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"KING'S MARK"
ENVIRONMENTAL REVIEW TEAM REPORT

STANLEY WORKS, INC. PROPERTY
KENT, CONNECTICUT

JUNE, 1975

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ENVIRONMENTAL REVIEW TEAM REPORT - STANLEY WORKS PROPERTY

The decision to undertake this project was approved by the King's Mark Executive Committee following the written request of the First Selectman of Kent, Eugene O'Meara, and Mr. Howard Coe representing the Stanley Works Company of New Britain, Connecticut. Thomas McGowan, Planning Director of the Northwestern Connecticut Regional Planning Agency (NWCRPA) was appointed coordinator of the King's Mark Environmental Review Team to undertake an environmental review of a portion of the land owned by the Stanley Works Company in Kent.

On May 15, 1975 the Team met at the Kent town hall for a briefing with local officials and Mr. Coe. This was followed by an extensive field investigation of the proposed project site. Each team member prepared a statement which was summarized and printed in this report by the Northwestern Connecticut Regional Planning Agency. Prior to finalization, this report was reviewed by Elliott Bronson, Department of Environmental Protection and George Sweeney, Project Coordinator of King's Mark Resource, Conservation and Development Project.

The members of the Environmental Review Team consisted of the following: Elliott Bronson, Environmental Analyst, Natural Resource Center, Connecticut Department of Environmental Protection (DEP); Lawrence Bandolin, DEP Fish Biologist; Art Cross, District Conservationist, U.S. Soil Conservation Service (SCS); Peter Hearn, Director of the Housatonic Valley Association; Sid Quarrier, DEP Geologist; Phillip Renn, Civil Engineer, SCS; Carl Stamn, Park and Recreation Specialist, DEP District I; Steve Stilicki, Transportation Planner, Connecticut Department of Transportation; Barry Wolf, Soil Scientist, SCS; and Jay Zaragoza, NWCRPA Planner, who was primarily responsible for drawing together the individual technical reports into this final report.

This report does not compete with private consultants by supplying site designs or detailed solutions to development problems. By identifying the existing resource base and evaluating its significance to potential development, the aim of this report is to encourage land use decisions that recognize both the long-term economics of land use and the need to maintain environmental quality.

The King's Mark Project Executive Committee hopes you will find this report of value and assistance in making your decisions on this particular site.

If you require any additional information on this report, please contact Thomas McGowan (203-868-7341). For information concerning the Environmental Review Team, contact King's Mark Project Coordinator George Sweeney, Litchfield Agricultural Center (203-567-0264).

INTRODUCTION

Years ago, for the purpose of creating a hydroelectric power dam, the Stanley Works Company, Inc. of New Britain, Connecticut acquired over 2,000 acres of land along both sides of the Housatonic River in the Towns of Kent, Cornwall and Sharon. The Company's original plan was to impound the river's water north of the Village of Kent and construct a hydroelectric station. A power dam for the Stanley Works was eventually located on the Farmington River and the Company's land along the Housatonic has remained primarily in farm and forests.

However, Stanley Works has permitted several limited uses on this land including a small sand and gravel operation which began in the 1930's, the Town of Kent sanitary landfill (dump), and a small state park site at Kent Falls which is leased to the State of Connecticut.

In the past, the sand and gravel operation has been utilized to service the Town's needs, rather than on a commercial basis. Stanley Works, represented by Mr. Coe, recently approached the Town with a proposal to allow for an expanded sand and gravel operation to be located approximately in the same location as the existing mining operation. Under this plan, Stanley Works would grant a lease to a third party to conduct the mining and following its completion, Stanley Works would transfer title of the site, as well as other land in the site's proximity, to the Town.

The Stanley Work's proposal for the 130-acre site included the development of a twenty-seven acre pond which would be created as a product of the sand and gravel excavation. The pond and surrounding land could then be utilized for recreational activities. South of the pond could be an open space area and sites for family camping. North of the pond could be for parking and playground areas. (See Proposed Sketch Site Plan on Page 5) It was stressed that this was a sketch plan and as such was not based upon detailed soils or engineering data. On this basis, the King's Mark Environmental Review Team was requested to provide a general analysis of the proposal's feasibility.

The primary focus of the Environmental Review was on two areas: the environmental impact of a greatly expanded sand and gravel operation and the viability of the proposed pond.

It is especially important to stress that this report does not substitute for a detailed engineering feasibility study. The Environmental Review Team draws together a range of experts who, based upon existing available data and field investigation, formulate an analysis of a proposed project. The scope of the review team project does not allow for the

preparation of new technical data, such as a series of soil borings, which would require considerable expense and time. Soil borings on this site would have provided useful information on key questions relating to the quantity and quality of the site's sand and gravel and groundwater.

This report does present the existing natural resource base data and, based upon this information, general site problems and opportunities are identified.

The format of the report is simple. The first several sections report information and analyses of the existing conditions and natural resource base including existing land use, zoning regulations, soils analysis, and geology (covers sand and gravel deposits and groundwater resources). The balance of the report addresses the key site questions concerning the proposed pond, recreation potential, transportation of the sand and gravel, and the noise factor of an excavation operation.

* * * * * *

LAND USE AND NATURAL RESOURCES INVENTORY

Existing Land Use

The 130-acre site lies approximately in the center of the Stanley Works property and is bounded to the east by the Berkshire Line of the Penn Central Railroad and to the west by the Housatonic River. Its maximum length is 7,000 feet and maximum width is 1,375 feet.

