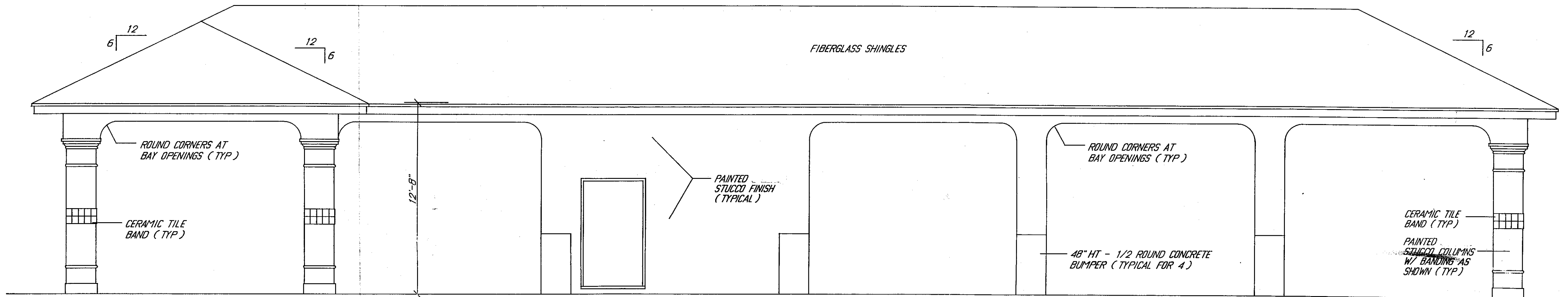
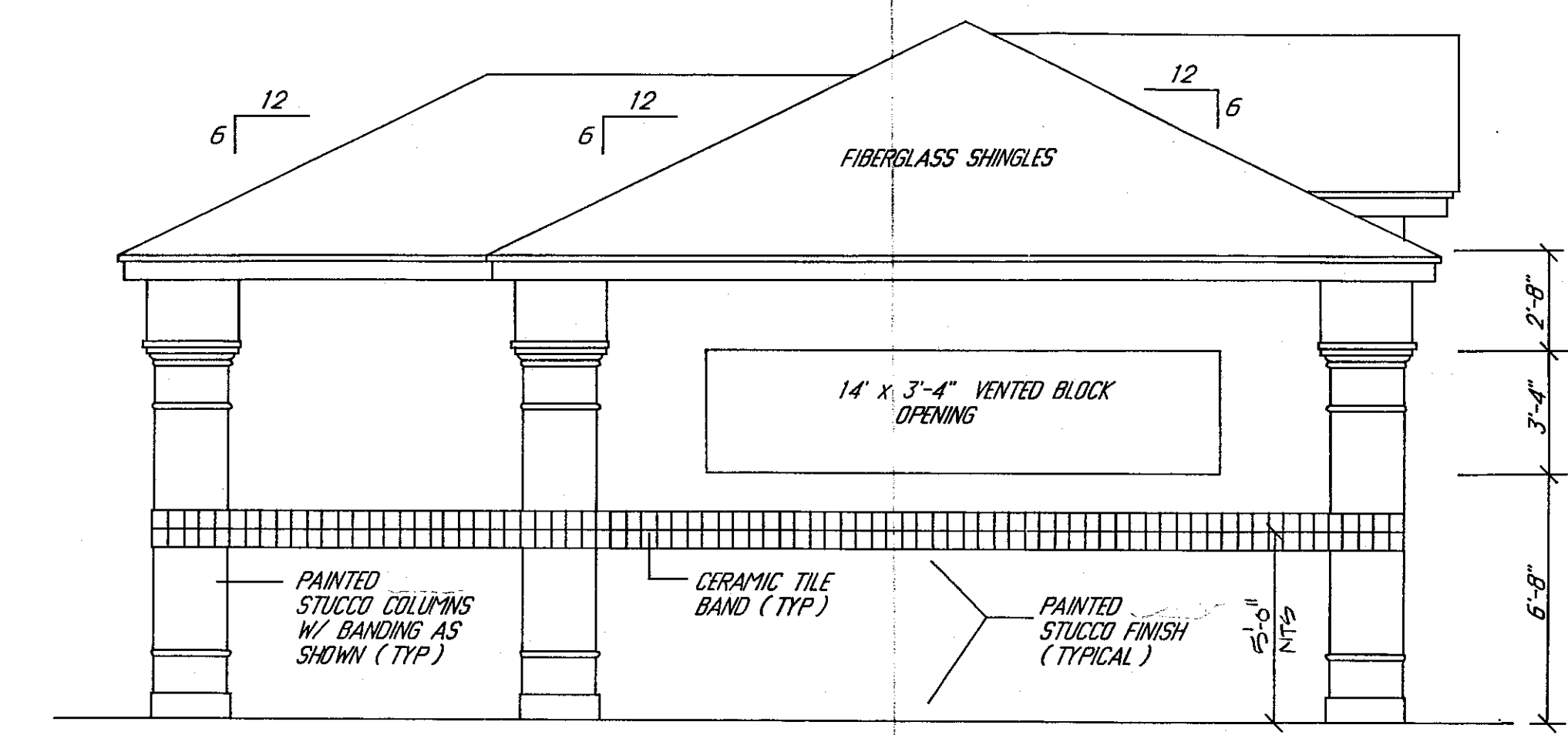


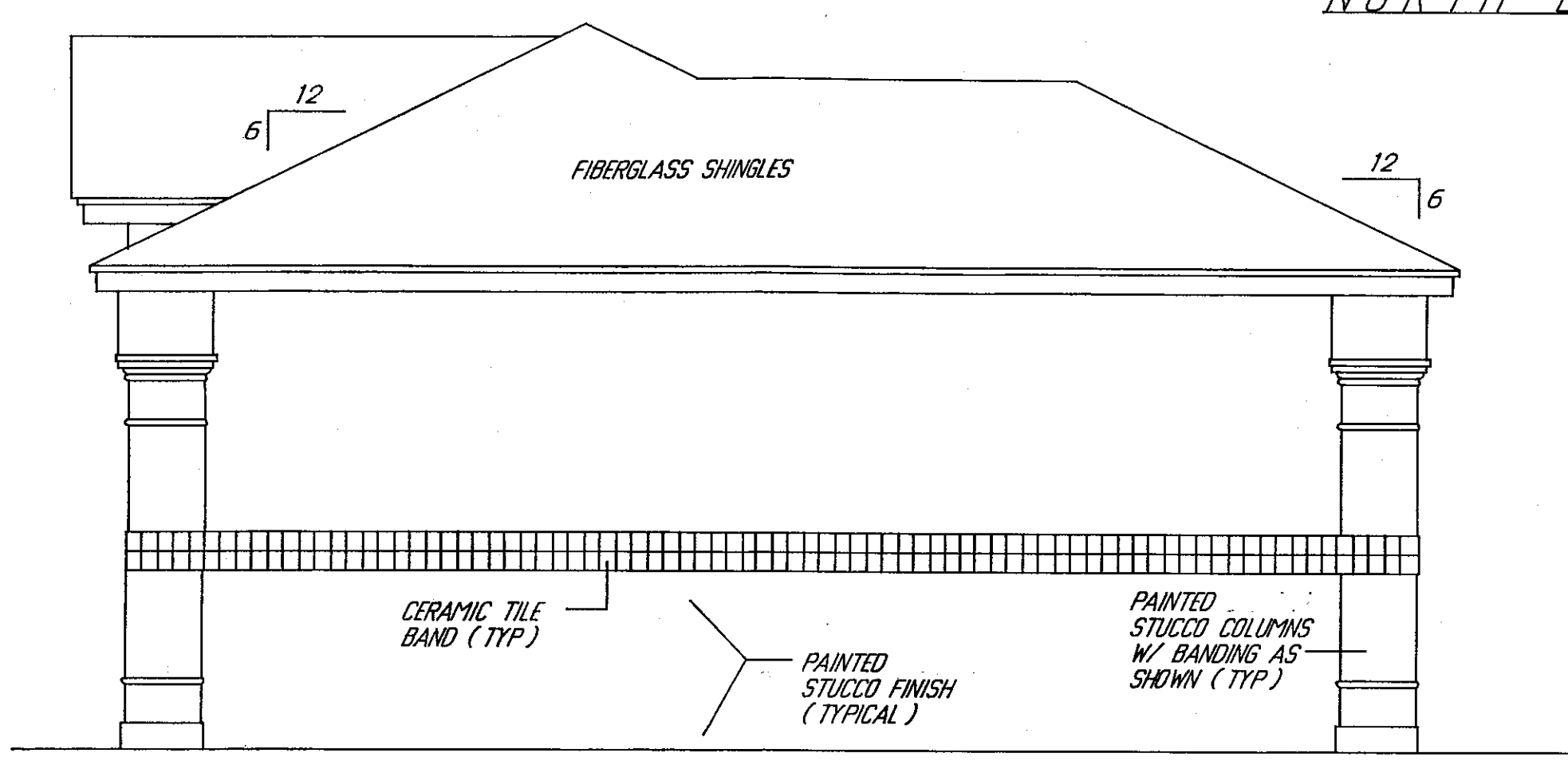
SOUTH ELEVATION - FRONT
SCALE 1/4" = 1'-0"



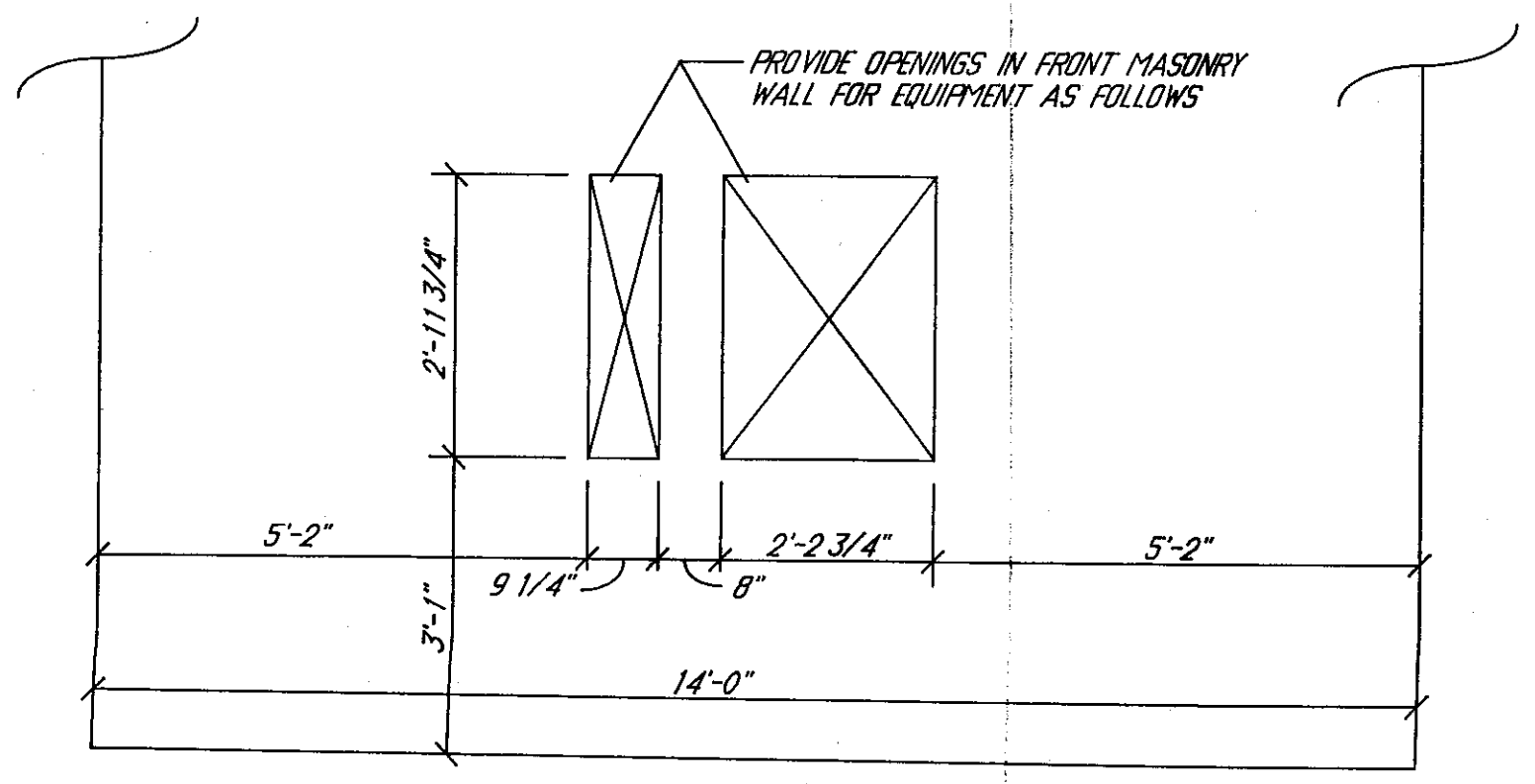
NORTH ELEVATION - REAR
SCALE 1/4" = 1'-0"



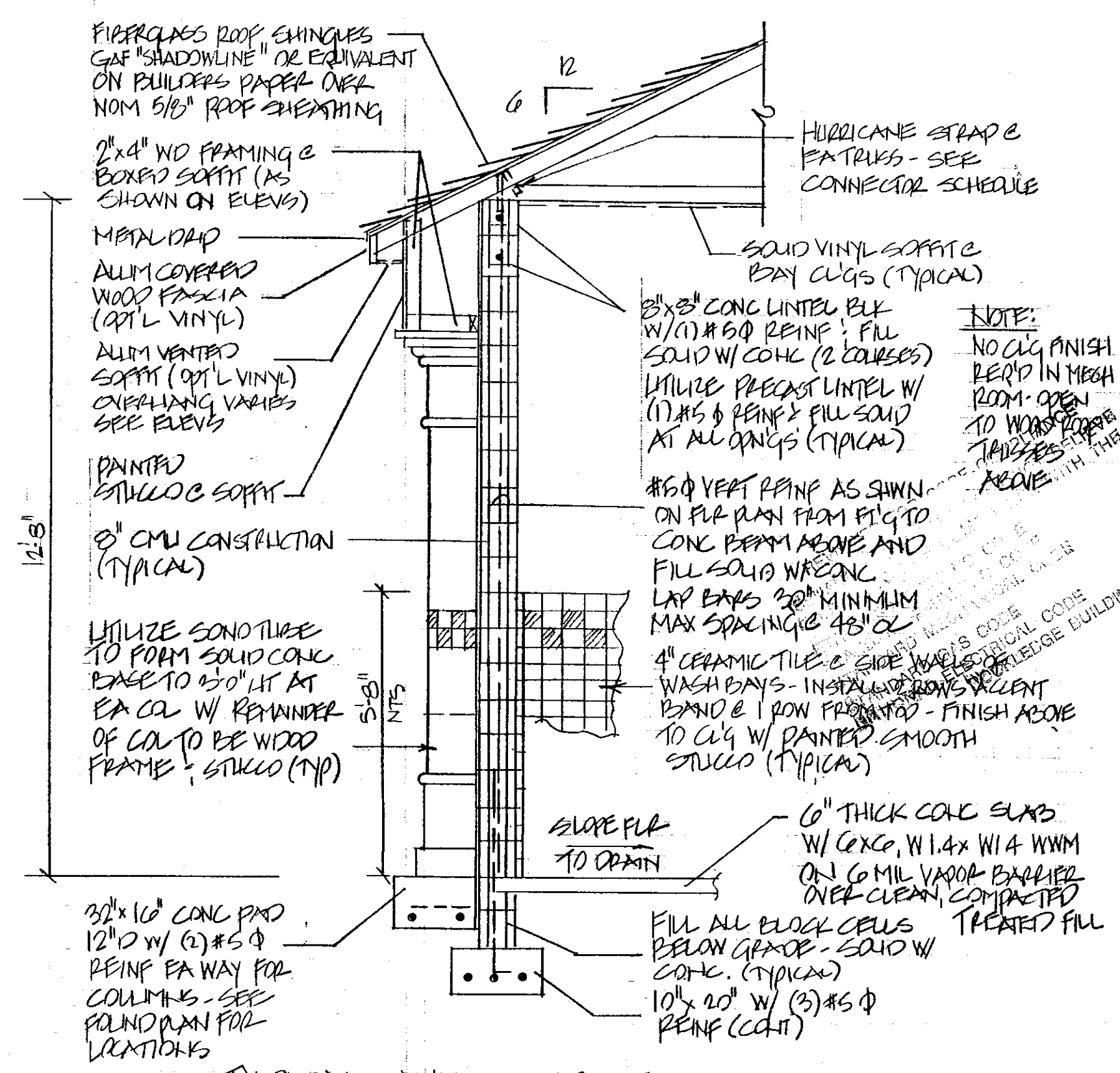
WEST ELEVATION - LEFT SIDE
SCALE 1/4" = 1'-0"



EAST ELEVATION - RIGHT SIDE
SCALE 1/4" = 1'-0"



MASONRY OPENINGS - FRONT MECH. ROOM WALL
SCALE 1/4" = 1'-0"



TYPICAL WALL SECTION
NOT TO SCALE

NOTE:
FINISH BUILDING EXT W/ PAINTED STUCCO FINISH COLOR, STYLE OF STUCCO BANDS, CERAMIC TILES, COLUMNS AND COL BASE TRIM PER ELEV SHALL BE VERIFIED W/ OWNER PRIOR TO CONSTRUCTION.

NOTE:
INSTALL 9 GAUGE HORIZONTAL JOINT REINF & 10\"/>

I HEREBY CERTIFY THAT ALL CONSTRUCTION FOR THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH 1994 SBCCI STANDARD BUILDING CODE, MORE SPECIFICALLY, CHAPTER 16, SECTION 1606, FOR A WIND LOAD SPEED OF: 100 MILES PER HOUR

1998
Rock Blvd.

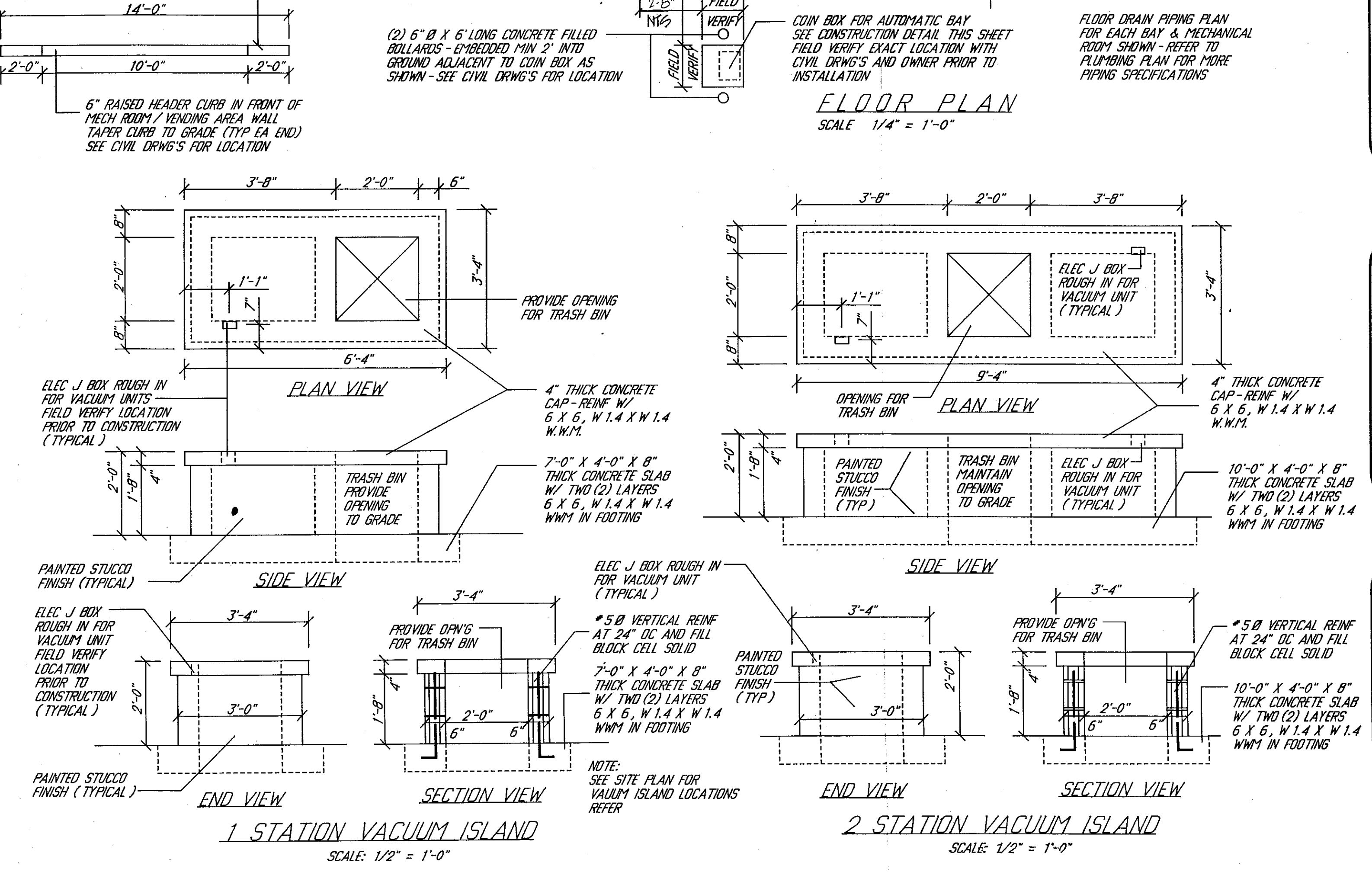
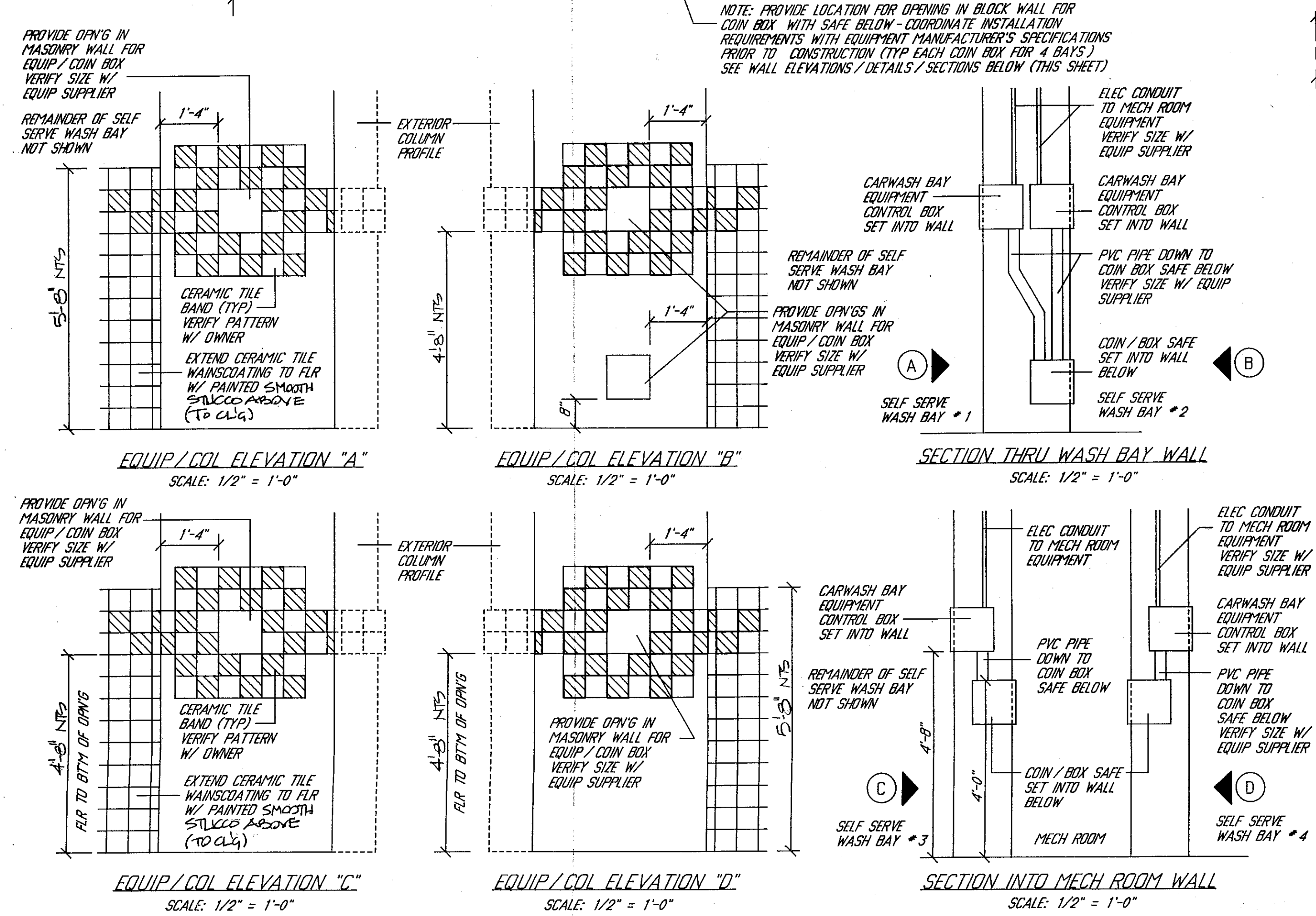
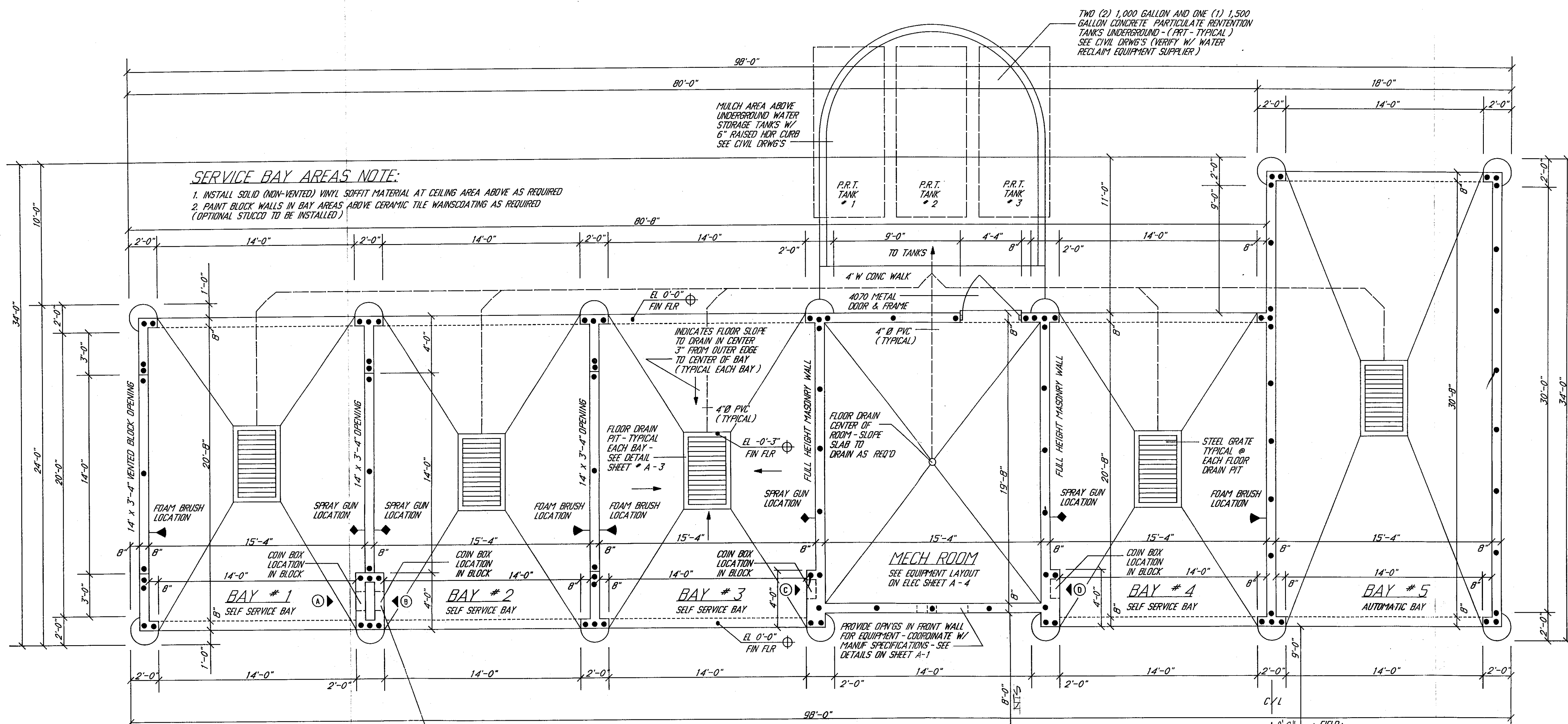
REVISIONS

ENGINEERING & DESIGN CONCEPTS, INC.
1398 PALM BAY ROAD, NE PALM BAY, FLORIDA 32905 TEL (407) 727-2056 FAX (407) 727-8465
PROPOSED NEW BUILDING PLANS / NOTES / DETAILS FOR:
RON FAULISI - BAYWASH OF ROCKLEDGE
US HIGHWAY NO 1 & PARK AVENUE ROCKLEDGE, FLORIDA

Seawall M. R. H.
#1012
9/19/97

DRAWN	BOB C
CHECKED	
SCALE	AS NOTED
JOB NO.	
DATE	JULY 21, 1997
SHEET	
A - 1	
OF	SHEET

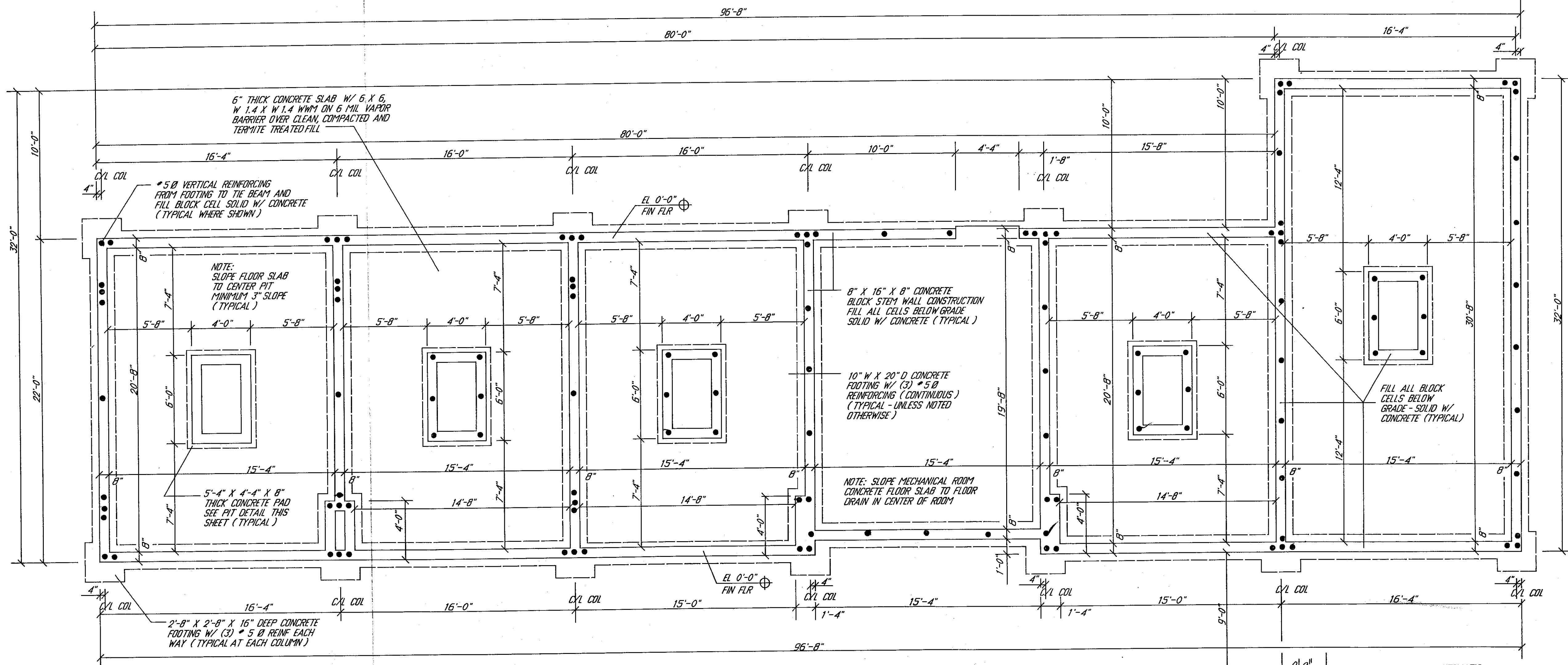
REVISIONS	



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 US HIGHWAY NO 1 & PARK AVENUE ROCKLEDGE, FLORIDA

Signature: M. Nish
 Date: 9/13/97

DRAWN BOB C
 CHECKED "AS NOTED"
 SCALE "AS NOTED"
 JOB NO.
 DATE JULY 21, 1997
 SHEET
A - 2
 OF SHEET



FOUNDATION PLAN

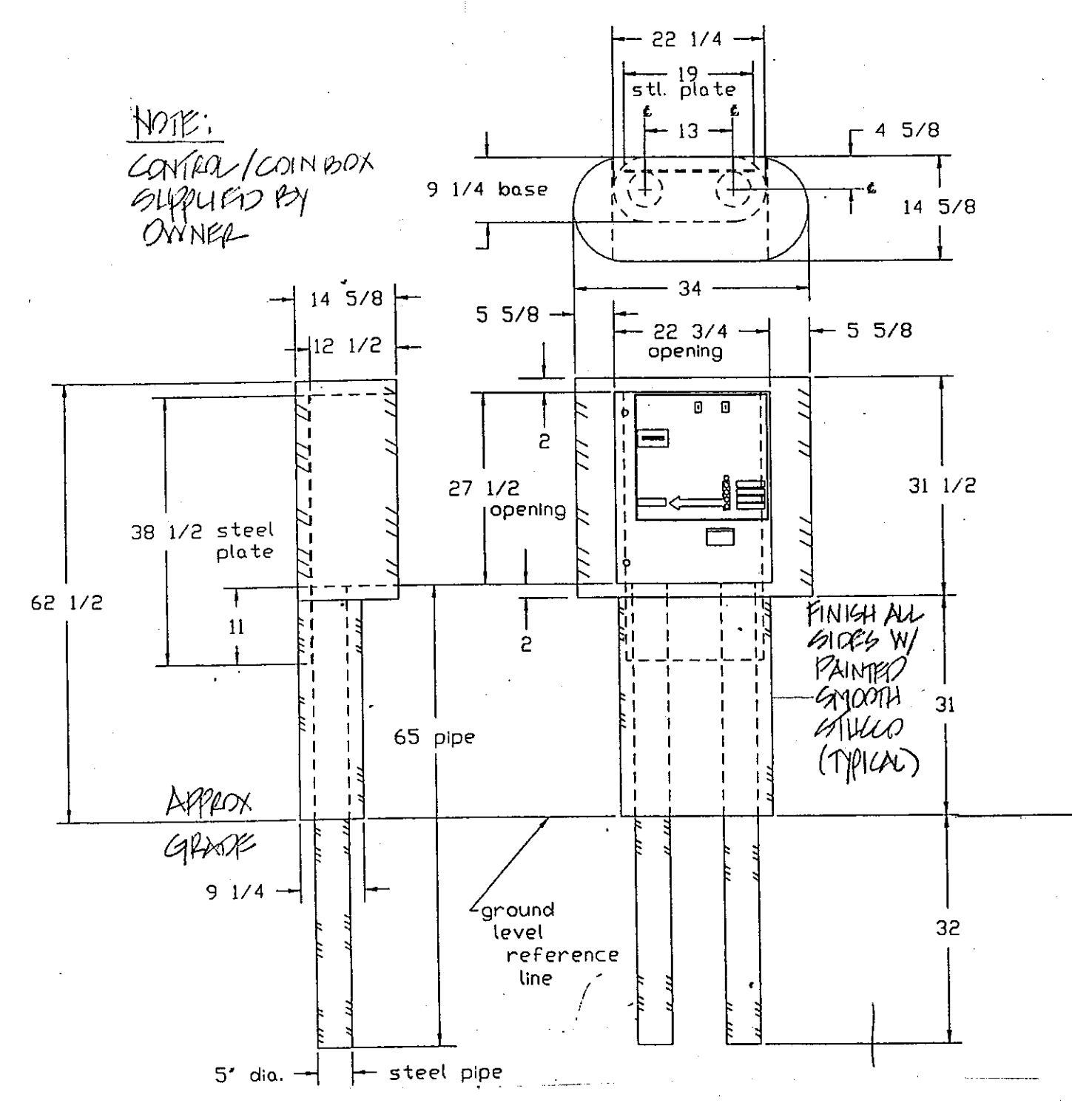
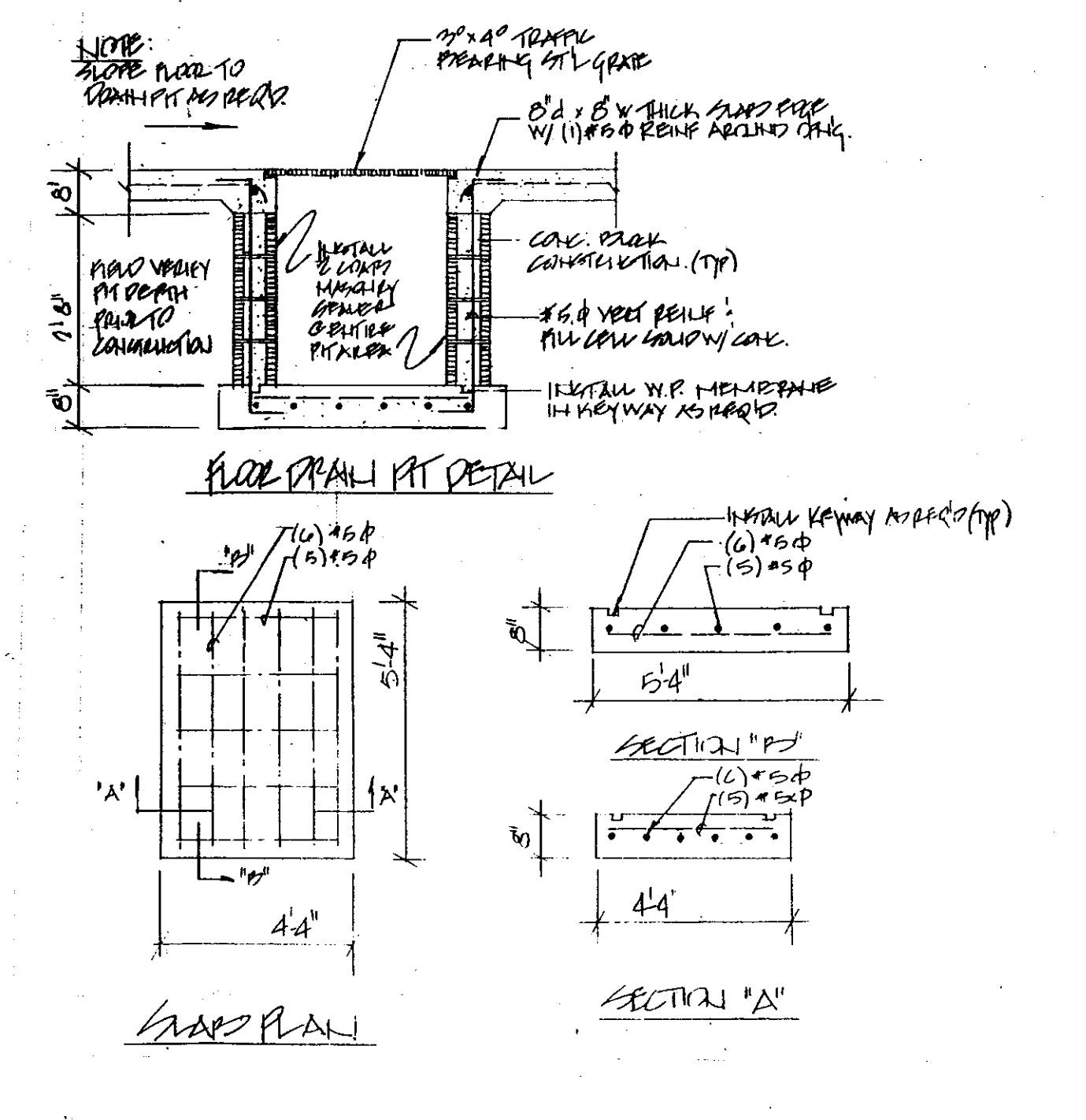
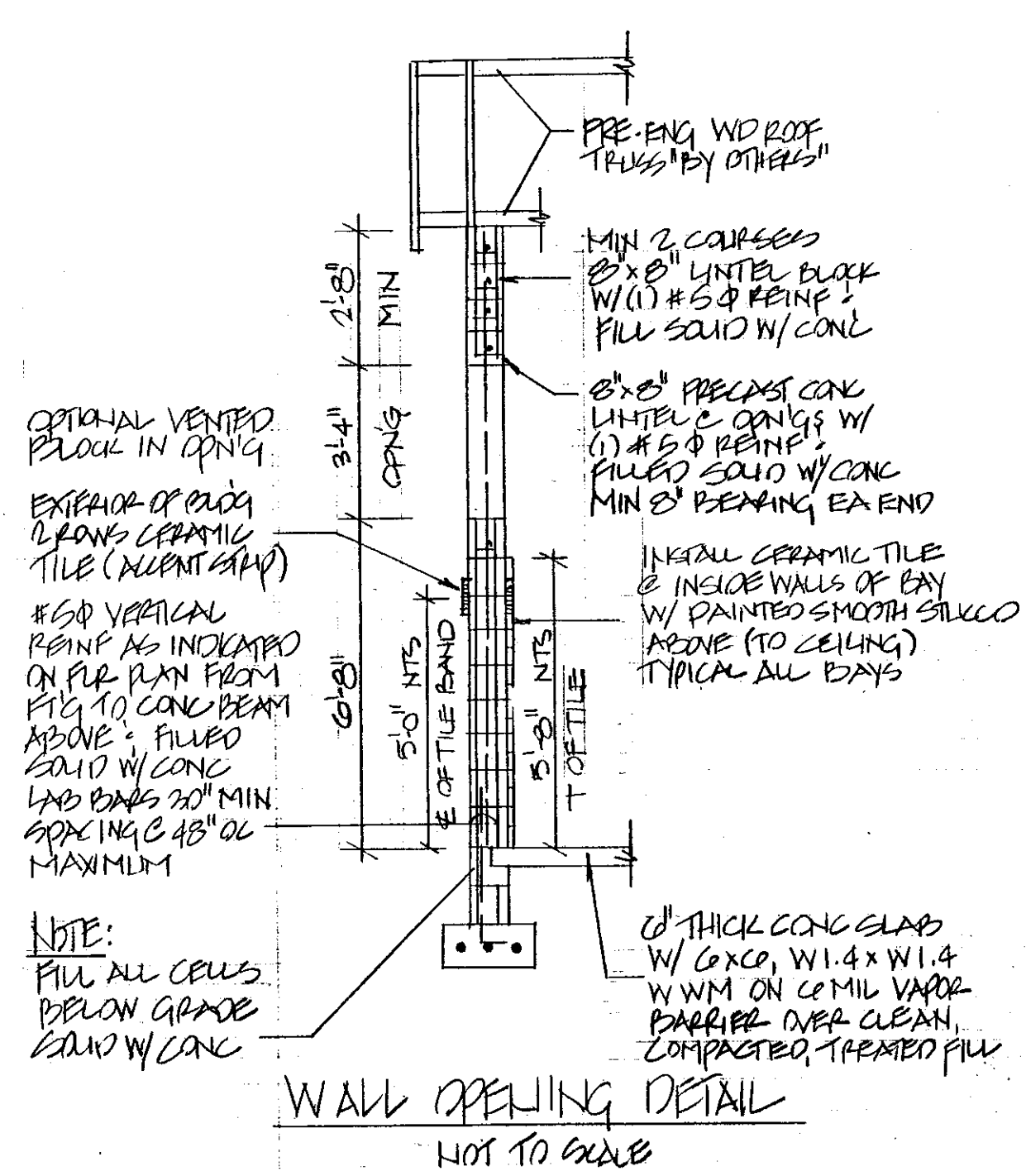
SCALE 1/4" = 1'-0"

(2) 6" Ø CONCRETE FILLED BOLLARD ADJACENT TO COIN BOX AS SHOWN SEE CIVIL DRWG'S FOR LOCATION

BASE FOR AUTOMATIC BAY COIN BOX - FIELD VERIFY EXACT FINAL LOCATION PRIOR TO CONSTRUCTION - SEE CONSTRUCTION DETAILS ON THIS SHEET

STRAP AND TIEDOWN SCHEDULE						
TRUSS IDENTIFICATION	LEFT	INTERIOR	RIGHT	TRUSS TO TOP PLATE / BEAM	TOP PLATE TO STUD	BOTTOM PLATE TO FOUNDATION
H1	925#	925#	TA10	N/A	N/A	N/A
H2A, H2B, H2C, H2D, H2E, H2F	807#	804#	TA12	N/A	N/A	N/A
T15, H8A, H8B	668#	924#	L-TA12	N/A	N/A	N/A
H5F	975#	779#	L-TA10	N/A	N/A	N/A
G2B	1117#	1697#	H-TA10/12	N/A	N/A	N/A
ALL OTHER TRUSSES	420#		TA10 FRAME W/AGGREG BY DETAIL (S) ON S.S.			

