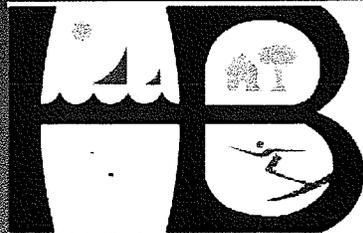
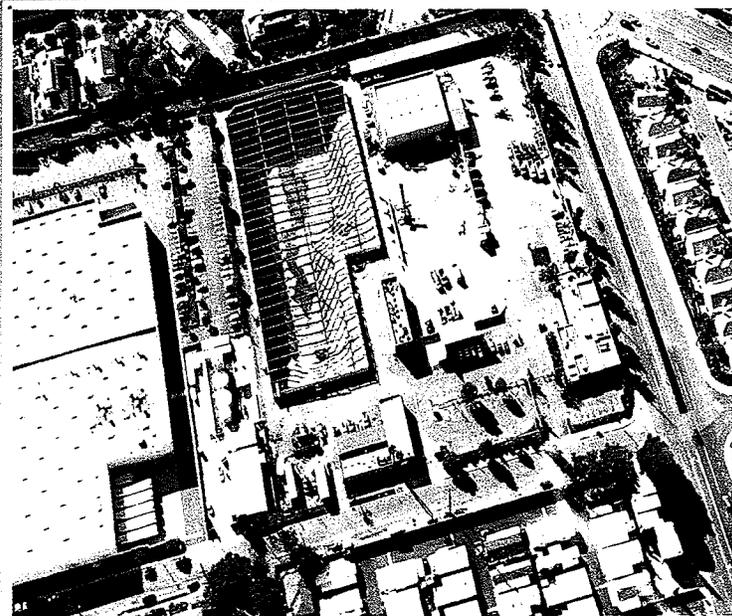


CITY OF HUNTINGTON BEACH PUBLIC WORKS

UTILITIES OPERATIONS YARD



FACILITIES PLAN



UPDATE AUGUST
2007

Richard Prudy & Associates

Engineering and Architecture

E-1'

August 27, 2007

Howard Johnson
City of Huntington Beach
Public Works, Utilities Division
19001 Huntington Street
Huntington Beach, CA 92648

Subject: Utilities Operations Yard Update

Dear Mr. Johnson:

In June of 2003, Richard Brady and Associates in association with Platt/Whitelaw Architects prepared a building program needs assessment for the then Water Utilities Operations Yard. The assessment provided the initial phase of groundwork, which encompassed facilities to meet present and future staff and operations' requirements. In May of 2006 an update was prepared to analyze the potential relocation of other Public Works, Engineering staff to the Utilities Operations Yard.

We are pleased to submit this August 2007 updated report as a recommended plan to the Utilities Division Operations Yard - Facilities Plan, prepared for the City of Huntington Beach, Public Works Department, which now incorporates current updated staffing and operational requirements.

In accordance with the task order issued to Richard Brady & Associates, this report serves as a recommended site plan and provides a summary assessment of the requirements of the Utilities Operations Yard. This recommended site plan covers the following revisions and facility expansion requirements: relocated covered bulk material storage bins and fluoride storage that is presently under design, new water meters and distribution building, relocation of waste water workshop within (or possibly immediately adjacent to) the new water meters and distribution building, additional production long term storage, remodeled existing operations administration building, and new single story utilities operations building.

Included within a separate package is Richard Brady & Associates' cost proposal and scope of services for the design and construction support services for the Utilities Operations Yard Update and Expansion project.

If you have any questions or need additional information please let me know.

Sincerely,

Nick Kanetis
Senior Vice President

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1. INTRODUCTION AND METHOD

The City of Huntington Beach Public Works Water Division serves the City of Huntington Beach and a small portion of Sunset Beach in unincorporated Orange County. The City's current population is estimated at more than 195,000 with an average of approximately 4 people being served by each residential water connection.

The City's water system is comprised of:

- 9 active groundwater wells;
- 4 reservoirs with a combined capacity of 55.5 million gallons (MG);
- 4 booster pump stations;
- Approximately 540 miles of pipeline ranging from 2-inch to 42-inch in diameter;
- 3 "import" water connections; and
- 5600 fire hydrants.

The City meets approximately seventy-five percent of its water demands utilizing groundwater wells over the Santa Ana River groundwater basin. The Orange County Water District (OCWD) manages the basin and the City pays a replenishment assessment for each acre-foot of water pumped from the basin. Twenty-five percent of the City's demand is met with water purchased from the Metropolitan Water District of Southern California (MWD) via the Municipal Water District of Orange County. The City does not own or operate any water treatment plants. The water delivered to the City by MWD is fully treated and has a disinfectant residual. In addition, the City adds chlorine for disinfection at each of its well sites. Fluoride is injected at each of the import water connections and at the well sites.

