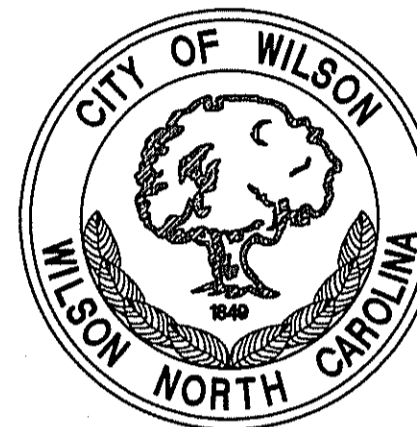


**WILSON FIRE STATION 1**  
*Generator Replacement*  
*for*  
**CITY OF WILSON**  
*Wilson County, North Carolina*  
*September 2020*



MAYOR:

CARLTON L. STEVENS

COUNCIL MEMBERS:

MICHAEL S. BELL  
 DEREK D. CREECH  
 DONALD I. EVANS  
 WILLIAM THOMAS "TOM" FYLE  
 JAMES M. JOHNSON, III  
 LOGAN T. LILES  
 GILLETTIA M. MORGAN

CITY MANAGER:

GRANT W. GOINGS

DEPUTY CITY MANAGER:

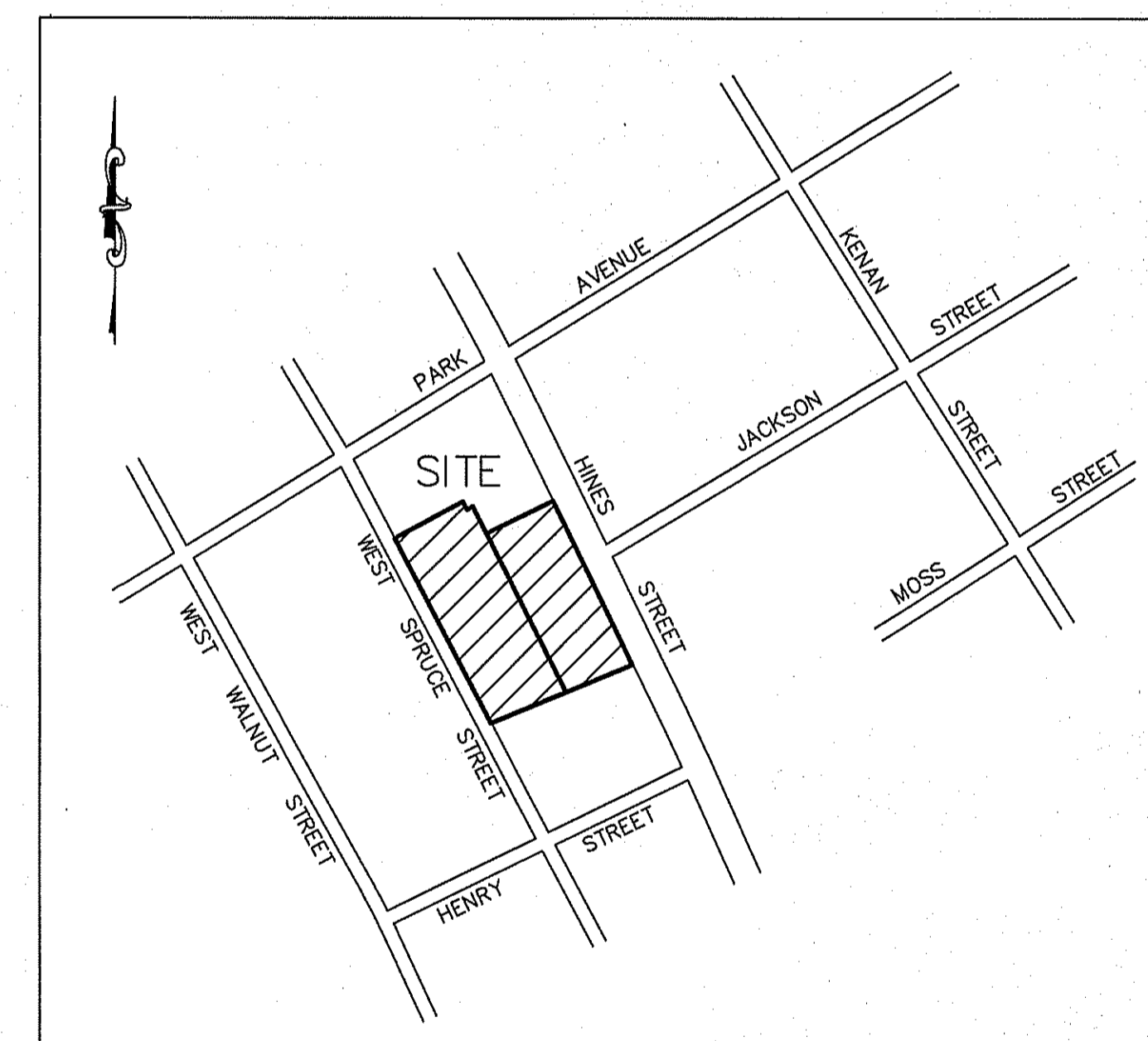
HARRY TYSON

CITY CLERK:

TONYA A. WEST

FIRE CHIEF

ALBERT ALSTON



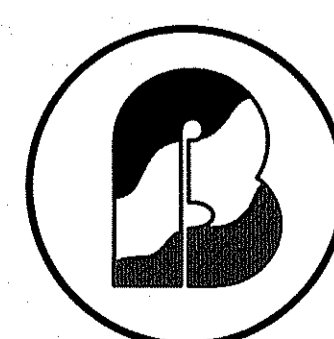
LOCATION MAP  
NO SCALE

**SHEET INDEX**

CV	COVER SHEET
SP1	EXISTING CONDITIONS/DEMOLITION PLAN
EG1 & EG2	GENERATOR SET/ELECTRICAL & GAS PIPING PLAN/DETAILS

PREPARED BY:

BARTLETT ENGINEERING & SURVEYING, PC  
 1906 NASH STREET NORTH  
 WILSON, NORTH CAROLINA 27893-1726

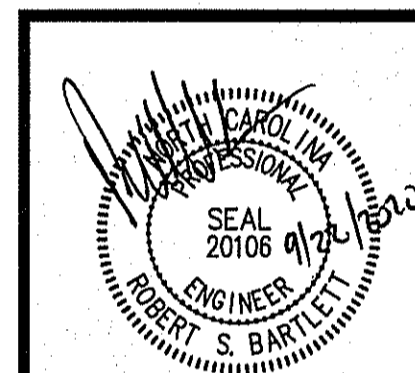
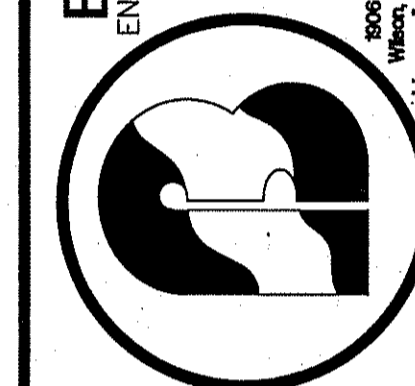


Owner:

