK WITHOUT WRITTEN APPROVAL FROM OWNER OR ARCHITECT.
10. 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.
11. 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.
12. THE CONTRACTOR SHALL PROVIDE ALL STRUCTURAL SHORING, BRACING AND SHEATHING AS REQUIRED FOR SAFETY AND FOR PROPER EXECUTION OF WORK AND HAVE SAME REMOVED WHEN WORK IS COMPLETED.
13. THE OWNER RETAINS THE RIGHT TO SALVAGE ANY DEMOLISHED OR CONTRACTOR REMOVED MATERIAL(S). CONTACT OWNER BEFORE REMOVAL FROM SITE

1 / A-0.0 GENERAL CONSTRUCTION and DEMOLITION NOTES

NO SCALE

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

REHABILITATION and MITIGATION for the JENNINGS RESIDENCE APPLICATION No. 2184
87 Atlantic Avenue
Groton, CT 06340

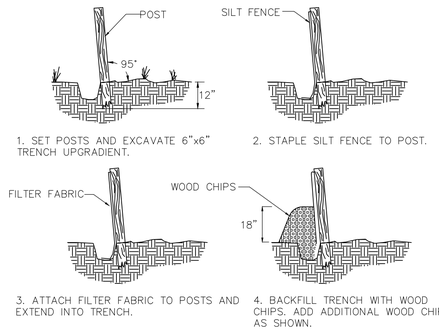
date	description	no.

revisions

GENERAL INFORMATION

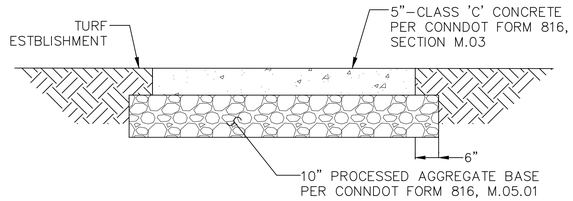
A-0.0

date	20 MAY 2016
drawn	NWF/JRP/DP
scale	AS SHOWN
checked	JP/DH/KG
project no.	1347-44
application no.	2184



SILT FENCE

N.T.S.



CONCRETE LANDING

N.T.S.

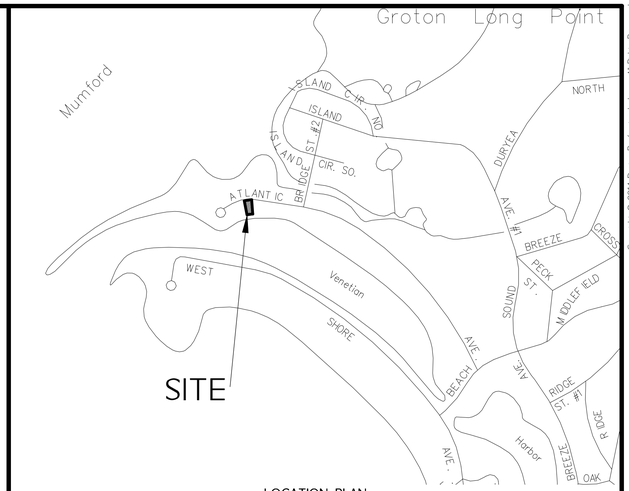
Zoning Information

ZONE: R – SINGLE FAMILY RESIDENCE

ITEM	REQUIRED	EXISTING CONDITIONS	PROPOSED CONDITIONS
Minimum Lot Area	6,000 s.f.	4,055± s.f. *	4,055± s.f. *
Minimum Lot Width	60 feet	52.34 feet *	52.34 feet *
Minimum Front Yard Setback	25 feet	34.8 feet	34.8 feet
Minimum Side Yard Setback	6 feet	6.2 feet	6.2 feet
Minimum Rear Yard Setback	10 feet	10.5 feet	10.5 feet
Maximum Building Height	36 feet **	25.8± feet	35.2± feet
Maximum Building Cover	25%	27.5%*	27.5%*

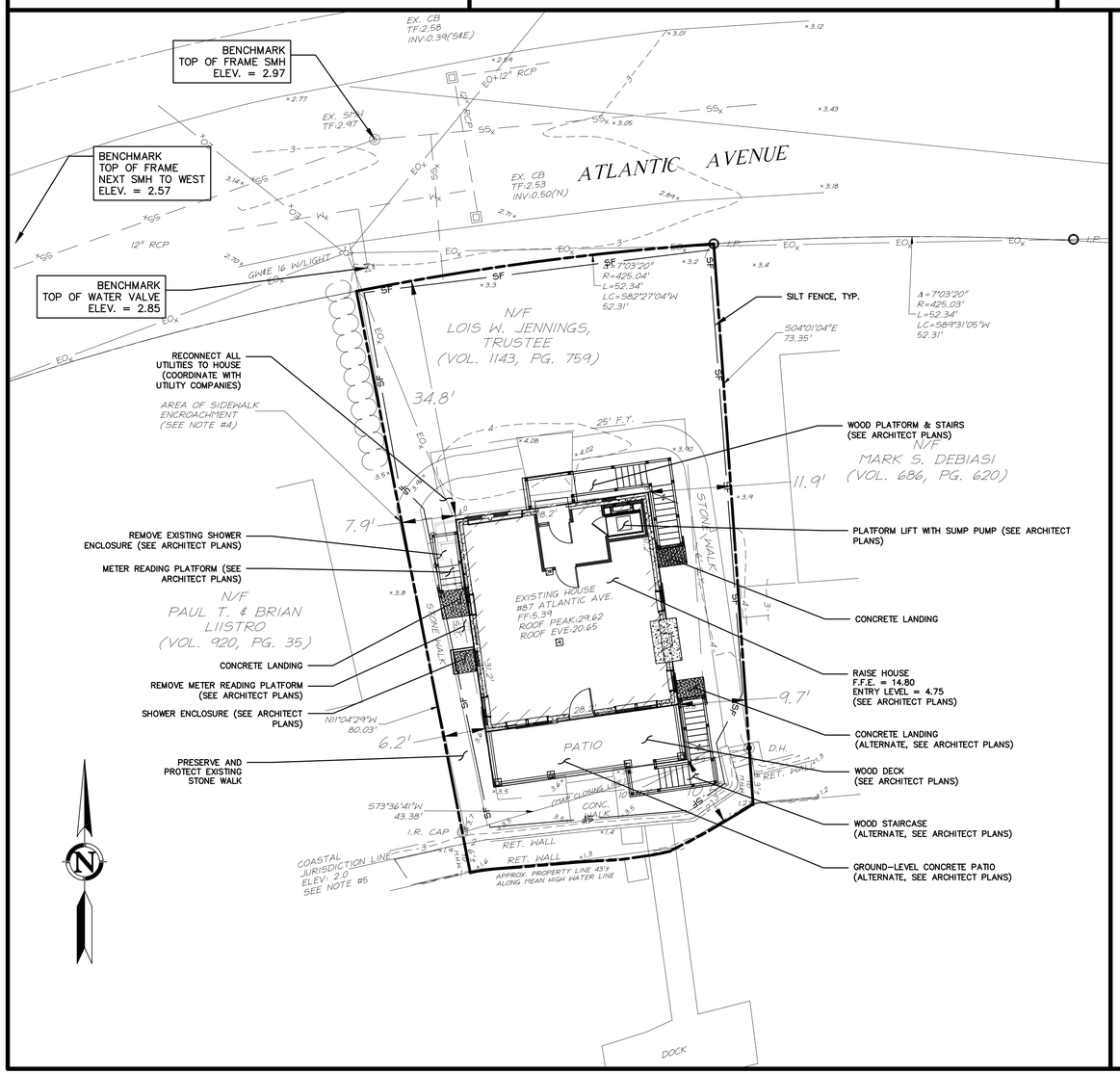
* Property is existing non-conforming with regards to minimum lot area requirements, minimum lot width, and building coverage requirements.

** 30 feet + (½ of additional elevation required by the Flood Damage Prevention Regulations)
Flood Elevation = 11 + 1 to lowest floor = 12 feet /2 = 6 feet additional allowed



LOCATION PLAN

SCALE: 1"=500'



LEGEND

EXISTING	DESCRIPTION
COMMUNICATION	
C_x	OVERHEAD COMM. LINES (CABLE, TEL, ETC.)
DOMESTIC WATER	
W_x	WATER MAIN
WS_x	WATER SERVICE
W	WATER VALVE
	FIRE HYDRANT
LIGHTING	
	POLE MOUNTED LIGHT
NATURAL GAS	
G_x	GAS MAIN
POWER	
EO_x	ELECTRICAL LINES, OVERHEAD
EU_x	ELECTRICAL LINES, UNDERGROUND
	UTILITY POLE
PROPERTY	
	PROPERTY LINE
	IRON PIN
	MONUMENT
ROADS	
	GUARD RAIL
SITE FEATURES	
X X	BARBED WIRE FENCE
	CHAIN LINK FENCE
	RAIL FENCE
	STOCKADE FENCE
+ +	WIRE FENCE
OR	TREE
	TREE LINE
SANITARY SEWER	
S_x	SANITARY SEWER MAIN
S	SANITARY SEWER MANHOLE
STORM SEWER	
D_x	STORM DRAIN PIPE
D	STORM DRAIN MANHOLE
	CURB INLET
	CATCH BASIN
TOPOGRAPHY	
95	CONTOUR
×61.95	SPOT ELEVATION
WETLANDS	
	WETLANDS LINE

EROSION & SEDIMENTATION CONTROL:

1. 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.
2. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO CONSTRUCTION, AND SHALL BE MAINTAINED OR REPLACED AS NECESSARY.
3. CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTATION AND MAINTENANCE OF ALL SEDIMENTATION AND EROSION CONTROL MEASURES SHOWN ON THIS PLAN. ANY PROPOSED CHANGES TO THIS PLAN MUST BE APPROVED BY THE ENGINEER AND/OR THE TOWN OF OLD LYME.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR SWEEPING EXISTING ROADS & DRIVEWAYS AS DEEMED NECESSARY.
5. 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:

1. "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.
2. 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.
3. CONTRACTOR SHALL VERIFY LAYOUT DIMENSIONS. DISCREPANCIES SHALL BE REPORTED TO THE DESIGN ENGINEER AND ARCHITECT PRIOR TO CONSTRUCTION.
4. ALL WORK SHALL BE COMPLETED IN CONFORMANCE WITH THE REQUIREMENTS OF ALL FEDERAL, STATE, AND LOCAL PERMITS ISSUED FOR THIS PROJECT.
5. DEWATERING, IF REQUIRED, SHALL BE CONDUCTED IN ACCORDANCE WITH THE CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, AS REVISED.

NOTES:

1. *PROPERTY IS IN THE R ZONE.*
2. *PARCEL CONTAINS 4,055± SQUARE FEET OR 0.09± ACRES.*
3. *PROPERTY FALLS WITHIN THE LIMITS OF A FLOOD HAZARD ZONE AS DEPICTED ON: "FIRM FLOOD INSURANCE RATE MAP TOWN OF GROTON CONNECTICUT NEW LONDON COUNTY PANEL 509 OF 554 COMMUNITY PANEL NUMBER 090106C509J EFFECTIVE DATE AUGUST 5, 2013 FEDERAL EMERGENCY MANAGEMENT AGENCY FEDERAL INSURANCE ADMINISTRATION. FEMA FLOOD ZONE AE ELEVATION OF 11.*
4. *SIDEWALK ENCROACHES ONTO ABUTTING PROPERTY 0.3'±.*
5. *COASTAL JURISDICTION LINE AS DEPICTED IN "THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS RESOURCES FOR TIDAL AND NAVIGABLE WATERS IN CONNECTICUT BY JOHN J. DOODY, PS & PE CHAIR, CALS TIDE COMMITTEE FIRST PRINTING OCTOBER 15,2012 IS ELEVATION 2.0 (NAVD 88). THE MEAN HIGH WATER LEVEL AS DEPICTED IN ABOVE REFERENCED RESOURCE IS 0.9 (NAVD 88).*
6. *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 PAROL 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.*
7. *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:

1. *PROPERTY SURVEY AND BOUNDARY LINE AGREEMENT MAP PROPERTY OF THE CORINNE S. WINALSKI REVOCABLE TRUST 77 AND 81 ATLANTIC AVENUE, GROTON LONG POINT - GROTON, CONNECTICUT, SCALE: 1"=10', OCTOBER 19, 2004. PREPARED BY DICESARE-BENTLEY ENGINEERS, INC.*
2. *GROTON LONG POINT GROTON, CONN. GROTON LONG POINT LAND CO. INC., OWNERS JAS. JAY SMITH CO. (EXCLUSIVE AGENTS.) OFFICE 50 STATE STREET, NEW LONDON, CONN. SUBDIVISIONS PLAN NO. 5. SCALE 1 INCH = 100 FEET. PREPARED BY DABOLL & CRANDALL, C.E.*

SURVEY NOTES:

1. *THIS SURVEY AND MAP HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THRU 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.*
   - *TYPE OF SURVEY IS AN PROPERTY & TOPOGRAPHIC SURVEY - AND IS INTENDED TO DEPICT THE LOCATION OF IMPROVEMENTS RELATIVE TO PROPERTY LINES.*
   - *THIS IS A DEPENDENT RESURVEY BASED ON MAPS AND 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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* The plans in hard copies (paper) are the official plans and specifications of the Professional Engineer. Let's Survey or Design Professionals, Inc.

* Locating utility locations depicted hereon are based on available information and should be field verified prior to construction.

* Dimensions shown on plans take precedence over scaled measurements. Do not scale drawing for construction purposes.

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PREPARED FOR:
Lois W. Jennings
87 Atlantic Avenue
Groton, Connecticut 06340

PROJECT NO.	3400.2184
DATE:	2/12/16
DESIGNED BY:	BPW
DRAWN BY:	BPW
CHECKED BY:	BPW
REVIEWED BY:	BPW

LOIS W. JENNINGS

87 ATLANTIC AVENUE
GROTON, CONNECTICUT

REVISIONS

NO.	DATE		BY
1	4/15/16	UPDATED HOUSE PLAN FROM ARCHITECT	BPW
2	5/26/16	UPDATED HOUSE PLAN FROM ARCHITECT	BPW

PLOT PLAN

SCALE: 0 5 10' 20'
1" = 10'

SHEET
P-1

File: C:\jobs\3400\2184-jennings\AutoCAD\3400-2184 plot plan.dwg Layout: P-1 Plotted: 5/26/2016 4:54 PM Last Saved: 5/26/2016 4:54 PM Last Saved By: bwheeler

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GENERAL STRUCTURAL NOTES:

BUILDING DESIGN LOADS
LIVE LOADS

RESIDENTIAL DWELLING HABITABLE AREAS
FIRST FLOOR AND DECKS 40 PSF

SNOW LOADS

GROUND SNOW LOAD, Pg = 30 PSF

FLAT/SLOPED ROOF SNOW LOAD, Pf/Ps = 30 PSF

WIND LOADS

IMPORTANCE FACTOR, I = 1.0

WIND EXPOSURE CATEGORY: C

BASIC WIND SPEED = 110 MPH (3 SEC. GUST) (GROTON, CT)

FLOOD HAZARDS

1. AE FLOOD ZONE WITH 100 YEAR BASE FLOOD ELEVATION 11.0 PLUS 1 FT. FREEBOARD, NAVD 1988 DATUM PER FEMA FIRM MAP DATED AUG. 5, 2013.
2. ALL FRAMING BELOW FLOOD ELEVATION 12.0 SHALL BE PRESSURE TREATED OR OTHERWISE FLOOD DAMAGE RESISTANT MATERIAL PER FEMA TECHNICAL BULLETIN 2.
3. PER STATE OF CONNECTICUT DEPT. OF HOUSING COMMUNITY DEVELOPMENT BLOCK GRANT DISASTER RECOVERY REQUIREMENTS, THE TOP OF FINISH FLOOR SHALL BE ELEVATED TO THE 500-YEAR DESIGN FLOOD ELEVATION OF 14.80.

GENERAL

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE 2009 INTERNATIONAL RESIDENTIAL CODE PORTION OF THE 2005 STATE BUILDING CODE, STATE OF CT 2013 AMENDMENT TO THE STATE BUILDING CODE. STRUCTURAL ELEMENTS EXCEEDING THE LIMITS, OR NOT CONFORMING TO THE CODE SHALL BE DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE.
2. DIMENSIONS AND DETAILS SHALL BE CHECKED AGAINST ARCHITECTURAL DRAWINGS AND EXISTING CONDITIONS.
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. THE STRUCTURE IS DESIGNED TO BE STABLE AND SELF-SUPPORTING AFTER CONSTRUCTION IS COMPLETE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY FOR THE BUILDING DURING CONSTRUCTION, INCLUDING, BUT NOT LIMITED TO METHOD AND SEQUENCING OF ERECTION, AND TEMPORARY SHORING AND BRACING.

FOUNDATIONS

1. THE EXISTING HOUSE TO BE ELEVATED ON A NEW CONCRETE FOUNDATION WALL.
2. FOUNDATION WALLS SHALL BE TEMPORARILY BRACED AGAINST EARTH PRESSURE, WIND AND OTHER LATERAL FORCES.
3. SEE GNCB CONSULTING ENGINEER'S GEOTECHNICAL REPORT DATED FEB. 5, 2016 FOR RECOMMENDATIONS.
4. REFER TO SPECIFICATIONS FOR EXCAVATION AND BACKFILL REQUIREMENTS.

REINFORCED CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTES SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS.
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:

FOUNDATIONS AND WALLS	3,000 PSI
SLAB ON GRADE INTERIOR	3,500 PSI
SLAB ON GRADE EXTERIOR	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 MEMBERS SHALL NOT HAVE JOINTS IN A HORIZONTAL PLANE.
7. PROVIDE 2-#5 BARS (1-EACH FACE) WITH 2'-0" PROJECTION ABOUND ALL OPENINGS IN CONCRETE.

