

The Town of Cromwell Pierson Park & Team Room Renovations

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Schematic Design Report

Prepared for:
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SUMMARY

The Town of Cromwell initiated the schematic/permit/construction document phases of the Pierson Park and Team Locker Room renovations project in June 2023 based on the previous study. The team kicked off the project starting work in June to refine the floor plan and site plan. The scope of the project consists of the renovation of the former mechanics garage into two team rooms, restrooms for the teams and the public along with additional support spaces. The mechanics building is located at the southernmost portion of the property and entails a redesign of this entire area encompassing the park expansion of amenities such as a new timber framed pavilion, bocce and volleyball courts and improvements to the football field.

The design team has further investigated the building, site and grounds. Benesch has recently completed the topographic survey of the site and will go back to further document the football field. Geotech borings are scheduled in the next couple of weeks. Further refinements to the team room floor plan, pavilion design and site design are incorporated into the Schematic Design set. All this is needed to complete documents as the team moves into construction documents and permitting.

PROPOSED CONSTRUCTION & SYSTEMS

Site

The Town of Cromwell is set to expand the size of Pierson Park and grow its park offerings and amenities by repurposing the roughly 2.3-acre parcel to the south of Pierson Park, past home of the Town of Cromwell Public Works Department. This added development will provide even more opportunities for residents to enjoy the great outdoors. The proposed design promises to be a beautiful addition to the community, with plenty of green space and many walking paths for all to enjoy. Whether you're looking for a place to relax with a book or to engage in outdoor activities, this addition to Pierson Park will have something for everyone.

The proposed design will require the removal and disposal of three buildings and all related concrete slabs, re-grading of exiting soils to create a gentle slope and milling of existing bituminous pavement. The design boasts a 63-vehicle parking area, relocated town vehicle refueling hub, two bocce courts, a beach volleyball court, walking paths, benches, lawn areas, a large pavilion with grilling stations, renovation of an existing building into home and away team rooms for the football field as well as public restrooms for the park. In addition to these amenities the existing football field's fence to the north along with the path adjacent will be removed to allow for proper runout distance for players. The existing home side grandstands will have a new accessible connection to the existing paths around the field. Another new path will be added to the visitor side along with more bleachers to increase the number of available seats and improve accessibility for all.

The proposed design will have a welcoming entry drive and large stamped concrete plazas at the beginning of the walks for gathering. Path circulation is based off a winding concrete walk that connects to the parking area in two locations secondary paths of structured stone dust dissect the park and add connections to the existing parks walking paths. Along the main walk are four (4) separate bench seating areas with trash receptacles. The two bocce courts are of regulation size and utilize granite curbing as boundaries and containment of bocce balls during play. Demolition of the sinking building between the proposed park addition and the football field will allow for a large plaza to welcome visitors from the parking area to the field and the rest of the park amenities. Planting for this site can be minimal with 35 shade trees proposed and addition screening planting could be added along the property line of the adjacent lot to the east.

Utilities:

An electrical service with a meter is currently mounted to the adjacent building that is to be demolished and will need to be re-located to the building that is to be renovated.

Natural Gas is currently available in the building to be renovated.

Sanitary sewers will require a connection from the proposed renovation facilities to the sanitary service located in the existing parking area.

Storm sewer is also available on site and will remain with minimal grade changes which will not affect the underground system.

An existing generator is on site which may be relocated for use on this proposed site or removed and relocated for another use.

Architecture

Exterior

The existing building is a pre-engineered building with corrugated metal siding and roofing. The existing overhead doors and hollow metal doors will be removed and filled in with a 10" concrete wall up to approximately 3 feet to align with the existing concrete wall. The remaining portion will be in-filled with structural metal stud framing. The metal siding will be replaced with new metal paneling, to be selected by the owner. One operable garage door will be included in the design so that in the future this building can open to the park and be used by Parks and rec and the town for variety of reasons.

In addition to restoring the exterior envelope, new canopies will be installed over new entry points to the team rooms and public toilets. Exterior wall siding below the canopies will contrast the new metal façade with either a different color or material such as wood or fiber cement boards, to be selected by owner. Windows are placed on the front and back ends of the building to provide natural lighting into the team room areas, and further break down the mass of the existing building.

Interior

The interior building will be comprised of two team rooms, one for the home football team, and one for the away team. Support space consisting of team toilets and training areas will support each team area. The existing concrete slab will be leveled with self-leveling concrete and then finished with VCT flooring, and tiles in the toilet rooms.

The west end of the building is where the toilets will be located, two team toilet rooms and two public toilet rooms. The toilet rooms will be tiled throughout and are designed in accordance with ADA guidelines. The walls will be constructed with structure metal studs to support a mezzanine floor above to house HVAC equipment.

The ceiling will be an acoustical ceiling tile system, 10 feet above the main floor. Insulation will be added to the perimeter and above the ceiling tiles to provide an enclosed heating and cooling environment.

