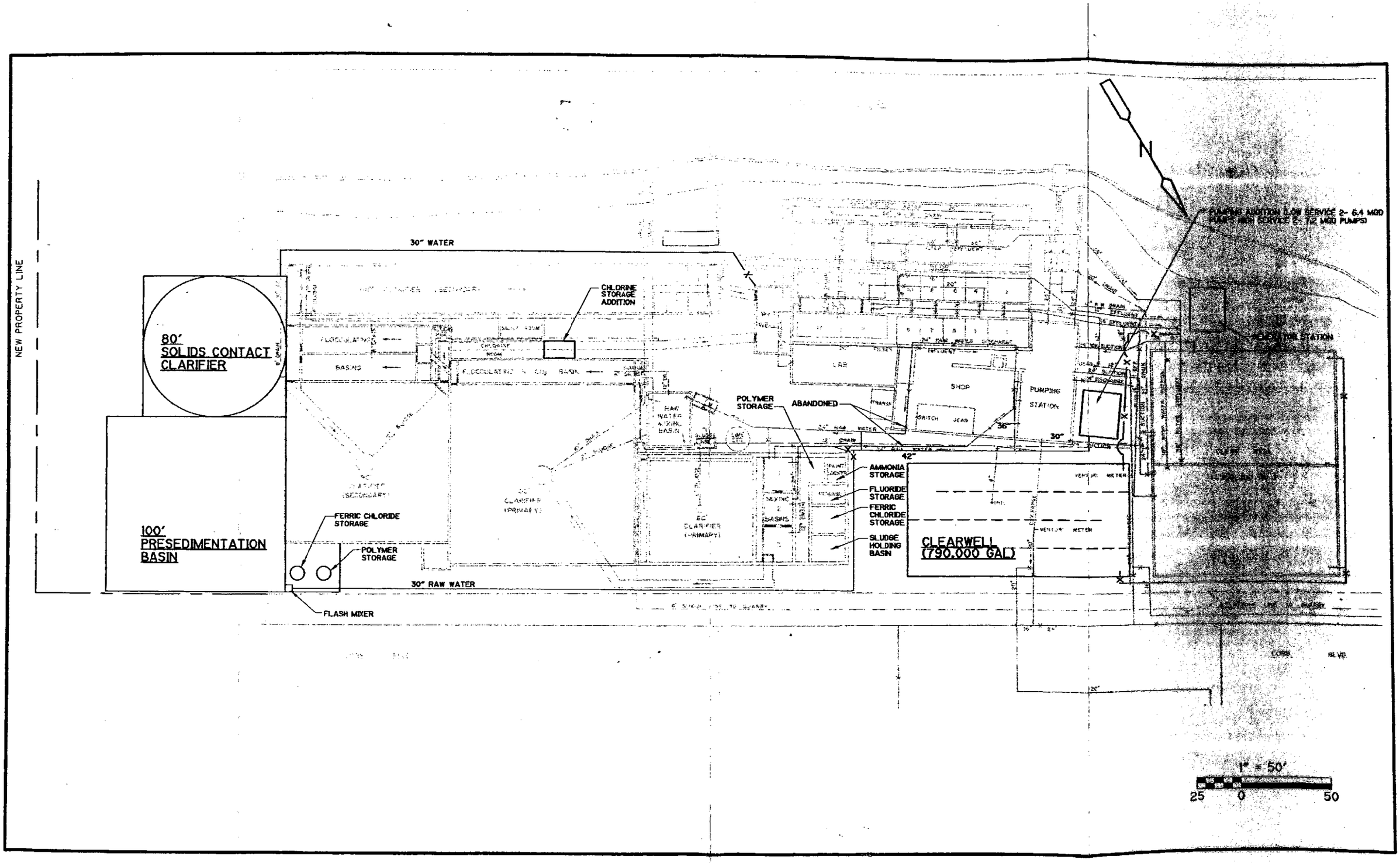


CDM Camp Dresser & McKee

Figure 2-4
Site Plan- Alternative 2

CONSUMERS ILLINOIS WATER COMPANY
ICC DATA REQUEST NUMBER WD-1.04
DOCKET NUMBER: 00-0591
DATE SUBMITTED: 09/25/00

RESPONSIBLE PERSON FOR RESPONSE:
THOMAS J. BUNOSKY, VICE PRESIDENT/DIVISION MANAGER - 815-935-6535

RESPONSIBLE WITNESS:
THOMAS J. BUNOSKY

DESCRIPTION OF DATA REQUESTED:

Please provide a description of the capacity addition to be paid for by Duke Energy.

RESPONSE:

Attached is the detailed explanation of the plant expansion alternative that was selected based on the analysis conducted by Camp Dresser & McKee. The alternative selected was based on the cost and the ease of implementation. The report explains the additions to the Plant for the extra capacity that is required for Duke's additional flow requirements.

Memorandum

To: *Mr. Thomas Bunosky, Consumers Illinois Water Company*

From: *Mr. Len Rago, P.E. CDM*

Date: *August 31, 2000*

Subject: Kankakee Water Treatment Plant
Evaluation of Plant Expansion Alternatives
Revisions to Alternative 2 Costs
CDM Project No. 10956-29104

In response to your request, we are providing those portions of the ***Kankakee Water Treatment Plant: Evaluation of Plant Expansion Alternatives*** report that pertain to the description of the recommended alternative (Alternative 2) for the expansion of the plant capacity to 27.5 mgd. Alternative 2 was selected from a total of four different treatment alternatives. Briefly, these alternatives were as follows:

Alternative	Description	Total Project Capital Cost Opinion
No.1	All water is treated in two-similar, parallel treatment trains. The 60-foot primary clarifier is converted into two Actiflow units and the existing 90 and 100-foot primary clarifiers are converted into softening solids contact clarifiers.	$ 13,200,000
No. 2	The existing dual train treatment plant from the mixing basin to the wetwell will remain unchanged. A new treatment train will be added consisting of a flash mixing chamber, presedimentation basin, and solids contact clarifier. The three treatment trains will be blended at the wetwell	$ 8,435,000
No. 3	The existing dual train treatment plant from the mixing basin to the wetwell will remain unchanged. A new treatment train consisting of two CBI Walker Caricone units will be constructed The product water from three treatment trains will be blended at the wetwell.	$ 7,900,000
No. 4	Dual train treatment through the continued operation of the existing conventional treatment process train and the addition of a second treatment (softening) train involving Actiflow units for presedimentation and new solids contact clarifiers.	$ 11,100,000

As you may recall, Alternative No.2 was selected primarily due to extremely fast-track nature of the project from design through construction. Alternative No. 3, although slightly less in capital cost, involves the purchase of proprietary equipment (Claricone units) while Alternative No. 2 does not. The schedule of a construction project relying on the purchase and installation of proprietary equipment (i.e. Claricone's) is primarily subject to the constraints of the manufacturer providing that equipment. Whereas, with the non-proprietary equipment specified under Alternative No. 2, the presence of multiple manufacturers allows the contractor and Consumers to be in control of the project schedule since the selection of the equipment manufacturer can be based upon, among other things, how quickly the equipment can be supplied. Another disadvantage to the use of proprietary equipment is the premium paid by the owner should the equipment require future modification or expansion.

