GOFFSTOWN PUBLIC LIBRARY
RENOVATION AND ADDITION
GOFFSTOWN, NEW HAMPSHIRE

SCHEMATIC BUDGET SET
NOT FOR CONSTRUCTION

12/11/2020

DRAWING LIST:
Cover
Civil
Site Plan
Structural:
Basement Level
First Floor Level
Second Floor Level
Third Floor/Level
Penthouse Level
Architectural:
Basement Floor Plan
First Floor Plan
Second Floor Plan
Third Floor Plan
North and West Elevations
South and East Elevations
Building Section A
Building Section B
Building Section C
Mechanical:
H1 First Floor HVAC
H2 Second Floor HVAC
H3 Third Floor HVAC
Plumbing/Fire Protection:
Water System Entrance and Narratives
Electrical:
E1 First Floor Electrical Plan
E2 Second Floor Electrical Plan
E3 Third Floor Electrical Plan
GENERAL NOTES
1. These plans are intended for estimating and planning purposes. These are not construction documents.
2. Spot elevations shown are approximate and are intended to be used for estimating purposes.
3. The parking lot typical section consists of the following: 3 1/2" hot mix asphalt, 6" of crushed stone (fine gradation), 8" of crushed stone (coarse gradation), and 8" of sand.
4. The parking lot is curbed on the north and south sides with a 7" reveal straight granite curb. The structural section of the parking lot extends 6" beyond the back of curb.
5. The sidewalk section consists of 4" concrete with a broom finish over 12" crushed stone (fine gradation).
6. Catch basins are located at the low points of the parking lot and all assumed to be 4" diameter.
7. The sewer and drain manholes are assumed to be 4" diameter.
8. The underground infiltration chambers are Stormtech SC-310. See the ADS website for installation specifications.
9. The new sewer service located to the west of the existing library is intended to service the library during construction.

SCHEMATIC ELECTRICAL NOTES
(1) 20 FT. LIGHT POLES WITH NIGHT SKY COMPLIANT LED FIXTURES WITH MINIMAL BACKLIGHT/SPILL ON ADJACENT PROPERTIES. COMBINATION PHOTOCELL AND ASTRONOMICAL TIME CLOCK CONTROL.
(2) EMERGENCY GENERATOR (APPROXIMATELY 22KW, DIESEL) ON 6'-6" x 15'-0" 6 INCH REINFORCED CONCRETE PAD.
(3) 300 PH PADMOUNT TRANSFORMER 60 HZ, 300.0 KVA 65 AWG FR3 ON 6'-6" x 7'-0" 6 INCH REINFORCED CONCRETE PAD.

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1. SLAB ON GRADE TO BE 4" THICK WITH #4 BARS AT 16" O/C EACH WAY.
2. PROVIDE PERFORATED PVC FOUNDATION DRAIN AROUND PERIMETER OF BASEMENT.
1. Slab on deck shown thus to be 4" thick concrete slab on 20 gauge 1.5VL-36 composite steel deck as MFG by Vulcraft or approved equivalent. Reinforce slab with #4 bars at 16" o/c each way, top.

2. Moment connections indicated thus to be field welded flanges. Where connection occurs at a column, columns shall have shop installed internal web stiffener plates w/ thickness to match beam flange.

Existing stair to be removed. Infill with new W14 beams at max 5'-0" o/c and 4" concrete slab - on - deck.

Dimensions are shown in feet and inches.
1. Roof deck to be 20 gauge. 1.5B grade 50 steel, deck as per manufacturer's approved specifications.
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TYPICAL ROOF ASSEMBLY:
- 90 MIL WHITE TPO ROOF (FIRESTONE ULTRAPLY)
- 5/8" DENSE DECK COVERBOARD
- 10" R57 (MIN) TAPERED ROOF INSULATION
- SELF ADHESIVE AIR/VAPOR BARRIER
- 5/8" DENSE DECK GWB
- METAL DECK ON STRUCTURAL STEEL FRAME

WOOD CEILING
GWB SOFFIT WITH COVE LIGHT
ACT CEILING TYP.