ANCHOR SCHEDULE			
CONNECTOR TYPE	UPLIFT PROVIDED	FASTENING NOTES	
TA12	935#	5-10d x 1/2"	
TA10	1002#	6-10d x 1/2"	
LH 20 (HANGER)	540#	11-10d	
UH 20/10 (HANGER)	895#	21-10d	
HTA10/12	1968#	12-10d x 1/2"	



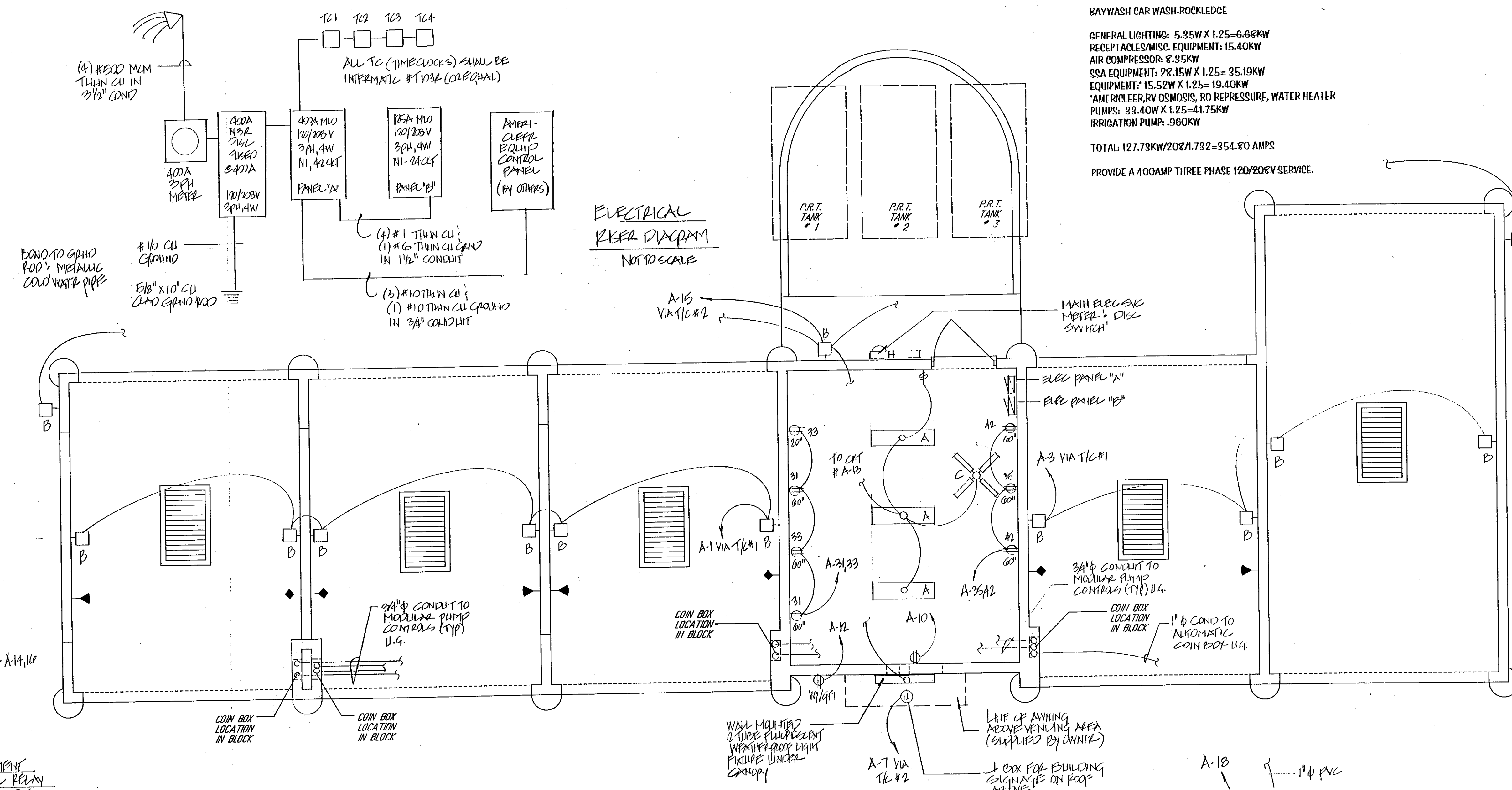
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 PROPOSED NEW BUILDING PLANS / NOTES / DETAILS FOR:
RON FAULISI - BAYWASH OF ROCKLEDGE
 US HIGHWAY NO 1 & PARK AVENUE ROCKLEDGE, FLORIDA

Stamped signature
 9/3/97

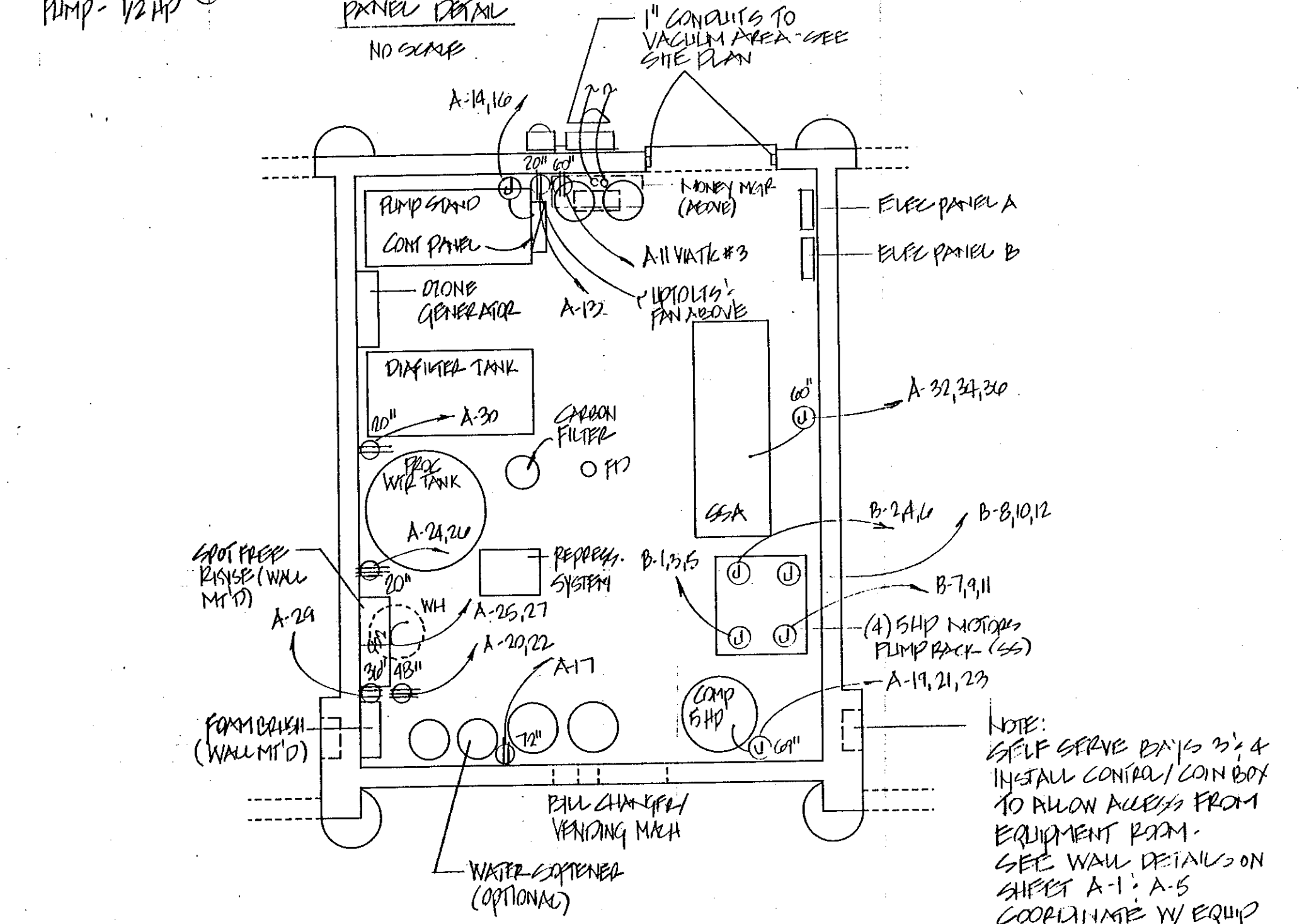
DRAWN	BOB C
CHECKED	
SCALE	AS NOTED
JOB NO.	
DATE	JULY 21, 1997
SHEET	A-3
OF	SHEET

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ELECTRICAL
 REEFER DIAGRAM
 NOT TO SCALE

- FLUOR PUMP 1 1/2 HP
- WASTE PUMP 1 1/2 HP
- BOOSTER PUMP 3 HP
- MEMBRANE PUMP - 1/2 HP



PANEL A		RATING: 400A MLD SERVICE: 120/208V 3Ø 4W		LUG LOCATION: TOP MOUNTING: SURFACE		A.I.C. TYPE: ITC, SAD		ID: 000					
CKT. NO.	EQUIPMENT SERVED	KVA	CKT. BKR.	BRANCH CIRCUIT	#	CKT. NO.	EQUIPMENT SERVED	KVA	CKT. BKR.	BRANCH CIRCUIT	#		
1	BAY LIGHTS-TCL	1.20	1	2D	12	12	12	1/2	A	2	VACUUM	1.0	
3	BAY LIGHTS-TCL	1.20	1	2D	12	12	12	1/2	B	4	BFI	1.0	
5	EXTERIOR BLDG. LTS.	1.20	1	2D	12	12	12	1/2	A	8	GF	1.0	
7	BLDG. SIGNAGE	1.20	1	2D	12	12	12	1/2	A	8	BFI	1.0	
11	PYLON SIGNAGE	1.20	1	2D	12	12	12	1/2	B	10	CASH MACHINE	1.2	
13	OZONE GENERATOR	1.50	1	2D	12	12	12	1/2	C	12	VENTILATING FAN	1.2	
17	MEDI. RNLT. (W/LET)	1.60	1	2D	12	12	12	1/2	B	14	AMERICLEER PANEL	2.08	
15	SPACE								A	16	CONV. BOX	1.0	
17	WATER SOFTENER	1.0	1	2D	12	12	12	1/2	A	20	REVERSE OSMOSIS PUMP	1.20	
19	AIR COMPRESSOR	2.78	3	3S	10	10	10	3/4	A	22	RO PRESSURE PUMP	3.60	
21	"	2.78	"	"	"	"	"	"	C	24	"	3.60	
23	"	2.78	"	"	"	"	"	"	A	26	"	3.60	
25	SPACE								A	28	SPACE		
29	PUMP MODULE	1.0	1	2D	12	12	12	1/2	A	30	SPRAYER INJECTOR	1.60	
31	GENERAL PURPOSE CONN.	3.00	1	2D	12	12	12	1/2	A	32	SSA EQUIP. PANEL	5.58	
33	"	3.00	"	"	"	"	"	"	A	34	"	5.58	
35	"	3.00	"	"	"	"	"	"	A	36	"	5.58	
37	PANEL "B"	12.35	3	12S	1	1	1	6	12	A	38	UNKNOWN	1.0
39	"	12.35	"	"	"	"	"	"	B	40	"	1.0	
41	"	12.35	"	"	"	"	"	"	C	42	"	1.0	
CONNECTED LOAD (KVA)		#A	35.95	#B	34.26	#C	34.68						
EQUIPMENT SERVED		CONN. LOAD	LF	DF	DEMAND LOAD	REMARKS:							
LIGHTING		5.75	1.25		7.20								
RECEPTACLES		13.08			13.08								
EQUIPMENT		84.15	1.25		107.63								
TOTAL SPARE					127.97								

PANEL B		RATING: 125A MLD SERVICE: 120/208V 3Ø 4W		LUG LOCATION: TOP MOUNTING: SURFACE		A.I.C. TYPE: SOB		ID: 000			
CKT. NO.	EQUIPMENT SERVED	KVA	CKT. BKR.	BRANCH CIRCUIT	#	CKT. NO.	EQUIPMENT SERVED	KVA	CKT. BKR.	BRANCH CIRCUIT	#
1	PUMP #1	2.78	3	4D	8	1	PUMP #2	2.78	3	4D	8
3	"	"	"	"	"	3	"	"	"	"	"
5	"	"	"	"	"	5	"	"	"	"	"
7	PUMP #3	2.78	3	4D	8	7	PUMP #4	2.78	3	4D	8
9	"	"	"	"	"	9	"	"	"	"	"
11	"	"	"	"	"	11	"	"	"	"	"
13	ACCENT LIGHTS	2.0	1	2D	12	13	SPACE				
						15	IRRIGATION PUMP	3.60	1	2D	12
						16	REVERSE OSMOSIS PUMP	1.20	2	2D	12
						17	"	1.20	"	"	"
CONNECTED LOAD (KVA)		#A	12.52	#B	12.08	#C	12.52				
EQUIPMENT SERVED		CONN. LOAD	LF	DF	DEMAND LOAD	REMARKS:					
LIGHTING		2.0			2.5						
PUMPS		35.80			1.0	35.80					
IRRIGATION PUMP		3.60			1.0	3.60					
TOTAL SPARE					57.80						

ELECTRICAL SPECIFICATIONS

- ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (N.E.C.), ALL LOCAL CODES, ORDINANCES AND REGULATIONS AND POWER COMPANY STANDARDS.
- ALL WIRE SHALL BE COPPER TYPE "THIN" FOR SIZES UP TO # 8 AND TYPE "THW" FOR # 6 AND LARGER (UNLESS OTHERWISE NOTED) MINIMUM WIRE SIZE SHALL BE # 12 A.W.G.
- ALL BRANCH AND FEEDER CIRCUITS SHALL CONTAIN A GROUNDING CONDUCTOR AND BE SIZED AND BONDED IN ACCORDANCE WITH ARTICLE 250 OF THE N.E.C.
- ALL CONDUIT INSTALLED IN INTERIOR LOCATIONS SHALL BE TYPE E.M.T. ALL CONDUIT INSTALLED IN EXTERIOR LOCATIONS, ABOVE GRADE, SHALL BE GALVANIZED RIGID CONDUIT.
- CONTRACTOR TO COORDINATE THE LOCATION OF RECEPTACLES, EQUIPMENT CIRCUITS, COMMUNICATIONS AND DATA OUTLETS, LIGHTING FIXTURES AND DEVICES WITH THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
- DRAWINGS ARE DIAGRAMMATIC - CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS AND FIELD CONDITIONS FOR ALL DIMENSIONS. CONTRACTOR SHALL OBTAIN AND FURNISH ALL PERMITS REQUIRED.
- PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, APPLIANCES AND TOOLS TO PERFORM ALL WORK NECESSARY FOR THE COMPLETE EXECUTION OF THE ELECTRICAL WORK AS SHOWN ON THE DRAWINGS. PROVIDE WORK NOT SPECIFICALLY SHOWN OR SPECIFIED, YET REQUIRED TO INSURE PROPER AND COMPLETE OPERATION OF ALL SYSTEMS AND TO SATISFY THE DESIGN INTENT IN THE WORK AND TO COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS.
- THE DRAWINGS INDICATE THE ARRANGEMENT OF CIRCUITS AND OUTLETS, LOCATIONS OF SWITCHES, PANELBOARDS, CONDUITS AND OTHER WORK. PRIOR FIELD VERIFICATION OF ALL DIMENSIONS IS REQUIRED.
- CONDUIT RUNS AND GROUNDING ARE SHOWN DIAGRAMMATICALLY ONLY. FIELD VERIFY ACTUAL ROUTING OF CONDUITS.
- PROVIDE ALL WIRING DEVICES, COVER PLATES, JUNCTION BOXES AND PLASTER RINGS AS NEEDED TO FACILITATE THE INSTALLATION OF DEVICES FLUSH MOUNTED IN WALL OR SURFACE MOUNTED, AS PROJECT CONDITIONS WARRANT.
- CONTRACTOR SHALL VISIT SITE PRIOR TO BIDDING FOR FIELD INSPECTION AND PROJECT COORDINATION.
- CONTRACTOR SHALL VERIFY THE LOCATION OF THE ELECTRICAL SERVICE ENTRANCE TO UNIT, PRIOR TO CONSTRUCTION
- CONTRACTOR SHALL COORDINATE THE EXACT ELECTRICAL CHARACTERISTICS OF ALL OWNER SUPPLIED EQUIPMENT, PRIOR TO CIRCUIT INSTALLATION.

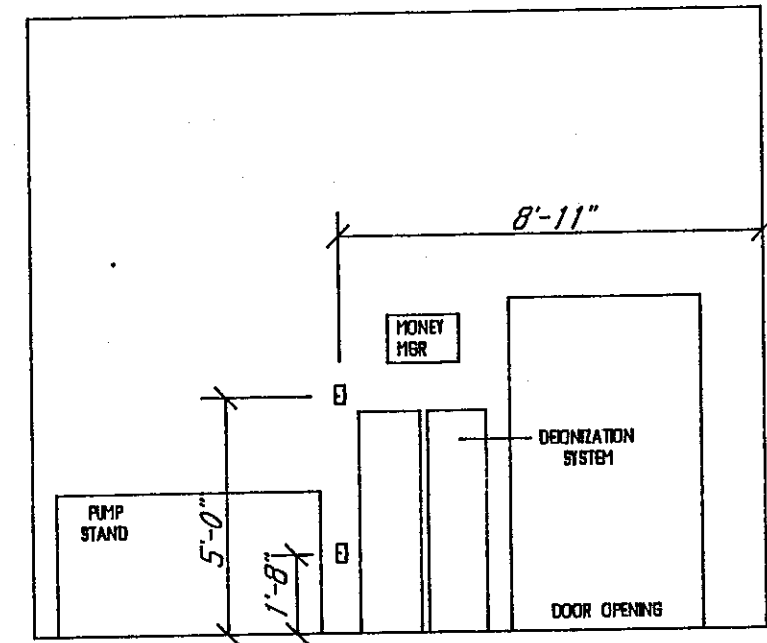
ELECTRICAL / LIGHTING PLAN
 SCALE 1/4" = 1'-0"

REVISIONS

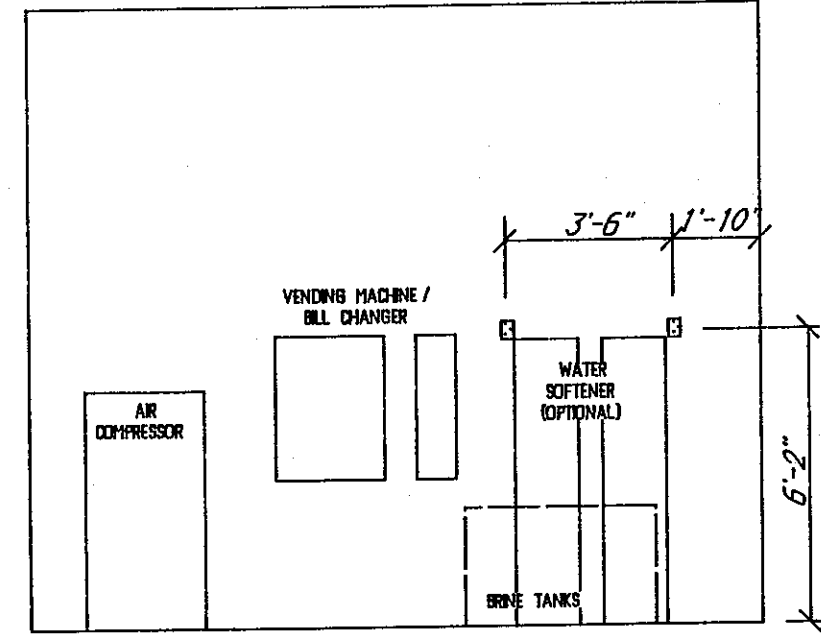
ENGINEERING & DESIGN CONCEPTS, INC.
 1398 PALM BAY ROAD, NE PALM BAY, FLORIDA 32909 TEL (407) 727-2055 FAX (407) 727-9455
 PROPOSED NEW BUILDING PLANS / NOTES / DETAILS FOR:
 RON FALLISI - BAYWASH OF ROCKLEDGE
 U.S. HIGHWAY NO. 1 & PARK AVENUE, ROCKLEDGE, FLORIDA

Johanne M. Oshin
 #6102
 9/3/07

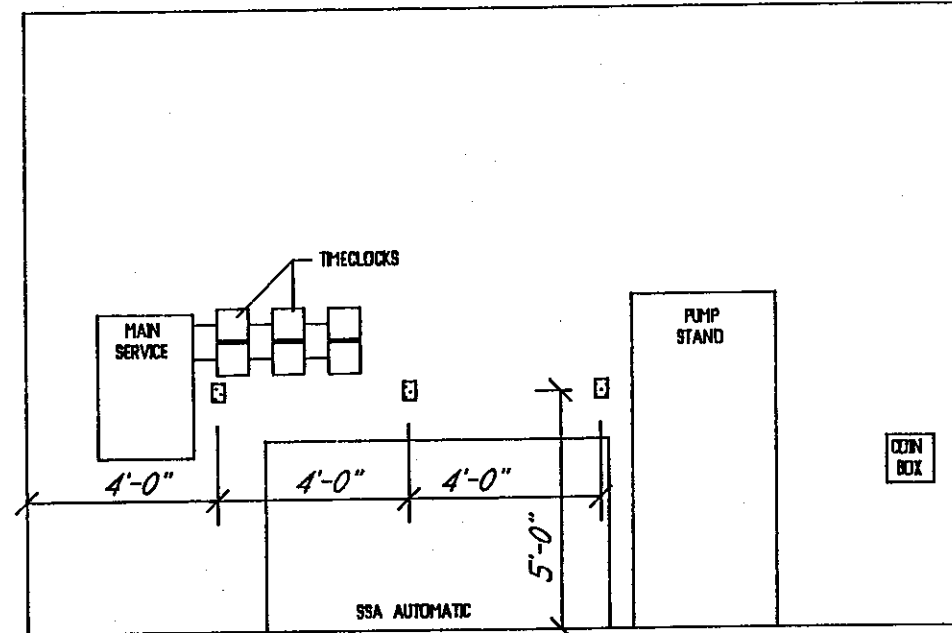
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 DATE JULY 21, 1997
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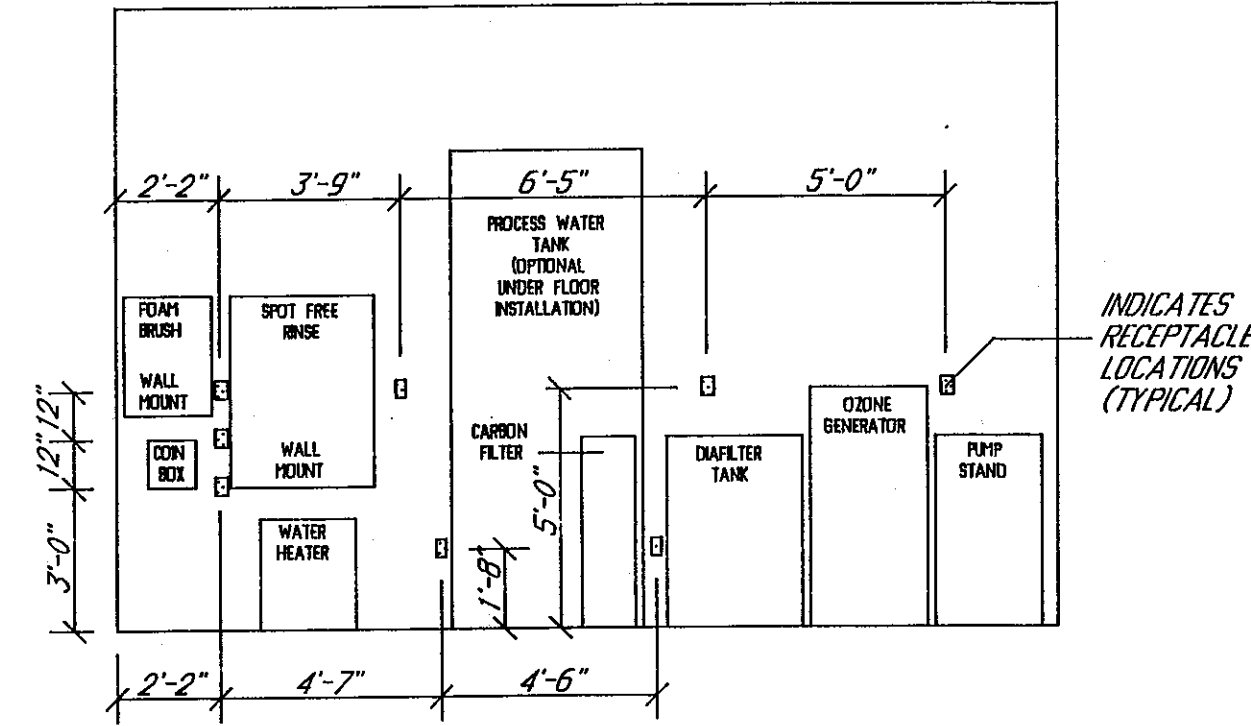
WALL ELEVATION "A"
MECH ROOM WALL - NORTH ELEV
SCALE: 1/4" = 1'-0"



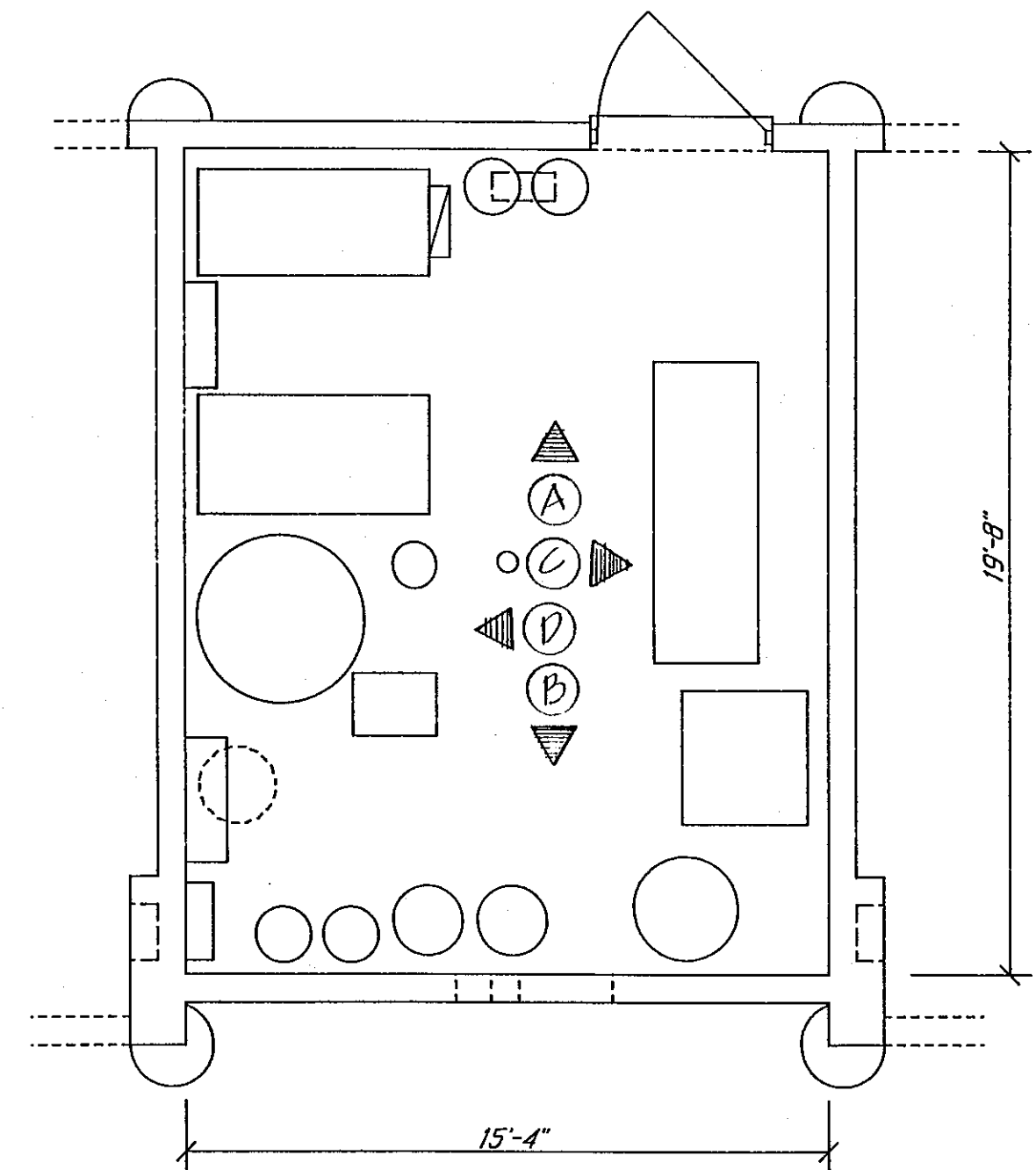
WALL ELEVATION "B"
MECH ROOM WALL - SOUTH ELEV
SCALE: 1/4" = 1'-0"



WALL ELEVATION "C"
MECH ROOM WALL - EAST ELEV
SCALE: 1/4" = 1'-0"



WALL ELEVATION "D"
MECH ROOM WALL - WEST ELEV
SCALE: 1/4" = 1'-0"

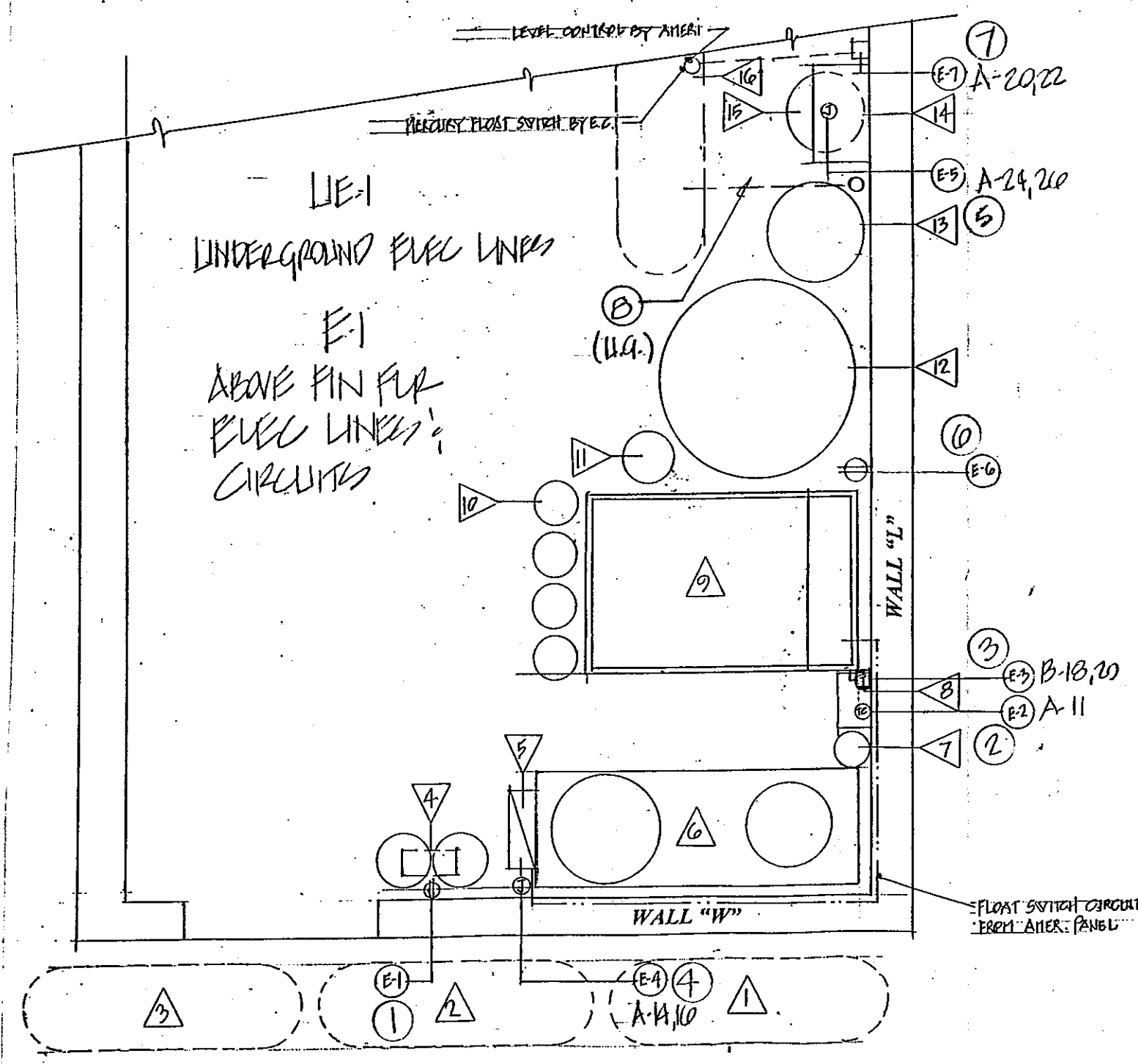


MECHANICAL ROOM LAYOUT
SCALE: 1/4" = 1'-0" (NOTE: PARTIAL FLOOR PLAN IS SHOWN)
NOTE: COORDINATE EXACT FINAL LOCATIONS OF MECHANICAL ROOM EQUIPMENT PRIOR TO CONSTRUCTION

ELECTRICAL INSTALLATION REQUIREMENTS

The following electrical must be installed by the electrical contractor including but not limited to all electrical lines, junction boxes, time clock, float switch and other components to complete the electrical installation. All electrical lines must be connected to the Americleer Water Reclamation Equipment as follows:

NOTE!!: ALL UNDERGROUND ELECTRICAL LINES (UE) MUST BE CONNECTED TO THE RECLAIM COMPONENTS AND THIS SECTION SHALL INCLUDE FINAL CONNECTIONS TO COMPONENTS.



UNDERGROUND ELECTRICAL:

UE-1 (2) Install 1" PVC line #1 from Reverse Osmosis level control to R.O. Storage Tank. Install mercury float switch (SEE NOTE #2) as in Tank as indicated.

ABOVE FINISH FLOOR ELECTRICAL:

NOTE: ALL ELECTRICAL LINES ARE SINGLE PHASE. INSTALL 1" CONDUIT FROM AMERICLEER ELECTRICAL PANEL TO FLOAT SWITCH ON DIAFILTER TANK.

- E-1:
- Circuit E-1 is a 5 amp, 115 VAC circuit for Deionization System. Install duplex plug. SEE NOTE #1
 - Circuit E-2 is a 10 amp, 115 VAC circuit for Ozone Generator. Electrical directs connects to unit. Furnish time clock (SEE NOTE #3). See NOTE #1.
 - Circuit E-3 is a 10 amp, 230 VAC circuit for Recirculation Pump. Install disconnect switch as J-Box. SEE NOTE #1.
 - Circuit E-4 is a 30 amp, 230 VAC circuit. CONNECT THIS CIRCUIT TO BUILDING MAIN ELECTRICAL DISCONNECT PANEL.
 - Circuit E-5 is a 10 amp, 230 VAC circuit. SEE NOTE #1.
 - Circuit E-6 is a 5 amp, 115 VAC circuit. Install duplex plug. SEE NOTE #1.