The oblong-shaped site lies parallel to Route 7. A narrow road at the site's north end connecting to Route 7 is the means of access to the existing sand and gravel operation and the Town's landfill operation. There are no residences or other structures within the site.

The site's open land is used principally for the production of silage corn for the feeding of dairy cows; the balance of the site is heavily wooded.

Existing Zoning Regulations

The site is located within the RU-40 Rural Residential District. Within the RU-40 District several uses are permitted, including one and two family dwellings when located on lots of at least 40,000 square feet in area, farming and town parks or playgrounds. Within this zoning district Special Exemptions are required for such land uses as water reservoirs or reservations, golf courses, the Town of Kent landfill, apartments and condominiums, campgrounds, and sand and gravel mining operations. The proposal as presented would require the issuance of a Special Exemption to allow for the expansion of the mining operation.

Soils Analysis

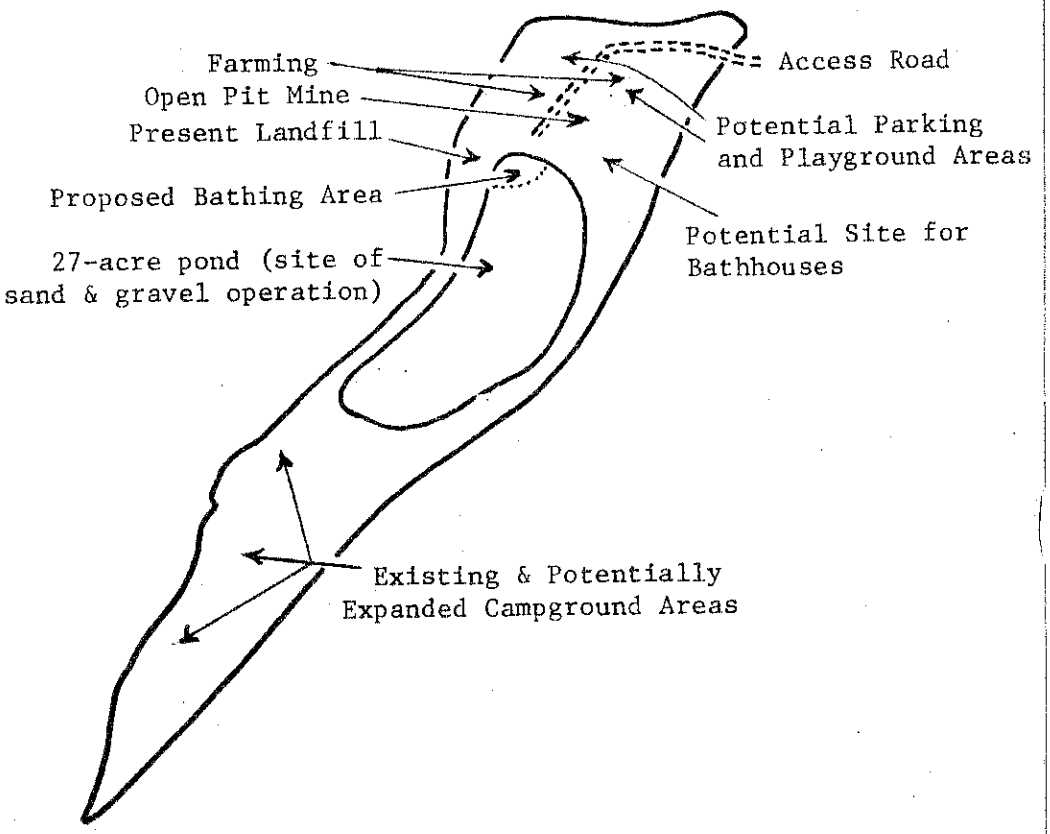
A basic tool for environmental evaluation is soils analysis. A detailed soils map with the site boundaries marked by a heavy line is included on the following page. Within the site there appear fourteen different symbols. The areas designated by the following symbols generally indicate the presence of sand and gravel deposits at or near the surface of the earth: EsA, HbA, HbB, HkA, HkC, WvB. Sand and gravel soils occur above flood plains in river and stream valleys. Most of the site is made up of this soil group. Nearly all sources of sand and gravel and many of the important sources of groundwater supply are in areas associated with this soil group. Properties of the sand and gravel soils in this site are generally favorable for development. These soils are either well or excessively well drained and the grade of the slopes ranges from 0-15%.

The steep slope areas of the site are terrace escarpments (Tg). These are sand and gravel soils which are over 15% and commonly in excess of 25% slope. Terrace escarpments are quite susceptible to erosion and care must be taken during excavation so that these areas are not disturbed.

The soils information shows a 4-5 acre section of rocky and shallow to bedrock soils within the proposed excavation and pond site. In the field a white pine stand was found over this rocky soil area and upon investigation it was recommended that this section not be included in the area to be excavated for a pond.