Wilson Fire & Rescue Services  
 307 Hines St West Wilson, NC 27893

**BARTLETT**  
 ENGINEERING & SURVEYING, PC

Y 0261 384-0504  
 F 0262 384-0004  
 www.bartlett.com

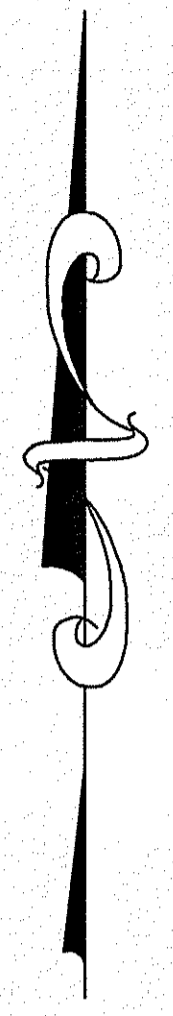
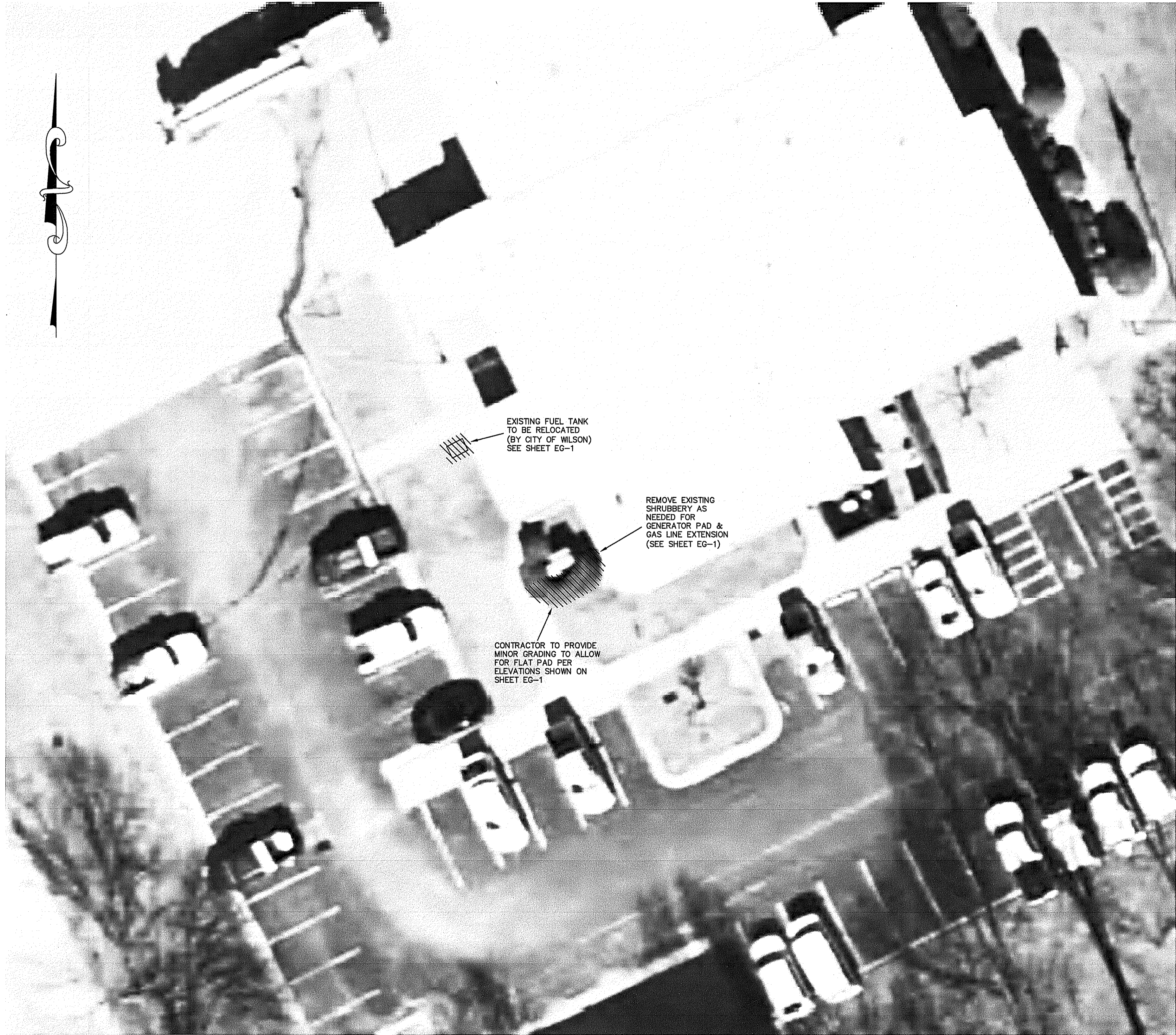


Rev.	Date:	Description:

Title Sheet:  
COVER SHEET

Project:  
Generator Replacement for:  
**Wilson Fire Station 1**  
307 Hines St West Wilson, NC 27893

Drawn by: LR  
 Issue Date: SEPT. 2020  
 Project Number: 20-298  
 Sheet: CV



**EXISTING CONDITIONS:**

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING ALL EXISTING JOB CONDITIONS. ANY ADVERSE CONDITIONS AFFECTING WORK SHOWN ON THESE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER FOR POSSIBLE CLARIFICATION OR RECONCILIATION.

**CONSTRUCTION SAFETY:**

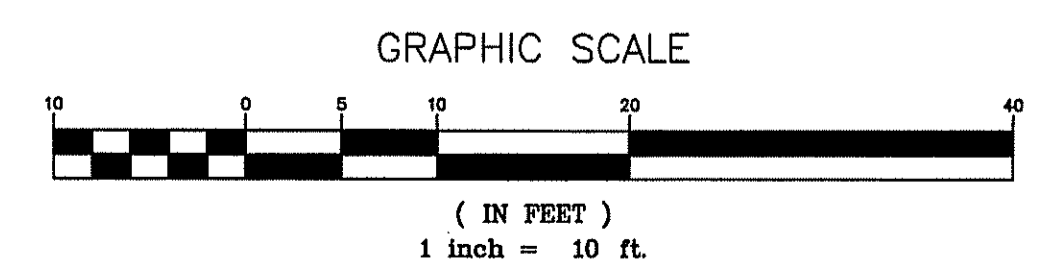
THESE DRAWINGS DO NOT CONTAIN THE REQUIREMENTS FOR JOB SAFETY. ALL PROVISIONS FOR SAFETY SHALL BE SOLE RESPONSIBILITY OF THE CONTRACTOR.

**GENERAL NOTES:**

WORK WITHIN THE NCDOT RIGHT-OF-WAY SHALL CONFORM TO NCDOT STANDARDS AND SPECIFICATIONS. CALL ONE CALL CENTER AT 1-800-632-4949 FOR LOCATIONS OF EXISTING UTILITIES PRIOR TO EXCAVATION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ZONE TRAFFIC CONTROL IN OR ADJACENT TO NCDOT OR CITY RIGHT-OF-WAY. ALL METHODS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND NCDOT STANDARDS.