The City of Huntington Beach Utilities Division Operations Yard is located at 19001 Huntington Street. The utilities yard is the main operating center for the City owned water enterprise. The Public Works Division consists of five distinct sections: Administration, Water Quality, Water Production, Water Distribution, and Water Meters.

Objectives

In 1987 the City of Huntington Beach commissioned a study of its Water Operations Yard. The primary purpose of the study was to identify opportunities to improve the Public Works Division facilities and enhance operating efficiencies and effectiveness. In particular, the thrust of the study was toward developing recommendations for appropriate warehousing facilities and material handling techniques. The study, prepared by Eugene Akrige & Associates, in association with Cash & Associates, was finalized and adopted by the City in December 1987. The study has become the basis of master planning the development, upgrade, and improvements to the Water Division facilities and operations. A number of the Master Plan recommendations, prepared during the course of the study, have been implemented.

To affect the Master Plan upgrade, the City of Huntington Beach contracted with Richard Brady & Associates, in association with Platt/Whitelaw Architects (RBA/PWA) to prepare a Building Program Needs Assessment of the Water Operations Yard. It was completed in June 2003. The objectives of the building needs assessment were provided. This provided the first step toward budgeting, design, and construction of new and/or remodeled facilities to meet present and future staff and operations requirements.

Scope of Project

The City now requires a refined plan to the Utilities Operations Yard. This report is to define and implement improvements for continued efficient and effective operations of the Utilities Division, which now includes the waste water group, based on current and future anticipated functions and needs. It is our recommendation that this site plan be implemented.

Existing Conditions

General

The following subsections identify the site visits to the Water Operations Yard, and observations made by the RBA/PWA team. Diagrams, indicating the current locations occupied by division staff, also have been included.

RBA/PWA assessments are divided into three sections:

- Document Review
- Verification of Existing Site Conditions
- Issues Observed

Members of the RBA/PWA team visited the Water Operations Yard a number of times during the months of February and March 2003, to field verify and document existing conditions.

The investigation covered the buildings occupied by Division Administrative and Management, Water Quality, Water Production, Water Distribution, Warehousing, and Water Meters. The investigation also covered the site areas such as bulk material storage, pipe storage, fueling, truck wash, parking, and other areas available for consideration in developing the building program.

Facility Locations

The Water Operations Yard consists of a number of buildings and facilities to house and support the operations of the Water Division and other functions. The main facilities that currently exist at the Water Operations Yard include:

Operations Administration Building. The Operations Administration Building is a single story structure, located in the northeast quadrant of the yard, which houses the Division management and staff offices, the meter shop, the water quality laboratory, water services inspection offices, a lunch/meeting area and employee locker rooms.

Production Repair Shop. The Production Repair Shop is an L-shaped structure located in the southeast quadrant of the yard. This building primarily consists of a welding and fabrication shop, some warehousing and storage of materials and equipment, support offices for supervisory personnel, and a staff break room.

Distribution Warehouse. The Distribution Warehouse is a single story concrete block building. In addition to the primary warehouse area, interior facilities include offices, rest rooms, a mezzanine, and a break room for warehouse administrative staff and distribution crew lead workers. The bulk of the Divisions materials and equipment requiring covered storage and careful inventory control is located within the warehouse. On the north side of the warehouse is an exterior loading dock, and on the west exterior side are additional storage rooms for chemicals, paints, and other materials.

Covered Storage. A covered storage facility, located on the west side of the yard, provides for additional storage of materials and equipment that is not housed in the warehouse. This covered storage facility also provides areas for fire hydrant repair and an inspector station.

Gasoline Pumps. Gas pumps for fueling Division vehicles are located north of the area previously occupied by reservoirs No.1 and No.2. This gas fueling island and its underground storage tanks were previously relocated to their current position to alleviate a conflict with the bulk material storage bunkers. The bulk material storage bunkers, which hold sand, gravel, etc., require the use of heavy equipment such as backhoes/front end loaders for material handling. The use of this heavy equipment immediately adjacent to the fueling station posed a risk of damage to the gas pumps. Protective measures, such as the installation of a fence between the pumps and storage bunkers, have created a constraint to the efficient operation of bulk material handling.

Truck Wash. Immediately adjacent to and east of the area previously occupied by reservoirs No.1 and No.2 is the Division's truck wash facility.