Another factor for the selection of Alternative No. 2 instead of Alternative No. 3 was due to the expected difficulties in obtaining permits to construct the Claricone units proposed under Alternative No. 3. This expected permitting issue is primarily due the disproportionate height of the units relative to the height of the surrounding residential neighborhood. This raises further questions as to the acceptability of Alternate No. 3 by the surrounding community. Much like Alternative No. 3, Alternative No. 2 proposed the expansion of the plant capacity through the addition of a third treatment train. However, Alternative No. 2 involves the use of lower-profile solids contact clarifiers to achieve softened-settled water.

Another factor for the selection of Alternative No. 2 instead of Alternative No. 3 was due to the greater amount of familiarity that Consumers' operating staff has with the treatment technologies employed by Alternative No.2. Specifically, Alternative No. 3 would employ a different type of treatment technology (equipment) for the new treatment train. This would require Consumers Kankakee WTP staff to become well versed in the operations and maintenance of two distinct systems. On the other hand, Alternative No.2 employs equipment and technology that Consumers Kankakee WTP staff are already familiar with. This feature is a distinct advantage especially when considering that less time would be required during the start-up of the third treatment train. For your convenience, the sections of the report describing Alternative 2 are provided below:

Selections from the ***Kankakee Water Treatment Plant: Evaluation of Plant Expansion Alternatives*** report.....

2.3 Alternative 2

In Alternative 2, a new treatment train consisting of rapid mix basin, presedimentation basin, and solids contact clarifier will be designed with sufficient capacity to expand the treatment capabilities of the Water Treatment Plant to a total of 27.5 mgd. Under this alternative, up to one-fifth of the total flow of 27.5 mgd could be conventionally treated (when desired), the existing softening train will be operated up to its current capacity, and the remainder of the flow will be softened using the new solids contact clarifier train. Figure 2-4 presents the site plan, and Figure 2-5 presents the flow diagram for Alternative 2. As shown in Figure 2-4, the property line will need to be extended to the southeast side of the treatment plant for Alternative 2 to be feasible.

As previously stated, this alternative employs a separate softening train which has the advantage of permitting the existing plant to remain unmodified and maintain current split treatment operations.

Solids contact clarifiers are commonly used for softening and clarification where water characteristics do not fluctuate rapidly and operation is continuous. Since solids contact clarifiers require consistent incoming water quality, a presedimentation basin is provided in this alternative. A flash mixer is provided for chemical addition and mixing. The new basins are discussed in Section 2.3.1 through 2.3.3.

Additionally, the hydraulic evaluation is presented in Section 2.3.4, and modifications to the chemical systems are presented in Section 2.3.5. A 30-inch raw water pipe will be needed to bring raw water to the southeast side of the treatment plant. Also, a 30-inch pipe will be needed to take softened water from the solids contact clarifier to the wet well where it will be combined with settled water from the existing treatment trains.

For:

- Low service pumping modifications, see Section 2.6.1.
- Filter modifications, see Section 2.6.2.
- For clearwell modifications, see Section 2.6.3.
- For high service pumping modifications, see Section 2.6.4.
- For standby power, see Section 2.6.5.

2.3.1 Rapid Mix

A 30-inch raw water pipe will be installed parallel to Cobb Boulevard to the southeast side of the treatment plant. This mixing tank will be designed with sufficient volume to provide a theoretical hydraulic detention time of 18 seconds, which is less than the maximum detention time of 30 seconds recommended by the Ten State Standards. In the rapid mix basin, polymer, ferric chloride, and activated carbon will be added.

2.3.2 Presedimentation

Conventional settling is the process of removing floc particles from suspension by keeping the water in a relatively quiescent state for a sufficient time so that a desired fraction of the particles settle out by gravity to the bottom of the basin.

Settling basin performance depends on the:

- Surface overflow rate or surface loading rate
- Effective water depth
- Mean horizontal flow velocity
- Detention time
- Launder-trough weir loading rate

The most important parameter in the design of settling basins is the surface loading rate (sometimes called the surface overflow rate). The surface loading rate is defined as the flow rate divided by the basin surface area, and it may be conceptualized as a "design particle settling velocity." The surface loading rate is usually quoted in units of gallons per day per square foot of basin surface area (gpd/ft^2). The detention time and water depth are not as important to settling performance as the surface loading rate. The maximum surface-loading rate for the presedimentation basin in Alternative 2 is approximately 1,200 gpd/ft^2. Based upon CDM experience, a maximum surface loading rate of 1,200 gpd/ft^2 is appropriate for water treatment plants such as Kankakee.

In Alternative 2, the water will enter the presedimentation basin, which will be designed for a theoretical detention time of 3.1 hours. This is slightly greater than the Ten State Standards minimum detention time of 3 hours.

The product water will flow over a peripheral launder with V-notch weirs or submerged orifices. It will then be collected and sent to the solids contact clarifier for softening.

2.3.3 Solids Contact Clarification

Solids contact clarifiers are commonly used for softening and clarification where water characteristics do not fluctuate rapidly and operation is continuous. Solids contact clarifiers have separate flocculation and clarifying zones. In the flocculation zone, the particles are gently mixed to increase the rate of collisions without disrupting the formation of particle aggregates. The smaller discrete particles agglomerate into larger floc particles heavy enough to settle by gravity and large and durable enough to be removed during settling and filtration. In the clarifying zone, the treated water exits the basin as the particle aggregates are allowed to settle. Solids contact clarifiers typically allow for good suspended solids removal in less space than do conventional clarifiers.

Performance of solids contact clarifiers depends on the:

- Surface overflow rate or rise rate
- Uniform flow distribution in the settling zone
- Minimization of flow short circuiting from hydraulic and density currents
- Uniform withdrawal of clarified water
- Sludge withdrawal without disturbing settling efficiency

In Alternative 2, the new treatment train flow from the presedimentation basin will enter a solids contact clarifier. A new 80-foot-by-80-foot concrete basin will be built on the southeast side of the treatment plant to accommodate the solids contact clarifier installation. The basin will have a 21-foot sidewater depth and a volume for 998,000 gallons. Fillets will be constructed in each corner area such that the sludge will settle toward the circular area and will be removed with the sludge collector. Lime and ferric chloride will be added for softening and coagulation.

Submerged radial launders with orifices will collect the product water. One 30-inch diameter pipe will convey the product water to the 30-inch pipe that will take the water to the wet well. In the wet well, the flow from this new treatment train will be combined with the flow from the existing treatment process. Fluoride, carbon dioxide, and chlorine will be added in the wet well.

