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March 1977

State of Rhode Island
Department of Economic Development

Quonset Point Technical Park

Facilities Study

KEYES ASSOCIATES
architects / engineers / planners

Rhode Island. Department of Economic Development



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FACILITIES STUDY FOR QUONSET POINT TECHNICAL PARK

FINAL REPORT

"This study was financed in part by a technical assistance grant awarded the State of Rhode Island by the Economic Development Administration."

PREPARED FOR THE

RHODE ISLAND DEPARTMENT OF ECONOMIC DEVELOPMENT

BY

KEYES ASSOCIATES-ARCHITECTS/ENGINEERS/PLANNERS

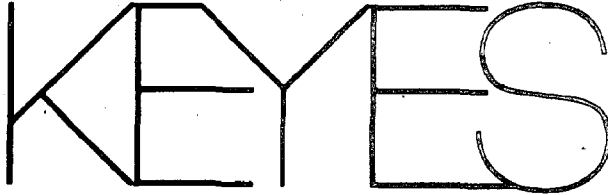
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The preparation of this plan was financed in part by a planning grant from the National Oceanic and Atmospheric Administration, under the provisions of the Coastal Zone Management Act of 1972 (Public Law 92-583), through the Intergrated Grant Administration Program. The contents do not necessarily reflect the official views or policies of the sponsoring agencies. This publication is based upon publicly-supported research and may not be copyrighted. It may be reprinted, in part or in full, with the customary crediting of the source.

Rhode Island Department of Economic Development

HD257.5 .F33 1977



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March 28, 1977
"Our Twenty-Sixth Year"

Rhode Island Department
of Economic Development
One Weybosset Hill
Providence, Rhode Island 02903

Attention: Mr. James O. Roberson, Executive Director
R.I. Port Authority and Economic Development
Corporation

Gentlemen:

In accordance with our contract with the State of Rhode Island and as modified in the Rhode Island Department of Economic Development Project Analysis Worksheet, we are pleased to submit the following final report of the "Quonset Point Technical Park Facilities Plan."

This report provides a comprehensive Land Use Study; investigation and inventory of all existing structures; compilation and study of all available soils information; a study and preliminary layout of proposed highway and rail transportation systems; a study and preliminary development schemes of the Port Facilities; a study of the existing airport; and construction cost estimate for the three final Land Use Scenarios as agreed upon by your staff.

We are most appreciative of the opportunity to perform this service and wish to acknowledge the courtesy, cooperation, and assistance rendered to members of our firm by yourself, your staff, members of the Task Force and The Rhode Island Port Authority and Economic Development Corporation Planning Committee in the preparation of this report.

Very truly yours,

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INTRODUCTION

The three Development Scenarios, included in this Report and their various land use options represent the culmination of the Facilities Study element of the Master Development Plan for Quonset Point Technical Park. Two additional elements of study for the Master Development Plan include; 1) an environmental assessment being prepared by the Coastal Resources Center at the University of Rhode Island, and 2) a socio-economic assessment being prepared by Gladstone Associates.

It is important to note that these scenarios represent the final product of two years of marketability studies, and ten months of Master Development Planning. Our Schedule included eight meetings of the Master Development Plan, Task Force, five public meetings which were held at intervals of four to six weeks during the ten month study period, and numerous working sessions between Department of Economic Development personnel and the staffs of the three elements of study. In addition, on-site inspections of petroleum related facilities, modern technical/industrial parks and airport related industrial parks were conducted. Additional information was collected when, in September 1976, the Coastal Resources Management Council and the Department of Economic Development sponsored a three-day Conference on Rhode Island and Offshore Oil. All of these examples of research and more have contributed to a rationale for development of Quonset Point/Davisville which essentially holds economic development and the creation of employment opportunities as the primary goals for development.

Nonetheless, the comprehensiveness of this effort serves to recognize all concerns. For instance, prior to land development planning, all of the environmentally-sensitive areas were identified, and to the extent possible, new development was planned around these sites. In addition, the golf course was held intact due to tremendous local interest in that facility.

What is presented here are three basic Development Scenarios which we feel incorporate the most practical, sensible and functional uses for properties at the Quonset Point/Davisville Site.

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Development Scenarios I

QUONSET POINT TECHNICAL PARK
FACILITIES STUDY

A. Scope and Definitions

As described in the Introduction, the proposed Facilities Plans for Quonset/Davisville are documented in Three Development Scenarios - based on the extent of off-shore oil and gas findings, hereinafter described as "High Find", "Medium Find" and "No Find."

Each Development Scenario includes several major land use invariants: The Airport, Air National Guard, General Dynamics, common service areas, the golf course and various environmentally-sensitive areas. These common land areas comprise 1636 acres of the total 3200 acre parcel, leaving 1564 acres potentially available for new development. For a detailed description of the above areas, refer to Property Description, pages I-2 thru I-6.

Scenario 1. "High Find" - Mixed Land Use.

This scenario is based on a "high find" of commercially recoverable oil and gas as defined in the NERBC-RALI Report: 2.4 billion barrels of oil, 2.4 trillion cubic feet of associated gas and 10.1 trillion cubic feet of unassociated gas. Refer to a detailed description of Scenario 1 on pages I-7 thru I-13.

Scenario 2. "Medium Find" - Mixed Land Use.

This scenario is based on a "medium find" of gas and oil defined as: 900 million barrels of oil, 4.2 trillion cubic feet of natural gas and 3.3 trillion feet of unassociated gas, assumed to be commercially recoverable. Refer to detailed description on pages I-14 thru I-17.

Scenario 3. "No Find" - Mixed Land Use.

This scenario reflects the land uses which would be projected if either of the following should occur:

- a) A "low find" or "no find" of oil and gas in the off-shore explorations.
- b) An unfavorable Environmental Impact Statement with respect to the transfer of title to surplus property is filed.

In this case, the land would be utilized completely for Industrial and Commercial development as defined in the Harbridge House Standard Industrial Classifications (SIC) List and for Recreational uses. Refer to detailed description on pages I-18 thru I-20.

B. Property Description

1. General Location - The Facilities Study Area at Quonset/Davisville is comprised of 3200 acres of land owned entirely by the United States Navy, and is bounded on the east and south by Narragansett Bay and on the west and north by residential and wooded areas.
2. Infrastructure. The Development Scenarios, as presented in this Report were based on a careful study of all existing facilities at the Quonset/Davisville site, including: existing building condition, roadways, airport, rail and port capabilities, water, sanitary, drainage systems, electrical, fire alarm and communications system distribution and geological conditions at the site. Refer to the Table of Contents for references to appropriate text and maps.
3. Land Use Categories. In our analysis for the potential reuse of the Quonset/Davisville properties, we have divided the total land area into five basic land use categories.

- a) Presently Occupied Parcels
- b) Common Service Areas
- c) Environmentally Sensitive and Recreation Areas
- d) Navy Retained Land
- e) New Development Areas

For a detailed breakdown of land areas, refer to Table A, Page I-3.

4. Areas Unavailable for Development

a) Presently Occupied Parcels

1) The Quonset State Airport Complex

This parcel, consisting of 650 acres, will become a public general aviation airport, owned and operated by the State under FAA licensure. Some of the airport facilities will serve the State Air National Guard.

In the event of a national emergency, the airport could revert to military control.

Based on this probability and the value of an airport for shipment of industrial products, it was determined that the airport should remain.

TABLE A

	Category	Use	Acre/Parcel	Total Acres
Unavailable for Development	Presently Occupied Parcels	Quonset State Airport	650	857 Acres
		Air National Guard	45	
		Military Housing	12	
		General Dynamics	150	
Common Service Areas	Roadways and Interchange	89	121 Acres	
	Wastewater Treatment Facility	22		
Sensitive and Recreational Areas	Environmentally sensitive areas and buffers		282	658 Acres
		18-hole Golf Course	166	
		Calf Pasture Point	210	
TOTAL AREA UNAVAILABLE FOR DEVELOPMENT -				1636 Acres
Potentially Available	Navy Retained Land	Navy Permanent Mission and future mobilization land (Refer to Existing Land Use Plan, Sheet #1)		732 Acres
	New Development Areas	Remaining land areas within Quonset/Davisville		832 Acres
	TOTAL POTENTIALLY AVAILABLE FOR DEVELOPMENT			
TOTAL QUONSET/DAVISVILLE LAND AREA				3200 Acres

2) The Air National Guard (ANG)

This parcel, consisting of 45 acres, is a vital link in the State's defense and training system and should remain intact.

3) General Dynamics Corp.

General Dynamics, consisting of 150 acres, was not considered for possible reduction or elimination, because it employs 5,000 people, and is a vital part of the State's economic stability and economic recovery plan.

4) Military Housing

This 12-acre parcel in West Davisville is occupied by military personnel for housing and will continue for that purpose.

b) Common Service Areas

1) Roadways. A total of 121 acres has been utilized for the proposed interchange at the intersection of Route 1, Davisville Road and Roger Williams Way and for various auxiliary roadway requirements.

2) Wastewater Treatment Facility. The 22-acre parcel adjacent to the Golf Course has been identified through an independent engineering study to be the optional location for this facility. It will not impede growth of any important component of this plan and with some concern for landscape treatment should be an attractive part of the new development.

It's location has been approved by concerned groups in the Town of North Kingstown.

c) Sensitive and Recreational Areas

1) Environmentally Sensitive Areas.

Various areas throughout Quonset/Davisville have been identified by the Coastal Resources Center at the University of Rhode Island as being environmentally sensitive. These areas encompass sandy beaches, mud flats, salt marshes, and ponds. These sensitive areas not only harbor wildlife, but provide an interesting and welcomed relief from the toils of everyday life.

Therefore, 150 acres has been earmarked to remain untouched and are identified on the development scenarios.

2) Recreational Area - Golf Course.

The 18-hole Golf Course consisting of 166 acres should remain in its present location for the following reasons:

- (1) At a cost of \$50,000 per hole the total cost of replacement of the 18 holes and support facilities would be in the vicinity of \$1,000,000.
- (2) Any development to the west would conflict with the location of the new wastewater treatment facility and the open recreational area traversed by Mill Creek.
- (3) Any elimination of golf holes in the vicinity of the "O" Club for potential industrial development is not economically warranted, considering the cost of relocating each golf hole and the speculative nature of industrial expansion.

3) Calf Pasture Point.

This parcel, consisting of 210 acres east of Allens Harbor, will be developed in the future by the Town of North Kingstown for recreational purposes.

5. Areas Potentially Available for Development

a. Navy Permanent Mission

The areas described as Navy Permanent Mission sites are generally not available for lease. However, this study takes the position that these areas offer a tremendous amount of development potential when incorporated with the surrounding Surplus Areas. Specifically these areas are:

- 1) 119 acres in the West Davisville area adjacent to the main AMTRAK Rail System. The property is flat open land and encompass four large warehouses (808,000 Sq. Ft.) which are provided with rail sidings. This site is adjacent to the Surplus Area defined in the Development Scenarios as Area #9.

- 2) 235 acres south of the Administrative Triangle in Davisville defined in the Development Scenarios as Area #12. The area is flat, open land serviced by rail, and offers warehouses and large flat lay down areas. The site is north of the Surplus Area defined in the Development Scenarios as Area #13.
- 3) 85 acres southwest of the Davisville Pier Area and 75 acres north of the flight path area. The site is flat, open land serviced by rail and offers warehouse space and a bulkhead. The site is adjacent to the Davisville Pier Area defined as Planning Area #1.

These parcels are within Surplus Areas defined in the Development Scenarios as Areas #5 and #7 respectively.

- b. Remaining land areas within Quonset/Davisville available for Development are listed on the Scenario Plans (in Appendix VII) as follows: Areas #1, 2, 4 a 35-acre portion of Areas 5, 125 acre portion of Area 7, 90 acres of Area 9, 10, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 and 26 comprising a total of 832 acres.

DEVELOPMENT SCENARIO 1

"HIGH FIND" - MIXED LAND USE

A. General Description

This Scenario represents an optimal land use plan for Quonset/Davisville, if the following conditions are met:

1. Off-shore explorations produce a "high find" of commercially recoverable oil and gas. See Definitions on Page I-1.
2. The results of the Bureau of Land Management Environmental Impact Statement on off-shore drilling permits development as described in this Scenario.
3. The plan receives all local, State and Federal approvals necessary to proceed with development.

B. Land Area Categories

In Scenario 1, the allotment of land areas by category is described in detail on Table A, Page I-3 and in condensed form as follows:

- | | |
|---|------------|
| 1. All unavailable parcels | 1636 acres |
| 2. Navy-Retained Land Parcel 12
(not utilized) | 235 acres |
| 3. New petroleum-related development parcels | |
| a. Primary uses | 657 acres |
| b. Secondary uses (Areas 13, 21, 22, 23) | 125 acres |
| 4. New commercial and industrial parcels | 531 acres |
| 5. New recreation parcels | 16 acres |

This acreage description illustrates that the primary oil and gas-related land uses would be limited to 782 acres or approximately 24% of the total 3200 acre site, for the following reasons:

- a. Not all land areas at Quonset/Davisville lend themselves to petroleum-related use due to topography, access and relationship to waterfront.

- b. Not all "high find" support facilities as listed in the NERBC-RALI Report would locate on this site, because: a) adequate facilities exist elsewhere and, b) such facilities cannot be supported at Quonset in terms of utility demands, height restrictions (within the airport flightpath) and large land area requirements (2500 acres). These support facilities include an oil refinery of 1000 acres, marine terminals of 100 acres, gas processing plants of 345 acres and related pipe lines and landfalls of 6 acres.

The remaining land areas, 531 acres, would be developed for new commercial and industrial uses, some of which would be attractive to the oil and gas industry. For example, the hotel would be heavily utilized by petroleum-related activities as would be office buildings in Area 18 of the Technical Park.

C. Development Cost

The total development cost for Scenario 1 is projected at \$63,967,058. For a detailed breakdown of costs refer to Section VI of this report.

D. Land Area/Land Use Description

Area #1. This 100-acre site consists of Davisville Pier #2 and adjoining land to the north. At present both Pier #1 and Pier #2 and 70 acres of land are occupied by various petroleum related support companies. These temporary oil support companies have a one year lease agreement with a 30-day cancellation clause, pursuant to the terms and conditions of the Protection and Maintenance Agreement between the Navy and the Rhode Island PAEDC.

Brown and Root, Inc., a cold steel fabrication company is presently negotiating for a right of first refusal to lease 100 acres of land at Davisville and Pier #2.

It is noted that the halting of off-shore drilling until the B.L.M. Environmental Impact Statement (EIS) is completed and reviewed will have an impact on additional oil support activity at Quonset/Davisville. How this will effect the present temporary oil support bases is not known. We expect this EIS procedure will be at least 18 months in duration.

Area #2. This 12-acre site in Allens Harbor, north of the cold steel fabrication area, is earmarked as a ferry landing for the Bay Island Park, a marine recreational plan for the State of Rhode Island connecting various land and island areas in Narragansett Bay.