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	Fb	=1, 035 psi
BENDING, SINGLE USE	Fb	= 900
TENSION PARALLEL TO GRAIN	Ft	= 575
COMPRESSION PARALLEL TO GRAIN	Fc (Par.)	= 1, 350
SHEAR PARALLEL TO GRAIN	Fv	= 180
COMPRESSION PERPENDICULAR TO GRAIN	Fc (Per.)	= 625
MODULUS OF ELASTICITY	E	= 1,700,000

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:
TRUS JOIST WEYERHAEUSER
LAMINATED VENEER LUMBER (LVL)

MODULUS OF ELASTICITY, MIN.	E	=1,900,000 psi
BENDING, SINGLE USE	Fb	= 2,500
COMPRESSIONAL PARALLEL TO GRAIN	Fc (Par)	= 2,510
HORIZONTAL SHEAR	Fv	= 285
COMPRESSION PERPENDICULAR TO GRAIN/	Fc (Per)	= 750

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 LANDING/STAIR FRAMING TO BE PRESSURE TREATED WOOD.
9. ALL EXPOSED FRAMING CONNECTORS AND NAILS TO BE STAINLESS STEEL, OR OTHER FINISH APPROVED BY ENGINEER.
10. INSTALL BLOCKING BETWEEN JOISTS AT ALL SUPPORTS.

NAILING SCHEDULE

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

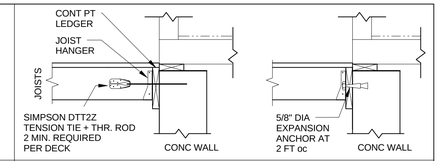
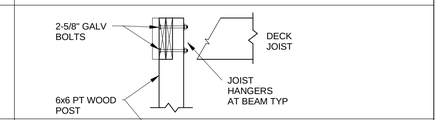
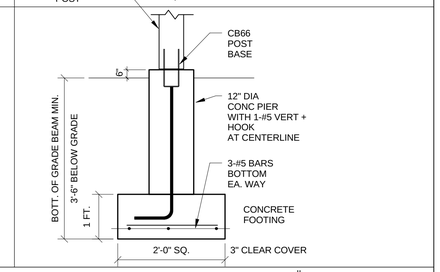
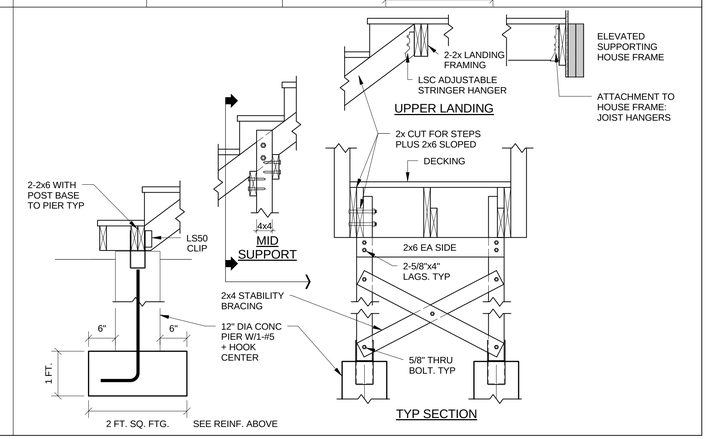
STURD-I-FLOOR PLYWOOD SHEATHING 3/4" TONGUE AND GROOVE	8d
WALL SHEATHING 1/2"	8d

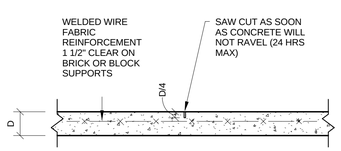
NOTES:
SCHEDULE BASED UPON COMMON WIRE NAILS.
LARGER NAIL SIZES REQUIRED FOR BOX OR PNEUMATIC DRIVEN FASTENERS.
SUBSTITUTING PNEUMATIC NAILS OF EQUAL DIAMETER OR LARGER IS ACCEPTABLE.
SUBMIT PRODUCT DATA AND ALL PERTINENT EVALUATION REPORTS FOR ALL PROPOSED FASTENERS IF DIFFERENT THAN INDICATED ON THE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

COMMON WIRE NAIL DIAMETERS

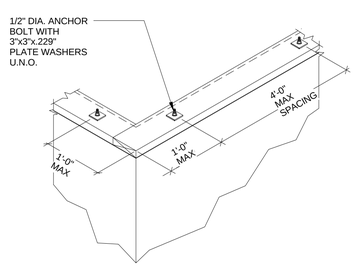
6d	0.113"
8d	0.131"
10d	0.148"
12d	0.148"
16d	0.162"
20d	0.192"

APPLY AT ALL TYPICAL AND SIMILAR CONDITIONS

FRAMING CONDITION	CONNECTOR	COMMENTS	GRAPHIC
JOISTS FRAMING TO LEDGER			
BEAM AT TOP OF POST			
STAIR LANDING/ STAIR POST BASE			
TYPICAL EXTERIOR STAIR FRAMING			



TYPICAL SLAB ON GRADE CONTROL JOINT DETAIL



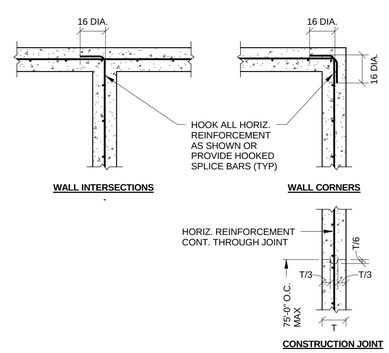
TYPICAL ANCHOR BOLT DETAIL

NOTES:

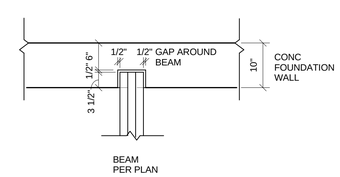
1. PROVIDE MINIMUM 7" EMBEDMENT.
2. MAXIMUM PERMITTED HOLE SIZE FOR ANCHOR BOLT IS 9/16".
3. SINGLE SPLICE PLATE TIED WITH SIMPSON ST6224 STRAP.

OPTION:
IN LIEU OF ANCHOR BOLTS, SIMPSON MUDSILL ANCHORS MAY BE USED

FOUNDATION - ANCHOR BOLTS



TYPICAL CONCRETE WALL REINFORCING DETAILS



BEAM POCKET DETAIL CONCRETE WALL

REFERENCE IS MADE TO THE FOLLOWING INFORMATION:

ARCHITECTURAL DRAWINGS:

PREPARED BY:	CAPITAL STUDIO ARCHITECTS LLC EAST HARTFORD, CT
TITLE:	GENERAL RENOVATIONS FOR THE JENNINGS RESIDENCE 87 ATLANTIC AVENUE GROTON, CT
DATED:	MAY 2016

PROPERTY SURVEY:

PREPARED BY:	DESIGN PROFESSIONALS, INC. SOUTH WINDSOR, CT
TITLE:	PROPERTY & TOPOGRAPHIC SURVEY LOIS W. JENNINGS 87 ATLANTIC AVENUE GROTON, CONNECTICUT
PREPARED FOR:	LOIS W. JENNINGS 87 ATLANTIC AVENUE GROTON, CONNECTICUT
DATED:	5/8/2015

ISSUED FOR BIDDING & CONSTRUCTION

CAPITAL STUDIO architects LLC
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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)

REHABILITATION and MITIGATION for the JENNINGS RESIDENCE APPLICATION No. 2184
87 Atlantic Avenue Groton, CT 06340

Consultants:

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ELEVATED FOUNDATION

GENERAL NOTE & TYPICAL DETAILS

S1.0

date	20 MAY 2016
drawn	RLB
scale	As indicated
checked	CCB
project no.	1347-44 GNCB# 15013
application no.	2184

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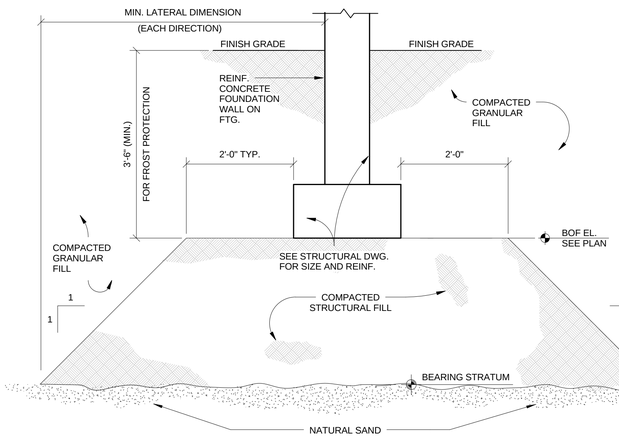


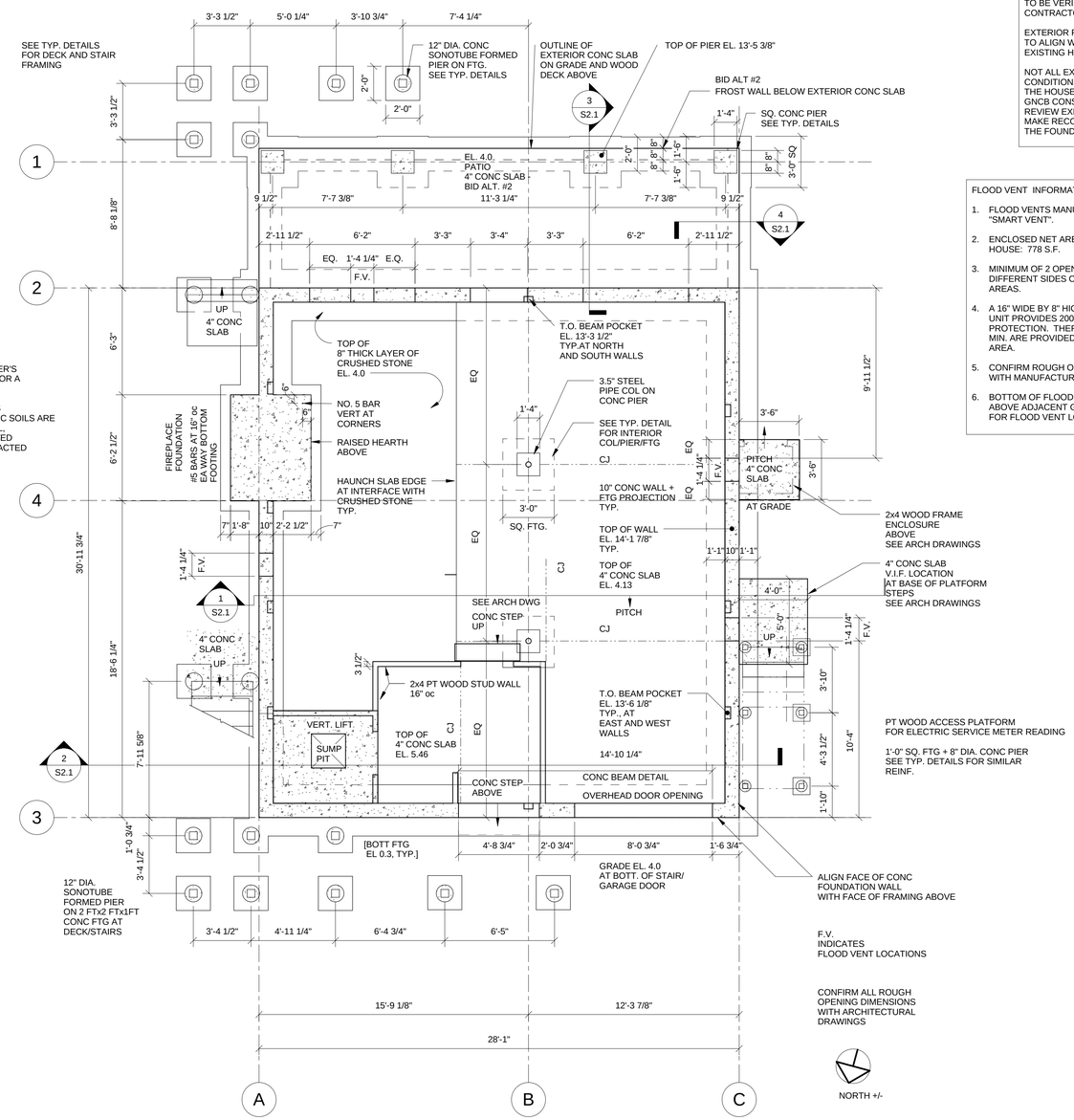
(NOTE: WHERE NEEDED TO REMOVE EXISTING MAN-PLACED FILL BELOW NEW FOOTING.)

LIMITS OF COMPACTED STRUCTURAL FILL BELOW FOOTINGS

NOTE:

REFER TO GNCB CONSULTING ENGINEER'S FEB. 5, 2016 GEOTECHNICAL REPORT FOR A DESCRIPTION OF SOIL CONDITIONS.

IN THE EVENT THAT UNSUITABLE SOILS SUCH AS MAN PLACED FILL OR ORGANIC SOILS ARE ENCOUNTERED AT THE FOOTING LEVEL, UNSUITABLE SOILS SHOULD BE REMOVED AND REPLACED BY AN OFF-SITE COMPACTED STRUCTURAL FILL.



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

NOTE:

ALL BUILDING DIMENSIONS SHOWN TO BE VERIFIED IN FIELD BY CONTRACTOR.

EXTERIOR FACE OF FOUNDATION TO ALIGN WITH OUTER FACE OF EXISTING HOUSE FRAME

NOT ALL EXISTING FRAMING AND CONDITIONS ARE KNOWN. ONCE THE HOUSE IS LIFTED, CONTACT GNCB CONSULTING ENGINEERS TO REVIEW EXISTING CONDITIONS AND MAKE RECOMMENDATIONS FOR THE FOUNDATION.

FLOOD VENT INFORMATION:

1. FLOOD VENTS MANUFACTURED BY "SMART VENT".
2. ENCLOSED NET AREA BELOW HOUSE: 778 S.F.
3. MINIMUM OF 2 OPENINGS ON DIFFERENT SIDES OF ENCLOSED AREAS.
4. A 16" WIDE BY 8" HIGH SMART VENT UNIT PROVIDES 200 SQ. FT OF FLOOD PROTECTION. THEREFORE, 4 UNITS MIN. ARE PROVIDED FOR THE ENCLOSED AREA.
5. CONFIRM ROUGH OPENING DIMENSIONS WITH MANUFACTURER.
6. BOTTOM OF FLOOD VENT 1 FT. MAX. ABOVE ADJACENT GRADE. SEE FOUNDATION PLAN FOR FLOOD VENT LOCATIONS.

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FOUNDATION PLAN

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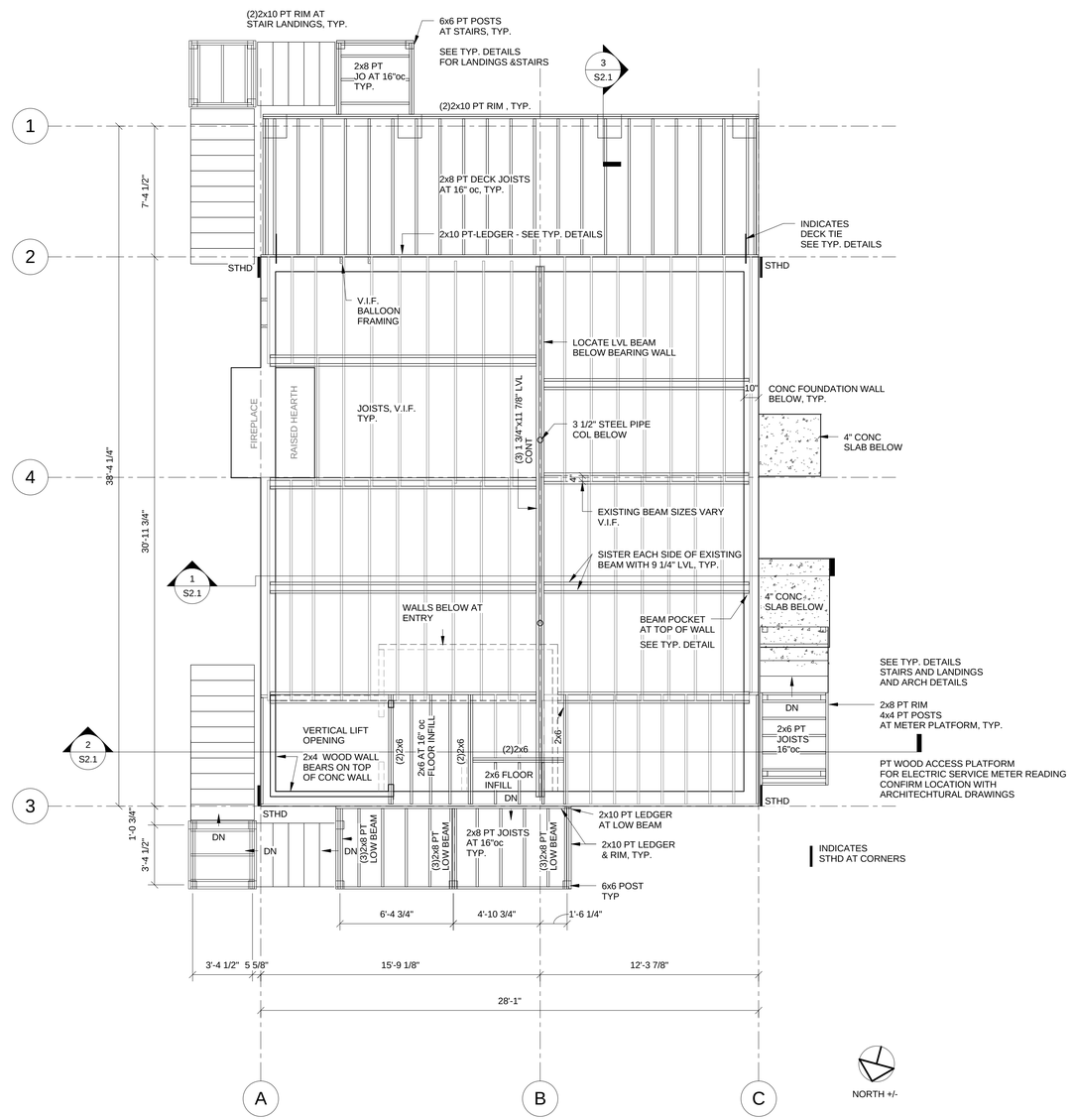

