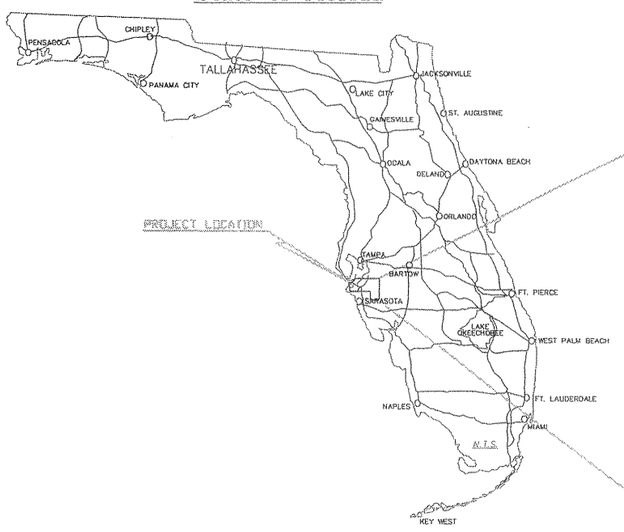
MANATEE COUNTY

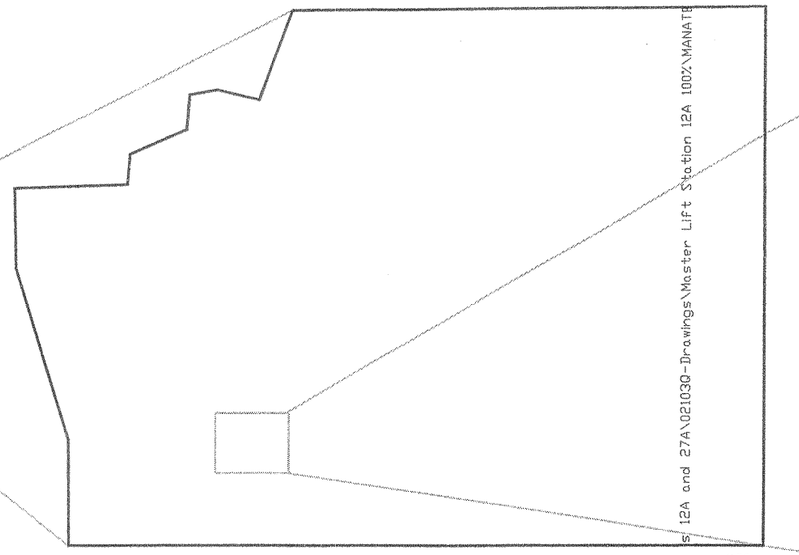
MASTER LIFT STATION 12A IMPROVEMENTS MANATEE COUNTY, FL.

PROJECT NO. 0019706-5001200

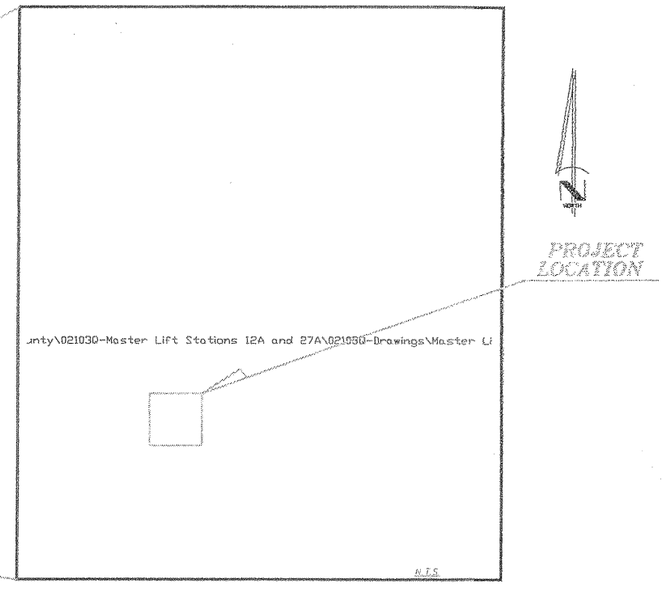
State of Florida



Manatee County



Vicinity Map



INDEX OF SHEETS

PLANS PREPARED FOR:

MANATEE COUNTY
1026 26TH AVE. EAST
BRADENTON, FL 34208
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FAX: (941) 708-7549

PLANS PREPARED BY:

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e-mail: mail@ashengineering.com

As-Builts

Signature

Date

Robert Hierholzer, PE
FLA. P.E. NO. _____

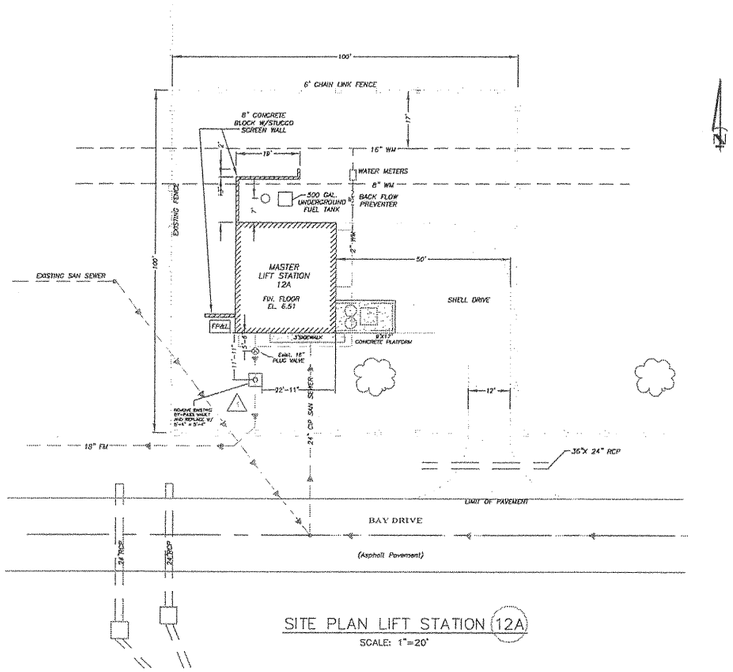
4696.001

GENERAL NOTES

1. ALL WORKMANSHIP AND MATERIALS USED IN THE CONSTRUCTION OF THIS PROJECT SHALL CONFORM TO MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS LATEST EDITION, UNLESS OTHERWISE INDICATED.
2. THE LOCATIONS AND SIZE OF THE UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. HOWEVER THERE IS NO GUARANTEE THAT ALL EXISTING UTILITIES HAVE BEEN FOUND OR SHOWN. THE CONTRACTOR IS FOREWARNED TO ASCERTAIN AND DETERMINE PRECISE LOCATIONS PRIOR TO EXCAVATING AND ALSO FAMILIARIZE HIMSELF WITH ALL VOLTAGES CARRIED IN OVERHEAD OR UNDERGROUND UTILITY SERVICES. NO CLAIM FOR EXTRA COST SHALL BE MADE AS A RESULT OF THE AFOREMENTIONED APPROXIMATIONS. THE CONTRACTOR SHALL LOCATE EXACTLY ALL UTILITIES THAT CROSS THE PROPOSED UTILITIES PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AT LEAST 48 HOURS BEFORE BEGINNING CONSTRUCTION. CALL SUNSHINE AT 1-800-432-4770.
4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO USE WHATEVER MEANS NECESSARY TO CONTROL AND PREVENT EROSION AND TRANSPORT OF SEDIMENT TO SURFACE DRAINS AND TO DITCHES DURING CONSTRUCTION. SEE EROSION AND POLLUTION CONTROL NOTES FOR ADDITIONAL INFORMATION.
5. THE INFORMATION PROVIDED IN THESE PLANS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF CONDITIONS WHICH WILL BE ENCOUNTERED DURING THE COURSE OF THE WORK. THE CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATIONS THEY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSION REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH THEIR BIDS ARE BASED.
6. THE CONTRACTOR SHALL CONTACT THE ENGINEER'S OFFICE IMMEDIATELY ON ANY CONFLICTS BETWEEN WHAT IS SHOWN HEREIN AND ACTUAL CONDITIONS DISCOVERED DURING CONSTRUCTION OF ANY IMPROVEMENTS SHOWN ON THE DRAWINGS.
7. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION SAFETY. SPECIAL PRECAUTIONS MAY BE REQUIRED IN THE VICINITY OF POWER LINES AND OTHER UTILITIES.
8. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. THIS EXCLUSION DOES NOT ALLEVIATE THE CONTRACTOR FOR PROVIDING A CONTINUOUS SAFE WORKSPACE.
9. ALL WORK PERFORMED SHALL COMPLY WITH THE REGULATIONS, PERMIT REQUIREMENTS AND ORDINANCES OF THE VARIOUS GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK.
10. ALL DISTURBED GRASSED AREAS SHALL BE SODDED UNLESS OTHERWISE INDICATED.
11. THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY CONSTRUCTION TO THEIR ORIGINAL OR BETTER CONDITION.
12. THE CONTRACTOR SHALL NOT ENTER UPON OR IN ANY WAY ALTER THE WETLAND AREAS THAT MAY BE ON THE SITE. ALL WORK IN THE VICINITY OF OPEN WATER AND/OR WETLANDS IS TO BE PERFORMED IN COMPLIANCE WITH THE ENVIRONMENTAL REGULATIONS AND/OR PERMITS FOR THE SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY FINES RESULTING FROM HIS VIOLATION OF ANY REGULATIONS OR PERMIT CONDITIONS.
13. THE CONTRACTOR IS TO CONTROL ALL FUGITIVE DUST ORIGINATING ON THIS PROJECT BY WATERING OR OTHER METHODS AS REQUIRED.
14. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH IN THE FIELD RIGHT OF WAY LINES, BASE LINES, BENCH MARKS (ELEV.), CENTER LINES, AND STATIONING AS REQUIRED TO CONSTRUCT THIS PROJECT.
15. THE LOCATION OF SOME TREES HAVE NOT BEEN FIELD VERIFIED. CONTRACTOR TO FIELD VERIFY LOCATION OF TREES.
16. NO WORK EXCEPT FOR EMERGENCY TYPE WILL BE PERFORMED AFTER SUNDOWN AND BEFORE SUNRISE.

EROSION & POLLUTION CONTROL NOTES

1. GENERAL:
   ALL EROSION AND SILTATION CONTROL METHODS SHALL BE IMPLEMENTED PRIOR TO THE START OF CONSTRUCTION.
2. PROTECTION AND STABILIZATION OF ON-SITE SOIL STOCKPILES:
   STOCKPILES SHALL BE PROTECTED AT ALL TIMES BY ON-SITE DRAINAGE CONTROLS WHICH PREVENT EROSION OF THE STOCKPILED MATERIAL. CONTROL OF DUST FROM SUCH STOCKPILES IS REQUIRED, DEPENDING UPON THEIR LOCATION AND THE EXPECTED LENGTH OF TIME THE STOCKPILES WILL BE PRESENT. IN NO CASE SHALL ANY STOCKPILED MATERIAL REMAIN AFTER THIRTY (30) CALENDAR DAYS.
3. PROTECTION OF EXISTING STORM SEWER SYSTEMS:
   STORM WATER INLETS IN THE VICINITY OF THE PROJECT SHALL BE PROTECTED BY SEDIMENT TRAPS SUCH AS SECURED HAY BALES, SOD, STONE, ETC. WHICH SHALL BE MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS, AND WHICH MUST BE APPROVED BY THE ENGINEER BEFORE INSTALLATION. THIS WILL BE MAINTAINED TO PREVENT DEGRADATION OF THE WATERS OF THE COUNTY & STATE.
4. SEDIMENT TRAPPING MEASURES:
   BERMS, SEDIMENT BARRIERS, VEGETATIVE BUFFERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT AND/OR PREVENT THE TRANSPORT OF SEDIMENT ONTO ADJACENT PROPERTIES, OR INTO EXISTING BODIES OF WATER, MUST BE INSTALLED, CONSTRUCTED OR, IN THE CASE OF VEGETATIVE BUFFERS, PROTECTED FROM DISTURBANCE, AS A FIRST STEP IN THE LAND ALTERATION PROCESS. SUCH SYSTEMS SHALL BE FULLY OPERATIVE BEFORE ANY OTHER DISTURBANCE OF THE SITE BEGINS. EARTHEN STRUCTURES INCLUDING BUT NOT LIMITED TO BERMS, EARTH FILTERS, DAMS OR DIKES SHALL BE STABILIZED AND PROTECTED FROM DRAINAGE DAMAGE OR EROSION WITHIN ONE WEEK OF INSTALLATION.
5. SWALES, DITCHES, AND CHANNELS:
   ALL SWALES, DITCHES AND CHANNELS LEADING FROM THE SITE SHALL BE PROTECTED FROM SILTATION AND EROSION DURING CONSTRUCTION AND BE SODDED WITHIN THREE (3) DAYS OF EXCAVATION. SOIL DISPLACED BY CONSTRUCTION WILL BE REMOVED FROM AREAS WHICH ARE CONSIDERED ENVIRONMENTALLY SENSITIVE.
6. EROSION CONTROL:
   EROSION CONTROL SYSTEMS SHALL BE REQUIRED FOR ALL WORK WITHIN JURISDICTIONAL AREAS. THESE SYSTEMS MAY INCLUDE STAKED HAY BALES, SILT SCREEN, FILTER FABRIC, AND TURBIDITY SCREENS.
7. MAINTENANCE:
   ALL EROSION AND SILTATION CONTROL DEVICES SHALL BE CHECKED REGULARLY, ESPECIALLY AFTER EACH RAINFALL AND SHALL BE CLEANED OUT AND/OR REPAIRED AS REQUIRED.