Reservoir No.3 and Pump Stations. Located along the southerly edge and primarily in the southeast quadrant of the yard is the 21.5 MG Overmyer Reservoir No.3 and Overmyer and Reservoir Hill pump stations. The reservoir and pump stations, and their immediate perimeter access corridors occupy approximately 30% of the Division's total yard area.

The following site plan diagram of the Utilities Operations Yard identifies the various buildings, facilities, and section locations. Section elements have been color coded and highlighted for ease of identification.

Civil Assessment

The Water Division Water Warehouse, inclusive of Production Area Shop, Materials Storage Building, and Covered Storage drawings dated December 1989 were reviewed. Field verification of visible site utilities were made and recorded.

There are a number of underground utilities located on the site, including water, sewer, electric, gas, telephone cable, and storm drain, which may require relocation and/or upgrading. Detailed utilities assessment and design will occur as a part of the final Operations Yard buildings design.

Architectural Assessment

Documentation Review:

Prior to site verification, Platt/Whitelaw Architects, Inc. obtained and reviewed existing facility documentation including overall site plans and aerial photographs. Construction document sets reviewed included:

- Water Warehouse Project, Packages 2 & 3, Production Repair Shop & Material Storage Building, Covered Storage 1, February, 1989
- Water Warehouse Project, April 1989
- Water Operations Building, March 1980

Site visits occurred during January and February 2003. These visits allowed the Architect to compare existing documentation with field conditions.

Verification of Existing Conditions:

For the most part, the facility documentation appeared to accurately represent the existing physical layout. Site reconnaissance was limited to visual review and was not detailed in nature. Water Division staff provided additional information on elements that were not observable during limited site observation.

Operations Administration Building: Constructed in 1980, this building is primarily composed of concrete masonry bearing walls with some steel framing. The roof's structural system is made up of wood truss joists, supporting plywood roof decking. Building type per the Uniform Building Code is V-Non-rated.

The floor plan remains intact, except for a few minor revisions. Its area is approximately 8,400 square feet. A number of room assignments have changed during the building's lifetime.

The building houses the Administration Section, Water Quality Section, Water Meter Section, and Inspector offices. It also contains locker rooms, a lunchroom and meeting room.

Overall, the building appears to be in good condition. Air conditioning units have recently been replaced. Reportedly, the air conditioning system is not currently balanced or zoned properly, causing inconsistent cooling and uncomfortable conditions in portions of the building. It was also reported that roof leaks are a continuous problem, even though repairs have been attempted. Electrical power provisions are deficient for contemporary needs.

Production Repair Shop: The Production Repair Shop originally housed all Water Division services. The structure consists of concrete masonry, wood framing, and stucco. The building was remodeled and a steel canopy structure was added in 1989. The building's area is approximately 4500 square feet.

The Water Production Section staff currently occupies this facility. This building consists primarily of a welding and fabrication shop, warehousing and storage of materials and equipment, support offices for supervisory personnel, and a staff breakroom.

The building appears to be in good condition.

Distribution Warehouse: The warehouse was built in 1989. It contains 9345 square feet with an adjacent enclosed area of 600 square feet, accessed separately from the west. The building is classified Type V-Non-rated, with an automatic fire sprinkler system installed. Principal building materials include concrete masonry, structural steel and metal roofing.

In addition to the primary warehouse area, interior facilities include offices, restrooms, a storage mezzanine, and a breakroom for warehouse administrative staff and Distribution Section crew leadworkers. The bulk of the Division's materials and equipment requiring covered storage and careful inventory control are located within the warehouse. On the north side of the warehouse is an exterior loading dock. The west storage rooms are used for chemicals, paints, and other materials.

Covered Storage: Constructed in 1989, the covered storage area located on the west side of the yard is composed of a concrete masonry screen wall along the north and west property lines, steel framing with steel deck roof, and chain link gate access along the east face. Plastic inserts have recently been placed in the chain link to reduce sun and dust damage to stored items.

The facility provides additional area for storage of materials and equipment that are not currently housed in the warehouse. It also houses areas for fire hydrant repair and an inspector station. There are also several other storage buildings and sheds located throughout the site. These other storage buildings house items specific to various division sections.

Gasoline Pumps: West of the Operations Administration Building, this 800 square foot facility includes a fuel island with steel canopy above. The fuel island and its underground storage tanks were relocated to their current position to alleviate a conflict with the bulk material storage bins. The fueling station primarily serves the Utilities Division. However, other public works department vehicles are allowed to use this facility.