The site also contains the following inland wetland soils: Am, Bz, Ee, Lm, and Sb. Activity within these areas is regulated by the Kent Inland Wetlands Commission. Although the proposal calls for maintaining a distance of 100 feet between water bodies and the mining operation, there are a limited number of instances where the inland

PROPOSED SKETCH SITE PLAN

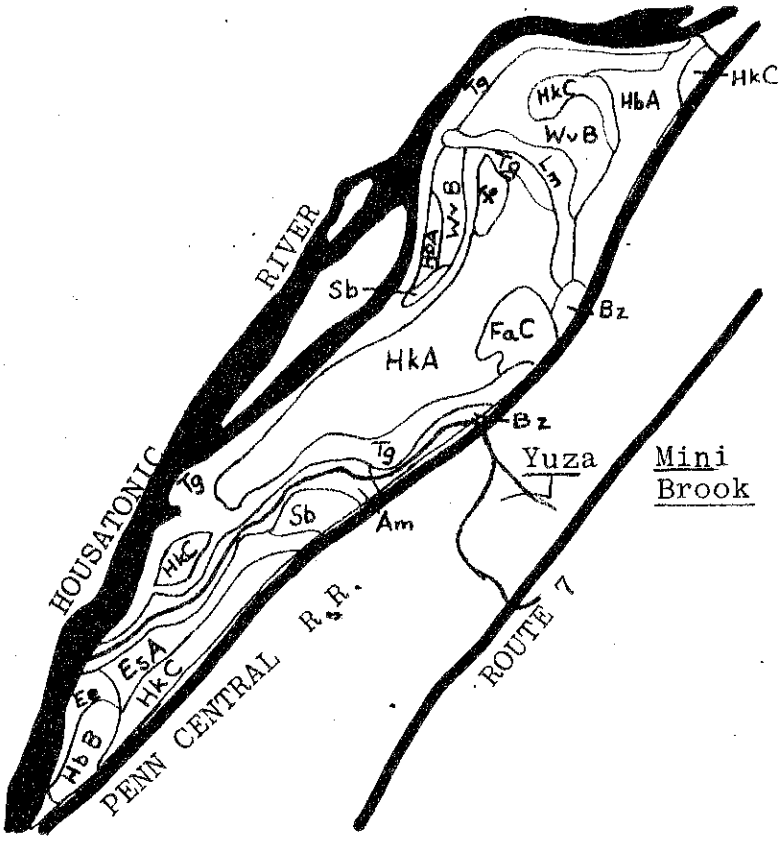


SOILS MAP

Sand & Gravel Soils
EsA, HbA, HbB, HkA, HkC, WvB, Tg

Shallow to Bedrock Soils
FaC

Inland-Wetland Soils
Am, Bz, Lm, Sb



wetland soils extend a distance of more than 100 feet from the Yuza Mini Brook. A buffer strip should include all wetlands and flood plain soil areas, especially during the excavation period so as to avoid erosion and sedimentation problems. A 150' buffer strip is normally recommended for streambelt protection.

Finally, the deposits of fine sand found during excavation should be recovered and mixed with the stock-piled topsoil to cover areas that would need revegetation.

Geology

This report, after a brief general description of the area's geology, is divided into an evaluation of the site's sand and gravel deposits and its groundwater resources.

The site rests within the Housatonic Valley which is one of the major topographic and physiographic features in Western Connecticut. The site itself includes low-lying areas adjacent to the river, part of an abandoned channel on the east side of the valley floor, and a series of sand and gravel hills, knobs, and ridges which are remnants of the glacial deposits in the area. Marble bedrock is beneath the sand, gravel, silt and clay. The precise depth to bedrock has not been determined for the entire site; however, at one point it is at 310 feet above mean sea level, which is a depth of about seventy feet below the site's existing grade. At other points at the site there are outcroppings of bedrock.

Sand and Gravel Deposits

The Connecticut Department of Transportation Aggregate Survey indicates that the site contains areas of commercially valuable sand and gravel deposits, as well as other scattered areas of sand and gravel which would not be suitable for highway construction. This survey shows an area of high quality sand and gravel generally south and west of the Yuza Mini Brook, including the terrace escarpment along the river. Judging from this survey, the area indicated in this proposal for the mining probably does not contain sufficient and/or suitable sand and gravel for a commercial operation.

The single available test boring (KT8) within the site area indicates that from the surface there is approximately 30 feet of course sand and gravel followed by another 30 feet of clay, silt and fine sand, which in turn is followed by another deep layer of sand and gravel. This second layer of sand and gravel is a potentially major sand and gravel deposit,

as well as a potentially major stratified drift aquifer.

There are maps on the following two pages illustrating this information. The first map, "Location of Sand and Gravel Deposits and Groundwater Resources" was derived from the Connecticut Department of Transportation Aggregate Survey and the U.S.G.S. Upper Housatonic Water Resources Inventory. The second map, "Cross Section of Proposed Development Site" shows the elevation of the site area in relation to the Housatonic River. It also illustrates the results of test hole KT8, showing the vertical distribution of subsurface material from the bottom of the existing gravel pit to bedrock.