SITE PLAN LIFT STATION 12A

SCALE: 1"=20'

LEGEND

EXISTING	PROPOSED	
		FORCE MAIN
		SANITARY SEWER
		RIGHT OF WAY
		TELEPHONE
		PROPERTY LINE
		WATER
		OVERHEAD ELECTRIC
		OVERHEAD CATV
		SANITARY MANHOLE
		HYDRANT
		DETECTOR CHECK VALVE
		WATER METER
		GATE VALVE
		HEDGES
		POWER POLE
		OAK TREE
		PALM TREE
		24"x15" RCP
		FENCE

BY-PASS NOTES

1. EXISTING FLOW CONDITIONS : @PMP 3203 HEAD 113

Addendum #2

2.0) Pump Operation Data - STA's 27A and 12A
The Contractor should use the design pump data as a base for for calculating the requirements for bypass pumping. That is, STA 12A-3200, GPM @ 112 ft., TDH and STA 27A-4200 GPM @ 51 ft. TDH.

Further, Jim Marble advises that if graundwater is high and/or there is continual significant rainfall, one should double the bypass pump base capacities.

Addendum #4

1.0) Steel Reinforcement-CMU Walls-Valve/Meter Vaults
The steel box reiforcement should be vertical bent bars tied to the reinforcing steel bars in the bottom slab. Bent bars should be placed in every other block cell around the perimeter of the vault. Those cells would then be filled with concrete. In this design case or for any other alternate design, the Contractor will have to provide shop drawings for approval by the Engineer.

Addendum #4

11.0) Bypass Connections-Lift Station 12A & 27A
The 8" bypass connections do indeed constitute serious flow restrictions. Our suggestions was and is to consider using the lift stations' pumps as much as possible.

12.0) Bypass Valve Arrangments-Lift Stations 12A & 27A
There is an 8" valve located at each pump bypass connection as previously stated. I do not yet see any need for a line stop regardng bypass pumping.

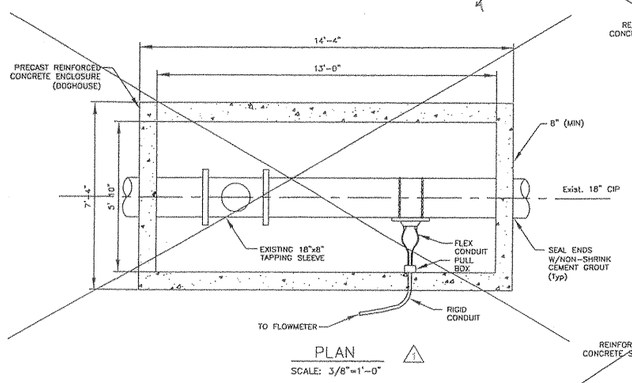
13.0) Existing 24" Plug Valve
Nothing is to be done about the existing 24" plug valves upstream of the meter vault locations unless, as previously mentioned, they do not function properly. Also, as previously mentioned, the so-called existing 24" plug valve shown on the drawings does not, in fact, exist.

14.0) Fitting/Valve Replacement-Bypass Assemblies
There is no requirement at present to replace anything related to the bypass connections.

15.0) Pumping Capacities-Wet Well Drawdown Pump Valve Replacement
The blanket statement that the station pumps could not keep up with the incoming sewage flows is not true. I suggest that any bidder or the Contractor can contact Jim Marble to work out best days and times for executing plug valve replacements both on the pump suctions and pump discharges.

Addendum #4 Same Addendum #2

5.0) Station Bypass Details
STA 12A
24"x8" Tapping Sleeve
8" Bypass Valve
8" Flanged Connection
24" Plug Valve 4-5' Upstream of Bypass Location



PLAN 1

SCALE: 3/8"=1'-0"

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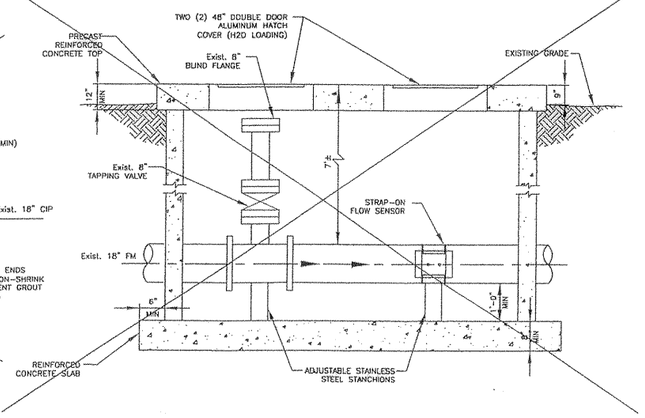

BYPASS/FLOW METER VAULT DETAIL 2

SCALE: 3/8"=1'-0"

PROPOSED PUMP DATA

PROPOSED PUMP DATA & DESIGN CHARACTERISTICS	
NUMBER OF PUMPS	3
DESIGN CAPACITY PER PUMP, G.P.M.	3203
TOTAL DYNAMIC HEAD, FT.	112
MIN. EFF. AT DESIGN CAPACITY %	70%
HORSEPOWER PER PUMP, H.P.	140
SUCTION SIZE, IN.	12"
DISCHARGE SIZE, IN.	8"
PUMP MANUF. & MODEL NUMBER	FLYGT CT-3231/665
IMPELLER DIAMETER, MM	346
PUMP R.P.M.	1780
ELECT. SVC- VOLTAGE & PHASE	460V 3 PHASE
MAXIMUM HEIGHT OF PUMP & LIFTING BALE	78"

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Addendum #5 See Specs

No.	Date	REVISION	By
1	08/19/05	REVISE BYPASS METER VAULT	JHC
1	11/02/04	REVISE BYPASS METER VAULT	JHC
Approved		Date	

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LEGEND / NOTES & SITE PLAN

MANATEE COUNTY
LIFT STATION - 12A
SANITARY SEWERAGE PROJECT

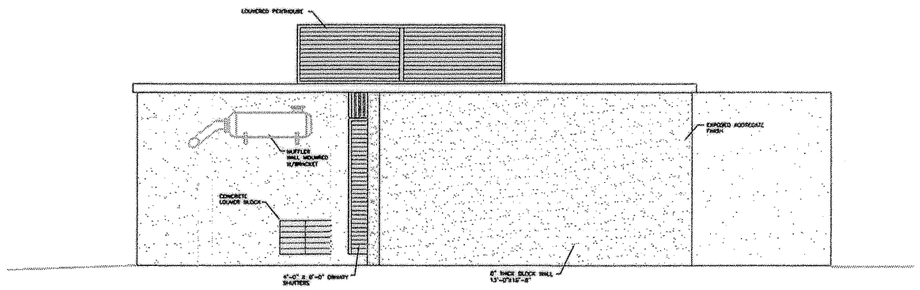
Robert Hierholzer, PE
FLA. P.E. NO.

20 0 20 40 FT 1"=20'
1 0 1 2 3 4 5 6 7 FT 3/8"=1'-0"

Des: DAM
Dwn: LPB
Ckd: WEW

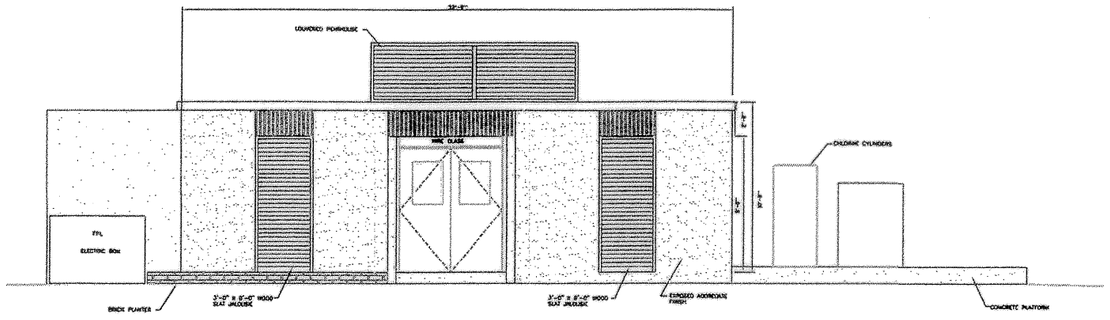
DATE: 8/25/03
PROJECT NUMBER: 02103-0
SHEET G.2
File: 02103-0
CADD FILE NAME: 02103-12A-Legend & Notes.dwg

4696.002



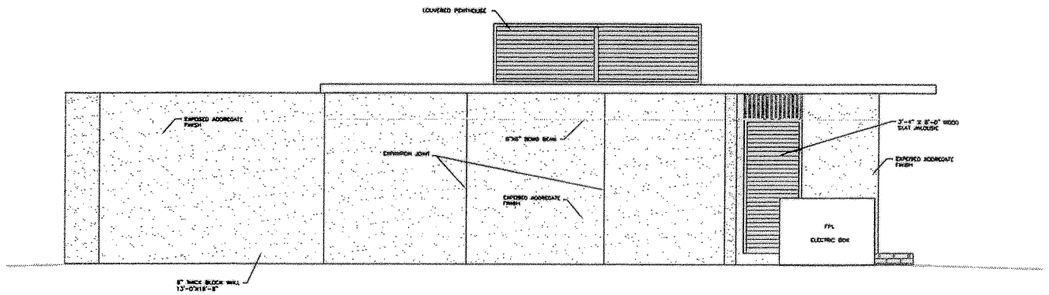
REAR ELEVATION

SCALE : 1/4" = 1'-0"



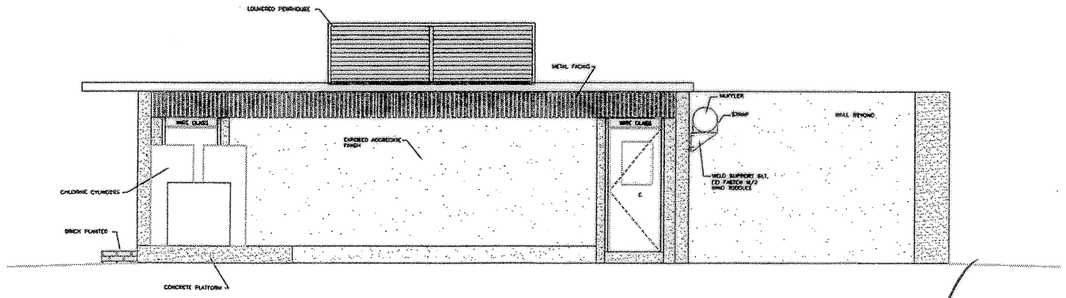
FRONT ELEVATION

SCALE : 1/4" = 1'-0"



LEFT ELEVATION

SCALE : 1/4" = 1'-0"



RIGHT ELEVATION

SCALE : 1/4" = 1'-0"

MASTER LIFT STATION 12A
ELEVATIONS SCALE : 1/4" = 1'-0"

As-Built

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ELEVATION

MASTER LIFT STATION 12A
IMPROVEMENTS
MANATEE COUNTY

Robert Hierholzer, PE
FLA. P.E. NO. _____

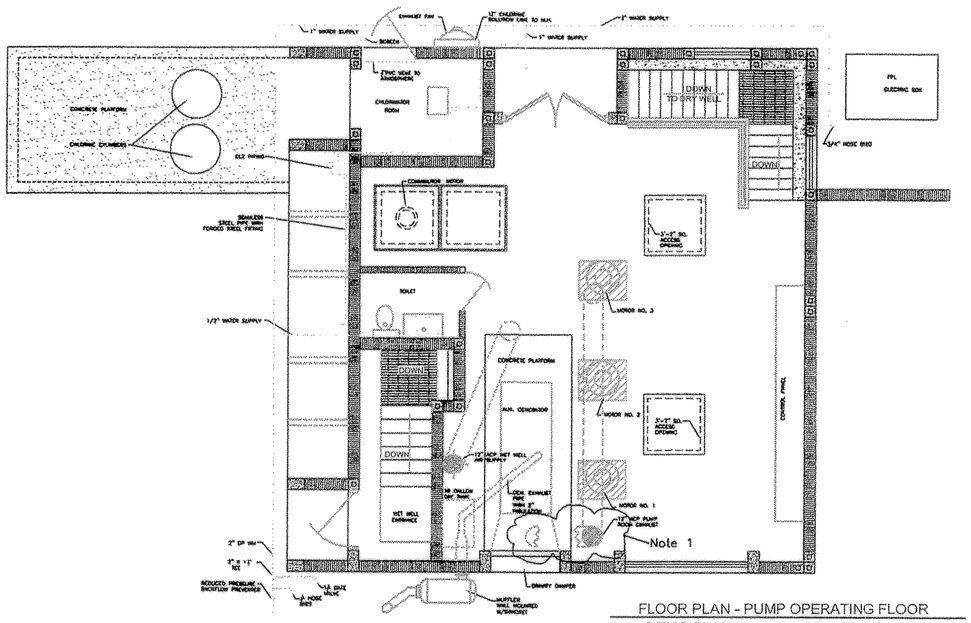
SCALE : 1/4" = 1'-0"