1. DEMOLITION TO BE PHASED IN ACCORDANCE WITH CONSTRUCTION SEQUENCE AS INDICATED ON SP7
2. UNUSABLE EXCAVATED MATERIALS AND ALL WASTE RESULTING FROM DEMOLITION SHALL BE DISPOSED OF AT AN APPROVED PERMITTED OFF-SITE LOCATION BY CONTRACTOR. CLEAN ASPHALT, CONCRETE AND STONE MAY BE DISPOSED AT CITY OF WILSON RECYCLE YARD ON DOWNING STREET (COORDINATE WITH BILL BASS AT 252-399-2467). CLEAN SOIL MAY BE DISPOSED AT WILSON COUNTY LANDFILL WITH NO TIPPING FEES (COORDINATE WITH ANDY DAVIS 252-399-2823).
3. CONTRACTOR SHALL NOTIFY AND COOPERATE WITH ALL UTILITY COMPANIES OR FIRMS HAVING FACILITIES ON OR ADJACENT TO THE SITE BEFORE DISTURBING, ALTERING, REMOVING, RELOCATING, ADJUSTING OR CONNECTING TO SAID FACILITIES. CONTRACTOR SHALL RAISE OR LOWER TOPS OF EXISTING MANHOLES AS REQUIRED TO MATCH FINISHED GRADES.
4. COORDINATE WITH THE LOCAL UTILITY PROVIDER FOR REMOVAL/RELOCATION OF EXISTING ELECTRICAL TRANSFORMERS AND/OR LIGHT POLES.
5. SIDEWALK AND CURB & GUTTER TO BE REMOVED TO NEAREST JOINT OR SAW-CUT IN A MANNER SUCH THAT NO JOINT IS LESS THAN 5 FEET.
6. ANY EXISTING CURB & GUTTER, SIDEWALK OR ASPHALT DAMAGED DURING CONSTRUCTION WILL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.



Owner:

**Wilson Fire & Rescue Services**  
Wilson, NC 27893  
307 Hines St West

**BARTLETT**  
ENGINEERING & SURVEYING, PC

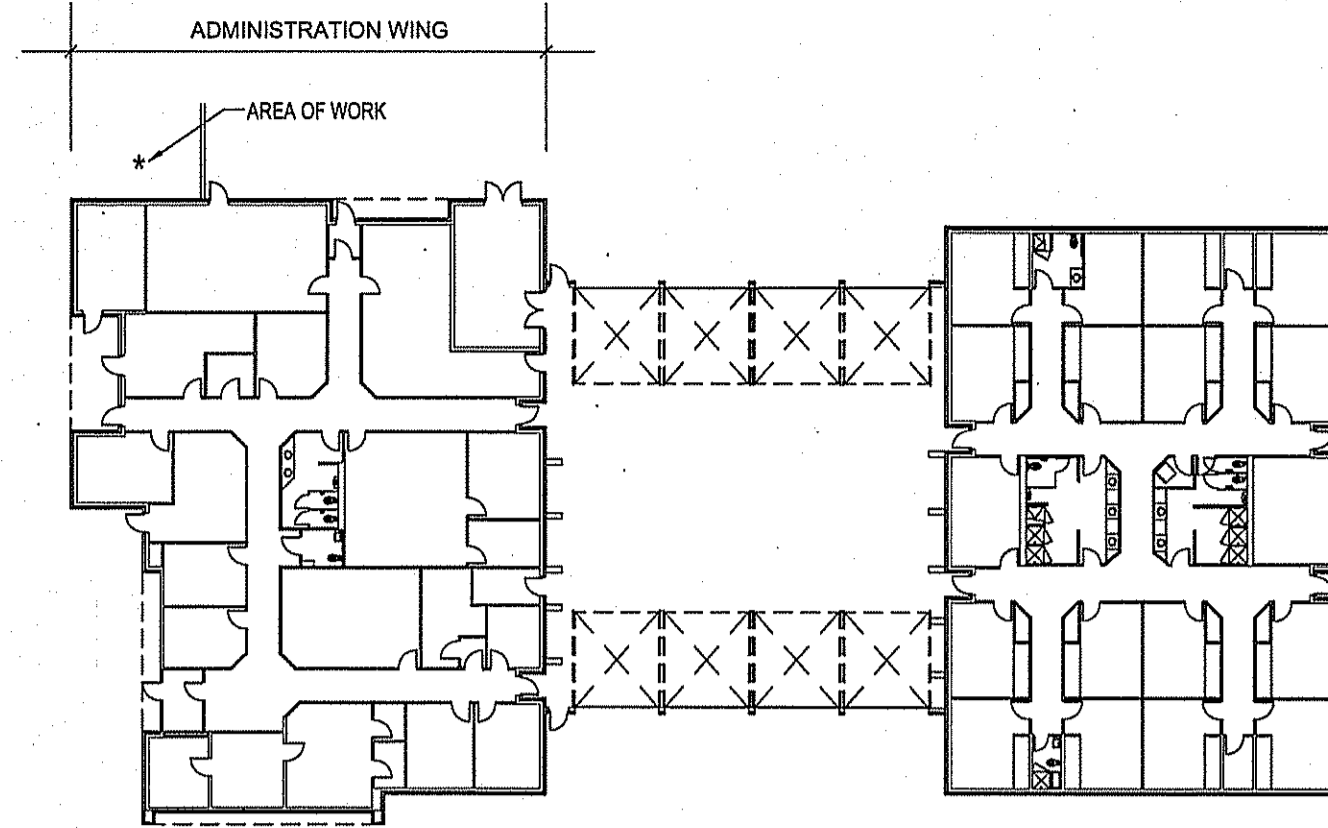


Rev.	Date:	Description:

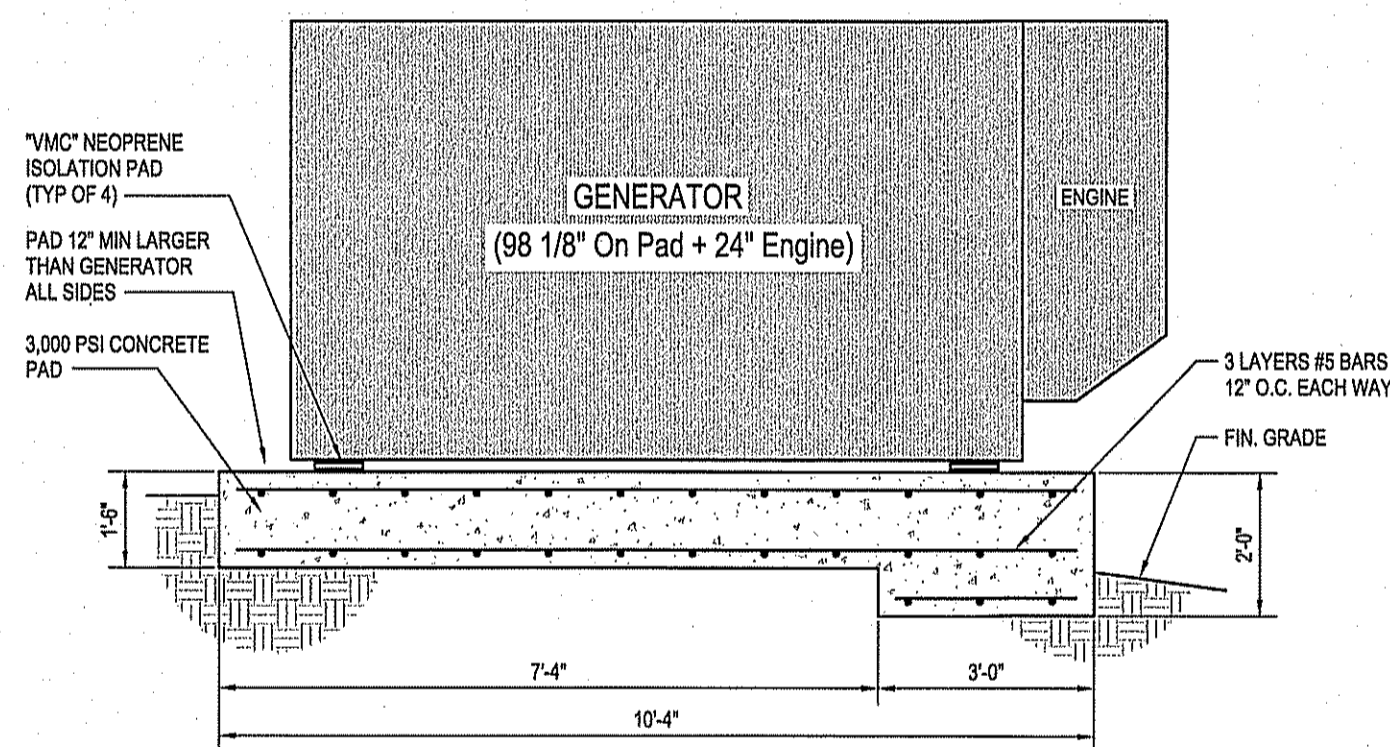
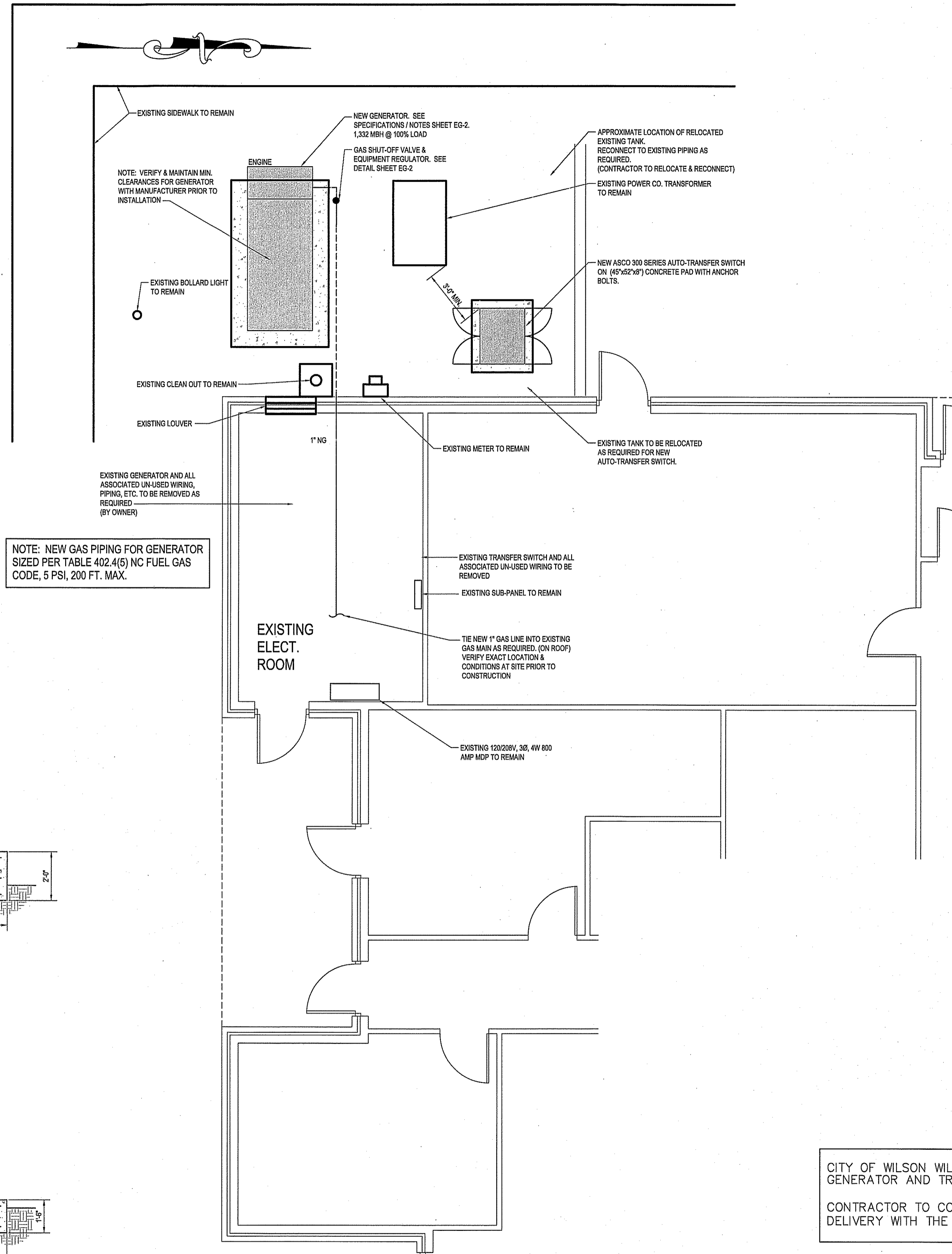
Title Sheet:  
EXISTING CONDITIONS/DEMOLITION PLAN

Project:  
Generator Replacement for:  
**Wilson Fire Station 1**  
307 Hines St West Wilson, NC 27893

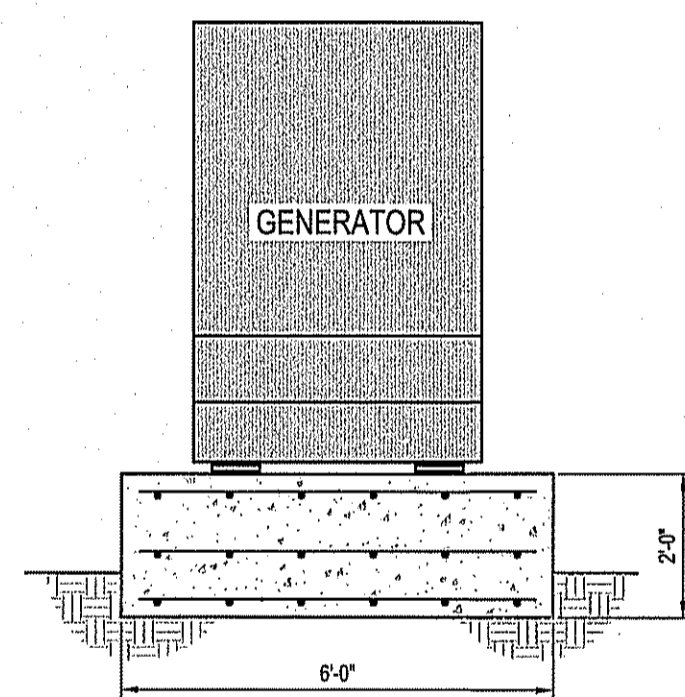
Drawn by: LR  
Issue Date: SEPT. 2020  
Project Number: 20-296  
Sheet: **SP1**



