ANN ARBOR WATER TREATMENT PLANT
CLARIFIER #4 DRIVE REPLACEMENT

SITE PLAN
SCALE: 3/16"=1'-0"
SLUDGE COLLECTOR - FLOOR-SUPPORTED TYPE

Application: Sludge removal.

Tank Size: 130'0" x 18'-1" to 18'-6"

Number of Units: One (1)

Type: RS

COLLECTOR MECHANISM

Collector Size: 129'0" approx. diameter.

Speed: 0.034 rpm approx.

Drive:
1 - Sterling 810-Speed motor reducer, 37 RPM output with 1-1/2 HP, 3 phase, 60 cycle, 480 volt, totally enclosed, 55°C rise frame 224-23, with thermal protector.
1 - Roller chain drive, with 18 tooth drive and 48 tooth driven sprockets, 3/4" pitch steel roller chain, and 1/2 gauge chain guard.
1 - Shear pin coupling with hardened steel bushings, mounted on worm gear input shaft.
1 - Single reduction worm gear reducer, 38:1 ratio, of high tensile bronze gear bolted to Mechanite hub, with carburized hardened and ground alloy steel worm. Mechanite gear case. Spur gear pinion shaft keyed to worm gear hub.
1 - Turntable type main spur gear driving unit, including internal 80° P.D. spur gear, 5-1/2" face, 2 D.P., 160 teeth, of Mechanite G.C. Pignon 15-teeth, 1-1/4" P.D. of AISI 4140 alloy steel, heat treated.
1 - Turntable for main gear and collector mechanism support with 85° dia. bearing race, comprising 11/2" large dia. (1-1/2") hardened steel bearing balls, (800) 42100 high carbon alloy steel inserts in annular raceways in the gear and turntable base. Oil bath protected by felt seal and dust shield. Gear case of Mechanite. Complete with oil fill, drain plugs, and oil level indicator pipe. Drive turntable to mount to top of steel center support pier.

Support Assembly: Entire mechanism suspended from heavy duty turntable ball bearing assembly mounted on center pier of steel. Center pier shall be 8'-6" x 3/8" plate.

Drive Cage: 1 - Heavy duty fabricated steel drive cage, suspended from internal gear and bearing assembly. Minimum thickness of any member 1/4".