No.	Date	REVISION	By
Approved		Date	

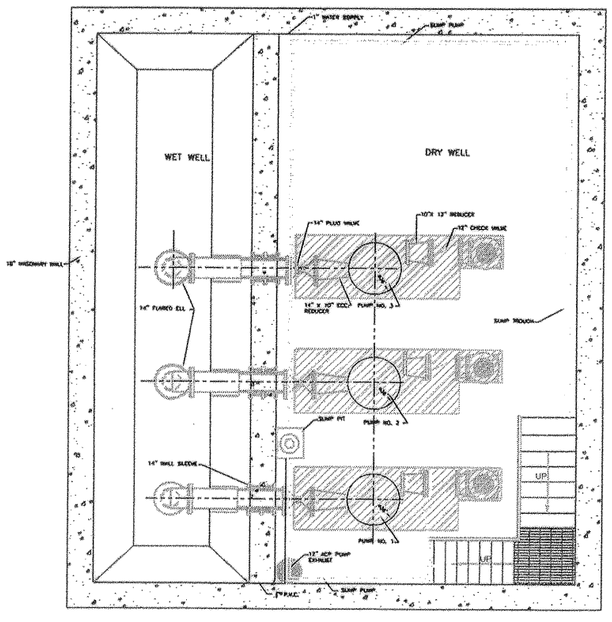
Des: LPB
Dwn: LPB
Ckd: MEW

DATE: 6/12/03 | File: 02103-0
PROJECT NUMBER | CADD FILE NAME
02103-0 | 02103-0-ELEVATIONS.dwg
SHEET A-EL | SHEETS

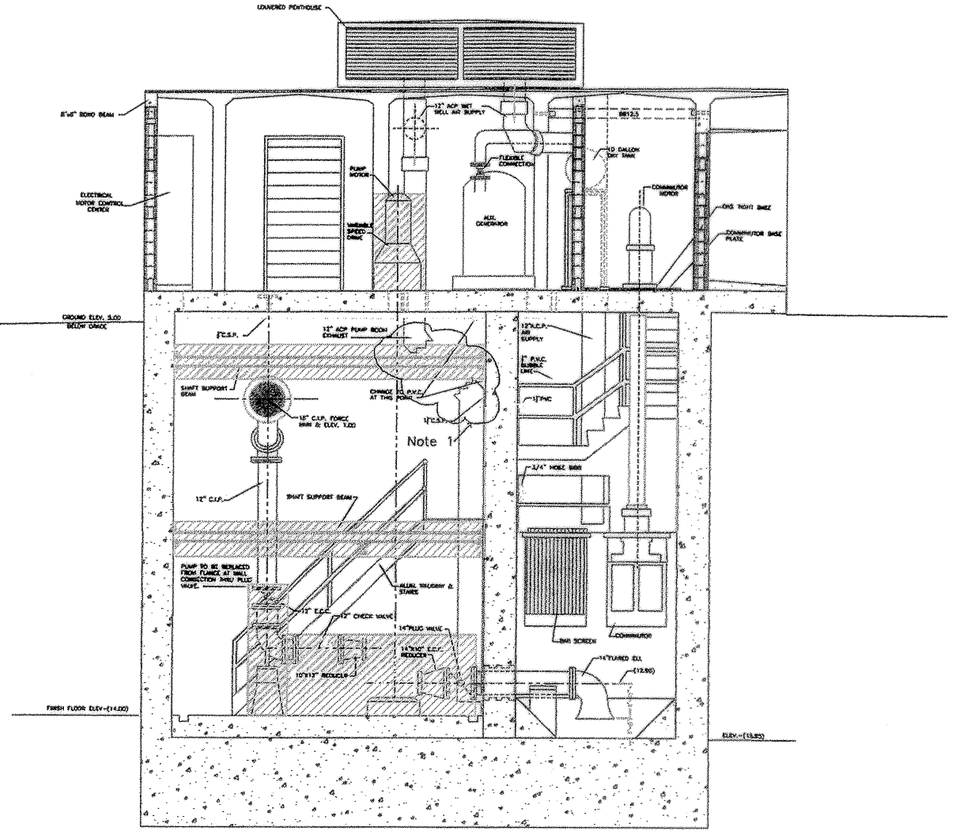
4696.003



FLOOR PLAN - PUMP OPERATING FLOOR
DEMO PLAN SCALE : 1/4" = 1'-0"



FLOOR PLAN - PUMP ROOM & WET WELL
DEMO PLAN SCALE : 1/4" = 1'-0"



MASTER LIFT STATION 12A SECTION
DEMO PLAN SCALE : 1/4" = 1'-0"

Note 1:
Removed by
Field Directive 2

DWG 4.2

LEGEND

EQUIPMENT TO BE REMOVED, SALVAGED AND/OR DISPOSED OF, ACCORDING TO OWNER'S DIRECTION. SALVAGED EQUIPMENT SHALL BE STORED NEATLY ON-SITE ACCORDING TO OWNER'S DIRECTION.

As-Builts

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FLOOR PLAN & SECTION – DEMO

MASTER LIFT STATION 12A IMPROVEMENTS MANATEE COUNTY

Robert Hierholzer, PE
FLA. P.E. NO. _____

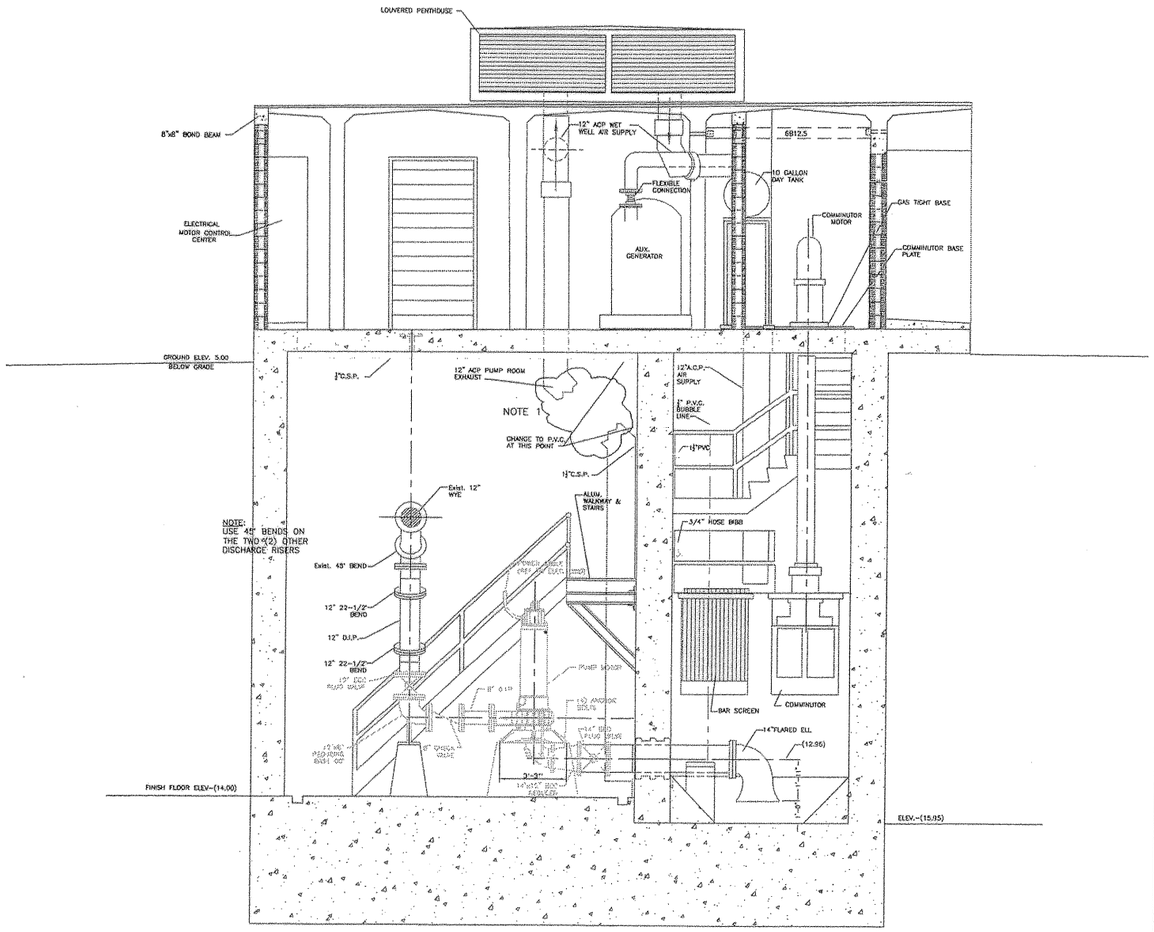
SCALE : 1/4" = 1'-0"

No.	Date	REVISION	By
Approved		Date	

Des: DAM
Dwn: LPB
Ckd: WEW

DATE: 8/25/03 | File: 02103-0
PROJECT NUMBER | CADD FILE NAME
02103-0 | 02103-0-R300 FLOOR PLAN.dwg
SHEET 0-1

4693.004



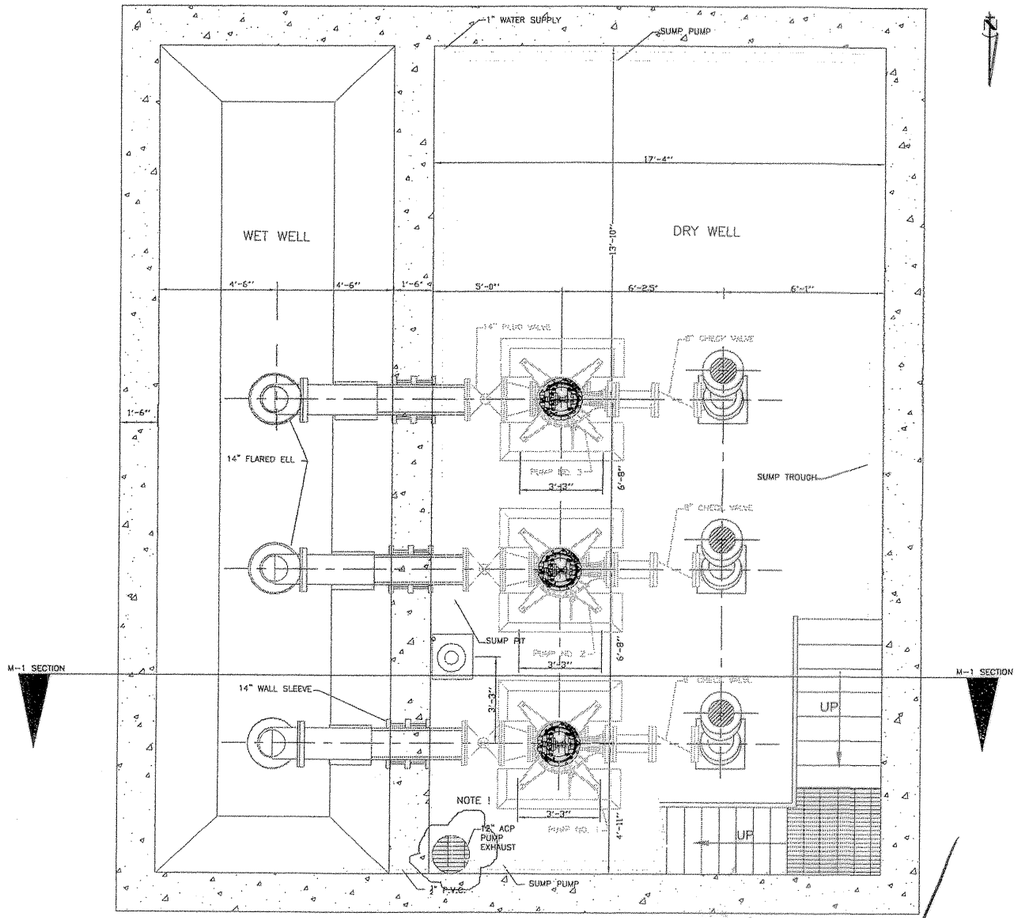
MASTER LIFT STATION 12A SECTION

PROPOSED SCALE : 3/8" = 1'-0"

Note 1:
Removed by
Field Directive 2

NOTE:

1. INSTALL NEW DRY PIT SUBMERSIBLE PUMPS PER SPECIFICATION.
2. SUPENDED SOLIDS IN VERTICAL LINE – WHERE THE POSSIBILITY OF OVERHEAD DRAIN-BACK EXISTS, INSTALL THE PLUG VALVE WITH SEAT AT THE TOP. THIS PREVENTS DRAIN-BACK SOLIDS FROM PACKING INTO BODY.