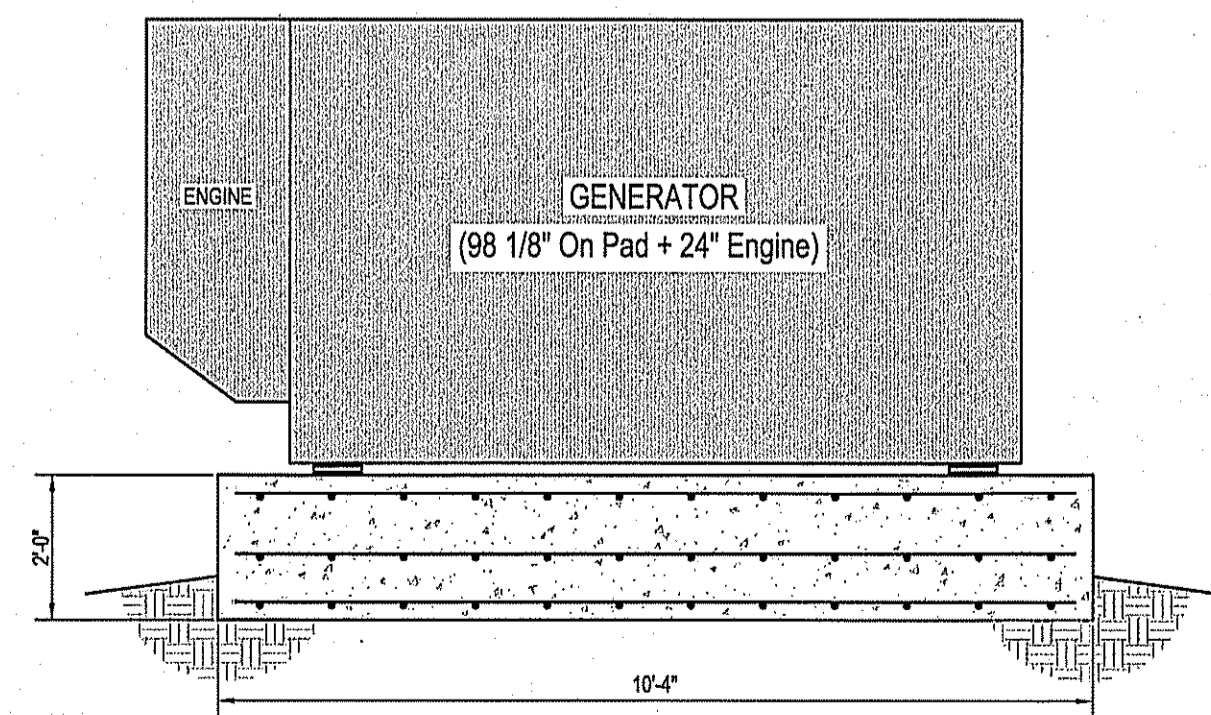
KEY PLAN  
NTS



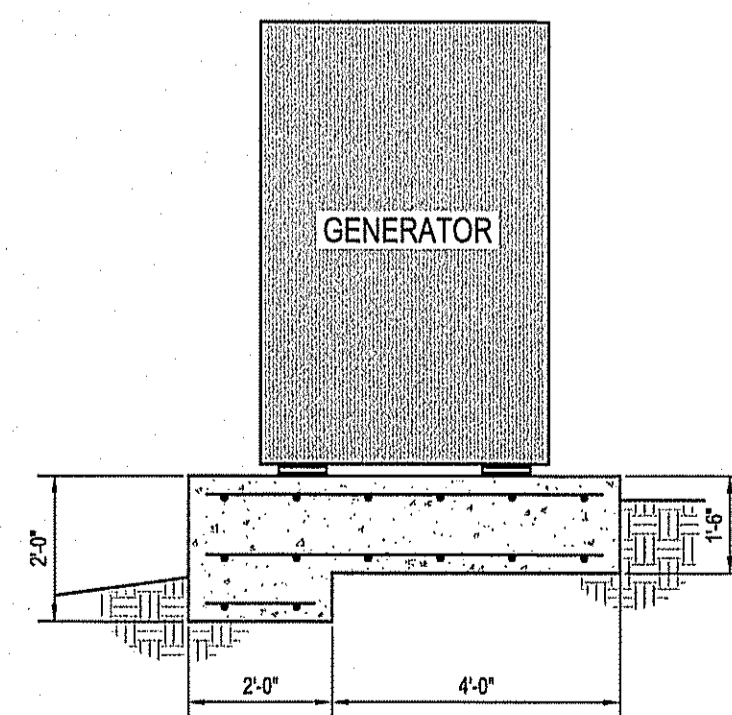
NORTH ELEVATION



WEST ELEVATION



SOUTH ELEVATION



EAST ELEVATION

DETAIL - GENERATOR SET  
NTS

ELECTRICAL & GAS PIPING PLAN  
SCALE: 1/4" = 1'-0"

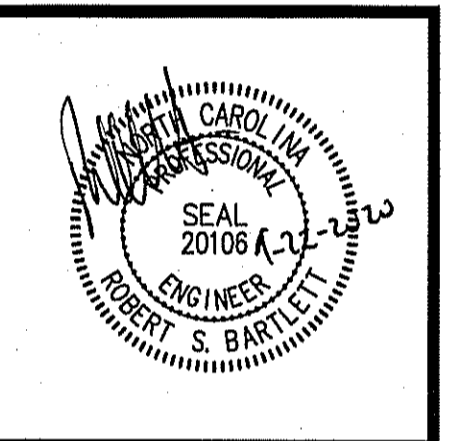
CITY OF WILSON WILL PROVIDE GENERATOR AND TRANSFER SWITCH  
CONTRACTOR TO COORDINATE DELIVERY WITH THE CITY OF WILSON

GENERAL ELECTRICAL DEMO NOTE - EXISTING ELECTRICAL ROOM:  
REMOVE ALL EXISTING UNUSED ELECTRICAL DEVICES, FIXTURES, BOXES, SWITCHES, WIRING, DISCONNECTS, CONDUIT, ETC. AS REQUIRED. DISPOSE OF ALL MATERIALS PROPERLY.

GENERAL GAS PIPING DEMO NOTE - EXISTING ELECTRICAL ROOM:  
REMOVE ALL EXISTING UNUSED GAS PIPING, REGULATORS, VALVES, ETC. AS REQUIRED. DISPOSE OF ALL MATERIALS PROPERLY.

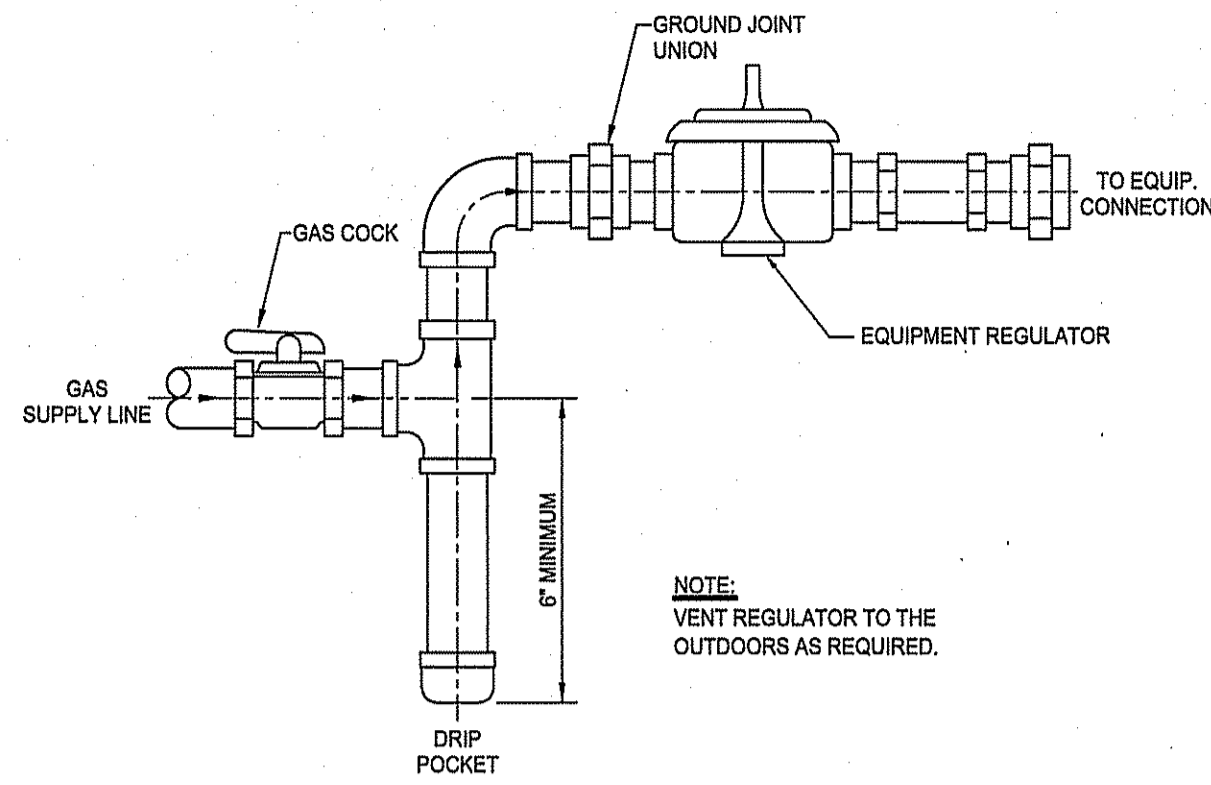
Owner:  
**Wilson Fire & Rescue Services**  
307 Himes St West Wilson, NC 27893