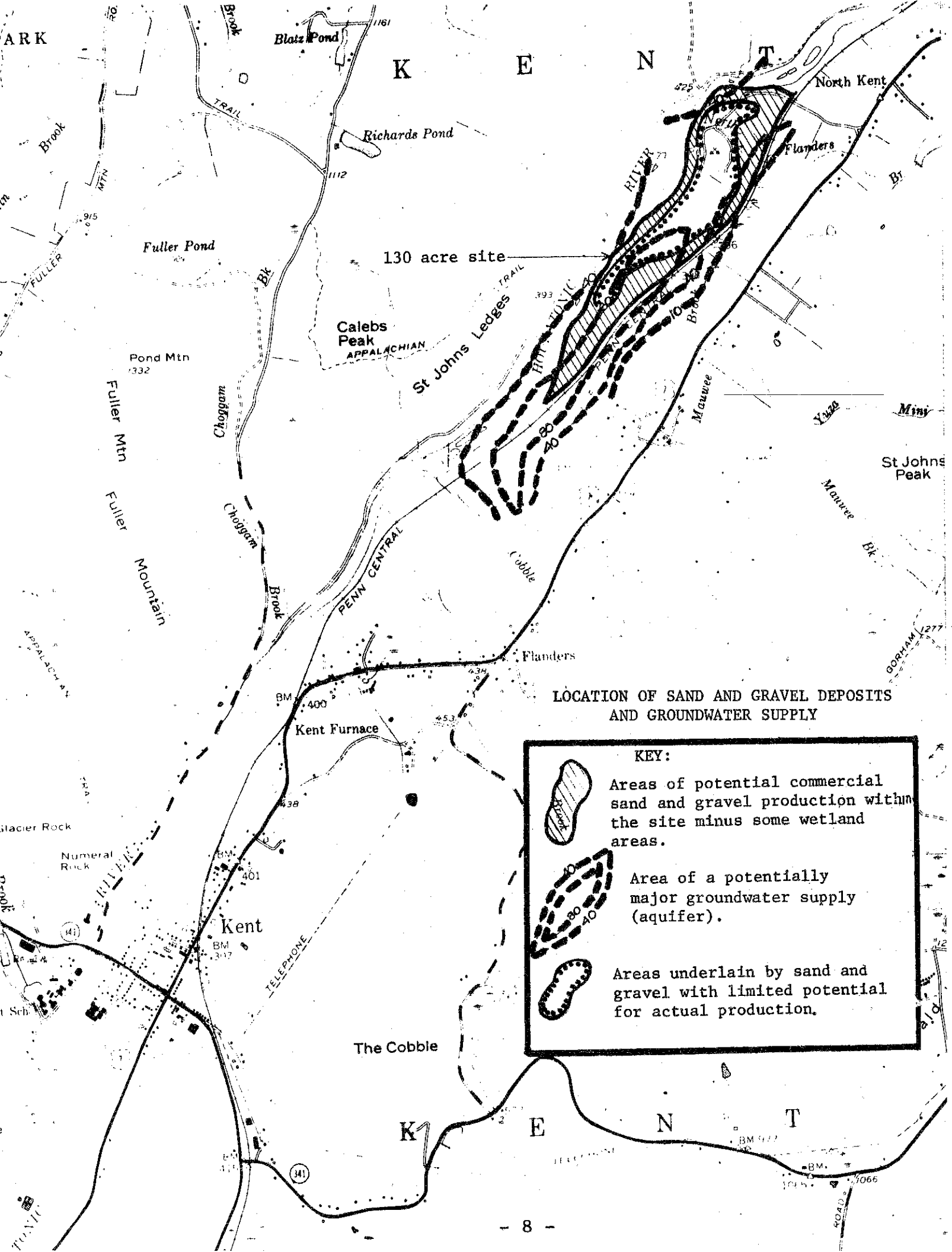
While this data provides a general indication of the potential for sand and gravel production, it should again be stressed that a project of this magnitude should not be undertaken until the location and volume of sand and gravel and other materials within the site are clearly identified through a series of soil test hole borings.

Groundwater Resource

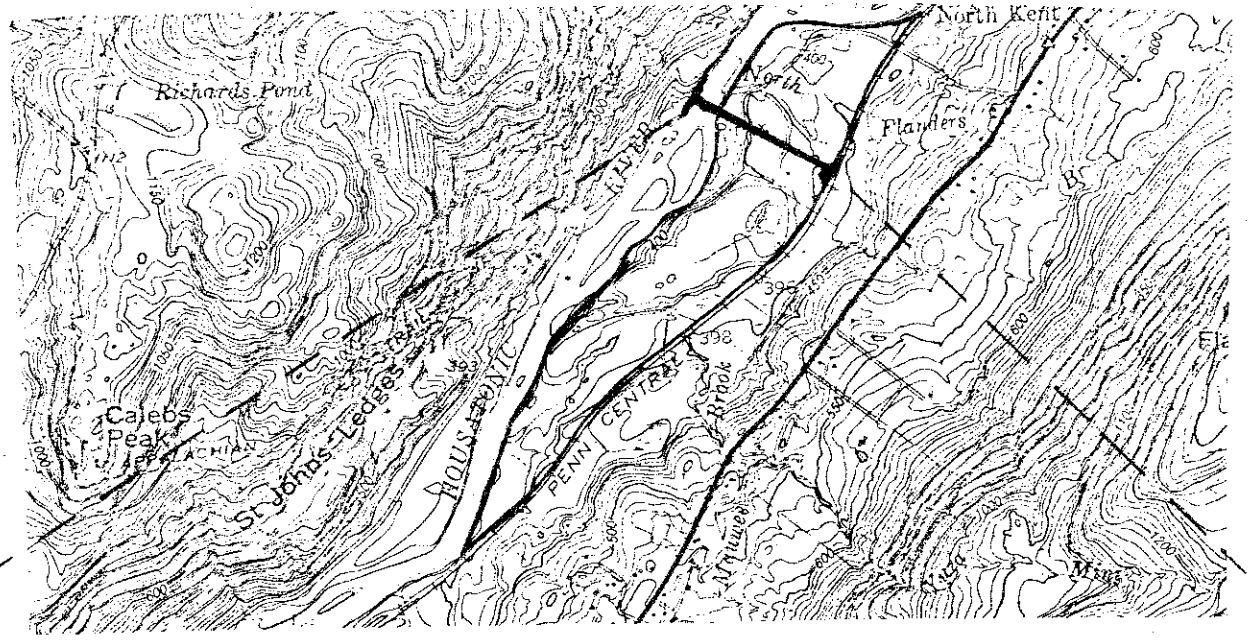
The groundwater resource in the vacinity of the proposed sand and gravel operation has been estimated to be the major stratified drift aquifer in the entire Upper Housatonic River Basin. Based upon the estimates developed in the U.S.G.S. Water Resources Basin Study, this aquifer could supply 5 million gallons a day (more than required for the City of Danbury).