Also, based on information submitted by Gladstone Associates, economic consultants, there is a need for additional boat slips in the State of Rhode Island. This information further indicates the need for at least 200 boat slips suggesting that marina expansion is economically viable.

The time table for the marina expansion may vary anywhere from 2-4 years depending on the results of the EIS and the economic climate at that time.

Area #3. The land west of Allens Harbor, consisting of approximately 85 acres, was used as a training area by the Seabees. This land is presently reserved for Navy future mobilization requirements.

A 7-acre parcel abutting Allens Harbor, now occupied by several storage buildings, could be utilized for a marina and boat storage as part of the overall development of Allens Harbor. It is recommended that new facilities be constructed in this area as part of the overall marina development.

The remaining land area of 78 acres could serve as an open storage area for oil support related supplies. It is noted that most of this 78 acres is not suitable for construction, i.e., one-tenth is wooded, one-fourth is a mud flat, and one-fourth is below the 100 year flood plain elevation of 13'-mean sea level.

Since this land is still under Navy ownership, usage would be restricted to the provisions of a Navy lease. Therefore, it is recommended that the purchase of the 30 acre site bordering Davisville Road which is above the flood plain, and the 7 acre site recommended for a marina, be pursued by the State of Rhode Island.

Area #4. This land area of approximately 30 acres, providing rail and vehicular access to Pier #1, may serve as a common corridor and pier area for a water transport facility. The implementation of this concept is essential to the flow of products shipped by water and offers an added valuable asset for any and all industrial growth of Quonset/Davisville.

This concept must be implemented soon after the completion of the land transfer, and EIS, assuming a favorable decision. Prompt action will be required since, at present, Pier #1 is occupied by temporary oil-related support companies, and the commencement of off-shore oil exploration will result in the establishment of Permanent Service Bases. These Bases would prefer to remain on Pier #1; however, we believe this area should be free for use as a common corridor to achieve optimal use of the total pier facility.

Area #5. The land area, east of the airport near the Davisville piers, consists of approximately 120 acres. Approximately 12 acres of the land is wooded. Six acres of that wooded land is within an 85-acre parcel presently retained for Navy Permanent Mission requirements.

This 85-acre parcel is of prime importance in the development of Quonset/Davisville for usage by oil related support bases for the following reasons: 1) its closeness to water; 2) access to proposed bulkhead and pier development; 3) the rail system; and 4) two large dehumidified warehouses.

This parcel, to repeat, is vital to the success of Scenario 1, and every effort possible must be made to negotiate a lease with the Navy.

The Permanent Services Bases that would occupy this 85-acre parcel require access and proximity to the piers. These bases will be established at Quonset/Davisville after exploratory off-shore drilling is complete. Anticipating a 2 year period for an EIS and 2 years of exploratory drilling, these Bases would occupy Quonset/Davisville within a range of 4-9 years.

Area #6. Based on a "high find", available information indicates a need for 4000 linear feet of bulkhead and 4000 linear feet of pier space. Both road and rail service will be required. This development is described in Section III, Transportation, pages 7 and 8.

Area #7. This land, north of the Airport Complex, consists of approximately 225 acres. Because of its close proximity to the Davisville Piers and because it is open land with some paved areas, it could serve the needs of additional Permanent Service Bases as well as for use as a pipe coating yard. Approximately 100 acres of this land are being retained by the Navy and would therefore be available only under the provisions of a short term lease.

Permanent pipe coating operations require 95 acres for pipe laydown and 5 acres for the pipe coating process plant.

A portable plant may be constructed on 30 acres of leased land. Depending on the number of Permanent Service Bases that would occupy Quonset Point under this Scenario, some consideration should be given to a portable plant versus a permanent installation. The pipe coating operations would take place prior to expansion and use of the remaining land area by a Permanent Service Base.

Both these occupants would require a rail spur in order to make their operations viable for the needs of off-shore oil drilling. Therefore, a new rail spur through this area has been indicated in this Development Scenario.

Area #8. This parcel, consisting of approximately 120 acres, is known as the Davisville administrative triangle. It has a small campus-like setting consisting of living, dining, administrative, and recreational facilities. With such features readily available, this area could serve as a research and administrative complex. This land may be used only on a temporary basis through a lease arrangement, since it is reserved for Navy future mobilization requirements.

Area #9. This parcel, west of Route 1, known as West Davisville, consists of approximately 310 acres. A 42-acre parcel containing four large warehouses could serve as temporary storage facilities for the various commercial and industrial businesses which would locate at Quonset Point.

A 65-acre parcel to the north of the warehouse site with its rail systems connecting directly with the AMTRAK Rail System, could serve as a central rail terminal and minibus shuttle depot for transporting goods and people to Quonset/Davisville.

These two land parcels are within a 107-acre site which is being retained for Navy Permanent Mission requirements. Therefore, use of this land may be only on a temporary lease arrangement.

The 90-acre parcel east of the central rail terminal also with rail service could serve a single industrial use. Some consideration was given to the use of this area by petroleum-support facilities. However, because most such support facilities require water locations and piers, this site was not given top priority.

The 12-acre parcel indicated as occupied by military housing will remain a residential area.

The remaining area of 101 acres is a red maple swamp and should remain undisturbed except for possible use as a primary access corridor to Quonset/Davisville.

Area #10. This 49-acre parcel has good visibility from Route 1 and therefore is a prime site for commercial development.

Area #11. This 21-acre parcel, with Mill Creek traversing the site, has been earmarked for open recreational use. It is recommended that Mill Creek be considered a sensitive area and remain undisturbed.

Area #12. This 235-acre parcel containing numerous warehouses and rail spurs on open, flat ground offices would make an excellent industrial site. However, with the exception of possible temporary lease arrangements, this land is reserved for future Navy Permanent Mission requirements, and is not utilized in this Scenario.

Area #13. This 75-acre parcel to the north of the golf course could serve secondary oil-related industries. Such industrial uses may require rail service, necessitating the extension of a rail spur through the Navy property to the north.

These secondary petroleum-related industries would not occupy this parcel until 4-9 years after exploratory drilling has commenced. However, the land, together with the buildings, could be occupied on a temporary basis in accordance with the provisions of the standard Navy lease. Because of possible impacts from industrial usage of this parcel on surrounding land areas, it is recommended that landscape buffers be provided.

Area #14. This 16-acre parcel adjacent to the golf course site is a natural location for a tennis club and court complex. Since the socio-economic assessment of recreational needs have projected a demand for these facilities, 8 indoor and 20 outdoor tennis courts have been included in this plan.

Area #15. This 9-acre parcel, presently a parking area, is located at the entrance to Quonset Point. With the adjoining golf course and tennis courts, this site has been indicated as the location for a motor hotel complex since demand would be high for overnight lodging, food and beverage facilities.

Area #16. This 68-acre parcel abutting the easterly border of the Shore Acres community, has good road and utilities access, and favorable topographic characteristics.

For these reasons, a multi-use Technical Park has been located here, with buffer areas landscaped to minimize the contact with adjacent residential properties.

Area #17 & #19. These two 7-acre parcels could function separately or be combined into one parcel for industrial use. In both instances, careful planning must be ensured to avoid impacts on the other uses in the immediate area.

Area #18. This 66-acre parcel, because of its proximity to the golf course and frontage on the access road to the "O" Club and Davisville area, is projected for use as an Office Park. Please note that Building #8 and part of Building #9

are scheduled to remain because of their structural soundness, architectural interest and potential for re-use. Building #8, (formerly a Navy hospital) could serve as a Medical Office Building. Building #9, (formerly a Navy B.O.Q.), has an attractive stone entrance wall and flagstone terrace lined with large maple trees, and could serve, with some modifications, as an office building.

Area #20. This 16-acre parcel, south of the Port Authority Building #7 on Quonset Road, is earmarked for a single industrial use.

Area #21. This 40-acre parcel, north of General Dynamics, could serve as a secondary oil-related industrial site. Some of the buildings in this area might provide temporary space since the secondary oil related industries would not occupy this parcel until 4-9 years hence.

Area #22 and #23. These 5-acre parcels at each end of General Dynamics are earmarked for secondary petroleum-related industries. Please note that several of the areas designated for oil-related use may continue to be used on a temporary basis for lengthy periods by non-oil related industries.

Area #24. The 8-acre parcel north of the General Dynamics storage area is an irregular shaped land parcel which could serve a single industry. Area #20 abutting this parcel to the west could be combined with this parcel to meet the requirements of a potential developer.

Area #25. This 14-acre land parcel adjoining the Quonset Carrier Pier, could serve as a storage and shipping depot for the secondary petroleum-related industries. The primary oil support facilities are located at Davisville Pier #1 and adjoining areas, leaving the Quonset Pier to serve a secondary function.

Area #26. This 22-acre, irregularly shaped land parcel abutting General Dynamics is earmarked for their potential expansion.

Sensitive Areas

A total of 282 acres of "sensitive" land has been identified and should remain untouched. These land areas are sandy beaches, salt marshes, and other natural vegetative areas as defined by the Coastal Resources Center at the University of Rhode Island as part of their environmental assessment of Quonset/Davisville. These vegetative areas represent interesting areas that lend to overall development and are of no practical value. We have an obligation to save these areas which harbor the wildlife, and provide a natural amenity to the Technical Park.

DEVELOPMENT SCENARIO 2

"MEDIUM FIND" - MIXED LAND USE

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COASTAL ZONE
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A. General Description

This Scenario represents an optimal land use plan for Quonset/Davisville if the following conditions are met:

1. Off-shore explorations produce a "medium find" of commercially recoverable gas and oil as stated in Definitions, Page 1.
2. The results of the B.L.M. Environmental Impact Statement on off-shore drilling permit development as described in this Scenario.
3. The plan receives all local, State and Federal approvals required for development.

B. Land Area Categories.

In Scenario 2, the allotment of land uses by category is described in detail on Table A, Page I-3, and in condensed form as follows:

1. All unavailable parcels	1636 acres
2. Navy retained land Parcel 12 (not utilized)	235 acres
3. New primary petroleum-related development parcels	523 acres
4. New commercial and industrial parcels	790 acres
5. New recreation parcels	16 acres

This acreage description illustrates that the primary oil and gas-related land uses would be limited to 523 acres, or approximately 16% of the total 3200 acre sites.

C. Differences Between Scenario 1 and Scenario 2

1. In Scenario 2, the new bulkhead in Area #6 would be required (as in Scenario 1) but the finger piers would not be constructed.
2. The "Secondary oil-related" parcels in Scenario 1, (Areas #13, 21, 22 and 23) probably would not be required by the oil and gas companies, and would be available for standard industrial use.

3. The requirement by the oil and gas companies for office space in Area #18 would be diminished, as would potential demand for motel, food and beverage and other commercial functions.

D. Development Costs

The total development cost for Scenario 2 is projected at \$61,084,890. For a detailed breakdown of costs refer to Section VI, of this report.

E. Land Area/Land Use Description

Area #1. This 100-acre parcel consists of Davisville Pier #2 and the adjoining land to the north. At present, both Pier #1 and Pier #2 and the surrounding 70 acres of land are occupied by various oil related support companies. These temporary oil support companies are presently occupying space under the Protection and Maintenance Agreement with the Navy.

Brown and Root, Inc., a cold steel fabrication company, is presently negotiating for a right of first refusal to lease 100 acres of land at Davisville together with Pier #2. However, the "find" resulting from the exploratory off-shore oil drilling operations will determine whether or not this cold steel fabrication company will locate at Davisville. Assuming a low to medium find, this 100 acre site may be occupied by Permanent Service Bases.

Please note that the delay of off-shore drilling pending the completion of a B.L.M. Environmental Impact Statement (EIS) will vary the time schedule. We estimate that the EIS will take 2 years to complete and evaluate. Assuming a favorable ruling, we estimate that an additional 3 years will pass before the influx of the Permanent Service Bases take place.

Area #2. This 12-acre site in Allens Harbor is earmarked for marine recreational use as described in Scenario 1.

Area #3. This 85-acre parcel west of Allens Harbor could serve the same purpose as described in Scenario 1.

Area #4. This 30-acre parcel could serve as a common corridor for the flow of products to Pier #1 as described in Scenario 1.

Area #5. This 120-acre parcel east of the airport and near the Davisville Piers could serve as oil related support bases for reasons described in Scenario 1.

Area #6. Based on a "medium find", available information indicated a need for 4000 linear feet of bulkhead. Also, both rail and vehicular service will be required. This concept is reflected in Section III Transportation, Pages 7-8.

Area #7. This 225-acre parcel north of the Airport could serve oil-related purposes as described in Scenario 1.

Area #8. This 120-acre parcel known as the Davisville Administrative Triangle could serve as a research and administrative complex as described in Scenario 1.

Area #9. This 310-acre parcel west of Route 1, known as West Davisville, could serve the same purposes as described in Scenario 1.

Area #10. This 49-acre parcel at the intersection of Route 1 and Davisville Road could serve for commercial development as mentioned in Scenario 1.

Area #11. This 21-acre parcel is earmarked for open recreational use as described in Scenario 1.

Area #12. This 235-acre parcel could serve an industrial function with restrictions described in Scenario 1.

Area #13. This 75-acre parcel to the north of the golf course could serve as an industrial site. With the possible need for rail service to this parcel, a rail spur would have to be extended through the Navy retained land to the north. Because of the possible visual conflicts of this parcel with surrounding land use, it is recommended that landscape buffers be provided.

Area #14. This 16-acre parcel could serve for a tennis complex as described in Scenario 1.

Area #15. This 9-acre parcel could serve as an office, retail or hotel complex, as described in Scenario 1.

Area #16. This 68-acre parcel could serve as a multi-use technical park for reasons described in Scenario 1.

Area #17 and #19. These two 7-acre parcels could serve as industrial sites as described in Scenario 1.

Area #18. This 66-acre parcel could serve as an office and medical park as described in Scenario 1.

Area #20. This 16-acre parcel could serve an industrial use as mentioned in Scenario 1.

Area #21. This 40-acre parcel north of General Dynamics could serve a single industrial use. The present buildings could serve a temporary purpose until demand for this parcel is generated.

Areas #22 and #23. These 5-acre parcels at each end of General Dynamics are earmarked for industrial use. In addition, these parcels may serve as parking areas for General Dynamics, or be held in a temporary status for other industrial uses.

Area #24. This 8-acre parcel could serve a single industry as described in Scenario 1.

Area #25. This 14-acre parcel, together with the Quonset Pier, may serve the fishing industry. One should consider the attraction of birds to fishing boats and its adverse affect on the airplane navigation within the adjacent airport approach zone.

The Quonset Pier facilities, with its rail service, can function as a water transport facility to service the entire Quonset Complex as well.

Area #26. This 22-acre parcel is earmarked for potential expansion as described in Scenario 1.

Sensitive Areas

A total of 282 acres of land have been identified and should remain untouched for reasons described in Scenario 1.