EQUIPMENT SCHEDULE

- Particulate Retention Tank #1 - 1,000 gallon polyethylene tank
- Particulate Retention Tank #2 - 1,000 gallon polyethylene tank
- Particulate Retention Tank #3 - 1,000 gallon polyethylene tank
- Deionization System
- Americleer Electrical Control Panel
- Americleer Pump Module
- Americleer Ozone Contactor Module
- Americleer Ozone Generator
- Americleer Diaphiler Tank
- Stainless Steel Separator Tanks
- Reverse Osmosis Carbon Filter
- Processed Water Storage Tank - 750 vertical polyethylene tank
- Hot Water Heater
- Reverse Osmosis System
- Reverse Osmosis Re-pressurization System
- Reverse Osmosis Permeate Water Storage Tank

NOTE #1: CONNECT THIS CIRCUIT TO BUILDING ELECTRICAL SUB-PANEL.

NOTE #2: MERCURY FLOAT SWITCH IS TO BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. MERCURY FLOAT SWITCH IS MANUFACTURED BY ANCHOR SCIENTIFIC, INC. (TEL. 612-473-7115) AND IS MODEL: ROTO TYPE S20NC.

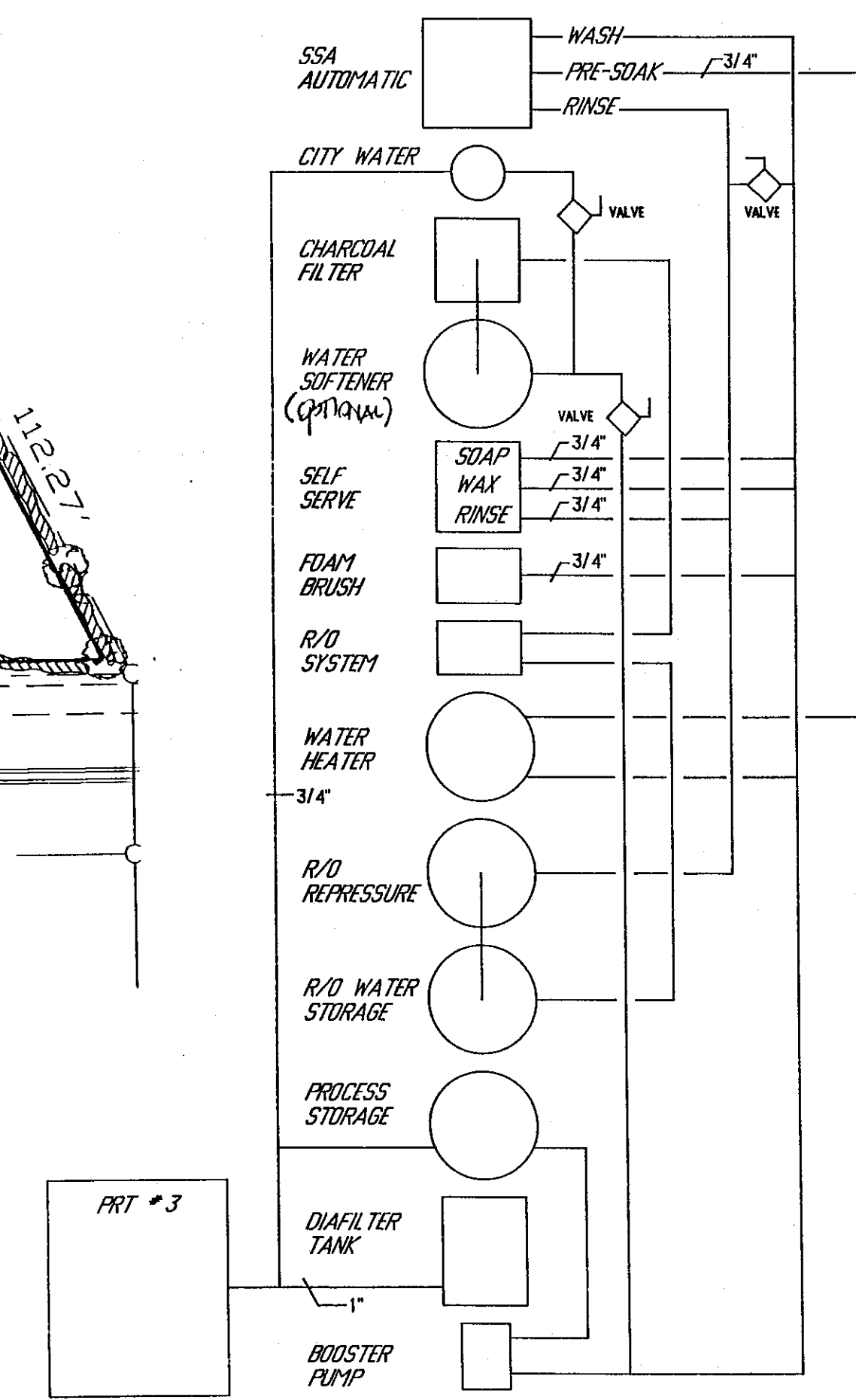
NOTE #3: TIME CLOCK IS TO BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. TIME CLOCK IS MANUFACTURED BY INTERMATIC AND DISTRIBUTED BY GRAINGER, INC. STOCK #1XC66.

(7) Circuit E-7 is a 20 amp, 230 VAC circuit. Direct connect to Reverse Osmosis System and to Level Control Panel and level control float switch (SEE NOTE #2) as required.



LIGHTING FIXTURE LEGEND

- NEW SURFACE MOUNTED FLUORESCENT LIGHT FIXTURE 2 LAMP, F40W CW/SS LAMPS WITH ACRYLIC DIFFUSER, 120V, SURFACE MOUNTED MANUFACTURER: HUBBELL # ED5042R-PACA-S1 (OR EQUIVALENT)
- NEW NEW WALL MOUNTED HID LIGHT FIXTURE 1 LAMP, 175 W METAL HALIDE W/ POLYCARBONATE DIFFUSER, 120V, WALL BRACKET MOUNTING (TIGHT TO SOFFIT / CEILING ABOVE) MANUFACTURER: HUBBELL # PVL-0175H-118 (OR EQUIVALENT)
- NEW CEILING FAN - SURFACE MOUNTED, 120 V CONTRACTOR'S CHOICE
- NEW GROUND LEVEL ACCENT LIGHTING - LIGHTS OF AMERICA 27W PL FLUORESCENT FLOOD LIGHT FIXTURE



NOTES:
ALL PIPING LINES SHOWN ARE 1 1/2" (UNLESS OTHERWISE NOTED)
ALL PIPING SHALL BE PVC - SCHEDULE 40 PIPING
PIPING LAYOUT SHOWN ABOVE IS DIAGNOSTIC ONLY
FIELD VERIFY ACTUAL LAYOUT WITH EQUIPMENT LOCATIONS
DURING EQUIPMENT INSTALLATION PROCESS

MECH ROOM EQUIPMENT PIPING LAYOUT
NOT TO SCALE

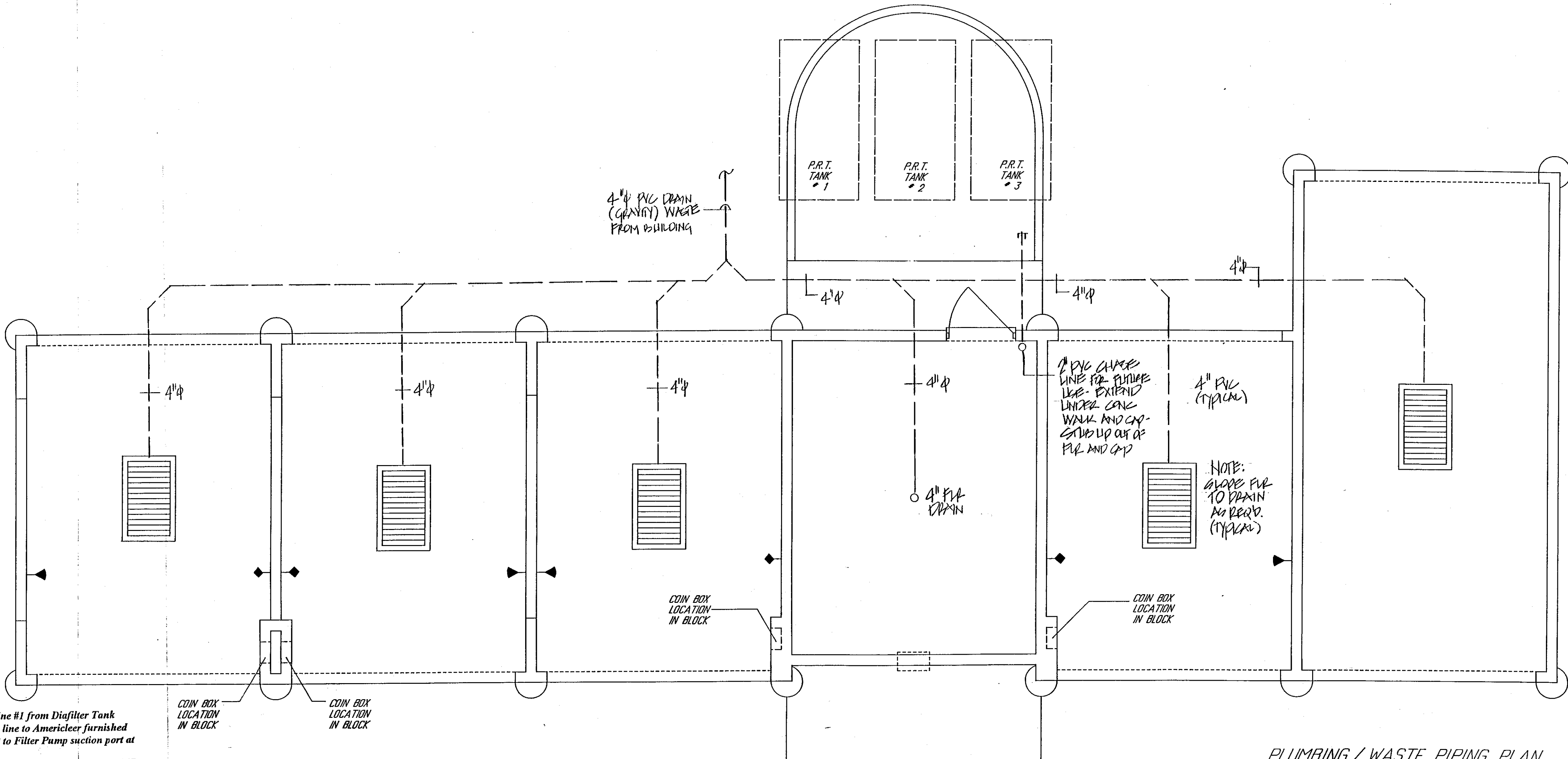
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RON FAULISI - BAYWASH OF ROCKLEDGE
US HIGHWAY NO 1 & PARK AVENUE ROCKLEDGE, FLORIDA

Signature: [Handwritten Signature]
Date: 9/3/97

DRAWN	BOB C
CHECKED	
SCALE	AS NOTED
JOB NO.	
DATE	JULY 21, 1997
SHEET	

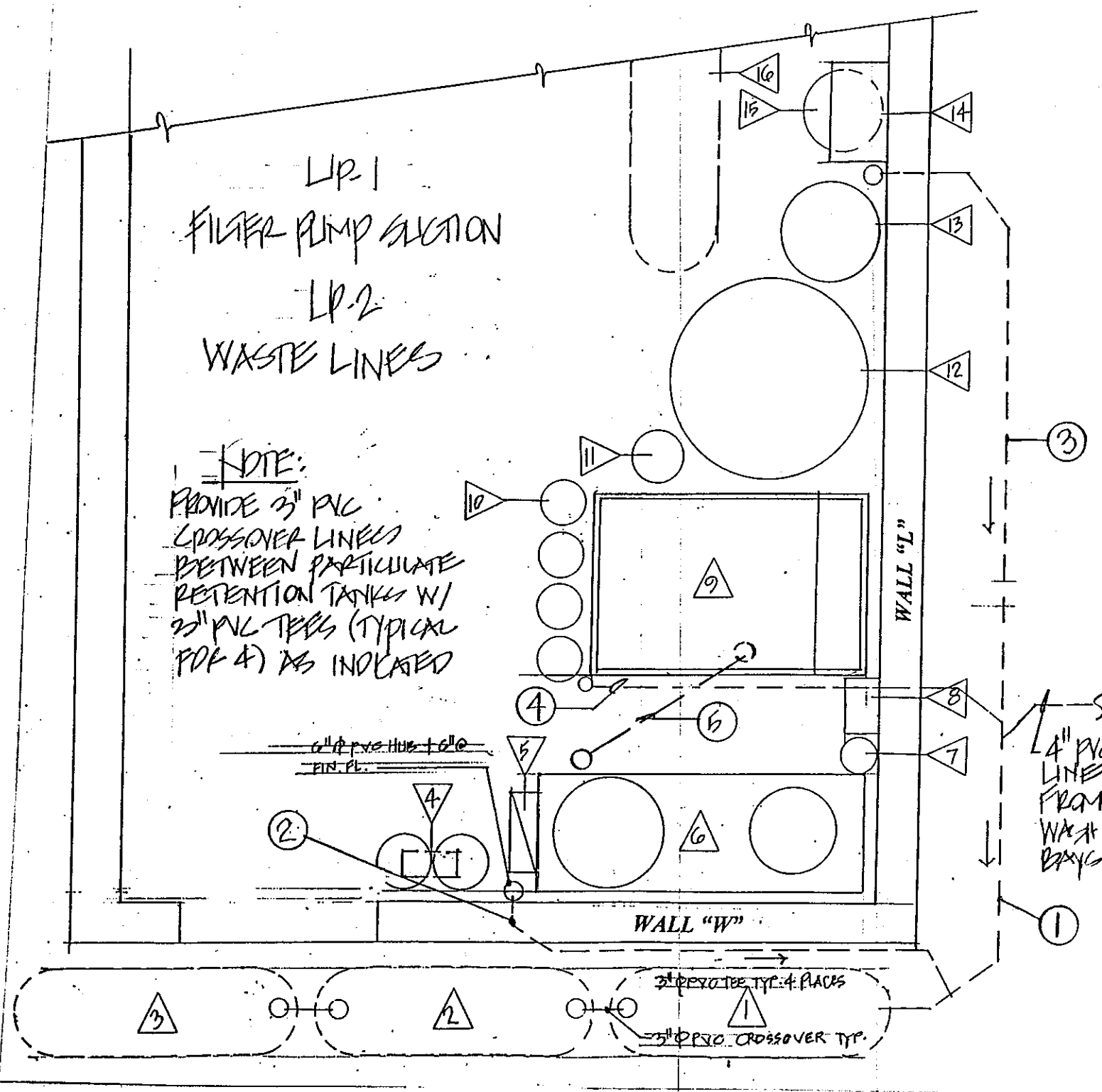
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OF SHEET

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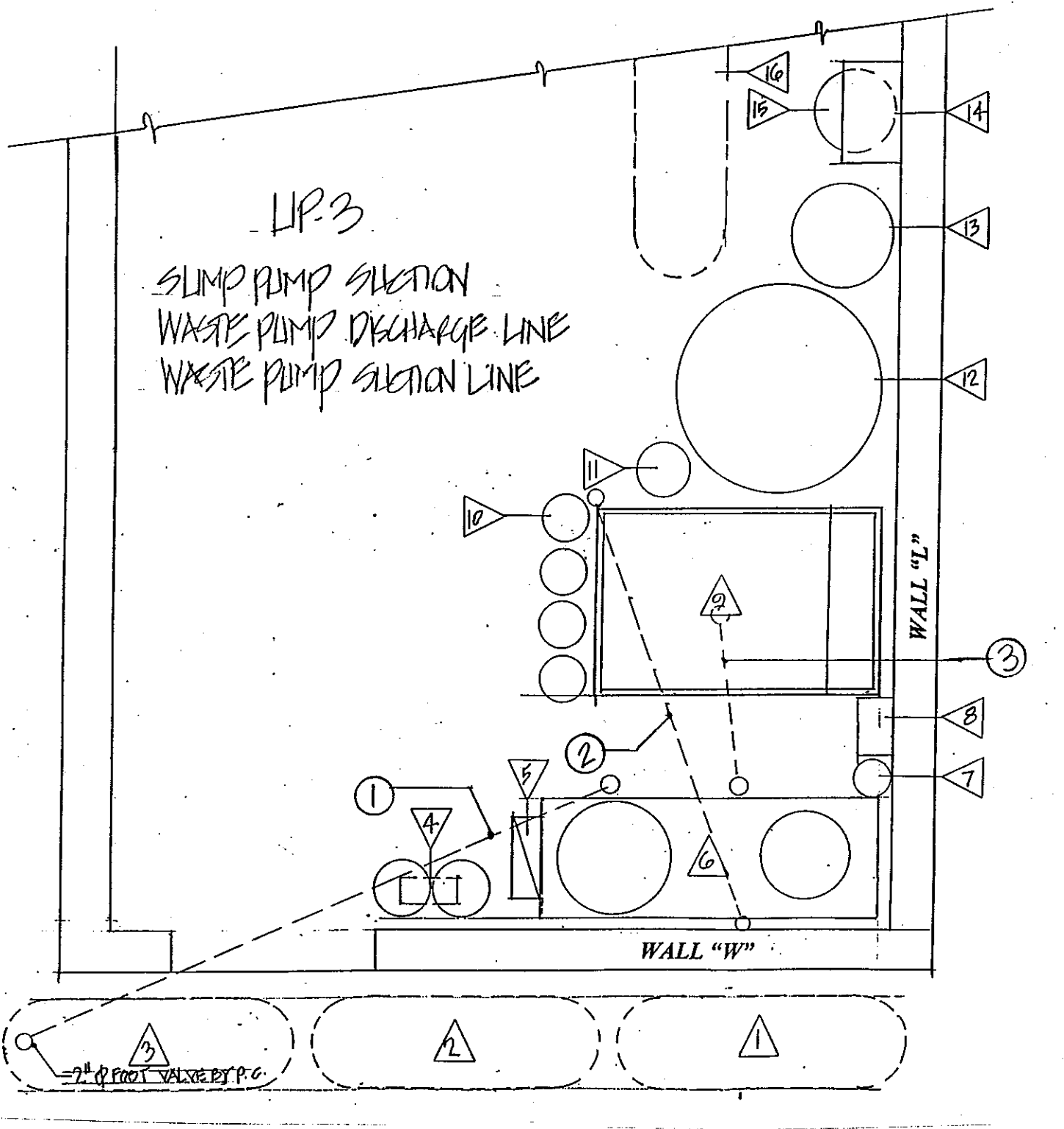


UP-1: (7) Install 3" underground PVC line #1 from Diafilter Tank to Pump Module. Connect 3" line to Americleer furnished manifold at Tank and connect to Filter Pump suction port at Pump Module.

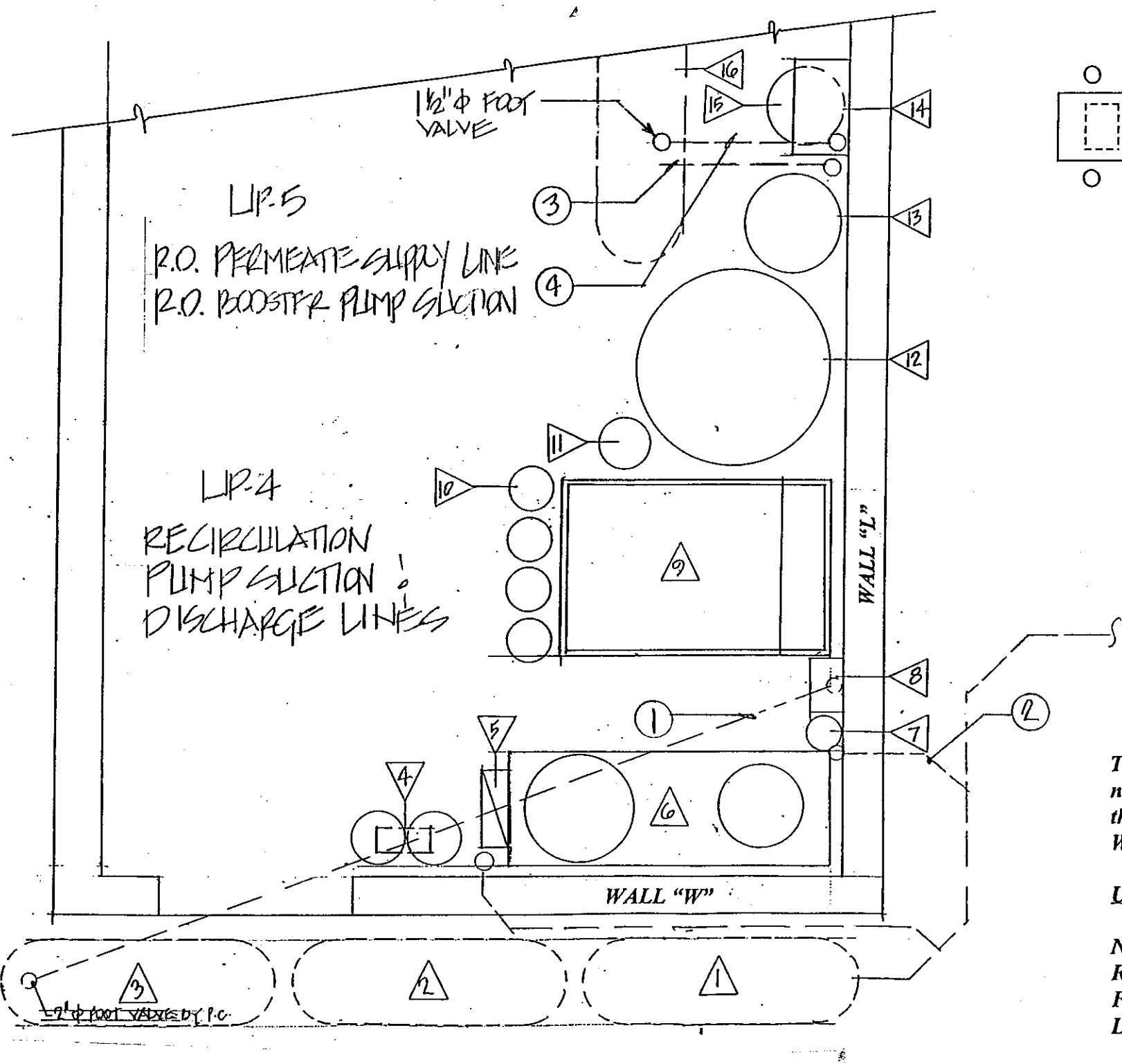
PLUMBING / WASTE PIPING PLAN
SCALE 1/4" = 1'-0"



- UP-2:
1. Install 4" PVC main gravity drain line #3 from wash bays to Particulate Retention Tank #1. Connect the following gravity drain lines to line #3:
 2. Install 3" PVC gravity line #2 with 6" PVC hub to line #3.
 3. Install 2" PVC gravity line #4 from R.O. System and connect to line #3.
 4. Install 2" PVC pressure line #5 from Separator Tank discharge port to drain line #3.



- UP-3:
1. Install 2" PVC suction line #6 with 2" foot valve from Particulate Retention Tank #3 to suction port of Sump Pump located on Pump Module.
 2. Install 2" PVC line #7 from discharge port of Waste Pump to Separator Tank inlet.
 3. Install 3" PVC line #8 from Diafilter Tank drain to suction port of Waste Pump.



- UP-4:
1. Install 2" PVC pressure line #9 from Particulate Retention Tank #3 to suction port of Recirculation Pump. Install 2" foot valve in PRT #3.
 2. Install 2" PVC pressure line #10 from Ozone Contactor Module discharge port to gravity waste line #3 (see sheet UP-1).
- UP-5:
1. Install 1" PVC pressure line #11 with from Reverse Osmosis System to R.O. Storage Tank.
 2. Install 1-1/2" PVC suction line #12 from R.O. Storage Tank to Booster Pump suction port. Install 1-1/2" foot valve at R.O.

- EQUIPMENT SCHEDULE
1. Particulate Retention Tank #1- 1,000 gallon polyethylene tank
 2. Particulate Retention Tank #2- 1,000 gallon polyethylene tank
 3. Particulate Retention Tank #3- 1,000 gallon polyethylene tank
 4. Deionization System
 5. Americleer Electrical Control Panel
 6. Americleer Pump Module
 7. Americleer Ozone Contactor Module
 8. Americleer Ozone Generator
 9. Americleer Diafilter Tank
 10. Stainless Steel Separator Tanks
 11. Reverse Osmosis Carbon Filter
 12. Processed Water Storage Tank- 750 vertical polyethylene tank
 13. Hot Water Heater
 14. Reverse Osmosis System
 15. Reverse Osmosis Repressurization System
 16. Reverse Osmosis Permeate Water Storage Tank

PLUMBING INSTALLATION REQUIREMENTS

The following plumbing must be installed by the plumbing contractor including but not limited to PVC lines, ball valves, check valves and other components to complete the plumbing installation. All plumbing lines must be connected to the Americleer Water Reclamation Equipment as follows:

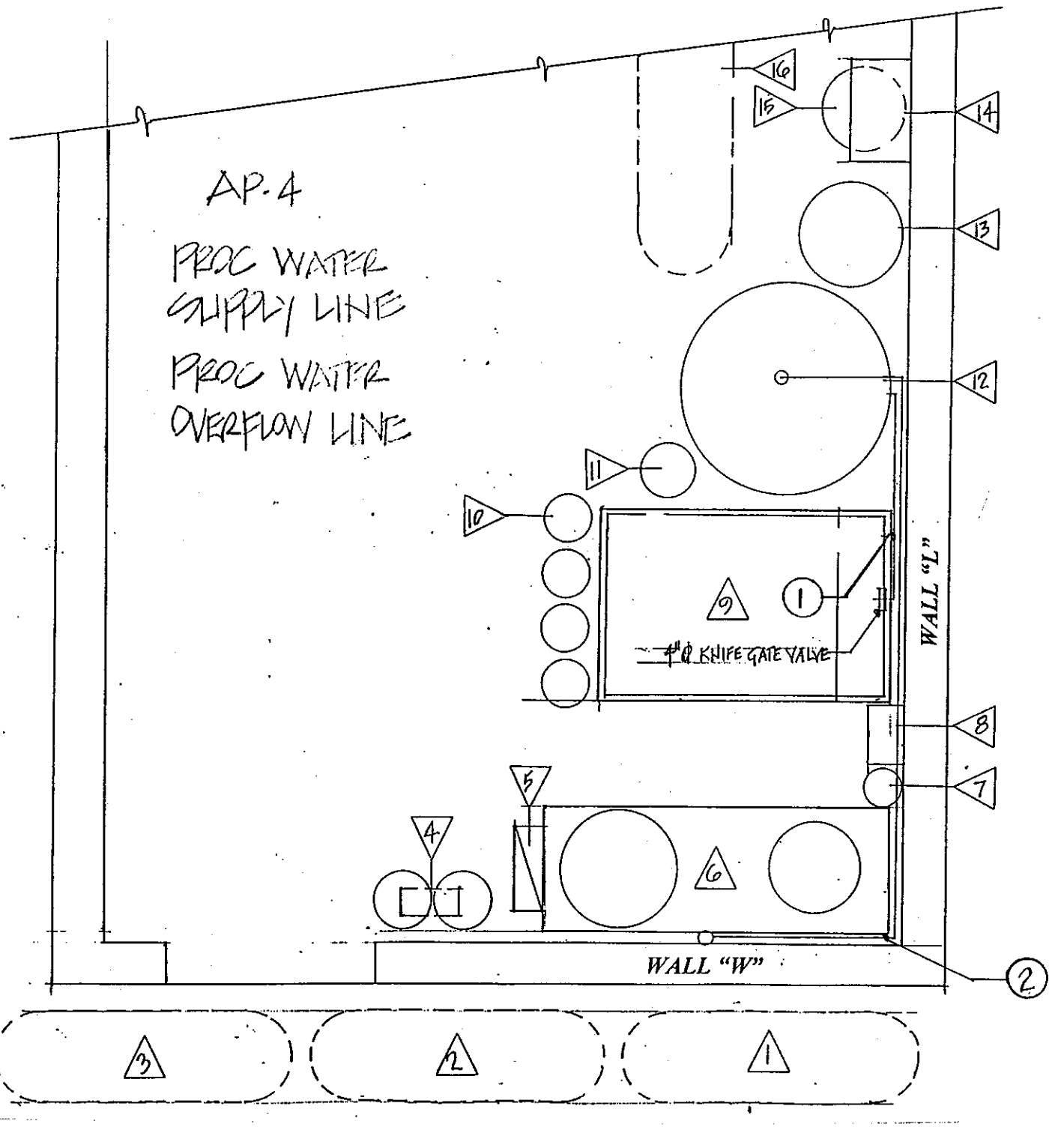
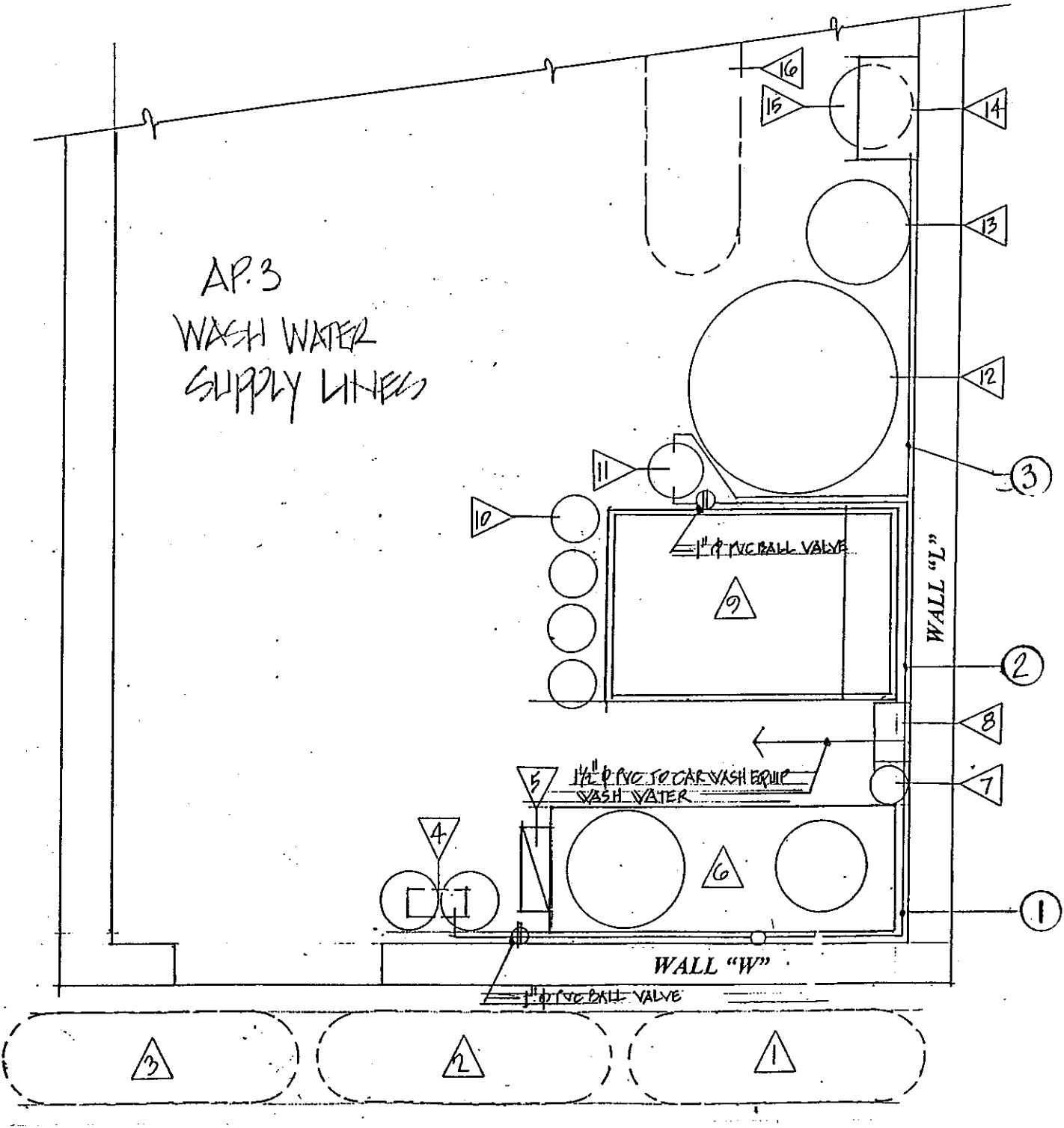
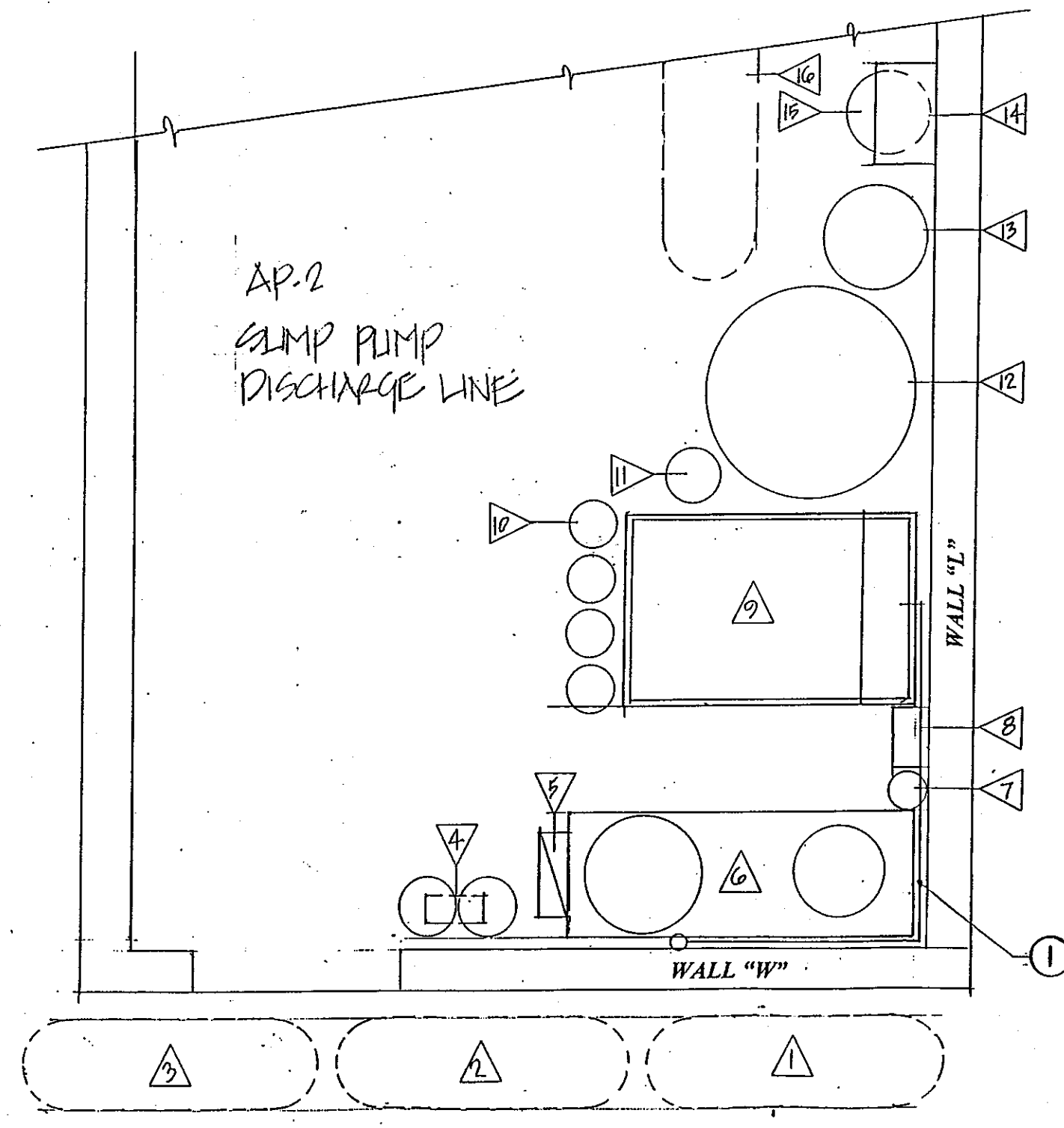
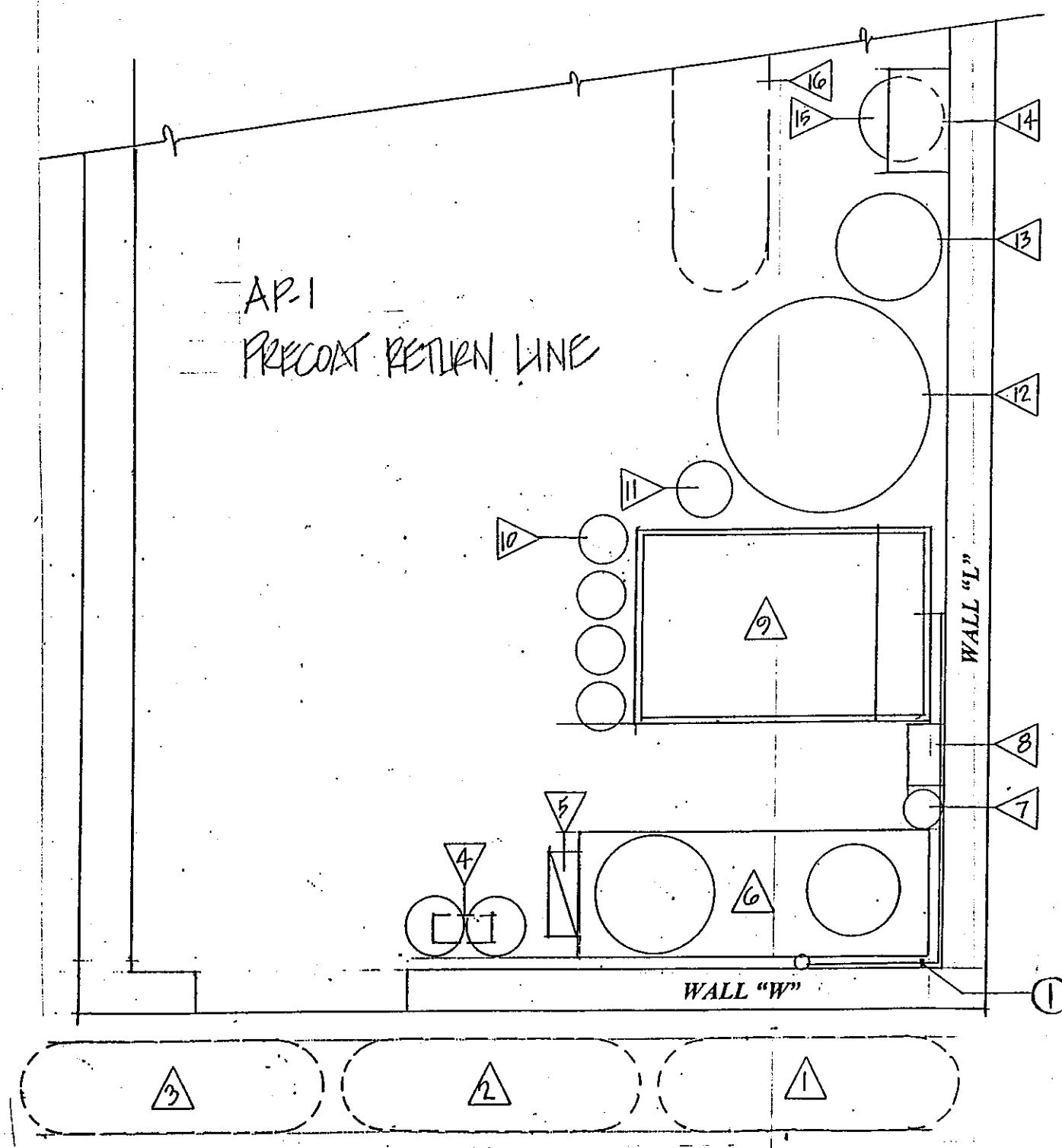
UNDERGROUND PLUMBING:

NOTE!!: ALL UNDERGROUND PLUMBING (UP) MUST BE CONNECTED TO RECLAIM COMPONENTS AND THIS SECTION SHALL INCLUDE THOSE FINAL CONNECTIONS TO COMPONENTS. PLUMBING CONTRACTOR MUST LABEL AND IDENTIFY ALL LINES STUBBED-UP AT FINISH FLOOR.