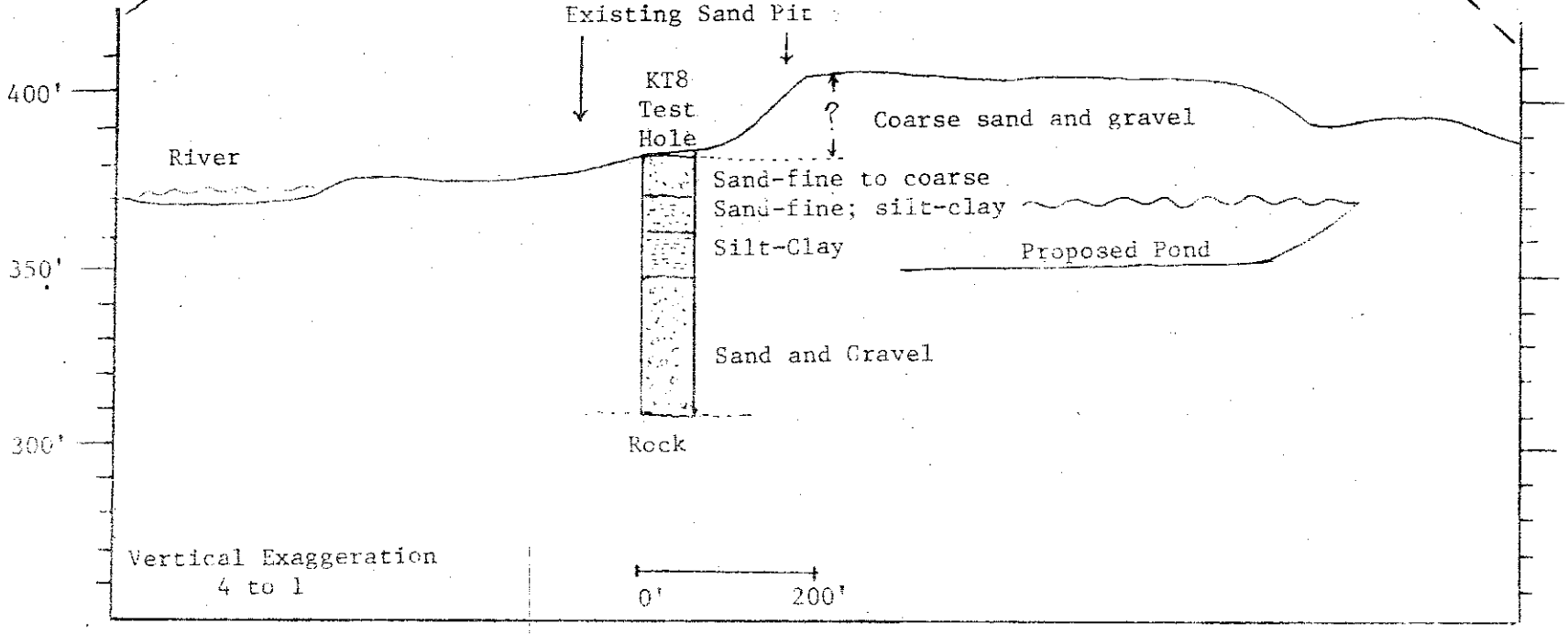
Fifteen years ago, State projections of population and water consumption to the year 2000 indicates a doubling of the Danbury Region's population and a 220% increase in water use. Estimates completed in 1967 by the City of Danbury (Manganero, Martin and Lincoln) predict a tripling in the city's use of water between 1967 and 2000. Recent revisions of these projections indicate a slower growth rate; nevertheless, the overall water demand will continue to increase.

From a regional perspective, it would be a sound decision to protect the North Kent aquifer, especially in view of future area water demands. If the immediate Danbury area did not require this aquifer's water or if it could not be transported that distance, there is still a possibility that New Milford or other close by growth areas may need it. The State's Plan of Conservation and Development states as one of its key policies, "As a general principle water supply should be obtained from groundwater resources before resorting to the creation of new (surface water) impoundments."



LOCATION OF SAND AND GRAVEL DEPOSITS AND GROUNDWATER SUPPLY





CROSS SECTION OF PROPOSED DEVELOPMENT SITE

First, the question of whether or not this aquifer is to utilized for future groundwater supplies should be determined. Within the next several years more detailed study should provide a clear indication of the value of the Upper Housatonic River's groundwater resources for future water supply. Until this determination is made it would be wise to observe the recommendation of the State's Plan of Conservation and Development which states that "..until the water yields obtained from the aquifers (groundwater resources)... are identified, protective measures should be instituted to ensure the integrity of these sources."

It is important to state clearly that Team members representing the Department of Environmental Protection have agreed that it would be compatible with protection of a groundwater resource to permit a properly controlled sand and gravel mining operation followed by a modest recreational activity. In fact, a recreational area may be, over the long term, an opportune means of protecting this future potential water supply resource.

THE BALANCE OF THE REPORT PROVIDES INFORMATION AND SUGGESTIONS REGARDING THE KEY QUESTIONS RAISED BY THE PROPOSED STANLEY WORKS SITE SKETCH PLAN.

A major question is whether or not the pond as proposed will be able to satisfy the Public Health Code and other water resources requirements. The following remarks attempt to address a few of the basic concerns.