2 FIRST FLOOR FRAMING PLAN
1/4" = 1'-0"

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FIRST FLOOR FRAMING PLAN

S1.2

date	20 MAY 2016
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project no.	1347-44 GNCB# 15013
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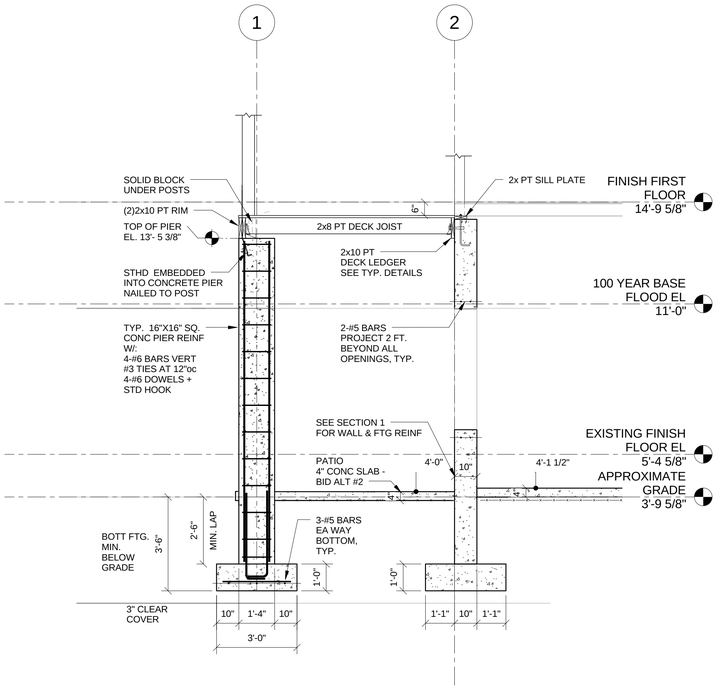
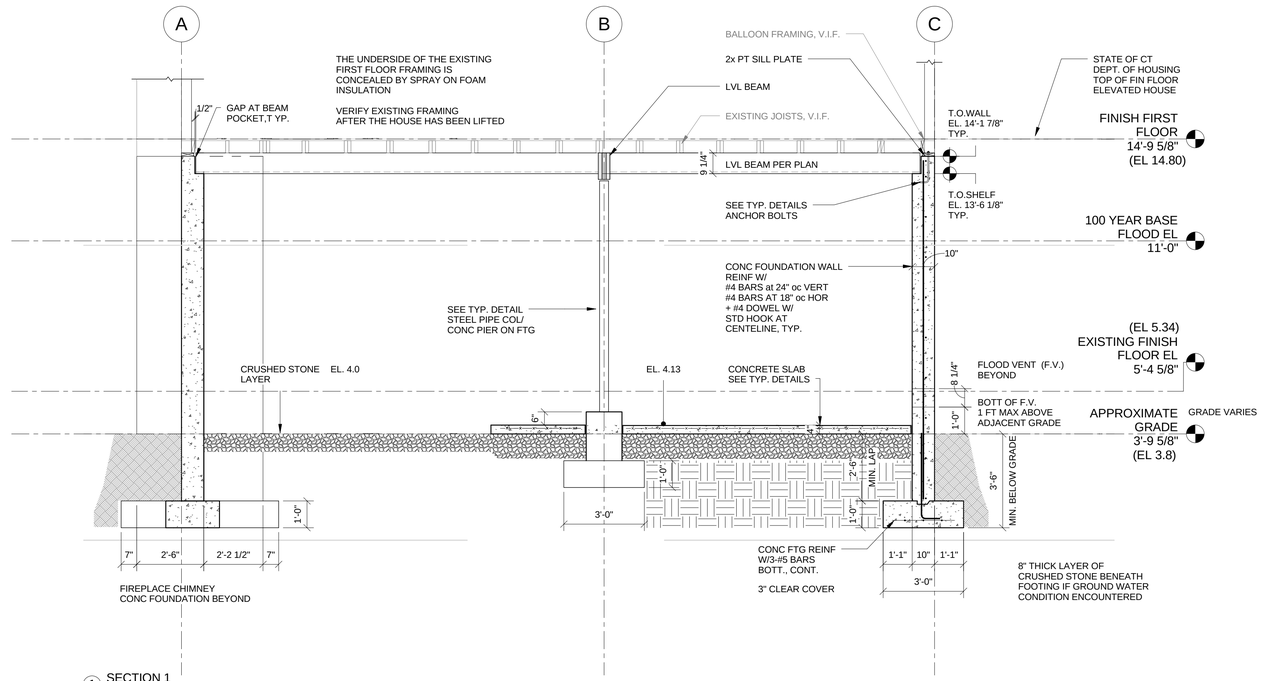
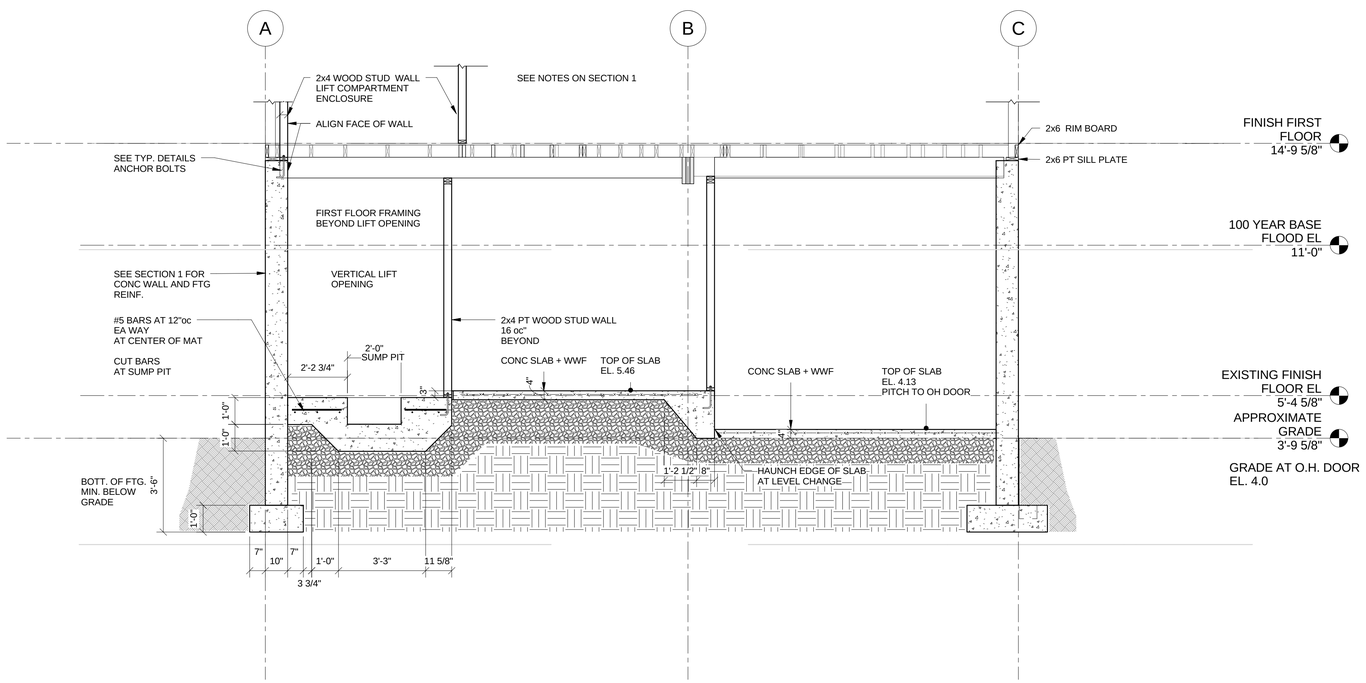


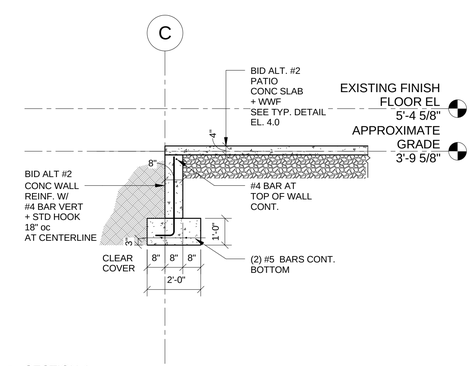
3 SECTION 3
3/8" = 1'-0"



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



2 SECTION 2
3/8" = 1'-0"



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

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REHABILITATION and MITIGATION for the JENNINGS RESIDENCE APPLICATION No. 2184
87 Atlantic Avenue Groton, CT 06340

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SECTIONS

S2.1

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application no.	2184

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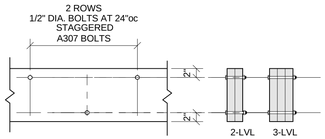
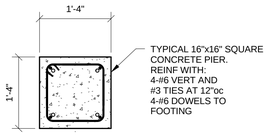
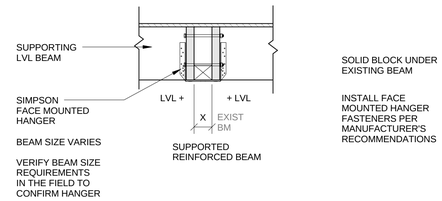


MULTI MEMBER CONNECTION

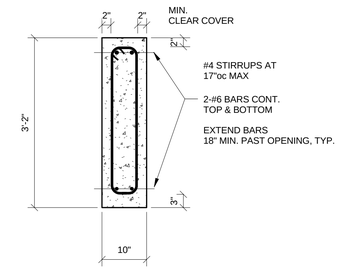


PIER AT SOUTH END DECK

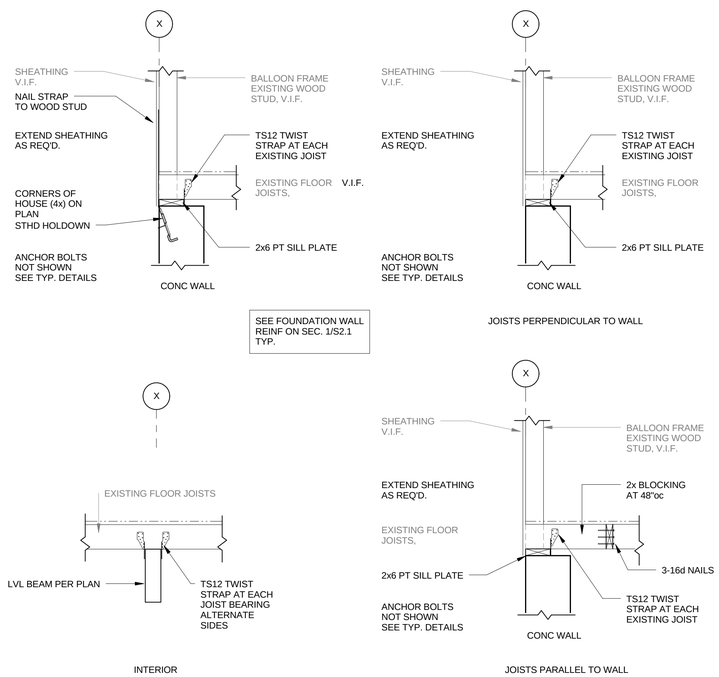
16"x16" CONCRETE PIER PLAN VIEW



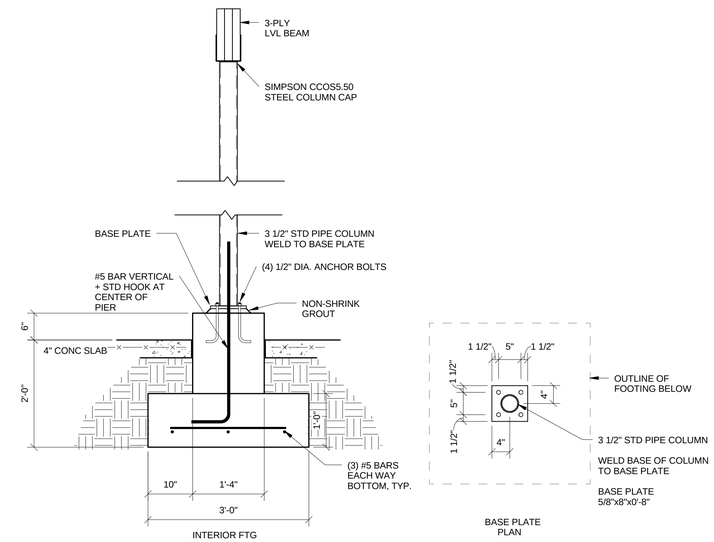
FLUSH FRAMING DETAIL



CONCRETE BEAM DETAIL



TYPICAL EXISTING FLOOR TO NEW BEAM CONNECTION



COLUMN CAP AND BASE PLATE

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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)

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TYPICAL DETAILS

S2.2

date	20 MAY 2016
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checked	CCB
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application no.	2184

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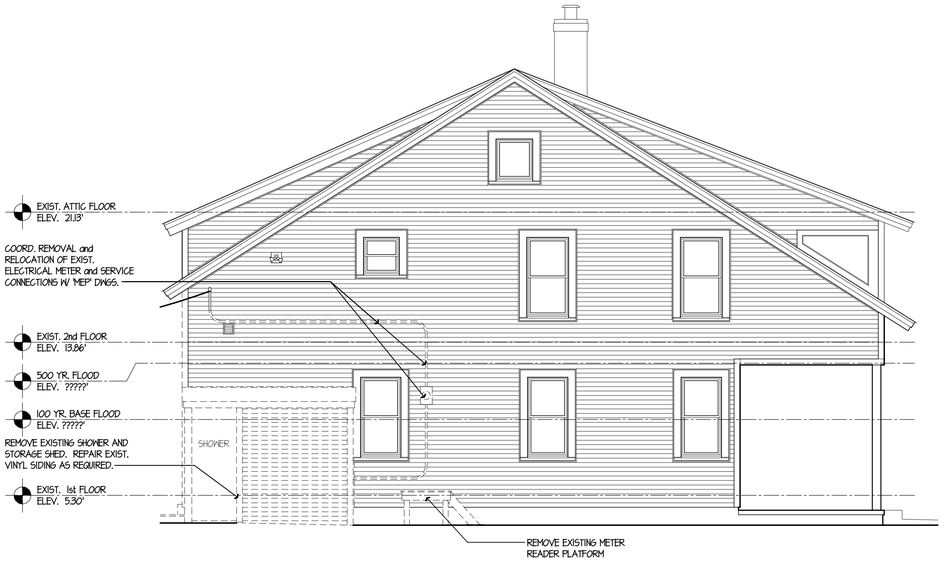
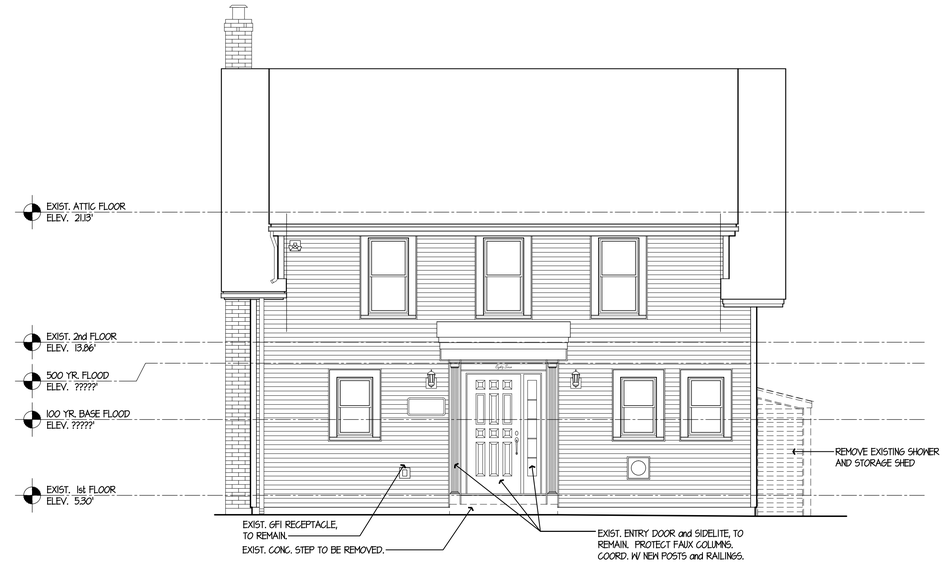


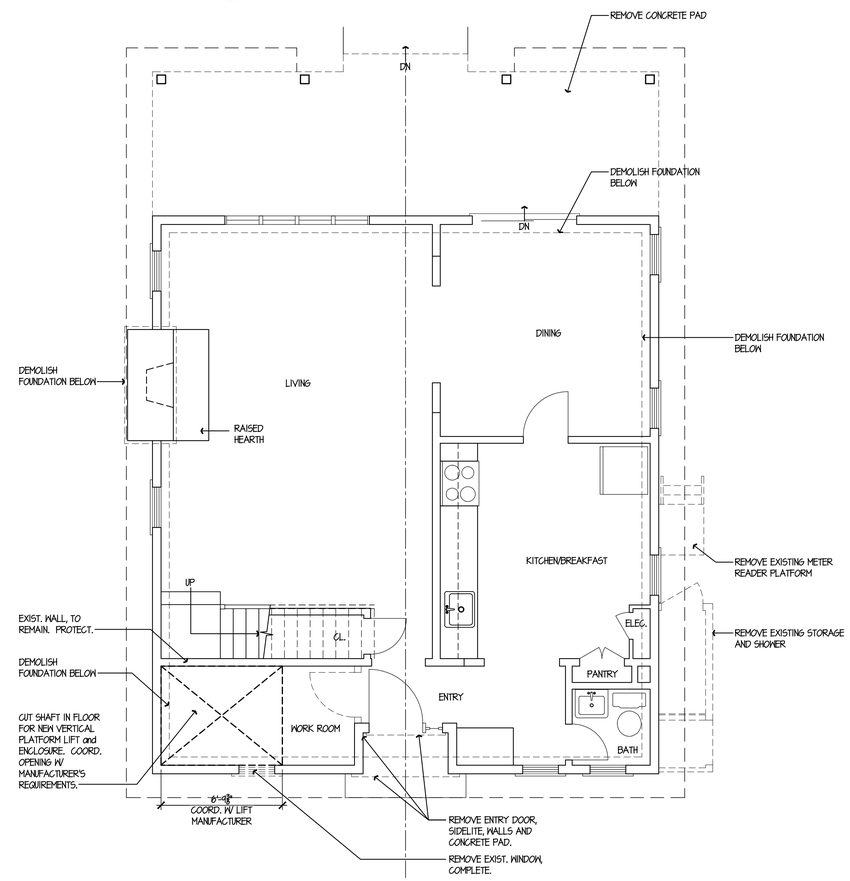
4 / D-1.0 WEST DEMOLITION ELEVATION

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



3 / D-1.0 NORTH DEMOLITION ELEVATION

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



1 / D-1.0 DEMOLITION PLAN

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

NORTH

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date	description	no.