The new solids contact clarifier was designed to provide an upflow rate of about 1.53 gpm/ft^2 at the sludge separation line of the clarifier. Since the Ten State Standards allow a maximum upflow rate of 1.75 gpm/ft^2 at the sludge separation line, the solids contact clarifier in Alternative 2 has an upflow that is 12 percent less than the approved maximum. The theoretical detention time of the solids contact clarifier was designed to provide the minimum detention time required by the Ten State Standards. However, the orifice-loading rate for the 80-foot basin is well below the maximum loading of 20 gpm/ft for softeners set by the Ten State Standards

2.3.4 Hydraulic Evaluation

Alternative 2's hydraulic profile is presented in Figures 2-6 and 2-7. For Alternative 2, a new 36-inch header will be installed in the existing low service pumping station. This pipe will join a new 30-inch pipe from the new low service pumping station and will become a 42-inch pipe at the tee. The 42-inch pipe will carry the low service water to two tees where the existing 24-inch raw water lines will connect. The existing 24-inch line to the rapid mixing basin will receive that portion of the plant influent flow designated for conventional treatment. This flow will be regulated by a new valve located immediately northwest of the existing rapid mixing basin. The existing 24-inch line to the existing three-stage mixing basin will have a new valve installed to regulate the flow designated for the existing softening treatment train. The remainder of the plant flow will then be passively diverted to the new treatment train. This will be accomplished by routing a new 30-inch line around the north side of the plant to the new flash mix basin that will be located on the southeast side of the existing plant.

As previously stated, the existing plant will continue to produce softened, settled water by maintaining existing treatment practices. To prevent the submergence of the V-notch weirs in both the 60-foot basin and the 100-foot basin of this existing treatment process, the west wall of the 240-foot basin will be core drilled with 8-inch ports and the existing launders removed. The launder in the 90-foot basin will be core drilled with 4-inch holes. This will maintain flow to each basin while eliminating several inches of headloss downstream of the 60-foot and 100-foot basins.

The water treated by the new train located on the southeast side of the plant will be conveyed in a new 30-inch pipe on the southwest side of the 240-foot basin to the wetwell.

2.3.5 Chemicals

In Alternative 2, alterations to the existing chemical storage and feed systems will need to be addressed. Additionally, new chemical storage and feed systems for the new treatment train. The total storage capacity for lime was established at 15 days while total storage

capacity for all other chemicals was established at 30 days. The lime storage requirement was established at 15 days because re-supply is readily available. In addition, lime is used only for aesthetic purposes (i.e., hardness reduction) and is not required to meet primary drinking water quality standards. Providing a 30-day supply would be cost prohibitive, and in CDM's opinion, is not warranted.

Two new 1,000 pound per hour lime slakers will be added to service the new treatment train with one duty pump and one stand by pump. The application point will be at the new solids contact clarifier. Along with the increase in storage capacity, three new 15 gallon-per-hour ferric chloride pumps will also be installed. Three pumps will be added to service the new treatment train, two duty pumps and one stand by pump. Applications points will be at the new flash mixing basin and at the new solids contact clarifier. Two 3 gallon-per-hour polymer activation units will be added to the new treatment train. One pump will be for duty and one pump for standby. The application point will be at the new flash mixing basin. The polymer storage area that is currently under design and construction will not provide a 30-day storage for Alternative 2. Additional storage will need to be found for six 55-gallon drums in order to reach a 30-day storage capacity.

As a result of the increase in plant capacity, additional chlorine gas storage and feed system capacity will be needed. Options include increasing the size of the existing chlorine storage room by extending the current room 10 feet or using the adjacent fluoride storage room after the fluoride system is relocated. These options would allow for the storage of four additional one-ton chlorine containers facilitating an additional feed capacity of 500 pounds per day. A 5,000 pound per day carbon dioxide feed system will be added for application in the wet well. An allowance will also be made for additional feed capacity for PAC by adding two 500 pound per day pumps and one 400 pound per day pump. The two 500 pound per day pumps will be used to feed the new flash mixing basin, while the 400 pound per day pump will be added to feed PAC at the recarbonation basin in the existing treatment train. To help reduce the formation of disinfection by-products (DBPs) such as THMs and HAAs, aqueous ammonia will be added to the finished water after leaving the clearwell and prior to the high service pumps. The primary application point will be the clearwell exit, and the secondary point will be at the high service pump discharge header. An aqueous ammonia system is currently being designed and constructed and should be operational by the end of 2000.

2.6 Common Improvements to All Alternatives

The low service pumping, filter, clearwell, and high service pumping modifications required to meet the applicable demands presented in Section 2.1 will be the same regardless of which treatment process alternative is selected. These improvements are summarized in Sections 2.6.1 through 2.6.4. Additionally, standby power is addressed in Section 2.6.5.

2.6.1 Low Service Pumping

To increase the capacity of the treatment plant, a new low service pumping station will be

added. The low service pumps will be housed, along with new high service pumps, in a new station located between the existing pump station and the existing clearwell. The combined pump station will have a joint operating room and motor control center room. The new low service pumping station will consist of two vertical turbine pumps, with room for a third pump. The addition of the two pumps will increase the firm capacity of low service pumping to 27.5 mgd.

The existing low service pumps and motors are located below grade and are therefore subject to flooding. Although no specific improvements are presented in this report, the location of the low service pump motors should be moved to a higher location that is less prone to flooding. Should the low service pumps flood, the entire plant will be rendered inoperable.

2.6.2 Filtration

There are different types of filters that vary according to the driving force, depth of solids penetration, media distribution, direction of water flow, and pretreatment provided. High rate, rapid gravity, dual-media filters are the current standard for municipal water treatment plants. Filter performance is based on:

- Filtrate turbidity
- Filtration rate
- Head loss
- Backwash rate
- Air-flow rate (if auxiliary air scour backwash is installed)

The number of filters installed is determined by the acceptable surface loading rates, resultant transfer of applied water to the filters remaining in service when backwashing, and the method of control utilized. When one filter is out of service for backwashing, the remaining filters should be sized so that the maximum filtration rate is not exceeded. Total filtration capacity with one filter out of service must be at least equal to the maximum-day capacity of the Kankakee WTP, or 27.5 mgd.

Specific information relative to Kankakee's seventeen existing filters is summarized in Section 1.2.7. At 27.5 mgd, the filter-loading rate is approximately 3.48 gpm/ft^2 with all filters in operation and 4.2 gpm/ft^2 with one filter out of service for backwashing. The Illinois Environmental Protection Agency's (IEPA) rated capacity for the filters are 5.0 gpm/ft^2 based upon current filtered water quality requirements.

While the existing filter media configuration may achieve the 0.5 NTU standard at a maximum rate of 5gpm/ft^2, the media depth is likely too shallow to consistently meet a 0.3 NTU future standard being discussed in the LT2ESWTR. Therefore, either pilot or full-scale testing should be performed to determine achievable filtered water turbidity at increased loading rates. If pilot or full-scale testing reveals an inability to consistently meet a 0.5 NTU or a 0.3 NTU filtered water turbidity, filter modifications will be required as presented in the remainder of Section 2.6.2. Based on pilot and full-scale testing of plants

using media depths of 24 inches, CDM believes that follow-up testing at Kankakee will likely show an inability to consistently meet the 0.3 NTU standard of the future LT2ESWTR. Therefore, a worst-case scenario is presented herein-requiring replacement of all filter box internal materials and equipment.