DEVELOPMENT SCENARIO 3

"NO FIND" - MIXED LAND USE

- A. General Description. This Scenario results from an investigation of the potential for land use at Quonset/Davisville should there be a "low find" or "no find" of off-shore oil and gas or if oil-related facilities for any other reason should not be located on this site.
- B. Land Areas. In Scenario 3, the allotment of land uses by Category as described in detail on Table A, page I-3 and in condensed form as follows:
- | | |
|---|------------|
| (1) All unavailable parcels | 1636 acres |
| (2) Navy-retained land (not utilized) | 235 acres |
| (3) New commercial and industrial parcels | 1313 acres |
| (4) New recreation parcels | 16 acres |

The acreage description illustrates that new uses comprise 1329 acres or approximately 41% of the total 3200 acres within the Study Area.

- C. The fundamental differences between Scenario 3 and Scenario 1 and 2 are as follows:
1. There would be no requirement for bulkheading channel excavation, piers, or other special work in Area #6.
- D. Development Costs. The total development cost for Scenario 3 is projected at \$45,616,371. For a detailed breakdown of costs refer to Section VI of this report.
- E. Land Area/Land Use Description

Area #1. This 100-acre parcel consists of Davisville Pier #2 and adjoining land to the north. At present, both Pier #1 and Pier #2, and the surrounding 70 acres of land are occupied by various oil related support companies under one year lease agreements with a 30-day cancellable clause.

In this scenario, no commercial finds of petroleum are assumed to occur on George's Bank. Thus the Temporary Oil Service Bases at Davisville would vacate. Such a likelihood could conceivably occur within 5-7 years pending B.L.M. Environmental Impact Statement submission and ruling and the results of oil exploratory drilling.

In this event, this parcel could serve a single industry which requires rail service and water frontage for shipping purposes are necessary.

Area #2. This 12-acre site in Allens Harbor is earmarked for marine recreational use as described in Scenario 1.

Area #3. This 85-acre parcel west of Allens Harbor could serve the same purpose as described in Scenario 1 except that the open storage area would not be used by oil-related support companies.

Area #4. This 30-acre parcel could serve as a common corridor for the flow of products to Pier #1 as described in Scenario 1.

Area #5. This 120-acre parcel is designated for industrial use. Approximately 85 acres of this 120-acre site are Navy owned. This 85 acre parcel is of prime importance in the development of Quonset/Davisville for water-borne shipping. This parcel contains an elaborate rail system together with two large dehumidified warehouses. It is not likely that this 85 acre parcel will be released by the Navy without a significant re-use of the property, however, a temporary lease agreement should be pursued, if industry is interested in the parcel.

Area #6. The development of this area for additional piers or bulkhead is not recommended since most of the assigned industrial areas are basically speculative.

Area #7. This 225-acre parcel north of the airport complex has been designated for industrial use and open storage. Approximately 100 acres of this land are being retained by the Navy and would be available on a short term lease arrangement.

It is noted that landscape buffers are recommended on Davisville Road fronting this land parcel.

Area #8. This 120-acre parcel could serve as a research and administrative complex as described in Scenario 1.

Area #9. This 310-acre parcel, known as West Davisville, could serve the same purposes as described in Scenario 1.

Area #10. This 49-acre parcel at the intersection of Route 1 and Davisville Road could serve for commercial development as mentioned in Scenario 1.

Area #11. This 21-acre parcel is earmarked for open recreational use as described in Scenario 1.

Area #12. This 235-acre parcel could serve an industrial use with restrictions described in Scenario 1.

Area #13. This 75-acre parcel to the north of the golf course could serve as an industrial site. With the possible need for rail service to the parcels, a rail spur would have to be extended through the Navy retained land to the north. To accomplish this, a railroad construction service agreement will be necessary. However, due to the speculative nature of this site and the costs of a rail spur, new track construction should be delayed until more favorable conditions become apparent.

Because of the possible visual conflicts of this parcel with surrounding land use, it is recommended that landscape buffers be provided.

Area #14. This 16-acre parcel could serve for a tennis complex as described in Scenario 1.

Area #15. This 9-acre parcel could serve as an office, retail or hotel complex as described in Scenario 1.

Area #16. This 68-acre parcel could serve as a multi-use technical park for reasons described in Scenario 1.

Area #17 and #19. These two 7-acre parcels could serve as industrial sites as described in Scenario 1.

Area #18. This 66-acre parcel could serve as an office and medical park as described in Scenario 1.

Area #20. This 16-acre parcel could serve an industrial use as mentioned in Scenario 1.

Area #21. This 40-acre parcel could serve a single industrial use as described in Scenario 2.

Area #22 and #23. These 5-acre parcels are earmarked for industrial use as described in Scenario 2.

Area #24. This 8-acre parcel could serve a single industry as described in Scenario 1.

Area #25. This 14-acre parcel and Quonset pier could serve the fishing industry with some reservations as described in Scenario 2.

Area #26. This 22-acre parcel is earmarked for potential expansion as described in Scenario 1.

Sensitive Areas. A total of 282 acres of land have been identified and should remain untouched for reasons described in Scenario 1.

Building Inventory II

Building Inventory of Quonset / Davisville, Rhode Island

Categories Inventoried:

1. Administration, Offices
2. Hospital, Dispensary
3. Dining Facilities, Food Handling & Storage
4. Barracks
5. Housing, Quarters
6. Recreation Facilities
7. Miscellaneous
8. Navy Exchange, Commissaries
9. Classrooms, Instruct. Buildings, Small Shops
10. Sewage Disposal
11. Heating, Power Plants
12. Warehouses, Storage, P.W. Garages, Magazines
13. Piers
- 13A Water Supply
14. Electric Boat Bldgs. (Not Inventoried as to condition)
15. Airport Buildings " " " "
16. National Guard Bldgs. " " " "

Categories not Inventoried

Trans. Vaults, Fuel Tanks, Buildings Under \$10,000 Replace Value
(Total Approximately \$200,000 @ Quonset & \$700,000 @ Davisville.
= \$1,000,000⁺)

Category Condition

G = Good, F = Fair, P = Poor

Summary of
Building Cost Analysis

Quonset

<u>Category</u>	<u>SF</u>	<u>ACQ.</u>	<u>Rep.</u>
1 - 13	3,340,000	\$ 35,000,000	\$ 138,000,000
14. EB	2,000,000	23,000,000	104,000,000
15. Airport	144,000	2,000,000	5,300,000
16. R.I.A.N.G.	312,000	3,700,000	15,600,000
<hr/>			
1 - 16	5,796,000	\$63,700,000	\$262,900,000

Davisville

<u>Category</u>	<u>SF</u>	<u>Acquisition Cost</u>	<u>Replacement cost</u>
1 - 13	4,400,000	\$ 30,000,000	\$ 124,000,000

Building Inventory - Quonset Point

<u>Category</u>		<u>Present Use</u>	<u>Potential Use</u>	<u>Proposed Demolition</u>
1. Admin.				
<u>Bldg.</u>	<u>Condition</u>			
#7	G	R.I.P.A., R.D.N. Res. Sedo Inc., CD Prep. Agcy.	x	
421	P			x
438	P			x
523	F			x
437	P			x
620	F	Custy Lobster Inc.		x
2. Hospital Dispensary				
	(Brick) F		Brick Portion	Wood Portion
#8	(Wood) P			x
508	F			x
3. Dining, Food Hand. & Storage				
#15	F	Murphy Caterers Quonset Pt. Credit Union		x
#55	F			x
#173	F			x
14	F			x
4. Barracks				
# 56	F-P			x
41-48	F-P			x
49-54	F-P			x

Building Inventory - Quonset Point

Category		Present Use	Potential Use	Demolition
4. Barracks				
<u>Bldg.</u>	<u>Condition</u>			
# 432	P			x
433	P			x
491	P			x
518	F-P			x
522	F		Offices	
9	F		"	
490	P			x
503	P			x
504	P			x
5. Housing Quarters				
(Circle A-T)	F-P			x
CPO	F-P			x
Kiefer Park	P			x
Hoskins Park	P			x
Military Dr.	P			x
Navy Dr.	P			x
Area #1	F			x
Area #2	F			x
Dogpatch	F-P			x
DM0Q5	F	R.C.Diocese of Prov.		x
DM099	F	" " " "		x
D250	F			x

Building Inventory - Quonset Point

Category		Present Use	Potential Use	Demolition		
5. Recreation						
<u>Bldg.</u>	<u>Condition</u>					
# 12	G	"O" Club Custy Lobster Inc. & Dept. of Natural Res.	Same			
62	F			x		
435	P			x		
436	P			x		
502	P			x		
505	P			x		
506	P			x		
875	F			Bath House	Same	
876	F			"	"	
877	F			Pool Filter	"	
922	F		C.P.O. Club			
923	P			x		
DS- 34	P			x		
DS- 69	G	Golf Course Club House	Same			
#759 & Assoc. Bldgs.	P			x		
DS- 45	P			x		
S- 89	G	Diocese of Prov.		x		
7. Miscellaneous						
#157	F-P			Chapel		
65	F-P			Laundry		
407	G	Fire Station	Same			
410	F-P			Incinerator		

Building Inventory - Quonset Point

Category		Present Use	Potential Use	Demolition
7. Miscellaneous				
<u>Bldg.</u>	<u>Condition</u>			
DE-7	P			Laundry
395	P	Mac's Automotive Service		X
School	F	Town of N.Kingstown	X	
829,830,831	P	Preston Elec.Inc.	X	
8. Navy Exchange Commissaries				
#934	G			X
DHJ-3	G (new)		Storehouse	
	P (old)			X
9. Classrooms Instr. & Shops				
#413	F			X
458	F	Painting Service Co.		X
459	F	Custy Lobster Inc.		X
507	F	Quonset Metal Finishing Co.		X
694	F	Fit 'N Stich		X
10. Sewage Disp.				
#66A-66M	F	Sewage Treat. Plant.		X
DS - 55	F	Sewage Pump Station		X

Building Inventory - Quonset Point

Category		Present Use	Potential Use	Demolition
11. Heating Power Plants				
<u>Bldg.</u>	<u>Condition</u>			
#64	F	Central Heat.Plant		x
195-198	P			x
63	F-P			x
12. Warehouses Storage Garages, Magazines				
#13	F	Maintenance Shops		x
19	F	Ocean State Testing Co.		x
20	F	Becker & Goldstein, Inc.		x
59	F			x
98	F			x
100	F			x
102	F			x
104	F			x
143	F	State Fire Marshall		x
144	F-P			x
145	F			x
412	F			x
414	F			x
415	F	R.I. Ship Supply		x
416	F			x

Building Inventory - Quonset Point

Category		Present Use	Potential Use	Demolition
12. Warehouses, Storage Garages, Magazines				
Bldg.	Condition			
418	F	Becker & Goldstein, Inc.		x
419	F			x
423	P			x
410	F	Preston Electronics, Inc.		x
424	P			x
425-430	P			x
431	P			x
451	F			x
460	F			x
462	F			x
516	P			x
517	P			x
518	P			x
533-535	F			x
621	P			x
630	F	Kingston Pipe		x
58	P			x
380	P			x
384	F	Narragansett Elec. Co.		x
393	P			x
394	P			x
880	G	Rhode Island Ocean State Training Facility	Same	

Building Inventory - Quonset Point

Category		Present Use	Potential Use	Demolition
12. (Con't.)				
<u>Bldg.</u>	<u>Condition</u>			
DE11	F	Sheilco Ltd.		x
DE12	F	Harter Underwater Corp.		x
DEE-1	P			x
DEE-5	G		Warehouse	
DF11	F			x
DFG-3	F			x
DS-24	P			x
DS-33	P			x
DS-45	P			x
D-180	F	Eastman Whipstock		x
D-184	F			x
487	F			x
13. Pier Area				
Various Bldgs on Pier		Mobil Oil Co. Custy Lobster Inc. Dept. Nat. Resources		x x x
13A Water Supply				
#909		Water Meter Pit	x	
466		Under. Reservoir	x	
57		Pump House	x	
485		" "	x	
851		Valve House	x	

Building Inventory - Quonset Point

Category	Present Use	Potential Use	Demolition
<u>13A Water Supply (Cont'd)</u>			
<u>Bldg.</u>	<u>Condition</u>		
D75	Pump Station	x	
D75-5	Under. Reservoir	x	
D75-6	Under. Reservoir	x	
D304	Water Storage Tank	x	

Building Inventory - Davisville

Category		Present Use	Potential Use	Demolition
1. Administration				
<u>Bldg.</u>	<u>Condition</u>			
#101	F		Offices	
A-78	F			x
A-129	F		Offices	
A-130	F		"	
A-133	F			x
S6	F			x
S8	F			x
S32	F			x
W5	F			x
W319	F			x
404	G	N.C.B.C. Hdqts.	Same	
395	F			x
397	F			x
3. Dining, Food Hand. & Storage				
C100	G		Dining Hall	
212	F			x
4. Barricks				
C101	G		Housing-Quarters	
C-102	G		"	
C-103	G		"	
C-104	G		"	
C-105	G		"	

Building Inventory -- Davisville

Category		Present Use	Potential Use	Demolition
4. Barracks (Cont'd)				
<u>Bldg.</u>	<u>Condition</u>			
C-106	G		Housing -Qtrs.	
C-107	G		"	
C-108	G		"	
C-109	G		"	
391	G		"	
392	G		"	
5. Housing				
D264-D272	F			X
6. Recreation				
#108	P			X
236	P			X
237	P			X
AH-2A	P			X
C-114	G		Recreation	
C-115	G		Gymnasium	
E-112	G		Small Boat Berths	
S-89	G	R.C.Diocese of Prov.		X
379	G		Theater	
380	G		Library	

Building Inventory - Davisville

Category	Present Use	Potential Use	Demolition
7. Miscellaneous			
<u>Bldg.</u>	<u>Condition</u>		
#341	F		Chapel
S-16	G		Fire Sta.
8. Navy Exchange			
#102	F		x
9. Classrooms, Instr. Bldg. Shops			
#27	P		x
31	F		x
32	F		x
44	F		x
47	F		x
48	F		x
56	F		x
58	P		x
59	P		x
60	P		x
62	F		x
63	F		x
69	P		x
106	P		x
111	G	Pistol Range & Armory	x
113	F		x

Building Inventory - Davisville

Category	Present Use	Potential Use	Demolition
9. Classrooms, Instr. Bldg. Shops (Cont'd)			
<u>Bldg.</u>	<u>Condition</u>		
118	G		x
175	F		x
213	F		x
277	F		x
279	F		x
280	F		x
295	F		x
312	G	Storage	
324	F		x
330	F		x
332	P		x
343	P		x
344	P		x
345	P		x
365	F	(No Access)	x
368	F		x
370	F		x
371	F	Schlumberger Services	x
372	F		x
374	P		x
A-10CT	G	Battery Shop	
A-11	F		x

Building Inventory - Davisville

Category		Present Use	Potential Use	Demolition
9. (Con't.)				
<u>Bldg.</u>	<u>Condition</u>			
A-12	F			x
A-63	P			x
A-64	P			x
A-66	P			x
A-132	P			x
AH-30	F	Sheilco		x
AH-4A	F			x
B-11	F			x
C-116	G		Classrooms	
C-117	F			x
C-118	F			x
C-120	F			x
C-121	F			x
C-122	F			x
C-123	F			x
C-124	F			x
C-125	F			x
C-126	F			x
C-130	F			x
C-131	F			x
D-11	F			x
D-12	F			x
E-107	F	(No Access)		x