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DEMOLITION PLAN

D-1.0

date	20 MAY 2016
drawn	NWF/JRP/DP
scale	AS SHOWN
checked	JP/DH/KG
project no.	1347-44
application no.	2184

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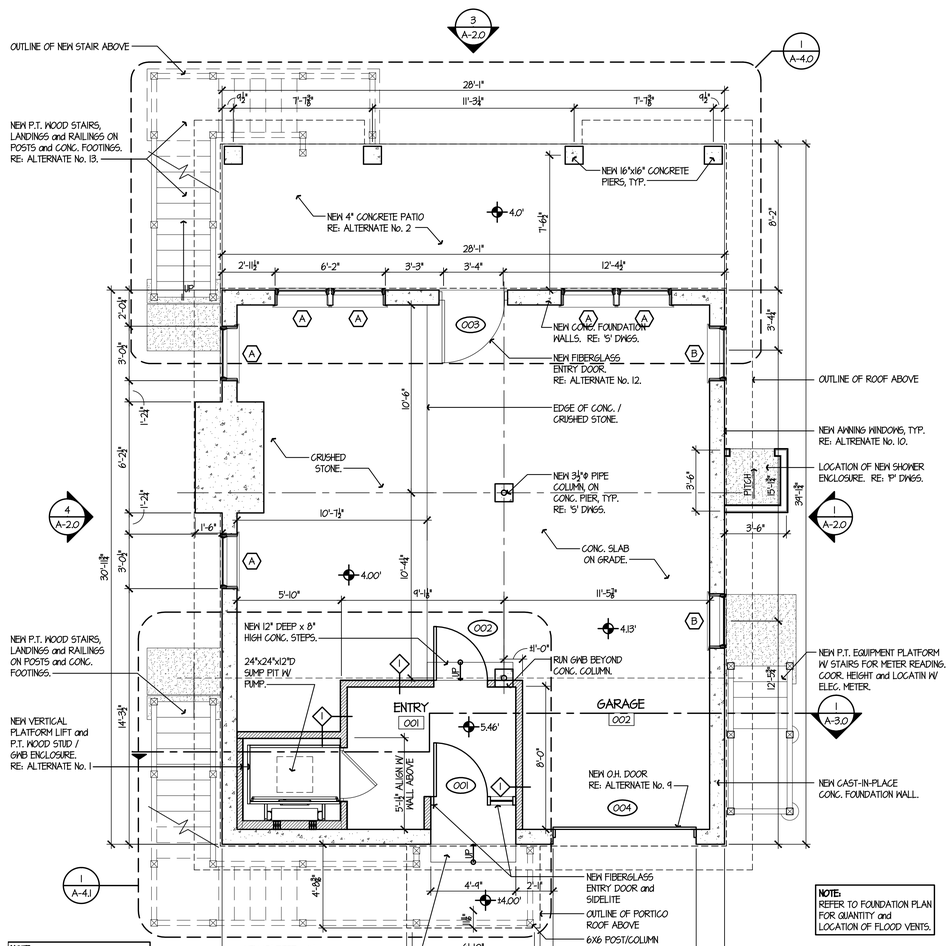
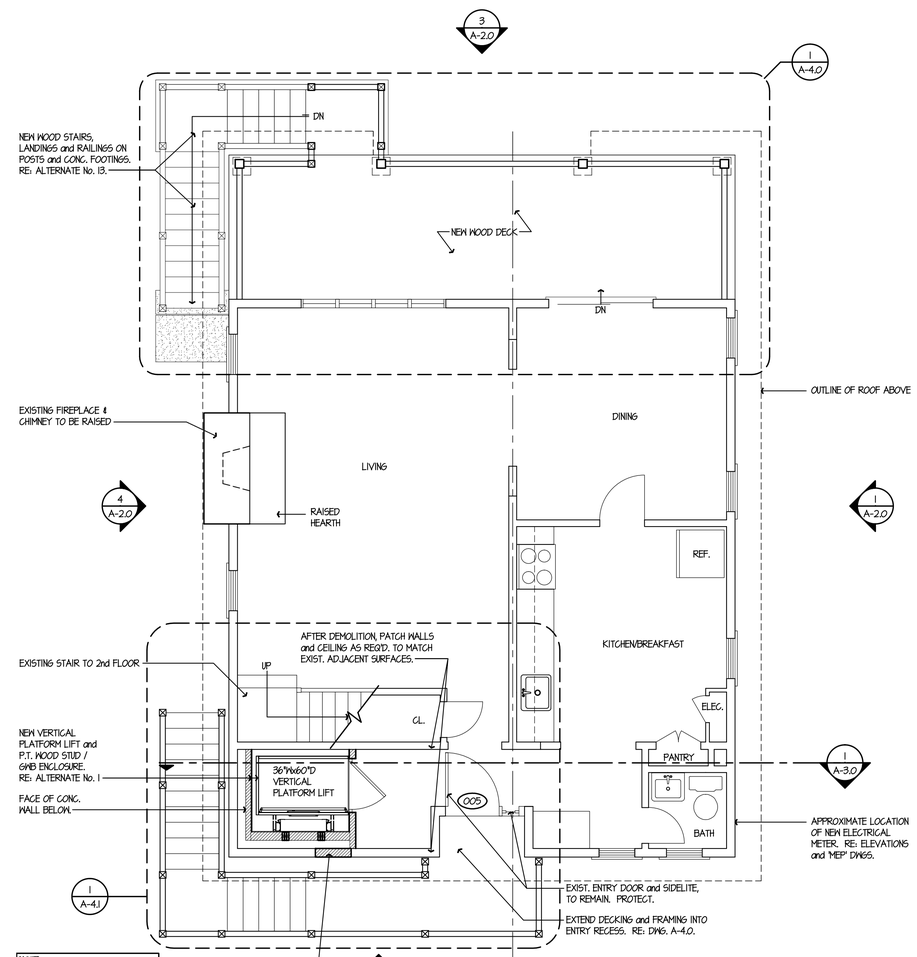


NOTE: CONTRACTOR TO PROV. SHOP DRAWINGS FOR LIFT. COORD. ENCLOSURE CLEARANCES W/ MANUFRG. REQT'S. PROV. OPENING IN FLOOR ABOVE AS REQUIRED.

NOTE: REFER TO FOUNDATION PLAN FOR QUANTITY and LOCATION OF FLOOD VENTS.

GROUND LEVEL PLAN

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



NOTE: CONTRACTOR TO PROV. SHOP DRAWINGS FOR LIFT. COORD. ENCLOSURE CLEARANCES W/ MANUFRG. REQT'S. PROV. OPENING IN FLOOR ABOVE AS REQUIRED.

1ST FLOOR PLAN

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

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REHABILITATION and MITIGATION for the JENNINGS RESIDENCE APPLICATION No. 2184
87 Atlantic Avenue
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date	description	no.

revisions

FLOOR PLANS

A-1.0

date	20 MAY 2016
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application no.	2184

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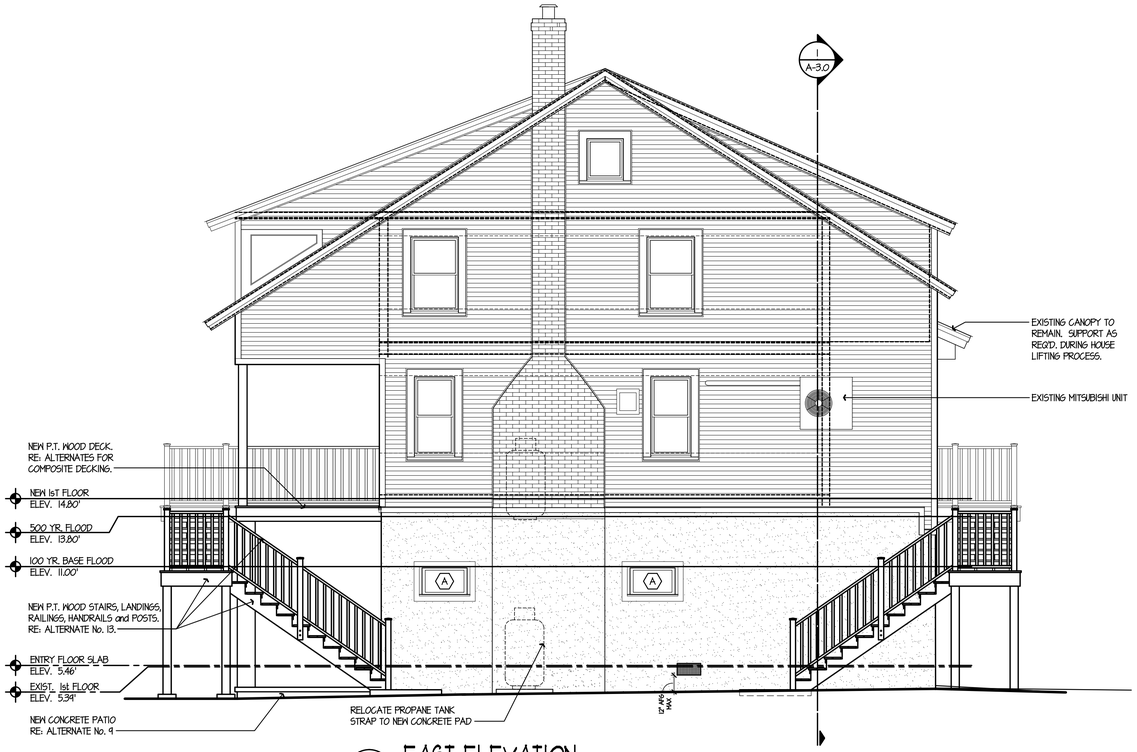
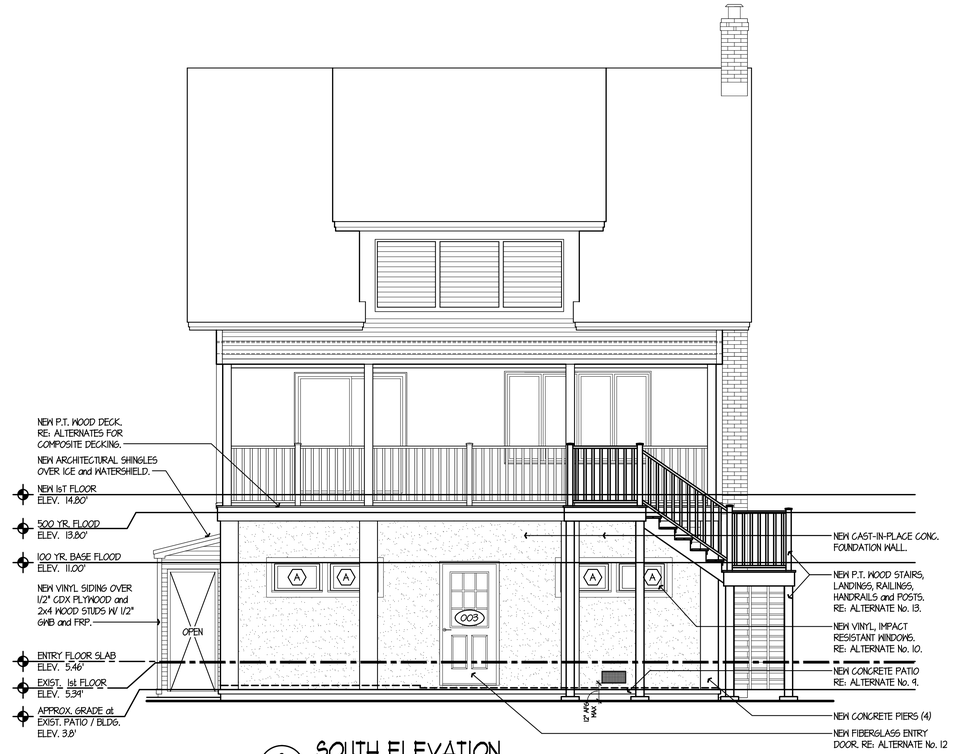


4 A-2.0 EAST ELEVATION

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



3 A-2.0 SOUTH ELEVATION

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

2 A-2.0 NORTH ELEVATION

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

1 A-2.0 WEST ELEVATION

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

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date	description	no.

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ELEVATIONS

A-2.0

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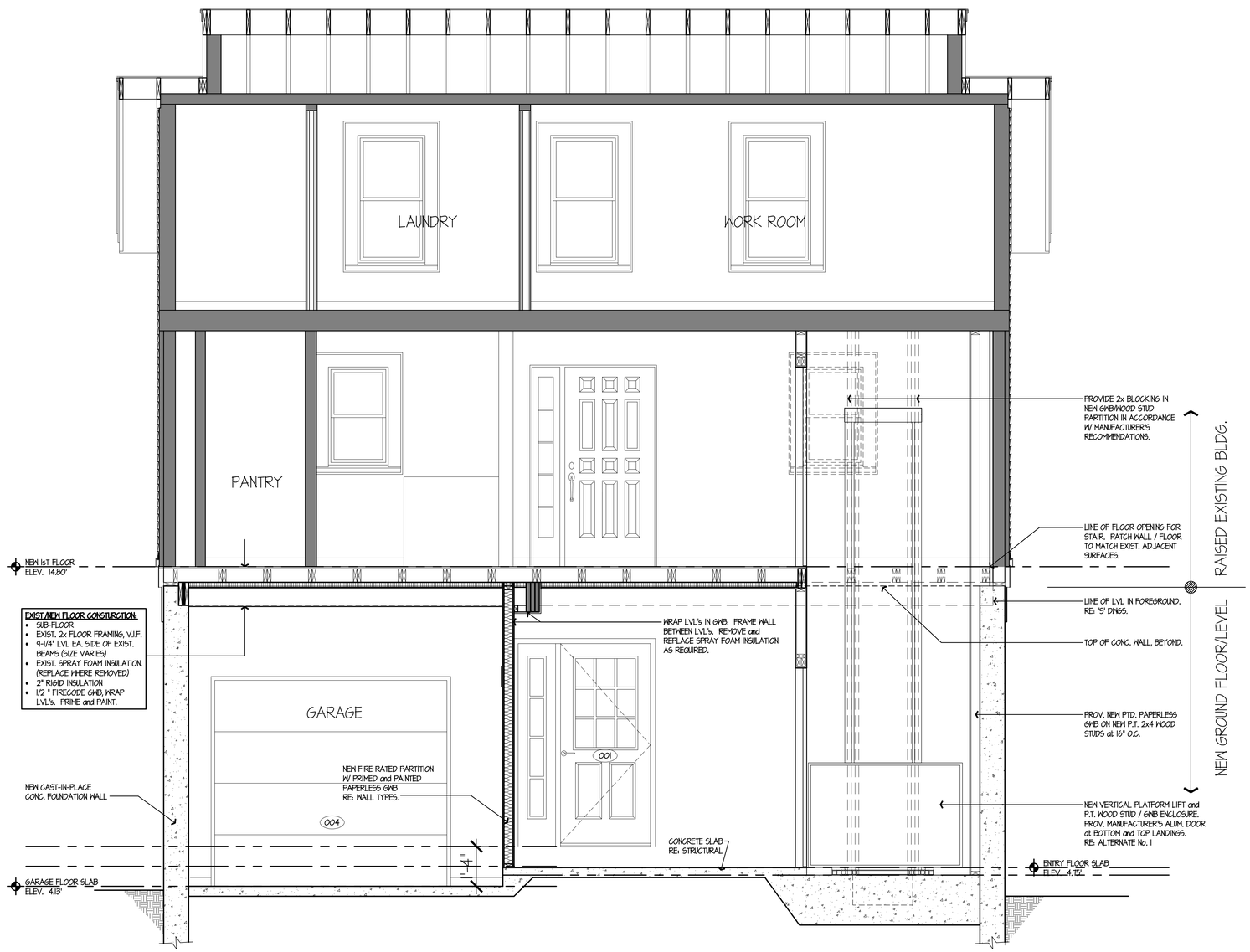

1
A-3.0

SECTION thru HOUSE

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

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date	description	no.
revisions		

SECTION

A-3.0

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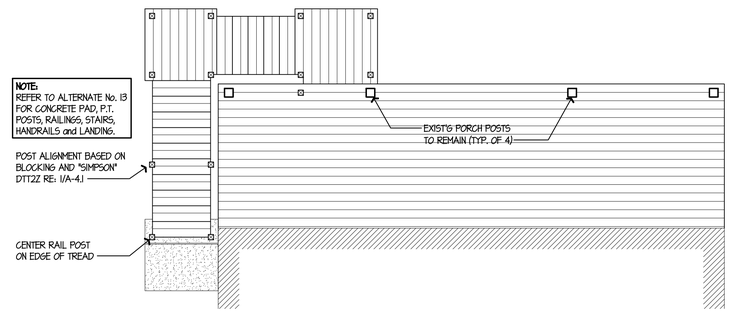
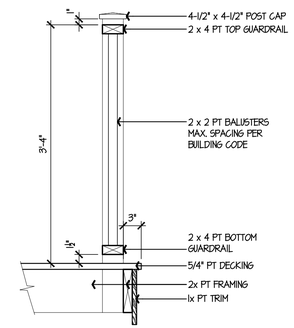


ALL DECKING TO BE 5/4" x 6" PT. RIP WHERE REQUIRED.