While Kankakee's filters have operated well in the past, increasing the loading rate by 70 percent may be too high for the existing filters' media configuration (15 inches of anthracite and 9 inches of sand). This may not be as great of a concern if all of the upstream processes are operating appropriately and filtered water quality standards do not change. However, increasing the filtration rate to 4.22 gpm/ft^2 would not be advisable unless the depth of media is increased. CDM has successfully demonstrated rates above 6.0 gpm/ft^2 with dual media of 12 inches of sand and up to 36 inches of anthracite. Therefore, increasing media depth could allow the existing filters to handle an additional expansion and still be below industry standards.

Dual-media filter beds are common for high rate gravity filters with filtration rates more than 3 gpm/ft^2. Conventional dual-media designs use a top layer of 20 to 48 inches of anthracite with a specific gravity of about 1.4 to 1.7 and an effective size of 1.0 mm, overlaying a 4- to 16-inch sand layer with a specific gravity of about 2.65 and an effective size of about one-half that of anthracite.

The existing filter boxes with the current underdrain system do not have enough depth to increase the media depth and still allow for proper expansion during backwashing. The underdrain system could be replaced with a lower-profile underdrain and the gravel layer could be replaced with a porous plate (or integral media support (IMS) cap). The need for support gravel is eliminated when a porous plate made of high density polyethylene beads is included. This would provide 12 to 17 inches for additional media depth depending on the underdrain selected.

Unfortunately, an IMS cap cannot be placed directly on the existing clay underdrain system. Therefore, a retrofit eliminating the gravel layer would require replacement of the underdrain system as well. Underdrain systems suitable for retrofitting the Kankakee WTP include:

- ***Universal Type S Underdrain System:*** F. B. Leopold Company manufacturers a dual-lateral air-water underdrain system which consists of high density polyethylene blocks each about 1 foot square in section by 3 feet long. The blocks are mechanically joined by snap locks and sealed by O-rings to form continuous laterals. The laterals are assembled equal to the length or width of the filter. Leopold has recently produced a low profile block that is approximately 8 inches in height. There have been some reports of a maldistribution percentage of 16 to 18 percent, which is more than normally acceptable.

  A gravel media support layer is not needed with the Universal Underdrain System if the Integral Media Support (IMS) cap is provided. The IMS cap provides good flow

distribution of air and water; has lower headloss than gravel; and is removable. The surface of the IMS cap is smooth thereby reducing the potential for calcification, and the IMS cap is proven to have reduced plugging potential. The IMS cap is an easy change to allow for a greater depth of media. IMS cap experience in lime softening plants has had both positive and negative results. The IMS cap has the potential to plug and require acid cleaning or replacement if recarbonation is insufficient and a polyphosphate sequestering agent is not utilized.

- ***Tetra's LP System:*** About three years ago, Tetra Process Technologies released a "U" Block that is almost identical to the Leopold "S" Block, and several months ago, Tetra released a low profile "LP" Block. Tetra's LP Block is different than Leopold's low profile block in that the Tetra block maintains the cross sectional area of the U Block, providing a profile that is twice as wide as the Leopold block. A wider block allows for a lower percent maldistribution and fewer blocks needed to cover the floor (thus, fewer joints, less grout, and reduced installation labor). Tetra sites maldistribution of plus or minus 5 percent for lateral lengths up to 30 feet long. The LP Block is 8 inches in height and 18 inches in length.

- ***Roberts' Trilateral System:*** The Roberts Filter Group has a Trilateral Underdrain that is similar to the Universal Type "S" Underdrain.

- ***Roberts' Infinity System:*** The Infinity System is a continuous lateral PVC underdrain. The underdrain is 6 inches in height and 11 inches in width. The overall length is tailored to the existing filters, eliminating the need for joints. The underdrain system is completely assembled in the factory, including flume openings, endplates, and porous plates (if desired). The low profile maximizes filter freeboard and allows for a greater media depth. This increases the possible filtration rate without additional filters. Additional benefits include low headloss and low maldistribution.

  The Infinity underdrain has continuous parallel rows of laterals that completely cover the entire filter floor. Each lateral has six conduits of rectangular cross-section: three upper conduits for dispersal and three lower conduits for distribution. One lower conduit is connected to a corresponding upper conduit by uniformly-spaced orifices. This allows for uniform collection of filter water and uniform discharge of backwash water.

A retrofit of the Kankakee filters should consider the Roberts Infinity, Universal Type S, or Tetra LP underdrain systems. A lower profile underdrain system and elimination of the gravel support layer will allow for an increase in the media depth and filtration rate without the need to build additional filters.

2.6.3 Chlorination

To meet the IEPA requirement for post-filtration chlorine contact time and the Surface Water Treatment Rule (SWTR) requirement of a 3.0 log kill of *Giardia lamblia*, a new 790,000 gallon clearwell will be constructed east of the existing clearwell. This clearwell addition is

driven by the more stringent IEPA requirement of post-filtration disinfection detention. The combination of the new clearwell and the existing clearwell will satisfy the detention time requirements established by IEPA.

The SWTR allows for a 2.5 log kill credit for conventional treatment, thus the existing and new clearwells are required to provide a 0.5 log kill of *Giardia lamblia*. Based on a temperature of 10 degrees C, a pH of 8.5, and a residual chlorine concentration of 1.4 mg/L, the required CT is 34 for a 0.5 log kill of *Giardia lamblia*. The new clearwell should be baffled such that it will have "superior baffling" (BC = 0.7). Given superior baffling in the new clearwell and assuming "poor baffling" (BC = 0.3) in the existing clearwell, the hydraulic retention time in the new clearwell must be at least 18.8 minutes. Using the minimum depth and maximum flow conditions, the new clearwell will have a hydraulic retention time of 23.3 minutes and therefore will meet the requirement of the less stringent SWTR. Baffling is therefore not required in the existing clearwell.