BRICK WALL ASSEMBLY:
- STANDARD SIZE BRICK
- 2" AIR SPACE
- 4" (R17.2) ROXUL CAVITY ROCK INSULATION
- SELF ADHERED AIR BARRIER
- 5/8" TYPE X DENSE GLASS SHEATHING
- 6" LGMF @ 24" o/c
- 6" (R22) DENSE PACK CELLULOSE (NUWOOL WALL SEAL)
- 5/8" GWB PTD DIZAL SIDING BAND

STONE WALL ASSEMBLY:
- 4" THICK GRANITE VENEER
- 2" AIR SPACE
- 4" (R17.2) ROXUL CAVITY ROCK INSULATION
- SELF ADHERED AIR BARRIER
- CONCRETE FOUNDATION
- 3 5/8" LGMF INT. PARTITION

TRIPLE GLAZED FIBERGLASS WINDOW UNIT BY ACCURATE DORWIN
GOFFSTOWN PUBLIC LIBRARY

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Building Section B
**VRF UNIT MODEL & SIZES**

<table>
<thead>
<tr>
<th>Indoor Units</th>
<th>Outdoor Units</th>
</tr>
</thead>
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<tr>
<td>ARNU093M2A4</td>
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<td>ARNU543M3A4</td>
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</table>

**HVAC SYSTEMS NARRATIVE**

Primary Heating System

The primary heating system is designed to provide efficient and comfortable heating throughout the library. The system consists of a single, large-scale heat pump unit that operates using R410A refrigerant. This unit is capable of simultaneous heating and cooling, making it ideal for a space that requires both operations at different times.

Ductwork

Sheet metal ductwork is planned for the primary heating system. The ducts are designed to be insulated and are made of high-quality materials to ensure energy efficiency. The ducts are connected to the roof-mounted heat recovery system, which includes a heat exchanger.

Heat Recovery System

The heat recovery system is designed to capture and reclaim heat from the exhaust air to the intake air, thereby reducing the energy required for heating. The system is engineered to be highly efficient, ensuring minimal energy loss.

Refrigerant Handling

Refrigerant piping and valves are designed to be durable and corrosion-resistant. The system is designed to meet all safety and environmental standards, ensuring that refrigerant leakage is minimized.

Piping and Valves

The system includes a variety of metal and reinforced piping that is designed to withstand high pressures and temperatures. The valves are strategically placed to control flow and pressure within the system.

Contemporary Controls

Contemporary controls are integrated into the HVAC system to provide precision control over the heating and cooling processes. These controls are designed to be user-friendly and energy-efficient, ensuring optimal performance.

1. Refrigerant piping, ventilation ducts, and valve systems shall be designed in accordance with the applicable codes.
2. Heat recovery systems shall be designed to comply with applicable codes and standards.
3. Refrigerant piping shall be designed in accordance with applicable codes and standards.
4. HVAC systems shall be designed to comply with applicable codes and standards.
5. Equipment shall be selected and sized to meet the project requirements.
6. The HVAC system shall be designed to meet energy efficiency standards.

The project team is committed to designing and implementing a HVAC system that is energy-efficient, comfortable, and environmentally friendly. The system is designed to meet the specific needs of the library, ensuring that the space is a welcoming and comfortable environment for all users.
PLUMBING SYSTEMS NARRATIVE

A. Piping:
- Water Supply: Temple City water main with meter at entrance.
- Tankless Water Heater: shall be placed in the mechanical room.

B. Trades:
- General Contractor: shall provide the necessary equipment and labor for the installation of all plumbing systems, including sanitary drains, water supply, and other systems as required.

C. Design Preferences:
- Sanitary Drain Design:
  - It is anticipated that a new electric water heater will be installed to serve the addition, with capacity to accommodate the complete flow but would have to be coordinated with other systems.
  - A Circulating pump will be installed to maintain supply temperature through the newly installed system.

D. Domestic Supply:
- Type-L Copper. All piping insulated with 1” insulation.
- Drinking Fountain:
  - A drinking fountain shall be installed as indicated on the plans.
  - A Staff room would add a spray hose independent of the spout.
- Floor Drains:
  - Floor drains with mechanical trap-seals to be installed in each toilet room and each mechanical room.
- Lavatory:
  - Wall-mounted fixture, with single-lever faucet and swing spout. Staff room would add a spray hose independent of the spout.

E. Exterior Hose Bibs:
- Freeze-proof device with integral vacuum breaker. Devices will need a wall box for electrical connection and outlet.

FIRE PROTECTION SYSTEMS NARRATIVE

A. Sprinkler Piping:
- All sprinkler piping will be installed in accordance with NFPA 13 requirements.
- Check valves:
  - 175 psig, cast or ductile iron body, flanged, grooved, or threaded connections.

B. Sprinkler Piping Fittings:
- Steel Pipe: ASTM A53 Schedule 40, black.
- Steel Fittings: ASME B16.5, steel flanges and fittings.
- Fire Department Connections:
  - Exposed, projected wall mount, corrosion resistant metal complying with UL 405.