ENGINEERING & DESIGN CONCEPTS, INC.
1358 PALM BAY ROAD, NE PALM BAY, FLORIDA 32905 TEL (407) 727-2056 FAX (407) 727-8465
PROPOSED NEW BUILDING PLANS / NOTES / DETAILS FOR:
RON FAULISI - BAYWASH OF ROCKLEDGE
US HIGHWAY NO 1 & PARK AVENUE ROCKLEDGE, FLORIDA

Approved by: [Signature]
9/15/97

DRAWN	BOB C
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SCALE	AS NOTED
JOB NO.	
DATE	JULY 21, 1997
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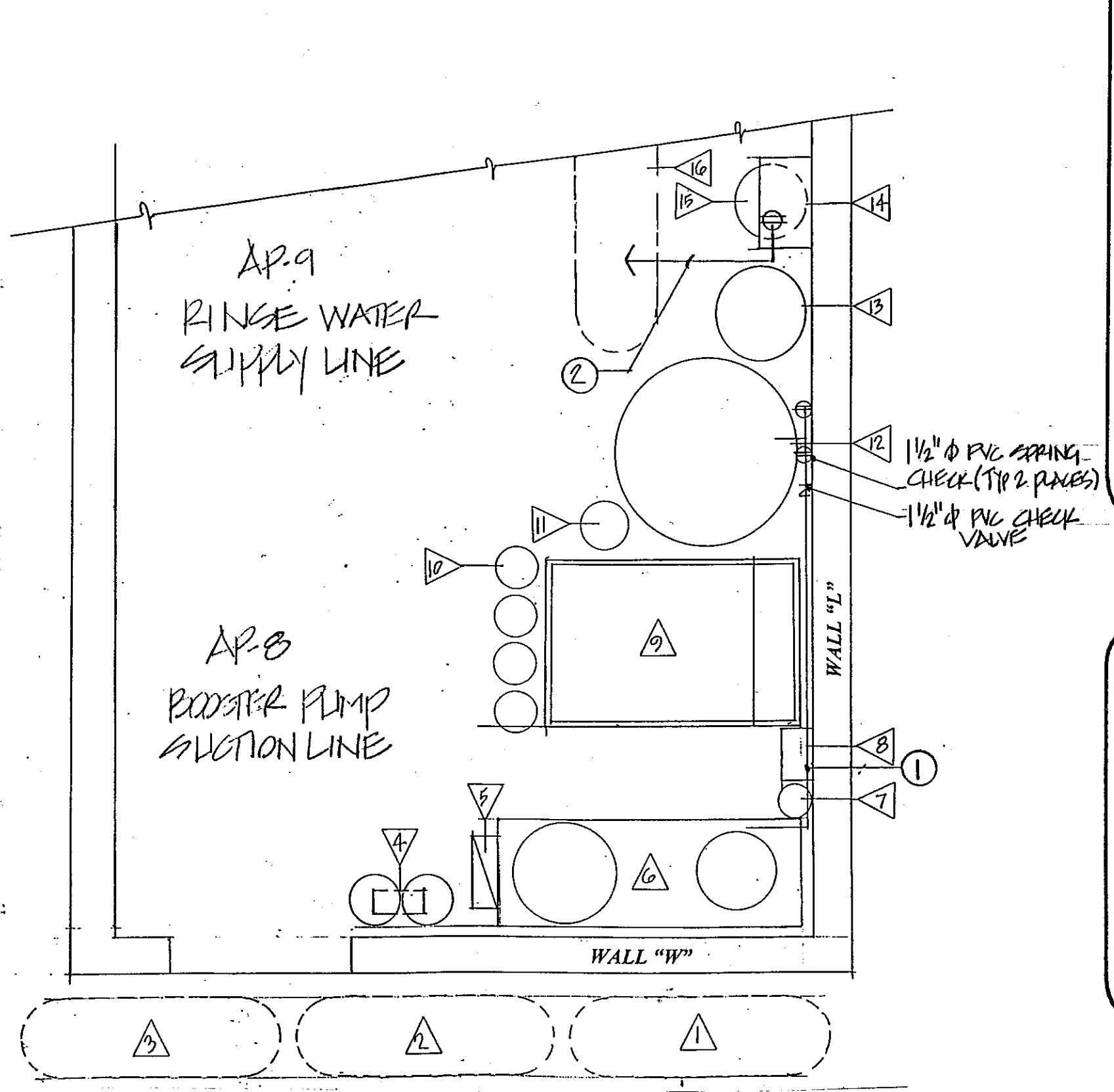
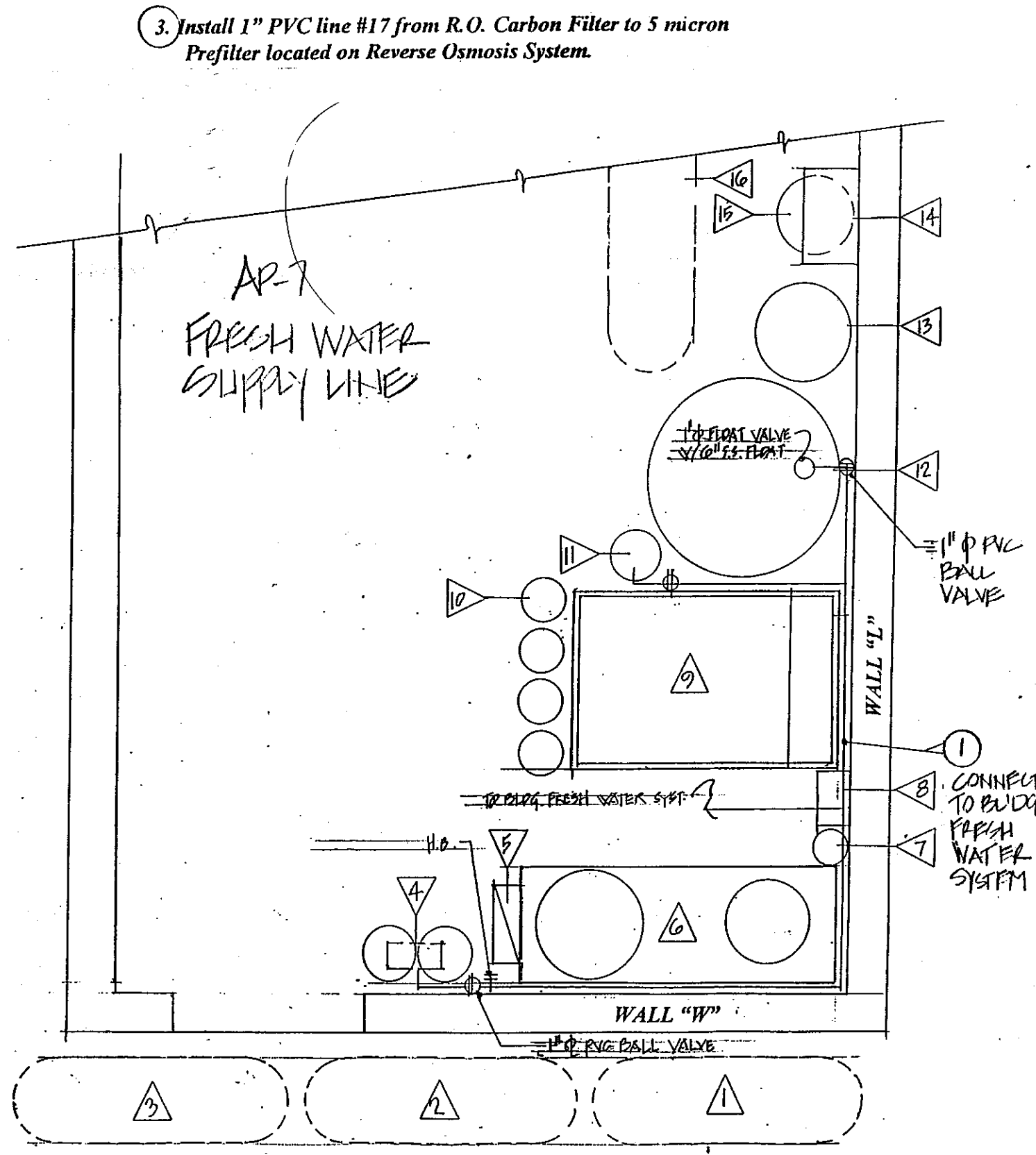
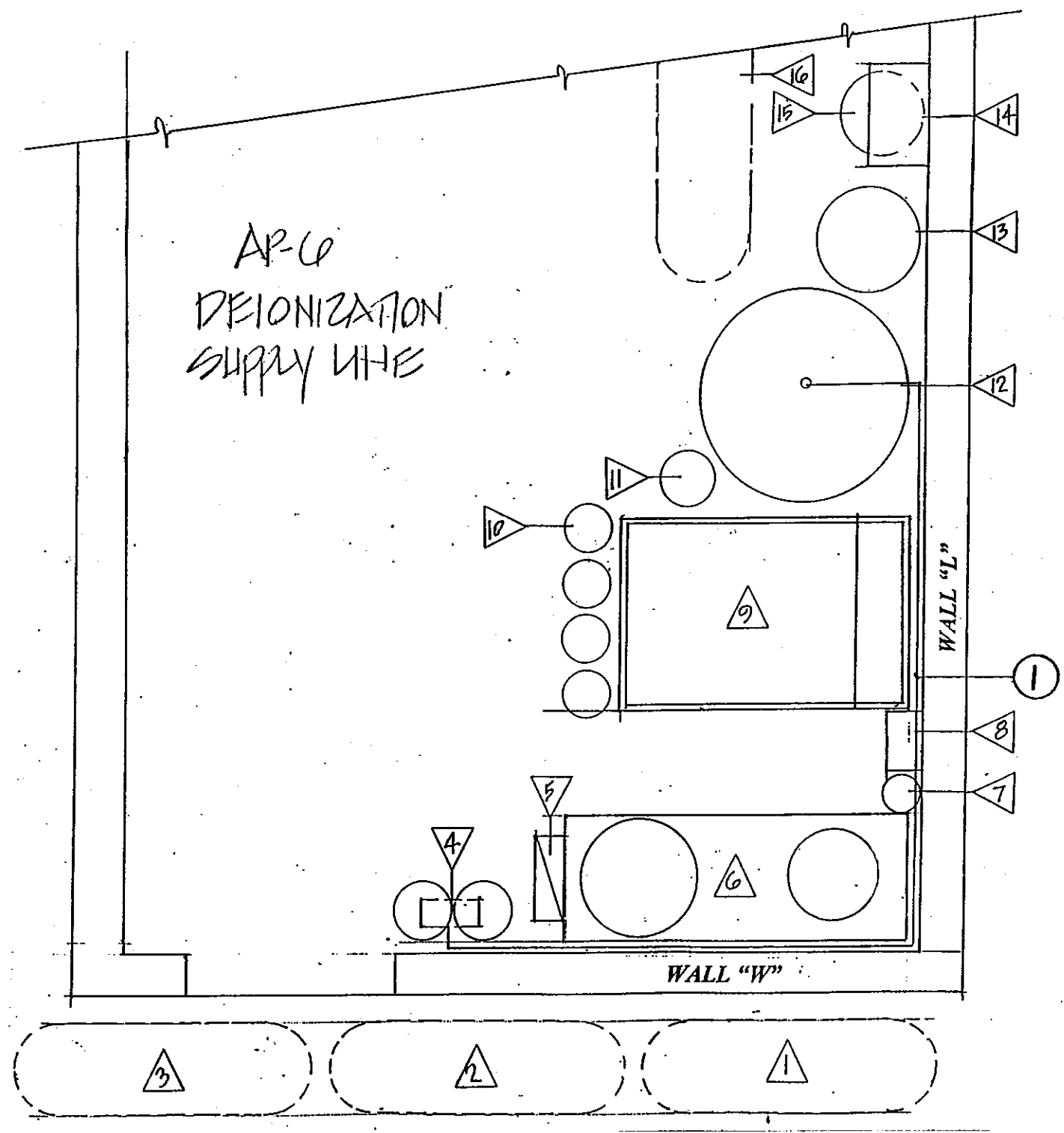
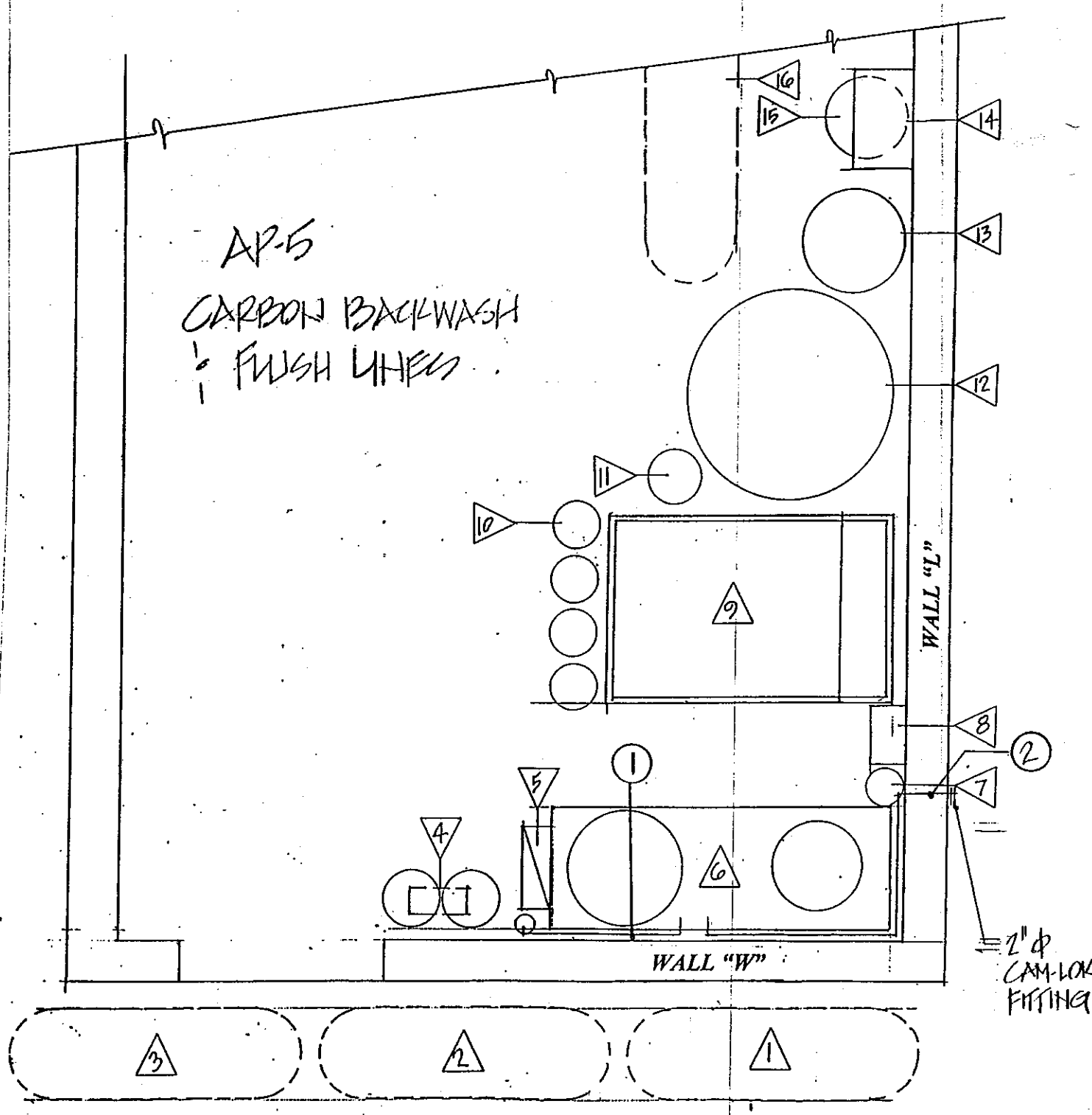


AP-1: 1. Install 2" PVC line #13 from Diafilter Tank inlet to Pump Module. Connect 2" line to Americleer furnished Precoat Manifold at Tank and connect to Precoat Return port at Pump Module.

AP-2: 1. Install 2" PVC line #14 from Sump Pump discharge port to raw water inlet port at Diafilter Tank.

AP-3: 1. Install 1-1/2" PVC line #15 from Booster Pump discharge port to car wash equipment (wash water). Install 1" PVC line from this discharge port to Deionization System with 1" PVC ball valve as indicated.
2. Install 1" PVC line #16 from Line #15 to R.O. Carbon Filter. Install 1" PVC ball valve as indicated.
3. Install 1" PVC line #17 from R.O. Carbon Filter to 5 micron Prefilter located on Reverse Osmosis System.

AP-4: 1. Install 2" PVC line #18 from Filter Mode discharge port to top center of Processed Water Storage Tank.
2. Install 4" PVC line #19 from Processed Water Storage Tank overflow port to Diafilter Tank. Install 4" knife gate valve as indicated.



AP-5: 1. Install 2" PVC line #20 from Carbon Filter backwash port to 6" PVC hub.
2. Install 2" PVC line #21 from Carbon Flush discharge port to outside of building. Install 2" Kam-Lok fitting for future hose connection.

AP-6: 1. Install 1" pressure PVC line #22 from Deionization System outlet port to top off-center of Processed Water Storage Tank.

AP-7: 1. Install 1" pressure fresh water line #23 from building fresh water supply system to: Deionization System, R.O. Carbon Filter and Processed Water Storage Tank. Install hose bibb, PVC ball valves and float valve as indicated.

AP-8: 1. Install 1-1/2" PVC suction line #24 from Processed Water Storage outlet port to Booster Pump suction port. Install spring check valve and ball valves as indicated.
AP-9: 2. Install 1-1/2" PVC line from R.O. Booster Pump discharge port to car wash equipment (rinse water).

EQUIPMENT SCHEDULE

- 1. Particulate Retention Tank #1- 1,000 gallon polyethylene tank
- 2. Particulate Retention Tank #2- 1,000 gallon polyethylene tank
- 3. Particulate Retention Tank #3- 1,000 gallon polyethylene tank
- 4. Deionization System
- 5. Americleer Electrical Control Panel
- 6. Americleer Pump Module
- 7. Americleer Ozone Contactor Module
- 8. Americleer Ozone Generator
- 9. Americleer Diafilter Tank
- 10. Stainless Steel Separator Tanks
- 11. Reverse Osmosis Carbon Filter
- 12. Processed Water Storage Tank- 750 vertical polyethylene tank
- 13. Hot Water Heater
- 14. Reverse Osmosis System
- 15. Reverse Osmosis Repressurization System
- 16. Reverse Osmosis Permeate Water Storage Tank

ABOVE GROUND PLUMBING:

NOTE!! ALL PLUMBING SHALL BE SCHEDULE 40 PVC WITH PVC VALVES, CHECK VALVES ETC. ALL PLUMBING MUST BE SECURED TO WALL WITH APPROVED FASTENERS. ALL LINES MUST BE CONNECTED TO COMPONENTS AS DESCRIBED:

REVISIONS

ENGINEERING & DESIGN CONCEPTS, INC.