Building Inventory - Davisville

Category		Present Use	Potential Use	Demolition
9. Classrooms, Instr. Bldg. Shops (Con't.)				
<u>Bldg.</u>	<u>Condition</u>			
S-9	F			x
S-10	F			x
S-11	F			x
S-17	F			x
S-20	F			x
S-21	F			x
S-22	F			x
S-23	F			x
S-40	F			x
S-41	G		Maintenance Shop	
S-42	F			x
S-82	P			x
S-83	P			x
S-84	P			x
S-85	G			x
S-101	F			x
S-102	F			x
S-103	F			x
S-104	F			x
S-105	F	Baroid Division, N.L. Industries		x
S-106	F	"		x
S-107	F	Mc Junkin Corp.		x

Building Inventory - Davisville

Category		Present Use	Potential Use	Demolition
9. (Con't.)				
<u>Bldg.</u>	<u>Condition</u>			
S-108	F	Milchem Inc.		X
S-109	F			X
S-110	F			X
S-111	F			X
S-112	F			X
S-113	F			X
S-114	F			X
S-115	F			X
S-116	F			X
S-117	F			X
S-118	F			X
S-119	F			X
S-120	F			X
T-2	F			X
T-3	F			X
T-4	F			X
T-5	F			X
T-6	F			X
T-7	F			X
T-8	F			X
T-9	F			X
T-10	F			X
T-11	F			X

**COASTAL ZONE
INFORMATION CENTER
FEB 1 1978**

Building Inventory - Davisville

Category		Present Use	Potential Use	Demolition
9. (Con't.)				
<u>Bldg.</u>	<u>Condition</u>			
T-13	F			x
T-15	F			x
T-16	F			x
T-17	F			x
T-18	F			x
T-19	F			x
378	F			x
390	F			x
399	F			x
408	F			x
68	F			x
Heating				
11. Power Plants				
#103	G		Heating Plant	
210	F			x
225	G	Heating Plant	Heating Plant	
C-113	G	"	"	
S-18A	F			x
S-29A	F			x
T-1A	F			x
W-3A	F			x
W-5A	F			x

Building Inventory - Davisville

Category		Present Use	Potential Use	Demolition
12. Warehouses, Stor. Garages, Magaz.				
<u>Bldg.</u>	<u>Condition</u>			
#18	G		Warehouse	
#34	G		"	
#35	G		"	
#36	G		Warehouse	
37	G		"	
38	G		"	
39	G		"	
40	G		"	
41	G		"	
42	G		"	
43	F			X
45	F			X
46	F			X
64	G		Warehouse	
67	F			X
218	F			X
224	G			X
314	G		Warehouse	
315	G		"	
316	G		"	
317	G		"	
318	G		"	

Building Inventory - Davisville

Category		Present Use	Potential Use	Demolition
12. (Con't.)				
<u>Bldg.</u>	<u>Condition</u>			
#363	G			X
AB-3	F			X
C-132	F			X
CO-3	F			X
E-319	G		Warehouse	
C-119	F			X
S-12	F			X
S-18	F			X
S-19	F			X
S-19A	P			X
S-26	G			X
T-1	F			X
W-1	F			X
W-2	F			X
W-3	F			X
W-4	F			X
W-6	G		Warehouse	
W-7	G		"	
410	F			X
C-126	F			X
E-111	F			X
AH-30	F	Sheilco Ltd.		X
A136, A137, AH5B	F	Imco Services		X

Building Inventory - Davisville

Category		Present Use	Potential Use	Demolition
12. (Con't.)				
<u>Bldg.</u>	<u>Condition</u>			
27,69,210,212 213	F	Imco Services		x
A91,32,175,AH5A	F	Oilfield Products Group		x
AH2A,AH2B,AH2E	F	" " "		x
13. Piers				
#1	G	Baroid Division,N.C. Industries,Inc. Drilling Fluids Div. Milchen,Inc.	Same "	
"	G	Shell Oil Co.	"	
"	G	B.J. Hughes,Inc.	"	
#2	G	Imco Services Division Halliburton Corp. Oilfield Products Group Dresser Industries Houston Oil and Minerals Corp. Mobil Oil Co. Exxon Co.	" " " " "	

BUILDING INVENTORY QUONSET - TOTALS

<u>Category</u>	<u>S.F.</u>	<u>Acq.</u>	<u>Replace.</u>
1.	77,046	\$ 714,768	\$ 3,346,000
2.	93,573	1,240,171	6,322,000
3.	123,370	1,941,416	9,476,000
4.	598,574	4,883,845	26,878,000
5.	1,218,595	7,877,668	18,565,000
6.	162,153	1,954,875	7,769,000
7.	29,316	432,861	2,003,000
8.	59,600	778,018	1,352,400
9.	27,241	256,437	822,000
10.	16,107	314,253	1,049,000
11.	40,660	6,307,331	30,846,000
12.	795,639	6,623,389	22,218,000
13.	<u>93,760</u>	<u>1,562,224</u>	<u>7,094,000</u>
	3,335,634	\$34,887,256	\$137,740,400
14.	1,940,604	\$22,586,200	\$103,967,000
15.	143,726	\$ 1,939,266	\$ 5,223,000
16.	311,667	\$ 3,648,828	\$ 15,556,000

BUILDING INVENTORY - QUONSET POINT

<u>Category</u>	<u>S.F.</u>	<u>Acq.</u>	<u>Replace.</u>	<u>In Use</u>	<u>Usable</u>	<u>Demo.</u>
1. Administration						
#7	42,550	\$511,445	\$2,501,000	x		
421	1,040	2,000	10,000			x
438	22,000	126,000	575,000			x
523	640	2,500	11,000			x
437	7,700	35,000	180,000			x
620	<u>3,116</u>	<u>37,823</u>	<u>69,000</u>	x		
	77,046	\$714,768	\$3,346,000			
2. Hospital - Dispensary						
#8	91,350	\$1,184,149	\$6,092,000		Brick	Wood
508	<u>2,223</u>	<u>56,022</u>	<u>230,000</u>		x	x
	93,573	\$1,240,171	\$6,322,000			
3. Dining Facilities, Food Handling & Storage						
#15	14,060	\$ 269,040	\$1,316,000	x		
#55	71,071	1,284,421	6,285,000		x	
#173	3,254	20,279	76,000			x
#14	<u>34,985</u>	<u>367,676</u>	<u>1,799,000</u>	x		
	123,370	\$1,941,416	\$9,476,000			
4. Barracks						
#56	3,786	\$ 58,948	\$ 288,000			x
#41 to #48	160,656	1,309,660	8,908,000			x
#49 to #54	120,492	984,295	4,817,000			x
#432	17,611	140,408	640,000			x
#433	17,511	140,702	641,000			x
#491	13,300	90,000	367,000			x
#518	13,737	74,182	318,000			
#522	56,600	266,000	1,089,000		x	
#9	159,281	1,592,647	8,882,000		x	
#490	11,400	65,000	265,000			x
#503	11,600	67,500	276,000			x
#504	<u>12,600</u>	<u>94,503</u>	<u>387,000</u>			x
	598,574	\$4,883,845	\$26,878,000			

BUILDING INVENTORY - QUONSET POINT

<u>Category</u>	<u>S.F.</u>	<u>Acq.</u>	<u>Replace.</u>	<u>In Use</u>	<u>Usable</u>	<u>Demo.</u>
5. Housing, Quarters						
(circle) A-T	69,599	\$ 202,710	\$ 1,075,000			x
(C.P.O.) 21-40	30,493	122,051	648,000			x
Kiefer Park						
(202-370)=168	201,375	755,193	4,084,000			x
Hoskins Park	414,162	1,287,663	2,762,000			x
Military Dr.	196,800	1,834,000	2,940,000			x
Navy Drive	106,278	987,794	1,591,000			x
Area #1	79,698	1,705,719	2,324,000			x
Area #2	45,960	976,230	1,331,000			x
Dog Patch	<u>74,230</u>	<u>331,069</u>	<u>1,810,000</u>			x
	1,218,595	\$7,877,668	\$18,565,000			
6. Recreation Facilities						
#11						
#12	24,100	\$ 484,000	\$2,366,000	x		
#62	5,895	161,784	792,000			x
#759						x
&						
Assoc. Bldgs.						x
#435	12,896	120,952	454,000			x
#436	19,594	450,375	1,950,000			x
#502	11,400	66,000	270,000			x
#505	12,600	67,495	277,000			x
#506	29,568	172,269	705,000			x
#875	900	9,000	16,000	x		
#876	10,000	10,000	17,000	x		
#877	1,200	23,000	39,000	x		
#922	8,000	243,500	321,000		x	
#923	13,000	26,000	36,000			x
DS-34	4,000	30,500	138,000			x
DS-69	<u>9,000</u>	<u>90,000</u>	<u>388,000</u>	x		
	162,153	\$1,954,875	\$7,769,000			
7. Miscellaneous						
#157 Chapel	7,400	\$ 71,000	\$ 290,000			x
#65 Laundry	7,381	196,506	962,000			x
#407 Fire Sta.	8,859	83,198	378,000	x	x	
#410 Incin.	2,076	47,157	214,000			x
DE-7 Laundry	<u>3,600</u>	<u>35,000</u>	<u>159,000</u>			
	29,316	\$432,861	\$2,003,000			

BUILDING INVENTORY - QUONSET POINT

<u>Category</u>	<u>S.F.</u>	<u>Acq.</u>	<u>Replace.</u>	<u>In Use</u>	<u>Usable</u>	<u>Demo.</u>
8. Navy Exchange, Commissaries						
#395	2,800	\$ 20,018	\$ 87,000	x		
#934	1,800	47,000	56,400			x
DHJ-3	<u>55,000</u>	<u>711,000</u>	<u>1,209,000</u>		x new	x old
	59,600	\$778,018	\$1,352,400			
9. Classrooms, Instructional Bldgs., Small Shops						
#412	4,284	\$ 16,904	\$ 77,000			x
#453	1,250	6,600	38,000	x		
#458	7,930	68,900	298,000	x		
#459	6,230	90,801	166,000	x		
#507	5,622	29,423	120,000	x		
#510	830	16,000	74,000	x		
#694	<u>1,095</u>	<u>27,809</u>	<u>49,000</u>	x		
	27,241	\$256,437	\$822,000			
10. Sewage Disposal						
#66A-66M	14,219	\$293,653	\$1,006,000	x		
DS-55	<u>1,888</u>	<u>20,600</u>	<u>43,000</u>	x		
	16,107	\$314,253	\$1,049,000			
11. Heating - Power Plants						
#64	35,655	\$6,247,078	\$30,567,000	x		
#195-#198	1,536	12,000	60,000			x
#63	<u>2,715</u>	<u>39,253</u>	<u>178,000</u>	x		
	40,660	\$6,307,331	\$30,846,000			
12. Warehouses, Storage, Garages, Magazines						
#13	18,700	\$221,000	\$1,169,000	x		
#19	1,930	41,304	202,000	x		
#20	9,525	126,977	621,000	x		
#59	23,573	190,927	867,000		x	
#98	5,151	76,187	346,000			x
#100	3,074	18,408	90,000			x
#102	1,300	15,187	69,000			x
#104	10,250	152,300	692,000			x
#143	1,377	15,884	69,000			x
#144	1,377	15,884	69,000			x
#145	6,171	47,126	214,000			x
#412	10,833	64,459	264,000	x		
#414	12,600	73,355	317,000		x	
#415	2,412	\$ 13,801	\$ 63,000			x

BUILDING INVENTORY - QUONSET POINT

<u>Category</u>	<u>S.F.</u>	<u>Acq.</u>	<u>Replace.</u>	<u>In Use</u>	<u>Usable</u>	<u>Demo.</u>
#416	5,252	\$ 48,456	\$ 220,000			x
#418	10,900	18,074	82,000	x		
#419	10,250	20,248	88,000			x
#423	3,000	11,000	58,000			x
#424	3,000	11,000	58,000			x
#425-430	104,832	731,301	3,330,000			x
#431	5,234	61,121	278,000			x
#451	9,312	48,925	225,000	x		
#460	1,540	10,000	43,000	x		
#462	4,284	19,463	101,000			x
#516	12,600	47,015	193,000			x
#517	12,600	76,270	313,000			x
#518	13,737	74,182	318,000			x
#533-535	12,000	56,743	121,000	x		
#621	1,200	4,000	17,000			x
#630	18,062	576,493	1,014,000	x		
# 58	7,036	75,789	371,000			x
#380	1,900	10,200	50,000			x
#384	4,000	27,000	132,000			x
#393	1,612	27,256	118,000			x
#394	1,062	4,100	18,000			x
#880	71,493	1,872,799	3,064,000	x		
DE-11&12	8,200	26,000	116,000			x
DEE-1	22,000	33,000	153,000			x
DEE-5	175,000	850,000	3,676,000		x	
DF-11	4,100	13,000	58,000			x
DFG-3	30,000	128,000	551,000		x	
DS-24	41,000	94,000	426,000			x
DS-33	20,000	63,500	288,000			x
DS-45	50,000	263,000	1,077,000			x
D-180	14,400	162,000	434,000	x		
D-184	3,200	15,000	68,000			x
#921	3,465	43,846	58,000	x		
#487	1,095	27,809	49,000	x		
	795,639	\$6,623,389	\$22,218,000			
13. Pier						
#495	93,760	\$1,562,224	\$7,094,000	x		

BUILDING INVENTORY - QUONSET POINT

14. Electric Boat Buildings at Quonset

<u>BUILDING</u>	<u>TOTAL AREA</u>		<u>COSTS</u>	
			<u>ACQ.</u>	<u>REPLACE.</u>
1	106,330	Square Feet	\$ 965,300	\$ 4,723,000
2	111,560	" "	1,063,700	5,542,000
10	14,000	" "	135,100	661,000
16	242,030	" "	2,009,400	9,832,000
17	51,972	" "	668,900	3,273,000
60	622,726	" "	11,553,100	57,680,000
149	N/A		-	-
151	3,272	" "	30,000	113,000
152	2,984	" "	11,300	43,000
166	N/A		-	-
374	65,500	" "	197,200	965,000
375	59,000	" "	209,600	1,025,000
406	111,300	" "	1,194,500	5,424,000
409	734	" "	3,700	17,000
420	19,796	" "	266,700	1,154,000
464	4,264	" "	63,100	308,000
480	2,153	" "	40,300	165,000
483	50,000	" "	187,700	918,000
484	50,197	" "	180,800	885,000
488	50,895	" "	645,700	2,428,000
536	101,000	" "	813,400	1,667,000
537	170,835	" "	1,396,300	2,759,000
808	1,052	" "	22,700	85,000
879	13,163	" "	88,800	152,000
897	2,460	" "	-	60,000
DG-12	4,127	" "	58,700	266,000
DT-38	4,127	" "	7,200	29,000
DT-39	4,127	" "	31,400	57,000
DT-41			15,900	65,000
628	1,800	" "	12,900	24,000
697	2,200	" "	5,000	22,000
698	1,000	" "	2,500	11,000
932	24,300	" "	427,000	2,350,000
924	8,000	" "	37,500	52,000
18	19,500	" "	147,400	721,000
373	14,200	" "	93,400	491,000
	<u>1,940,604</u>		<u>\$22,586,200.</u>	<u>\$103,967,000.</u>