Truck Wash: The truck wash sits directly west of staff parking. It is composed of concrete masonry and steel construction. Its location originally formed the east component of Reservoir No. 1 which has been demolished. The wash facility serves the entire Public Works Department.

Reservoir No.3 and Pump Stations: Located along the southerly edge and primarily in the southeast quadrant of the yard are the Overmyer No.3 Reservoir and pump stations. The reservoir and pump stations, and their immediate perimeter access corridors occupy approximately 30% of the Division's total yard area. The reservoir has undergone rehabilitation, with one pump station being completely reconstructed.

Issues Observed:

Growth of the utilities division has outpaced provisions for housing site personnel. Area provided for uses including meeting rooms, office space, storage, and shops is not up to current industry standards. Section occupancies have become fragmented.

Overall, the buildings are relatively new, most less than 25 years, or have been remodeled within the last 15 years. Thus, unless issues such as site security or strong impacts to site efficiency are defined, planning options should elect to maintain the existing facilities to the greatest extent possible.

Additions to the existing structures are possible. However, building code revisions may impact the extent and location of additions, or possibly require structural upgrades to the existing buildings.

2. BUILDING NEEDS ASSESSMENT

The Building needs assessment has been compiled using the following process:

- Obtain information via staff questionnaires
- Verify information using staff interviews
- Prepare preliminary space needs inventory
- Refine space needs inventory through additional staff interviews

The following needs assessment documents were then produced, and are included in this section.

- 2.1 Area Summary Sheets
(Supporting document enclosed *Exhibit 2.2A*)
- 2.2 Room/Area Requirements
(Available in Appendix B of the June 2003 report)
- 2.3 Site/Area Requirements
(Supporting document enclosed *Utilities 1-6*)

2.1 Area Summary Sheets

The following Area Summary Sheets are the master summary of area designations and the allocated net area for each.

Areas are divided into the following categories:

- Administration
- Common Areas
- Inspectors
- Warehouse
- Wastewater Operations
- Water Distribution
- Water Meter Section
- Water Production
- Water Quality

An efficiency factor of 30% is added to the total net area to calculate the projected gross building area required for the facility.

AREA REQUIREMENTS PER SECTION

HUNTINGTON BEACH UTILITIES OPERATIONS YARD

DESIGNATION	Quantity	Total Area
COMMON AREAS - NET NET AREA / .70 = GROSS AREA	20	7,028 S.F. Net 10,040 S.F. Gross
ADMINISTRATION - NET NET AREA / .70 = GROSS AREA	12	1,900 S.F. Net 2,714 S.F. Gross
WATER QUALITY - NET NET AREA / .70 = GROSS AREA	7	1,224 S.F. Net 1,749 S.F. Gross
WATER PRODUCTION - NET NET AREA / .70 = GROSS AREA	15	3,825 S.F. Net 5,464 S.F. Gross
WATER DISTRIBUTION - NET NET AREA / .70 = GROSS AREA	14	3,960 S.F. Net 5,657 S.F. Gross
WATER METERS - NET NET AREA / .70 = GROSS AREA	23	2,952 S.F. Net 4,217 S.F. Gross
WAREHOUSE - NET NET AREA / .70 = GROSS AREA	5	8,230 S.F. Net 11,757 S.F. Gross
INSPECTORS - NET NET AREA / .70 = GROSS AREA	3	360 S.F. Net 514 S.F. Gross
WASTEWATER OPERATIONS - NET NET AREA / .70 = GROSS AREA	14	1,120 S.F. Net 1,600 S.F. Gross
GRAND TOTAL TOTAL GROSS AREA	113	43,712 S.F. Gross

Exhibit 2.2A

*E-1*¹²

2.3 Site/Area Requirements

The following Site/Area Requirements table is provided for outside space requirements. This table and area requirements were developed from a detailed vehicle and equipment inventory list provided by the Water Operations Division. The categories of vehicle and equipment considered in the outside space needs include:

- Standard cars, pickups and vans
- Service trucks
- Large trucks
- Trailers
- Backhoes/Loaders
- Miscellaneous equipment

Additional outside space for efficient and effective traffic circulation is considered and identified in the site traffic plan, later in the report.