Plumbing

Domestic Water

The building will be served by an existing main, with a 2-inch service which would be required to operate and provide the necessary flow to the flush valves at the Water Closets. The water service will reside in the Storage/Mechanical room and will serve the water closets, lavatories, water coolers and the tank-type water heater. Piping to the toilet fixtures will run through a plumbing wall with copper tube or PEX piping. Trap primers will also be fed from the domestic cold water to supply the floor drains within each toilet room. There will also be hose connections in each toilet room in lockable valve boxes for maintenance and cleaning since a Janitorial Closet/Sink will not be incorporated into the program. Exterior, freeze-proof wall hydrant(s) will be incorporated as required per the Owner's location and quantity requirements, and will be in recessed, locked wall boxes.

Hot water needs are limited to the six (6) lavatories in the toilet rooms and showers are not incorporated into this program. Therefore, a 40-gallon, storage tank-type electric-resistance water heater is recommended to serve the maximum 3 GPM load that the building will experience at peak use. A hot-water recirculation pump will be incorporated for instant access to hot water at the fixtures.

Gas

A gas service will be brought to the building to a meter/regulator setup outside the facility. Gas piping sized for the heating load of the furnaces will be distributed to the units with steel pipe and threaded fittings. Connections will be made to the heating sections with corrugated stainless steel flexible connections and gas shutoff valves.

Sanitary

The building is going to be equipped with cast iron sanitary drainage and vent pipe with no-hub joints/connections run in the plumbing wall. PVC piping can be used as an alternate method as well. After the sanitary piping has picked up all the toilet fixtures, it will drop under the slab and pick up the floor drains and the water coolers before exiting the building, run below the frost-line. Cleanouts will be incorporated at changes in direction as specified by code. The building vent will exit through the roof in one location serving all the fixtures.

Storm

There will be no internal storm drain piping as exterior gutters will be utilized.

Toilet Room Fixtures

Water closets will be wall-mounted porcelain hung from carriers in the plumbing wall. They will be designed for low-flow water consumption per code. Exposed flushometers will be used with manual lever-operators. Trap primer outlets in the flushometer risers can be used (one per toilet room) to maintain floor drain traps in those locations.

In the team toilet rooms, wall-mounted lavatories will be hung from fixture carriers located in the plumbing wall – two (2) per toilet room. They will be equipped with hot and cold-water faucets that limit flow to 0.5 GPM per code for low water consumption. For the toilet rooms being accessed from the exterior, ADA wall mounted porcelain fittings will be used with automatic/self-closing faucets that dispense 105°F water tempered by a mixing valve for each location. All exposed drainage piping and water supplies will be insulated per ADA requirements. Access to these fixtures will be per ADA guidelines as indicated.

Water coolers will be incorporated within each team room, with ADA two-height accessibility and a filtered bottle filler.

Mechanical

Heating and Air Conditioning

The building will be served by a Heating, Ventilation and Air Conditioning (HVAC) system. A grade-mounted slab outside of the existing building will support a new Rooftop Unit. The Dx component will consist of a condenser coil with a guard pair in the rooftop unit. Refrigerant piping will be used to interconnect the split system components.

Natural gas will be brought from a street service to the building in order to provide the heating medium to the unit. Rooftop unit will have variable speed fan settings and multi-stage heating to reflect the loads in the spaces efficiently. Unit will be direct-vented, high-efficiency types with local, two-stage (heat/cool), programmable thermostats for control. Each team space will constitute a zone.

The Zone level equipment should be just under 10-Tons of cooling and under 150.00 MBh for heating.

Exposed spiral-round ductwork will supply air in the team rooms with branch takeoffs to the rooms in the zones (Trainers, Officials, Toilet Rooms). Central returns will bring the air back to the air handling equipment.

Ventilation and Exhaust

Ventilation will be ducted to the air handlers via louvers in the wall. Dampers will control the ventilation operation based on schedule and occupancy. Toilet exhaust will serve the toilet rooms and will be ducted to the exterior through a louver with a backdraft damper.

Toilet rooms that are accessed from the exterior of the building will be individually heated using electric-resistance wall heaters and integral thermostatic controls. Toilets will be exhausted based on occupancy.

Filtration and Indoor Air Quality

Units will be equipped with MERV 13 filtration suitable for resistance of airborne pathogens, such as COVID. Additionally, Germicidal Ultra-violet light (UVg) can be incorporated into the duct systems or via wall-mounted lighting fixtures within the team rooms and team toilet rooms as an added level of protection.

Electrical

General

While some electrical materials in the existing buildings have remaining useful life, their locations and specifications are not well suited for reuse in the renovated building. Removal of the DPW building will have an electrical impact on the team room building which further drives the need for all new electrical materials in the space. We assume that the existing generator will be removed and that a new generator is not required for the operation of this facility.