BUILDING INVENTORY - QUONSET POINT

<u>Category</u>	<u>S.F.</u>	<u>Acq.</u>	<u>Replace.</u>	<u>In Use</u>	<u>Usable</u>	<u>Demo.</u>
15. Airport						
#3	63,750	\$ 660,392	\$3,231,000	x		
#61	28,100	543,000	-			
#132	225	2,524	13,000			
#165	360	3,600	14,000			
#455	700	36,000	179,000			
#456	730	36,000	179,000			
#457	25,669	153,892	666,000			
#481	830	14,000	66,000			
#509	5,600	16,000	74,000			
#360	640	2,500	11,000			
#711	3,350	29,310	53,000			
#818	708	38,548	68,000			
#822	700	37,300	69,000			
#823	180	12,700	24,000			
#884	6,900	230,000	376,000			
#885	4,900	112,000	182,000			
#890	384	11,500	18,000	x		
	<u>143,726</u>	<u>\$1,939,266</u>	<u>\$5,223,000</u>			
16. National Guard						
#4	63,750	\$ 677,912	\$3,317,000	x		
#5	63,750	676,930	3,312,000			
#6	63,750	657,545	3,217,000			
#11	76,080	1,061,079	3,414,000			
#97	3,111	50,000	245,000			
#99	1,377	18,408	90,000			
#101	1,300	15,000	73,000			
#103	10,300	158,000	772,000			
#105	200	4,800	24,000			
#129	225	2,524	13,000			
#130	225	2,524	13,000			
#131	225	2,524	13,000			
#139	192	6,022	29,000			
#140	192	6,022	29,000			
#141	1,400	23,100	113,000			
#142	1,400	17,000	76,000			
#155	21,670	201,555	758,000			
#618	960	4,832	9,000			
#619	960	7,460	15,000			
#626	600	12,391	24,000	x		
	<u>311,667</u>	<u>\$3,648,828</u>	<u>\$15,556,000</u>			

BUILDING INVENTORY - DAVISVILLE - TOTALS

<u>Category</u>	<u>S.F.</u>	<u>Acq.</u>	<u>Replace.</u>
1.	224,878	\$2,467,396	\$10,614,000
2.	-	-	-
3.	28,890	829,380	2,275,000
4.	259,538	4,702,629	11,272,000
5.	162,000	90,000	459,000
6.	104,361	1,714,345	4,466,000
7.	9,218	167,650	691,000
8.	18,630	199,186	1,186,000
9.	469,650	2,659,777	9,739,000
10.	-	-	-
11.	15,982	615,870	2,557,000
12.	2,097,401	10,608,821	44,837,000
13.	4,500 L.F. (Berth)		
	<u>980,000</u>	<u>7,910,347</u>	<u>35,899,000</u>
	4,370,548	\$31,965,411	\$123,995,000

BUILDING INVENTORY - DAVISVILLE

<u>Category</u>	<u>S.F.</u>	<u>Acq.</u>	<u>Replace.</u>	<u>In Use</u>	<u>Usable</u>	<u>Demo.</u>
1. Administration, Offices						
#101	163,857	\$1,344,040	\$8,001,000		x	
A-78	1,800	3,500	21,000			x
A-129	2,900	5,000	30,000		x	
A-130	2,900	5,000	30,000		x	
A-133	2,900	5,000	30,000			x
S-6	3,100	33,300	198,000			x
S-8	4,700	49,000	292,000			x
S-32	4,600	58,424	348,000			x
W-5	7,100	46,400	262,000			x
W-319	1,200	40,000	110,000			x
#404	18,021	713,732	1,020,000		x	
#395	7,800	108,600	180,000			x
#397	4,000	55,400	92,000			x
	224,878	\$2,467,396	\$10,614,000			
3. Dining Facilities, Food Handling & Storage						
#C100	24,072	\$805,745	\$2,134,000		x	
#212	4,818	23,635	141,000			x
	28,890	\$829,380	\$2,275,000			
4. Barracks						
C-101	21,702	\$ 402,809	\$ 1,075,000		x	
C-102	21,702	405,732	1,075,000		x	
C-103	21,702	405,732	1,075,000		x	
C-104	21,702	405,809	1,075,000		x	
C-105	21,702	405,809	1,075,000		x	
C-106	21,702	413,310	1,095,000		x	
C-107	21,702	360,531	955,000		x	
C-108	21,702	351,992	932,000		x	
C-109	21,702	351,589	931,000		x	
#391	32,110	598,163	992,000		x	
#392	32,110	598,163	992,000		x	
	259,538	\$4,702,639	\$11,272,000			
5. Housing, Quarters						
D264-D272						x
9 Buildings @	18,000	10,000	51,000			x
	162,000	\$90,000	\$459,000			

BUILDING INVENTORY - DAVISVILLE

<u>Category</u>	<u>S.F.</u>	<u>Acq.</u>	<u>Replace.</u>	<u>In Use</u>	<u>Usable</u>	<u>Demo.</u>
6. Recreation						
#108	10,453	\$ 59,566	\$ 319,000	x		
#236	924	5,792	15,000			x
#237	2,863	13,500	72,000			x
AH-2A	6,328	28,951	155,000			x
C-114	30,000	450,277	1,193,000		x	
C-115	31,314	498,164	1,320,000		x	
E-112	-	56,294	153,000		x	
S-89	6,758	48,301	259,000			x
#379	9,298	336,063	595,000		x	
#380	6,423	217,437	385,000		x	
	<u>104,361</u>	<u>\$1,714,345</u>	<u>\$4,466,000</u>			
7. Miscellaneous						
#341 Chapel	2,418	\$ 79,310	\$165,000			x
S-16 Fire Sta.	6,800	88,340	526,000			x
	9,218	\$167,650	\$691,000			
8. Navy Exchange						
#102	18,630	\$199,186	\$1,186,000			x
9. Classrooms, Instruction Bldg., Small Shops						
#27	5,712	\$51,775	\$308,000			x
#31	4,200	22,000	125,000			x
#32	4,720	13,850	78,000			x
#44	5,587	27,356	155,000			x
#47	5,587	25,381	144,000			x
#48	5,587	25,808	146,000			x
#56	1,000	5,857	31,000			x
#58	1,000	11,000	63,000			x
#59	1,000	10,000	60,000			x
#60	1,000	10,000	60,000			x
#62	1,000	10,000	61,000			x
#63	4,100	12,000	64,000			x
#69	4,000	16,456	88,000			x
#106	1,734	12,936	77,000			x
#111	8,870	42,550	233,000		x	
#113	1,000	2,500	15,000			x
#118	7,888	39,789	237,000			x
#175	1,668	5,134	29,000			x
#213	1,456	\$ 3,975	\$ 26,000			x

BUILDING INVENTORY - DAVISVILLE

<u>Category</u>	<u>S.F.</u>	<u>Acq.</u>	<u>Replace.</u>	<u>In Use</u>	<u>Usable</u>	<u>Demo.</u>
9. Classrooms, Instruction Bldg., Small Shops (continued)						
#277	5,600	\$ 17,000	\$ 83,000			X
#279	6,520	43,063	231,000			X
#280	4,000	13,463	72,000			X
#295	1,000	5,000	27,000			X
#312	8,000	20,665	57,000		X	
#324	3,200	28,531	54,000			X
#330	1,000	6,900	19,000			X
#332	1,000	4,900	24,000			X
#343	1,810	34,049	83,000			X
#344	1,447	23,126	57,000			X
#345	820	19,030	46,000			X
#365	4,000	32,000	61,000			X
#368	4,331	22,052	42,000			X
#370	8,000	101,617	187,000			X
#371	8,372	97,534	179,000			X
#372	5,100	44,720	82,000			X
#374	1,000	5,760	11,000			X
A-10CT	470	2,481	15,000		X	
A-11	4,000	13,000	76,000			X
A-12	4,000	13,000	76,000			X
A-63	1,000	3,500	21,000			X
A-64	1,000	3,500	21,000			X
A-66	280	3,000	16,000			X
A-132	500	2,273	1,400			X
AH-30	1,400	3,193	17,000			X
AH-4A	7,483	7,014	38,000			X
B-11	4,000	13,000	76,000			X
C-116	21,698	430,260	1,140,000		X	
C-117	8,580	65,245	173,000			X
C-118	8,367	50,488	137,000			X
C-120	4,483	25,057	66,000			X
C-121	5,166	19,166	52,000			X
C-122	4,403	23,941	65,000			X
C-123	4,938	35,056	93,000			X
C-124	4,280	24,615	65,000			X
C-125	4,000	26,257	69,000			X
C-130	4,000	51,752	140,000			X
C-131	4,000	22,000	58,000			X
D-11	4,000	12,700	76,000			X
D-12	4,000	13,000	76,000			X
E-107	7,581	57,400	152,000			X
S-9	4,000	12,696	76,000			X
S-10	4,000	12,696	76,000			X
S-11	5,600	13,000	77,000			X
S-17	3,097	78,684	479,000			X
S-20	4,000	\$ 13,000	\$ 76,000			X

BUILDING INVENTORY - DAVISVILLE

<u>Category</u>	<u>S.F.</u>	<u>Acq.</u>	<u>Replace.</u>	<u>In Use</u>	<u>Usable</u>	<u>Demo.</u>
9. Classrooms, Instruction Bldg., Small Shops (Continued)						
S-21	4,000	\$13,000	\$76,000			x
S-22	4,000	13,000	76,000			x
S-23	4,000	13,000	76,000			x
S-40	4,495	24,715	147,000			x
S-41	4,000	40,449	103,000		x	
S-42	4,000	12,696	76,000			x
S-82	4,000	6,348	34,000			x
S-83	4,000	6,000	34,000			x
S-84	4,000	6,400	34,000			x
S-85	4,120	7,745	41,000			x
S-101	4,000	15,099	42,000			x
S-102	4,000	10,468	29,000			x
S-103	4,000	9,000	25,000			x
S-104	4,000	11,520	32,000			x
S-105	4,000	9,655	27,000			x
S-106	4,000	9,655	27,000			x
S-107	4,000	9,120	25,000			x
S-108	4,000	9,120	25,000			x
S-109	4,000	9,000	26,000			x
S-110	4,000	9,000	25,000			x
S-111	4,000	9,120	25,000			x
S-112	4,000	9,120	25,000			x
S-113	4,000	9,679	27,000			x
S-114	4,000	9,655	27,000			x
S-115	4,000	9,679	27,000			x
S-116	4,000	9,679	27,000			x
S-117	4,000	9,100	25,000			x
S-118	4,000	9,120	25,000			x
S-119	4,000	9,789	27,000			x
S-120	4,000	9,000	25,000			x
T-2	4,000	12,700	76,000			x
T-3	4,000	12,700	76,000			x
T-4	4,000	16,700	100,000			x
T-5	4,000	12,700	76,000			x
T-6	4,000	13,000	76,000			x
T-7	4,000	13,000	76,000			x
T-8	4,000	13,000	76,000			x
T-9	4,000	13,000	76,000			x
T-10	4,000	12,696	76,000			x
T-11	4,000	12,696	76,000			x
T-13	4,000	12,696	76,000			x
T-15	4,300	12,696	76,000			x
T-16	4,000	12,700	76,000			x
T-17	4,000	12,696	76,000			x
T-18	4,000	\$13,000	\$78,000			x

BUILDING INVENTORY - DAVISVILLE

<u>Category</u>	<u>S.F.</u>	<u>Acq.</u>	<u>Replace.</u>	<u>In Use</u>	<u>Usable</u>	<u>Demo.</u>
9. Classrooms, Instruction Bldg., Small Shops (Continued)						
T-19	4,000	\$ 12,700	\$ 76,000			x
#378	1,700	71,177	126,000			x
#390	4,400	43,000	66,000			x
#399	2,000	46,538	72,000			x
#408	4,000	15,000	19,000			x
#68	6,000	26,700	143,000			x
	<u>469,650</u>	<u>\$2,659,777</u>	<u>\$9,739,000</u>			
11. Heating, Power Plants						
#103	1,848	\$ 96,546	\$ 588,000			x
#210	420	15,000	91,000			x
#225	2,584	72,000	395,000			x
C-113	6,792	325,524	862,000			x
S-18A	1,200	29,200	169,000			x
S-29A	1,500	47,400	275,000			x
T-1A	768	16,200	94,000			x
W-3A	600	9,000	53,000			x
W-5A	270	5,000	30,000			x
	<u>15,982</u>	<u>\$615,870</u>	<u>\$2,557,000</u>			
12. Warehouses, Storage, P.W. Garages, Magazines						
#18	51,100	\$170,500	\$1,015,000			x
#34	53,500	228,000	1,389,000			x
#35	51,500	227,200	1,383,000			x
#36	50,700	237,100	1,444,000			x
#37	51,000	217,000	1,321,000			x
#38	50,700	213,900	1,303,000			x
#39	50,700	223,900	1,363,000			x
#40	50,000	146,848	874,000			x
#41	34,400	145,300	865,000			x
#42	60,000	224,600	1,367,000			x
#43	13,386	95,092	538,000			x
#45	11,015	38,384	217,000			x
#46	10,517	37,262	222,000			x
#64	22,000	55,000	295,000		x	
#67	12,700	63,400	340,000			x
#218	10,492	100,278	597,000			x
#224	102,000	828,428	4,802,000		x	
#314	202,000	718,000	1,973,000		x	
#315	202,000	718,000	1,973,000		x	
#316	202,000	718,000	1,973,000		x	
#317	202,000	\$718,000	\$1,973,000		x	

BUILDING INVENTORY - DAVISVILLE

<u>Category</u>	<u>S.F.</u>	<u>Acq.</u>	<u>Replace.</u>	<u>In Use</u>	<u>Usable</u>	<u>Demo.</u>
12. Warehouses, Storage, P.W. Garages, Magazines (continued)						
#318	83,000	\$1,207,000	\$3,316,000		x	
#363	11,900	69,392	131,000			x
AB-3	31,000	127,417	721,000		x	
C-132	22,000	38,000	99,000			x
CD-3	30,400	127,300	720,000		x	
E-319	83,000	1,012,000	2,386,000		x	
C-119	11,364	69,602	189,000			x
S-12	13,000	126,630	754,000		x	
S-18	13,900	346,600	2,110,000			x
S-19	20,200	41,300	246,000		x	
S-19A	20,200	41,300	246,000		x	
S-26	20,000	354,910	2,113,000			x
T-1	22,000	93,000	555,000			x
W-1	20,200	41,300	246,000			x
W-2	20,200	43,000	255,000			x
W-3	20,200	64,775	386,000			x
W-4	52,000	65,000	387,000			x
W-6	37,600	149,900	869,000		x	
W-7	36,100	154,600	896,000		x	
#410	821	83,054	381,000			x
C-126	13,920	77,230	204,000			x
E-111	20,686	151,319	400,000			x
	<u>2,097,401</u>	<u>\$10,608,821</u>	<u>\$44,837,000</u>			

13. Piers

#1	(Berth)	2,650 L.F.	\$4,671,022	\$28,442,000	x	x
		33,330 S.Y.				
#2	(Berth)	1,850 L.F.	3,239,325	7,457,000	x	x
		75,560 S.Y.				
		<u>980,000 S.F.</u>	<u>\$7,910,347</u>	<u>\$35,899,000</u>		

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COASTAL ZONE
INFORMATION CENTER

Transportation III

TRANSPORTATION

ROADWAYS

Existing Roadway Access

Presently, access to the proposed development of Quonset Point-Davisville is through the Davisville-Devil's Foot Roads which run east to west and from Post Road (U.S. Route #1) running north and south. These roads are respectively a two lane highway which traverses a residential area and a four lane highway through a heavily developed commercial area. Traffic counts in this area indicate that approximately 51% of the traffic utilize Davisville and Devil's Foot Roads, 33% from Post Road north and 16% from Post Road south.