FLOOR PLAN - PUMP ROOM & DRY WELL (A)

PROPOSED SCALE : 3/8" = 1'-0"

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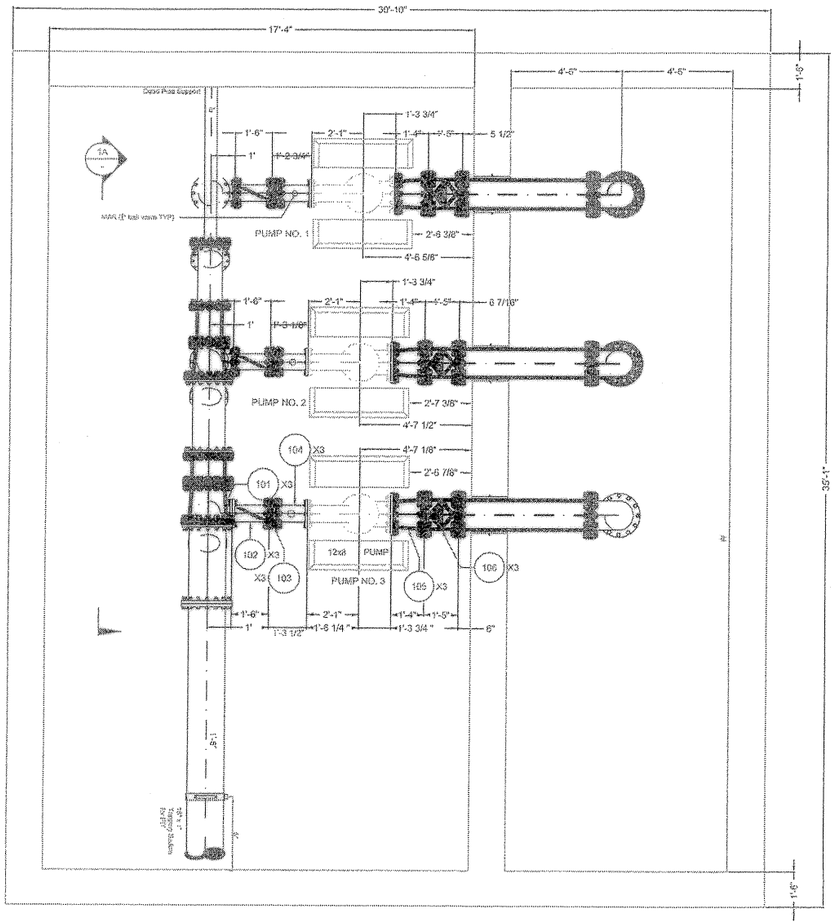
MANATEE COUNTY 1026 26th Ave. East Bradenton, FL 34208	Ash Engineering, Inc. 5313 JOHNS ROAD SUITE 201 Tampa, FL 33634 License #6603 (813) 290-8899 Fax: (813) 290-8891 e-mail: mail@ashengineering.com	FLOOR PLAN & SECTION PROPOSED	MASTER LIFT STATION 12A IMPROVEMENTS MANATEE COUNTY
Robert Hierholzer, PE FLA. P.E. NO. _____			

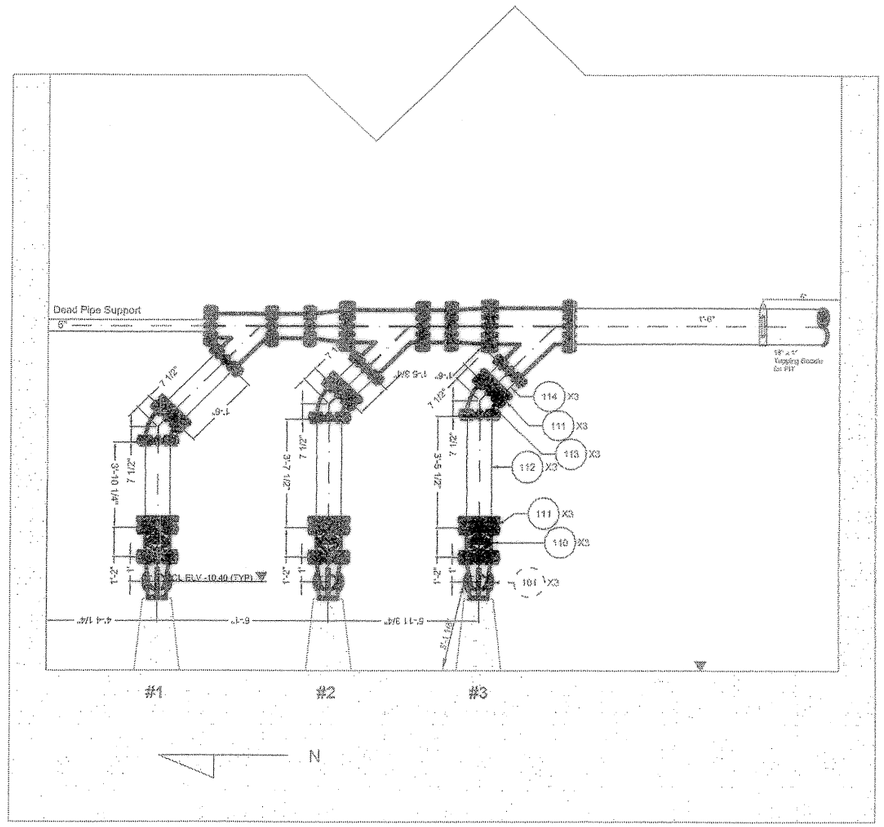
No.	Date	REVISION	By
2	11/02/04	REVISE BYPASS METER VAULT	JHC
1	1/28/04	REVISED PUMP	LPB
Approved		Date	

Des: DAM	DATE: 8/25/03
Dwn: LPB	PROJECT NUMBER
Ckd: WEW	02103-0
	SHEET M-1

File: 02103-0
CADD FILE NAME
02103-0-FLOOR PLAN.dwg

4696.005





SECTION 1A
SCALE: 3/8"=1'-0"

TAG	QTY	DESCRIPTION	SPECIFICATION			
		SIZE LENGTH TYPE/PATTERN	TFS	CLASS	LINE	COAT
		PLAN VIEW				
101	3	" x ' - " 12" x 8" FLG RED BASE 90 DEG BE		C110	EPY	PR
102	3	" x ' - " 8" FLG CHECK VALVE				
103	3	" x ' - " 8" MEGA-FLG ADAPTER		2100		
104	3	8 " x 2' - 8" F-PE DIP CTSIF		53	EPY	PR
105	3	" x ' - " 14" x 12" FLG ECC REDUCER		C110	EPY	PR
106	3	" x ' - " 14" FLG PLUG VALVE				
107	9	" x ' - " 8" FLG ACC SET				
108	6	" x ' - " 12" FLG ACC SET				
109	6	" x ' - " 14" FLG ACC SET				
		SECTION VIEW				
110	3	" x ' - " 12" FLG PLUG VALVE				
111	6	" x ' - " 12" MEGA-FLG ADAPTER		2100		
112	3	12" x 6' - 0" F-PE CTSIF		53	EPY	PR
113	3	" x ' - " 12" FLG 45 DEG BEND		C110	EPY	PR
114	3	12" x 4' - 6" F-PE DIP CTSIF		53	EPY	PR
116	12	" x ' - " 12" FLG ACC SET				

As-Builts

NOTES

1. DIMENSIONS AND PIPING CONFIGURATIONS MAY CHANGE DUE TO UNKNOWN EXISTING CONDITIONS
2. ALL FLANGE ADAPTERS TO BE WEDGE TYPE - EBAA MEGA FLANGE 2100 OR APPROVED EQUAL
3. FLANGE SPOOL PIECES TO BE FABRICATED TO 1/8" TOLERANCE
4. ALL FLANGED CONNECTIONS INCLUDE AMERICAN TORUSEAL FLANGE GASKET OR APPROVED EQUAL

BOM - BILL OF MATERIAL
CTSIF - CUT TO SUIT IN FIELD
FCA - FLANGE COUPLING ADAPTOR
FLG - FLANGE
PE - PLAIN END
DENOTES THE USE OF A MEGA-LUG
- - DENOTES THAT BOM ITEM IS CALLED OUT IN ANOTHER VIEW

Wharton-Smith, Inc.
CONSTRUCTION GROUP

4696.006

GENERAL STRUCTURAL NOTES

SCOPE OF WORK

1. WORK DETAILED ON THE DRAWINGS AND APPLICABLE ITEMS DESCRIBED IN THE GENERAL STRUCTURAL NOTES.

BUILDING CODES AND SPECIFICATIONS

1. FLORIDA BUILDING CODE 2001
2. MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES ASCE 7-98
3. BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES
4. AISC MANUAL OF STEEL CONSTRUCTION
5. BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE ACI 318

DESIGN LOADS

1. LIVE LOADS
   A. ROOF .... 20 PSF
2. WIND LOAD
   A. DESIGN WIND SPEED .... 130 MPH (3 SECOND GUST)
   B. EXPOSURE CATEGORY
   C. HEIGHT AND EXPOSURE ADJUSTMENT
   D. IMPORTANCE FACTOR
   E. ASCE 7 BUILDING CATEGORY
   F. ENCLOSED BUILDING

DRAWINGS AND SPECIFICATIONS

1. DO NOT SCALE DRAWINGS FOR DIMENSIONS NOT GIVEN.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS.
3. ADVISE ARCHITECT / ENGINEER OF DIMENSIONAL DISCREPANCIES.
4. VERIFY ALL EXISTING FIELD CONDITIONS AND DIMENSIONS PRIOR TO COMMENCING CONSTRUCTION.
5. THE CONTRACTOR SHALL PERFORM NO PORTION OF THE WORK AT ANY TIME WITHOUT CONTRACT DOCUMENTS OR, WHERE REQUIRED, REVIEWED SHOP DRAWINGS, PRODUCT DATA OR SAMPLES FOR SUCH PORTION OF THE WORK.

CONSTRUCTION SAFETY

[illegible]

VALUE ENGINEERING

[illegible]

FIELD MODIFICATIONS

[illegible]

PORTLAND CEMENT CONCRETE

[illegible]

STRUCTURAL STEEL

[illegible]