	<u>Description</u>	Cars/Pickups/Vans	Service Trucks	Large Trucks	Trailers	Backhoes	Misc. Equip.
202*	86 GMC Pickup S-10	1					
203*	Ford F-150 Pickup	1					
204*	Ford Pickup	1					
208*	Dodge Aries Sedan	1					
209*	S-10 Pickup	1					
210*	S-10 Pickup	1					
212*	Dodge Service Truck		1				
213*	S-10 Pickup	1					
214	94 Ford 1 Ton Dump		1				
215*	¾ Ton Pickup	1					
216*	Dodge Sedan	1					
217	86 GMC Boom Truck			1			
218*	82 Ford 1 Ton Dump Truck		1				
219*	Ranger Pickup	1					
221*	¾ Ton Pickup	1					
222	84 Ford 2 Ton Dump (5 yards)			1			
224	91 Chevrolet Pickup S-10	1					
225*	S-10 Pickup	1					
226	94 Chevrolet Service Truck		1				
227	Ford Service Truck		1				

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**City of Huntington Beach
Emergency Management Plan**

OPERATIONS SECTION

	<u>Description</u>	Cars/Pickups/Vans	Service Trucks	Large Trucks	Trailers	Backhoes	Misc. Equip.
228	86 GMC Pickup S-15	1					
229*	Ranger	1					
231	Water Truck			1			
232*	S-10 Pickup	1					
234*	S-10 Pickup	1					
235*	Ranger Pickup	1					
236	87 Chevrolet Dump – 10 Wheel			1			
239*	Van	1					
240*	Chevrolet Dump Truck			1			
241	81 Ford Dump Truck – 2 Ton			1			
243*	90 ¾ Ton Chevrolet Pickup	1					
247*	¾ Ton Pickup	1					
248	87 Concrete Saw (35hp) EDCO						1
249	89 Cement Mixer Stone						1
250	73 Compressor (Ingersol-Rand) (287)						1
251	Compressor (Sullair) #227						1
252	83 Case Backhoe					1	
253	John Deere Backhoe					1	
254	96 Cement Mixer Stone						1
256	72 Lincoln Welder						1
257	85 Case Backhoe					1	

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**City of Huntington Beach
Emergency Management Plan**

OPERATIONS SECTION

	<u>Description</u>	Cars/Pickups/Vans	Service Trucks	Large Trucks	Trailers	Backhoes	Misc. Equip.
258	89 Generator – Lights Trailer				1		
259	90 Cement Mixer						1
261	86 Compressor (Ingersol-Rand) #220						1
262	92 Trailer (Zieman) (Haul Saw/Shoring)				1		
263	92 Trailer (Zieman)				1		
264	79 Backhoe (John Deere)					1	
265	95 4" Pump (Multiquip)						1
266	96 Backhoe Case 580 Super L					1	
267	86 4" Pump (Multiquip)						1
268	87 Trailer-pipe (Zieman)				1		
269	87 Arrowboard Trailer – Gas				1		
270	Dodge Sedan	1					
271	87 Arrowboard Trailer – Gas				1		
273*	89 Chevrolet Pickup	1					
274	89 Trailer (Zieman)				1		
275	89 Compressor (Leroi)						1
277	90 GMC 1 Ton Dump		1				
278*	Ford Ranger	1					
280*	Ford Ranger1						
281	92 Long Run Box Trailer				1		
282	93 Arrowboard Trailer – Solar (Bemis)				1		

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**City of Huntington Beach
Emergency Management Plan**

OPERATIONS SECTION

	<u>Description</u>	Cars/Pickups/Vans	Service Trucks	Large Trucks	Trailers	Backhoes	Misc. Equip.
283	96 Trailer (Zieman)				1		
284	97 Arrowboard Solar (Bemis)						1
285	97 10 Wheel Dump			1			
287	97 Service Truck (Deferred Maintenance)		1				

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Enclosure 2 – Water Resources

Vehicles

Description	Cars/Pickups/Vans	Service Trucks	Large Trucks	Trailers	Backhoes	Misc. Equipment
Cars	4					
Pickup Trucks	29					
Vans	3					
Acid Truck		1				
2-ton Service Trucks w/ Tools			2			
1-ton Service Trucks w/ Tools		2				
1-ton Dump Trucks		3				
10 Wheel Dump Trucks			2			
400-series National Boom Truck - Gross Weight 28,000 lb.			1			
5-yard Dump Trucks			3			
Water Truck			1			

Equipment

Description	Cars/Pickups/Vans	Service Trucks	Large Trucks	Trailers	Backhoes	Misc. Equipment
Concrete Saws (1-35hp) (1-6hp)						2
Cement Mixers (1-yard) capacity						3
170 CFS Air Compressors						4
580-D Rubber Tire Case Backhoe					1	
580-E Rubber Tire Case Backhoe					1	
410 John Deere Rubber Tire Backhoe					1	
580 Super L Backhoe					1	
Diesel Coleman Light Generator: Rating 60 HZ (240V-Phase 1) With 4-12" Spot Lamps, and 6 Additional Lighting Connections						1
4" (Multiquip) Pumps						2