These roadways are servicing traffic volumes beyond their capacities, resulting in excessive back-ups and restricted movement of vehicles not only on the main arteries but on the surrounding roadways as well. Such force flow and delays cause great driver discomfort and inconvenience.

Within the Quonset Point-Davisville area the existing tenants have also expressed concern with regard to the vehicular traffic delays experienced with access and egress to the complex.

Existing Trip Origins

The 1976 trip origins to the Quonset Point-Davisville area are based on actual traffic counts made by the R.I.D.O.T. Planning Division.

The existing facilities located in the proposed development area, comprising approximately 17% of the development area, produce a seven day, two way, average daily traffic of 15,100 vehicles. Of greater concern to us is the workday average daily traffic which, through analysis of the D.O.T. counts, amounts to approximately 18,400 vehicles. Assuming a 50% split, into and out of the area, the one way average daily traffic is 9,200 of the traffic occurs at the morning and evening peak hours. This amounts to 1840 vehicles per design hour competing for the available road space during the critical peak hour periods of ingress and egress.

These are the vehicles presently experiencing the aforementioned bottlenecks and delays.

Developed and Projected Trip Origins

The total developable area of the Quonset-Davisville area is approximately 1,300 acres. Of this area approximately 250 acres are presently occupied, 150 acres by General Dynamics, Electric Boat Division and 100 acres by temporary oil related service companies.

As the area is further developed the Quonset Point Airport will also become a trip generator into the Quonset Pt. Technical Park.

Trip generation, to a great degree, is based on the anticipated land use of the area. For the purpose of this trip generation analysis a general approach will be used based on occupied areas compared to the total anticipated developable area.

The total occupied area of 250 acres generates 9,200 work day trip origins. Electric Boat estimates they alone generate approximately 4,000 of these trip origins. The total 250 acres occupied, applied to the 9,200 work day trip origins, yield a trip generation factor of 36.8 trip origin per acre. The trip generation factor for the Electric Boat area, of 150 acres applied to 4,000 trip origins, yields 28.6 trip origins per acre. These trip generation factors are quite high for technical park, therefore, it is assumed that the remaining acreage will generate trips at one-half the average of these two generating factors or 16.5 trip origins per remaining gross acreage.

The remaining 1,050 acres of developable area will then generate 20,625 trip origins per work day. The existing 9,200 trip origins plus the projected 20,625 trip origins yield a projected daily one way traffic volume of 29,825 for 30,000 trip origins, one way, to the proposed Quonset-Davisville complex by the year 1996.

The present peak hour traffic volume, 20% of the existing one-way A.D.T. work day volume, is based primarily on one major generator. As more and varied generators locate within the complex with staggered work hours this peak hour factor could drop to approximately 14%. Thus the projected 1996 one way A.D.T. would yield 4,200 vehicles per peak hour competing for the available roadway space or an increase of 128% over the existing peak hour traffic.

No additional growth factors are applied to these volumes because of the very real possibility that commuter services in the form of rail and/or bus mass transit systems will be afforded the complex. The rail commuter service between Providence and Quonset-Davisville could be implemented with the proposed high speed northeast corridor rail service, now being studied, and can be scheduled between the high speed service.

With the before mentioned traffic problems associated with the existing traffic on the existing roadways coupled with the projected traffic volumes it is apparent that an improved major access be developed.

The desirability of sites at the proposed technical park, to a great extent, will depend on adequate primary access to the area for motor vehicles.

Proposed Primary Access Corridor

The need for a primary access route to the Quonset Point-Davisville area from a major highway of the state roadway network is apparent. The anticipated traffic volumes could not be accommodated on the local or primary route systems of the adjacent area without causing a complete breakdown of traffic on these systems.

Route 4, with its connection to Interstate 95 to the north and the proposed connection to Route 138 and Interstate 95 to the south, is considered the best location on the state highway system for the primary access road to connect.

The location of the primary route connection at Route 4 falls between the Frenchtown Road and Route 2 interchanges. A general corridor is shown, as a shaded area, on a plan entitled "Primary Access Corridor". Within this corridor several alternates were reviewed.

The primary access route may take the form of an arterial along the widened existing Davisville and Devil's Foot Roads, a free-way concept entirely on new location or a combination of these.

Along with the proposed primary access the existing at grade intersection access to the Quonset-Davisville complex should be improved and maintained to serve much of the Post Road traffic. This access point would also serve as a relief valve should the primary access road experience delays.

Much more in-depth study, along with an environmental impact statement, would be required before a preferred roadway alignment can be determined.

TRANSPORTATION

AIRPORT FACILITY

General Description

Quonset State Airport borders along the easterly limits of the proposed Quonset Point Technical Park. By virtue of its location, the airport affords a major attraction for industry. Business is relying increasingly on air transportation because of the advantages it offers in speed, and flexibility of operations. In essence, the proposed technical park may well be identified as an airport industrial park designed to integrate air transportation into the industrial operations and offering maximum use of air transportation in the movement of personnel and products.

Quonset State Airport is classified as a General Aviation Airport performing under daylight operations. By definition, general aviation flying encompasses all civil flying except that by air carriers. Relative to general aviation, business flying represents the use of aircraft as a transportation vehicle. Company-owned aircraft are used to transport executives, sales personnel, technicians and components from plant to plant and to customer locations, thereby saving time and enabling greater coverage of marketing areas.

Land uses to be permitted will be influenced by the height limitations for structures required for the safe operation of aircraft in the approach zone of runways and in the general vicinity of the airport. For a General Aviation Airport, the navigable airspace or the imaginary surfaces which are the control parameters for structure height limitations are defined in "Part 77 - Objects Affecting Navigable Airspace" of the Federal Aviation Regulations and are shown on Transportation Plan 4. These regulations tend to encourage horizontal or lateral structures rather than vertical development of structures, thereby creating an aesthetically pleasing low profile industrial development. These regulations are a useful guide in the establishing of specific zoning ordinances.

Physical Plan of Airport

The airport property occupies approximately 650 acres containing four (4) runways with supporting taxiways and aircraft parking areas. The airfield besides operating as a general aviation airport will also be used jointly by the Air National Guard.

Runway 16-34, the main runway, is 200 feet wide by 8,000 feet long oriented northwesterly. Runway 5-23 is 150 feet wide and 4000 feet long oriented northeasterly. These are the only runways which will be operative at present. Runway 1-19 oriented due north is 150 feet wide by 4000 feet long and will be temporarily inoperative.

Runway 10-28 will be rendered inactive and will be utilized as a taxiway and helicopter parking area.

With the expected growth of military operations and the future growth of air transport resulting from the development of the technical park, runway 16-34 will become a precision instrument runway while runway 5-23 will remain a general aviation runway. Activation of runway 1-19 will likely occur during this growth period.

TRANSPORTATION
RAILROAD FACILITIES

COASTAL ZONE
RECREATION CENTER

FEB 1 1979

Availability of Service

According to the Final System Plan of the United States Railway Association (U.S.R.A.), rail service will be provided to the rail yard at West Davisville. From this location all rail distribution will be provided by Seaview Railroad Co., Inc. to the Quonset Point Technical Park.

Quonset/Davisville Rail System

1. Capabilities of Rail Feeder Lines

The existing rail system and all feeder lines are licensed by the Navy to the State of Rhode Island Port Authority which in turn leases the rail system to Seaview Railroad Co., Inc.

Any transporting of goods on this rail system will be accomplished by Seaview Railroad through separate contracts with present and future businesses located at Quonset/Davisville.

Seaview Railroad intends to expand its services as required to meet the needs of the anticipated growth of the Quonset Point Technical Park.

2. Condition of Rail Feeder Lines

The condition of the present track system is good and is considered to be a Class 1 and 2 under Federal Railroad Administration Track Safety Standards.

Funding for necessary improvements to the rail system is sponsored by the Department of Commerce (Title 10) and New England Regional Council. Grants in the amount of \$45,000.00 for 1976 and \$30,000.00 for 1977. This funding encompasses only labor costs for rehabilitating existing trackage.

3. Recommended Improvements/Extensions of Rail System

At the present time three rail systems are recommended to service different areas depending on the scenario. However, according to Seaview Railroad Co., Inc. lease agreement, the total footage of track cannot be reduced. Also, any and all improvements or new tracks will be performed by Seaview Railroad Co., Inc. under force account work.

TRANSPORTATION

OCEAN PORT DEVELOPMENT

I. EXISTING PIER/WHARF CONDITIONS

The following design data is based on information from Construction Drawings provided by the Port Authority.

- A. Quonset Carrier Pier #495
 - 1. Concrete on piers is 3000 lbs. per square inch
 - 2. Live load on piers is 400 lbs. per square foot
 - 3. Allowable Stresses
 - Concrete - 1000 lbs. per square inch
 - Steel - 20,000 lbs. per square inch
 - 4. Impact: 15% of wheel loads on beams
10% of wheel loads on girders
- B. Davisville Marginal Wharf
 - 1. The rigid pavement (concrete) live load is 1000 lbs. per square foot
 - 2. The flexible pavement (asphalt) live load is 600 lbs. per square foot
- C. Davisville Pier #1
 - 1. Live load is 600 lbs. per square foot at 40 foot width each side of pier
 - 2. Live load is 500 lbs. per square foot at 170 foot center section of pier.
- D. Davisville Pier #2
 - 1. The rigid pavement (concrete) live load is 1000 lbs. per square foot
 - 2. The flexible pavement (asphalt) live load is 600 lbs. per square foot.

II. CHANNEL DEPTHS/RAIL FACILITIES

- A. The Channel depths to the Quonset/Davisville piers and wharf are approximately 30 feet depending on silting which has taken place.
- B. In the vicinity of the Quonset Pier there exists a turn around basin of approximately 12 million square feet.
- C. Unloading facilities are available and are adequate for the present needs.
- D. Rail facilities are available to all the piers/wharf and are in good condition.

III. ADJACENT SHORE DEVELOPMENT

- A. Quonset Carrier Pier
This pier adjoins the present sewerage facility on one side and land occupied by Electric Boat on the other.

B. Davisville Piers/Wharf

The land on each side of these piers are considered "sensitive" areas in terms of wildlife and wetlands and at present, with the exception of the possible development of additional bulkhead facilities, this land will not be disturbed.

IV. SUPPORTING LAND FACILITIES

The land area adjacent to the piers are suitably supplied with rail and storage facilities (some of which consist of 120,000 square feet).

It is also noted that a major portion of the land area is paved.

V. PROPOSED IMPROVEMENTS

The development of additional bulkhead and piers at Davisville is reflected on two scenarios plans and the rationale for the extent of development is described in the scenario texts.

COASTAL ZONE
INFORMATION CENTER

Site Utilities IV

SITE UTILITIES
WATER DISTRIBUTION SYSTEM

FEB 1 1978
COASTAL ZONE

The existing water supply for Quonset Point/Davisville consists of a series of gravel packed wells with a total delivery capacity of 4.75 M.G.D. (million gallons daily). The water distribution system consisting of several miles of piping is particularly well gridded and has ample size supporting transmission mains. Storage for this system is provided with an approximate balance of underground and elevated water storage totaling 4.65 M.G. Most of the well pumping stations and underground reservoirs contain auxiliary power that can maintain the system in operation for extended power failures.

Records and reports of Quonset Pt/Davisville indicate that when in full operation in 1971, the average daily water consumption was 3.22 M.G.D.; maximum daily usage for the Quonset Pt. Technical Park would be approximately two times this amount, or 6.44 M.G.D.

Of particular interest at the present time is the future water consumption when Quonset Pt. has changed to a commercial, industrial, and recreational related use. To do this on a preliminary basis, several assumptions were made. Also, analysis of existing metered facilities were reviewed and used as a guide for future water use where no other data was available.

Water usage for industrial areas was computed on the basis of 2,000 gallons per acre per day, office related areas were determined on the basis of 1000 gallons per acre per day. Storage areas and the new piers at Davisville were allotted water usage on the basis of the best estimate or in the case of the new piers, estimates were obtained from NERBC-RALI report for oil company support facilities.

At General Dynamics and the golf course whose water usage has been reasonably established, actual metered quantities were used for the purposes of this report.

The following table lists each of the proposed industrial areas of development and other activities that will remain unchanged.

TABLE 1
FUTURE WATER USAGE

<u>Area #</u>	<u>Acres</u>	<u>Activity</u>	<u>Average Water Use Based on 2000 Gal/ Acre/Day except As Noted</u>

1	60		120,000
2	40		80,000
3	90		180,000
4	120		240,000
5	235		470,000
6		Storage	100,000*
7	213	Golf Course	500,000**
8	68		68,000***
9	68		136,000
10	176		352,000
11		General Dynamics	100,000**
12	40		80,000
13	85		170,000
14	100		200,000
15		New Piers @ Davisville	300,000*
	1295		3,096,000 M.G.D.

- * Estimated Because of Indeterminate Function
- ** Based on Metered Usage
- *** Based on 1000 Gallons/Day/Acre
- **** Numbered areas were designated for use in determining water computations

Note: The total 3,096,000 M.G.D. represents the projected average daily flow requirement.

Based on the total average daily flow from Table 1 of 3,096,000 M.G.D., maximum daily usage would be twice this amount or 6,198,000 M.G.D. Fire flow requirements could vary considerably depending on the particular activity or industry that will plan to locate at Quonset Pt.

Fire protection for Quonset/Davisville is in most instances provided by well spaced hydrants connecting to properly sized water transmission and distribution piping. The requirements for fire fighting water supply vary a great deal throughout the service area. They may vary from 750 gallons per minute in the present residential areas to 5,000 G.P.M. or 6,000 G.P.M. at more hazardous locations such as the new pier and bulkhead area. In general, however, it is anticipated that fire protection of about 3,000 G.P.M. would be adequate to control most fires for a duration of 3 to 4 hours.