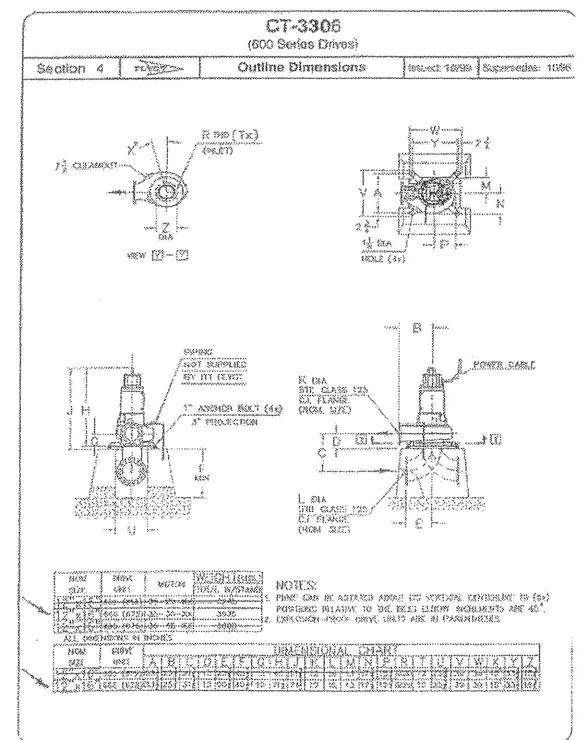
OVERHEAD CRANE SYSTEM

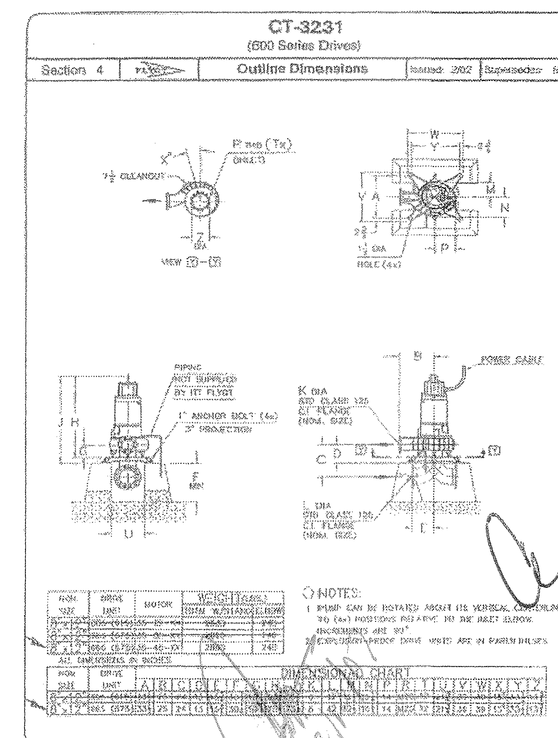
1. OVERHEAD CRANE SYSTEMS IN PUMP OPERATING ROOM AND PUMP ROOM SHALL BE MANUFACTURED BY HARRINGTON HOIST AND PROVIDED BY FLORIDA HANDLING SYSTEMS OR APPROVED EQUAL.
2. MOTORIZED HOIST
   A. FRAME – SHALL BE LIGHTWEIGHT HEAT TREATED ALUMINUM AND PRECISION MACHINED FOR ACCURATE GEAR AND BEARING ALIGNMENT.
   B. BEARINGS – SHALL BE HIGH QUALITY ANTI-FRICTION TYPE OF EITHER NEEDLE OR BALL DESIGN AND USED THROUGHOUT THE HOIST.
   C. BRAKES – HOIST SHALL HAVE TWO (2) TYPES OF BRAKES: ONE DC ELECTRICAL MOTOR BRAKE SPRING SET ELECTRICALLY RELEASED AND ONE SELF-ADJUSTING WESTON TYPE MECHANICAL LOAD BRAKE LOCATED IN THE GEAR CASE. EITHER BRAKE SHALL HAVE THE CAPABILITY OF HOLDING RATED LOAD IN THE EVENT OF FAILURE OF OTHER BRAKE SYSTEM.
   D. OVERLOAD DEVICE – SHALL BE PROVIDED TO PREVENT LIFTING EXCESSIVE OVERLOADS. THE LOAD LIMITING (CLUTCH) DEVICE SHALL BE PRESET AT THE FACTORY TO DISENGAGE THE HOIST MOTOR FROM THE GEARING IN EVENT OF EXCESSIVE OVERLOAD CONDITION. OVERLOAD DEVICE IS TO BE LOCATED BETWEEN THE MOTOR AND LOAD BRAKE SO THAT THE LOAD BRAKE WILL HOLD THE LOAD IN EVENT OF OVERLOAD DEVICE FAILURE.
   E. MOTOR – [illegible]
   F. GEARING – [illegible]
   G. LOAD CHAIN – [illegible]
   H. LIMIT SWITCHES – [illegible]
   I. SUSPENSION AND LOAD HOOKS – [illegible]
   J. CONTROLS – [illegible]
   K. PUSHBUTTON STATION – [illegible]
   L. TROLLEY – [illegible]

[illegible]

Addendum #2 & #4

3.0) Pump and Pump Fittings Dimensions
The Contractor should use manufacturer's pump and fitting dimensions shown.





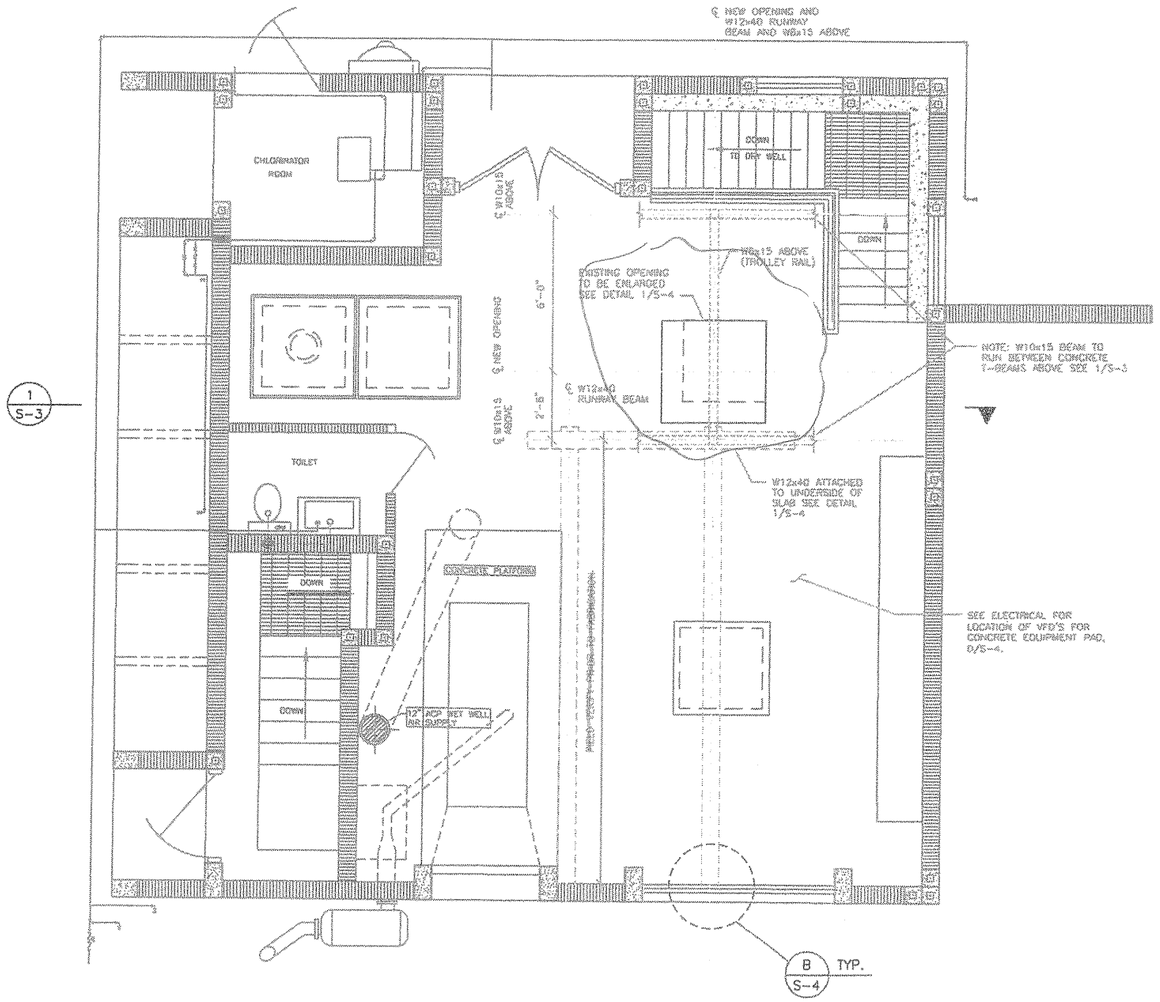
As-Builts

MANATEE COUNTY 1026 26th Ave. East Bradenton, FL 34208	Ash Engineering, Inc.	GENERAL NOTES	MASTER LIFT STATION 12A IMPROVEMENTS MANATEE COUNTY	billerreinhart

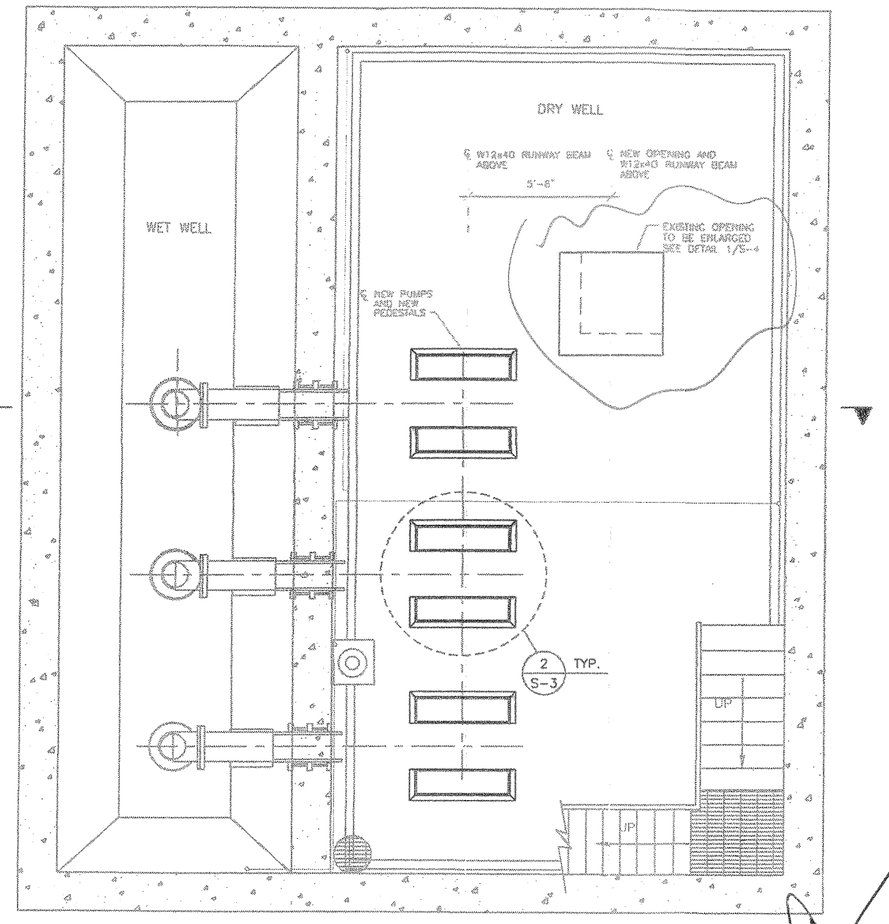
No.	Date	REVISION	By
Approved		Date	

Des: RP/BW	DATE 02/05/04	File: MANATEE LIFT STATIONS
Dwn: RC	PROJECT NUMBER 03-117	CADD FILE NAME MLS12A-S-1
Ckd: RP	SHEET S-1	

4696.007



1 S-1 FLOOR PLAN — PUMP OPERATING FLOOR
SCALE: 3/8" = 1'-0"



2 S-1 FLOOR PLAN — PUMP ROOM & WET WELL
SCALE: 3/8" = 1'-0"

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1026 26th Ave. East
Bradenton, FL 34208

Ash Engineering, Inc.

PLANS

MASTER LIFT STATION 12A
IMPROVEMENTS
MANATEE COUNTY

billerreinhart

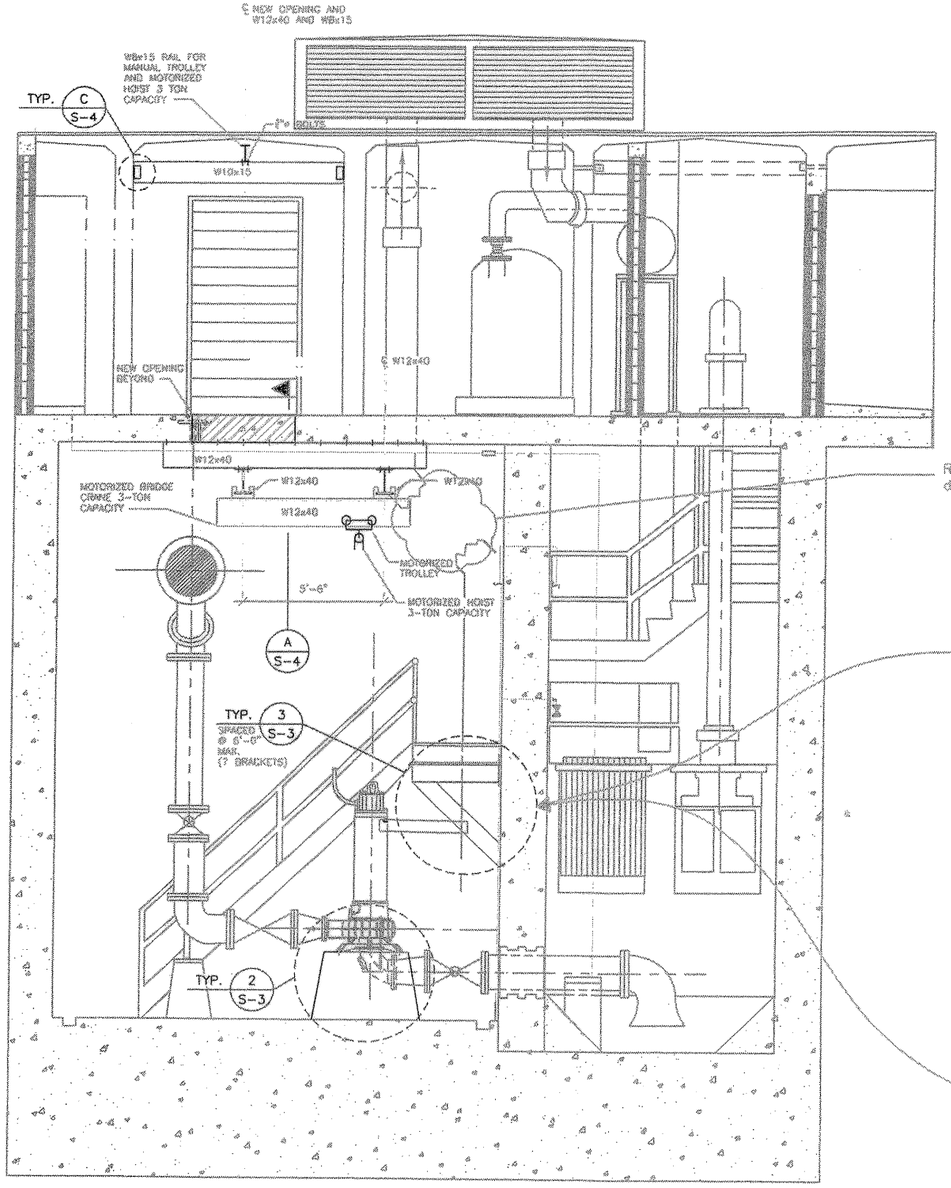
No.	Date	REVISION	By
Approved		Date	

Des: JRA/BW
Drwn: PC
Chkd: RP

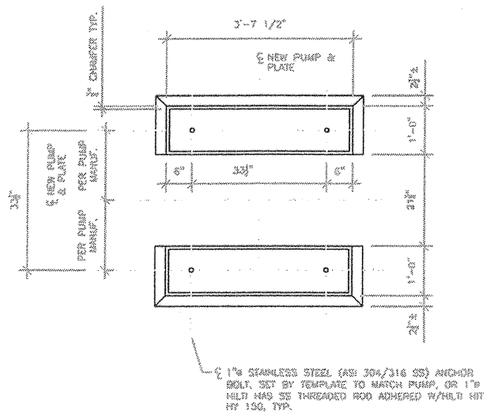
DATE: 02/05/04
PROJECT NUMBER: 03-117
SHEET: S-2

