

Case Study: Mecklenburg County

Mecklenburg County, NC requested Facility Condition Assessments and capital expenditure forecasts for 101 facilities. The facilities consisted of government offices, Parks and Recreation facilities, Libraries, and Jail facilities, totaling approximately 4,900,000 square feet of space.

Cardno performed facility condition assessments and provided a numerical rating (FCI) of the overall condition of each facility based on the sub-systems assessed. Our final report included a description of the methodology of the facility rating system. The rating system was weighted to align with the County's Capital Reserve Projects criteria.

To help plan for their investment needs over a 5 year period Cardno (using **Paragon**) completed a comprehensive Facilities Condition Assessment (FCA) of the buildings and their respective systems.

Cardno provided a report of findings for each facility that objectively rated the remaining life span of the facility, along with the various components, and whether replacement of the facility or various components within a 5 year planning window is warranted.

Analysis results from **Paragon** were provided to Mecklenburg County to help plan and prioritize \$45.5M of deferred maintenance.

The report consisted of summary text of our findings for each system assessed with current and deferred maintenance deficiencies, and a Maintenance Action Plan (MAP).



Mecklenburg County - Welcome Darrell

Profile	Assets	Inventory	Deficiencies	Work Packages	Review	Analysis	Reports	Administration	My Account	Version 6.3.10
current inspections. There are no visible deficiencies; however, the freight elevator is reaching the end of its service life.										
2241 Hal Marshall Center Annex (Government)	D20 PLUMBING	D20_0	There are eight restrooms in this building. The building plumbing entrance is in the west end of the building office area. There is a gas-fired water heater in the main mechanical room, which is in good condition. Plumbing fixtures include toilets, urinals and lavatories. In the second floor restrooms and the southwest area of the first floor, the fixtures have been recently replaced and are in excellent condition. The older fixtures throughout the building are in fair to good condition; some of the lavatories in the locker rooms have minor corrosion around the faucets and drains. The main sewer line is reported to have problems with numerous service calls reported to clear blockages. Further investigation of this issue is recommended.							
	D30 HVAC	D30_0	The primary heating system for this building consists of a heating water boiler serving air handling units and terminal units. Cooling equipment includes a water cooled chiller and cooling tower. There are three air handling units in mechanical rooms throughout the building. There are two roof top package units. The boiler and cooling equipment are in good condition. The three air handling units are near the end of their service life, with moderate deterioration, and are recommended for replacement. There are reported to be issues with the HVAC controls, which are recommended to be replaced along with the air handling units.							
	D40 FIRE PROTECTION	D40_0	This building has a fire alarm system consisting of a Fire Alarm Control Panel, strobes and strobe/annunciators, and manual pull stations. There are smoke detectors mounted on the ceiling throughout the building. The facility has a wet pipe sprinkler system throughout the building. There is a fire riser located in the Sprinkler Room on the 1st floor. The fire alarm system certification is present. Overall the fire protection system appears to be in good condition with no deficiencies noted.							
	D40 FIRE PROTECTION	D40_2 LIFE SAFETY	There are nine metal duct penetrations in the second floor concrete slab located in a storage room on the southwest side of the building. The holes through the slab are square and the spaces around the duct are not filled with fire/smoke safe insulation or fire caulk. It was noted that fire dampers were not visible from the second floor. Structural fire protection is provided by spray applied fire proofing. The means of egress appear to be compliant.							
	D50 ELECTRICAL	D50_0	The electrical system of this building consists of a 3 phase 277/480 volt electrical service that supplies a 1000 amp switchboard in the 1st floor electrical room. There are 17 panels ranging from 100 amps to 800 amps. There is a Kohler (model- 125R0771; serial number - 105366), 277/480 volt 125 KW diesel standby generator. There are two 277/480 primary and 120/208 secondary interior transformers that feed the 120/208 panels. Exterior lighting includes recessed single bulb, soffit-mounted fixtures and several wall mounted fixtures. Interior lighting is predominantly T8 fluorescent bulb fixtures. Emergency lights are located throughout the building. There are exit lights throughout the building. The light fixtures all appear to be in good condition. Overall the electrical systems appear to be in good condition with one life safety deficiency that includes one non functioning exit light located on the first floor.							
	G20 SITE IMPROVEMENTS	G20_0	The site pavements are flexible asphalt pavement in poor condition. The pavement should be milled and replaced with some reconditioning of the base course. The curb and gutter is in fair condition. Sidewalks are in good condition. Drainage appears to be adequate with the exception of the main entrance. The flat slope at the entrance is causing moisture intrusion into the building and needs repair. Observable drainage structures are in good condition.							
	G20 SITE IMPROVEMENTS	G20_1 OTHER SITE IMPROVEMENTS	The exterior accessible route from the handicapped parking spaces appears to be compliant. The number, slope, signage, and striping of handicapped spaces appear to be compliant with the following exception. Slopes within one space and associated aisles, located in the rear lot, are greater than allowed by the ADA guidelines. The northwest entrance has a non-compliant access from the public sidewalk with a painted crosswalk. An ADA ramp should be installed at this entrance. The accessible entrance doors closed from 90 degree open position in less than 5 seconds and should be adjusted to take at least 5 seconds to close to a point 12" from latch.							