1398 PALM BAY ROAD, NE PALM BAY, FLORIDA 32905 TEL (407) 727-2056 FAX (407) 727-0465

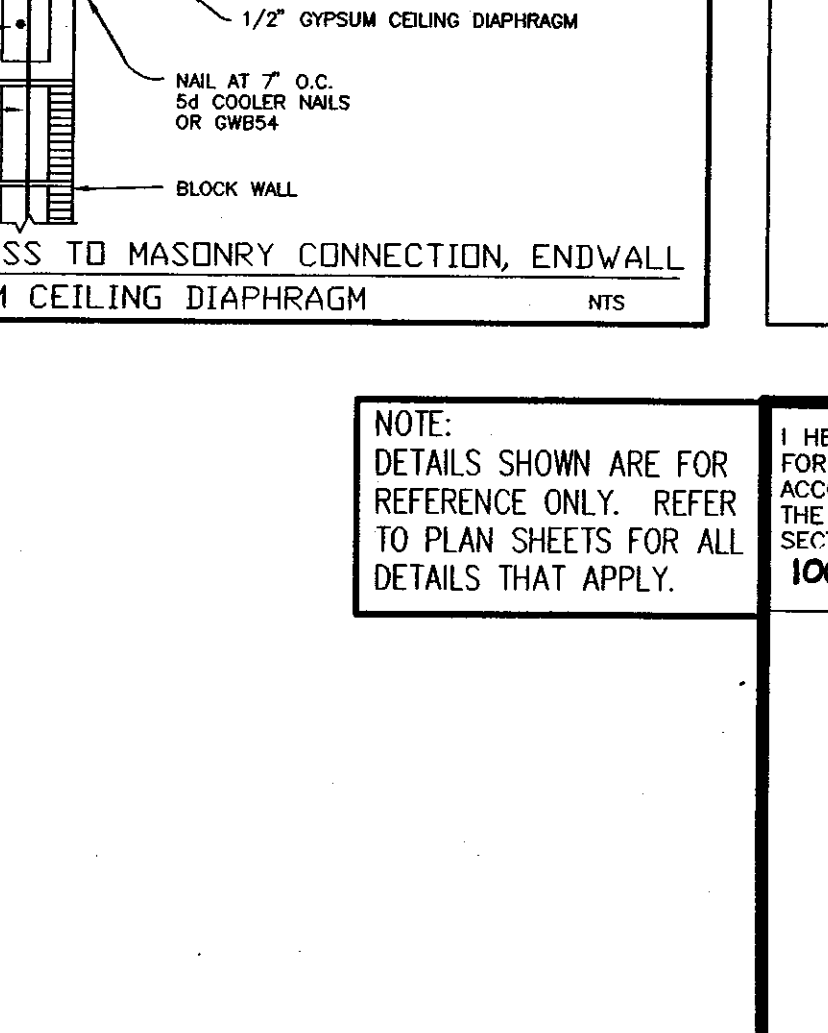
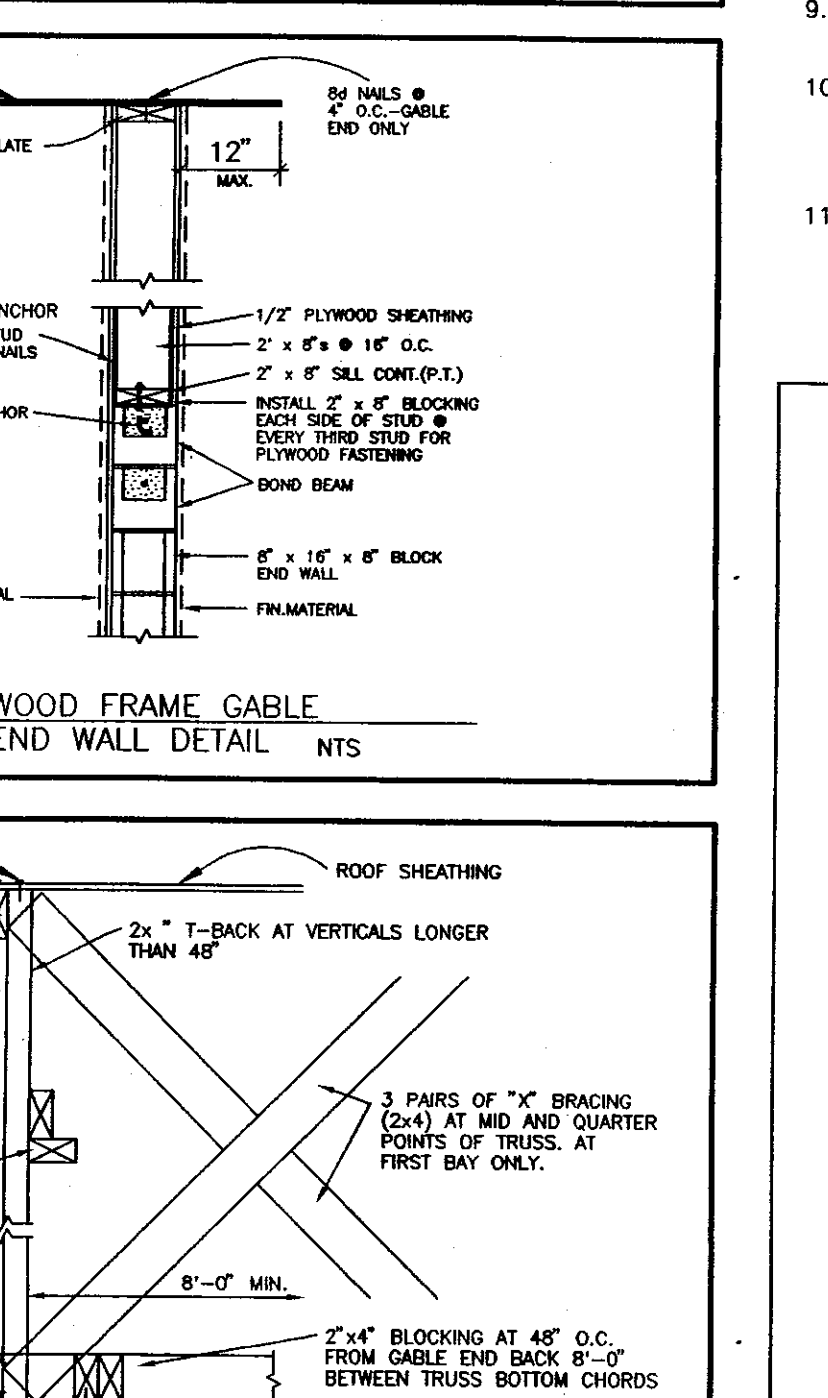
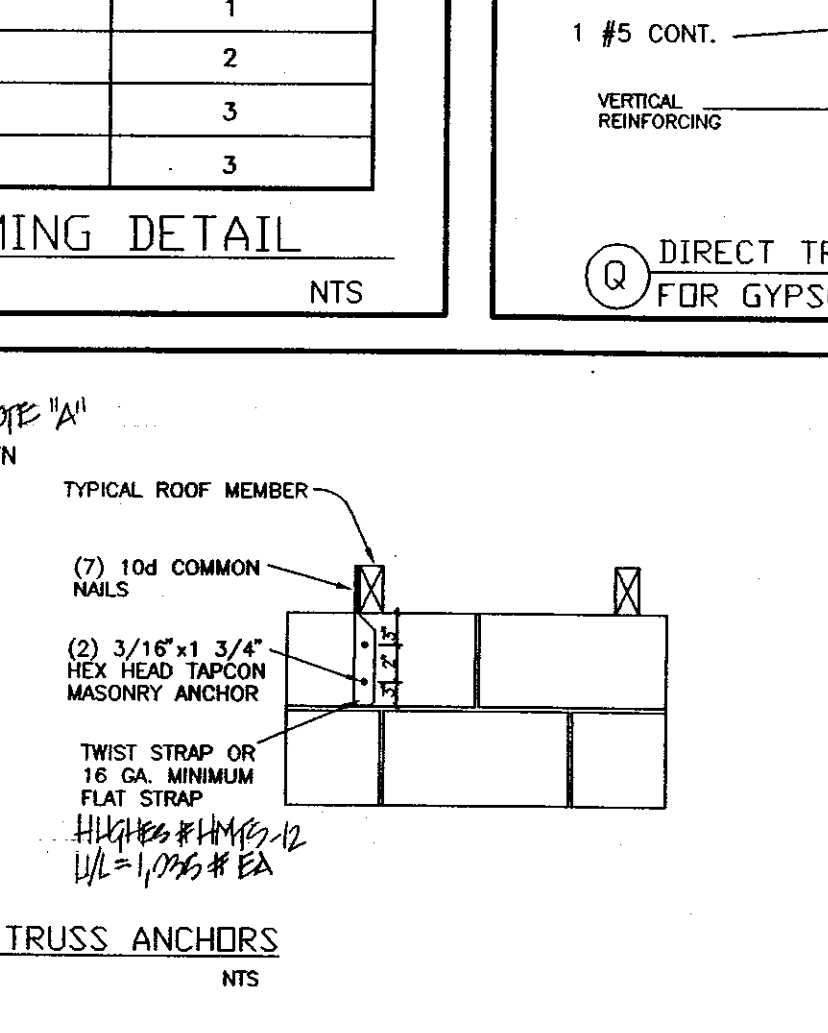
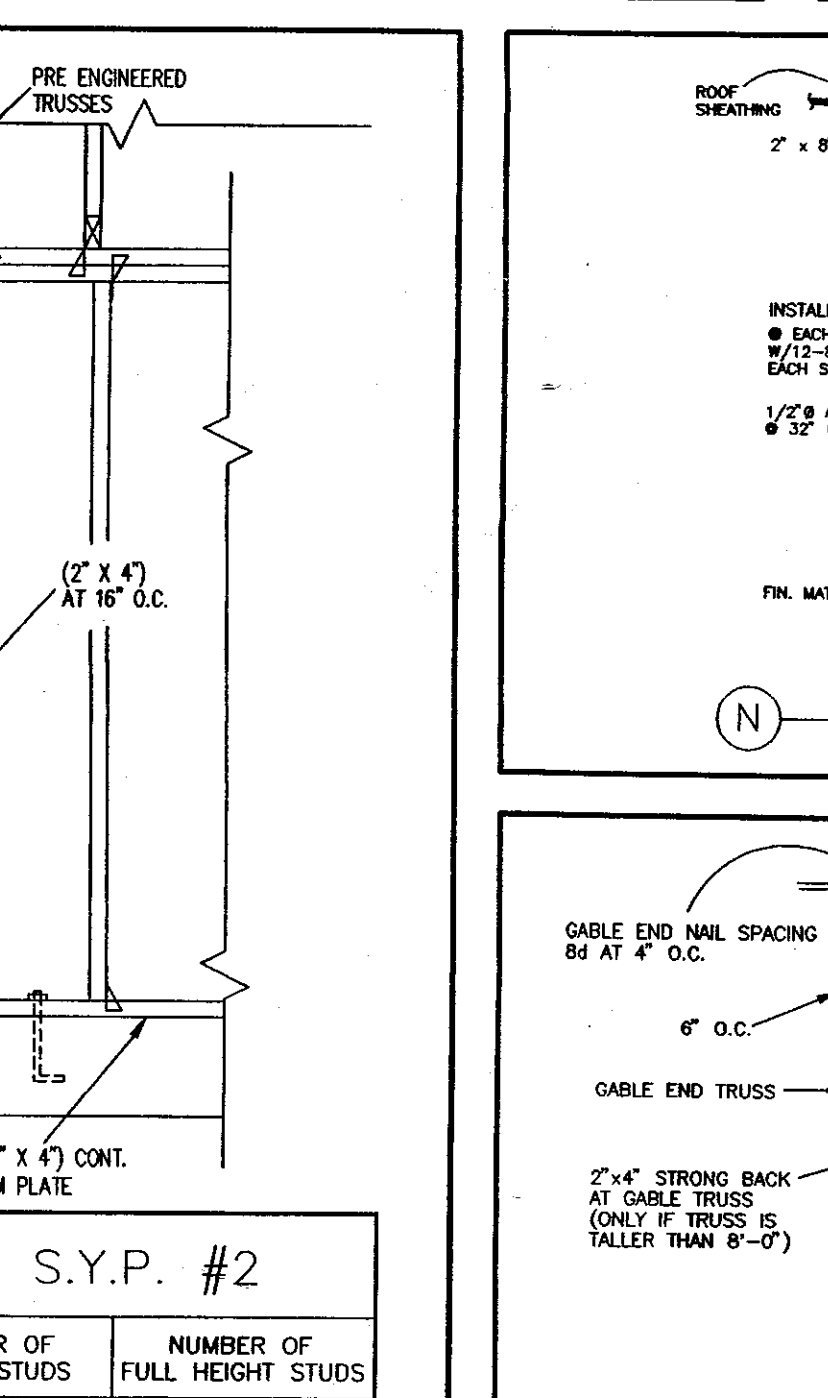
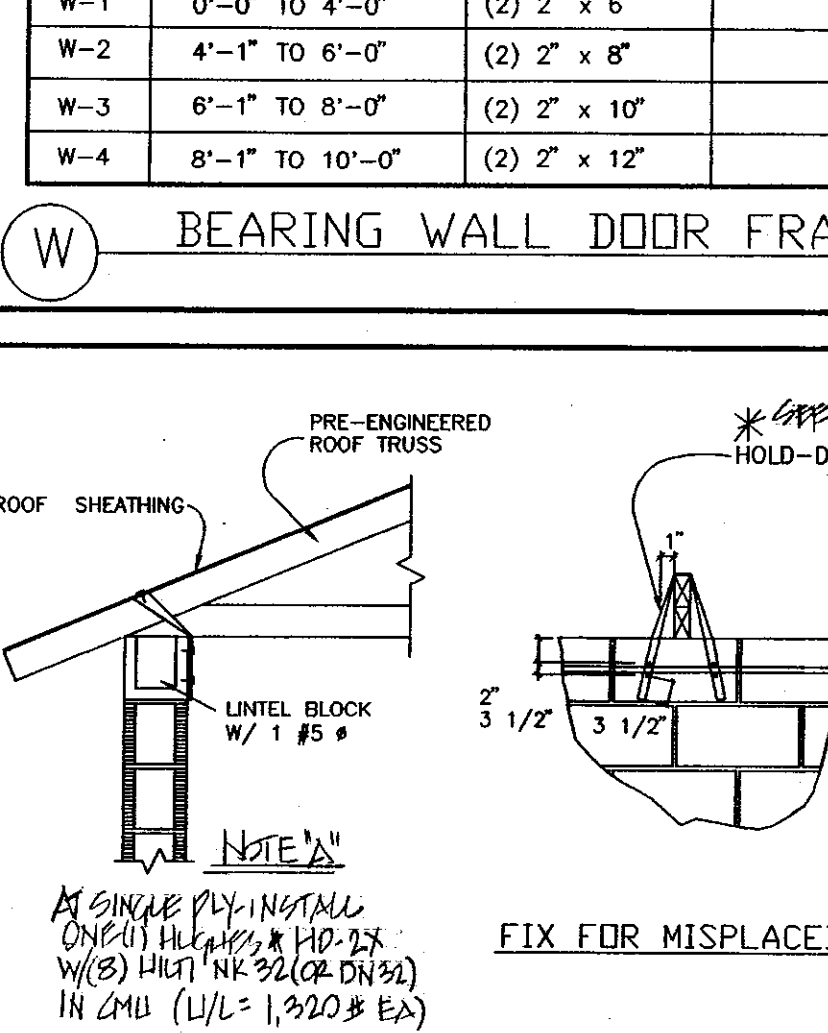
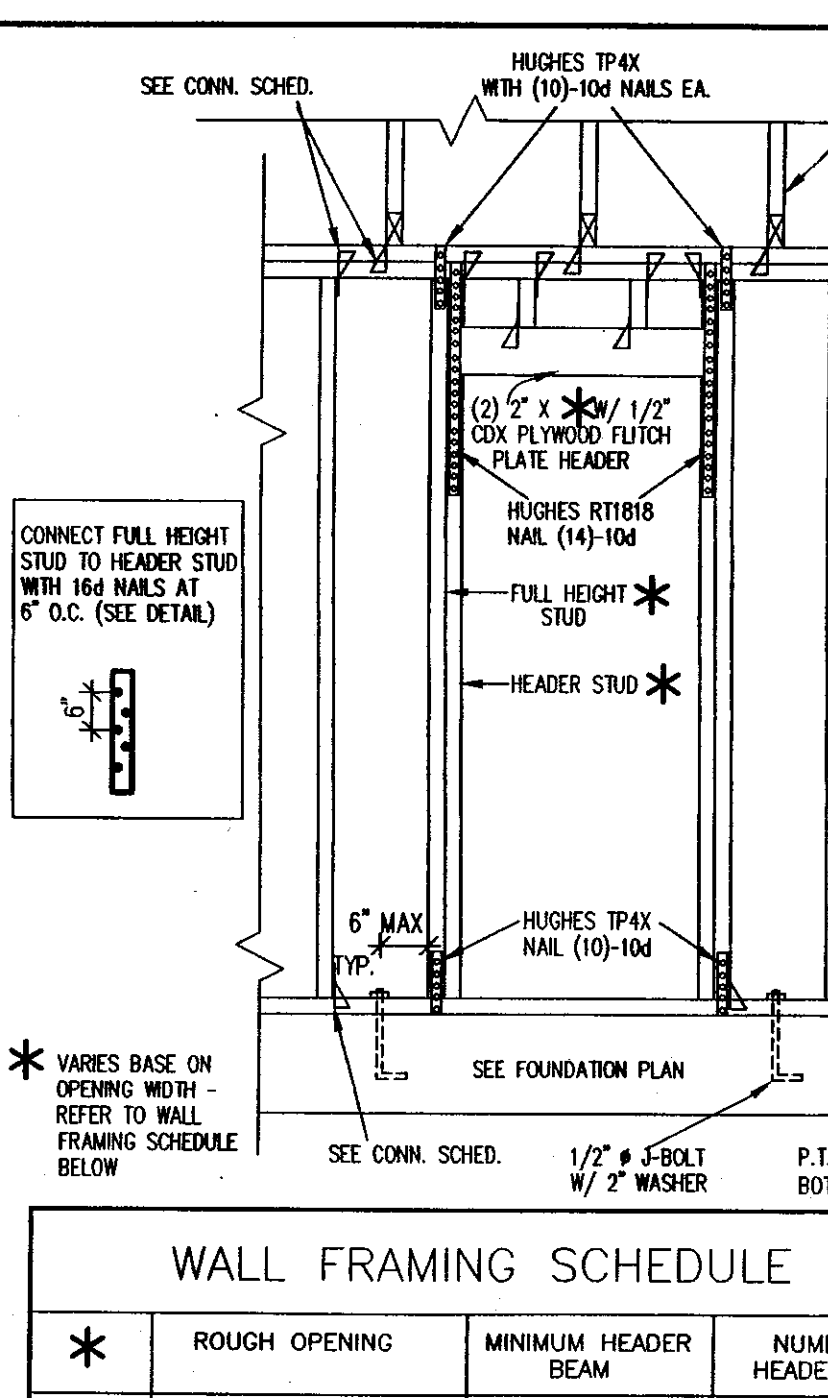
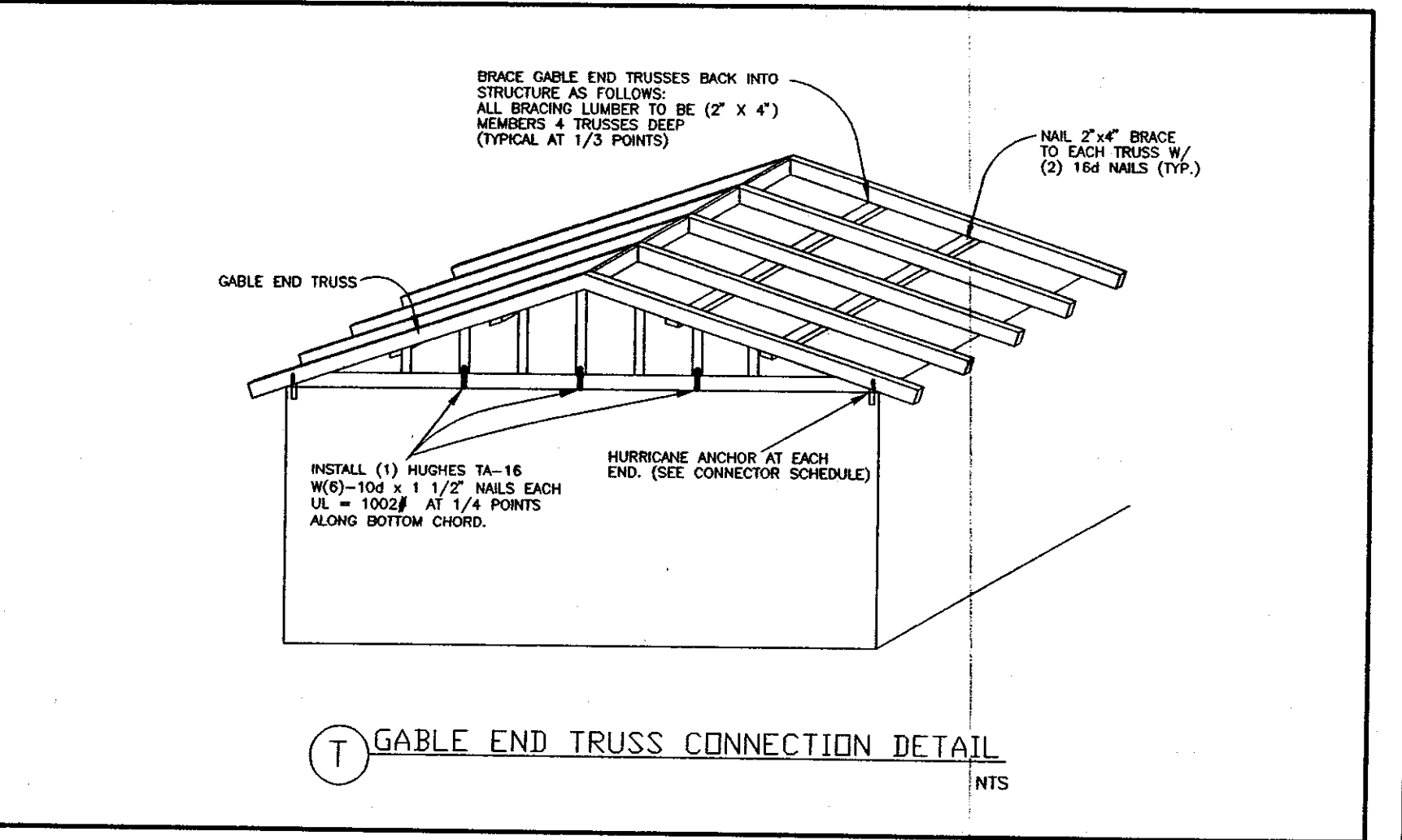
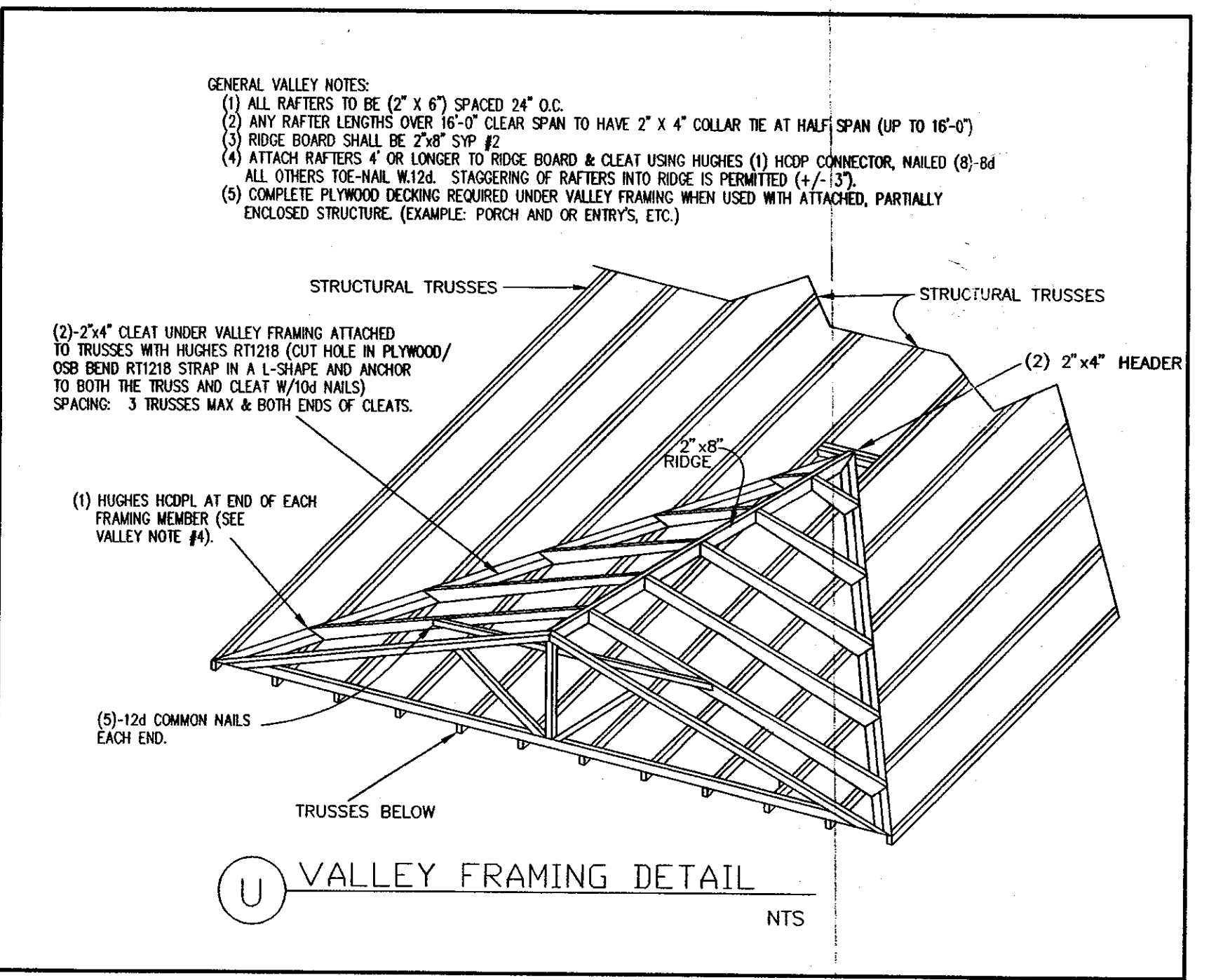
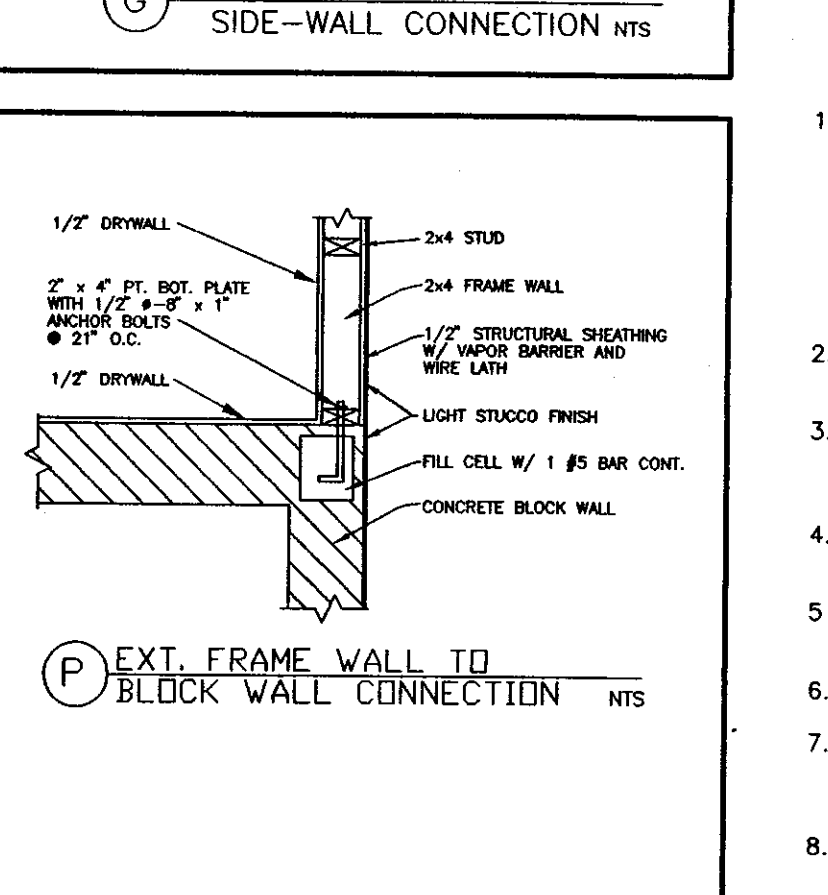
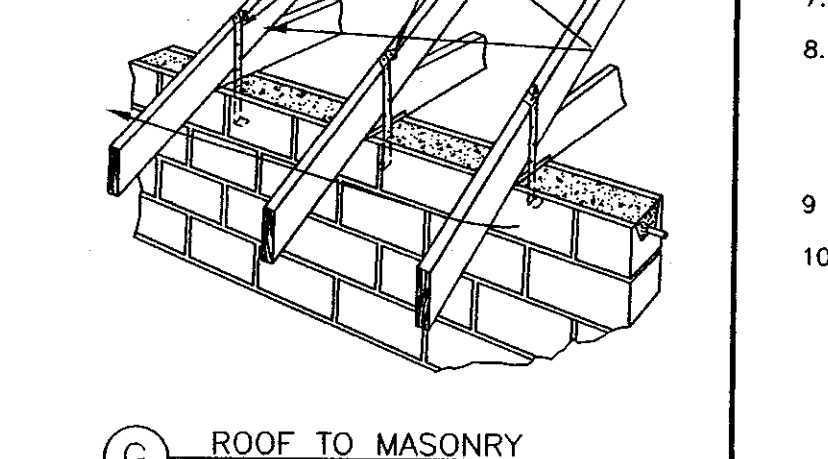
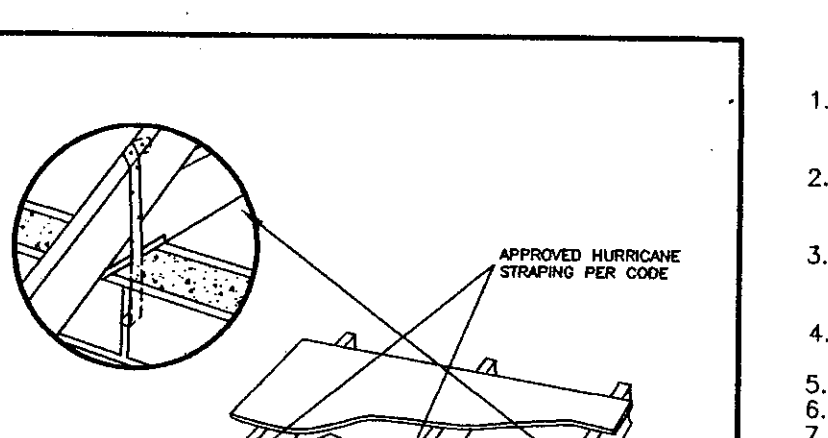
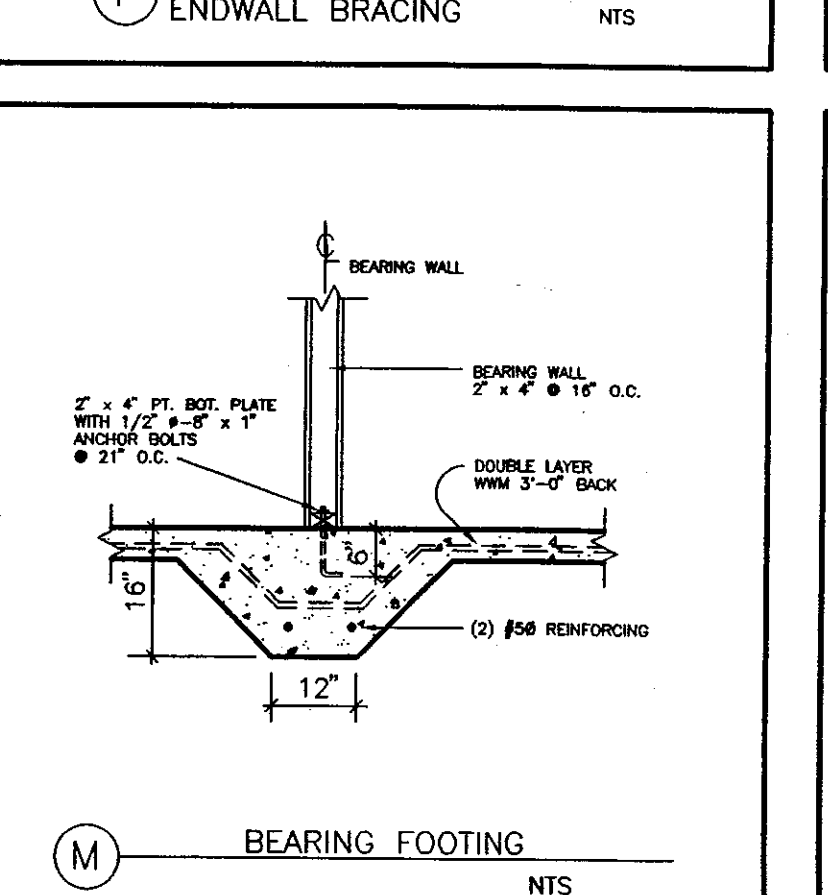
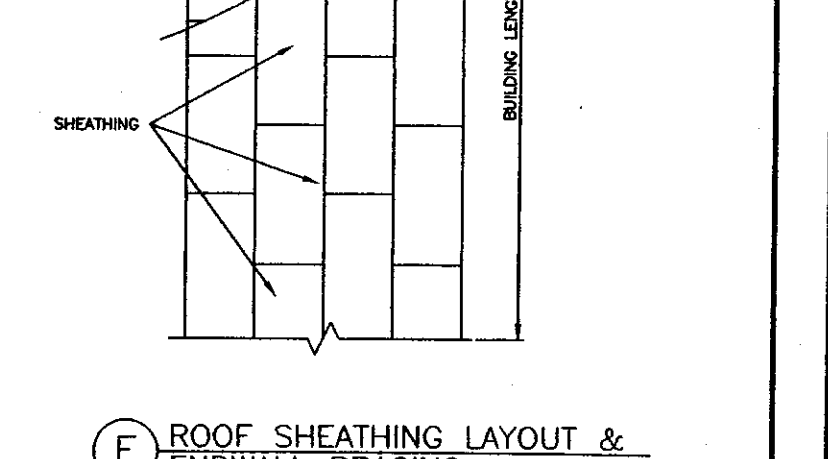
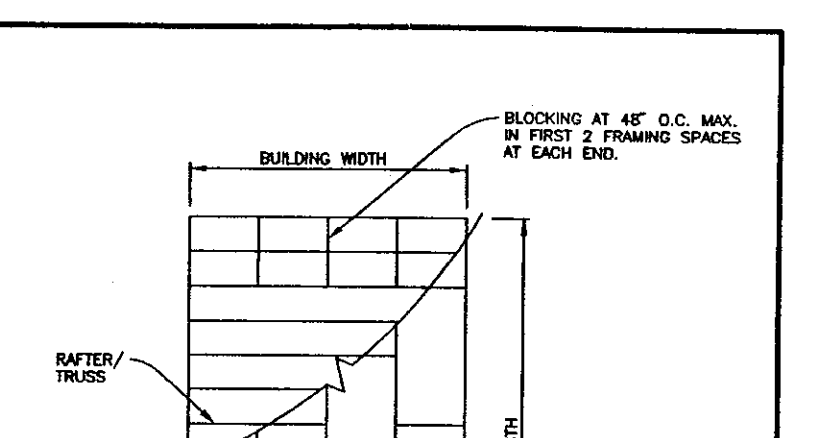
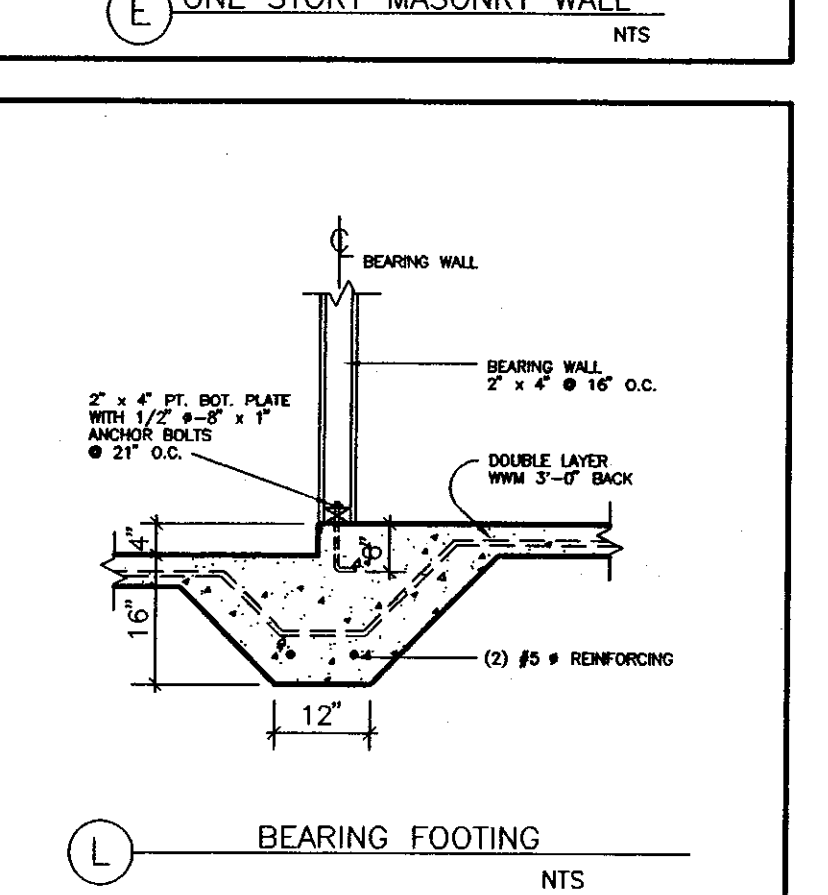
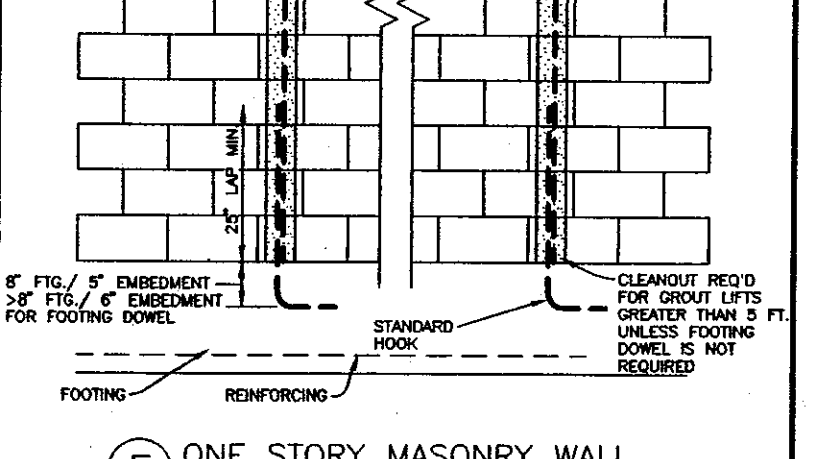
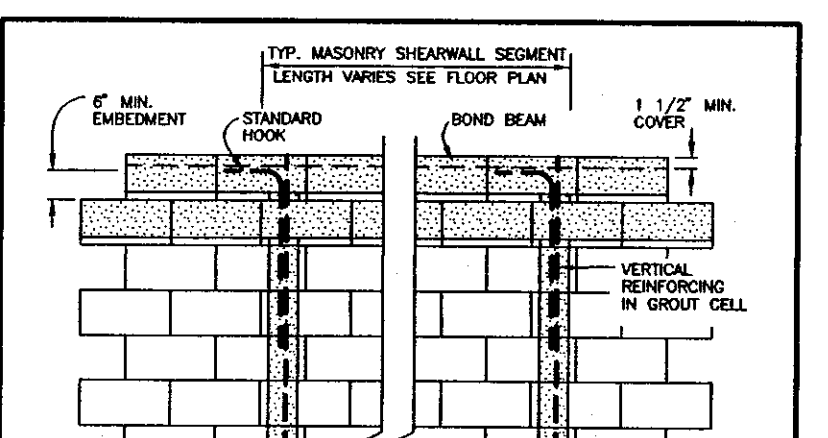
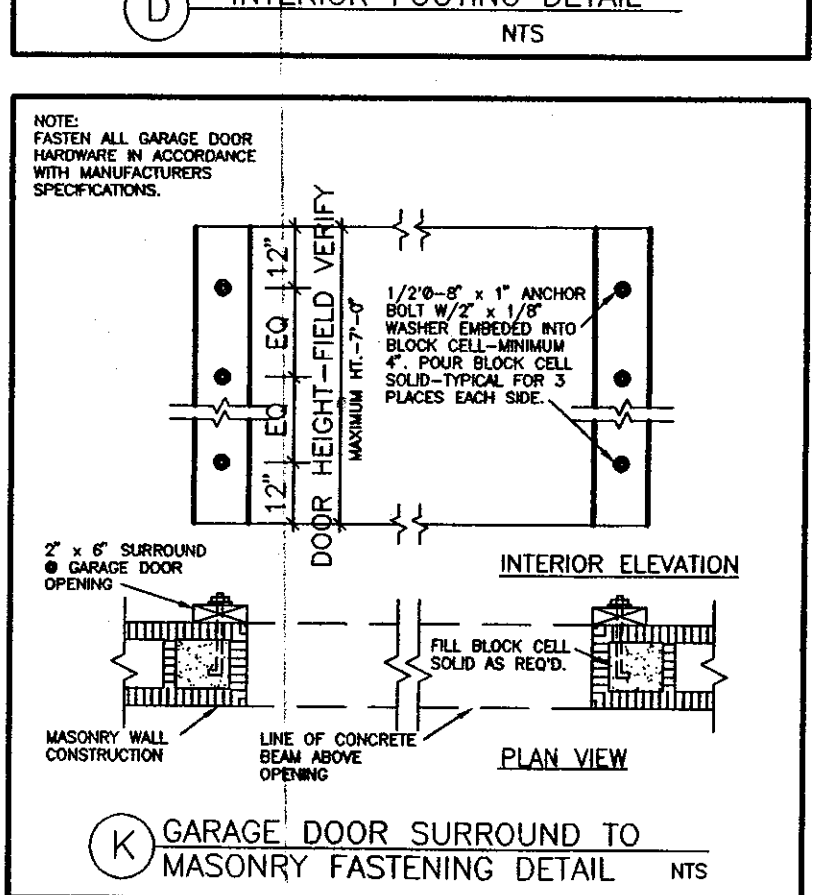
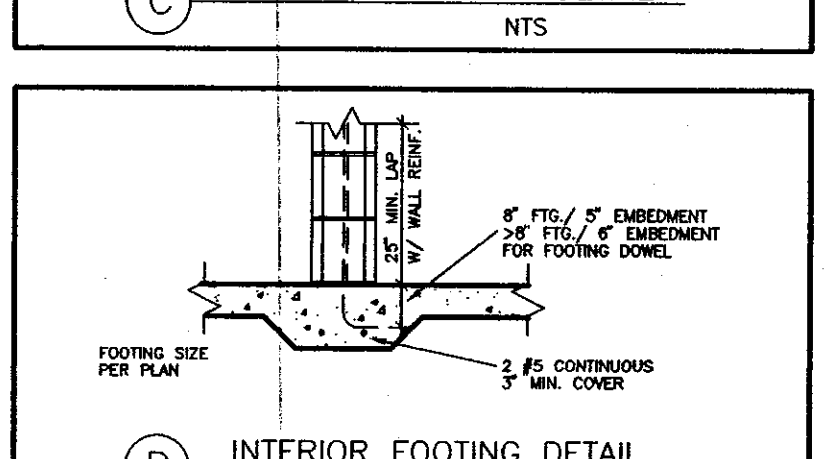
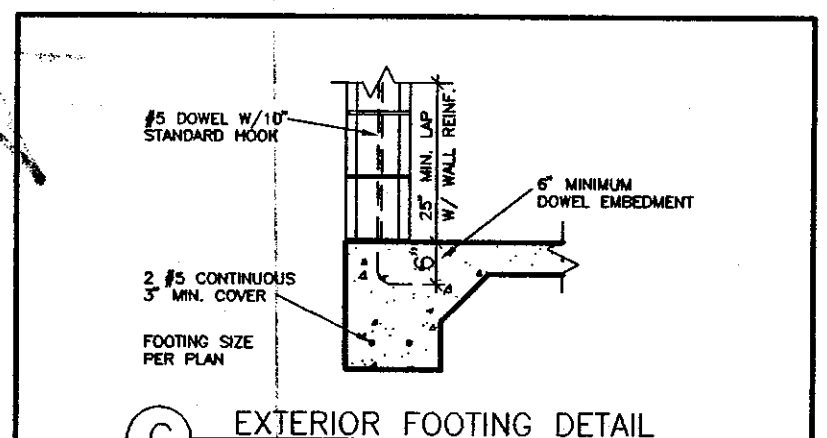
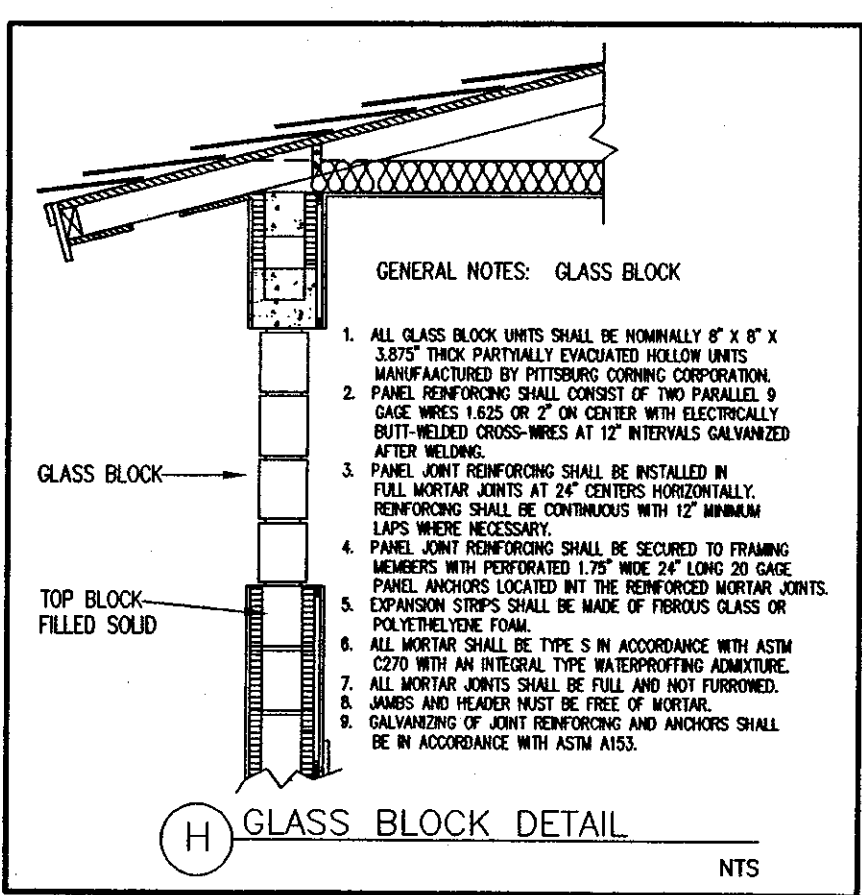
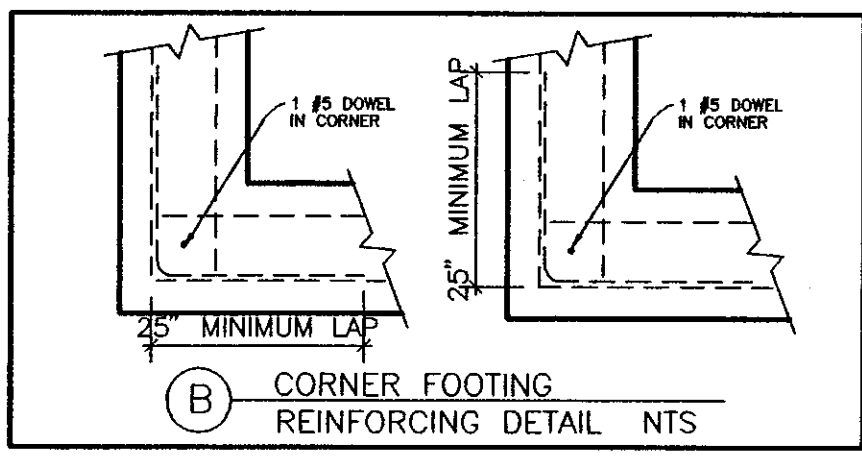
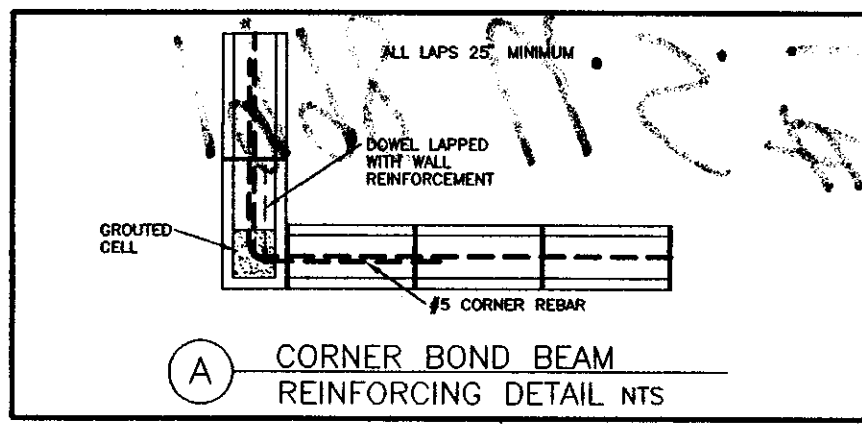
PROPOSED NEW BUILDING PLANS / NOTES / DETAILS FOR:
RON FAULLISI - BAYWASH OF ROCKLEDGE
US HIGHWAY NO 1 & PARK AVENUE ROCKLEDGE, FLORIDA

Johnnie M. Dyer
5/16/97

DRAWN BOB C
CHECKED
SCALE AS NOTED
JOB NO.
DATE JULY 21, 1997
SHEET

A - 7

OF SHEET



GENERAL NOTES: MASONRY

- ALL CONSTRUCTION WORKMANSHIP AND MATERIALS SHALL CONFORM TO "SPECIFICATIONS FOR MASONRY STRUCTURES" (ACI 530-92/ASCE 5-92/IMS 402-92).
- COURSE GROUT (SIZE 8) SHALL BE USED IN CONFORMANCE TO THE REQUIREMENTS OF ASTM C476-83 "STANDARD SPECIFICATIONS FOR GROUT OF REINFORCED AND NON-REINFORCED MASONRY".
- CONCRETE MASONRY SHALL BE NORMAL WEIGHT GRADE N, TYPE I OR II, CONFORMING WITH ASTM C90-85 "STANDARD SPECIFICATIONS FOR HOLLOW LOAD BEARING CONCRETE MASONRY UNITS".
- THE NET AREA COMPRESSIVE STRENGTH OF MASONRY UNITS (f_m) SHALL BE 1900 PSI USING TYPE MOR S MORTAR.
- THICKNESS OF MORTAR BED SHALL NOT EXCEED 5/8".
- HORIZONTAL REINFORCING SHALL CONFORM WITH ASTM A82-85.
- MASONRY REINFORCING STEEL BARS SHALL BE CONTINUOUS WITH LAP SPLICES OF 36 BAR DIAMETERS MINIMUM.
- THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL MASONRY STRUCTURAL ELEMENTS ARE ADEQUATELY BRACED TO RESIST WIND, BACKFILLING, SOIL COMPACTION, AND OTHER CONSTRUCTION AS WELL AS NATURAL OCCURRING FORCES ORDINARILY ENCOUNTERED DURING THE CONSTRUCTION PROCESS. BRACING SHALL REMAIN IN PLACE UNTIL THE STRUCTURE HAS BEEN COMPLETED AND PRODUCED TO HAVE A SLUMP BETWEEN 8 AND 11 INCHES.
- WHEN GROUT COURSES EXCEED 5 FEET IN HEIGHT, PROVIDE A CLEAN-OUT HOLE AT THE BOTTOM CELL. CLEAN THE CELL BY REMOVING ALL MORTAR DEBRIS, LOOSE AGGREGATES AND ANY MATERIAL DELETERIOUS TO MASONRY GROUT. INSTALL AND SECURELY TIE THE VERTICAL STEEL REINFORCEMENT TOGETHER. CLOSE THE OPENING AFTER INSPECTION.

GENERAL NOTES: CONCRETE

- ALL CONCRETE CONSTRUCTION WORKMANSHIP AND MATERIAL SHALL COMPLY WITH THE REQUIREMENTS OF ACI 318 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".
- ALL CONCRETE SHALL BE TYPE I OR II PORTLAND CEMENT COMPLYING WITH ASTM C150 AND SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH SHOWN BELOW:

FOUNDATIONS & SLABS	3000 PSI
BEAMS	3000 PSI
MASONRY	3000 PSI

- ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A 615-87 GRADE 60 BARS SHALL BE FREE OF RUST, MILL SCALE, PAINT OR OTHER COATINGS THAT WILL REDUCE CONCRETE BOND.
- ALL CONCRETE REINFORCEMENT SHALL BE DETAIL, FABRICATED, LABELED, SUPPORTED AND SPACED IN FORMS AND SECURED IN PLACE IN WITH ACT 315-80 (REVISED 1986) "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT".
- ALL BAR SPLICES, DOWELS AND CONCRETE COVERAGE SHALL MEET THE REQUIREMENTS OF ACI 318-89 / 318R-89 "BUILDING CODE AND COMMENTARY FOR REINFORCED CONCRETE".
- BEAMS OVER MASONRY OPENINGS SHALL HAVE CONTINUOUS TOP AND BOTTOM REINFORCEMENT. LAP SPLICES IN BOTTOM BARS SHALL OCCUR OVER SUPPORTS. TOP BARS SHALL LAP AT MID-SPAN.
- CONCRETE BEAMS AND SLABS SHALL BE FINISHED LEVEL AND TO THE ELEVATIONS SHOWN ON THE DRAWINGS.
- CALCIUM CHLORIDE SHALL NOT BE USED IN ANY FORM, UNLESS OTHERWISE PERMITTED OR SPECIFIED, CONCRETE SHALL BE PROPORTIONED AND PRODUCED TO HAVE A SLUMP OF 4 INCHES +/- 1 INCH. OPTIONAL "FIBERESH" REINFORCING ADMIXTURE MAY BE USED IN THE CONCRETE IN LIEU OF 6X6, W1.4X W1.4 WMM REINFORCING WHERE APPLICABLE.

GENERAL NOTES: WOOD

- ALL FRAMING CONSTRUCTION WORKMANSHIP AND MATERIALS (INCLUDING TRUSSES) SHALL CONFORM WITH THE SPECIFICATIONS AND REQUIREMENTS OF THE REFERENCES LISTED BELOW: "AMERICAN INSTITUTE OF TIMBER CONSTRUCTION" THIRD EDITION 1985 "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" 1991 AND SUPPLEMENT "U.S. PRODUCT STANDARD PS 1" OR APA PRP-108 PERFORMANCE STANDARDS "MANUAL FOR HOUSE FRAMING, WOOD CONSTRUCTION DATA NO. 1" NATIONAL FOREST PRODUCTS ASSOCIATION.
- ALL TRUSS BEAM AND COLUMN MEMBERS SHALL BE SPECIES AND GRADES OF LUMBER WHICH WILL PRODUCE DESIGN VALUES EQUAL TO OR GREATER THAN VALUES FOR SOUTHERN YELLOW PINE NO. 2, 19% MAX. M.C.
- GALVANIZED METAL HANGERS AND FRAMING ANCHORS SHOWN ON THE PLANS SHALL BE USED AND SHALL BE FASTENED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS, SUBSTITUTIONS REQUIRE ENGINEER'S APPROVAL.
- ANCHORING AND NAILING NOT IDENTIFIED SHALL COMPLY WITH THE NAILING SCHEDULE GIVEN WITHIN "MANUAL FOR HOUSE FRAMING", AND TABLE 2.306.1 "NAILING SCHEDULE FOR HOUSE FRAMING".
- A MINIMUM OF TWO STUDS SHALL BE INSTALLED ADJACENT TO ALL OPENINGS IN EXTERIOR AND LOAD BEARING WALLS AND BENEATH ALL BEAM & GIRDER BEARING POINTS.
- TRUSSES SHALL BE SIZED AND DETAILED IN ACCORDANCE WITH THE DIMENSIONS AND LOADS INDICATED.
- TRUSS SHOP DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED BY A FLORIDA LICENSED ENGINEER FOR REVIEW PRIOR TO FABRICATION. THE SPECIALTY ENGINEER SHALL SPECIFY BLOCKING AND BRACING NECESSARY TO WITHSTAND WIND LOADS DETERMINED USING ASCE 7-88.
- AS A MINIMUM, ROOF SHEATHING SHALL CONSIST OF 1/2" (NOMINAL) APA SPAN RATED, EXPOSURE 1 PLYWOOD OR O.S.B., NAILED TO SUPPORT WITH 8d NAILS AT 6" O.C.
- ALL EXTERIOR WALLS SHALL BE SHEATHED WITH 1/2" APA SPAN RATED, EXPOSURE 1 PLYWOOD OR O.S.B. THE SHEATHING SHALL BE ATTACHED TO FRAMING MEMBERS WITH 8d NAILS AT 6" O.C.
- EXTERIOR AND INTERIOR LOAD BEARING WALLS SHALL BE FRAMED WITH 2X4 MEMBERS AT 16" O.C. MAX. SPACING FOR MAX. 8' HIGH PARTITIONS. FOR HEIGHTS ABOVE 8' REFER TO WALL SECTIONS. STUDS SHALL BE SPRUCE-PINE-FIR #2 OR SPECIES WITH EQUAL OR GREATER DESIGN VALUES.
- ALL PRESSURE TREATED LUMBER SHALL BE SOUTHERN YELLOW PINE #2 19% MAX. M.C. IN ACCORDANCE WITH APA STANDARDS C1.22 AND C9 LATEST EDITIONS, WITH A WATERBORNE PRESERVATIVE IN ACCORDANCE WITH STANDARD P5. ALL NAILS AND SCREWS SHALL BE STAINLESS STEEL OR GALVANIZED.

2X4-47# LOADING

DESIGN BASIS

STANDARD UNIFORM LOADING (PSF)
 TOLL = 30.0, TCOL = 7.0, BCOL = 10.0
 INCREASE = 1.33
 LINE LOAD DEFLECTION BASED ON L/240

FASTENING RECOMMENDATIONS

- (3)-16d TOE NAILS
- (4)-16d TOE NAILS

ATTACHMENT MAY ALTERNATIVELY BE MADE USING APPROVED FRAMING CLIPS WITH EQUIVALENT OR BETTER LOAD CARRYING CAPABILITY.

NOTE: THE FRAMER MUST USE SPECIAL CAUTION WHEN TIE BAILING WITH (4)-16d NAILS SO AS TO AVOID SPLINING OF THE CHORD WOOD. SUPPORT IS REQUIRED FOR OVERHANGS GREATER THAN MAX.

LUMBER SPECIFICATIONS

TOP CHORD	2x4 #2 NON-DENSE S. PINE
BOTTOM CHORD	2x4 #2 NON-DENSE S. PINE
WEBS	2x4 #3 S. PINE

THIS TRUSS IS DESIGNED TO BE USED ON AN ENCLOSED BUILDING USING THE STANDARD BUILDING CODE. COMPLEX W/SBCO 10-93 AND ASCE 7-88. W/AMENDMENTS

NOTE: WIND LOAD AND HEIGHT ABOVE GROUND
 WIND SPEED (MPH) MEAN HEIGHT (FT) DEAD LOAD (PSF)

110 MPH	20 FEET	10 PSF
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WIND UPLIFT REACTIONS (LBS)

END JACK	BL = -357	BR = 487
	TL = -66	TR = 66
	BL = -306	TL = 244
HIP JACK	BL = -391	BR = 641
	TL = -248	TR = 152
	BL = -118	TL = 406

PLATE SIZES SHOWN IN () ARE MODEL 20 PLATES

FRAMING PLAN

WALL FRAMING SCHEDULE - S.Y.P. #2

* ROUGH OPENING	MINIMUM HEADER BEAM	NUMBER OF HEADER STUDS	NUMBER OF FULL HEIGHT STUDS
W-1 0'-0" TO 4'-0"	(2) 2" x 6"	1	1
W-2 4'-1" TO 6'-0"	(2) 2" x 8"	1	2
W-3 6'-1" TO 8'-0"	(2) 2" x 10"	1	3
W-4 8'-1" TO 10'-0"	(2) 2" x 12"	2	3

NOTE: DETAILS SHOWN ARE FOR REFERENCE ONLY. REFER TO PLAN SHEETS FOR ALL DETAILS THAT APPLY.