2.6.4 High Service Pumping

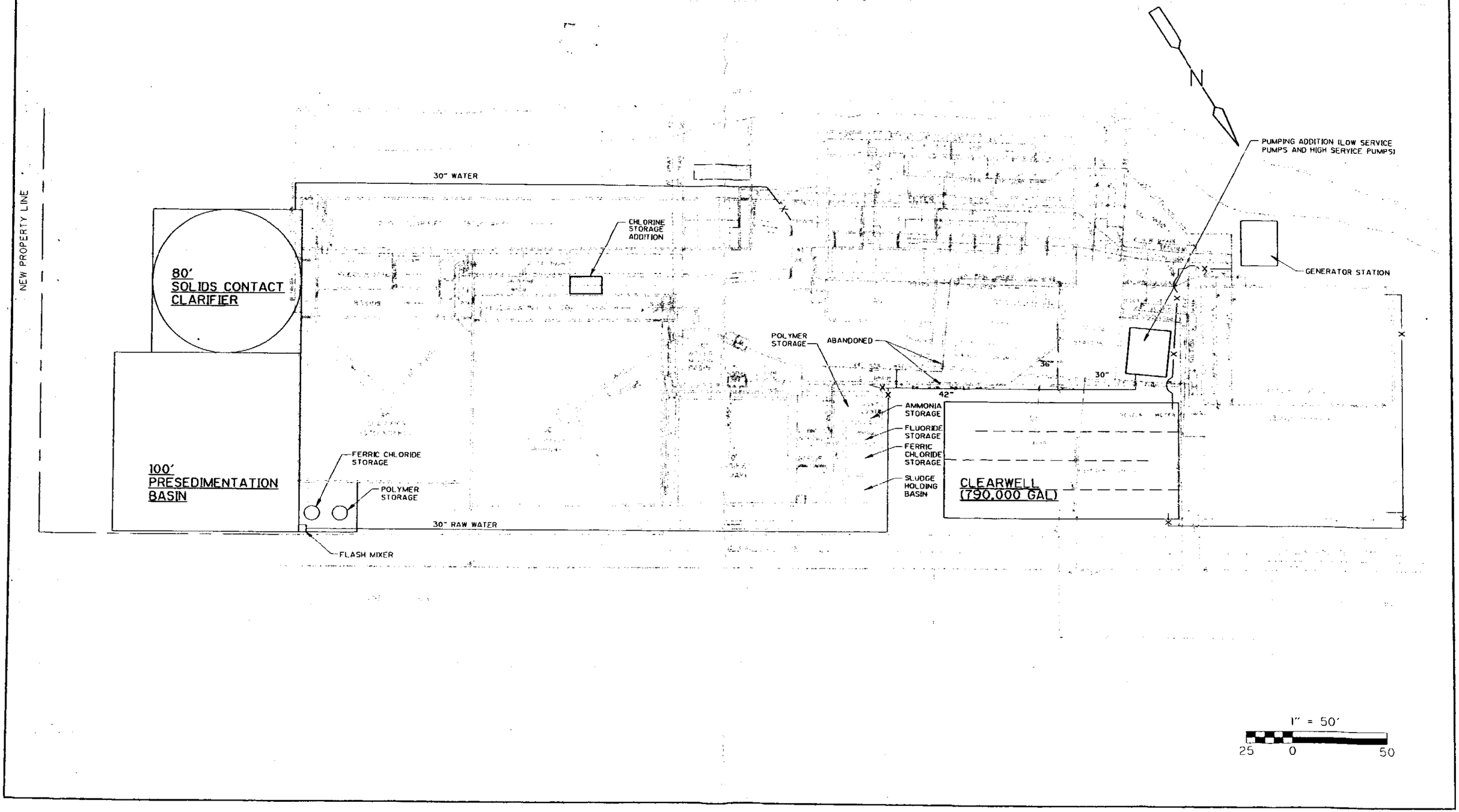
The new high service pumps will be located in the same building as the new low service pumps. The combined pumping station will have a joint operating room and motor control center room and will be located between the existing pump station and the existing clearwell. The new high service pump station will consist of two vertical turbine pumps, with room for a third pump. The addition of the two pumps will increase the firm peak hour capacity to 34.2 mgd. The drywell beneath the high service pumps will contain a suction manifold from the clearwell, which will allow the high service pumps to pump finished water from the clearwell out into the distribution system.

2.6.5 Standby Power

Standby power requirements are determined under plant average flow conditions. To provide power for both the high service and low service pumps, 1,250 horsepower is required. The full load amps (FLA) of the existing 750 KVA, 4,160-volt, 3-phase generator is 104 amps. The required current for the new 1,250 horsepower, 4,160-volt, 3-phase load is 160 amps. Given a 1.15 service factor, two 750 KVA, 4,160-volt, 3-phase generators are required. Thus, one additional 750 KVA, 4,160-volt, 3-phase generator is needed to provide the power required when operating the water facility at average flow conditions during a power outage.

..... This concludes the relevant portions of the report concerning the improvements associated with Alternative 2. Should you have any questions or concerns, please contact me directly at (847) 735-0391.