File Name: LIFT STATIONS
CADD FILE NAME: MLS12A-S-2

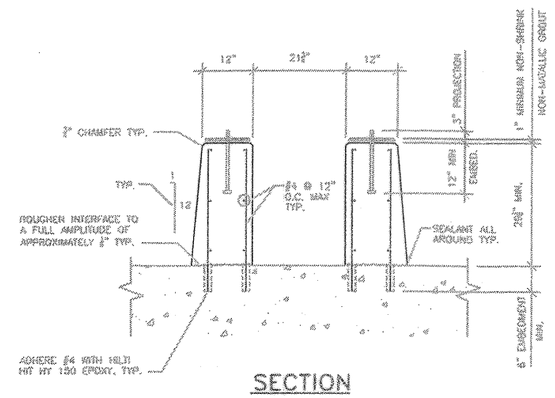
4696.008



1 S-3 SECTION
SCALE: 3/8" = 1'-0"

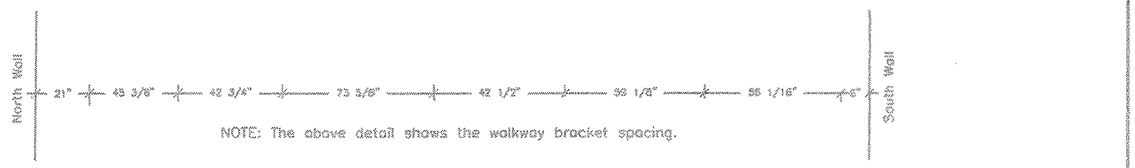


PLAN

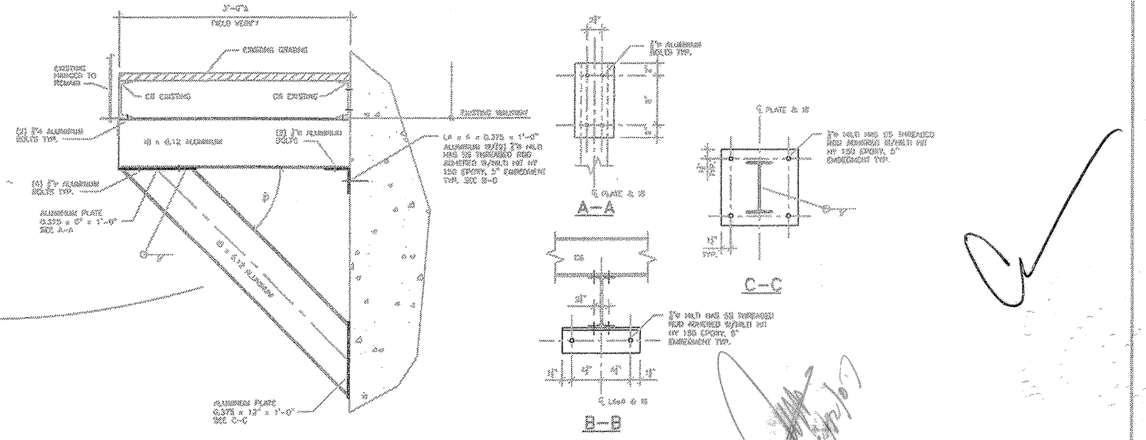


SECTION

2 S-3 PUMP PEDESTAL DETAIL
SCALE: 3/4" = 1'-0"



NOTE: The above detail shows the walkway bracket spacing.

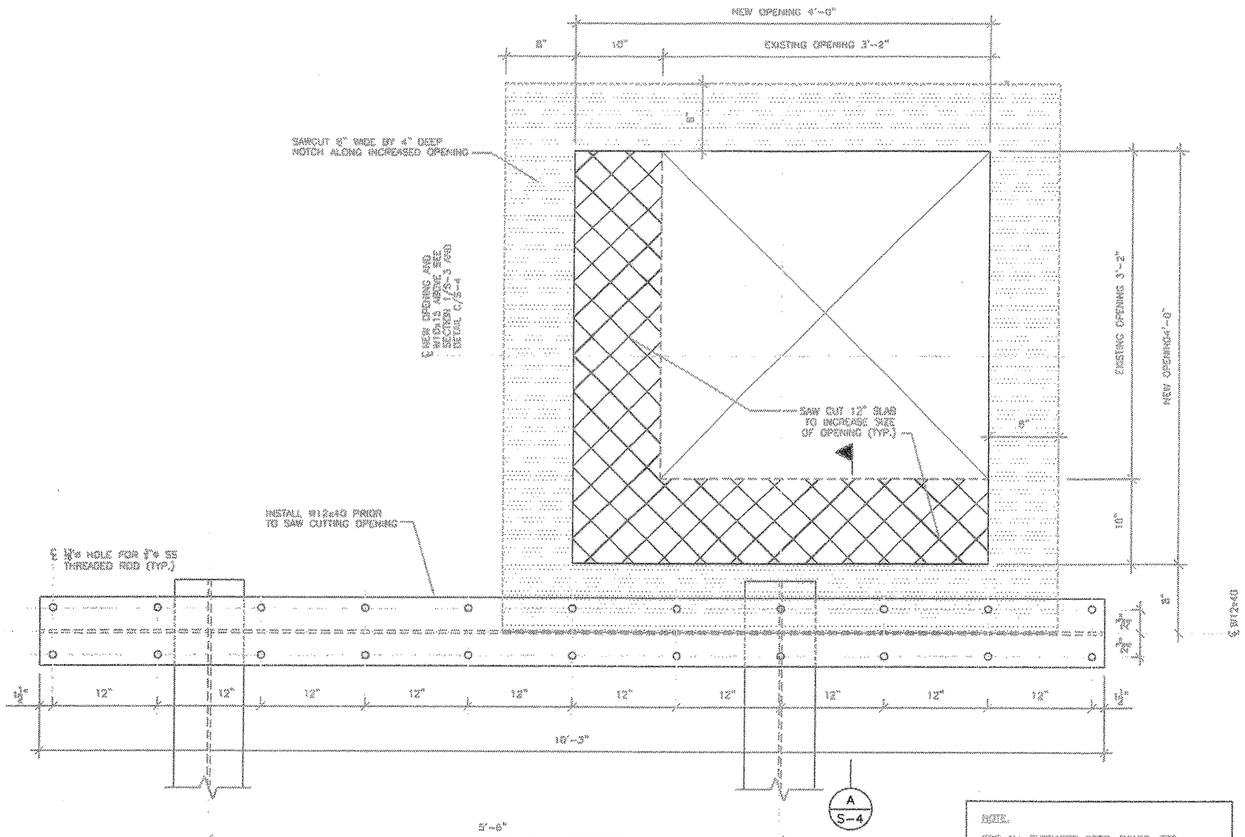


3 S-3 SECTION—WALKWAY BRACKET (7 REQUIRED)
SCALE: 1 1/2" = 1'-0"

As-Builts

MANATEE COUNTY 1026 26th Ave. East Bradenton, FL 34208	Ash Engineering, Inc.	SECTIONS	MASTER LIFT STATION 12A IMPROVEMENTS MANATEE COUNTY		billerreinhart	No.	Date	REVISION	By	Des: RR/RW	DATE: 02/05/04	File: MANATEE LIFT STATIONS
										Drn: RC	PROJECT NUMBER 03-117	CADD FILE NAME WLS12A-S-3
						Approved		Date		Chk: RR	SHEET S-3	

4696.009

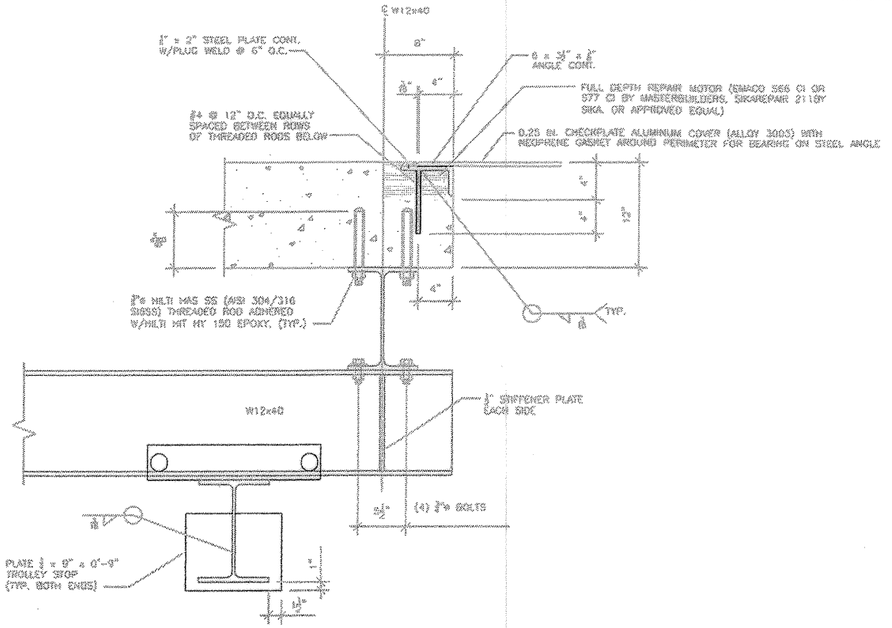


1 S-4 OPENING AND RUNWAY BEAM DETAIL
SCALE: 1 1/2" = 1'-0"

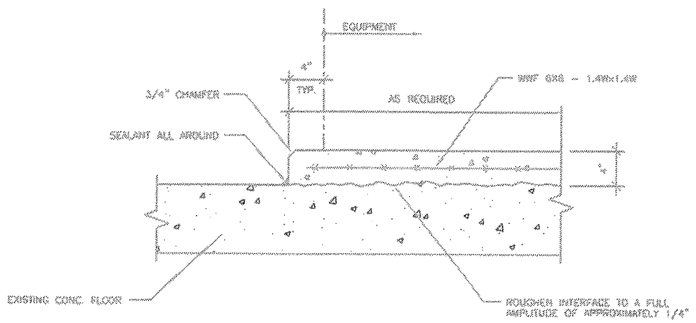
NOTE:

FOR ALL THREADED RODS, BOLTS, ETC., ADHERED WITH EPOXY INTO CONCRETE:

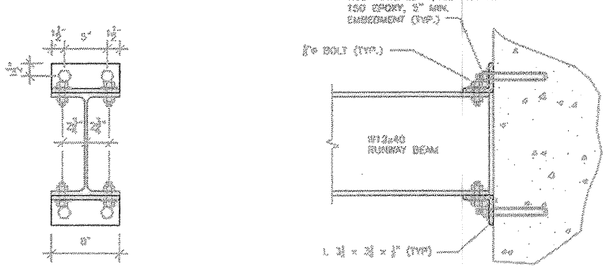
1. INSTALL IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. CONTRACTOR TRAINING BY HILTI IS REQUIRED PRIOR TO INSTALLATION.
3. CONTRACTOR SHALL COORDINATE WITH HILTI FOR PULL TESTS. PULL TESTS ARE REQUIRED FOR 30% OF ALL INSTALLATIONS.



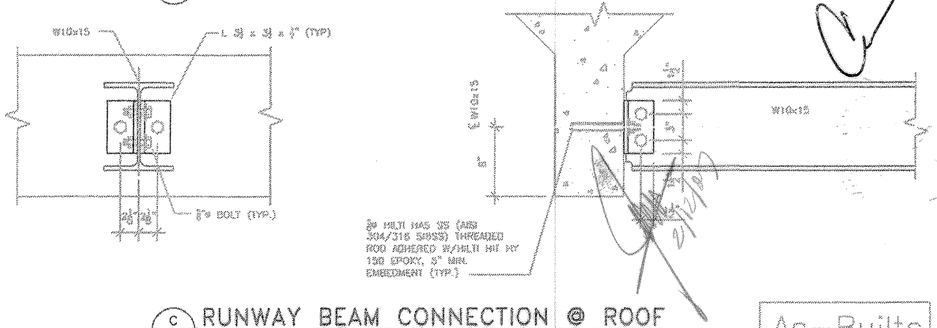
A S-4 BEAM CONNECTIONS @ NEW OPENING
SCALE: 1 1/2" = 1'-0"



D S-4 VFD CONCRETE EQUIPMENT PAD
SCALE: 1 1/2" = 1'-0"



B S-4 RUNWAY BEAM CONNECTION @ WALL
SCALE: 1 1/2" = 1'-0"



C S-4 RUNWAY BEAM CONNECTION @ ROOF
SCALE: 1 1/2" = 1'-0"

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MANATEE COUNTY
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Bradenton, FL 34208

Ash Engineering, Inc.