HEREBY CERTIFY THAT ALL CONSTRUCTION FOR THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH SBCCI 1994 EDITION OF THE STANDARD BUILDING CODE, CHAPTER 16, SECTION 1609 FOR A WIND LOAD SPEED OF 100 MILES PER HOUR.

ENGINEERING & DESIGN CONCEPTS, INC.
 TEL (407) 727-2056 FAX (407) 727-8465

EDC
 © MARCH 13, 1997

BLOCK CONSTRUCTION DETAILS & NOTES

STRUCTURAL SHEET # S1 DATE: 03/13/97

CONSTRUCTION PLANS FOR "BAY WASH" OF ROCKLEDGE

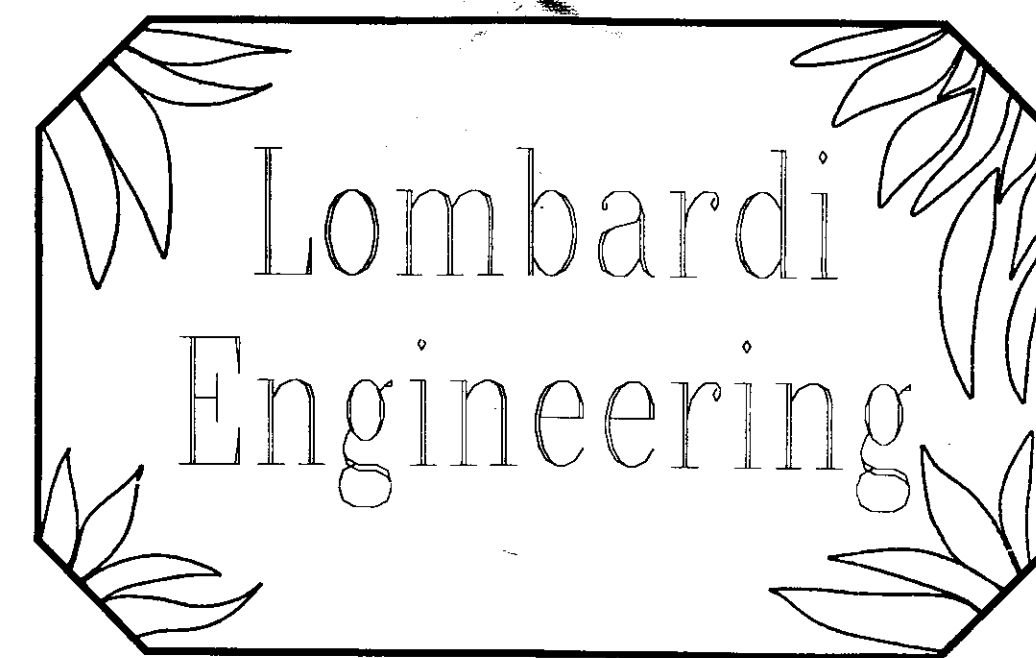
ROCKLEDGE, FLORIDA

CITY OF ROCKLEDGE
BUILDING DEPARTMENT
APPROVED
DATE: 9-9-97
SIGNATURE: *ey*
TITLE:

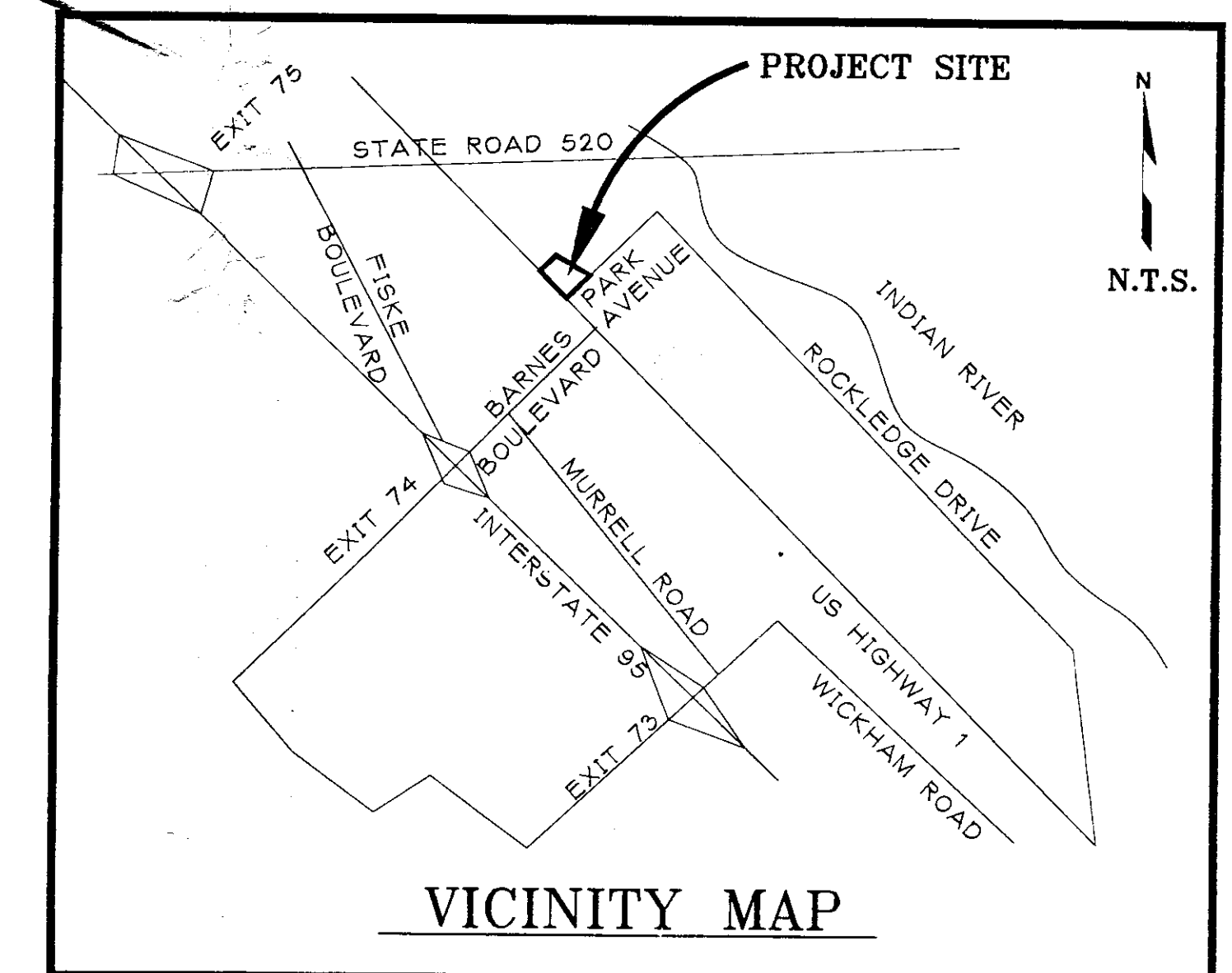
INDEX OF DRAWINGS

1. COVER SHEET AND INDEX OF DRAWINGS
2. SITE LAYOUT AND UTILITY PLAN
3. GRADING AND DRAINAGE PLAN
4. LANDSCAPE PLAN
5. IRRIGATION PLAN
6. EXISTING CONDITIONS AND EROSION CONTROL
7. PAVING AND DRAINAGE DETAILS
8. CITY OF ROCKLEDGE TECHNICAL SPECIFICATIONS
9. CITY OF COCOA WATER TECHNICAL SPECIFICATIONS
10. CITY OF COCOA POTABLE WATER DETAILS

PREPARED BY



land development site planning
engineering * permitting



LISA LOMBARDI, P.E.
1011 ROCKLEDGE DRIVE
ROCKLEDGE, FLORIDA 32955
(407) 633-0653

JUNE 23, 1997

REVISED 7/21/97

#4

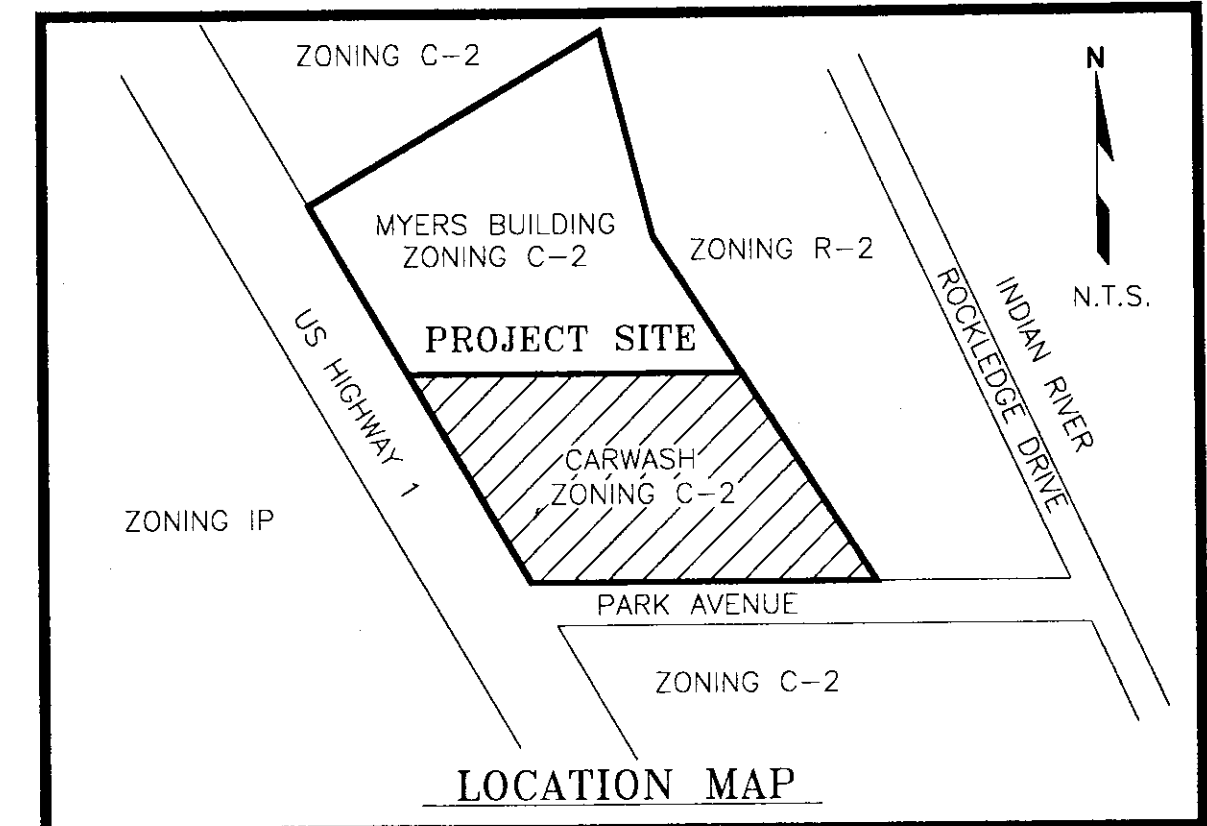
[Signature]
ALT - 9/9/97

REVISIONS	
no.	date
1	7/21/97

SITE PLAN
BAY WASH OF ROCKLEDGE
ROCKLEDGE, FLORIDA

Lombardi Engineering
LISA LOMBARDI, P.E.
1011 ROCKLEDGE DRIVE
ROCKLEDGE, FLORIDA 32955
(407) 633-0653

scale:	1" = 20'
drawn:	MA
checked:	LL
approved:	LL
date:	6/23/97
job no.:	97-007
SHEET NO.	
C 1	
2 OF 10	



SITE PLAN NOTES

- THIS SITE SHALL CONNECT TO CITY OF COCOA WATER.
- SOD ALL SLOPES GREATER THAN 5:1.
- ALL DIMENSIONS ARE TO THE FACE OF CURB.
- SURVEY INFORMATION WAS PROVIDED BY R.M. PACKARD & ASSOC., INC. SURVEYING AND MAPPING, DATED 11/18/96, DWG # D-2216.

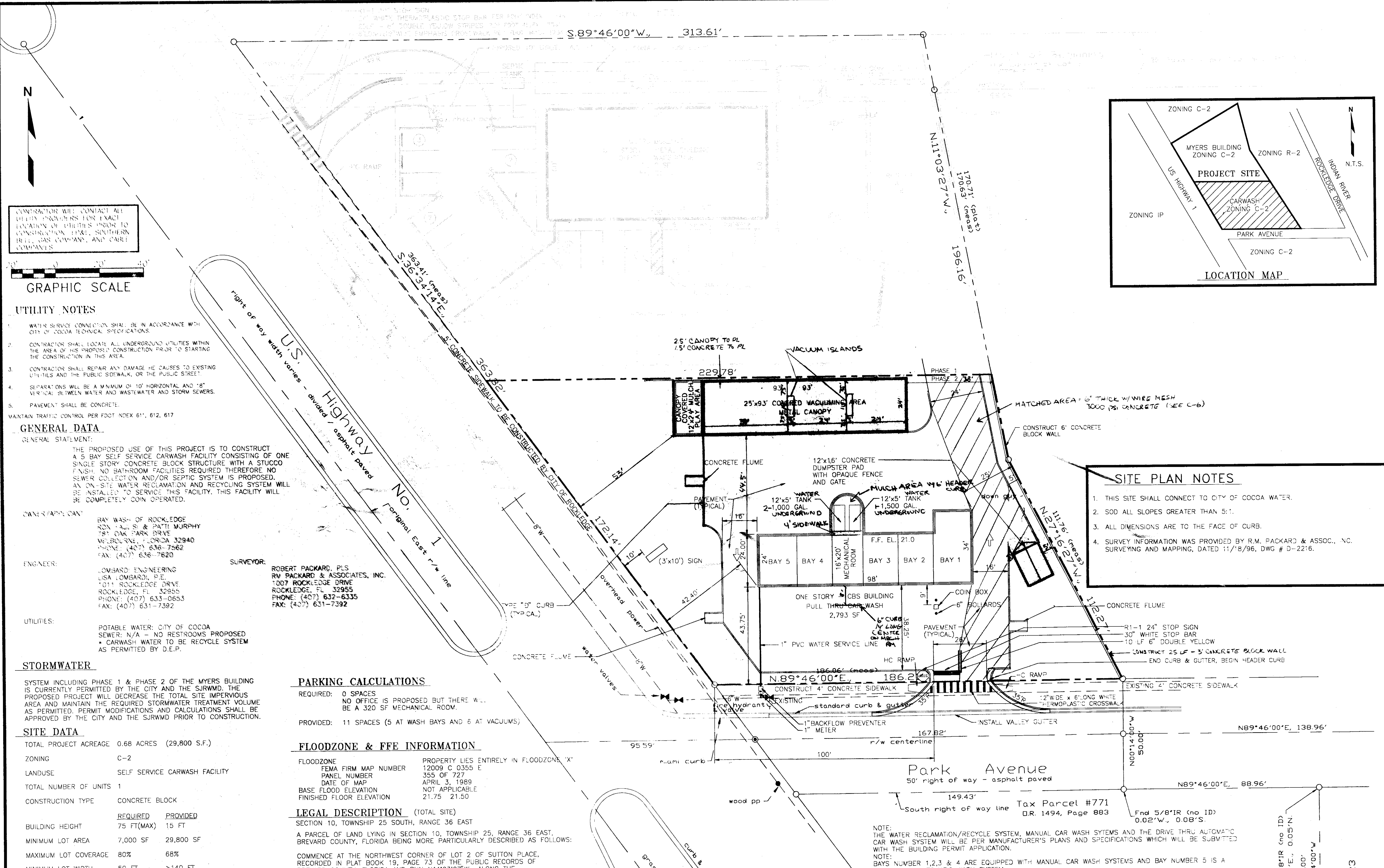
FIRE DEPARTMENT NOTES

- LANDSCAPING SHALL NOT BE LOCATED WITHIN 3 FEET OF ANY FIRE HYDRANT AND / OR FIRE DEPARTMENT CONNECTION.
- WATER FOR PRE-FIGHTING PURPOSES SHALL BE AVAILABLE PRIOR TO COMBUSTIBLES BEING BROUGHT ON SITE.
- NEW AND EXISTING FIRE HYDRANTS SHALL BE ADJACENT WITH A ROADWAY REFLECTOR PLACED ON FOOT OFF THE CENTERLINE OF THE ROAD FACING THE FIRE HYDRANT.
- NEW FIRE HYDRANTS SHALL BE POSITIONED NOT MORE THAN 8' OR LESS THAN 6' OFF THE EDGE OF PAVEMENT, WITH THE CENTER OF THE STREAMER (SECTION 14.5) NOT GREATER THAN 18" - 24" ABOVE THE FINISHED GRADE.

FIRE FLOW CALCULATIONS

TOTAL FLOOR AREA = 2,266 SF (CARWASH) - 2,625 SF (VACUUM) = 4,891 SF
 $F = 1.80 \sqrt{A}$
 $F = 1.80 \sqrt{4,891}$
 BASE GPM REQUIRED = 1,007 GPM
 PLUS 25% FOR LIGHT OCCUPANCY = 252

REQUIRED GPM = 755 = 1 FIRE HYDRANT BASED ON 1000 GPM PER FIRE HYDRANT



CONTRACTOR WILL CONTACT ALL UTILITIES PROVIDERS FOR EXACT LOCATION OF UTILITIES PRIOR TO CONSTRUCTION. SEE SOUTHERN BELL, GAS COMPANY, AND CABLE COMPANIES.

GRAPHIC SCALE

UTILITY NOTES

GENERAL DATA

OWNER/ARCHITECT:
 BAY WASH OF ROCKLEDGE
 LISA LOMBARDI, P.E.
 1011 ROCKLEDGE DRIVE
 ROCKLEDGE, FLORIDA 32955
 PHONE: (407) 633-0653
 FAX: (407) 633-0653

ENGINEER:
 LOMBARDI ENGINEERING
 LISA LOMBARDI, P.E.
 1011 ROCKLEDGE DRIVE
 ROCKLEDGE, FLORIDA 32955
 PHONE: (407) 633-0653
 FAX: (407) 633-7392

SURVEYOR:
 ROBERT PACKARD, PLS
 R.M. PACKARD & ASSOCIATES, INC.
 1007 ROCKLEDGE DRIVE
 ROCKLEDGE, FLORIDA 32955
 PHONE: (407) 632-6335
 FAX: (407) 631-7392

UTILITIES:
 POTABLE WATER: CITY OF COCOA
 SEWER: N/A - NO RESTROOMS PROPOSED
 * CARWASH WATER TO BE RECYCLE SYSTEM AS PERMITTED BY D.E.P.

STORMWATER

SITE DATA

PARKING CALCULATIONS

FLOODZONE & FFE INFORMATION

LEGAL DESCRIPTION (TOTAL SITE)

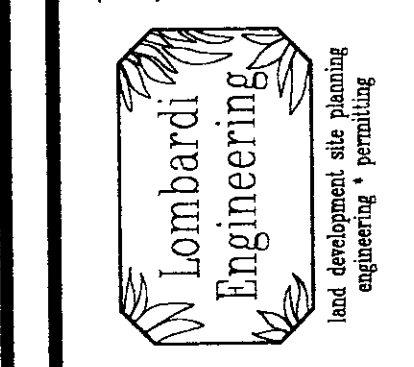
CALCULATED LOT COVERAGES

SUBJECT TO ALL EASEMENTS, RESTRICTIONS, LIMITATIONS AND / OR RIGHTS OF WAY OF RECORD.

REVISIONS	
no.	date
1	7-2-97

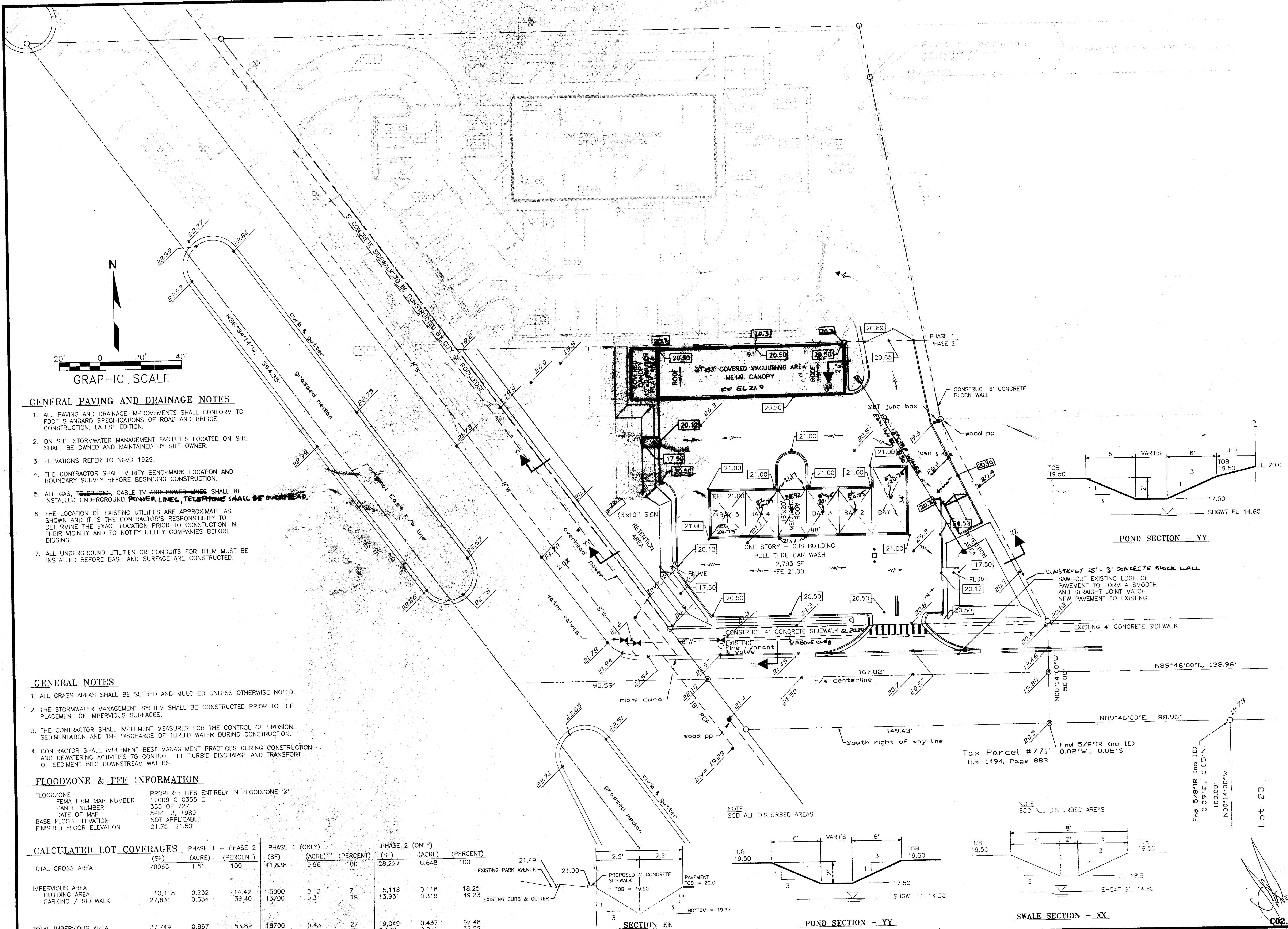
GRADING AND DRAINAGE PLAN
BAY WASH OF ROCKLEDGE
ROCKLEDGE, FLORIDA

Lombardi Engineering
LISA LOMBARDI, P.E.
1011 ROCKLEDGE DRIVE
ROCKLEDGE, FLORIDA 32955
(407) 633-0653



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drawn:	MA
checked:	LL
approved:	LL
date:	6/23/97
job no.:	97-007

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3 OF 10



GENERAL PAVING AND DRAINAGE NOTES

1. ALL PAVING AND DRAINAGE IMPROVEMENTS SHALL CONFORM TO FDOT STANDARD SPECIFICATIONS OF ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
2. ON SITE STORMWATER MANAGEMENT FACILITIES LOCATED ON SITE SHALL BE OWNED AND MAINTAINED BY SITE OWNER.
3. ELEVATIONS REFER TO NGVD 1929.
4. THE CONTRACTOR SHALL VERIFY BENCHMARK LOCATION AND BOUNDARY SURVEY BEFORE BEGINNING CONSTRUCTION.
5. ALL GAS, TELEPHONE, CABLE TV AND POWER LINES SHALL BE INSTALLED UNDERGROUND. ~~POWER LINES, TELEPHONE SHALL BE OVERHEAD.~~
6. THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE AS SHOWN AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION PRIOR TO CONSTRUCTION IN THEIR VICINITY AND TO NOTIFY UTILITY COMPANIES BEFORE DIGGING.
7. ALL UNDERGROUND UTILITIES OR CONDUITS FOR THEM MUST BE INSTALLED BEFORE BASE AND SURFACE ARE CONSTRUCTED.

GENERAL NOTES

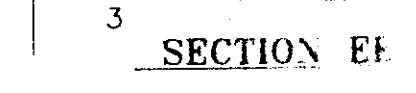
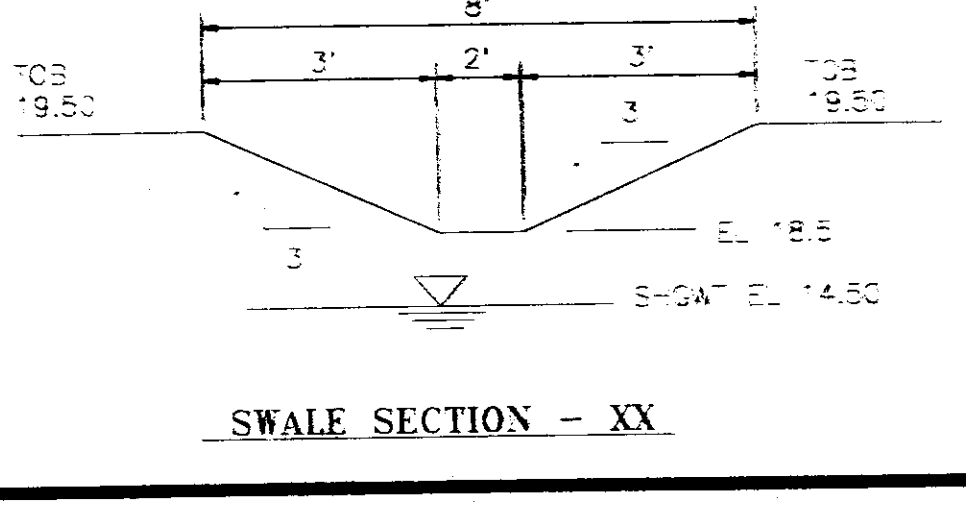
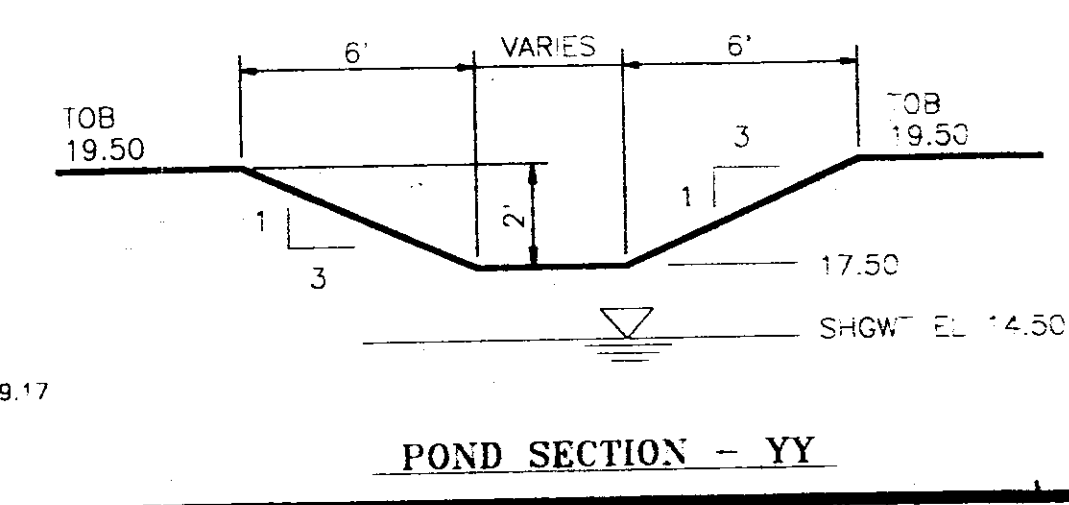
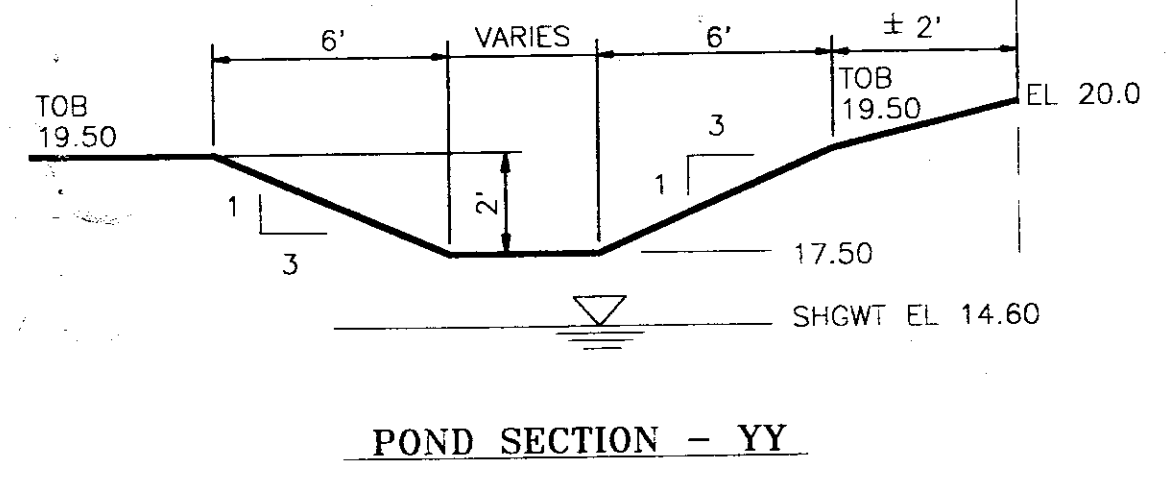
1. ALL GRASS AREAS SHALL BE SEEDED AND MULCHED UNLESS OTHERWISE NOTED.
2. THE STORMWATER MANAGEMENT SYSTEM SHALL BE CONSTRUCTED PRIOR TO THE PLACEMENT OF IMPERVIOUS SURFACES.
3. THE CONTRACTOR SHALL IMPLEMENT MEASURES FOR THE CONTROL OF EROSION, SEDIMENTATION AND THE DISCHARGE OF TURBID WATER DURING CONSTRUCTION.
4. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES DURING CONSTRUCTION AND DEWATERING ACTIVITIES TO CONTROL THE TURBID DISCHARGE AND TRANSPORT OF SEDIMENT INTO DOWNSTREAM WATERS.

FLOODZONE & FFE INFORMATION

FLOODZONE	PROPERTY LIES ENTIRELY IN FLOODZONE 'X'
FEMA FIRM MAP NUMBER	12009 C 0355 E
PANEL NUMBER	355 OF 727
DATE OF MAP	APRIL 3, 1989
BASE FLOOD ELEVATION	NOT APPLICABLE
FINISHED FLOOR ELEVATION	21.75 21.50

CALCULATED LOT COVERAGES

	PHASE 1 + PHASE 2		PHASE 1 (ONLY)		PHASE 2 (ONLY)	
	(SF)	(ACRE) (PERCENT)	(SF)	(ACRE) (PERCENT)	(SF)	(ACRE) (PERCENT)
TOTAL GROSS AREA	70065	1.61 100	41,838	0.96 100	28,227	0.648 100
IMPERVIOUS AREA						
BUILDING AREA	10,118	0.232 14.42	5000	0.12 7	5,118	0.118 18.25
PARKING / SIDEWALK	27,631	0.634 39.40	13700	0.31 19	13,931	0.319 49.23
TOTAL IMPERVIOUS AREA	37,749	0.867 53.82	18700	0.43 27	19,049	0.437 67.48
TOTAL PERVIOUS AREA	32,316	0.742 46.18	51365	1.18 73	9,178	0.211 32.52



Lot: 23

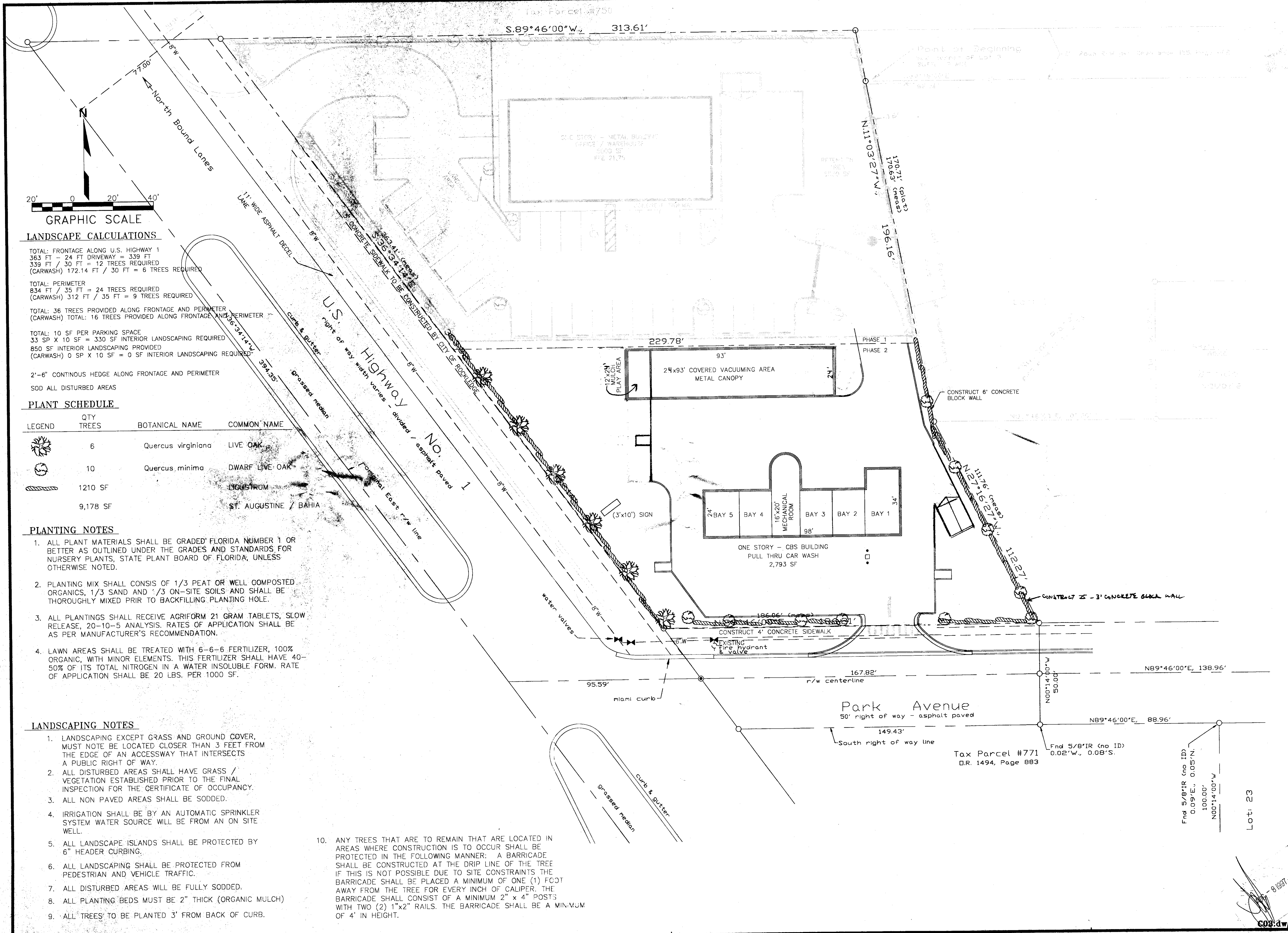
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REVISIONS	
no.	date
1	7-21-97

LANDSCAPE PLAN
BAY WASH OF ROCKLEDGE
ROCKLEDGE, FLORIDA

Lombardi Engineering
LISA LOMBARDI, P.E.
1011 ROCKLEDGE DRIVE
ROCKLEDGE, FLORIDA 32955
(407) 633-0653

scale:	1" = 20'
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checked:	LL
approved:	LL
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SHEET NO.	
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4 OF 10	



LANDSCAPE CALCULATIONS

TOTAL: FRONTAGE ALONG U.S. HIGHWAY 1
363 FT - 24 FT DRIVEWAY = 339 FT
339 FT / 30 FT = 12 TREES REQUIRED
(CARWASH) 172.14 FT / 30 FT = 6 TREES REQUIRED

TOTAL: PERIMETER
834 FT / 35 FT = 24 TREES REQUIRED
(CARWASH) 312 FT / 35 FT = 9 TREES REQUIRED

TOTAL: 36 TREES PROVIDED ALONG FRONTAGE AND PERIMETER
(CARWASH) TOTAL: 16 TREES PROVIDED ALONG FRONTAGE AND PERIMETER

TOTAL: 10 SF PER PARKING SPACE
33 SP X 10 SF = 330 SF INTERIOR LANDSCAPING REQUIRED
850 SF INTERIOR LANDSCAPING PROVIDED
(CARWASH) 0 SP X 10 SF = 0 SF INTERIOR LANDSCAPING REQUIRED

2'-6" CONTINUOUS HEDGE ALONG FRONTAGE AND PERIMETER
SOD ALL DISTURBED AREAS

PLANT SCHEDULE

LEGEND	QTY TREES	BOTANICAL NAME	COMMON NAME
	6	Quercus virginiana	LIVE OAK
	10	Quercus minima	DWARF LIVE OAK
	1210 SF	LIGUSTRUM	
	9,178 SF	ST. AUGUSTINE / BAHIA	

PLANTING NOTES

- ALL PLANT MATERIALS SHALL BE GRADED FLORIDA NUMBER 1 OR BETTER AS OUTLINED UNDER THE GRADES AND STANDARDS FOR NURSERY PLANTS, STATE PLANT BOARD OF FLORIDA, UNLESS OTHERWISE NOTED.
- PLANTING MIX SHALL CONSIST OF 1/3 PEAT OR WELL COMPOSTED ORGANICS, 1/3 SAND AND 1/3 ON-SITE SOILS AND SHALL BE THOROUGHLY MIXED PRIOR TO BACKFILLING PLANTING HOLE.
- ALL PLANTINGS SHALL RECEIVE AGRIFORM 21 GRAM TABLETS, SLOW RELEASE, 20-10-5 ANALYSIS. RATES OF APPLICATION SHALL BE AS PER MANUFACTURER'S RECOMMENDATION.
- LAWN AREAS SHALL BE TREATED WITH 6-6-6 FERTILIZER, 100% ORGANIC, WITH MINOR ELEMENTS. THIS FERTILIZER SHALL HAVE 40-50% OF ITS TOTAL NITROGEN IN A WATER INSOLUBLE FORM. RATE OF APPLICATION SHALL BE 20 LBS. PER 1000 SF.