1. The twenty-seven acre pond will be able to meet the Public Health Code requirements if there is adequate "natural circulation" within the pond. (Natural circulation should be provided by the passage of groundwater through the pond and by evaporation.) The water will most readily circulate through the pond if during the mining process all fine grained materials are removed and stored elsewhere on the site.

Tests should be made to determine the rate of water flow through the ground before the pond is actually developed. The Public Health Code requires a daily rate of flow at least equal to one thousand gallons per bather. (A second formula for determining the number of bathers is to divide the swimming area's square footage by 50; i.e., 50 square feet of swimming area is required per bather in such a pond.)

The swimming area as shown on the site plan is approximately 60,000 square feet and, therefore, would accommodate 1,200 bathers if the natural circulation were at least 1.2 million gallons a day.

2. The presence of a landfill operation within the pond's immediate area poses an unanswered question: Will leachate from the landfill seep into and contaminate the pond? Safety would call for a constant monitoring of the pond's water quality before permitting public bathing. It is suggested that a series of wells be drilled between the landfill and the pond site for the purpose of testing the water quality. If the water is currently contaminated, this would be sufficient reason not to pursue construction of a pond. As a safety precaution, a barrier of impervious material could be constructed around the landfill section of the pond to eliminate the possibility of leachate contamination.

3. It is not certain that the proposed pond would have an algae problem. If potential landfill leachate problem is removed as recommended above and the pond has adequate natural circulation, it is likely that it will not have an algae problem and could support a fish population.

4. If algae develops, its solution would require either treating the water with chemicals or by some other method. Diverting the stream flow of the Yuza Mini Brook alone would probably not be sufficient to cleanse the pond during low flow periods. While diversion of water from the Housatonic River would be adequate to cleanse the pond, this alternative has a number of drawbacks.

5. Bathhouses and sanitary facilities within the site must be provided. To insure the pond's quality as well as that of the adjoining aquifer, sewage effluent could be captured in tanks and transported to the Kent sewage treatment plant.

6. The pond site should be protected from flooding by the preservation of the existing "natural wall" along the Housatonic River up to the 390' contour. Where the natural wall is below 390', excess materials from the mining operation could be used to build up such a protective barrier. (NOTE: This recommendation may have to conform to the Federal Flood Insurance Act which may prohibit the large scale filling of flood plains because of its downstream effects.)

If the Town were to develop the site for recreation as indicated on the sketch plan, what are the design factors and costs that should be considered?

The Pond and Beach Area

The beach area as shown on the site proposed has the potential capacity of at least 1,200 persons per day, assuming the Public Health Code requirements are met. It is anticipated that because of the Town's small population a design capacity of 500 persons per day for beach facilities should be adequate for the foreseeable future.

The eventual 20 ft. depth in the pond center will constitute a definite safety problem. Potential recreational use must consider this hazard and plan on protective measures to minimize this hazard; i.e., limit swimming use to restricted area, post the rest of the pond edge to 'No Swimming'. Iceskating use of the pond will be hazardous unless supervised and controlled. Boating and fishing on the lake should be one of the primary recreational uses. Consideration could be given to limiting use to motorless boats, canoes and sailboats, or very limited horsepower outboards. Waterskiing, although feasible, is not recommended for so small a lake. Fishing should be restricted to the non-swimming area.

Beach Facilities Required for 500 Persons

Flush Toilets-Lavatory Sink Units. Estimated Cost: $30,000 to $50,000

(1) Septic Tank (2,500 to 4,000 gallon capacity)

(1 or 2) Bathhouse(s) with 12 to 24 changing stalls. Estimated Cost: $1,600 to $3,000

North Section - Proposed for Picnicing and Parking

Possible Facilities:

(1) Playground Picnic Shelter. Estimated Cost: $8,000-$12,000

(20 to 40) Picnic Tables. Estimated Cost: $800 - $1,500

(10 to 30) Fireplaces

120-car parking lot (125' x 350'). Estimated Cost: $500 to $1,500

South Section - Proposed Family Campground Facility

A well defined commercial-type Loop Campground with 45 sites with flush toilets, etc. could cost between $50,000 and $80,000 and return about $6,000 to $7,000 per season.

The required elements and costs for such an installation are as follows:

Gravel Road	Estimated Cost: $20,000
6 unit flush toilets 2 sinks 2 showers	Estimated Cost: $25,000 - $38,000
2,000 gallon septic tank	Estimated Cost: $5,000
Water taps, well, pump	Estimated Cost: $5,000

A rustic, limited use camping area would require much less expense for facilities (e.g., hand pump for drinking water, privies, etc.) and site preparation.

Other recreational uses suited for this area include hiking and nature trails, especially along the terrace of the river and canoeing in the Housatonic.

TRANSPORTATION

How will the sand and gravel be transported from the site (by truck or rail), and what will be the impact of each alternative?

Given existing circumstances, it is likely that the transport of sand and gravel from the site will be by truck rather than rail. From an environmental impact viewpoint, the use of the rail carriers would be far more desirable than the use of trucks. But, there are several factors discouraging the potential for rail use:

First, the Penn Central is attempting to eliminate all rail service to Kent;

Second, the transport of sand and gravel from this site would require specialized equipment (gondola cars) which may not be readily available (according to the United States Railway Association);

Third, the rail line from New Milford to the site will probably require partial upgrading in order to accept the weight load generated by the proposed volume of sand and gravel to be removed from the site.

With the present condition of the Penn Central, the economics of shipping by rail generally does not compare favorably to truck shipping, especially over the short haul. Presently virtually all sand and gravel transportation in Western Connecticut is done by truck. Unlike the train, the truck can pick up the sand and gravel and deliver it directly to its destination, eliminating the intermediate handling cost associated with truck loading and unloading which is required for shipment by rail.