**BARTLETT**  
ENGINEERING & SURVEYING, PC  
1000 North Street North  
Wilson, NC 27893  
License # C-255  
www.bartlett.com



Rev.	Date:	Description:

Title Sheet:  
**ELECTRICAL & GAS PIPING PLAN**  
Project: Generator Replacement for:  
**Wilson Fire Station 1**  
307 Himes St West Wilson, NC 27893  
Drawn by: JLT  
Issue Date: 08-13-20  
Project Number: 20-452  
Sheet:  
**EG-1**



DETAIL - GAS CONNECTION  
NOT TO SCALE

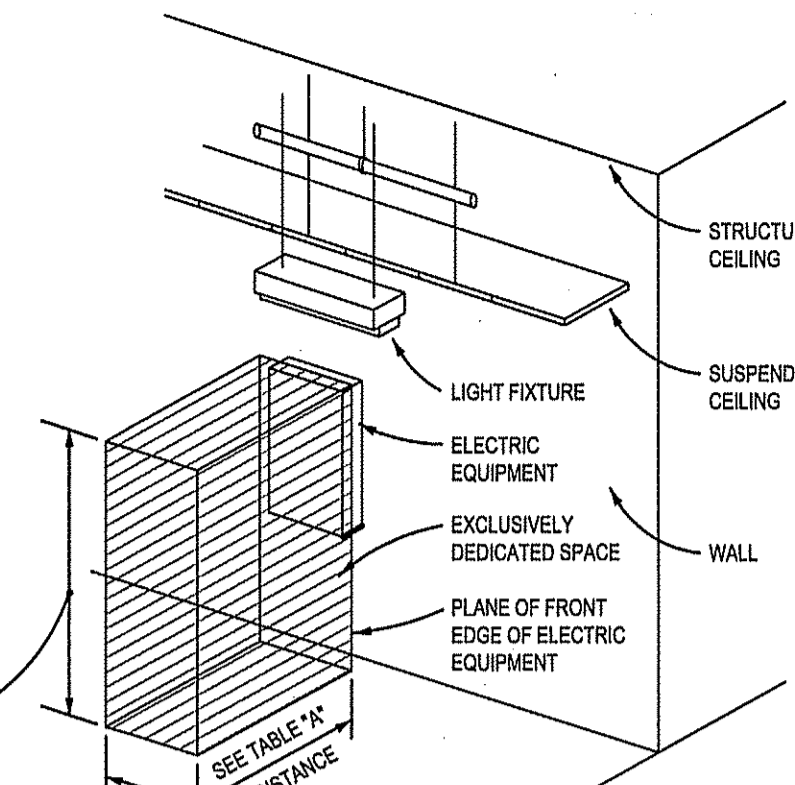
**GAS PIPING NOTES:**

1. GAS PIPING TO BE INSTALLED IN COMPLIANCE WITH THE 2018 NC FUEL GAS CODE.
2. GAS LINE TO BE BONDED TO BUILDING STEEL IN ACCORDANCE WITH THE 2018 NC FUEL GAS CODE, SECTION 310 ELECTRICAL BONDING.
3. GAS PIPING TO BE SCHEDULE 40 BLACK IRON THREADED.
4. MARK GAS PIPING WITH GAS & PSI IN BLACK LETTERS ON YELLOW BACKGROUND PER CODE.
5. PROVIDE A TRACER WIRE FOR UNDERGROUND GAS PIPING PER 2018 NC FUEL GAS CODE SECTION 404.15.3 TRACER.
6. TAG TOTAL BTU'S & ADDRESS AT GAS METER AS REQUIRED.
7. MP REGULATORS SHALL COMPLY WITH SECTION 410.2 MP REGULATORS 2018 NC FUEL GAS CODE

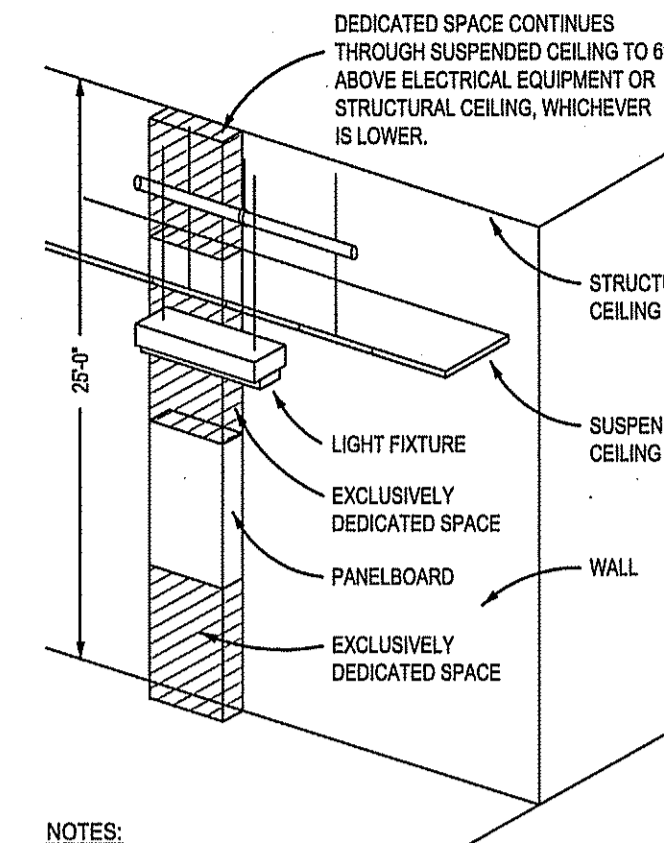
VOLTAGE TO GROUND (NOMINAL)	CONDITIONS		
	1	2	3
0-150	3'	3'	3'
151-600	3'	3 1/2'	4'

- WHERE THE 'CONDITIONS' ARE AS FOLLOWS:
1. EXPOSED LIVE PARTS ON ONE SIDE AND NO LIVE OR GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE, OR EXPOSED LIVE PARTS ON BOTH SIDES EFFECTIVELY GUARDED BY SUITABLE WOOD OR OTHER INSULATING MATERIALS. INSULATED WIRE OR INSULATED BUSBARS OPERATING AT NOT OVER 300 VOLTS SHALL NOT BE CONSIDERED LIVE PARTS.
  2. EXPOSED LIVE PARTS ON ONE SIDE AND GROUNDED PARTS ON THE OTHER SIDE.
  3. EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORK SPACE (NOT GUARDED AS PROVIDED IN CONDITION 1) WITH THE OPERATOR BETWEEN.