The present criteria for fire flow requires, that under maximum daily flow conditions, a fire flow of (say) 3,000 G.P.M. will not deplete the distribution storage by more than one third.

This would work in the following manner:

Input to the system from wells is approximately 2,975± G.P.M. Output from the system during maximum day would be 4,200± G.P.M. plus a fire flow of 3,000± G.P.M. Input minus output equals the depletion rate, or in this case, 4,225± G.P.M. The total depletion of distribution storage during a 3-hour fire would be about 760,000 gallons. The existing distribution storage is 4.65 M.G. One-third of this quantity is 1.55 M.G.

Therefore, the depletion of storage experienced during a fire requiring a flow of 3,000 G.P.M. would only be about one-sixth of the quantity available.

The foregoing information has been provided as an example of the overall system capability. The requirements of each potential industry at the multitude of available locations within the site will require individual analysis. This type of computerized hydraulic analysis is beyond the scope of this report and since specific industrial data is not available, the results would be subject to inaccuracy because of the lack of the data.

With this in mind some broad general statements can be made about the water supply distribution and storage system. Each of these three segments of the water system, although somewhat separate in nature, are totally interrelated.

The water supply system, although high in iron and manganese,

does not constitute a health hazard and is adequate to serve the foreseeable demands placed upon the system by industrial development at Quonset Point.

The water distribution system is a well reinforced system with the exception of some minor side streets and dead ends.

Water mains have been sized large enough to handle large demands and fires, and in most instances, water mains have been looped to provide greater support. Individual industry requirements will in some instances outstrip the distribution system's capability to furnish water; however, minor water main extensions should be able to correct most water distribution problems.

Water storage for Quonset Point is provided with underground and above-ground storage totaling 4.65 M.G. This storage is considered to be adequate for the future growth of Quonset as an industrial development.

It should be pointed out that fire protection for high hazard areas such as the new pier areas, or areas that might store fuel oil, may require quantities of water that cannot be supplied by the distribution system. In situations such as this the use of a salt water pumping for fire protection may be contemplated. This should be evaluated at the time the need for such high fire flow arises.

COASTAL ZONE
TECH CENTER

SITE UTILITIES

PROPOSED SANITARY SEWERAGE SYSTEM

The area designated for the proposed wastewater treatment plant is bordered by Roger Williams Way on the west, 2nd Street on the south, Lincoln Street on the north and Richmond Street on the east. All sewage flows collected at manhole located at the intersection of 2nd Street and Roger Williams Way (see Sheet No.8) will be diverted to the proposed treatment plant by gravity. All other sewage flowing to the existing wastewater treatment plant will be pumped by the proposed pumping station. The plan consists of extending the existing 14 inch force main to the proposed wastewater treatment plant and making use of the existing force main.

The proposed sanitary facilities to service the Davisville Road area from Roger Williams Way to the pier areas consists of a pumping station, force main and interceptor sewer along Davisville Road. The capacity of the pumping station and interceptor will also accommodate sanitary pumping facilities from ships docking at the piers.

EXISTING SANITARY SEWERAGE SYSTEM

The existing sewerage system in Quonset consists of gravity sewers, pumping stations, force mains and primary treatment plant. Sewers located in the Administration Triangle on the east side of Davisville Road and the area encompassed by Camp Avenue, "B" street, Davisville Road and Roger Williams Way flow by gravity to the main pumping station. The sewage is then pumped through a 14" force main directly to the treatment plant. A small lift station is also located in this area.

The personal support area and the Kiefer Park area sewers flow by gravity to the treatment plant. This area also includes two pumping stations.

The West Davisville and the Davisville pier areas are served by separate systems consisting of septic tanks and leaching fields.

SITE UTILITIES

STEAM AND GAS DISTRIBUTION SYSTEM

DATE TIME

Steam

The existing steam plant will continue to service the needs of General Dynamics and other present occupants at Quonset/Davisville. It is noted that this plant is very inefficient and should be abandoned. It is recommended that all future development at Quonset/Davisville be serviced by individual heating systems divorced of the present steam plant.

Gas

The existing gas system is small and limited to servicing the Davisville area. Gas did service the now abandoned Kiefer Park. Providence Gas Company has assured us that they can provide the quantity of gas needed for future development. However, no gas lines will be extended to service new development unless the demands of the new development is such as to be economically beneficial to the Providence Gas Company.

Therefore, it is anticipated that the only costs for steam and gas will be that required to serve the individual land parcels.

STORM DRAINAGE SYSTEM

A comprehensive storm drainage system presently encompasses the entire project area and is shown on sheet No. 9. In the proposed development of the various areas, it is expected that the existing facilities be utilized to the fullest extent possible. It is noted, however, that in some areas there are broken and blocked piping and structures. Depending upon the specific land use requirements and the geometric concept of each area to be developed, it is apparent that the removal and/or abandonment of the system may be necessary.

In accordance with the dictates of topography and grading at each site, re-routing of existing discharge lines in addition to new installations to adequately accommodate the surface water runoff will be necessary.

SITE UTILITIES

ELECTRICAL DISTRIBUTION SYSTEM

Quonset Point/Davisville area is presently served by the Narragansett Electric Company. Two distribution systems are installed. One owned by the Rhode Island Port Authority (Navy) and the other by Narragansett Electric Company.

It is Narragansett Electric Company's intention to purchase the state owned distribution system which receives its source from Narragansett Electric Company.

The area is served by multiple 115 KV transmission lines. Distribution on the former Air station is 34.5 KV with a limited 12.470 and 4.160 KV overhead and underground network.

Narragansett Electric Company states at this time there is ample electric power available from the 115 KV and 34 KV system. Ten miles to the north, at the Drum Rock Substation, 345KV is also available.

Narragansett Electric Company plans are to furnish any size load required. Depending on its size, an extension of the 34.5 KV will be made, or an extension of the 115 KV with a 115 KV/34.5 KV substation to be constructed at Quonset/Davisville near the required loads. Narragansett Electric Company indicates only normal service charges would be made for standard installations. All costs for service to Quonset/Davisville will be borne by Narragansett Electric Company.

COMMUNICATIONS SYSTEM

Communication systems serving the present occupants at Quonset/Davisville are good. New England Telephone Company will provide additional service to future development when the demand arises

FIRE ALARM SYSTEM

The existing fire alarm system is adequate to serve the present occupants. However, a more modern fire alarm system is necessary to serve the needs of future development. It is our understanding that the State of Rhode Island is presently considering a new fire alarm system. Therefore, assuming they will implement this new system prior to this site development, the cost of this system has not been included in this contract.

Additional Studies V

ADDITIONAL STUDIES

SURFICIAL GEOLOGY OF THE SITE

The material generally encountered throughout the site consists of the gray-brown poorly graded sands, the gravelly sands with little or no fines and the silty sands and sand-silt mixtures. Frequently, these soils are interspersed with the fine grained inorganic silts and inorganic clays of low to medium plasticity.

Ledge outcropping is evident at the knolls west of Fry's Pond. More detailed soils exploration data is available from borings taken in the Kiefer Park area. Six borings were taken. The material encountered was a brown-gray fine to coarse sand interspersed with fine and fine to medium gravel and traces of silt. Most of the upper layers are dry or moist, dense to medium dense with blow counts ranging from 15 to 40. The upper two (2) foot layer of soil consists of a dry, loose topsoil and fill material. Very dense material was encountered at those borings indicating refusal.

Water levels were recorded at depths from five (5) to nine (9) feet below ground surface.

Within the Air National Guard property which lies west of the airport, two borings were taken. The material encountered was a brown, brown-gray fine to coarse sand overlaying a 3' -6" to 5' -6" layer of dark brown fibrous peat. Below this peat, the material was a gray-brown fine to coarse sand with silt traces. Blow counts for the material above the peat ranged from 6 to 16 indicative of a loose to medium dense soil. Below the peat layer, blow counts ranged from 17 to 46 indicating a medium dense to dense soil.

Water levels were recorded at depths of four (4) and nine (9) feet below ground surface.

Based upon the blow counts indicated above the soils encountered are adequate to sustain the anticipated loadings of an industrial development. Where peat and other low load bearing soils are evident, special foundation design concepts are to be considered.

BORINGS TAKEN AT
AIR NATIONAL GUARD
SITE

AMERICAN PILE DRIVING EQUIPMENT CORPORATION

100 WATER STREET EAST PROVIDENCE, R. I.

SHEET 1 OF 1
 DATE _____
 HOLE NO. BH-1
 LINE & STA. _____
 OFFSET _____
 SURF. ELEV. _____

TO Fenton G. Keyes & Assoc. ADDRESS Providence, R.I.
 PROJECT NAME Proposed Maintenance Shop LOCATION Quonset Point, R.I.
 REPORT SENT TO above PROJ. NO. _____
 SAMPLES SENT TO " OUR JOB NO. 72-553

GROUND WATER OBSERVATIONS		Rods - "AW" Type _____ Size I.D. _____ Hammer Wt. _____ Hammer Fall _____	CASING H/S _____ Auger _____	SAMPLER S/S _____ 1 3/8" _____ 140# _____ 30" _____	CORE BAR _____	Date	Time
At <u>9'</u>	after <u>1/4</u> Hours						
At _____	after _____ Hours					START <u>2/23/77</u> a.m. p.m. p.m.	
						COMPLETE <u>2/23/77</u>	
						TOTAL HRS. _____	
						BORING FOREMAN <u>P. Brescia</u>	
						INSPECTOR <u>Bob Giblin</u>	
						SOILS ENGR. _____	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler			Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE		
				From 0-6	To 6-12	To 12-18				No.	Pen	Rec.
		0'-1'6"	D	29	27	30	Wet very dense		1' Frost & Loam - Brown fine SAND, some silt, trace of fine gravel - Fill	1	18"	18"
		5'-6'6"	D	7	8	8	Wet medium dense	5'	Brown Gray fine to coarse SAND, little silt & fine gravel - Fill	2	18"	10"
		10'-11'6"	D	6	4	3	Moist medium stiff	9'6"	Dark Brown fibrous PEAT, trace of fine sand	3	18"	15"
		15'-16'6"	D	13	12	15	Wet medium dense	15'	Gray Brown fine SAND, some silt	4	18"	14"
		20'-21'6"	D	6	6	11	Moist medium dense	18'	Brown fine to medium SAND, little silt (running)	5	18"	7"
		22'5"-23'1"	D	28	17	26	Moist dense	22'5" 23'11"	Brown F-C SAND, some F-M gravel, little silt Bottom of Boring 23'11"	6	18"	8"

GROUND SURFACE TO 20' USED H/S/A "CASING: THEN S/S to 23'11"

Sample Type D=Dry C=Cored W=Washed UP=Undisturbed Piston TP=Test Pit A=Auger V=Vane Test UT=Undisturbed Thinwall	Proportions Used trace 0 to 10% little 10 to 20% some 20 to 35% and 35 to 50%	140 lb Wt. x 30" fall on 2" O.D. Sampler Cohesionless Density 0-10 Loose 10-30 Med. Dense 30-50 Dense 50+ Very Dense	Cohesive Consistency 0-4 Soft 30+ Hard 4-8 M/Stiff 8-15 Stiff 15-30 V-Stiff	SUMMARY: Earth Boring <u>23'11"</u> Rock Coring _____ Samples <u>6</u> HOLE NO. <u>BH-1</u>
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AMERICAN PILE DRIVING EQUIPMENT CORPORATION

100 WATER STREET EAST PROVIDENCE, R. I.

SHEET 1 OF
 DATE
 HOLE NO. BH-2
 LINE & STA.
 OFFSET
 SURF. ELEV.

TO Fenton G. Keyes & Assoc. ADDRESS Providence, R.I.
 PROJECT NAME Proposed Maintenance Shop LOCATION Quonset Point, R.I.
 REPORT SENT TO above PROJ. NO.
 SAMPLES SENT TO " OUR JOB NO. 72-553

GROUND WATER OBSERVATIONS				Rods - "AW" Type	CASING H/S Auger	SAMPLER S/S 1 3/8" 140# 30"	CORE BAR. BIT	Date	Time
At		after	Hours					START	COMPLETE
At	<u>6'2"</u>	after	<u>1/4</u>					<u>2/23/77</u>	
At	<u>3'8"</u>	after	<u>1/2</u>					<u>2/23/77</u>	
								TOTAL HRS.	
								BORING FOREMAN	<u>P. Brescia</u>
								INSPECTOR	<u>BOB GIBLIN</u>
								SOILS ENGR.	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler			Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE	
				From 0-6	6-12	12-18				No.	Pen.
		<u>0'-1'6"</u>	<u>D</u>	<u>20</u>	<u>25</u>	<u>26</u>	<u>Moist very dense</u>		<u>1' Frost - Brown fine SAND, trace of silt & fine gravel - Fill</u>	<u>1</u>	<u>18"</u>
		<u>5'-6'6"</u>	<u>D</u>	<u>6</u>	<u>3</u>	<u>3</u>	<u>Moist loose</u>	<u>4'6"</u>	<u>Brown fine to coarse SAND, little silt, trace of fine gravel - Fill</u>	<u>2</u>	<u>18"</u>
		<u>10'-11'6"</u>	<u>D</u>	<u>4</u>	<u>5</u>	<u>5</u>	<u>Wet stiff</u>	<u>12'</u>	<u>Dark Brown PEAT mixed with fine Sand, little fine gravel</u>	<u>3</u>	<u>18"</u>
		<u>12'-13'6"</u>	<u>D</u>	<u>13</u>	<u>20</u>	<u>26</u>	<u>Wet dense</u>		<u>Gray Brown fine to coarse SAND, some fine to medium gravel, little silt</u>	<u>4</u>	<u>18"</u>
		<u>15'-16'6"</u>	<u>D</u>	<u>13</u>	<u>11</u>	<u>11</u>	<u>Wet medium dense</u>			<u>5</u>	<u>18"</u>
		<u>20'-21'6"</u>	<u>D</u>	<u>17</u>	<u>14</u>	<u>15</u>	<u>"</u>	<u>21'</u>	<u>Yellow Brown fine SAND & Silt, trace of fine gravel</u>	<u>6</u>	<u>18"</u>
								<u>21'6"</u>	<u>Bottom of Boring 21'6"</u>		

GROUND SURFACE TO 15' USED H/S/A CASING: THEN 5' Spoon to 21'6"

Sample Type
 D=Dry C=Cored W=Washed
 UP=Undisturbed Piston
 TP=Test Pit A=Auger V=Vane Test
 UT=Undisturbed Thinwall

Proportions Used
 trace 0 to 10%
 little 10 to 20%
 some 20 to 35%
 and 35 to 50%

140lb Wt. x 30" fall on 2" O.D. Sampler
 Cohesionless Density
 0-10 Loose
 10-30 Med. Dense
 30-50 Dense
 50+ Very Dense

Cohesive Consistency
 0-4 Soft 30+ Hard
 4-8 M/Stiff
 8-15 Stiff
 15-30 V-Stiff

SUMMARY
 Earth Boring 2
 Rock Coring
 Samples 6

HOLE NO. BH-2

BORINGS TAKEN AT
KIEFER PARK

American Drilling & Boring Co., Inc.