If the major operating problems of the Penn Central are at least mitigated through the institution of a Conrail System or with a short line operation on the Berkshire Rail Line and a federal subsidy can be secured for improving the rail bed, the potential for utilizing the rail line may become more positive, especially if it is anticipated that the sand and gravel will be hauled over long distances. In any case, the potential rail traffic that could be generated by a mining operation at this site will aid in the argument to restore service to this portion of the Berkshire Rail Line.

The following table provides a comparison between train and truck showing the types of vehicles, capacity, number of trips which would be generated by the proposed sand and gravel operation. These figures assume the transport of 288,000 cubic yards of sand and gravel per year with the mining activity operating 200 days per year.

TRAIN	TRUCK
Type: Gondola (100 tons)	Type: Trailer Dump
Capacity: 66 cubic yards	Capacity: 24 cubic yards
# of Gondolas: 22	# of Trucks: 15
# of Daily Round Trips: 1	# of Daily Round Trips: 4
Total # Daily Round Trips: 1	Total # Daily Round Trips: 60
Total # Annual Round Trips: 200	Total # Annual Round Trips: 12,000
Total # Annual Trips: 400	Total # Annual Trips: 24,000

The following is an analysis of the transportation impact of train and truck.

Transportation Impact: Train

Railroad crossings at Kent Village and South Kent as well as the rails will need to be examined, corrected, and maintained to assure a high degree of safety. The impact of the added rail traffic will be minimal. Train related noise would be minor except for brief periods twice daily.

Transporation Impact: Truck

Existing Route 7 is a rural two lane roadway. The travelway and shoulders are surfaced with bituminous concrete. The travelway base is 7" reinforced concrete built in 1923 and 1924.

The approximate width of the roadway in Kent is 24' to 26' from the New Milford town line to Route 341; 42' in width between Route 341 and the railroad; 32' in width north of the railroad for approximately 1100' in length; and about 26' in width for the remaining distance to the Cornwall town line.

The speed limit on Route 7 in Kent is 40 miles per hour with the exception of the section from about .2 mile south of Route 341 to about .1 mile south of Cobble Lane which is posted for 30 miles per hour. There are sidewalks and parking on both sides of Route 7 between Route 341 and a point just south of the railroad. Pedestrian zone signing is posted for about .3 mile north of the railroad.

The 1973 Annual Average Daily Traffic on Route 7 was about 3700 just north of Route 341, about 2000 at Flanders, and about 1500 in the vacinity of the Cornwall town line. The 1973 ADT on Route 7 was about 2200 and 2000 east of Route 7. Because of the high summer seasonal influx, the Monthly Average Daily Traffic for the months of July and August are about 50% higher than the Average Annual Daily Traffic.

Review of the accident experience in Kent along Route 7 for the five year period from January 1, 1969 to December 31, 1973 indicates small concentrations of accidents at three areas which should be addressed if the use of trucks along Route 7 is the mode of transportation chosen for transporting the sand and gravel. These three area locations are: (1) the intersection of Routes 7 and 341; (2) the curve on Route 7 near the intersection of Cobble Road and Studio

Hill Road; and (3) the intersection of North Kent Road #2 and Route 7. North Kent Road #2 would be the access road used for trucks entering and leaving the site area. The type of collisions at locations (2) and (3) involved rear end collisions and fixed objects, while the predominant type of collisions at location (1) seemed to involve turning and sideswipe collisions. (See Transportation Data Map on the following page.)

Another area along Route 7 experiencing some cluster of collisions is in the Bulls Bridge area. Although the actual number of accidents over the five year period may not be considered significant in itself, its relationship to the relatively low Annual Average Daily Traffic does appear significant. (Areas requiring improvements are circled on the Transportation Data Map.)

Some shoulder improvement will be required along North Kent Road #2, particularly at its intersection with Route 7, for trucks to be able to maneuver safely in this area. It may be necessary to remove a maple tree in this area to accommodate the necessary shoulder improvements.