LANDSCAPING NOTES

- LANDSCAPING EXCEPT GRASS AND GROUND COVER, MUST NOT BE LOCATED CLOSER THAN 3 FEET FROM THE EDGE OF AN ACCESSWAY THAT INTERSECTS A PUBLIC RIGHT OF WAY.
- ALL DISTURBED AREAS SHALL HAVE GRASS / VEGETATION ESTABLISHED PRIOR TO THE FINAL INSPECTION FOR THE CERTIFICATE OF OCCUPANCY.
- ALL NON PAVED AREAS SHALL BE SODDED.
- IRRIGATION SHALL BE BY AN AUTOMATIC SPRINKLER SYSTEM WATER SOURCE WILL BE FROM AN ON SITE WELL.
- ALL LANDSCAPE ISLANDS SHALL BE PROTECTED BY 6" HEADER CURBING.
- ALL LANDSCAPING SHALL BE PROTECTED FROM PEDESTRIAN AND VEHICLE TRAFFIC.
- ALL DISTURBED AREAS WILL BE FULLY SODDED.
- ALL PLANTING BEDS MUST BE 2" THICK (ORGANIC MULCH)
- ALL TREES TO BE PLANTED 3' FROM BACK OF CURB.
- ANY TREES THAT ARE TO REMAIN THAT ARE LOCATED IN AREAS WHERE CONSTRUCTION IS TO OCCUR SHALL BE PROTECTED IN THE FOLLOWING MANNER: A BARRICADE SHALL BE CONSTRUCTED AT THE DRIP LINE OF THE TREE IF THIS IS NOT POSSIBLE DUE TO SITE CONSTRAINTS THE BARRICADE SHALL BE PLACED A MINIMUM OF ONE (1) FOOT AWAY FROM THE TREE FOR EVERY INCH OF CALIPER. THE BARRICADE SHALL CONSIST OF A MINIMUM 2" x 4" POSTS WITH TWO (2) 1"x2" RAILS. THE BARRICADE SHALL BE A MINIMUM OF 4' IN HEIGHT.

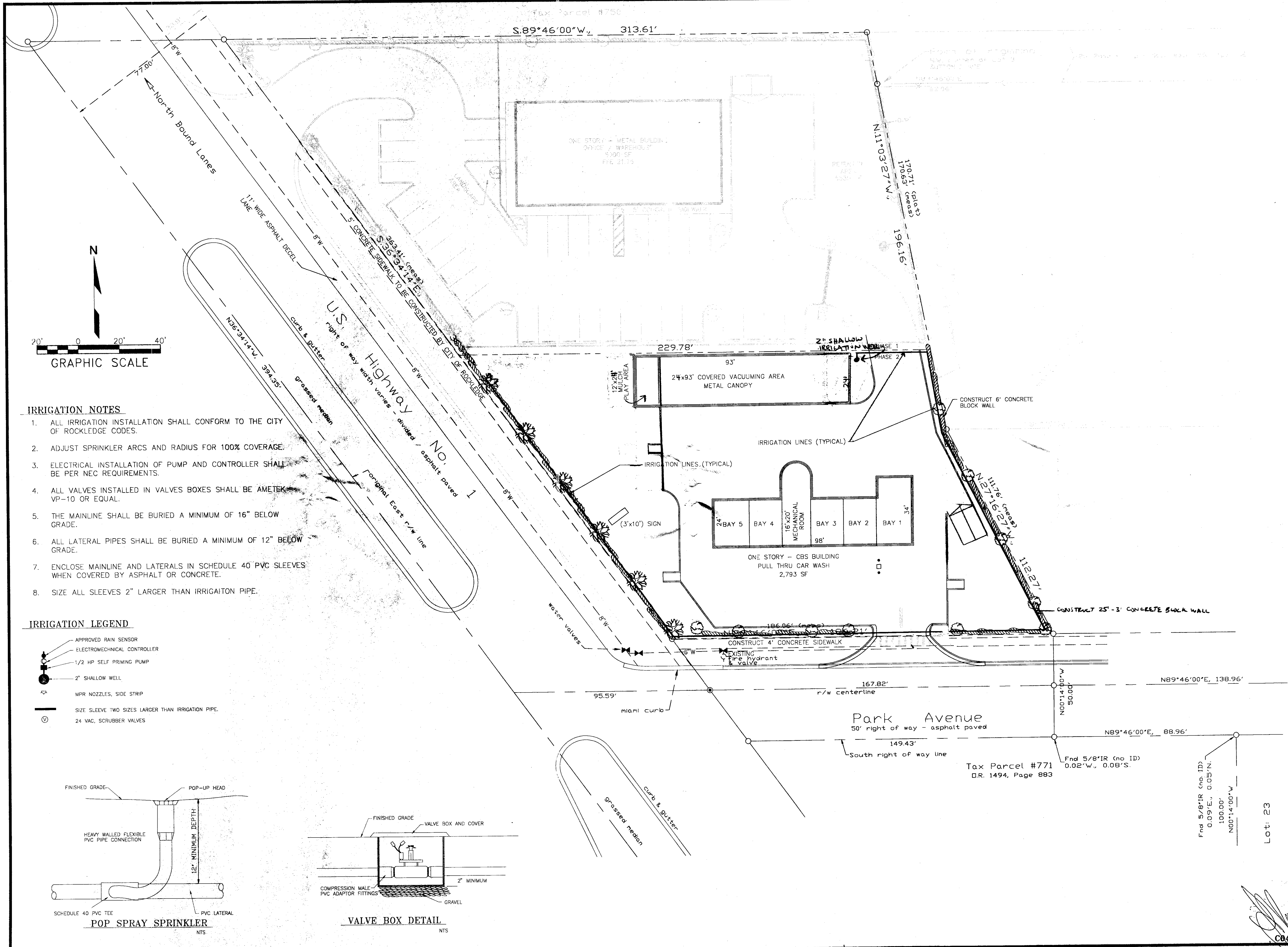
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REVISIONS	
no.	date
1	7-21-97

IRRIGATION PLAN
BAY WASH OF ROCKLEDGE
ROCKLEDGE, FLORIDA

Lombardi Engineering
LISA LOMBARDI, P.E.
1011 ROCKLEDGE DRIVE
ROCKLEDGE, FLORIDA 32955
(407) 633-0653

scale:	1" = 20'
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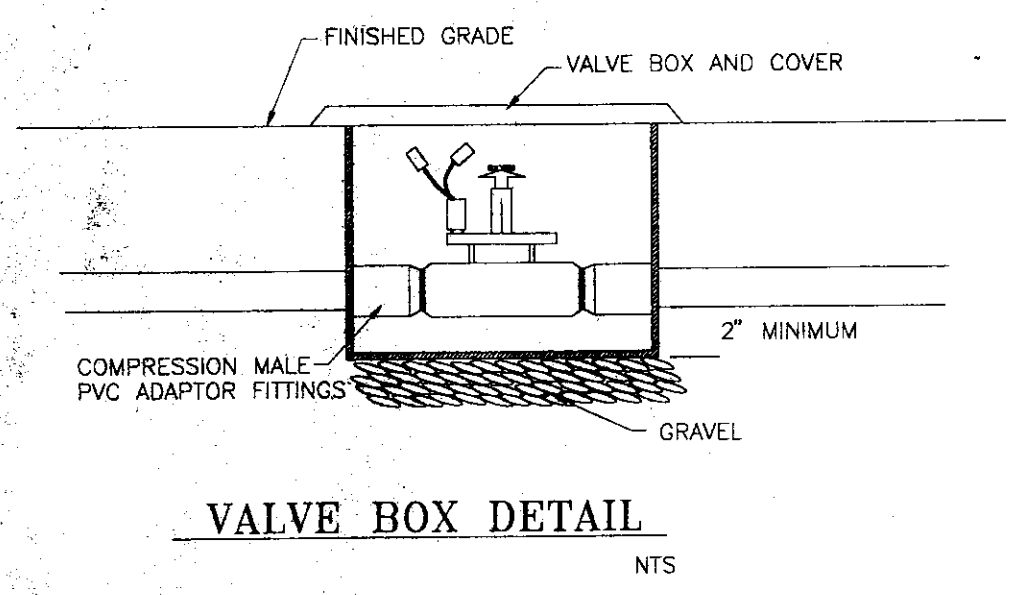
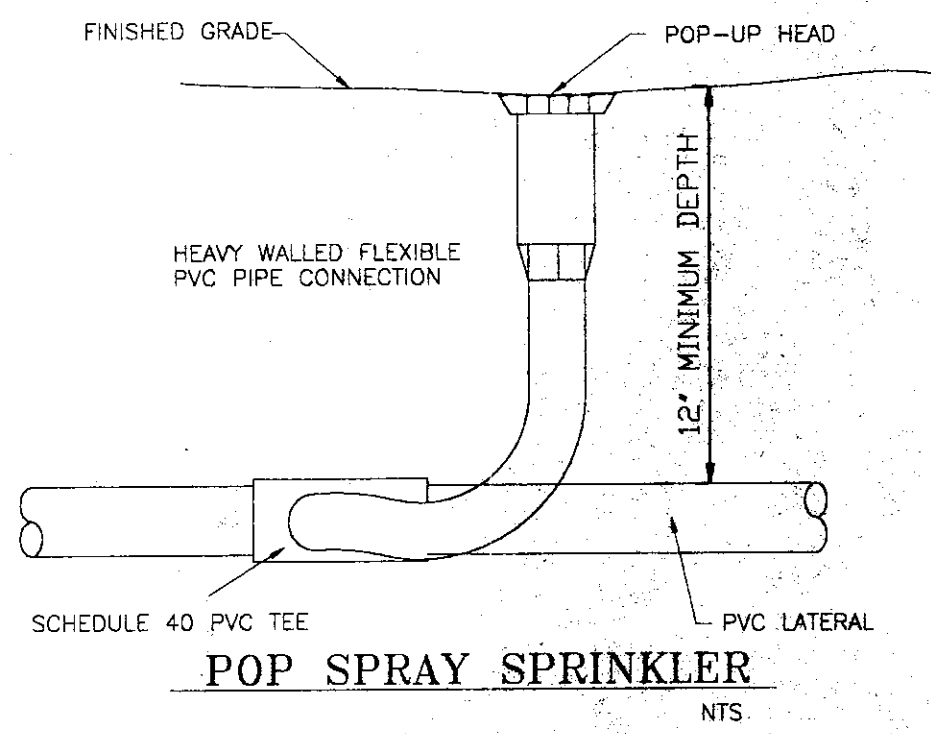


IRRIGATION NOTES

1. ALL IRRIGATION INSTALLATION SHALL CONFORM TO THE CITY OF ROCKLEDGE CODES.
2. ADJUST SPRINKLER ARCS AND RADIUS FOR 100% COVERAGE.
3. ELECTRICAL INSTALLATION OF PUMP AND CONTROLLER SHALL BE PER NEC REQUIREMENTS.
4. ALL VALVES INSTALLED IN VALVES BOXES SHALL BE AMETEK VP-10 OR EQUAL.
5. THE MAINLINE SHALL BE BURIED A MINIMUM OF 16" BELOW GRADE.
6. ALL LATERAL PIPES SHALL BE BURIED A MINIMUM OF 12" BELOW GRADE.
7. ENCLOSE MAINLINE AND LATERALS IN SCHEDULE 40 PVC SLEEVES WHEN COVERED BY ASPHALT OR CONCRETE.
8. SIZE ALL SLEEVES 2" LARGER THAN IRRIGATION PIPE.

IRRIGATION LEGEND

- APPROVED RAIN SENSOR
- ELECTROMECHANICAL CONTROLLER
- 1/2 HP SELF PRIMING PUMP
- 2" SHALLOW WELL
- MPR NOZZLES, SIDE STRIP
- SIZE SLEEVE TWO SIZES LARGER THAN IRRIGATION PIPE.
- 24 VAC, SCRUBBER VALVES



Lot: 23

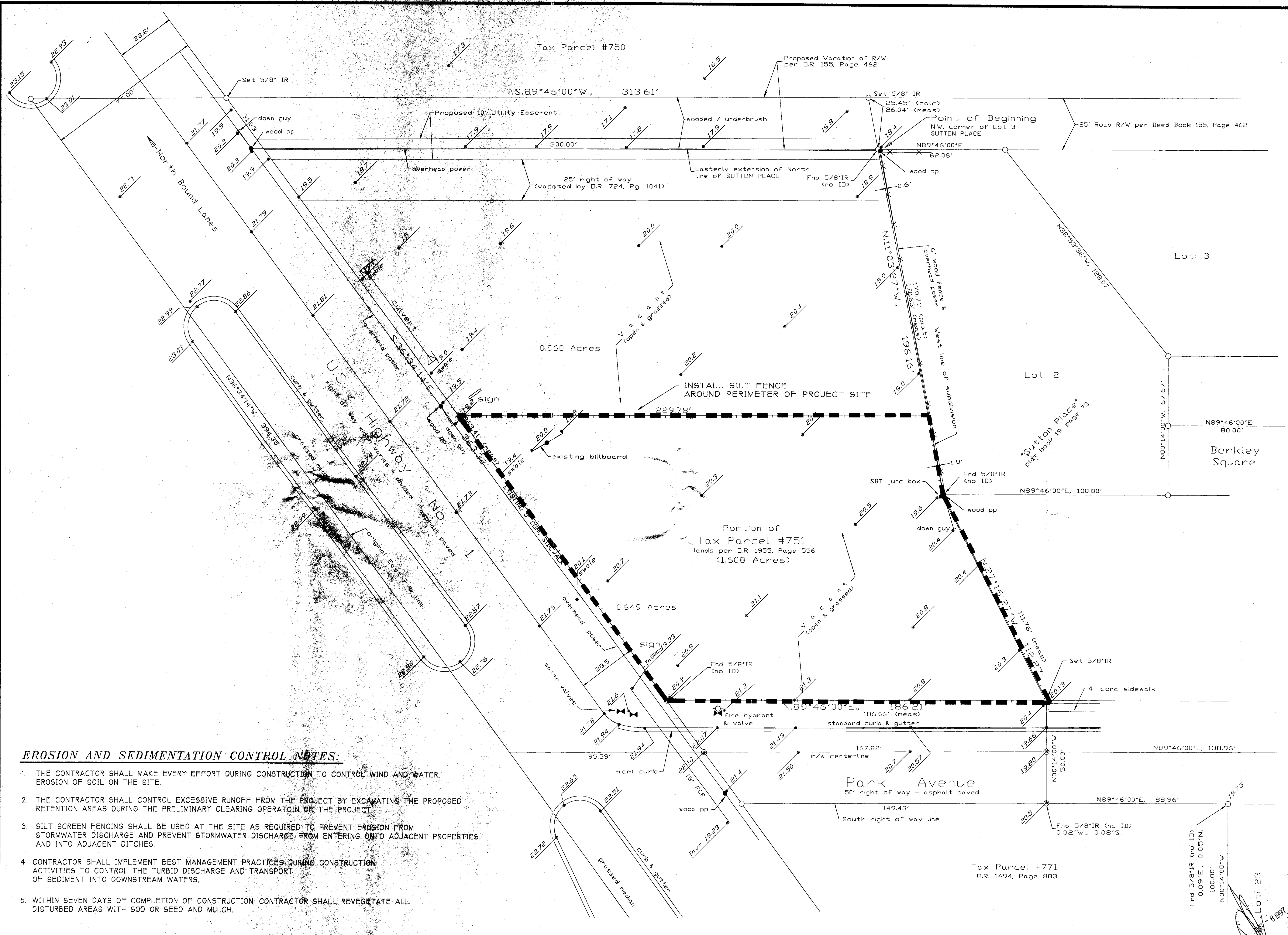
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REVISIONS	
no.	date
1	7-21-97

EXISTING CONDITIONS AND EROSION CONTROL
TOM PRICE
BAY WASH OF ROCKLEDGE
ROCKLEDGE, FLORIDA

Lombardi Engineering
LISA LOMBARDI, P.E.
1011 ROCKLEDGE DRIVE
ROCKLEDGE, FLORIDA 32955
(407) 633-0653

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6	OF 10



EROSION AND SEDIMENTATION CONTROL NOTES:

1. THE CONTRACTOR SHALL MAKE EVERY EFFORT DURING CONSTRUCTION TO CONTROL WIND AND WATER EROSION OF SOIL ON THE SITE.
2. THE CONTRACTOR SHALL CONTROL EXCESSIVE RUNOFF FROM THE PROJECT BY EXCAVATING THE PROPOSED RETENTION AREAS DURING THE PRELIMINARY CLEARING OPERATOIN OF THE PROJECT.
3. SILT SCREEN FENCING SHALL BE USED AT THE SITE AS REQUIRED TO PREVENT EROSION FROM STORMWATER DISCHARGE AND PREVENT STORMWATER DISCHARGE FROM ENTERING ONTO ADJACENT PROPERTIES AND INTO ADJACENT DITCHES.
4. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES DURING CONSTRUCTION ACTIVITIES TO CONTROL THE TURBID DISCHARGE AND TRANSPORT OF SEDIMENT INTO DOWNSTREAM WATERS.
5. WITHIN SEVEN DAYS OF COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL REVEGETATE ALL DISTURBED AREAS WITH SOD OR SEED AND MULCH.

SCOPE:

These specifications are to assist the Engineer, Developer and Contractor in their methods approved by the City of Rockledge.

The above mentioned are responsible for the following:

- 1.) Acquiring all permits, licenses and fees for projects considered including all tests.
- 2.) Complete coordination with all utility companies involved.
- 3.) Compliance with any and all governing agencies involved.
- 4.) Relocation, extension, enlargement or refurbishment of any improved areas of service in or out of the City of Rockledge.
- 5.) All work is to be done at no cost to the City of Rockledge.

MATERIALS:

A) DRAINAGE PIPING:

- 1.) Minimum sized piping shall be 18" or equivalent electrical pipe and 24" minimum on collector roads.
- 2.) Reinforced concrete pipe (RCP) shall be manufactured by reputable manufacturing practices, free of honey combs, exposed steel, or through from reinforcing and smooth finish at bell and spigot ends.
- 3.) Polyethylene smooth inner double walled pipe shall be manufactured by reputable manufacturing practices, free of defects before installation.
- 4.) Aluminum pipe shall be manufactured by reputable manufacturing practices, free of dents and gouging. Aluminum piping may require arching for load bearing areas as determined by Design Engineer and the City of Rockledge.
- 5.) All joints shall be wrapped with filter media.
- 6.) Safety Bars shall be placed on pipe and mitered end sections where determined necessary.
- 7.) Outfall end run to ditches shall have a mitered end section with safety bars to match existing ditch bank slope with appropriate erosion control measures.

B) DRAINAGE STRUCTURES:

- 1.) All drainage structures shall meet specific planned use as determined by Design Engineer and the City of Rockledge.
- 2.) All catch basins, inlets or manhole structures shall be at least reinforced type unless otherwise approved.
- 3.) All structures shall meet or exceed the standard specifications as determined by the American Society of Testing and Materials (ASTM C-438) 3000 PSI concrete.
- 4.) All structures shall be free of defects such as cracking, honey combs and exposed steel reinforcing including steel through.
- 5.) Shop drawings shall be submitted before ordering materials for the project. Corresponding shall be between the Design Engineer and the City of Rockledge.

C) OUTFALL STRUCTURES:

- 1.) Outfall Structures shall include Aluminum skimmers, weep holes and draw down systems as determined by Design Engineer and the City of Rockledge.
- 2.) Hardware to attach devices to outfall structures shall be stainless steel material.

D) MANHOLE COVERS & GRATES:

- 1.) Manhole frames, covers, and grates shall meet specific planned use as determined by Design Engineer and the City of Rockledge.
- 2.) Manhole frames and covers shall be of cast iron materials, free from cracks, holes or cold shuts. Frames and covers shall conform to a minimum standard of USF 1260 series or equivalent with covers having "Storm Sewer".
- 3.) Frame and grates shall be of cast iron materials, free from cracks, holes and cold shuts. Frames and grates shall conform to a minimum standard of USF 4160-6210 or equivalent.
- 4.) Throat inlet shall be used exclusively where practicable as determined by the Design Engineer and the City of Rockledge.
- 5.) 3' (foot) transition shall be utilized from top of inlet to back of curbs.

DUMPSTER PADS:

- 1.) Dumpster pads shall be sized according to residential units as determined by the City of Rockledge. Residential units shall be 16 units per 6 yard dumpster facility.
- 2.) Pad shall be constructed of 3000 PSI concrete, 6" (inches) thick with wire mesh - 6" (inches) O.C. of 10/10 gauge.

- 3.) Three side screening 5' (feet) in height shall be provided with approved materials by the City of Rockledge.
- 4.) Turning radii for sanitation vehicles shall be as follows:
 - a.) 90' (feet) - minimum clear distance to structure will be 65' (feet)
 - b.) 45' (feet) - minimum clear distance to structure will be 45' (feet)
- 5.) All dumpster pads are to accommodate a 6 yard dumpster size:
 - a.) 6 yard shall be 12' (feet) in width and 16' (feet) in length
- 6.) Recycling materials in dumpster pad will require an additional 5' (feet) in width.

ROADWAYS:

A.) Roadways shall be classified in the following categories, including specified widths:

- 1.) Local Roads, including subdivision roads - 26' (feet) including curb & gutter sections
- 2.) Collector and Commercial Roads - 28' (feet) including curb & gutter sections
- 3.) Highway and Arterials - 50' (feet) including curb & gutter sections

B.) Construction of Roadways and Specific Criteria:

- 1.) High ground water table not to exceed 6" (inches) below stabilized subbase.
- 2.) Subgrade to be clear of stumps, roots or any organic materials for a depth of 2' (feet) below this established grade. Subgrade compaction shall be 100% as per ASSHOT 180 method 1' (foot) below the established grade.
- 2a.) Backfill material to be tested in one (1) foot lifts at 98% density every 200 feet or where determined necessary.
- 3.) Top 4" (inches) of subgrade shall be mixed with 4" (inches) of limerock or coquina rock FDOT approved by mechanical means creating a stabilized subbase of 8" (inches) meeting LBR of 50 & 98% compaction. T-180 method every 200 feet staggered lanes or where determined necessary. Curb areas to have densities of 98% compaction under curbs every 200 feet staggered lanes.
- 3a.) Commercial or Collector Roads - top 6" (inches) of subgrade shall be mixed with 6" (inches) of limerock or coquina rock FDOT approved by mechanical means creating a stabilized subbase of 12" (inches) meeting a LBR of 50 & 98% compaction.
- 4.) Base material shall be of limerock or coquina rock & placed 6" (inches) thick with a LBR of 100 & 98% compaction.
- 4a.) Commercial or Collector Roads - Base material shall be of limerock or coquina rock & placed 8" (inches) thick with a LBR of 100 & 98% compaction.
- 5.) Prime tack coat with a sand seal shall follow after proper grades and compactions have been established.
- 6.) Asphalt shall be Type I and placed at 1 1/2" (inches) thick & compacted 11/4 (inches) thick. Finished 1/4" (inch) to 1/16" (inch) above curb and pavement match line.
- 6a.) Asphalt to be tested by Marshall, stability extraction and gradation method in accordance with Florida Department of Transportation Specifications every 500 feet staggered lanes.
- 7.) Cul-de-sacs shall have a minimum of 105' (foot) right of way with 80' (feet) paved diameter.
- 8.) Cul-de-sacs shall be created at any dead end streets.
- 9.) Gutter sections shall be Miami type at 2' (foot) wide unless otherwise approved by the City of Rockledge. F.D.O.T. unmountable curb and gutter section shall be permitted where application warrants as approved by the City of Rockledge. Cylinder test to be at beginning pour and every 50 c.y. thereafter reaching 3000 PSI in 28 days.
- 10.) Slope shall be a minimum of 0.3% when curbs are used to transfer stormwater.
- 11.) Crown of roads shall be a minimum of 2% on standard roads.
- 12.) Piping under roadways shall be reinforced concrete wrapped with filter media.
- 13.) Developed areas shall create a stabilized 5' (foot) wide strip from back of curb toward the property line.

DRIVEWAYS OR ENTRANCES:

A.) Two types of materials shall be used in driveways:

- 1.) Concrete:

Concrete shall be 3000 PSI, 6" (inches) thick with wire mesh or fiber mesh, 6" (inches) O.C., 10/10 gauge from property line to edge of pavement.
- 2.) Asphalt:

Asphalt drives shall have a minimum of 6" (inches) thick limerock or coquina rock compacted to 98% density.
- 3.) Asphalt shall be Type I placed at 1 1/2" (inches) thick & compacted to 11/4" (inches) thick.

- 4.) Asphalt drives shall have a minimum radii of 35' (feet) & bordered with environmental curbs from property line to edge of pavement measuring 12" (inches) in width x 7" (inches) front x 6" (inches) back

SIDEWALKS:

- 1.) Materials shall be 6" (inches) thick, 3000 PSI with wire mesh 6" (inches) O.C., 10/10 gauge in driveways.
- 2.) All other walks shall be 4" thick 3000 PSI concrete at a width of 4' (feet) & installed 6" (inches) inside right of way line.
- 3.) Expansion joints shall be at 5' (foot) intervals & a minimum of 1/4" (inch) per foot slope toward street.
- 4.) Wheelchair ramps shall be installed at intersections of crossroads as determined by Design Engineer or the City of Rockledge. A 3' (foot) transition shall be made from curb & gutter sections each side.
- 5.) All sidewalks are to be broom finished.
- 6.) Fire hydrants shall be placed 3' (feet) away as a standard procedure

ELEVATIONS:

- 1.) Finished Floor elevations shall be shown on each lot in commercial & subdivision sites.
- 2.) Minimum floor elevation shall be 18" (inches) above crown of road in subdivision and 6" (inches) above crown of road on commercial sites. Standard finished floor elevation shall not exceed 22" (inches) above crown of road except where ground elevations of natural contour are impractical as determined by the City of Rockledge.
- 3.) Minimum road elevation shall be 19'0" (feet) above sea level at lowest point. Higher elevations may be required due to flood zones & high ground water tables.
- 4.) Bench Mark & elevations shall be shown on plans to be used in construction of project.

RETENTION AREAS:

- 1.) First 1" (inch) of rainfall shall be contained on site as a minimum standard. Calculations for retention required & provided shall be shown on plans.
- 2.) Retention on site shall meet requirements for a 100 year storm pre-post event where an effective discharge point is available. A 100 year total retention shall be met for sites with no effective positive discharge as determined by the City of Rockledge.
- 3.) Retention areas shall be sodded as a standard & slopes of City maintained facilities shall not exceed 5:1. City maintained wet facilities shall be fenced with a 6' (foot) commercial fence & Public Works sign attached. Private facilities shall not exceed a 3:1 slope. Private retention areas shall become the responsibility of the Homeowners Association or legal entity for properties.
- 4.) A lot drainage detail shall be provided on plans with the standard design of all run-off being shed to the front & handled by the curb, gutter & drainage piping system. Transition detail to abutting properties shall be shown including spot elevations as determined by the City of Rockledge for acceptable transitions.
- 5.) Transition from abutting properties shall not exceed 2' (feet) in width. Retaining walls maybe required as determined by the City of Rockledge.

GENERAL NOTES:

A 24 hour notice by contractor for required inspections or the above mentioned facilities shall be given.
Call (407) 690-3967.

SCOPE
DRIVEWAYS
DRAINAGE STRUCTURES
MATERIALS

MATERIALS
DUMPSTERS
SIDEWALKS
DUMPSTERS

ELEVATIONS
ROADWAYS
RETENTION
GENERAL



CITY OF ROCKLEDGE

1600 Huntington Lane
Rockledge, FL 32955-2660

P.O. Box 560488
Rockledge, FL 32956-0488

PUBLIC WORKS DEPARTMENT

TECHNICAL SPECIFICATIONS

EFFECTIVE DATE: JANUARY 1995

[Handwritten signature and date: 1/16/95]

CITY OF COCOA
UTILITIES DEPARTMENT, COCOA, FLORIDA
TECHNICAL PROVISIONS
FOR
CONSTRUCTION OF WATER DISTRIBUTION SYSTEM

SECTION I. SCOPE OF WORK

1.1 The Contractor shall install all water mains and appurtenances in accordance with Utilities Department Technical Provisions for Construction of Water Distribution Systems, the approved plans and Standard Detail Sheet.

1.2 The Contractor shall furnish all labor, materials, tools and equipment necessary or incidental to the construction. He shall obtain and pay all permits, official inspections by the City of Cocoa and other official fees in connection with the work.

1.3 The Contractor shall arrange a preconstruction conference with the City of Cocoa Utilities Engineering Department a minimum of two working days prior to commencement of construction.

Any deviation from these specifications shall be approved in writing by the City of Cocoa Utilities Engineer, prior to commencement of construction of facility affected.

1.4 The Contractor shall not operate any valve nor remove any thrust block from City owned mains except under direct supervision of a representative from the City of Cocoa Utilities Department.

SECTION II. MATERIAL SPECIFICATIONS

2.1 PIPES

2.1.1 Polyvinyl Chloride pressure pipe (size 4" through 12") shall be Cast Iron pipe equivalent outside diameter Class 150 (DR 18) conforming to ANMA C900-81 and subsequent revision. Two inch Polyvinyl Chloride shall be Class 200 (DR 21). Pipe shall be in standard 20 foot lengths. All joints shall be of the elastomer-coupler type with threaded, integral solid-weld bell or coupling with the same DR as the barrel. No solvent cement joints shall be accepted. All PVC pipe and couplings shall bear the manufacturer's label, and N.S.F. approval for potable water.

2.1.2 Ductile Iron pipe installed in routine installations shall be cement lined Class 50 conforming to ANMA C-151-86. Water main and storm drain crossing conflicts shall be properly designed by the project engineer and approved by the Utilities Department prior to installation. Ductile Iron pipe installed with less than 30" of cover or installed in other than a routine trench shall be thickness Class 52 or greater as determined by the Design Engineer and approved by the Utilities Department. Water mains which are less than 10 feet apart from building foundations or other permanent objects shall be Class 52 ductile iron pipe. In no case shall water mains be installed less than 5 feet from foundations. The above distances shall be doubled for water mains larger than 8" in diameter. Polyethylene encasement, conforming to ANMA C900-82, shall be provided for routine trench installations in all soils.

2.1.3 Reuse Pipe - PVC pipe installed in reuse systems shall be SDR-21 Class 200. All PVC to ductile iron pipe shall be installed with a 5" wide bronze adhesive coating and identification tape affixed to the top of the pipe. Script in 1-1/2" black lettering shall identify the main as "Reuse Main".

2.2 VALVE AND VALVE BOXES

2.2.1 Resilient Seat Gate Valves - (4"-12") - Resilient seat valves with mechanical joint ends as manufactured by American Darling Valve (FRSRO, U.S. Pipe - Metrosol), Clow Corporation, or approved equal shall conform to ANMA C-509-87 specification and be manufactured in the U.S.A. Resilient seats shall be of natural or synthetic rubber and be bonded or mechanically attached to the gate using stainless steel hardware and shall be rated at a working pressure of 200 psi. The interior and exterior of the valve body shall be fusion bonded epoxy coated in accordance with ANMA-C-550 in order to provide a corrosion resistant seat, applied in a manner to withstand the action of line fluids and operation of the seating gate under long-term service. Valve seats shall seal by compression only. Wedging or sliding of the resilient seat shall not be acceptable. Valves shall be supplied with 2" square operating nuts and shall be designed to provide a bubble tight seal regardless of direction of flow. Opening shall be in the counterclockwise direction.

2.2.2 Butterfly Valves - (12" and larger) - Butterfly valves with mechanical joint ends shall be rubber seated, 90° tight closing type, short body, ANMA Specification C504-80, Class 150 B. Valve shaft shall be of 18-8 type 304 stainless steel or type 316 stainless steel. Body dimensions and minimum shaft diameter shall be in accordance with Tables 3 and 4 of ANMA C504-80. Valve seat shall be of molded natural or synthetic rubber and be mechanically secured to the disc or to the valve body, and shall mate against a stainless steel seat surface. Burled valves shall be for submersed service and equipped with totally enclosed gear operators, permanently lubricated and equipped with adjustable stops for open and closed positions. The gear ratio shall be such as to require not more than 150 foot pounds of input to produce output torque equivalent to maximum shaft torque indicated in Table 1 of ANMA C504. Each burled valve shall have a standard 2" square operating nut. Opening shall be in the counterclockwise direction.

2.2.3 All Valves - 2" Valves for use with 2" water distribution mains shall be of the following types: 2" Class 150 B, 2" Class 150 C, 2" Class 150 D, 2" Class 150 E, 2" Class 150 F, 2" Class 150 G, 2" Class 150 H, 2" Class 150 I, 2" Class 150 J, 2" Class 150 K, 2" Class 150 L, 2" Class 150 M, 2" Class 150 N, 2" Class 150 O, 2" Class 150 P, 2" Class 150 Q, 2" Class 150 R, 2" Class 150 S, 2" Class 150 T, 2" Class 150 U, 2" Class 150 V, 2" Class 150 W, 2" Class 150 X, 2" Class 150 Y, 2" Class 150 Z, 2" Class 150 AA, 2" Class 150 AB, 2" Class 150 AC, 2" Class 150 AD, 2" Class 150 AE, 2" Class 150 AF, 2" Class 150 AG, 2" Class 150 AH, 2" Class 150 AI, 2" Class 150 AJ, 2" Class 150 AK, 2" Class 150 AL, 2" Class 150 AM, 2" Class 150 AN, 2" Class 150 AO, 2" Class 150 AP, 2" Class 150 AQ, 2" Class 150 AR, 2" Class 150 AS, 2" Class 150 AT, 2" Class 150 AU, 2" Class 150 AV, 2" Class 150 AW, 2" Class 150 AX, 2" Class 150 AY, 2" Class 150 AZ, 2" Class 150 BA, 2" Class 150 BB, 2" Class 150 BC, 2" Class 150 BD, 2" Class 150 BE, 2" Class 150 BF, 2" Class 150 BG, 2" Class 150 BH, 2" Class 150 BI, 2" Class 150 BJ, 2" Class 150 BK, 2" Class 150 BL, 2" Class 150 BM, 2" Class 150 BN, 2" Class 150 BO, 2" Class 150 BP, 2" Class 150 BQ, 2" Class 150 BR, 2" Class 150 BS, 2" Class 150 BT, 2" Class 150 BU, 2" Class 150 BV, 2" Class 150 BW, 2" Class 150 BX, 2" Class 150 BY, 2" Class 150 BZ, 2" Class 150 CA, 2" Class 150 CB, 2" Class 150 CC, 2" Class 150 CD, 2" Class 150 CE, 2" Class 150 CF, 2" Class 150 CG, 2" Class 150 CH, 2" Class 150 CI, 2" Class 150 CJ, 2" Class 150 CK, 2" Class 150 CL, 2" Class 150 CM, 2" Class 150 CN, 2" Class 150 CO, 2" Class 150 CP, 2" Class 150 CQ, 2" Class 150 CR, 2" Class 150 CS, 2" Class 150 CT, 2" Class 150 CU, 2" Class 150 CV, 2" Class 150 CW, 2" Class 150 CX, 2" Class 150 CY, 2" Class 150 CZ, 2" Class 150 DA, 2" Class 150 DB, 2" Class 150 DC, 2" Class 150 DD, 2" Class 150 DE, 2" Class 150 DF, 2" Class 150 DG, 2" Class 150 DH, 2" Class 150 DI, 2" Class 150 DJ, 2" Class 150 DK, 2" Class 150 DL, 2" Class 150 DM, 2" Class 150 DN, 2" Class 150 DO, 2" Class 150 DP, 2" Class 150 DQ, 2" Class 150 DR, 2" Class 150 DS, 2" Class 150 DT, 2" Class 150 DU, 2" Class 150 DV, 2" Class 150 DW, 2" Class 150 DX, 2" Class 150 DY, 2" Class 150 DZ, 2" Class 150 EA, 2" Class 150 EB, 2" Class 150 EC, 2" Class 150 ED, 2" Class 150 EE, 2" Class 150 EF, 2" Class 150 EG, 2" Class 150 EH, 2" Class 150 EI, 2" Class 150 EJ, 2" Class 150 EK, 2" Class 150 EL, 2" Class 150 EM, 2" Class 150 EN, 2" Class 150 EO, 2" Class 150 EP, 2" Class 150 EQ, 2" Class 150 ER, 2" Class 150 ES, 2" Class 150 ET, 2" Class 150 EU, 2" Class 150 EV, 2" Class 150 EW, 2" Class 150 EX, 2" Class 150 EY, 2" Class 150 EZ, 2" Class 150 FA, 2" Class 150 FB, 2" Class 150 FC, 2" Class 150 FD, 2" Class 150 FE, 2" Class 150 FF, 2" Class 150 FG, 2" Class 150 FH, 2" Class 150 FI, 2" Class 150 FJ, 2" Class 150 FK, 2" Class 150 FL, 2" Class 150 FM, 2" Class 150 FN, 2" Class 150 FO, 2" Class 150 FP, 2" Class 150 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150 HX, 2" Class 150 HY, 2" Class 150 HZ, 2" Class 150 IA, 2" Class 150 IB, 2" Class 150 IC, 2" Class 150 ID, 2" Class 150 IE, 2" Class 150 IF, 2" Class 150 IG, 2" Class 150 IH, 2" Class 150 II, 2" Class 150 IJ, 2" Class 150 IK, 2" Class 150 IL, 2" Class 150 IM, 2" Class 150 IN, 2" Class 150 IO, 2" Class 150 IP, 2" Class 150 IQ, 2" Class 150 IR, 2" Class 150 IS, 2" Class 150 IT, 2" Class 150 IU, 2" Class 150 IV, 2" Class 150 IW, 2" Class 150 IX, 2" Class 150 IY, 2" Class 150 IZ, 2" Class 150 JA, 2" Class 150 JB, 2" Class 150 JC, 2" Class 150 JD, 2" Class 150 JE, 2" Class 150 JF, 2" Class 150 JG, 2" Class 150 JH, 2" Class 150 JI, 2" Class 150 JJ, 2" Class 150 JK, 2" Class 150 JL, 2" Class 150 JM, 2" Class 150 JN, 2" Class 150 JO, 2" Class 150 JP, 2" Class 150 JQ, 2" Class 150 JR, 2" Class 150 JS, 2" Class 150 JT, 2" Class 150 JU, 2" Class 150 JV, 2" Class 150 JW, 2" Class 150 JX, 2" Class 150 JY, 2" Class 150 JZ, 2" Class 150 KA, 2" Class 150 KB, 2" Class 150 KC, 2" Class 150 KD, 2" 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2.2.4 VALVE BOXES - Cast Iron valve boxes consisting of a Cast Iron top and bottom section, as approved by the City of Cocoa, shall be set flush with finished ground surface in such a manner as to permit easy use of a valve wrench, and to prevent surface loads from being transmitted to the valve or pipe. Box sections must be telescopic and adjustable. Valve box lids should have the

word WATER cast on the top. A concrete pad will be poured around box at finished grade level (24" X 24" X 4"). Valve box tops on reuse mains shall have the word REUSE removed and shall be painted brown with Epoxy Paint, Rustoleum 9591 or equal, top and bottom.

2.2.5 Check Valves - Check valves for fireline systems shall be the double detector check valve as manufactured by Febo, Model No. 808DC, Matta Model No. 709DC or approved equal. In accordance with ANMA C-508-82. Double detector check valves shall be accepted as an approved assembly in accordance with the manual "Cross-Connection Control" as published by Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California, University Park, Los Angeles, CA 90088-0211. Check valves shall be installed above ground in a grassed area and painted with Rust-O-Thano No. 9493-1411 Red or approved equal.

2.3 FITTINGS

2.3.1 All fittings shall be of the mechanical joint type. Cast Iron fittings shall be ANMA C110-87 Class 250; cement lined with inside seal coat, shall be bituminous coated on the outside, and shall be wrapped with 6 mil polyethylene.

Ductile Iron 4" to 12" Compact fittings shall conform to ANMA C 153-88. Ductile Iron compact fittings shall be mechanical joint with interior cement lining with seal coat and bituminous coated on the outside.

2.3.2 Tapping Valves - 4" - 12" shall be Cast Iron body mechanical joint. 18" - 48" shall be fabricated steel with O-ring seal, fusion bonded and epoxy coated with stainless steel nuts and bolts. Tapping Valve must have centering rings.