DETAILS

MASTER LIFT STATION 12A IMPROVEMENTS MANATEE COUNTY

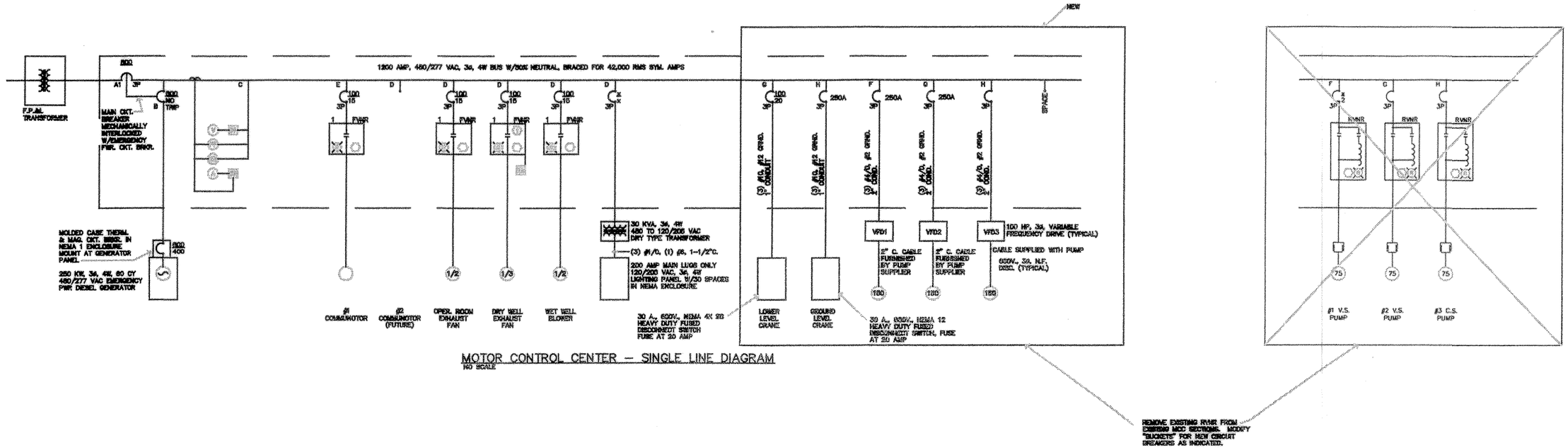
billerreinhart

No.	Date	REVISION	By
		Approved	Date

Des: RR/AW
Drn: RC
Chkd: RR

DATE: 02/06/04
PROJECT NUMBER: 03-117
CADD FILE NAME: MLS12A-S-4
SHEET: S-4

4696.010



MOTOR CONTROL CENTER – SINGLE LINE DIAGRAM
NO SCALE

EXISTING CONTROL ENCLOSURE 'INTERNALS' TO BE MODIFIED BY OWNER

UPPER LEVEL CRANE IN EXISTING SPACE

LOWER LEVEL CRANE IN EXISTING SPACE

A	B	C	D	E	F	G	H
CONTROLLER	EMERGENCY – NORMAL BREAKERS	INSTRUMENTS	STARTER	COMMUNITOR	SPACE	SPACE	SPACE
		SPACE	OP FLR FAN	SPACE	Operation Crane 30A, 3P	Drywell Crane 30A, 3P	SPACE
		SPACE	DRYWELL EXHAUST	SPACE	DISCONNECT	DISCONNECT	DISCONNECT
			WETWELL BLOWER	SPACE			
			DRY XFMR				
			CB				

PROVIDE 250 AMP, 3P BREAKER. MODIFY SECTIONS FOR NEW 400 AMP FRAME BREAKERS. (TYPICAL –3)

LIFT STATION 12A MCC
NO SCALE

NOTE:
1. MCC AND COMPARTMENTS ARE EXISTING. MODIFY WHERE INDICATED.
2. GE Panel Catalog Number: DES6000680

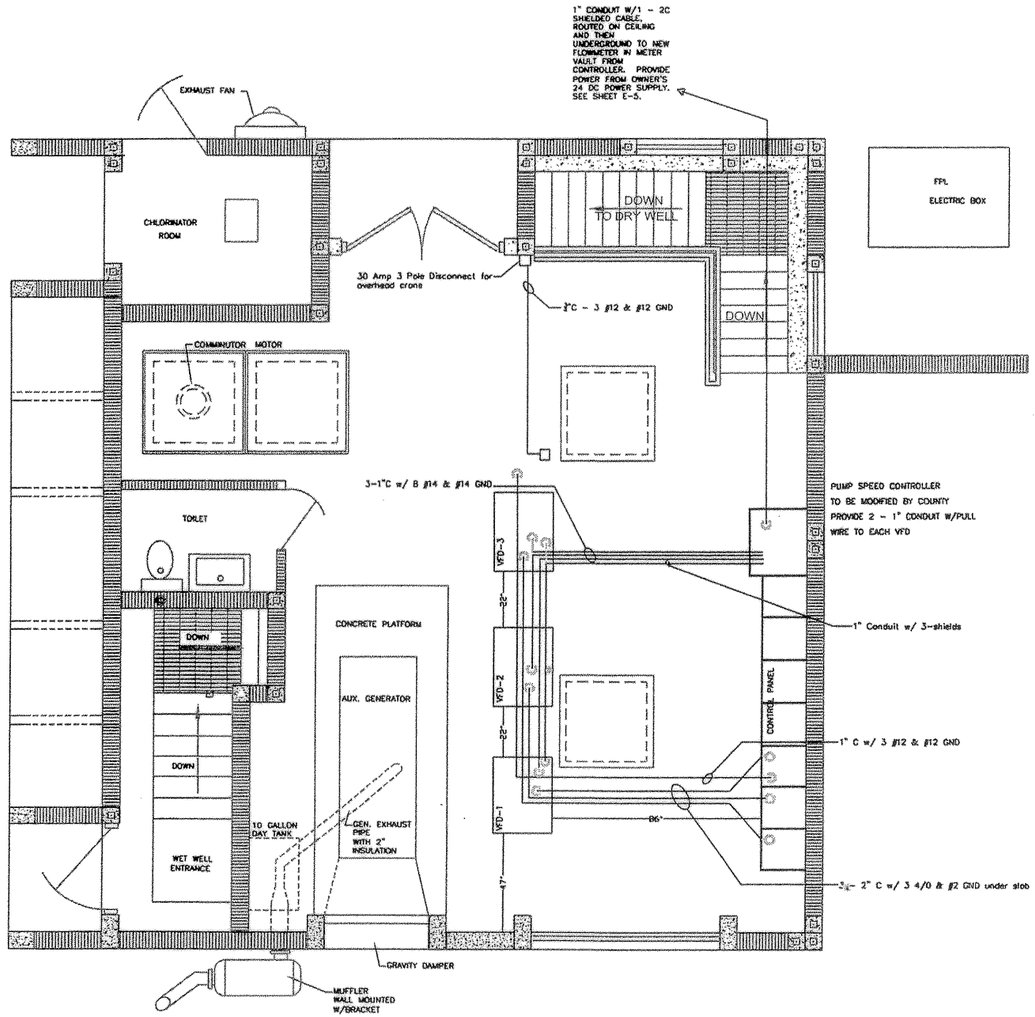
Addendum #4
4.1) Pump Monitor Cable
According to the Notes, all pump cables #3/0 were run in the same conduit without problems. There are 2 two conduits shown for this purpose.

As-Built's

VISTA SYSTEMS
P. O. Box 74
Palm Harbor, Florida 34682-0074
(727) 787-8876 Reg. No.
FAX (727) 773-2229 6268

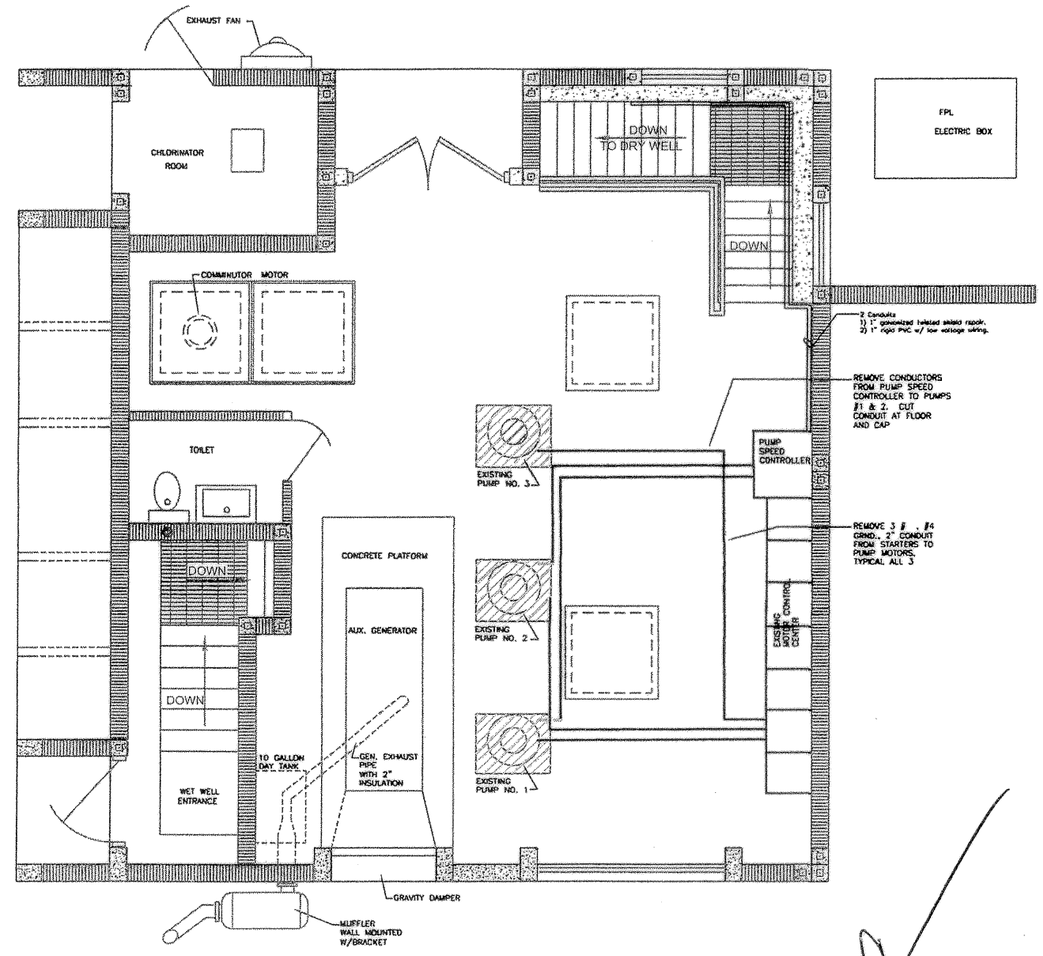
MANATEE COUNTY 1026 26th Ave. East Bradenton, FL 34208	Ash Engineering, Inc. 5313 JOHNS ROAD SUITE 201 Tampa, FL 33634 License #48003 (813) 290-8899 Fax: (813) 290-8891 e-mail: mail@ashengineering.com	MOTOR CONTROL CENTER	MASTER LIFT STATION 12A IMPROVEMENTS MANATEE COUNTY
Robert Hierholzer, PE FLA. P.E. NO. _____	SCALE = N.T.S.	No. Date REVISION By; Approved Date	Des: RLT; Dwn: RFW; Ckd: RLT
DATE: 8/20/03	File: 02103-0	PROJECT NUMBER 02103-0	CADD FILE NAME E-1 LIFT STATION SHEET LIFT STATION
SHEET E-1			

4696.011



ELECTRICAL PLAN - PUMP OPERATING FLOOR

PROPOSED SCALE : 3/8" = 1'-0"



FLOOR PLAN - PUMP OPERATING FLOOR

DEMO PLAN SCALE : 3/8" = 1'-0"