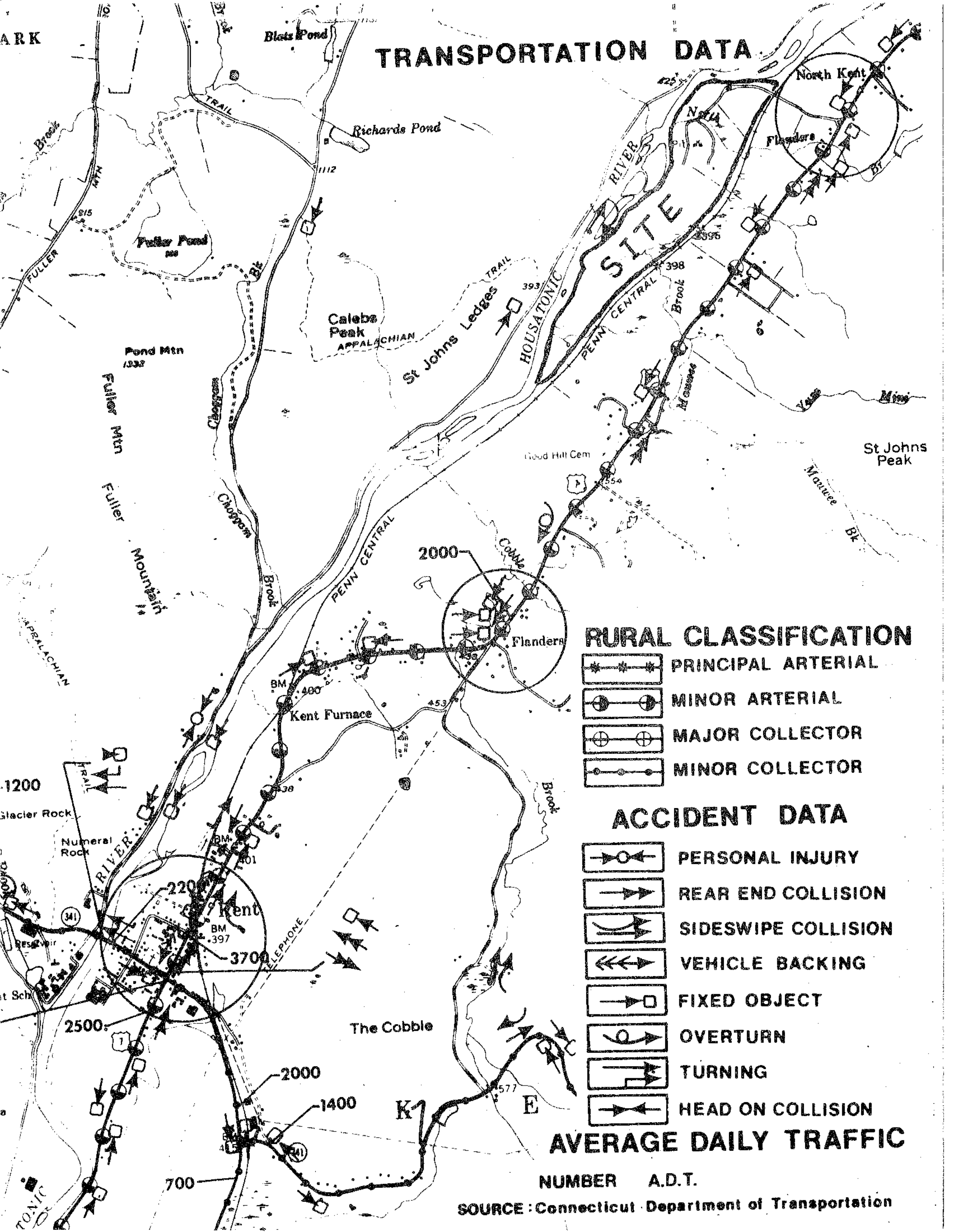
A total of 15 trucks will be leaving the site daily. A convoy of 15 trucks at a time could have a serious impact on Route 7, particularly on Kent Village itself. Convoys of five trucks at about ten minute intervals could reduce the impact significantly. Since the summer traffic for July and August is about 50% higher than that for the other months of the year, it would be necessary to reduce the number of trucks using Route 7 at one time during this period. It would also be necessary to properly sign Route 7, alerting motorists that trucks were hauling sand and gravel along Route 7. Because of the nature of the area and type of roadway, it would be imperative that the posted speed limits be observed by the truck drivers.

NOISE

The use of machinery for excavating and processing sand and gravel will generate noise. How will this noise factor impact the surrounding community? What can be done to minimize this impact?

The following is a listing of noise level ratings according to approximate decible level:

135 - acute pain threshold
95 - discomfort threshold
85 - imparement of hearing threshold
76 - annoyance threshold
65 - speech interference threshold
50 - normal conversation
35 - optimum sleeping level


TRANSPORTATION DATA
SITE
North Kent
Flanders
Kent
Kent Furnace
Richards Pond
Fuller Pond
Calebs Peak
Pond Mtn
Fuller Mtn
Fuller Mountain
St Johns Ledges
St Johns Peak
The Cobble
Glacier Rock
Numeral Rock
HOUSATONIC
RIVER
PENN CENTRAL
APPALACHIAN TRAIL
Choggam Brook
Cobble Brook
Macedonia Brook
Good Hill Cem
2000
2200
3700
2500
2000
1400
700
1200
RURAL CLASSIFICATION
PRINCIPAL ARTERIAL
MINOR ARTERIAL
MAJOR COLLECTOR
MINOR COLLECTOR
ACCIDENT DATA
PERSONAL INJURY
REAR END COLLISION
SIDESWIPE COLLISION
VEHICLE BACKING
FIXED OBJECT
OVERTURN
TURNING
HEAD ON COLLISION
AVERAGE DAILY TRAFFIC
NUMBER A.D.T.
SOURCE: Connecticut Department of Transportation

The noise from the gravel operation is consistent and not intermittent and consequently will provide less annoyance than might occur from other types of industrial operations since the human ear adapts more readily to constant noise than to sharp sudden noise.

People residing along Route 7 in the North Kent-Flanders area could be faced with a continuous noise level of 60 to 71 dBA generated from the mining operation, plus noise reverberating off of valley walls. This noise level would approach becoming an annoyance. Trucks transporting sand and gravel add to the local noise level.

Recommendations

1. The construction of berms between the noise source and the noise receptors would help to reduce the level of noise heard by local residents.

2. Reverberation from the valley wall on the river's west bank may pose an excessively high noise level on the residents between North Kent and Flanders. There should be initiated high intensity noise tests at the site to determine exact noise levels and best methods for attenuation (noise reduction).

3. Attenuation procedures should be written into the contract with the mine operator.

4. Trailer dump truck traffic should be limited to convoys of five trucks at one time to avoid intermittant noise as much as possible.

5. Operation of the facility should be limited to the daylight hours.

6. In order to further reduce noise levels, the railroad should be used for transporting materials.