Power

It appears that an Eversource metered service runs to the DPW building which then sub-feeds the team room building. We anticipate that a new underground service will need to be run from the existing Eversource pole to the team room building. This service is currently projected to be 200 amps, 208 volt, 3-phase. A meter with a main breaker will be located on the exterior of the building and a main panel will be located in the mechanical room. Power for convenience tamper-proof outlets and mechanical equipment will run from this main panel with conduit where exposed and armored cable where concealed in walls or above ceilings.

We have included a separate cost line item to increase the electrical service to 400 amps to allow for powering electric vehicle charging stations in 10% of the parking spaces. This line item also includes the cost of wiring and providing four dual head charging stations. As the project does not include a newly constructed building, the State mandate for this EV infrastructure may not be applicable. This matter requires further investigation.

Lighting

New interior lighting will be provided throughout the space. All fixtures will be LED lamped and suitable for the ceiling condition in each space. Most fixtures will be recessed 2x2 flat-panel LED style. Use of vandal resistant fixtures should be considered in the public toilet rooms. The use of 2x2 LED with Sanitizing UV should also be considered in the public toilet rooms and locker area. The use of UV will help to keep these busy areas clean. Emergency lighting will be provided with a small inverter unit powering a few of the normal lights. Occupancy sensor lighting controls will be provided throughout. New exterior lights will be provided with a combination of recessed canopy lights at the new canopy and wall mounted at other areas. These will be controlled with a combination of time clock and photocell.

New site lighting will be provided for the parking areas and walking paths. All fixtures will be LED lamped and full cutoff for energy code and zoning compliance. Integral controls will be provided to lower the fixture output based on a lack of motion in the area and all site lighting will have a time clock control so that they can be turned off when the park is closed. New lights in the pavilion and on the exterior of the pavilion will be provided and a few GFCI outlets will be provided in the pavilion. A NEMA 3R disconnect switch will also be provided in the pavilion to disconnect power going to the pavilion.

Other Electrical

Conduit for communication services will be brought to the building. We anticipate the desire for telephones and perhaps internet service but have only included the cost for the conduit & wire to provide this function. The existing space has a simple fire alarm and security systems. While neither are code mandated, we have included the cost for very basic versions of these systems. We have not assumed that security systems in the form of surveillance cameras or emergency call boxes will be required throughout the site.

PROSPOSED RENOVATION DRAWINGS

The attached drawings include the survey, the schematic site plan, a plan to dictate the phasing or alternates, a rendered site plan and demolition and floor plans, elevations, along with pavilion plans and elevations.

SCHEMATIC ESTIMATES

Silver Petrucelli and Associates and Benesch collectively put a conceptual estimate together based on the proposed site and floor plans, exterior renovations and new infrastructure needed to support this space. These estimates are schematic as typical at this early stage of the process.

Town of Cromwell

Pierson Park - Base Bid/Phase 1

Schematic Design Opinion of Total Project Cost



Project Hard Costs		Total
Division 1 - General Requirements	- \$	105,135
Division 2 - Existing Conditions	- \$	29,147
Division 3 - Concrete	- \$	80,999
Division 5 - Metals	- \$	20,910
Division 6 - Woods, Plastics, Composites	- \$	6,325
Division 7 - Thermal & Moisture Protection	- \$	96,033
Division 8 - Openings	- \$	50,450
Division 9 - Finishes	- \$	117,280
Division 10 - Specialties	- \$	85,250
Division 22 - Plumbing	- \$	113,200
Division 23 - Heating, Ventilating & AC	- \$	145,000
Division 26 - Electrical	- \$	124,753
Division 31 - Earthwork	- \$	50,000
Division 32 - Exterior Improvements	- \$	356,899
Division 33 - Utilities	- \$	285,000
Hazardous Materials Abatement		

Sub-total Project Costs \$ **1,666,380**

Construction Contingency 10% \$ **166,638**

Total Construction Costs **\$ 1,833,018**

Project Soft Costs

Architectural/Engineering Professional Services	\$	183,650
Independent Material Testing & Special Inspections Allowance	\$	5,000
Total Project Soft Costs	\$	188,650

Grand Total of Project Costs **\$ 2,021,668**

Pierson Park - Phase 2 /Alternates

Project Hard Costs	Per SF Cost	Total
Division 3 - Concrete	- \$	225,000
Division 5 - Metals	- \$	8,000
Division 6 - Woods, Plastics, Composites	- \$	150,000
Division 26 - Electrical	- \$	45,667
Division 31 - Earthwork	- \$	20,000
Division 32 - Exterior Improvements	- \$	351,660

Sub-total Project Costs \$ **800,327**

Construction Contingency 10% \$ **80,033**

Total Construction Costs **\$ 880,360**

Conclusions

As the schematic documents come to an end, we will look to the Town for approvals to proceed into construction documents/permit documents. Once approved we will begin the necessary steps to create documents for planning and zoning approvals, bidding and permitting. We recognize the Phase 1 estimate may be higher than your budget and would be happy to work with you to find ways to bring it closer to your needs as this process moves forward.