Utilities

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**City of Huntington Beach
Emergency Management Plan**

OPERATIONS SECTION

Description	Cars/Pickups/Vans	Service Trucks	Large Trucks	Trailers	Backhoes	Misc. Equipment
(Zieman) Transport Pipe Trailer				1		
Portable Gasoline Arrowboard Trailer				2		
Portable Solar Powered Arrowboard Trailer				2		
(22,500 GVW) Transport Trailers Used to Transport Backhoe				3		
Portable Welder Trailer				1		
Emergency Chlorination Unit						1
Steel Plates 2,000 lb. [7-5'x10' Plates], [7-6'x10' Plates], [2-2'x12' Plates]						16
8'x8' GME Trench Box: Model 88SW with Spreaders Shield Capacity Rated at C-60S780 PSF						1
6'x6' GME Trench Box: Model T-66SW with Spreaders Shield Capacity Rated at C-60S960						1
Yale Gasoline Electric Forklift: Model 201-R3077 Max Capacity 2,100 – 3,000 lb. 24 Volts: Battery Max Rated at 6 Hours: 850 AMPS HR Capacity						1
6'x6' GME Trench Box w/ 24" Cutouts						1
Totals	61	13	15	19	9	45
Area Requirement per Vehicle/Equip.	9X20=180	10X20=200	10X25=250	10X30=300	10X30=300	6X7=42

Summary:

Cars/Pickups/Vans: 10,980
 Service Trucks: 2,600
 Large Trucks/Equip: 3,750
 Trailers: 5,700
 Backhoes: 2,700
 Misc. Equipment: 1,890

Subtotal 27,620 SF
 Employee/Visitor: 18,360

Total Area Req. 45,980 SF

Employee Personal & Visitor Vehicles:
 102 Vehicles @ 180 SF = 18,360 SF

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3. SCREENING ANALYSIS

The process of developing this conceptual site plan is based upon the information provided in Sections 1 and 2 of this report.

In addition to defining the facility needs, the following criteria were developed:

- General Screening Criteria
- Master Code Constraints
- Regulatory Requirements

General Screening Criteria

Criteria for evaluating site plan concepts have been derived from the various discussions and interviews with Utilities Division and Public Works staff during the design investigation process. These criteria are summarized as follows:

- Minimize staff and organization impacts during construction
- Allow continued operations during construction
- Maximize the use of existing facilities
- Provide for effective work/supervisory control and relationships
- Provide adequate employee and visitor parking
- Provide adequate Division vehicle and equipment parking/storage
- Provide efficient and effective materials handling patterns
- Provide sufficient covered storage
- Balance functional and efficient facilities with low cost for best value
- Provide durable, easy to maintain facilities
- Provide high quality work environments that are operationally efficient
- Provide flexibility for future change and growth
- Provide facilities that are energy efficient
- Provide facilities supportive of a healthy and positive work environment
- Provide facilities that contribute to the overall security of the site
- Provide facilities that complement the surrounding neighborhood

Master Code Constraints

The 2001 California Building Code, California Mechanical Code, California Plumbing Code, and California Electrical Code currently apply to this project. At this stage of site plan analysis, the master code constraints consists of overall size and form of the project.

Projected Occupancy Classifications

Facilities are classified according to their use or character of occupancy. It is anticipated that this facility will incorporate the following occupancy groups:

- Group A-3 – Assembly with total occupancy less than 300 and no legitimate stage
- Group B – Business (Office and Laboratories)
- Group F-2 – Factory and Industrial (Maintenance) low hazard facility

The area ratio of the various occupancy groups within a building influences the final maximum allowable area, and will be determined during the building design phase.

Projected Types of Construction

The types of construction as set forth by the Code represent varying degrees of public safety and resistance to fire. In considering the uses and required durability for the Water Operations Yard facilities, it is expected that the Type of Construction selected will fall within one of the following:

- Type I – Fire Rated
- Type II – Fire Rated, One-Hour Rated, or Non-rated
- Type V – One Hour Rated

The final construction type designation will be determined during the building design phase.

Allowable Floor Area and Allowable Number of Stories

The basic allowable floor areas and number of stories are determined by the Use Group and Construction Type, and are included in Table 5-B of the code. These are reflected in the abbreviated table below.