cc: Mr. Kurt Ronnekamp, CDM Kansas City



CDM Camp Dresser & McKee

Figure 2-4
Site Plan- Alternative 2

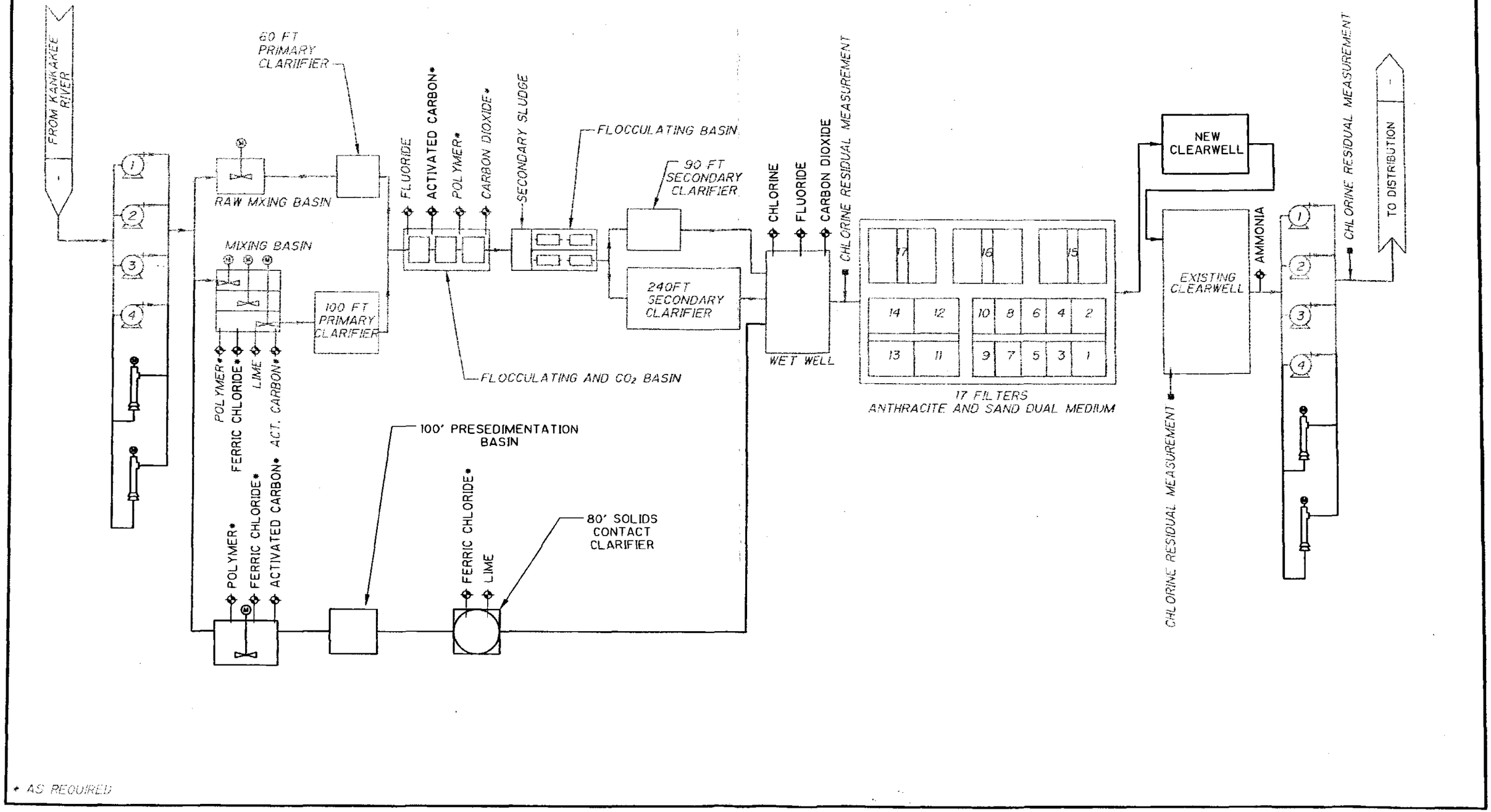
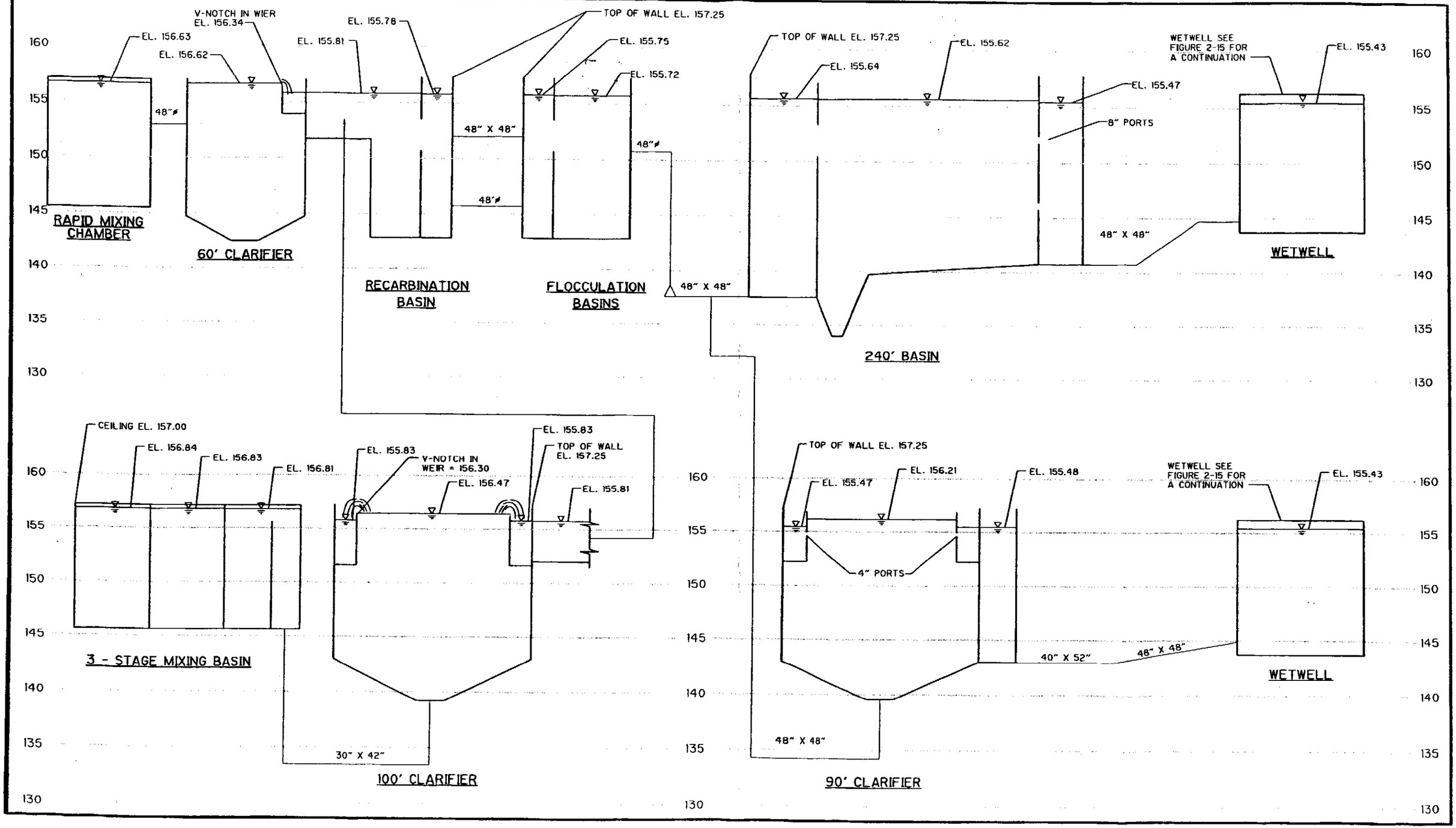


Figure 2-5
Process Flow Schematic- Alternative 2



CDM Camp Dresser & McKee

Figure 2-6
Hydraulic Profile
Alternatives 2 and 3 Train A

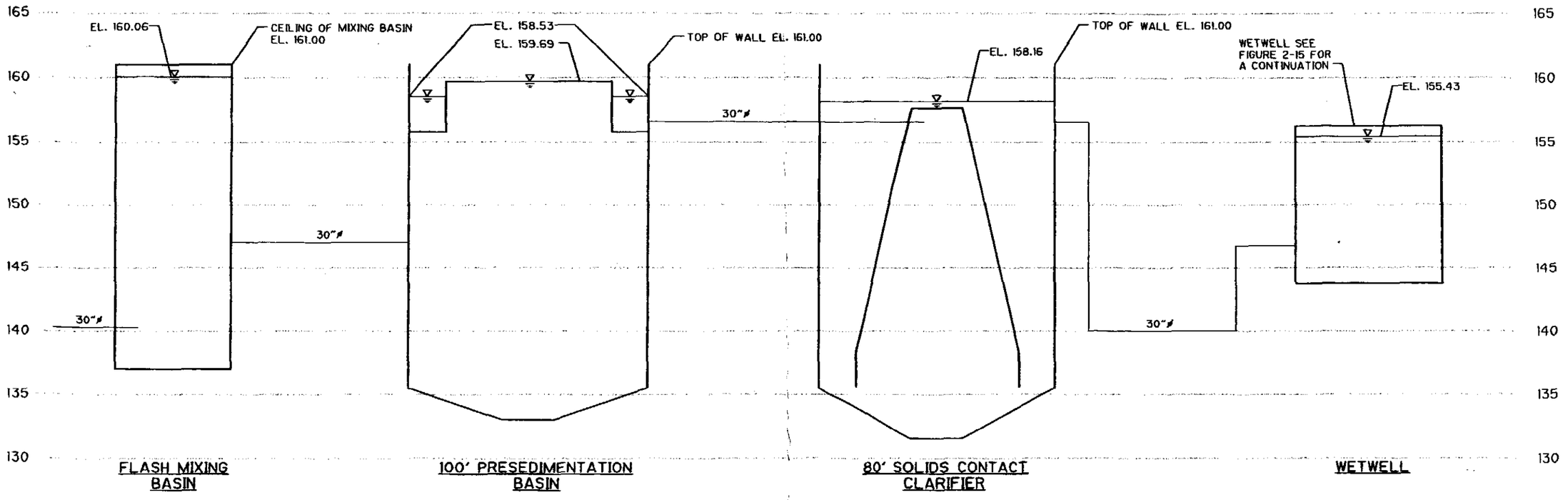


Figure 2-7
Hydraulic Profile
Alternative 2 Train B

CONSUMERS ILLINOIS WATER COMPANY
ICC DATA REQUEST NUMBER WD-1.05
DOCKET NUMBER: 00-0591
DATE SUBMITTED: 09/25/00

RESPONSIBLE PERSON FOR RESPONSE:
THOMAS J. BUNOSKY, VICE PRESIDENT/DIVISION MANAGER - 815-935-6535

RESPONSIBLE WITNESS:
THOMAS J. BUNOSKY

DESCRIPTION OF DATA REQUESTED:

Please provide the status of Engineering plans for the project.