- NOTES:
1. THIS FIGURE ILLUSTRATES THE WORKING SPACE IN FRONT OF ELECTRICAL EQUIPMENT REQUIRED BY NEC SECTION 110-26.
  2. THIS INCLUDES BUT IS NOT LIMITED TO PANELBOARDS, SAFETY SWITCHES, MOTOR STARTERS, JUNCTION BOXES AND OTHER ELECTRICAL EQUIPMENT.



ALL ELECTRIC EQUIPMENT



- NOTES:
1. THIS FIGURE ILLUSTRATES THE ADDITIONAL EXCLUSIVELY DEDICATED SPACE REQUIRED OVER AND UNDER PANELBOARDS FOR CABLES, RACEWAYS, ETC. TO AND FROM PANELBOARDS REQUIRED BY NEC SECTION 110-26.
  2. NO PIPING, DUCTWORK OR EQUIPMENT FOREIGN TO THE ELECTRICAL EQUIPMENT OR ARCHITECTURAL APPURTENANCES SHALL BE PERMITTED TO BE INSTALLED IN, ENTER OR PASS THROUGH THE DEDICATED SPACES SHOWN. FOR EXCEPTIONS SEE NEC SECTION 110-26F.

PANELBOARDS

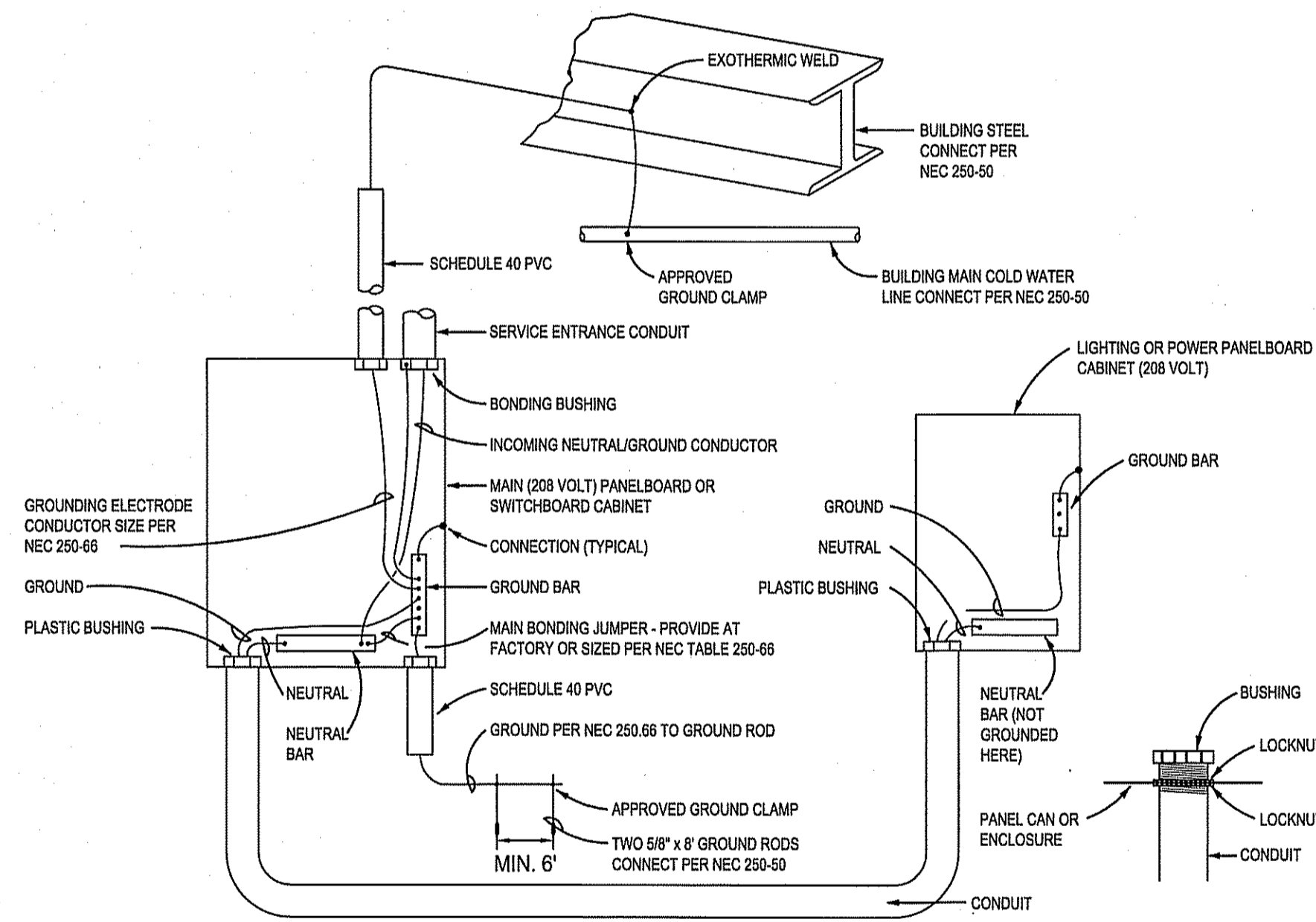
DEDICATED WORKING SPACE REQUIREMENTS  
NO SCALE

**GENERAL ELECTRICAL NOTES:**

1. WORK SHALL COMPLY WITH NATIONAL ELECTRICAL CODE (NEC) STATE BUILDING CODE, AND ALL REQUIREMENTS OF THE LOCAL INSPECTOR. ALL WORK SHALL BE BY LICENSED ELECTRICAL CONTRACTOR.
  2. ALL BRANCH CIRCUITS SHALL BE E.M.T., RIGID CONDUIT OR MC CABLE AS PERMITTED. RIGID CONDUIT SHALL BE USED FOR CIRCUITS UNDER SLAB ON GRADE, OR WHERE APPROVED SCHEDULE 80 PVC MAY BE USED.
  3. ALL CONDUCTORS SHALL BE COPPER.
  4. ALL EQUIPMENT LOADS SHALL BE VERIFIED BEFORE EQUIPMENT AND/OR CIRCUIT INSTALLATION.
- PROVIDE DRIVEN GROUND ROD AND COLD WATER GROUND FOR MAIN SERVICE AND ALL POINTS PER N.E.C. REQUIREMENTS.
5. EMT FITTINGS SHALL BE HEXAGONAL ALL STEEL, COMPRESSION TYPE.
  6. ALL CIRCUITS SHALL BE TESTED WITH 500 VOLT TESTER PRIOR TO ENERGIZING.
  7. FIRE STOP ALL PENETRATIONS THRU RATED WALLS & CEILING. VERIFY EXISTING CONDITIONS AT SITE PRIOR TO CONSTRUCTION.