		TYPES OF CONSTRUCTION				
		I	II			V
		F.R.	F.R.	1-HOUR	N	1-HOUR
USE GROUP	HEIGHT AREA					
A-3	H	UL	12	2	1	2
	A	UL	29,900	13,500	9,100	10,500
B, F-1	H	UL	12	4	2	3
	A	UL	39,900	18,000	12,000	14,000

Building Height is expressed in number of stories.

UL indicates unlimited.

F.R. indicates fire resistive.

Area indicated is the basic allowable floor area for a one-story building.

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Building Height

Allowable building height for each construction type under consideration is as follows:

- Type I – Fire Rated Unlimited Height
- Type II - Fire Rated 160 feet
- Type II - One-Hour Rated 65 feet
- Type II - Non-rated 55 feet
- Type V - One-Hour Rated 50 feet

Other code requirements, such as exiting, occupancy and area separations, lighting, ventilation, sanitation, and fire detection and extinguishing systems, will be addressed during the building design phase.

The Design Review Checklist from Chapter 7, Industrial of the Huntington Beach General Plan provides additional planning guidelines. General design objectives call for projects that:

- Contribute towards reinforcing or establishing a distinct architectural and environmental image for the district within which the project site is located.
- Consider the scale, proportion and character of development in the surrounding area.
- Establish attractive, inviting, imaginative and functional site arrangement of buildings and parking areas, and a high quality architectural and landscape design, which provides an efficient and pleasant work environment.
- Facilitate and encourage on-site pedestrian activity and mitigate existing adverse automobile oriented planning patterns.
- Minimize excessive or incompatible impacts of noise, light, traffic and visual character.
- Preserve and incorporate natural amenities unique to the site such as ocean views, mature trees, etc. into the project development proposal.
- Preserve and incorporate structures, which are distinctive because of their age, cultural significance, or unique architectural style into the project development proposal.

Site Analysis

The site analysis identifies a variety of existing site conditions and regulatory requirements that influence available locations and site orientation of new construction. The recognized constraints and opportunities aid in the design and evaluation of the conceptual site plan.

Utilities

The site is currently occupied with a number of underground utilities and yard piping. Appropriate easements in new construction should be provided to allow access, unless it is determined that the utilities can be abandoned or relocated.

4. RECOMMENDED ANALYSIS

Recommended Site Plan

This proposed Site Plan, Figure 4.2A, employs two new single-story buildings. The existing Operations building would be remodeled and a new building would be located at the site entrance on Huntington Street.

Operations sections/functions to be located in the new Huntington Street building would include:

- Water Quality
- Public/Meeting Areas

Operations sections/functions to be located in the remodeled Operations building include:

- Administration
- Wastewater
- Lockers/fitness

The second new building would be located at the northwest corner of the site. This building includes:

- Water Meter
- Distribution
- Waste Water Workshop

Assessment

This recommend site plan provides for:

- Department operations can continue during construction.
- The use of existing facilities is maximized.
- Provides adequate employee and visitor parking for current program.
- Provides adequate Division vehicle and equipment parking/storage.
- Provides efficient and effective materials handling patterns.
- Provides sufficient covered storage.
- Balances functional and efficient facilities.
- Provides facilities that can be designed to be energy efficient.
- Provides facilities supportive of a healthy and positive work environment.
- Provides facilities that contribute to the overall security of the site.
- Provides facilities that complement the surrounding neighborhood.
- Recognizes strong link among Distribution, Water Meter, and Warehouse functions.