POST CAPS NOT SHOWN FOR CLARITY

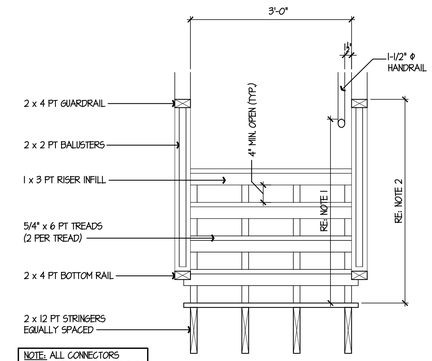
4 / A-4.0 DECKING PLAN

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



3 / A-4.0 TYPICAL RAIL

SCALE: 1"=1'-0"



NOTE: ALL CONNECTORS GALVANIZED COMPARABLE TO "SIMPSON Z MAX". ALL FASTENERS TO BE HOT-DIPPED GALVANIZED PER ASTM A153

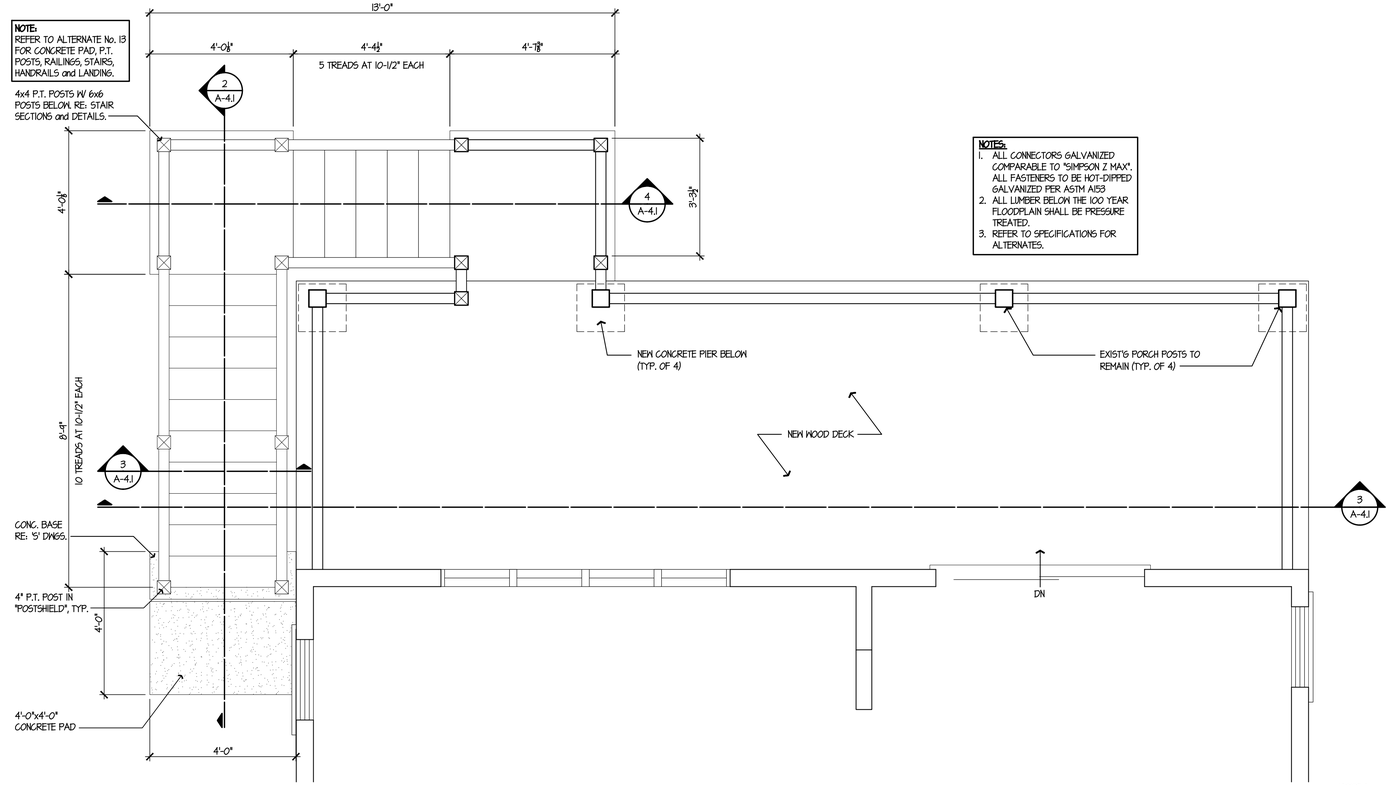
NOTE 1 - HANDRAIL MIN. HEIGHT 34" - MAX HEIGHT 38"
NOTE 2 - GUARDRAIL MIN. HEIGHT 36"

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

2 / A-4.0 STAIR SECTION

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

NORTH



NOTES:
1. ALL CONNECTORS GALVANIZED COMPARABLE TO "SIMPSON Z MAX". ALL FASTENERS TO BE HOT-DIPPED GALVANIZED PER ASTM A153
2. ALL LUMBER BELOW THE 100 YEAR FLOODPLAIN SHALL BE PRESSURE TREATED.
3. REFER TO SPECIFICATIONS FOR ALTERNATES.

1 / A-4.0 REAR DECK & STAIR

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

NORTH

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date	description	no.
revisions		

STAIR AND DECK DETAILS

A-4.0

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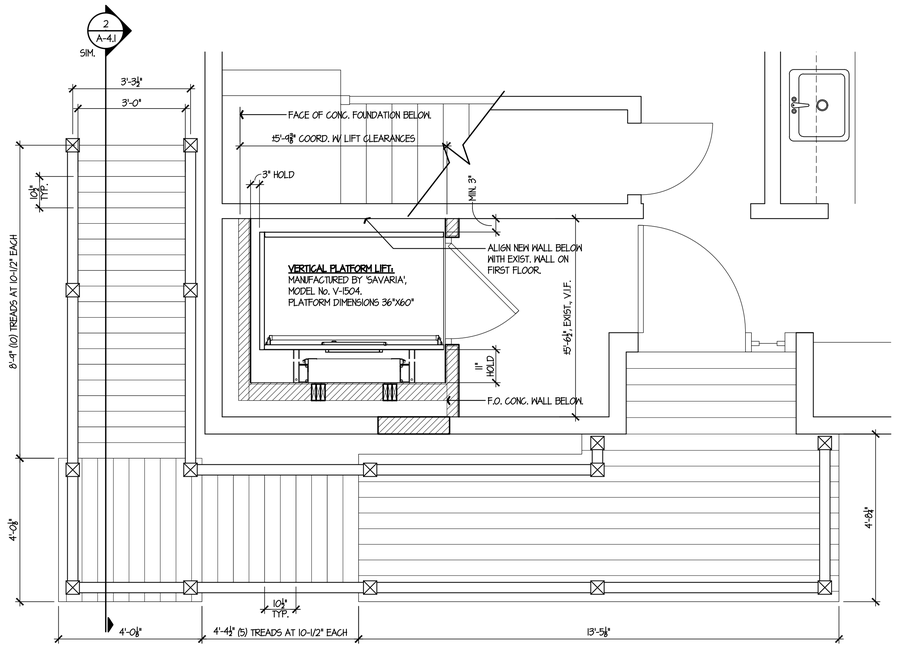
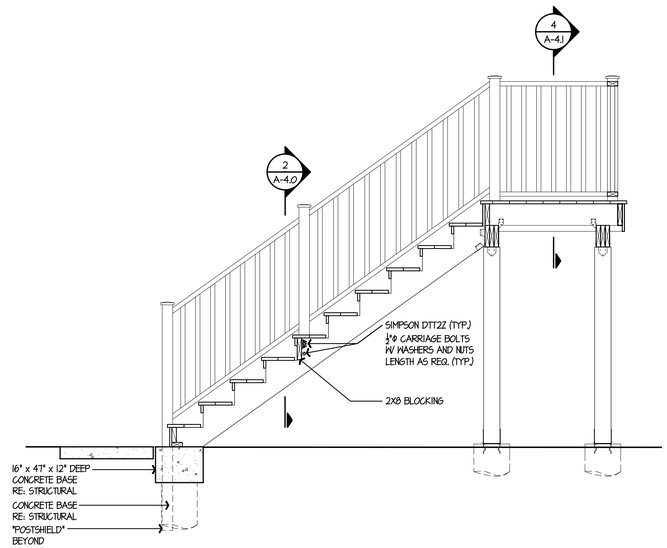


NOTES:
1. ALL CONNECTORS GALVANIZED COMPARABLE TO "SIMPSON Z MAX". ALL FASTENERS TO BE HOT-DIPPED GALVANIZED PER ASTM A153
2. ALL LUMBER BELOW THE 100 YEAR FLOODPLAIN SHALL BE PRESSURE TREATED.
3. REFER TO SPECIFICATIONS FOR ALTERNATES.

1 A-4.1 INTERIOR STAIR PLAN

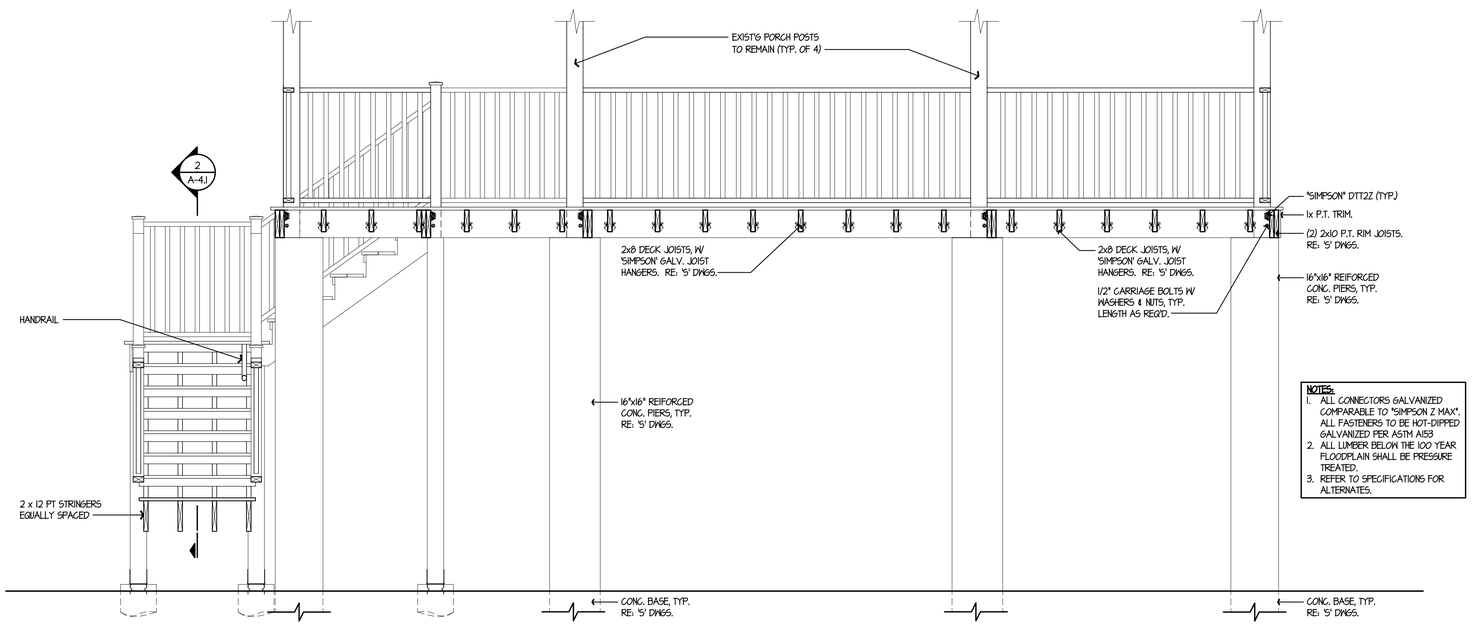
SCALE: 1/2"=1'-0"

NORTH



2 A-4.1 STAIR SECTION

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



NOTES:
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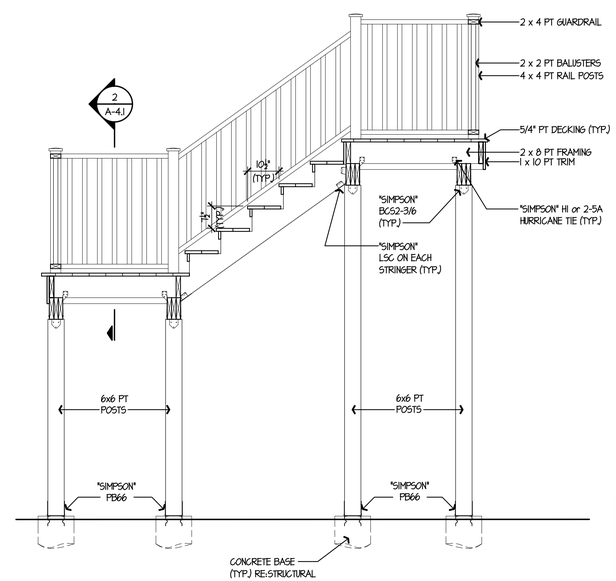
2. ALL LUMBER BELOW THE 100 YEAR FLOODPLAIN SHALL BE PRESSURE TREATED.
3. REFER TO SPECIFICATIONS FOR ALTERNATES.

3 A-4.1 STAIR & DECK SECTION

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



4 A-4.1 STAIR SECTION

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

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87 Atlantic Avenue
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STAIR AND DECK DETAILS

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scale	AS SHOWN
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project no.	1347-44
application no.	2184

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WINDOW SCHEDULE

LABEL	UNIT	TYPE	MIN. ROUGH OPENING (W x H)
A	AWN 31	AWNING	2'-0 1/2" x 3'-0 1/2" ALTERNATE No. 10
B	2442	DOUBLE HUNG	2'-6" x 4'-5 1/2"

WINDOW NOTES:

1. ALL WINDOW UNITS ARE HARVEY VIGILANCE SERIES IMPACT RESISTANT
2. VERIFY ALL ROUGH OPENINGS WITH MANUFACTURER.

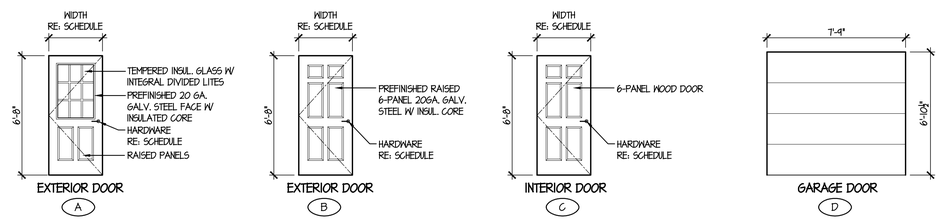
DOOR SCHEDULE

LABEL	TYPE	STYLE	SIZE (W x H)	HARDWARE	NOTES
001	EXTERIOR	A^	3'-0" x 6'-8"	LOCKSET & DEADBOLT	GALVANIZED METAL FRAME WITH ADA COMPLIANT THRESHOLD & WEATHERSTRIPPING
002	INTERIOR	C	3'-0" x 6'-8"	LOCKSET & DEADBOLT	REBL. STL. DOOR IN SOLID WOOD FRAME W/ SELF CLOSER, COLONIAL TRIM, MATCH EXIST.
003	EXTERIOR	B	3'-6" x 6'-8"	LOCKSET & DEADBOLT	GALVANIZED METAL FRAME WITH ADA COMPLIANT THRESHOLD & WEATHERSTRIPPING
004	O.H. GARAGE DOOR	D	8'-0" x 7'-0"	ELEC. DOOR OPENER and MANL. LOCK	BID ALTERNATE No. 9 RE: SPECIFICATIONS
005	EXTERIOR	EXIST.	EXIST.	EXIST.	EXISTING TO BE RELOCATED TO NEW EXTERIOR WALL INFILL.

^ - SEE SPECIFICATION SECTION ON ALLOWANCES FOR EXTERIOR DOORS

REFER TO ALTERNATE No. 9 IN THE SPECIFICATIONS FOR GARAGE DOOR 004.
REFER TO ALTERNATE No. 12 IN THE SPECIFICATIONS FOR EXTERIOR DOOR 003.

DOOR STYLES



FINISH SCHEDULE

LEVEL	ROOM NAME and NUMBER	FLOOR: CONCRETE	FLOOR: EXISTING LAMINATE	FLOOR: CERAMIC TILE	FLOOR: SHEET VINYL	FLOOR:	WALL: PAPER LESS GYPSUM WALL BOARD (PRIME 1 COAT, 2 FINISH COATS)	WALL: TILE	WALL: CONCRETE PAPER LESS GWB at ENTRY WALL ONLY, (PRIME 1 COAT, 2 FINISH COATS)	WALL: NONE	BASE: CONCRETE	BASE: VINYL BASE	BASE: NONE	BASE:	CEILING: GYPSUM WALL BOARD (PAINTED)	CEILING:	CEILING:	CEILING: NONE	REMARKS
GROUND LEVEL	001 ENTRY				●		●					●			●				INSTALL FLOOD RESISTANT WALLBOARD ON NEW WALLS, UNDERSIDE OF STAIRS & PREVIOUSLY UNFINISHED WALLS. FURR AS REQ'D. REPAIR EXIST. WALLS.
	002 GARAGE	●							●				●		●				FIRE CODE GWB CLG. at U/S OF EXIST. FLOOR JOISTS ABOVE. BOX OUT ALL LOWER BEAMS W/ FIRE CODE GWB. PROV. SOLID BLOCKING IN EXIST. FLOOR FRAMING AS REQ'D.

REFERENCES ALL WALL SURFACES AS ORIENTED ON FLOOR PLAN

PLAN NORTH

REFERENCES NORTH WALL SURFACE AS ORIENTED ON FLOOR PLAN

NOTE: ALL FINISH CLASSIFICATIONS TO MEET ALL APPLICABLE FIRE CODE REQUIREMENTS & STANDARDS

NOTE:

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

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87 Atlantic Avenue
Groton, CT 06340

date	description	no.