2.3.3 Fittings for 2" PVC pipe shall be PVC with rubber gasketed slip joints. No solvent weld joints will be accepted.

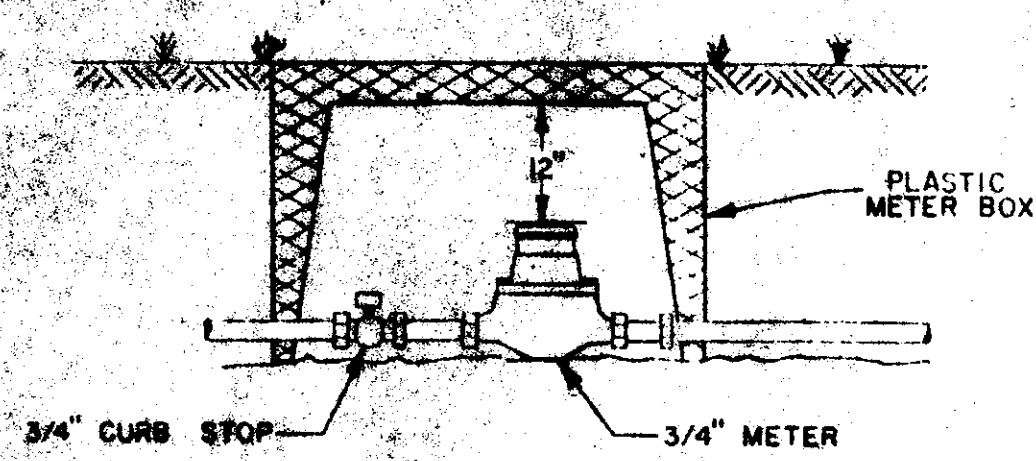
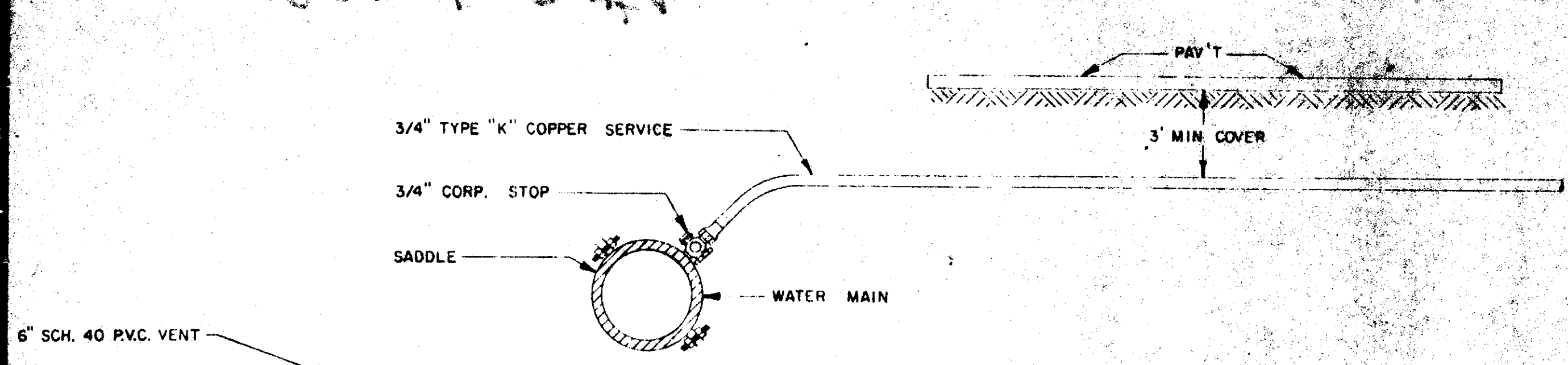
2.4 FIRE HYDRANTS

Fire hydrants shall be manufactured in accordance with ANMA C-151-86 and shall have bronze to bronze main seat threading surfaces. American Darling Model Mark 71 with bronze drain ring as manufactured by American Darling Valve and Manufacturing Company, Model No. A-421 Super Centurion 200 as manufactured by Muller Company, Kennedy Guardian Model SK-81A as manufactured by ITT Kennedy, Clow Modelation as manufactured by Clow Corporation, or U.S. Metropolitan and manufactured by U.S. Pipe will be accepted. All hydrants shall be traffic type and drain holes shall be plugged at the factory. Hydrants shall have a 4-1/2" valve opening, one 4-1/2" pump nozzle and two 2-1/2" hose outlets. All nozzles shall be a minimum of 18" and a maximum of 24" above finished grade. A 3" N.P. hydrant connection shall be provided using a hydrant valve anchoring line with integral 3" x 3" stainless N.P. gland on 6" plain end branch. All hydrants to be placed must-be-thane away from utility or approved equal. Hydrant shall be coated inside with fusion bonded epoxy. All hydrants

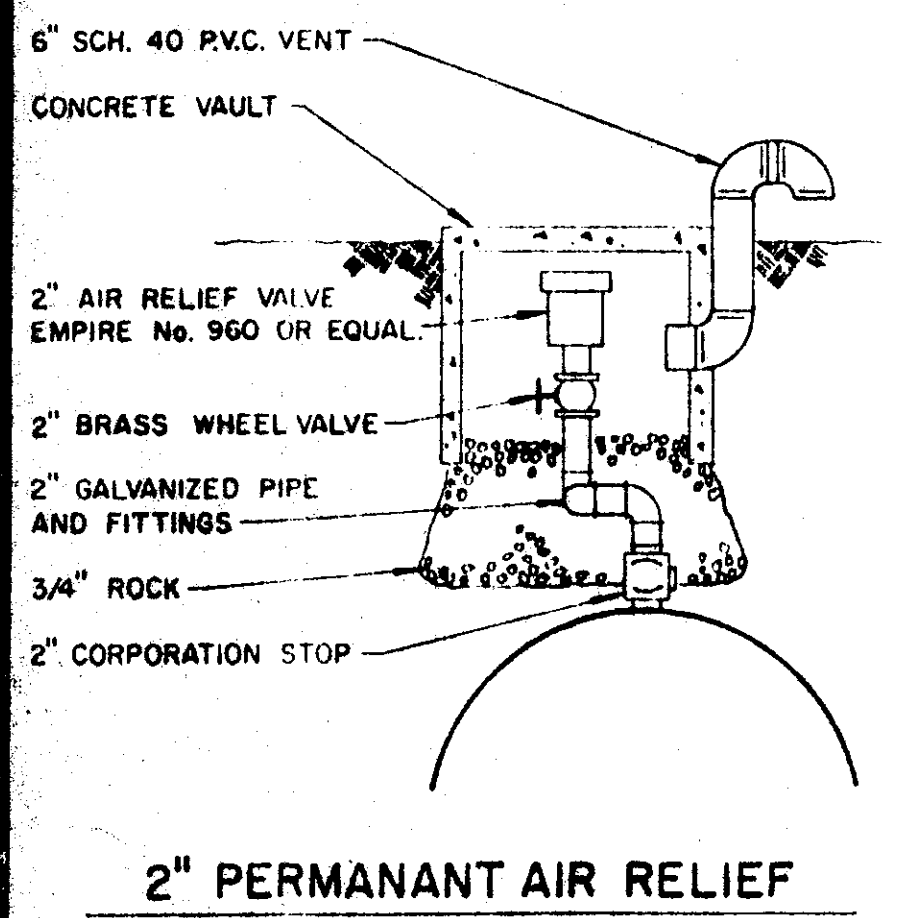
2.5 SERVICE CONNECTIONS

2.5.1 All service connections will be single connections. 1/4" and 1/2" services are to be fused to the main. 3/4" and 1" services are to be fused to the main. 1 1/2" and 2" services are to be fused to the main. 3" services are to be fused to the main. 4" services are to be fused to the main. 6" services are to be fused to the main. 8" services are to be fused to the main. 10" services are to be fused to the main. 12" services are to be fused to the main. 14" services are to be fused to the main. 16" services are to be fused to the main. 18" services are to be fused to the main. 20" services are to be fused to the main. 22" services are to be fused to the main. 24" services are to be fused to the main. 26" services are to be fused to the main. 28" services are to be fused to the main. 30" services are to be fused to the main. 32" services are to be fused to the main. 34" services are to be fused to the main. 36" services are to be fused to the main. 38" services are to be fused to the 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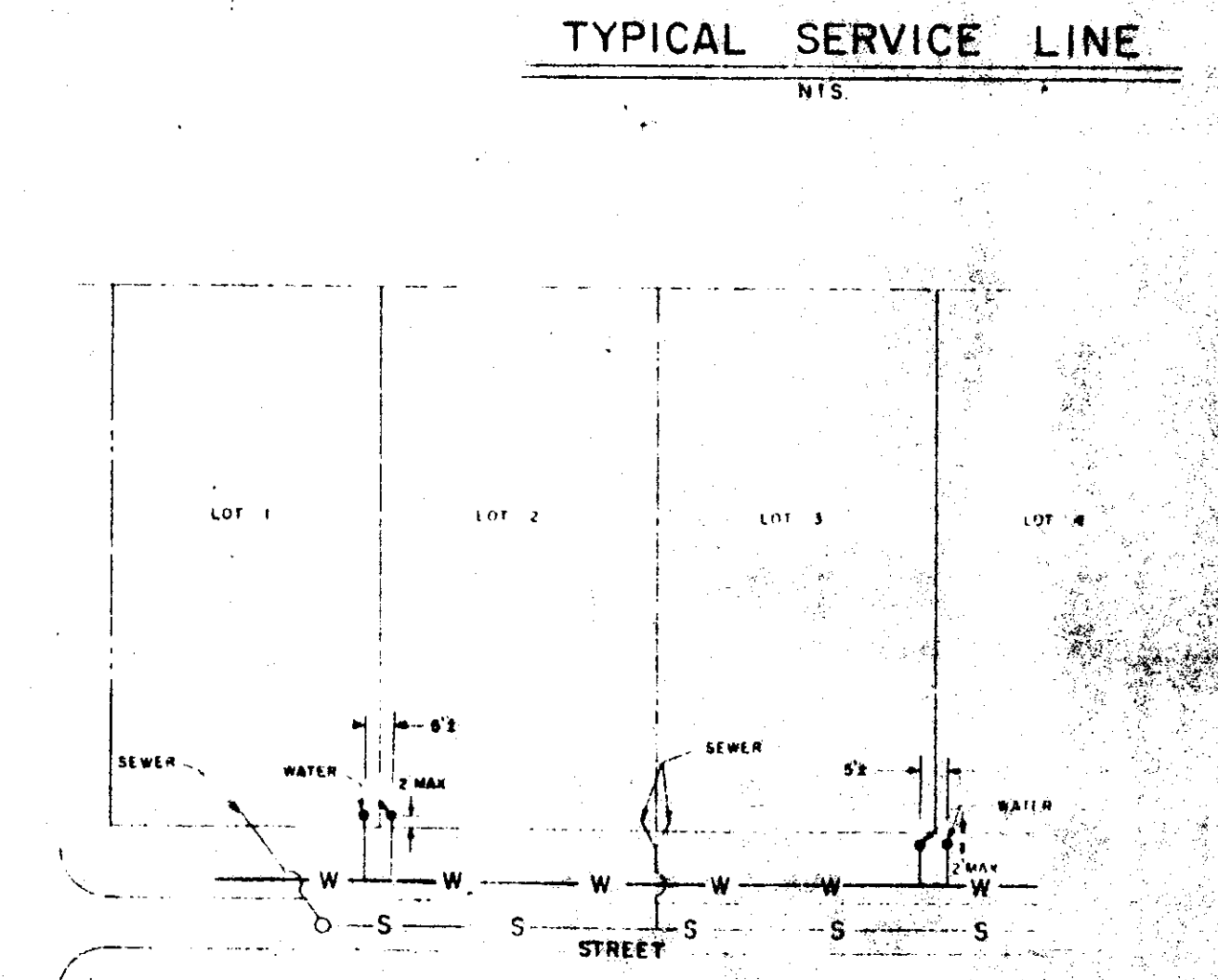
1008 112 #1



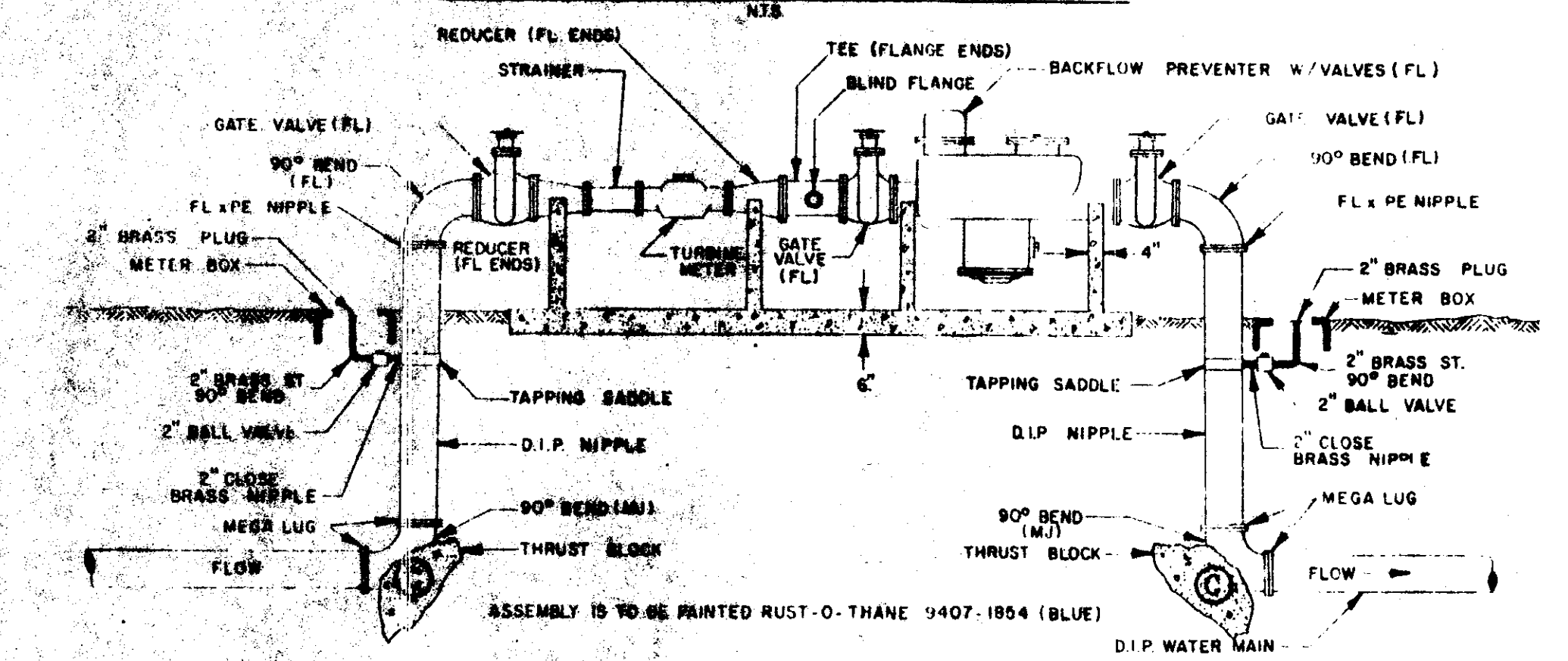
TYPICAL SERVICE CONNECTION



2" PERMANENT AIR RELIEF



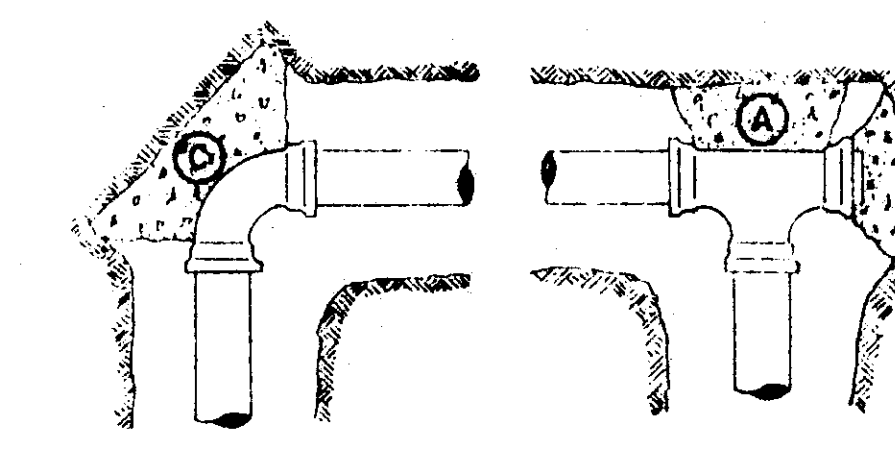
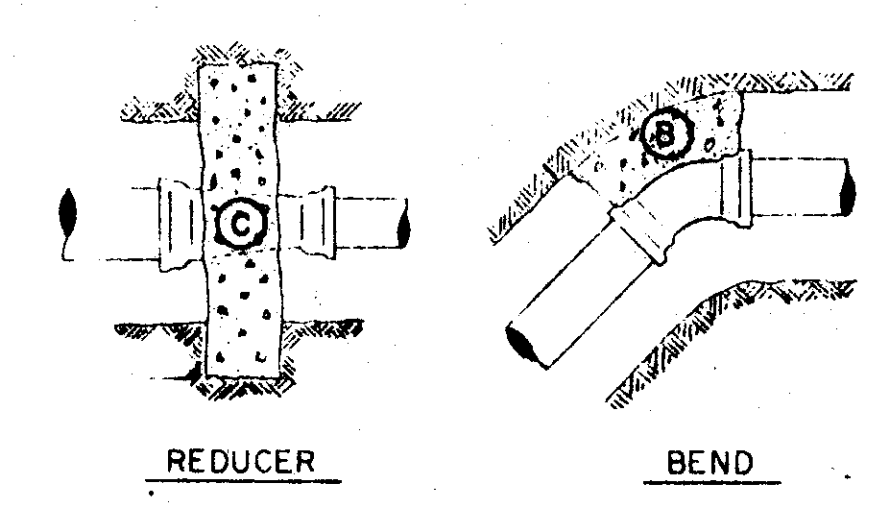
TYPICAL LOT SERVICE LINE LOCATION



3" x 4" METER W/BACKFLOW PREVENTER ABOVE GROUND INSTALLATION

THRUST BLOCK NOTES:

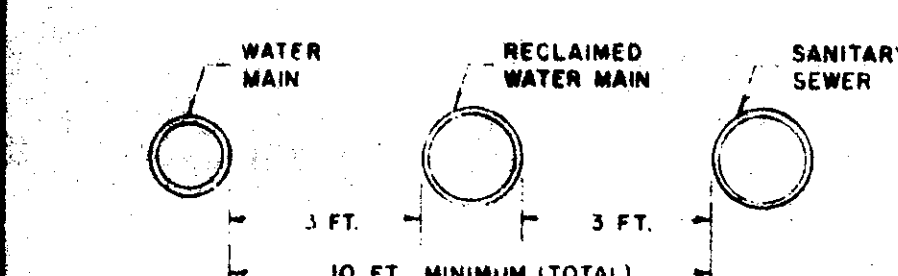
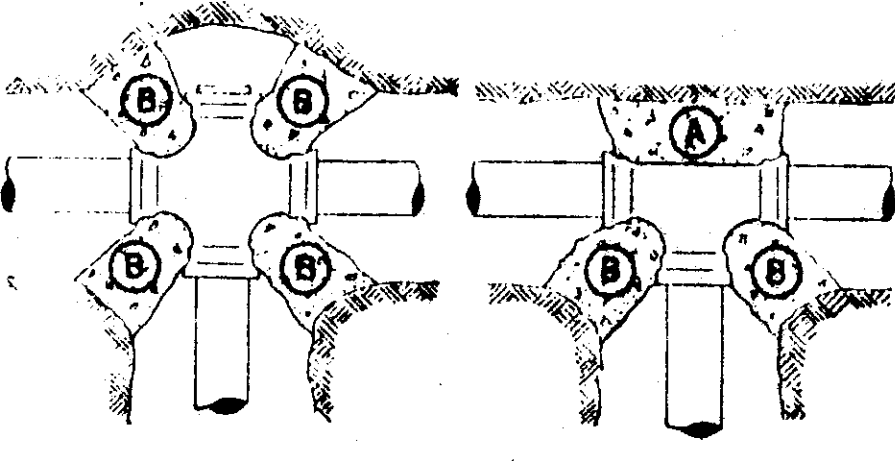
1. WRAP ALL FITTINGS WITH POLYETHYLENE FILM BEFORE POURING THRUST BLOCK. MAKING CERTAIN TO KEEP CONCRETE AWAY FROM ALL BOLTS, GLANDS, & FLANGES.
2. THRUST BLOCKS TO BE POURED AGAINST UNDISTURBED EARTH.
3. REQUIRED VOLUMES OF BEARING AREAS TO BE AS SHOWN IN CHART ADJUSTMENTS, IF NEEDED, WILL BE ALLOWED TO CONFORM TO TEST PRESSURE AND ALLOWABLE SOIL BEARING STRESS AS SHOWN IN SPECIFICATIONS.
4. BEARING AREA FOR THRUST BLOCKS ON HORIZONTAL BENDS IS BASED ON A TEST PRESSURE OF 1500 PSI AND SOIL BEARING STRESS OF 1500 PSI. THE DEPTH TO THE THRUST BLOCK BASE TO BE EQUAL TO OR GREATER THAN TWICE THE HEIGHT. EXAMPLE: IF BLOCK IS 2' THICK, THE BASE IS TO BE NO GREATER THAN 4' BELOW GRADE.
5. VERTICAL BEND THRUST BLOCKS TO BE THE SAME AS HORIZONTAL BENDS.
6. BEARING AREA OF THRUST BLOCK TO BE NOT LESS THAN ONE SQUARE FOOT.



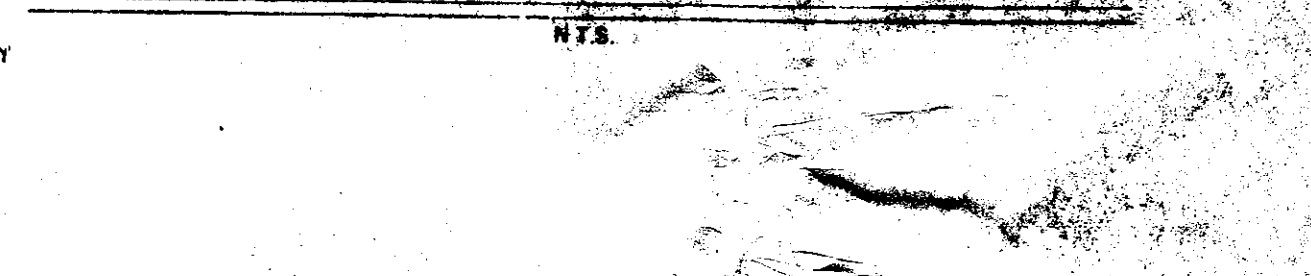
MINIMUM BEARING AREA (SQ. FT.)

LETTER	4"	6"	8"	10"	12"	16"	20"
A	1 1/2	2 1/4	3 1/2	5 1/4	7 1/4	10 1/4	16 1/2
B (22 1/2)	3/4	1	1 1/4	2	3	4	7
B (45)	1	1 1/4	2	3	4	6	10
C	2	4	7	11 1/4	17 1/2	25 1/4	39

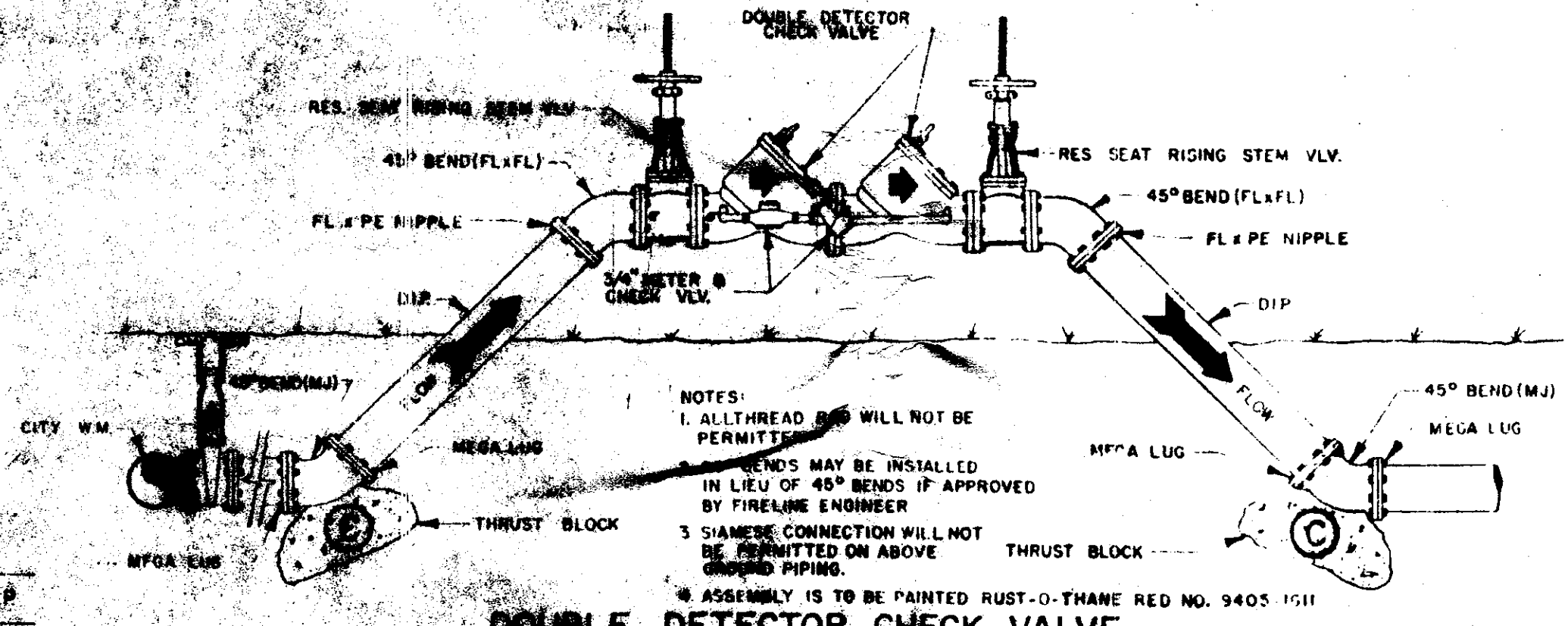
THE FIGURES IN THIS TABLE REPRESENT AREA OF CONCRETE BLOCKING AGAINST THE VERTICAL TRENCH WALL OF UNDISTURBED EARTH IN SQUARE FEET AT 2000 P.S.F. SOIL BEARING CAPACITY



TYPICAL SEPARATION OF POTABLE WATER FROM NONPOTABLE WATER



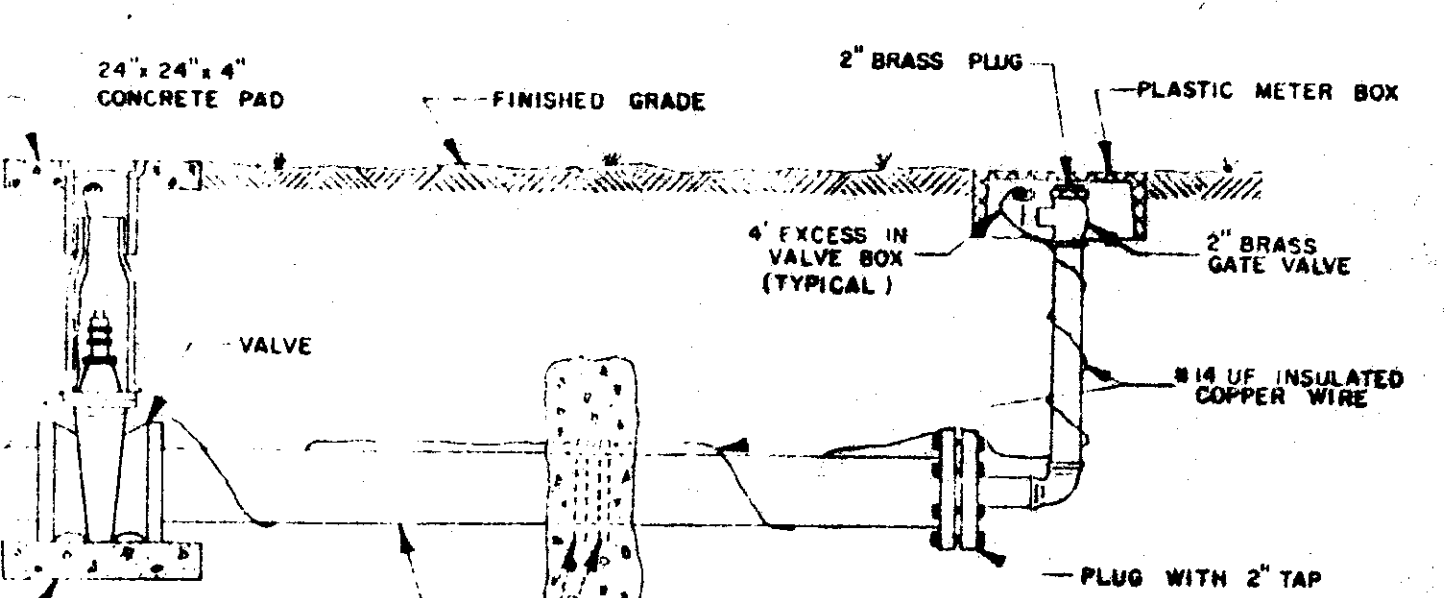
STORM DRAIN CROSSING



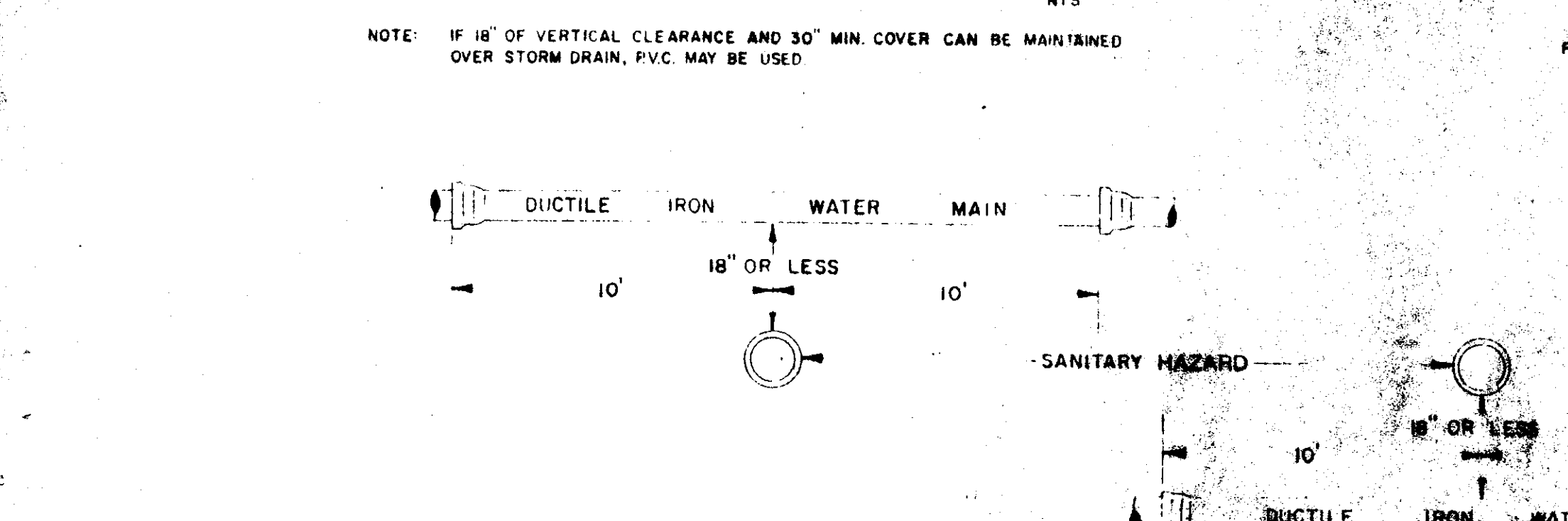
DOUBLE DETECTOR CHECK VALVE

GENERAL NOTES:

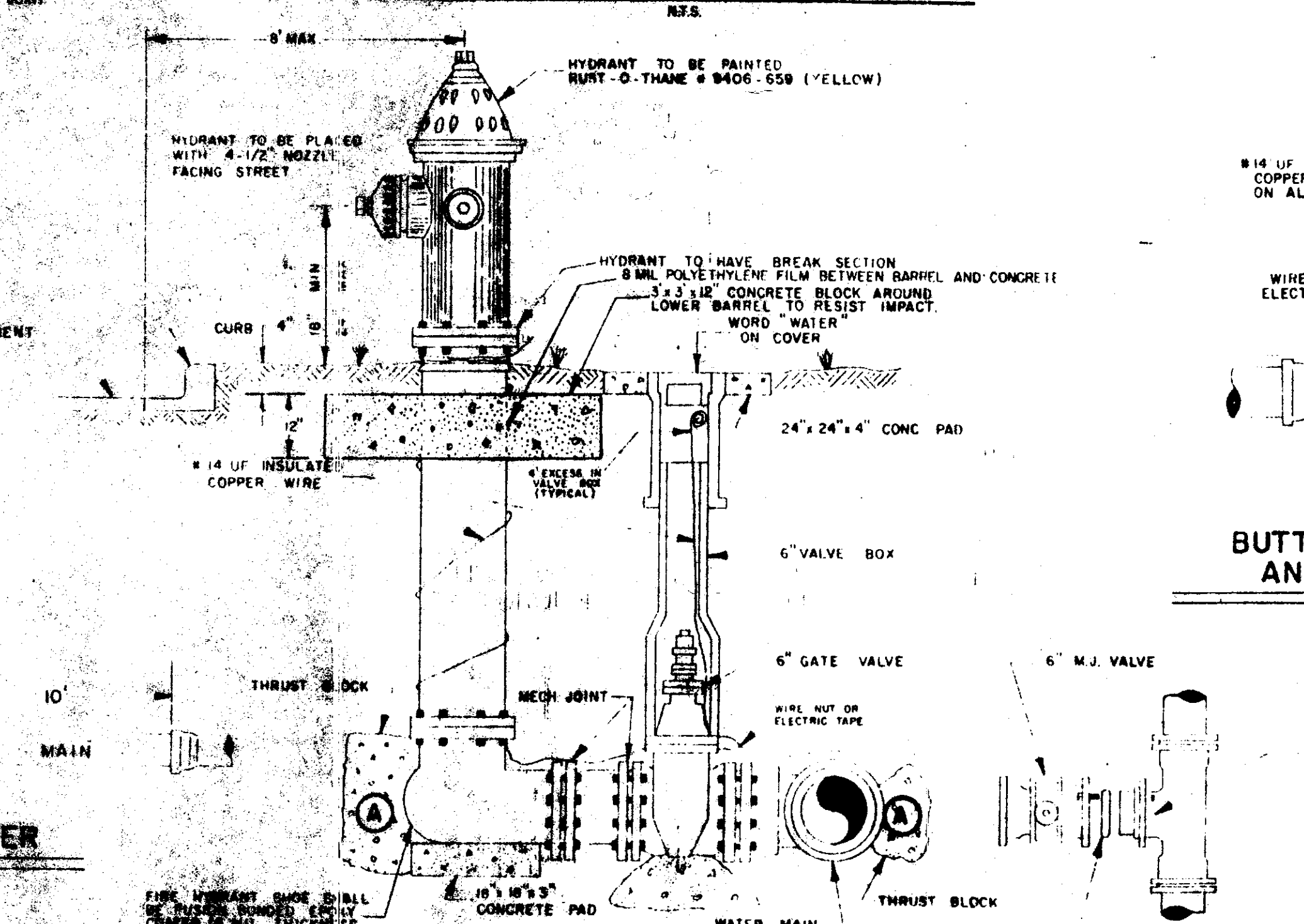
1. ALL DUCTILE IRON PIPE AND FITTINGS TO BE WRAPPED WITH 8 MIL POLYETHYLENE FILM.
2. AN APPROVED JOINT RESTRAINT SYSTEM MAY BE USED IN LIEU OF MEGA LUG.



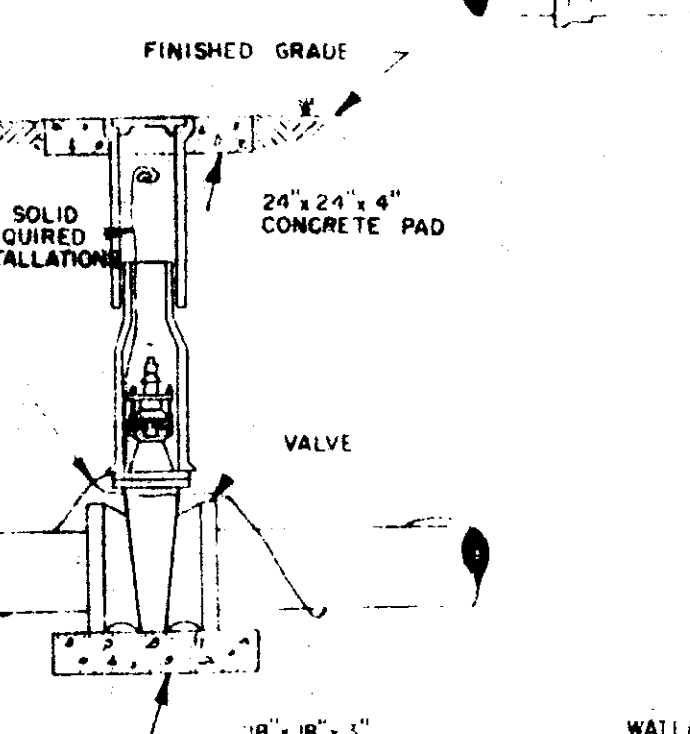
2" BLOW-OFF DETAIL



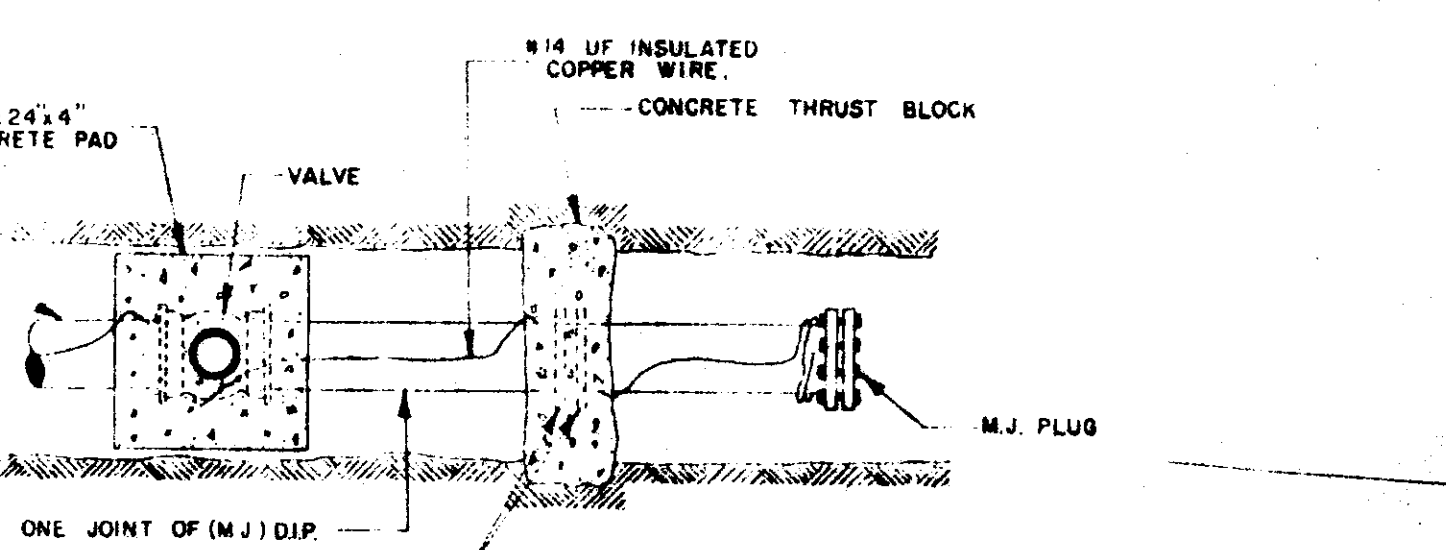
TYPICAL WATER MAIN & SANITARY HAZARD CROSS OVER



TYPICAL SECTION, FIRE HYDRANT & GATE VALVE INSTALLATION



BUTTERFLY OR GATE VALVE AND VALVE BOX DETAIL



PLUGGED END DETAIL

HYDRANT VALVE ANCHORING TEE WITH INTEGRALLY CAST STD. M.J. GLAND ON 6" PLAIN END BRANCH.

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