RESPONSE:

Camp Dresser & McKee has completed the Feasibility and Scoping Phase of the Plant Expansion Project. Camp Dresser & McKee evaluated alternatives for the Plant expansion required. One alternative has been selected and the necessary components identified that need to be constructed at the Plant.

The second phase of Engineering Services required for the Plant expansion is the solicitation of bids and award for design services. This solicitation went out to five Engineering firms on Sept 22. A mandatory pre-bid conference will be held on Sept 29th with the final bids due on Oct 12th. The selection of the Design Engineer will be made by Oct 20th.

The third phase of the Engineering Services is the Preliminary Engineering Design Phase, which is scheduled to be completed by December 3rd.

The fourth phase of the Engineering Services required is the Final Design Phase, which is scheduled to be completed by February 4th.

CONSUMERS ILLINOIS WATER COMPANY
ICC DATA REQUEST NUMBER WD-1.06
DOCKET NUMBER: 00-0591
DATE SUBMITTED: 09/25/00

RESPONSIBLE PERSON FOR RESPONSE:
THOMAS J. BUNOSKY, VICE PRESIDENT/DIVISION MANAGER - 815-935-6535

RESPONSIBLE WITNESS:
THOMAS J. BUNOSKY

DESCRIPTION OF DATA REQUESTED:

Please provide the status of request for a construction permit from the IEPA.

RESPONSE:

No request for an IEPA permit has been made. The IEPA requires detailed drawings for the issuance of a construction permit. The IEPA has accepted preliminary 30% design drawings for the work that is being conducted this year at the Water Treatment Plant. It is anticipated that the construction permits will be submitted to the IEPA prior to the Preliminary Engineering Phase being completed. This phase is scheduled to be completed by December 3rd.

CONSUMERS ILLINOIS WATER COMPANY
ICC DATA REQUEST NUMBER WD-1.07
DOCKET NUMBER: 00-0591
DATE SUBMITTED: 09/25/00

RESPONSIBLE PERSON FOR RESPONSE:
ROB TROTTA, DUKE ENERGY – 713-627-6555

RESPONSIBLE WITNESS:
THOMAS J. BUNOSKY

DESCRIPTION OF DATA REQUESTED:

Please provide the status of Zoning for the generating plant.

RESPONSE:

The site is in un-incorporated Manteno Township. Kankakee County ordinances/zoning will apply to the Project. The site is currently zoned I1 (light industrial) by Kankakee County and is adequate for the Project.

CONSUMERS ILLINOIS WATER COMPANY
ICC DATA REQUEST NUMBER WD-1.08
DOCKET NUMBER: 00-0591
DATE SUBMITTED: 09/25/00

RESPONSIBLE PERSON FOR RESPONSE:
ROB TROTTA, DUKE ENERGY – 713-627-6555

RESPONSIBLE WITNESS:
THOMAS J. BUNOSKY

DESCRIPTION OF DATA REQUESTED:

Please provide the status of EPA approval for air emissions for the generating plant.

RESPONSE:

The draft air permit/construction permit for Kankakee Generating Station was issued by the Illinois Environmental Protection Agency (IEPA) on August 2, 2000. The Draft Air Permit public comment period expired on September 5, 2000. The US EPA made two comments on the Draft Permit. First, US EPA requested clarification on the 112-(g) status of potential hazardous air pollutants (HAPs). The site emissions are not classified as major for HAPs. The US EPA also requested the IEPA to review the Best Available Control Technology (BACT), while the USEPA commented that combined Carbon Monoxide (CO)/Volitile Organic Material (VOM) emission reductions of an oxidation catalyst should be considered. It is atypical to evaluate dual pollutant affects from a control technology in the BACT analysis. No other public comments were submitted. Indications from discussions between the IEPA and the project are that the project has sufficiently addressed issue number one. The IEPA is presently formulating its response on the Oxidation Catalyst. Good combustion practices have typically been determined to be BACT in attainment areas. Resolution to this sole issue is expected to be accomplished by the end of October in time for Board approvals in November and December.

CONSUMERS ILLINOIS WATER COMPANY
ICC DATA REQUEST NUMBER WD-1.09
DOCKET NUMBER: 00-0591
DATE SUBMITTED: 09/25/00

RESPONSIBLE PERSON FOR RESPONSE:
ROB TROTTA, DUKE ENERGY – 713-627-6555

RESPONSIBLE WITNESS:
THOMAS J. BUNOSKY

DESCRIPTION OF DATA REQUESTED:

Please provide a list of and status of all other permits needed to construct and operate the generating plant.

RESPONSE:

There are twenty three permits and studies needed to construct and operate the plant. They are addressed as those for Construction or Operations. A full matrix of all Agreements and studies is attached. Below is an overview addressing all twenty three.

Construction:
Of the twenty three, sixteen are necessary for construction. Ten of the sixteen have already been sufficiently completed. One is not obtained until 30 days prior to construction. Of the remaining three, two are on schedule and the sole remaining is the Illinois Commerce Commission approval of the Petition filed by Consumers Illinois Water Company. Board approval will not be obtained by the Duke Boards without approval of the Petition.

Operations:
Of the seven permits required for operations, four are not issued until completion of construction or set times set prior to operations. The remaining three are on schedule as demonstrated in the attached matrix.

KANKAKEE GENERATING STATION
Permit and Agreement Status
As of Sept. 28, 2000

COMPLETED		
	Counter Party	**Status**
Electric Transmission		
System Impact Study	ComEd	Completed – July 24, 2000
Power Flow Study	ComEd	Completed – June 2, 2000
Short Circuit Study	ComEd	Completed – June 2, 2000
Transient Stability Study	ComEd	Completed – June 2, 2000
Environmental Permits & Approvals		
Draft Air Permit	Illinois EPA	Issued – Aug 2, 2000
Cultural Resource Signoff under Section 106	Illinois Historical Preservation Agency	Completed – May 9, 2000 (No significant sources.)
Protected Species Signoff	Illinois Dept. of Natural Resources	Completed– Feb. 17, 2000 (No endangered species)
Effluent Discharge		
Waste Water discharge Agreement	City of Kankakee	Completed – Aug 21, 2000
Waste Water discharge Permit	City Of Kankakee	Issued – Sept.1, 2000
Water Supply		
Water Purchase Agreement	Consumers Illinois Water	Completed – Sept. 1, 2000