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SCHEDULES

A-5.0

date	20 MAY 2016
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project no.	1347-44
application no.	2184

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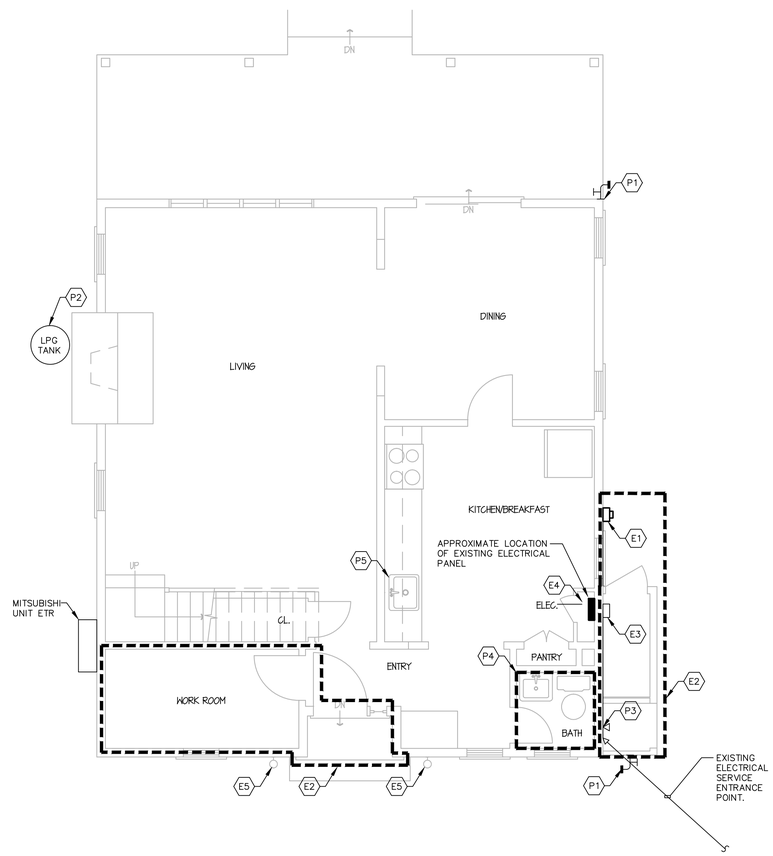
PLUMBING DEMOLITION KEY NOTES

- P1 REMOVE EXISTING HOSE BIBB AND ALL ASSOCIATED PIPING BACK TO NEAREST ACTIVE MAIN.
- P2 REMOVE EXISTING PROPANE TANK. STORE AND PROTECT FOR FUTURE USE.
- P3 REMOVE EXISTING OUTDOOR SHOWER AND ASSOCIATED ACCESSORIES. REMOVE CW AND HW PIPING 1' INSIDE OF STRUCTURE AND CAP FOR FUTURE CONNECTIONS.
- P4 REMOVE SANITARY PIPING SERVING BATHROOM BACK TO STACK. SANITARY RISERS TO FIXTURES EXISTING TO REMAIN FOR RECONNECTION.
- P5 REMOVE SANITARY PIPING SERVING KITCHEN SINK TO STACK. SANITARY RISER TO SINK EXISTING TO REMAIN FOR RECONNECTION.

ELECTRICAL DEMOLITION KEY NOTES

- E1 REMOVE EXISTING ELECTRIC SERVICE TO THE RESIDENCE, INCLUDING WEATHER HEAD AND ALL ASSOCIATED WIRING FROM WEATHER HEAD TO METER, METER, METER SOCKET, FEEDER AND CONNECTION TO MAIN ELECTRICAL PANEL IN THE RESIDENCE.
- E2 REMOVE ALL ELECTRICAL LIGHTS, LIGHTING SWITCHES, POWER OUTLETS AND ALL ASSOCIATED WIRING WITHIN THIS AREA BACK TO PANEL OF ORIGIN.
- E3 REMOVE EXISTING CATV AND PHONE SERVICE TO RESIDENCE BACK TO POINT OF ENTRY. DISTRIBUTION EQUIPMENT/BOXES SHALL BE STORED AND PROTECTED FOR FUTURE REUSE.
- E4 REMOVE EXISTING ELECTRICAL PANEL AND ALL ASSOCIATED WIRING FROM THIS POINT BACK TO ELECTRICAL METER ENCLOSURE. BRANCH CIRCUIT WIRING TO REMAIN. BRANCH CIRCUIT WIRING SHALL BE PROTECTED AND MADE SAFE FOR FUTURE EXTENSION AND RECONNECTION.
- E5 EXISTING EXTERIOR LIGHT FIXTURES TO REMAIN. REMOVE WIRING BACK TO LIGHTING SWITCH LOCATION. REMOVE LIGHTING SWITCH. BRANCH CIRCUIT WIRING TO REMAIN. PROTECT AND MAKE SAFE FOR FUTURE RECONNECTION.



1 / MEP-1.0 1st FLOOR PLAN

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

NORTH

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87 Atlantic Avenue
Groton, CT 06340

CES Consulting Engineering Services, Inc.
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Tel. (860) 632-1682
Fax. (860) 632-1768
CES #2014064.00

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MEP DEMOLITION FLOOR PLANS

MEP-1.0

date	20 MAY 2016
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project no.	2014064.00
application no.	2184

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GENERAL NOTES

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.
3. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL SPECIFICATIONS FOR ALTERNATE SCOPE OF WORK UNDER THIS PROJECT
4. EXISTING WATER HEATER TO REMAIN.

PLUMBING KEY NOTES

P1 EXISTING ABOVE GROUND PROPANE TANK SHALL BE ANCHORED TO CONCRETE PAD PER FEMA, ARCHITECTURAL DETAILS, AND STRUCTURAL DETAILS. PROVIDE FULL SIZE LPG PIPING EXTENSION TO EXISTING LPG RISER SERVING RESIDENCE.

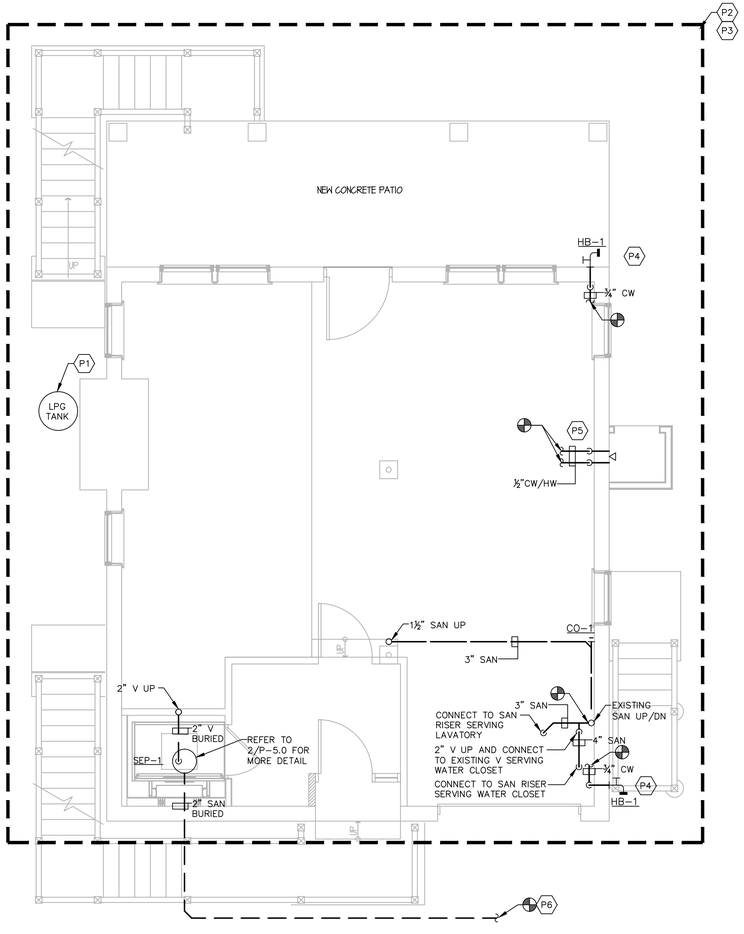
P2 PROVIDE PROPANE, SANITARY WASTE, HOT WATER, AND COLD WATER PIPING EXTENSIONS AS REQUIRED FOR RAISING OF HOUSE. CONTRACTOR TO FIELD VERIFY PIPING LOCATIONS AND SIZES PRIOR TO BIDDING AND INSTALLATION.

P3 ALL NEW AND EXISTING DOMESTIC COLD AND HOT WATER SUPPLY PIPING IN UNCONDITIONED GROUND LEVEL SPACE SHALL BE INSULATED WITH 1" FIBERGLASS INSULATION WITH CONTINUOUS PVC JACKETING. ALL HOT AND COLD WATER PIPING IN UNCONDITIONED GROUND LEVEL SPACE SHALL BE HEAT TRACED WITH SELF REGULATION HEAT TRACE CABLE MODEL H612 AS MANUFACTURED BY PENTAIR. CABLE SHALL BE 120V INPUT AND HAVE AN OUTPUT OF 6W PER FOOT. PROVIDE ONE HEAT TAPE FOR HOT WATER PIPING AND ONE HEAT TAPE FOR COLD WATER PIPING. PROVIDE ALL NECESSARY ACCESSORIES NEEDED FOR COMPLETE AND OPERATIONAL SYSTEM. PROVIDE ONE 20A/120V DEDICATED POWER CIRCUIT FOR EVERY 150 FEET OF HEAT TRACE CABLE.

P4 PROVIDE NEW EXTERIOR WALL HYDRANT 3' ABOVE FINAL FINISHED GRADE. HOSE BIBB SHALL BE FREEZELESS, ANTISIPHON, WITH ¾" THREADED OUTLET MODEL 17 AS MANUFACTURED BY WOODFORD OR APPROVED EQUAL. PROVIDE LOW POINT DRAIN ON PIPING DROP FROM HOUSE. SEE DETAIL 1/P5.0 FOR MORE DETAILS. CONNECT CW PIPING SERVING HOSE BIBB TO NEAREST ACTIVE MAIN.

P5 PROVIDE NEW EXPOSED SHOWER HEAD MODEL SC-1220-AF AS MANUFACTURED BY SPEAKMAN. CONNECT CW AND HW PIPING SERVING SHOWER HEAD TO NEAREST ACTIVE MAINS. PROVIDE ISOLATION VALVE ON DROPS ABOVE FLOOD PLANE. PROVIDE LOW POINT DRAIN ON PIPING DROPS FROM HOUSE.

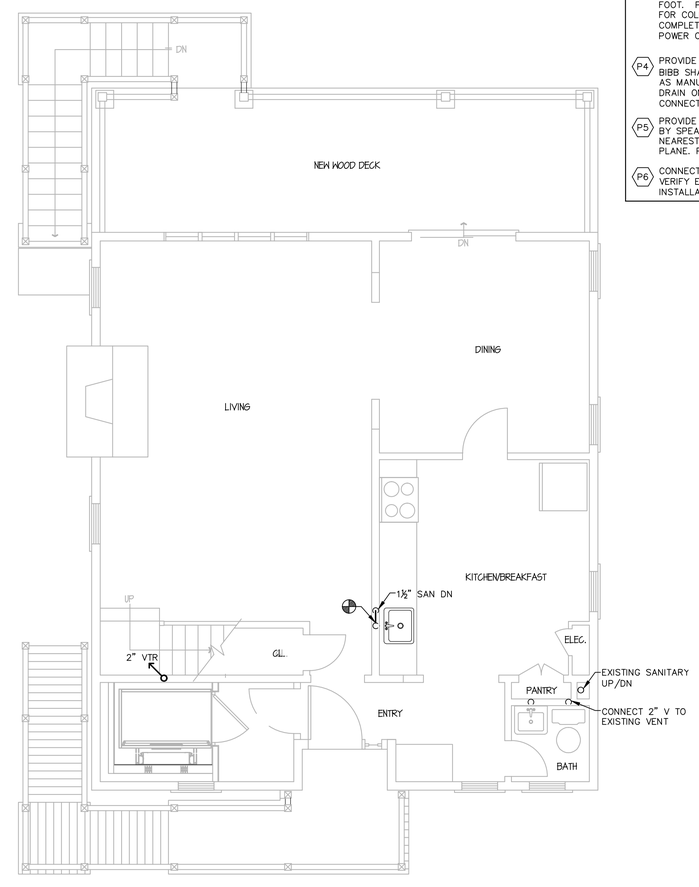
P6 CONNECT 2" SAN FROM SEP-1 TO BUILDING SEWER. CONTRACTOR TO FIELD VERIFY EXACT LOCATION AND ELEVATION PRIOR TO FABRICATION AND INSTALLATION. SEE DETAIL 2/P5.0 FOR MORE DETAIL.



1 / P-1.0 GROUND LEVEL PLAN

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

NORTH



2 / P-1.0 1ST FLOOR PLAN

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

NORTH

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PLUMBING FLOOR PLANS

P-1.0

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PLUMBING SYMBOL LEGEND

SYMBOL	DESCRIPTION
M	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
	HOSE BIBB

PLUMBING FIXTURE CONNECTION SCHEDULE

FIXTURE TYPE	WASTE CONNECTION	VENT CONNECTION	COLD WATER CONNECTION	HOT WATER CONNECTION
HOSE BIB	–	–	3/4"	–
OUTDOOR SHOWER	–	–	1/2"	1/2"

PUMP SCHEDULE - OPTION A ALTERNATE

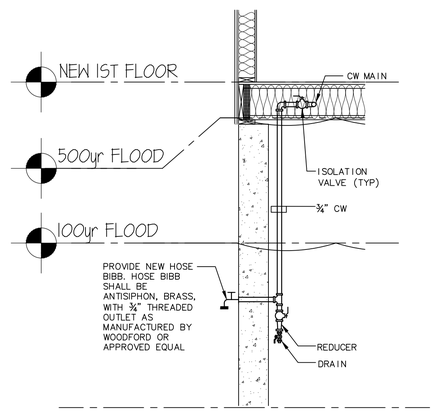
SYMBOL	MANUFACTURER/ MODEL NUMBER	TYPE	LOCATION	SYSTEM SERVED	CAPACITY	CAPACITY FT OF HEAD	ELEC. DATA	REMARKS
SEP–1	LITTLE GIANT MODEL # 10EC–CIA–SFS	SP	ELEVATOR PIT	SANITARY	28	30	115 V 1 PH ½ HP	ALL

NOTES:

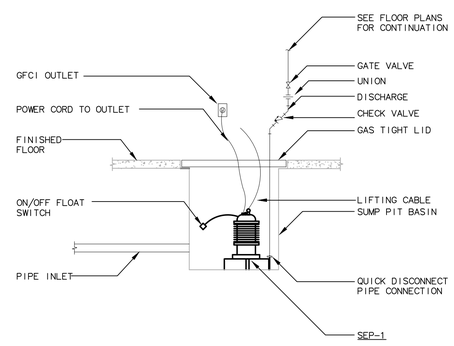
IL = IN–LINE PUMP
SP = SUBMERSIBLE PUMP

REMARKS:

1. LOCATE SUMP IN COVERED 24"LX24"WX12"D SUMP PIT WITH 3" CURB. SEE ARCHITECTURAL DRAWINGS FOR MORE DETAIL.
2. BASE MATERIAL OF SUMP PUMP SHALL BE POLYPROPYLENE.
3. PUMP DESIGNED FOR CONTINUOUS DUTY. IN THE EVENT OF SEVERE FLOODING POWER TO PUMP SHALL BE MANUALLY TURNED OFF ON CONTROL PANEL.



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



2 SUMP PUMP DETAIL
N.T.S.

GENERAL PROCEDURES ALL TRADES

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

PLUMBING

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

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

REHABILITATION and MITIGATION for the JENNINGS RESIDENCE APPLICATION No. 2184
87 Atlantic Avenue
Groton, CT 06340

CES Consulting Engineering Services, Inc.
1511 Middle Street
Middletown, CT 06457
Tel: (860) 632-1682
Fax: (860) 632-1768
CES #2014064.00

date	description	no.

revisions

PLUMBING SCHEDULES, DETAILS AND SPECIFICATIONS

P-5.0

date	20 MAY 2016
drawn	ANK
scale	AS SHOWN
checked	DTB
project no.	2014064.00
application no.	2184

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MECHANICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
T	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

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 GENERALITY THEREOF CONSISTS OF FURNISHING LABOR, MATERIALS, EQUIPMENT, HOISTING, PLANT, TRANSPORTATION, RIGGING, STAGING, APPURTENANCES, AND SERVICES NECESSARY AND/OR INCIDENTAL TO PROPERLY COMPLETE ALL WORK AS SHOWN ON THE DRAWINGS AND AS DESCRIBED HEREIN.
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   A. FURNISH: THE TERM "FURNISH" MEANS TO "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."
   B. INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."
   C. PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."
   D. REMOVE: THE TERM REMOVE MEANS TO DISCONNECTFROM ITS PRESENT POSITION, REMOVE FROM THE PREMISES AND TO DISPOSE OF IN A LEGAL MANNER.'
   E. SUBSTITUTIONS: 'SUBSTITUTIONS' ARE REQUESTS FOR CHANGES IN PRODUCTS, MATERIALS AND METHODS OF CONSTRUCTION AS PROPOSED BY THE CONTRACTOR AFTER AWARD OF THE CONTRACT.
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   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.
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      b. IDENTIFICATION OF PRODUCTS AND MATERIALS INCLUDED.
      c. COMPLIANCE WITH SPECIFIED STANDARDS AND PERFORMANCE DATA AS INDICATED.
      d. NOTATION OF COORDINATION REQUIREMENTS.
      e. NOTATION OF DIMENSIONS ESTABLISHED BY FIELD MEASUREMENT.
      f. SUBMIT 3 BLACK-LINE PRINTS AND 2 ADDITIONAL PRINTS WHERE REQUIRED FOR MAINTENANCE MANUALS, PLUS THE NUMBER OF PRINTS NEEDED BY THE ENGINEER FOR DISTRIBUTION. ONE PRINT WILL BE RETAINED; THE REMAINDER RETURNED. ONE OF THE PRINTS RETURNED SHALL BE MARKED-UP AND MAINTAINED AS A "RECORD DOCUMENT".
      g. DO NOT USE SHOP DRAWINGS WITHOUT AN APPROPRIATE FINAL STAMP INDICATING ACTION TAKEN IN CONNECTION WITH CONSTRUCTION.
      h. DO NOT ORDER ANY MATERIALS OR EQUIPMENT PRIOR TO RECEIVING FINAL APPROVED SHOP DRAWINGS.
      i. PROVIDE SUBMITTALS AS INDICATED IN SPECIFIC SPECIFICATION SECTIONS.
9. USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND THE METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK.
10. THE CONTRACTOR SHALL COORDINATE ALL INTERRUPTIONS OF SERVICES AND LIMITATIONS OF ACCESS WITH THE OWNER NO LESS THAN 5 DAYS PRIOR TO THE INTERRUPTION.
11. OPERATION AND MAINTENANCE
   A. UPON COMPLETION OF ALL WORK AND TESTS, THE CONTRACTOR SHALL INSTRUCT THE OWNER OR THE OWNER'S REPRESENTATIVE IN THE OPERATION, ADJUSTMENT AND MAINTENANCE OF ALL EQUIPMENT FURNISHED. THE CONTRACTOR SHALL GIVE AT LEAST SEVEN (7) DAYS NOTICE TO THE OWNER AND THE ENGINEER IN ADVANCE OF THIS PERIOD.
   B. THE CONTRACTOR SHALL PREPARE THREE (3) COPIES OF A COMPLETE OPERATION AND MAINTENANCE MANUAL, BOUND IN BOOKLET FORM. ORGANIZE OPERATING AND MAINTENANCE DATA INTO SUITABLE SETS OF MANAGEABLE SIZE. BIND PROPERLY INDEXED DATA IN INDIVIDUAL HEAVY-DUTY 3-RING VINYL-COVERED BINDERS, WITH POCKET FOLDERS FOR 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.