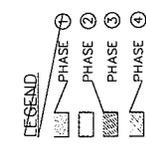
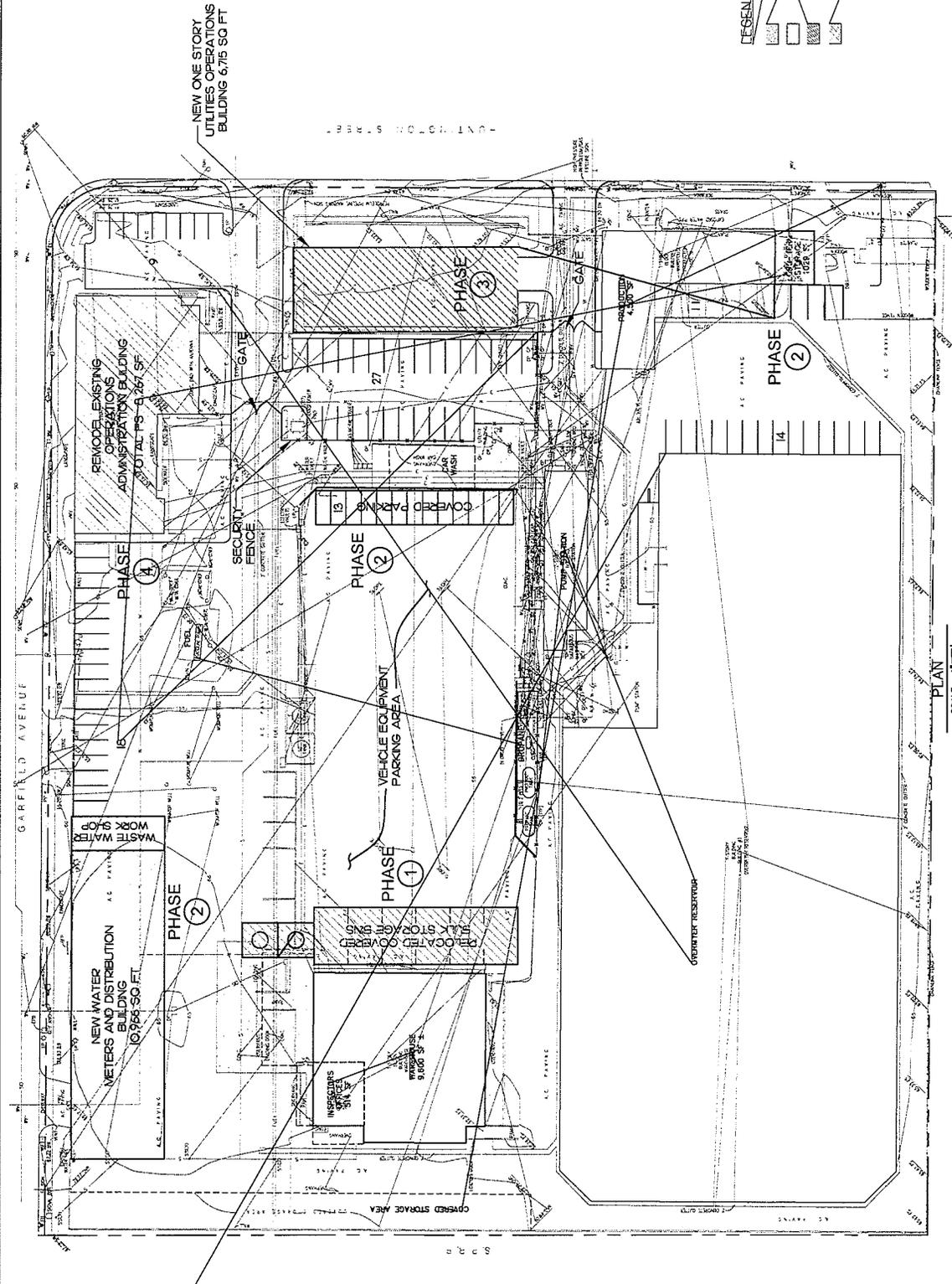
Basis for Selection

This Site Plan is recommended based on the strong organizational relationships that are created between the Distribution, Water Meter and Warehouse functions, as well as Administration, Water Quality, conference facilities and the public. Additionally, it provides adequate parking for employees, visitors and equipment now and into the forecasted future. With the re-stripping of the site for the new parking spaces and equipment storage, traffic flow within the site will be more orderly and controlled for more efficient site arrivals and departures of employees, visitors, and others including materials deliveries.

With appropriate and effective architectural design and treatment of the new water operations building, this site plan will provide a strong identity and image to the public and visitors. Additionally, the location of the new facilities contributes to the overall strengthening of site security and the opportunity to better control and monitor facility access.

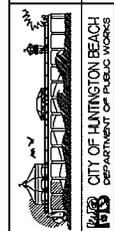
Phasing Plan

The multiple buildings associated with this proposed Site Plan provide opportunity for the effective phasing of construction for the build-out of the yard facilities. Figure 4.2AA shows a phasing plan for facility construction that would bring on line facilities in priority order and allow for the relocation of work sections with minimal disruption and impact to the Water Yard's operations. The phasing of the facilities would also provide for multiple construction contracts that can be scheduled to fit the City's budget and available revenue stream.



DWS NO.
4.2AA

CITY OF HUNTINGTON BEACH
WATERBLOWON
MASTER PLAN
PHASING SITE PLAN



CITY OF HUNTINGTON BEACH
DEPARTMENT OF PUBLIC WORKS

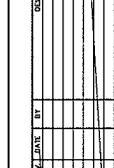
PREPARED UNDER THE SUPERVISION OF
CITY ENGINEER
BY
DATE

DESIGNED BY
DATE

REVISIONS

NO.	DATE	DESCRIPTION

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