PENDING			
	Counter Party	**Status**	**Status**
Market/Regulatory			
EWG Status	FERC	File 60 days prior to test power	No Action
Water rate change Approval	Illinois Commerce Commission	Submit – Sept. 2000 Target– Oct. 25, 2000	On Schedule Filed – Sept 1, 2000
Generator Lead Approval	Illinois Commerce Commission	Target Filing – Sept.	On Schedule
Market Based Rate Authority	FERC	File 120 days prior to test power	No Action
FPA Change for discharge	Northeastern Illinois Planning Commission	Submit –Oct 7. 2000 Target – Feb. 2001	On Schedule City of Kankakee & Manteno have agreed to change.
Environmental Permits & Approvals			
Air Permit to Construct	Illinois EPA	Target – Sept. 2000	30-day public comment period started Aug 4. (no pubic comments received) Responding to EPA comment on Oxidation Catalyst

Acid Rain Permit	Illinois EPA	Submit - Aug.7, 00 Target – Jan 2001	On Schedule Submitted Aug. 23, 2000
Notice of Proposed Construction or Alteration	Illinois EPA	Sub Dec 2000 Target Jan 2001 (Notice due 30 days prior to construction)	No Action
Air Permit to Operate – Title V	Illinois EPA	Target - June 2002 (Due after the plant is constructed)	No Action (Plant testing and commissioning are done under Construction Permit.)
Storm Water General Permit Coverage for Land Disturbance under the NPDES Program – Construction	Illinois EPA	Submit – Oct 16, 00 Target - Dec. 2000	On Schedule
Storm Water General Permit Coverage for Land Disturbance under the NPDES Program – Operations	Illinois EPA	Submit - Jan 2002 Target – June 2002 (180 days prior to discharge)	No Action
Sewer Connection Permit	Illinois EPA	Submit – Sept. 2000 Target – Nov. 2000	On Schedule Submitted – Sept. 4
Electric Transmission			
Interconnect Agreement	ComEd	Target – Oct. 30 2000	On Schedule. Negotiations continue

CONSUMERS ILLINOIS WATER COMPANY
ICC DATA REQUEST NUMBER WD-1.10
DOCKET NUMBER: 00-0591
DATE SUBMITTED: 09/25/00

RESPONSIBLE PERSON FOR RESPONSE:
TERRY J. RAKOCY, PRESIDENT - 815-935-6535

RESPONSIBLE WITNESS:
THOMAS J. BUNOSKY

DESCRIPTION OF DATA REQUESTED:

Please provide a copy of a map showing all certificated areas by docket number for the Kankakee Division.

RESPONSE:

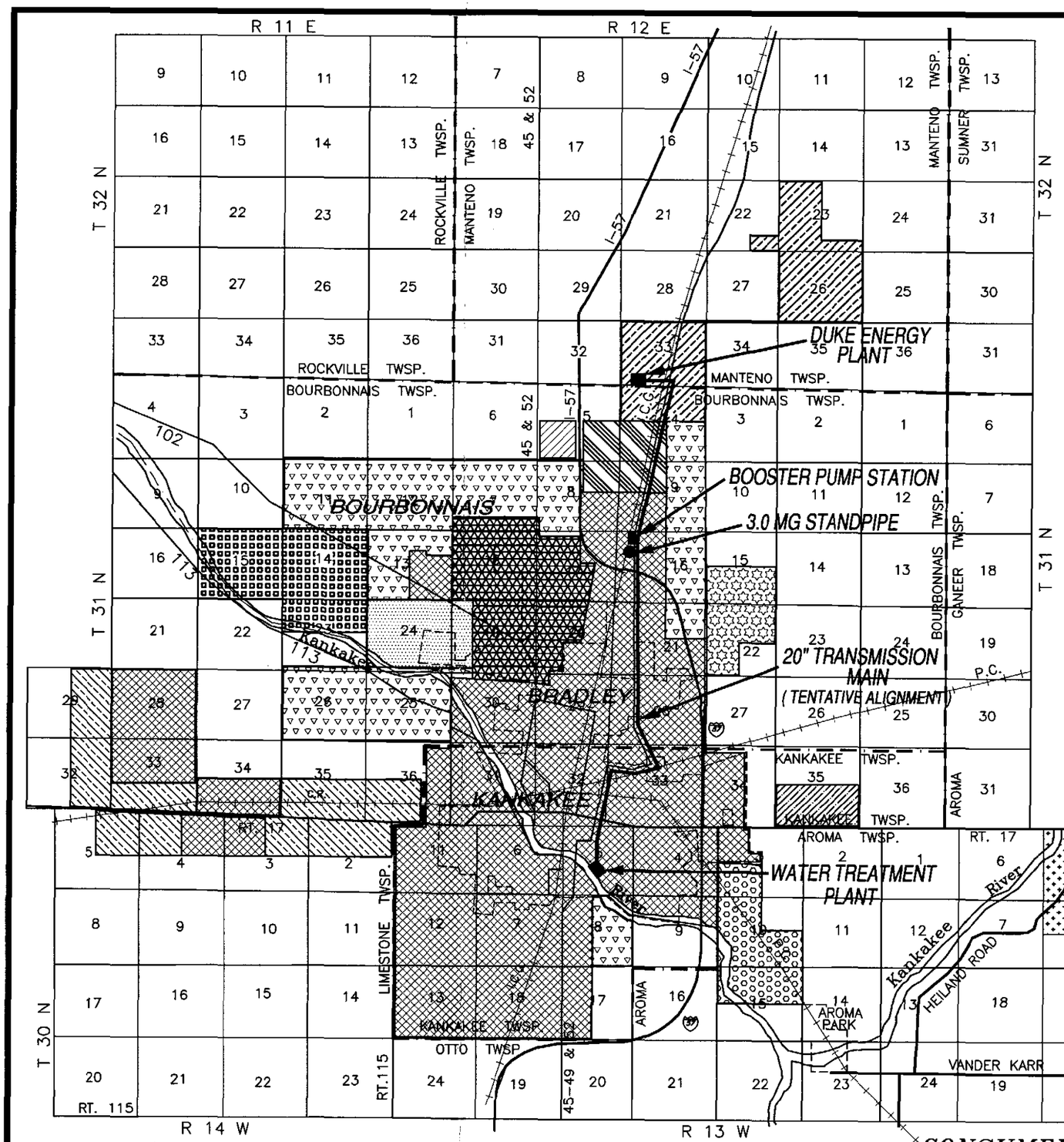
Please refer to attached map, which shows all existing certificate areas for the Kankakee Division including the Docket numbers for each Certificate petition. Also shown on the map is the location for the water treatment plant, the 3.0 million-gallon standpipe, the booster pumping station, the Duke Energy Plant and the route of the 20-inch transmission main. Please note that the 20-inch transmission main final alignment has not been determined at this time. However, no matter what alternative route may be chosen, if this one is not the final alignment, the route will be within the existing Certificate area of the Kankakee Division.

ICC DOCKET 00-0591

DATA REQUEST WD- 1.10

EXISTING CERTIFICATED AREAS

KANKAKEE COUNTY DIVISION



LEGEND

- MUNICIPAL LIMITS
- TOWNSHIP LIMITS

WATER CERTIFICATES

53155	55848
53510	58773
54332	860230
54744	92-0377
55696	94-0197
97-0305	94-0319
	98-0343

CIWC APPR. AREA = 45.3 SQ. MI.

NO SCALE

D. A. PETERS – 2/98

CONSUMERS IL. WATER COMPANY