HVAC SPECIFICATIONS

1. PIPING AND FITTINGS
   A. 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.
   B. CONDENSATE DRAIN [AND PUMPED CONDENSATE]: SHALL BE SCHEDULE 40 PVC WITH SOLVENT WELD FITTINGS OR TYPE L COPPER TUBING WITH 95-5 TIN-ANTIMONY SOLDER FILLER METALS.
2. FLUE AND COMBUSTION AIR PIPING
   A. ALL NATURAL GAS FIRED EQUIPMENT COMBUSTION AIR PIPING, FLUE AND JOINTS SHALL BE SCHEDULE 40 POLYVINYL CHLORIDE (PVC). JOINTS SHALL BE SOLVENT WELD.
3. INSULATION:
   A. INSULATION THICKNESS SHALL BE IN ACCORDANCE WITH LATEST EDITION OF ATHE IECC EXCEPT THAT PIPE INSULATION SHALL NOT BE LESS THAN 1" THICK AND, FLEXIBLE DUCTWORK INSULATION SHALL NOT BE LESS THAN 1-1/2" THICK. ALL INSULATION MATERIALS, ADHESIVES, COATINGS, AND OTHER ACCESSORIES SHALL HAVE FLAME SPREAD RATINGS OF 25 OR LESS, AND SMOKE DEVELOPED RATINGS OF 50 OR LESS AS TESTED BY ASTM E-84 (NFPA 255) METHOD. ALL INSULATION MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND IN ACCORDANCE WITH THE LATEST EDITION OF SMACNA AND ASHRAE STANDARDS.
   B. PIPE INSULATION SHALL BE FIBERGLASS WITH VAPOR BARRIER JACKET. PROVIDE INSULATION FOR THE FOLLOWING PIPING SYSTEMS:
      a. HVAC HYDRONIC SUPPLY AND RETURN PIPING
4. PIPING INSTALLATIONS
   D. INSTALL PIPING IN ACCORDANCE WITH ALL APPLICABLE CODES AND GOOD PRACTICES.
   E. INSTALL UNIONS OR FLANGES IN PIPES ADJACENT TO EACH VALVE, CONTROL DEVICE AND AT FINAL CONNECTIONS EACH PIECE OF EQUIPMENT.
   F. INSTALL DIELECTRIC UNIONS TO JOIN DISSIMILAR METALS.
   G. INSTALL AND ANCHOR PIPING TO ENSURE PROPER EXPANSION AND CONTRACTION.
   H. PROVIDE MANUAL AIR VENTS AT ALL HIGH POINTS AND DRAIN VALVES AT ALL LOW POINTS.
   I. ANCHOR PIPING TO ENSURE PROPER DIRECTION OF EXPANSION AND CONTRACTION.
   J. SUPPORT PIPING TO PREVENT VIBRATION OR SAGGING. PROVIDE HANGER SPACING ACCORDING TO DISTANCES LISTED IN APPLICABLE CODES AND REGULATIONS.
6. TESTING , ADJUSTING AND BALANCING
   A. 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.
   B. 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.
   C. 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:
      a. ALL AIR HANDLING EQUIPMENT
      b. ALL PUMPING SYSTEMS
      c. ALL SUPPLY AIR SYSTEMS
      d. ALL RETURN AIR SYSTEMS
      e. ALL HYDRONIC SYSTEMS
      f. VERIFY OPERATION OF ALL TEMPERATURE CONTROL SYSTEMS
      g. TEST SYSTEMS FOR PROPER SOUND AND VIBRATION LEVELS
   D. 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.
   E. 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 CEILINGS.

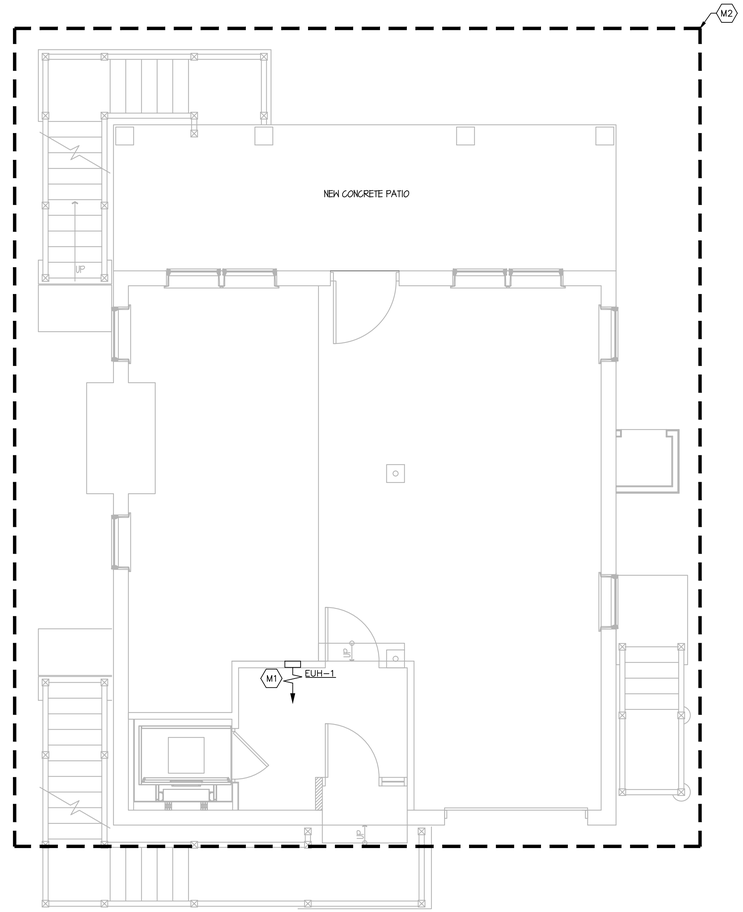
GENERAL NOTES ALL TRADES

1. ALL MECHANICAL ITEMS SHALL BE INSTALLED ABOVE THE FLOOD PLANE AS INDICATED ON THE ARCHITECTURAL PLANS.
2. WORK SHALL BE COORDINATED WITH ARCHITECTURAL PLANS INCLUDING ACCESS PANELS FOR VALVES AND EQUIPMENT, DIFFUSER LOCATIONS, THERMOSTAT AND SENSOR LOCATIONS, ETC.
3. CONTRACTOR SHALL FIELD VERIFY ACTUAL CONDITIONS PRIOR TO PROVIDING ALL EQUIPMENT AND PIPING.
4. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL SPECIFICATIONS FOR ALTERNATE SCOPE OF WORK UNDER THIS PROJECT.

MECHANICAL KEY NOTES

M1 PROVIDE SMALL FAN-FORCED WALL HEATER ABOVE 100 YR BASE FLOOD AS SPECIFIED ON ARCHITECTURAL ELEVATIONS. WALL HEATER SHALL BE 120V, 1500/750 WATT WITH A CAPACITY OF 5120/2560 BTU/HR. WALL HEATER SHALL BE MODEL FAHRENHEAT NUMBER FFH1612 AS MANUFACTURED BY MARLEY ENGINEERED PRODUCTS OR APPROVED EQUAL.

M2 PROVIDE ALL NECESSARY EXTENSIONS FOR RELOCATION OF EXISTING MITSUBISHI UNIT.



1 / M-1.0 GROUND LEVEL PLAN

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

NORTH

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

REHABILITATION and MITIGATION for the JENNINGS RESIDENCE
APPLICATION No. 2184
87 Atlantic Avenue
Groton, CT 06340

CES Consulting Engineering Services, Inc.
511 Middle Street
Middletown, CT 06457
Tel. (860) 632-1682
Fax. (860) 632-1768
CES #2014064.00

date	description	no.

revisions

MECHANICAL FLOOR PLANS LEGENDS AND SPECIFICATIONS

M-1.0

date	20 MAY 2016
drawn	ANK
scale	AS SHOWN
checked	DTB
project no.	2014064.00
application no.	2184

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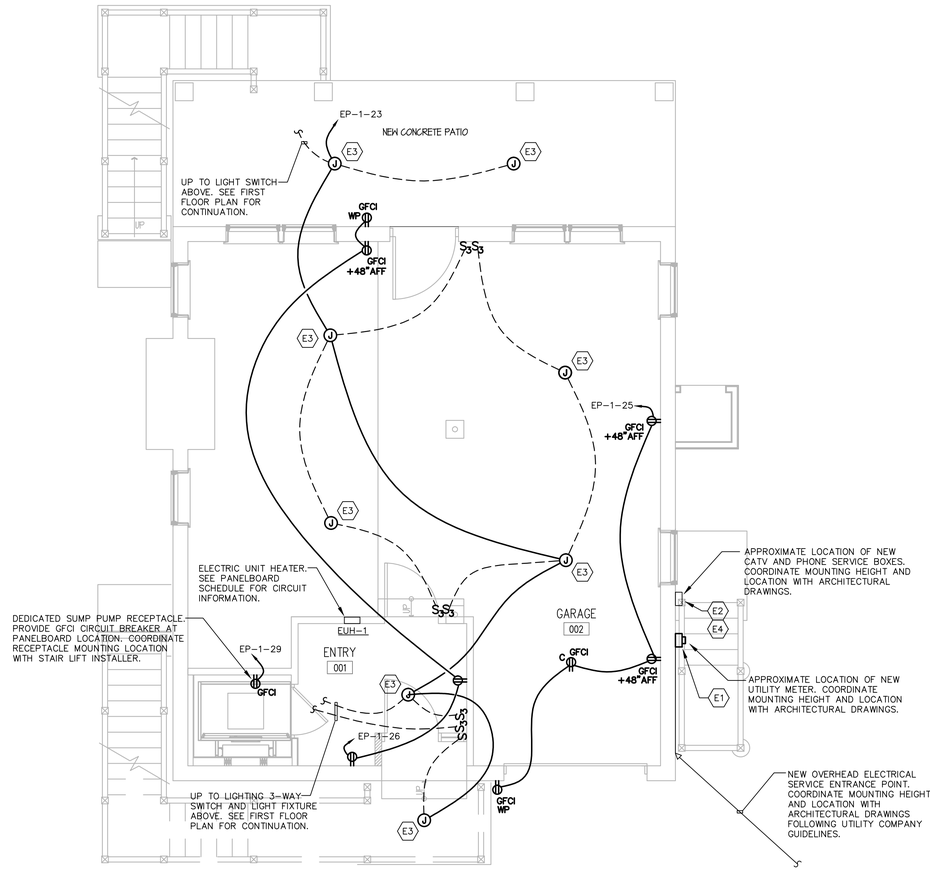
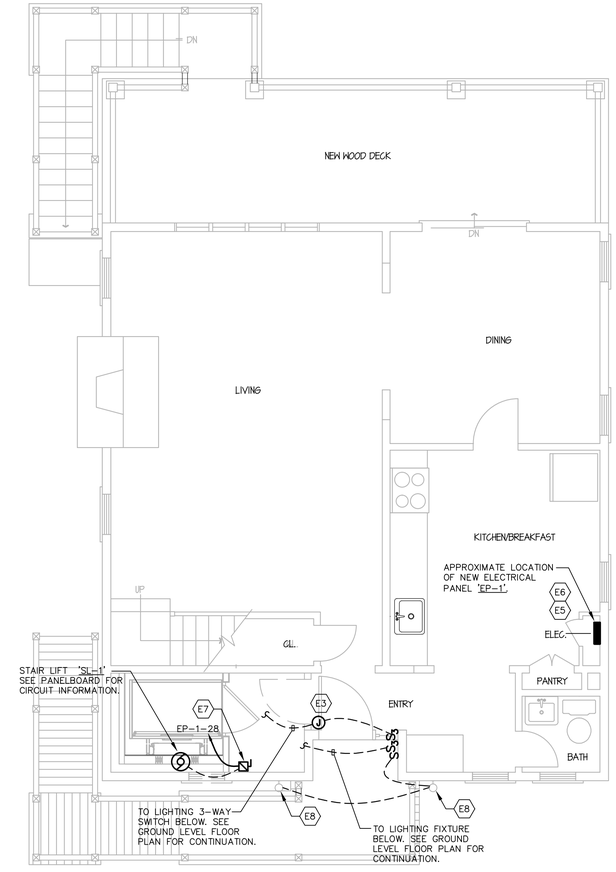


1 E-1.0 GROUND LEVEL PLAN

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

NORTH



2 E-1.0 1ST FLOOR PLAN

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

NORTH

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 CIRCUIT BREAKERS IN PANEL INDICATED UNLESS NOTED OTHERWISE.
5. CONTRACTORS SHALL REFER TO THE ARCHITECTURAL SPECIFICATIONS FOR ALTERNATE SCOPE OF WORK UNDER THIS PROJECT.

ELECTRICAL KEY NOTES

E1 PROVIDE NEW ELECTRIC SERVICE TO THE RESIDENCE. PROVIDE NEW WEATHER HEAD, WIRING (FROM WEATHER HEAD TO METER), METER, METER SOCKET, NEW FEEDER TO ELECTRICAL PANEL 'EP-1' AND CONNECTION TO ELECTRICAL PANEL 'EP-1'. REFER TO DISTRIBUTION RISER DIAGRAM FOR MORE INFORMATION. COORDINATE WITH THE UTILITY COMPANY ALL WORK AND PARTS ASSOCIATED WITH PROVIDING A NEW SERVICE.

E2 NEW TELEPHONE SERVICE SHALL BE PROVIDED TO THE RESIDENCE. CONNECT TO EXISTING TELEPHONE DISTRIBUTION EQUIPMENT AND CABLING. COORDINATE WITH THE TELEPHONE COMPANY ALL WORK AND PARTS ASSOCIATED WITH PROVIDING A NEW SERVICE.

E3 PROVIDE 12-2 WIRING AND JUNCTION BOX TO THIS LOCATION. WIRING AND JUNCTION BOX SHALL BE PROTECTED FOR FUTURE USE AND INSTALLATION OF LIGHTING FIXTURE. OWNER TO SELECT LIGHTING FIXTURE BASED ON ALLOWANCE PROVIDED UNDER THIS PROJECT. REFER TO PANELBOARD SCHEDULE FOR CKT INFORMATION. REFER TO DWGS FOR WIRING INFORMATION.

E4 NEW CATV SERVICE SHALL BE PROVIDED. CONNECT TO EXISTING CATV DISTRIBUTION EQUIPMENT AND CABLING. COORDINATE WITH THE CATV COMPANY ALL WORK AND PARTS ASSOCIATED WITH PROVIDING A NEW SERVICE.

E5 PROVIDE NEW PANEL 'EP-1' 200A/MCB, 2P, 120/240V, 30-POLE, 3-WIRE. PROVIDE RECONNECTION TO EXISTING BRANCH CIRCUITS. ELECTRICAL CONTRACTOR TO VERIFY CIRCUIT BREAKERS IN USE AND LABEL ACCORDINGLY.

E6 PROVIDE NEW SPLICE/JUNCTION BOX FOR EXTENSION OF EXISTING BRANCH CIRCUITS TO LOCATION OF NEW PANEL 'EP-1'. REFER TO FLOORPLAN FOR APPROXIMATE LOCATION.

E7 PROVIDE LEVER ACTION DISCONNECT, SINGLE-PHASE, FUSED AT 20A WITH AN AUXILIARY CONTACT ON THE MAIN POWER SUPPLY. INSTALL FOLLOWING STAIR LIFT MANUFACTURER RECOMMENDATIONS AND INSTRUCTIONS. PROVIDE ALL ASSOCIATED PARTS AND MATERIALS FOR A COMPLETE AND FUNCTIONAL INSTALLATION.

E8 EC SHALL PROVIDE COMPATIBLE SCREW-IN LED BULBS FOR EXISTING EXTERIOR LIGHTING FIXTURES UNDER THIS KEYNOTE. PROVIDE NEW 14-2 WIRING AND SINGLE POLE SWITCH AT APPROXIMATE LOCATION SHOWN ON PLANS. PROVIDE CONNECTION TO EXISTING/PREVIOUS BRANCH CIRCUIT.