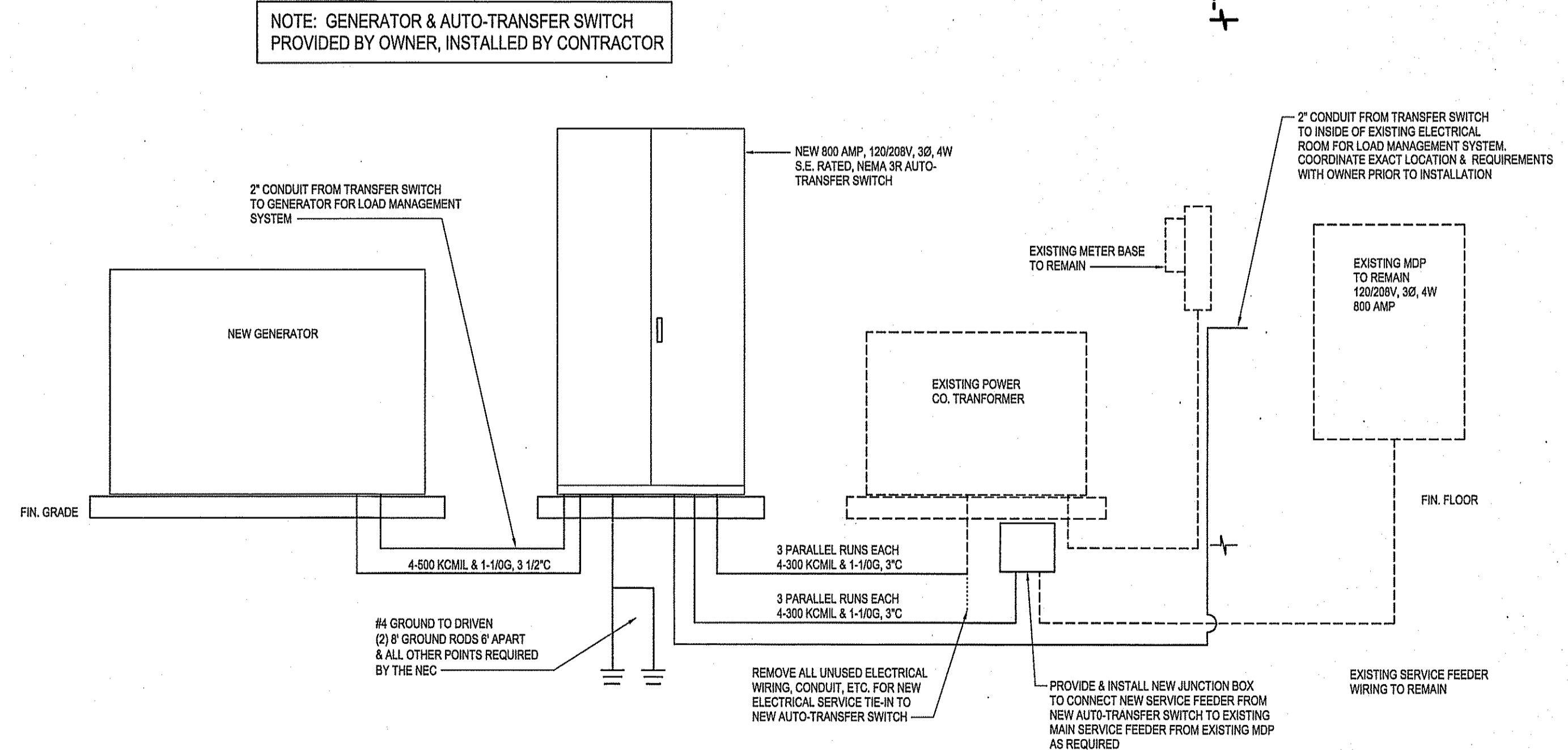
**GENERATOR SPECS. / NOTES**

1. Standby Generator, 120/208V 3Ø, 100 kVA (80 KW) Natural Gas Genset, "Stamford Electric" or equal (As Per Owner).
2. Load starting shall be sequenced by use of time delay relays for HVAC units as required.
3. Electrical Contractor to verify electrical starting loads do not exceed generator capacity.
4. Generator to have level 2 sound and weather protected aluminum enclosure. Weatherproof enclosure shall be by Stamford Electric manufacturer.
5. Generator to be installed on concrete housekeeping pad. See detail sheet EG-1.



- NOTES:
1. GROUNDING ELECTRODE CONDUCTOR SHALL BE RUN CONTINUOUSLY (UNBROKEN) FROM COLD WATER LINE AND/OR BUILDING STEEL AND GROUND ROD TO GROUND BAR BEFORE BONDING TO ANY CONDUIT BUSHING.
  2. ALL THE FOLLOWING GROUNDING ELECTRODES THAT ARE PRESENT SHALL BE BONDED TOGETHER TO FORM THE GROUNDING ELECTRODE SYSTEM PER NEC 250.52:
    - 2.1. METAL UNDERGROUND WATER PIPE IN DIRECT CONTACT WITH EARTH FOR 10 FT OR MORE
    - 2.2. METAL FRAME OF THE BUILDING
    - 2.3. ANY ELECTRODE ENCASED BY AT LEAST 2 IN. OF CONCRETE, CONSISTING OF 20 FT OR MORE BARE OR ZINC GALVANIZED OR OTHER ELECTRICALLY CONDUCTIVE COATED STEEL REINFORCING BARS OR RODS NOT LESS THAN 1/2" IN DIAMETER
    - 2.4. GROUND RING ENCASED IN CONCRETE
    - 2.5. ROD AND PIPE ELECTRODES NOT LESS THAN 8 FT.
    - 2.6. PLATE ELECTRODES

TYPICAL BONDING & GROUNDING DIAGRAM  
NO SCALE



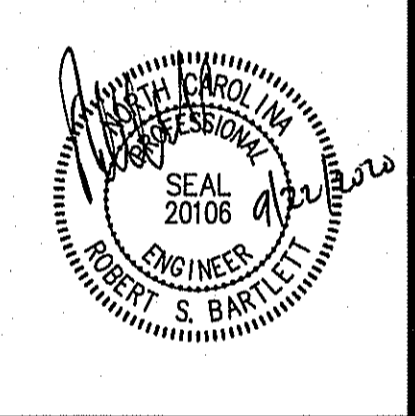
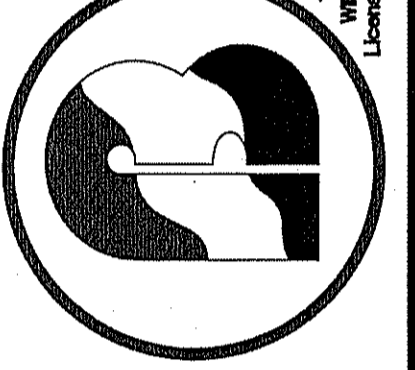
ELECTRICAL RISER DIAGRAM  
NOT TO SCALE

- NOTES:
1. AIC RATINGS SHALL BE VERIFIED AND PROPER PLACUES APPLIED PRIOR TO ENERGIZING.
  2. ELECTRICAL CONTRACTOR SHALL LABEL UTILITY AVAILABLE FAULT CURRENT AND DATE PER NEC.

Owner:

Wilson Fire & Rescue Services  
307 Hines St West Wilson, NC 27893

BARTLETT  
ENGINEERING & SURVEYING, P.C.



Rev.	Date:	Description:

Title Sheet:  
**ELECTRICAL RISER DIAGRAM, NOTES, DETAILS, GAS PIPING NOTES & DETAIL**

Project:  
Generator Replacement for:  
**Wilson Fire Station 1**  
307 Hines St West Wilson, NC 27893

Drawn by: JLT  
Issue Date: 08-13-20  
Project Number: 20-452  
Sheet:  
**EG-2**