100 WATER STREET EAST PROVIDENCE, R. I.

TO Fenton G. Keyes Assoc. ADDRESS Providence, RI
 PROJECT NAME Quonset Pt. Facilities Plan LOCATION North Kingstown, RI
 REPORT SENT TO above PROJ. NO. _____
 SAMPLES SENT TO _____ OUR JOB NO. 72-030

SHEET 1 OF 1
 DATE _____
 HOLE NO. BH-1
 LINE & STA. _____
 OFFSET _____
 SURF. ELEV. _____

GROUND WATER OBSERVATIONS			Rods-AW	CASING	SAMPLER	CORE BAR.	Date	Time
At <u>9'-6"</u>	after <u>1/2</u>	Hours	Type	BW	S/S	_____	START <u>7/2/76</u>	_____ a.m.
casing@30'			Size I.D.	<u>2 1/2"</u>	<u>1-3/8"</u>	_____	COMPLETE <u>7/2/76</u>	_____ p.m.
At _____	after _____	Hours	Hammer Wt.	<u>300#</u>	<u>140#</u>	BIT	TOTAL HRS. _____	
			Hammer Fall	<u>24"</u>	<u>30"</u>	_____	BORING FOREMAN <u>A. D'Atello</u>	
							INSPECTOR _____	
							SOILS ENGR. _____	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler			Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE		
				From 0-6"	6-12"	To 12-18"				No.	Pen.	Rec.
6		0'-1'-6"	D	1	2	2	dry		Dark brown TOPSOIL, little	1	18'	12"
7							loose	2'-0"	fine gravel, Fill			
31												
40												
42							dry		Brown fine SAND, some silt,			
29		5'- 6'-6"	D	16	18	21	dense		Little fine gravel, Fill	2	18'	11"
53												
110								8'-0"				
47												
32							wet					
12		10'-11'-6"	D	12	13	15	medium		Gray fine to medium SAND,	3	18'	10"
17							dense		Little silt			
21												
31												
34								15'-0"				
22		15'-16'-6"	D	15	21	31	wet		Brown fine SAND, some silt	4	18'	12"
42							very					
57							dense	18'-0"				
103												
160							moist					
28		20'-21'-6"	D	55	62	58	very		Dark gray fine SAND, some	5	18'	12"
30							dense		silt & fine gravel, Till			
68								23'-0"				
46												
39							wet					
50		25'-26'-6"	D	12	13	13	medium		Gray-brown fine to coarse	6	18'	12"
60							dense		SAND, Some silt, some fine			
74								27'-0"	gravel			
80												
83							wet		Gray fine SAND & silt,			
							very		Trace fine gravel, Till			
		30'-31'-6"	D	46	66	103	dense			7	18'	10"
		@31'-6"	DX	102/0"				31'-6"				
									Refusal-Bot. of Boring 31'-6"			

GROUND SURFACE TO 30' USED BW CASING: THEN S/S to 31'6", then o.e. rod-refusal

Sample Type	Proportions Used	140lb Wt. x 30" fall on 2" O.D. Sampler	SUMMARY:
D=Dry C=Cored W=Washed	trace 0 to 10%	Cohesionless Density	Earth Boring <u>31'6"</u>
UP=Undisturbed Piston	little 10 to 20%	Cohesive Consistency	Rock Coring _____
TP=Test Pit A=Auger V=Vane Test	some 20 to 35%	0-10 Loose 0-4 Soft 30+ Hard	Samples <u>7</u>
UT=Undisturbed Thinwall	and 35 to 50%	10-30 Med. Dense 4-8 M/Stiff	
		30-50 Dense 8-15 Stiff	
		50+ Very Dense 15-30 V-Stiff	
			HOLE NO. BH-1

American Drilling & Boring Co., Inc.

100 WATER STREET EAST PROVIDENCE, R. I.

SHEET 1 OF 2
 DATE _____
 HOLE NO. BH-2
 LINE & STA. _____
 OFFSET _____
 SURF. ELEV. _____

TO Fenton G. Keyes Assoc. ADDRESS Providence, RI
 PROJECT NAME Quonset Pt. Facilities Plan LOCATION North Kingstown, R. I.
 REPORT SENT TO above PROJ. NO. _____
 SAMPLES SENT TO " OUR JOB NO. 72-030

GROUND WATER OBSERVATIONS					Date	Time
At <u>9'-6"</u>	after <u>1/2</u>	Hours	Rods-AW	CASING	SAMPLER	CORE BAR.
At _____	after _____	Hours	Type _____	BW _____	S/S _____	_____
			Size I.D.	<u>2 1/2"</u>	<u>1-3/8"</u>	_____
			Hammer Wt.	<u>300#</u>	<u>140#</u>	BIT _____
			Hammer Fall	<u>24"</u>	<u>30"</u>	_____
START <u>7/6/76</u>						a.m.
COMPLETE <u>7/6/76</u>						p.m.
TOTAL HRS. _____						
BORING FOREMAN <u>A. D'Alillo</u>						
INSPECTOR _____						
SOILS ENGR. _____						

LOCATION OF BORING: _____

DEPTH	Casing Blows per foot	Sample Depths From- To	Type of Sample	Blows per 6" on Sampler			Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hard- ness, Drilling time, seams and etc.	SAMPLE		
				From	To	To				No.	Pen	Rec.
				0-6'	6-12'	12-18'						
3		0'-1'-6"	D	1	1	2	dry loose	2'-0"	Dark brown TOPSOIL	1	18"	7"
4												
12												
18												
22												
12		5'-6'-6"	D	14	16	22	dry dense	18'-0"	Gray-brown fineto coarse SAND, little fine gravel	2	18"	12"
14												
16												
21												
20							wet dense					
6		10'-11'-6"	D	14	17	13				3	18"	12"
12												
14												
20												
22							wet medium dense					
12		15'-16'-6"	D	12	14	15		18'-0"		4	18"	12"
11												
16												
21												
20												
12		20'-21'-6"	D	12	10	15	"		Gray-brown fine SAND, trace fine gravel, trace silt	5	18"	11"
14												
16												
18												
30												
		25'-26'-6"	D	10	10	12	"	26'-6"		6	18"	12"
									Bottom of Boring 26'-6"			

GROUND SURFACE TO 25' USED BW "CASING: THEN S/S to 26'6"

<p>Sample Type D=Dry, C=Cored W=Washed UP=Undisturbed Piston TP=Test Pit A=Auger V=Vane Test UT=Undisturbed Thinwall</p>	<p>Proportions Used trace 0 to 10% little 10 to 20% some 20 to 35% and 35 to 50%</p>	<p>140 lb Wt. x 30" fall on 2" O.D. Sampler Cohesionless Density 0-10 Loose 10-30 Med. Dense 30-50 Dense 50+ Very Dense</p>	<p>Cohesive Consistency 0-4 Soft 30+ Hard 4-8 M/Stiff 8-15 Stiff 15-30 V-Stiff</p>	<p>SUMMARY: Earth Boring <u>26'6"</u> Rock Coring _____ Samples <u>6</u></p>
HOLE NO. BH#2				

FEB 1 1978

COASTAL ZONE
INFORMATION CENTER

Cost Estimates VI

COST ESTIMATES

Summary

The cost of developing Quonset Point Technical Park was determined based on the present conditions and the assigned usage of the land areas.

Quonset/Davisville was divided into 26 separate land areas. These areas are described in the text for each development scenario. Included in each land area is the cost of demolition, utilities to service the area, site preparation and site improvements.

Based on this criteria, a cost per square foot was determined and assigned each land area.

The costs of utility improvements on the main roads servicing Quonset/Davisville was estimated separately and is reflected herein.

DEVELOPMENT SCENARIO I

<u>Land Area No.</u>	<u>Acreage</u>	<u>Site Development Cost</u>
1	100	\$2,241,389
2	12	287,496
3	85	2,221,560
4	30	653,400
5	120	2,688,600
6	8000 L.F. Bulkhead and pier area	18,386,429*
7	225	5,439,050
8	120	Navy retained land
9	209	5,007,222
10	49	1,463,664
11	21	515,618
12	235	Navy retained land
13	75	1,782,400
14	16	479,888
15	9	218,922
16	68	2,057,744
17	7	171,706
18	66	1,841,376
19	7	177,706
20	16	425,328
21	40	1,098,000
22	5	165,200
23	5	168,100
24	8	271,464
25	14	359,620
26	22	596,376
TOTAL COST		<hr/> \$48,718,758

*From Ocean Port Development Costs

DEVELOPMENT SCENARIO II

<u>LAND AREA NO.</u>	<u>ACREAGE</u>	<u>SITE DEVELOPMENT COST</u>
1	100	\$ 2,241,389
2	12	287,496
3	85	2,221,560
4	30	653,400
5	120	2,688,600
6	4000 L.F. bulkhead	15,201,519*
7	225	5,439,050
8	120	Navy Retained Land
9	209	5,007,222
10	49	1,463,664
11	21	515,618
12	235	Navy Retained Land
13	75	1,945,750
14	16	479,888
15	9	218,922
16	68	2,057,744
17	7	171,706
18	66	1,841,376
19	7	177,706
20	16	425,328
21	40	1,185,120
22	5	176,090
23	5	178,990
24	8	271,464
25	14	390,112
26	22	596,376
	TOTAL COST	45,836,090

*From Ocean Port Development Costs.

DEVELOPMENT SCENARIO III

<u>Land Area No.</u>	<u>Acreage</u>	<u>Site Development Cost</u>
1	100	\$2,241,389
2	12	287,496
3	85	2,221,560
4	30	653,400
5	120	2,688,600
6		<hr/>
7	225	5,439,050
8	120	Navy retained land
9	209	5,007,222
10	49	1,463,664
11	21	515,618
12	235	Navy retained land
13	75	1,945,750
14	16	479,888
15	9	218,922
16	68	2,057,744
17	7	171,706
18	66	1,841,376
19	7	177,706
20	16	425,328
21	40	1,185,120
22	5	176,090
23	5	178,990
24	8	271,464
25	14	390,112
26	22	596,376
		<hr/>
	TOTAL COST	\$30,634,571

PRIMARY ACCESS CORRIDOR COSTS

Basic Cost Assumptions

Mainline Roadways	@	\$110 / L.F.
Collector Distributor Roadways	@	\$ 40 / L.F.
Ramps	@	\$ 50 / L.F.
Turning Roadways	@	\$ 40 / L.F.
Structures	@	\$ 45 / S.F.
Misc. Items & Utilities	@	15% of Total Cost

ESTIMATE OF PRIMARY ACCESS ON NEW LOCATION

Mainline Roadway	2,000 L.F. @ \$110/L.F.	=	\$2,200,000.
Collector Distributor Roadways			
	10,000 L.F. @ \$ 40/L.F.		\$ 400,000.
Ramps	3,500 L.F. @ \$ 50/L.F.		\$ 175,000.
Route 4			
Turning Roadways	5,000 L.F. @ \$ 40/L.F.		\$ 200,000.
Davisville Connection	5,000 L.F. @ \$ 40/L.F.		\$ 200,000.
Structures - 18 more or less for a total area of 99,000 S.F. @			
	\$ 45/S.F.		\$4,455,000
	SUBTOTAL	=	\$7,630,000.
	15% Misc. Items & Utilities	=	\$1,144,500.
	SUBTOTAL		\$8,774,500.
R.O.W. Cost of \$1.5 Million			
	TOTAL		\$10,000,000.

RAILROAD SPURS COSTS

FEB 1 1978

COASTAL ZONE
ENGINEERING CENTER

SPUR TRACK I

*Length of Rail =	7,000'	@ \$60/FT	\$420,000.
Turnouts =	2	@ \$15,000	\$ 30,000.
Grade Crossings =	4	@ \$7,000	\$ 28,000.
			<hr/>
		SUBTOTAL	\$478,000.

SPUR TRACK II

Length of Rail =	3,400'	@ \$60/FT	\$204,000.
Turnouts =	0		<hr/>
Grade Crossings =	1	@ \$7,000	\$ 7,000.
			<hr/>
		SUBTOTAL	\$211,000

SPUR TRACK III

Length of Rail =	4,200'	@ \$60/FT	\$256,000.
Turnouts =	1	@ \$15,000	\$ 15,000 .
			<hr/>
		SUBTOTAL	\$267,000.
			<hr/>
		TOTAL =	\$956,000.

*Cost per linear foot of track includes ballast, ties & rail

OCEAN PORT DEVELOPMENT COSTS

DREDGING NEW CHANNEL AT PIERS

1. Material Useable For Backfill At Bulkhead & Pier Construction	1,020,194 CU. YD. @ \$1.75	\$1,785,340.
2. Excess Material (Offsite Disposal)	1,831,454 CU. YD. @ \$2.75	\$5,036,499
		<hr/>
	SUBTOTAL	\$6,821,839

BULKHEAD CONSTRUCTION

Cellular Steel Sheet Pile Construction	4000 L.F	\$8,379,680
--	----------	-------------

CONSTRUCTION OF PIERS

Steel Sheet Piling & Conc Deck	4000 L.F	\$3,184,910.
		<hr/>
	TOTAL	\$18,386,429.

Sanitary Costs

Davisville Piers and Navy Retained Area

12" Ductile Iron Pipe	2500 LF @ \$35.00	\$ 87,500.
18" Sewer	3000 LF @ \$42.00	\$125,000.
24" Sewer	7,500 LF @ \$50.00	\$375,000.
Broadway Pumping Station	L.S.	\$250,000.
		<hr/>
	Subtotal including 20% Contingency	\$1,005,000.

Quonset Pt Area

14" Ductile Iron Pipe	2600 LF @ \$40.00 =	\$104,000.
New pumping station to be located at treatment plant site	L.S.	\$250,000.
		<hr/>
	*Subtotal including 20% contingency	\$424,800.
	TOTAL	\$1,429,800.

*Based on assumption that the existing 14" FM will be used and extended to the proposed Wastewater Treatment Plant.

STORM DRAINAGE COSTS

Major Drainage Outlets

Flightpath Site and Davisville Piers

14800 LF @ \$125/LF \$1,850,000.

Personnel Support Area

1200 LF @ \$90/LF \$ 108,000.

Roger Williams Way

3800 LF @ \$112.50/LF \$ 455,000.

Kiefer Park

1500 LF @ \$100/LF \$ 150,000.

Revenue Producing Area

3000 LF @ \$100/LF \$ 300,000.

TOTAL \$2,863,000.

Costs Summary

*Development Scenario I \$63,967,058

*Development Scenario II \$61,084,890

*Development Scenario III \$45,616,371

*This total represents the costs of the primary access corridor, railroad spurs, ocean port development, sanitary system and storm drainage. It does not represent the costs of site acquisition.

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COASTAL ZONE CENTER
LINE CENTER

Appendix VII