As-Built s

VISTA SYSTEMS
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Palm Harbor, Florida 34682-0074
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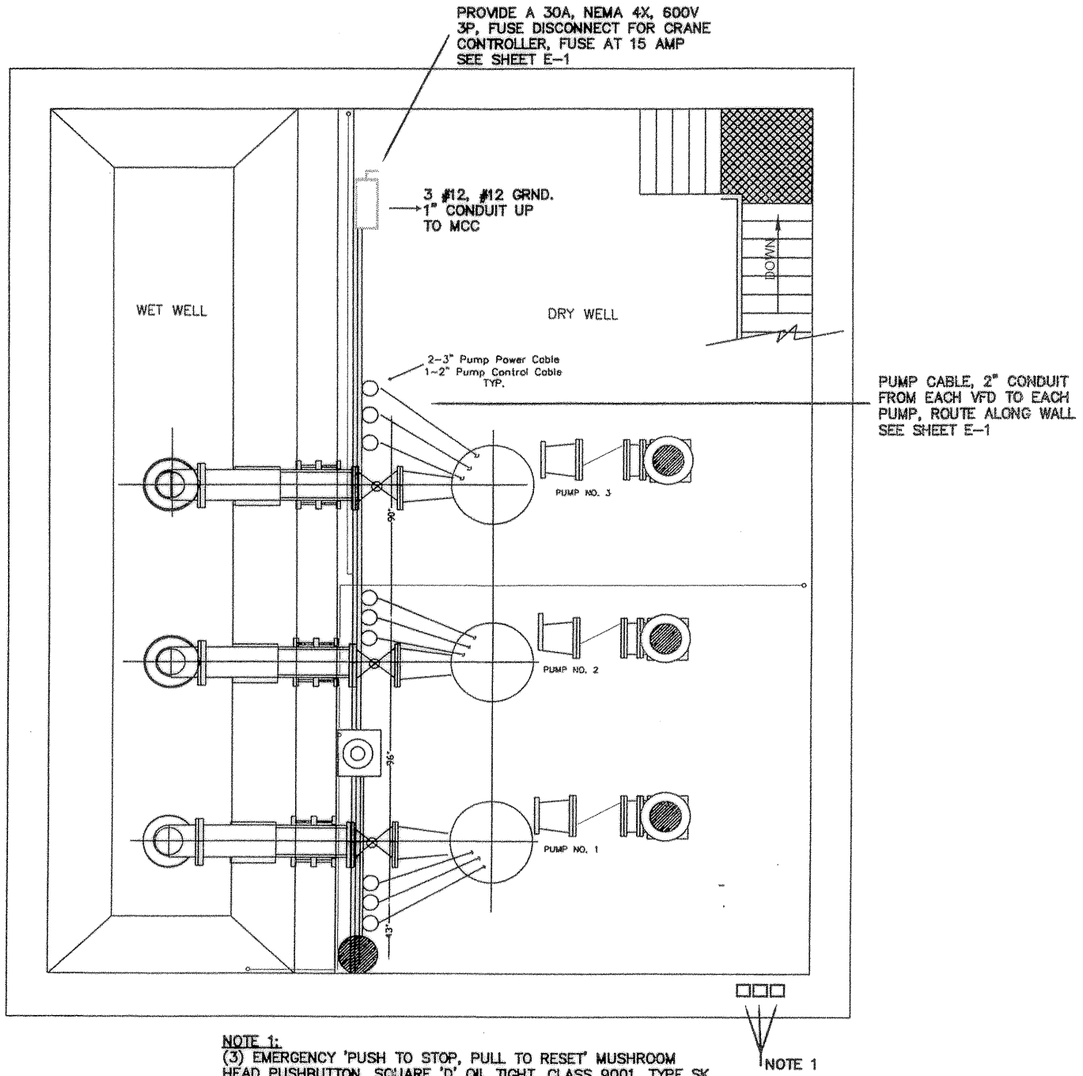
MANATEE COUNTY 1026 26th Ave. East Bradenton, FL 34208	Ash Engineering, Inc. 5313 JOHNS ROAD SUITE 201 Tampa, FL 33634 License #6663 (813) 290-8899 Fax: (813) 290-8891 e-mail: mail@ashengineering.com	ELECTRICAL PLAN	MASTER LIFT STATION 12A IMPROVEMENTS MANATEE COUNTY	Robert Hierholzer, PE FLA. P.E. NO. _____	SCALE : 3/8" = 1'-0"	No. Date REVISION By Approved Date	Des: RLT Dwn: AFW Ckd: RLT	DATE: 8/20/03 02103-0 SHEET E-2	File: 02103-0 CADD FILE NAME 1-7-15 ON PROPOSED PLANNING

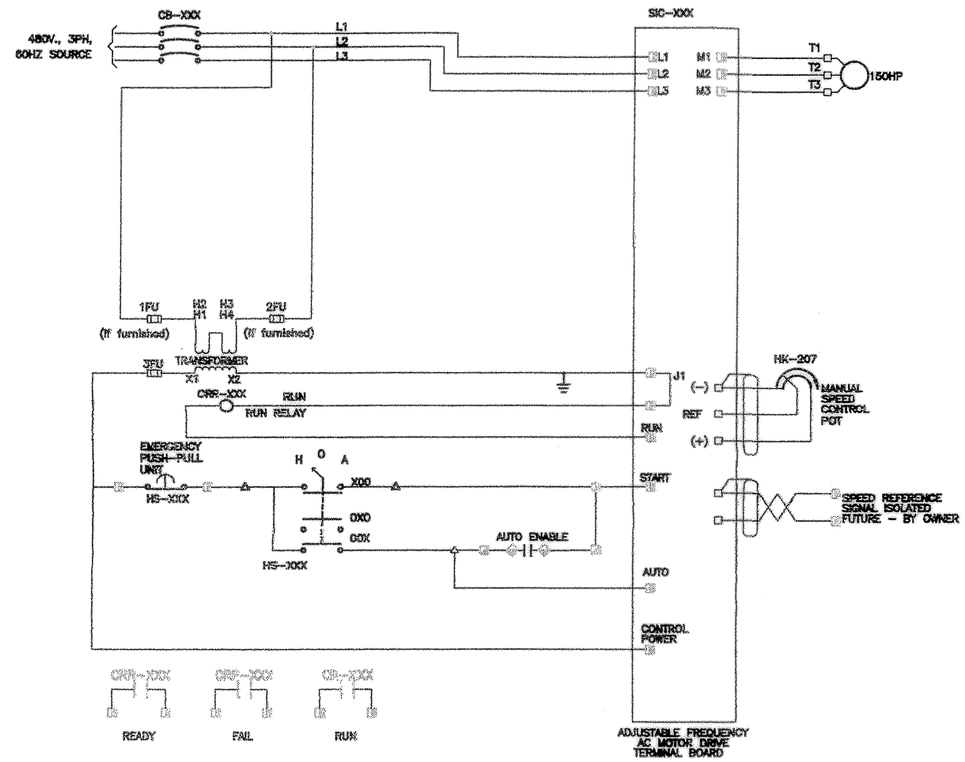
4696.012



NOTE 1:
(3) EMERGENCY 'PUSH TO STOP, PULL TO RESET' MUSHROOM HEAD PUSHBUTTON, SQUARE 'D' OIL TIGHT, CLASS 9001, TYPE SK OR EQUAL, MOUNT EACH BUTTON IN A GASKETED, WP BOX, ROUTE 3/4" CONDUIT WITH (2) #14 TO EACH NEW VFD, MOUNT ON WALL AT BOTTOM OF STAIRS AT 4'-6".

ELECTRICAL PLAN - PUMP ROOM & WET WELL

SCALE : 3/8" = 1'-0"



NOTE: THIS SCHEMATIC IS A TYPICAL, GENERAL SCHEMATIC TO PROVIDE INTENDED REQUIREMENTS. ACTUAL ELEMENTARY AND WIRING DIAGRAMS ARE DEPENDENT ON DRIVE FURNISHED

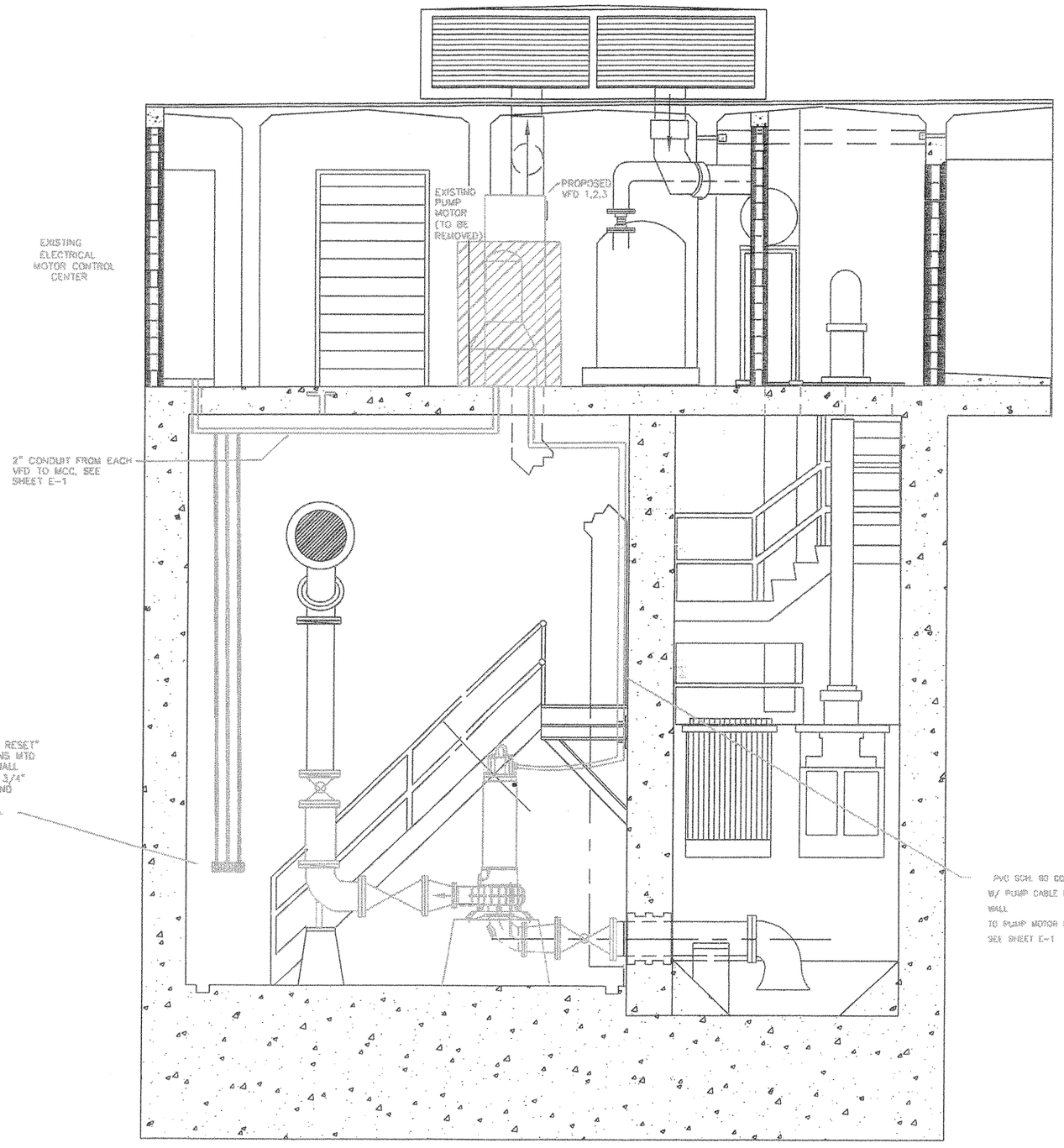
VARIABLE FREQUENCY DRIVE SCHEMATIC (TYPICAL)

As-Builts

VISTA SYSTEMS
P. O. Box 74
Palm Harbor, Florida 34682-0074
(727) 787-8876 Reg. No.
FAX (727) 773-2229 6268

MANATEE COUNTY 1026 26th Ave. East Bradenton, FL 34208	Ash Engineering, Inc. 5313 JOHNS ROAD SUITE 201 Tampa, FL 33634 License #6603 (813) 290-8899 Fax: (813) 290-8891 e-mail: mail@ashengineering.com	ELECTRIC PLAN – LOWER LEVEL	MASTER LIFT STATION 12A IMPROVEMENTS MANATEE COUNTY	Robert Hierholzer, PE FLA. P.E. NO. _____	SCALE : 3/8" = 1'-0"	No. Date REVISION By Approved Date	Des: RLT Dwn: RFW Ckd: RLT	DATE: 8/20/03 PROJECT NUMBER 02103-0 SHEET E-3	File: 02103-0 CADD FILE NAME E-3 LIFT STATION LOWER LEVEL PLAN.dwg

4696.013



As-Builts

VISTA SYSTEMS
P. O. Box 74
Palm Harbor, Florida 34682-0074
(727) 787-8876 Reg. No.
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MANATEE COUNTY
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ELECTRICAL SECTION

MASTER LIFT STATION 12A
IMPROVEMENTS
MANATEE COUNTY

Robert Hierholzer, PE
FLA. P.E. NO.

No.	Date	REVISION	By
Approved		Date	

Des: RLT
Dwn: RFW
Ckd: RLT

DATE:
PROJECT NUMBER 02103-0
SHEET E-4

File: 02103-0
CADD FILE NAME E-4 15 12M SECRN.dwg

4696.014