C. Fire Sprinkler Heads:
- Fire Sprinkler Heads:
  - High heat spray heads.
  - Standard temperature spray heads.
  - Extended coverage spray heads.

D. Fire Sprinkler Valves:
- All fire protection valves, water flow alarms, and other supervisory signals will be monitored by the fire alarm system.

E. Mechanical Grooved Couplings:
- Malleable iron housing clamps to engage and lock, “C” shaped elastomeric sealing gasket.

F. Mechanical Room Connections:
- ASME B16.34, grooved end connections.

G. Check Valves:
- 175 psig, cast or ductile iron body, flanged, grooved, or threaded connections.

H. Two-Piece Ball Valves:
- 175 psig, forged brass or bronze body, full port, hand-lever actuator.

I. Angle Valves:
- 175 psig, brass or bronze body, handwheel actuator.

J. Test and Drain Valve:
- Test and drain valve for each riser.

K. Butterfly Valves:
- 175 psig, cast or ductile iron or bronze body, worm gear or traveling nut actuator, handwheel or key/screwdriver option.

L. Two-Piece Ball Valves with Indicators:
- 175 psig, forged brass or bronze body, full port, hand-lever actuator.

M. Fire Department Connection:
- Exposed, projected wall mount, corrosion resistant metal complying with UL 405.
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SCHEMATIC ELECTRICAL NOTES

1. SUSPENDED ARCHITECTURAL INDIRECT/DIRECT LED LIGHTING AND SWITCHED/OCCUPANCY SENSOR CONTROLS, DAYLIGHT DIMMING AS REQUIRED BY CODE AND FIXTURE WATTAGE. EMERGENCY LIGHTING (HEADS OR INTEGRAL). CONVENIENCE RECEPTACLES (TAMPER PROOF), FIRE ALARM DEVICES, TELE/DATA DEVICES, DATA AT CEILINGS FOR WIFI.

2. RECESSED 2X2 OR 2X4 LED LIGHTING AND SWITCHED/OCCUPANCY SENSOR CONTROLS, EMERGENCY LIGHTING (HEADS OR INTEGRAL). CONVENIENCE RECEPTACLES (TAMPER PROOF), FIRE ALARM DEVICES, TELE/DATA DEVICES.

3. SUSPENDED ARCHITECTURAL INDIRECT/DIRECT AND CYLINDER OR RECESSED LED DOWNLIGHTING AND SWITCHED/OCCUPANCY SENSOR CONTROLS, DAYLIGHT DIMMING AS REQUIRED BY CODE AND FIXTURE WATTAGE. EMERGENCY LIGHTING (HEADS OR INTEGRAL). CONVENIENCE RECEPTACLES (TAMPER PROOF), FIRE ALARM DEVICES, TELE/DATA DEVICES, DATA AT CEILINGS FOR WIFI.

4. CYLINDER OR RECESSED LED DOWNLIGHTS, LED TRACK/ACCENT LIGHTING, ARCHITECTURAL DIRECT/INDIRECT PENDANT AND SWITCHED/OCCUPANCY SENSOR CONTROLS, EMERGENCY LIGHTING (HEADS OR INTEGRAL). CONVENIENCE RECEPTACLES (TAMPER PROOF), FIRE ALARM DEVICES, TELE/DATA DEVICES. FIRE ALARM ANNUNCIATOR PANEL LED EMERGENCY EXIT SIGNS LOCATED AS REQUIRED PER ARCHITECTURAL EGRESS PLANS.

5. LED ARCHITECTURAL ADA WALL SCONCE AND/OR SURFACE/RECESSED DOWNLIGHTING. EMERGENCY LIGHTING (HEADS OR INTEGRAL), CONVENIENCE RECEPTACLES (TAMPER PROOF), FIRE ALARM DEVICES.
SURFACE/SUSPENDED LINEAR/UTILITY LED STRIP LIGHTING AND SWITCHED/OCCUPANCY SENSOR CONTROLS, EMERGENCY LIGHTING (HEADS OR INTEGRAL). GFCI RECEPTACLES (TAMPER PROOF), FIRE ALARM DEVICES.

SURFACE OR SUSPENDED ARCHITECTURAL INDIRECT/DIRECT AND RECESSED LED DOWNLIGHTING AND SWITCHED/OCCUPANCY SENSOR CONTROLS, DAYLIGHT DIMMING AS REQUIRED BY CODE AND FIXTURE WATTAGE. EMERGENCY LIGHTING (HEADS OR INTEGRAL). CONVENIENCE RECEPTACLES (TAMPER PROOF), FIRE ALARM DEVICES, TELE/DATA DEVICES, DATA AT CEILINGS FOR WIFI.

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