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date	description	no.

revisions

ELECTRICAL FLOOR PLANS

E-1.0

date	20 MAY 2016
drawn	VCM
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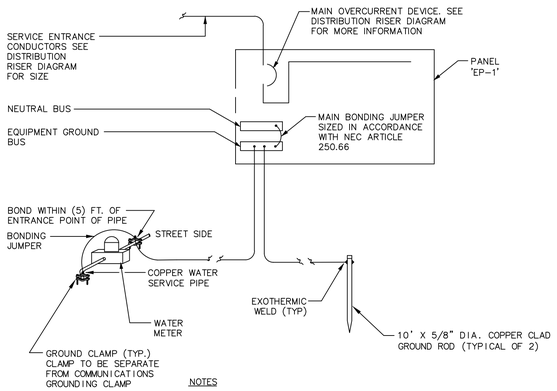
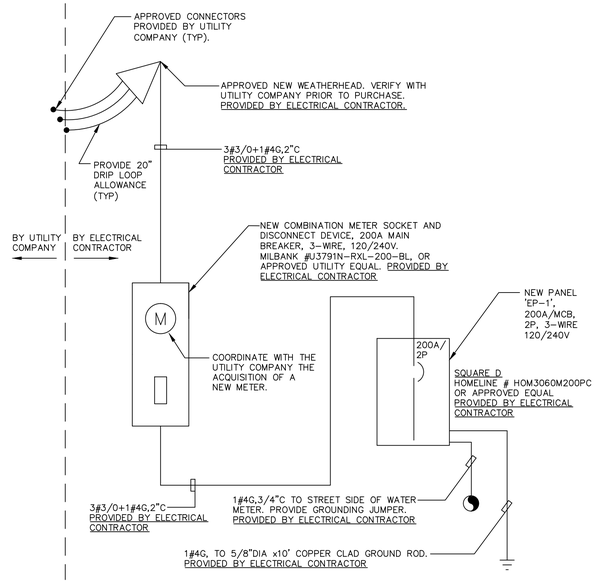


NOTES

1. THE GROUNDING ELECTRODE SYSTEM SHALL COMPLY WITH ARTICLE 250 OF THE CURRENT N.E.C.
2. BOND TO ALL GROUNDING ELECTRODE TYPES PRESENT.

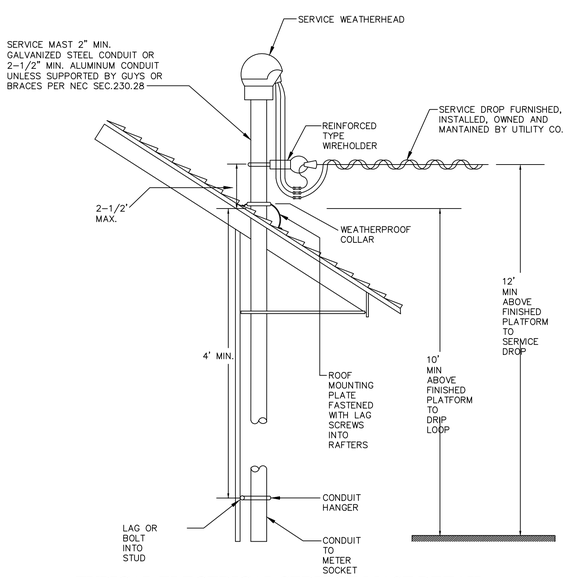
TYPICAL MAIN ELECTRIC GROUNDING DETAIL

N.T.S.



SERVICE ENTRANCE / DISTRIBUTION RISER DIAGRAM

N.T.S.



TYPICAL ELECTRICAL SERVICE MAST DETAIL

N.T.S.

ELECTRICAL ABBREVIATIONS

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

ELECTRICAL SYMBOL LIST

SYMBOL	DESCRIPTION
	SURFACE MOUNTED 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
J , J	JUNCTION BOX
	SPECIAL PURPOSE RECEPTACLE, NEMA CONFIGURATION AS INDICATED
S_3	THREE WAY SWITCH
S_2	TWO POLE MOTOR RATED TOGGLE SWITCH
S	SINGLE POLE SWITCH
GFCI	GFCI DUPLEX RECEPTACLE

PANELBOARD SCHEDULE

PANELBOARD	LOCATION	MAIN	VOLTAGE	PHASE	WIRE	FEEDER	SE RATED	MOUNTING	MIN SCR	REMARKS
EP-1	KITCHEN	200A/2P MCB	120/240	1	3	3#3/0+1#4G,2"C	N/A	SURFACE	10,000	–

CKT	DESCRIPTION	P	AT	AF	CIRCUITRY	KVA	CKT	DESCRIPTION	P	AT	AF	CIRCUITRY	KVA
1	EXISTING	2	40	40	8-3	8.0	2	EXISTING	2	30	30	12-3	5.0
3	–	–	–	–	–	–	4	–	–	–	–	–	–
5	EXISTING**	1	15	15	14-2	1.2	6	EXISTING**	1	20	20	12-2	0.36
7	EXISTING**	1	15	15	14-2	1.2	8	EXISTING	2	20	20	12-3	3.6
9	EXISTING**	1	20	20	12-2	1.2	10	–	–	–	–	–	–
11	EXISTING	1	15	15	14-3	1.0	12	EXISTING**	1	20	20	12-2	0.18
13	–	–	–	–	–	–	14	EXISTING**	1	20	20	12-2	0.18
15	EXISTING**	1	15	15	14-2	0.18	16	EXISTING**	1	15	15	14-2	0.18
17	EXISTING**	1	20	20	12-2	1.0	18	EXISTING**	1	15	15	14-2	0.90
19	EXISTING**	1	15	15	14-2	0.15	20	EXISTING**	1	15	15	14-2	0.10
21	EXISTING**	1	15	15	14-2	1.2	22	EXISTING**	1	15	15	14-2	0.10
23	LTG – GROUND LVL**	1	15	15	14-2	0.15	24	EXISTING**	1	15	15	14-2	0.20
25	RCPT – GARAGE**	1	20	20	12-2	0.72	26	RCPT – GROUND LVL**	1	20	20	12-2	0.54
27	EUH-1**	1	20	20	12-2	1.5	28	SL-1**	1	20	20	12-2	1.2
29	SEP-1**	1	20	20	12-2	1.2	30	SPARE**	1	15	15	–	–
					SUBTOTAL KVA	17.33						SUBTOTAL KVA	12.48
												TOTAL KVA	29.81

* CONTRACTOR SHALL FIELD VERIFY THE WIRING SIZE OF EXISTING CIRCUITS AND PROVIDE APPROPRIATELY SIZED AFCI CIRCUIT BREAKERS.

** CIRCUIT SHALL BE PROVIDED WITH CIRCUIT BREAKER OF AFCI TYPE.

PANELBOARD REMARKS:

1. PROVIDE WITH EQUIPMENT GROUND BUS.
2. PROVIDE WITH 100% RATED NEUTRAL BUS.
3. BRANCH CIRCUIT BREAKERS SHALL BE PLUG-ON TYPE.
4. PROVIDE WITH HINGED DOOR WITH IN DOOR TRIM.
5. PROVIDE A TYPED WRITTEN PANELBOARD DIRECTORY AND A DIRECTORY HOLDER ON THE INSIDE COVER OF DOOR.
6. PROVIDE WITH COPPER BUS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TYPES AND QUANTITIES OF CIRCUIT BREAKERS INDICATED ON THE DRAWINGS.
8. CIRCUITRY SPECIFIED IS FOR WIRING FROM PANEL TO FIRST DEVICE. CONTRACTOR TO PROVIDE MULTI-CONDUCTOR CABLES AS REQUIRED FOR 3 & 4 WAY SWITCHES IF APPLICABLE.
9. CIRCUITS LABELED AS EXISTING 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 DESIGNATED AS SPARES IN PANEL.
10. CIRCUIT BREAKERS UNDER THIS PROJECT THAT ARE 120V/1P AND ASSOCIATED WITH NEW, OR EXISTING TO-BE-EXTENDED AND RECONNECTED CIRCUITS SHALL BE OF AFCI TYPE. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY QUANTITIES AND CIRCUIT LOCATIONS, AND PROVIDE AFCI CIRCUIT BREAKERS AS NECESSARY.

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

REHABILITATION and MITIGATION for the JENNINGS RESIDENCE APPLICATION No. 2184
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date	description	no.

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ELECTRICAL SYMBOLS, DETAILS, AND SCHEDULES

E-5.0

date	20 MAY 2016
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scale	AS SHOWN
checked	DTB
project no.	2014064.00
application no.	2184

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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 GENERALITY THEREOF CONSISTS OF FURNISHING LABOR, MATERIALS, EQUIPMENT, HOISTING, PLANT, TRANSPORTATION, RIGGING, STAGING, APPURTENANCES, AND SERVICES NECESSARY AND/OR INCIDENTAL TO PROPERLY COMPLETE ALL WORK AS SHOWN ON THE DRAWINGS AND AS DESCRIBED HEREIN.

3. DEFINITIONS: THE FOLLOWING DEFINITIONS APPLY TO THIS CONTRACT

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

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

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

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

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

4. DRAWINGS

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

5. SURVEY AND MEASUREMENTS:

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

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

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

   D. ARRANGE INSTALLATION TO PROVIDE ACCESS TO EQUIPMENT FOR EASY MAINTENANCE AND REPAIR.

6. CODES AND STANDARDS: ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST STATE OF CONNECTICUT ACCEPTED VERSION OF THE FOLLOWING

   A. INTERNATIONAL RESIDENTIAL CODE

   B. INTERNATIONAL BUILDING CODE

   C. INTERNATIONAL PLUMBING CODE

   D. INTERNATIONAL MECHANICAL CODE

   E. NATIONAL ELECTRIC CODE (NFPA 70)

   F. THE LIFE SAFETY CODE (NFPA 101)

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

8. SHOP DRAWINGS:

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

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

      a. DIMENSIONS.

      b. IDENTIFICATION OF PRODUCTS AND MATERIALS INCLUDED.

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

      d. NOTATION OF COORDINATION REQUIREMENTS.

      e. NOTATION OF DIMENSIONS ESTABLISHED BY FIELD MEASUREMENT.

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

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

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

      i. PROVIDE SUBMITTALS AS INDICATED IN SPECIFIC SPECIFICATION SECTIONS.

9. USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND THE METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK.

10. THE CONTRACTOR SHALL COORDINATE ALL INTERRUPTIONS OF SERVICES AND LIMITATIONS OF ACCESS WITH THE OWNER NO LESS THAN 5 DAYS PRIOR TO THE INTERRUPTION.

11. OPERATION AND MAINTENANCE

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

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

   C. OPERATION AND MAINTENANCE MANUAL SHALL INCLUDE THE FOLLOWING:

      a. MANUFACTURER'S PRINTED OPERATING AND MAINTENANCE PROCEDURES.

      b. MAINTENANCE PROCEDURES FOR ROUTINE PREVENTATIVE MAINTENANCE AND TROUBLESHOOTING.

      c. COPIES OF WARRANTIES.

      d. APPROVED SHOP DRAWINGS AND PRODUCT DATA.

      e. BALANCE REPORTS.

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

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

12. AS-BUILT DRAWINGS

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

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

   C. NOTE RELATED CHANGE ORDER NUMBERS WHERE APPLICABLE.

   D. ORGANIZE AS-BUILT DRAWINGS INTO MANAGEABLE SETS, BIND WITH DURABLE PAPER COVER SHEETS, AND PRINT SUITABLE TITLES, DATES AND OTHER IDENTIFICATION ON THE COVER OF EACH SET.

13. OBTAIN IN OWNER'S NAME WRITTEN EQUIPMENT AND MATERIAL WARRANTIES OFFERED IN MANUFACTURER'S PUBLISHED PRODUCT DATA WITHOUT EXCLUSION OR LIMITATION.

14. GUARANTEE WORK OF THESE CONTRACT DOCUMENTS IN WRITING FOR NOT LESS THAN ONE (1) YEAR FROM DATE OF FINAL NOTICE OF ACCEPTANCE. REPAIR OR REPLACE DEFECTIVE MATERIALS, EQUIPMENT, WORKMANSHIP AND INSTALLATION THAT DEVELOP WITHIN THIS PERIOD, PROMPT AND TO OWNER'S SATISFACTION AND CORRECT DAMAGE CAUSED IN MAKING NECESSARY REPAIRS AND REPLACEMENTS UNDER GUARANTEE WITHIN CONTRACT PRICE.

15. SUBMIT TO THE OWNER AN OFFICIAL CERTIFICATE OF INSURANCE FOR THEIR RECORDS.

MEANS AND METHODS ALL TRADES

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

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

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

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

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

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

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

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

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

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

ELECTRICAL SPECIFICATIONS

1. CONTACT THE POWER COMPANY FOR NECESSARY COORDINATION OF SERVICE REQUIREMENTS AND PAY FOR ALL RELATED CHARGES FOR THE SERVICE INSTALLATION. PROVIDE ALL NECESSARY EQUIPMENT, GROUNDING, CONDUITS, WIRE, TRENCHING, SAND AND BACKFILL ETC., FOR THE POWER COMPANY SERVICE CONNECTIONS AND ACTIVATION OF SERVICE FOR THE PROJECT. ALL EQUIPMENT SHALL MEET THE POWER COMPANIES REQUIREMENTS AND SHALL BE SUBMITTED TO THE POWER COMPANY PRIOR TO ORDERING OR INSTALLATION.

2. CONTACT THE TELEPHONE COMPANY FOR NECESSARY COORDINATION OF SERVICE REQUIREMENTS AND PAY FOR ALL RELATED CHARGES FOR THE SERVICE INSTALLATION. PROVIDE ALL BOXES, TERMINATIONS, CONDUITS AND WIRING PER DRAWINGS.

3. CONTACT THE CABLE TELEVISION COMPANY FOR NECESSARY COORDINATION OF SERVICE REQUIREMENTS AND PAY FOR ALL RELATED CHARGES FOR THE SERVICE INSTALLATION. PROVIDE ALL BOXES, TERMINATION, CONDUITS AND WIRING PER DRAWINGS.

4. SERVICE-DISCONNECTING MEANS SHALL BE OF THE TYPE AS INDICATED WITH EXTERNAL HANDLE FOR MANUAL OPERATION. WHEN SERVICE DISCONNECTING MEANS IS A PART OF AN ASSEMBLY, THE ASSEMBLY SHALL BE LISTED AS SUITABLE FOR SERVICE ENTRANCE EQUIPMENT. ENCLOSURES SHALL BE SHEET METAL WITH HINGED COVER FOR SURFACE MOUNTING UNLESS OTHERWISE INDICATED.

5. PANELBOARD/LOAD CENTER:

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

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

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

   D. ENCLOSURE: GENERAL PURPOSE.

   E. BOX: FLUSH TYPE WITH DOOR AND PULL RING LATCH, FINISH IN MANUFACTURER STANDARD GRAY ENAMEL.

6. MOUNT PANELBOARDS, CIRCUIT BREAKERS, AND DISCONNECTING SWITCHES SO HEIGHT OF OPERATING HANDLE AT ITS HIGHEST POSITION IS MAXIMUM 78 INCHES ABOVE FLOOR.

7. ALL BACKBOARDS SHALL UTILIZE FIRE RETARDANT 3/4 INCH PLYWOOD, SIZED AS INDICATED ON THE DRAWINGS.

8. GROUNDING SHALL BE COMPLETED IN ACCORDANCE WITH NFPA 70.

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

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

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 INDICTED WIRING METHODS SHALL BE:

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

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

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

      d. WIRES SUBJECT TO DAMAGE SHALL BE IN PVC CONDUIT.

   B. MAKE ALL SPLICES IN ACCESSIBLE LOCATIONS. MAKE SPLICES IN CONDUCTORS NO. 10 AWG AND SMALLER DIAMETER WITH INSULATED, PRESSURE-TYPE CONNECTOR. MAKE SPLICES IN CONDUCTORS NO. 8 AWG AND LARGER DIAMETER WITH SOLDERLESS CONNECTOR, AND COVER WITH INSULATION MATERIAL EQUIVALENT TO CONDUCTOR INSULATION.

   C. PHASE CONDUCTORS SHALL BE IDENTIFIED BY COLOR CODING. THE COLOR OF THE INSULATION ON PHASES A AND B RESPECTIVELY (FOR SINGLE PHASE) OF DIFFERENT VOLTAGE SYSTEMS SHALL BE AS FOLLOWS: 120/240 VOLT, SINGLE/PHASE: BLACK AND RED.

9. BOXES:

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

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

   C. EXTERIOR BOXES SHALL BE GASKETED AND WATERTIGHT.

10. OUTLETS AND SWITCHES:

   A. ALL OUTLETS AND SWITCHES SHALL BE WHITE.

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

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

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

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

   D. WEATHERPROOF RECEPTACLES SHOWN SHALL BE MOUNTED IN A BOX WITH A GASKETED, WEATHERPROOF, WATERPROOF COVER PLATE AND GASKETED CAP OVER EACH RECEPTACLE OPENING.

   E. WALL SWITCHES SHALL BE OF THE TOTALLY ENCLOSED TUMBLER TYPE. WIRING TERMINALS SHALL BE OF THE SCREW TYPE OR OF SOLDERLESS PRESSURE TYPE HAVING SUITABLE CONDUCTOR-RELEASE ARRANGEMENT. SWITCHES SHALL BE RATED 15 AMPERE 120/277-VOLT FOR USE ON ALTERNATING CURRENT ONLY.

   F. DIMMING SWITCHES (IF APPLICABLE) SHALL BE SLIDE TYPE, SOLID-STATE, FLUSH MOUNTED, AND SIZED FOR THE LOADS.

   G. DEVICE PLATES SHALL BE ONE-PIECE TYPE AND BE PROVIDED FOR ALL RECEPTACLES, OUTLETS, SWITCHES AND FITTINGS. PLATES ON UNFINISHED WALLS AND ON FITTINGS SHALL BE OF IMPACT RESISTANT PLASTIC HAVING ROUNDED OR BEVELED EDGES. PLATES ON FINISHED WALLS SHALL BE IMPACT-RESISTANT PLASTIC. PLATES SHALL BE INSTALLED WITH ALL FOUR EDGES IN CONTINUOUS CONTACT WITH FINISHED WALL SURFACES WITHOUT THE USE OF 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) DOH OCCUPIED REHABILITATION and REBUILDING PROGRAM (OORR)

REHABILITATION and MITIGATION for the JENNINGS RESIDENCE
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