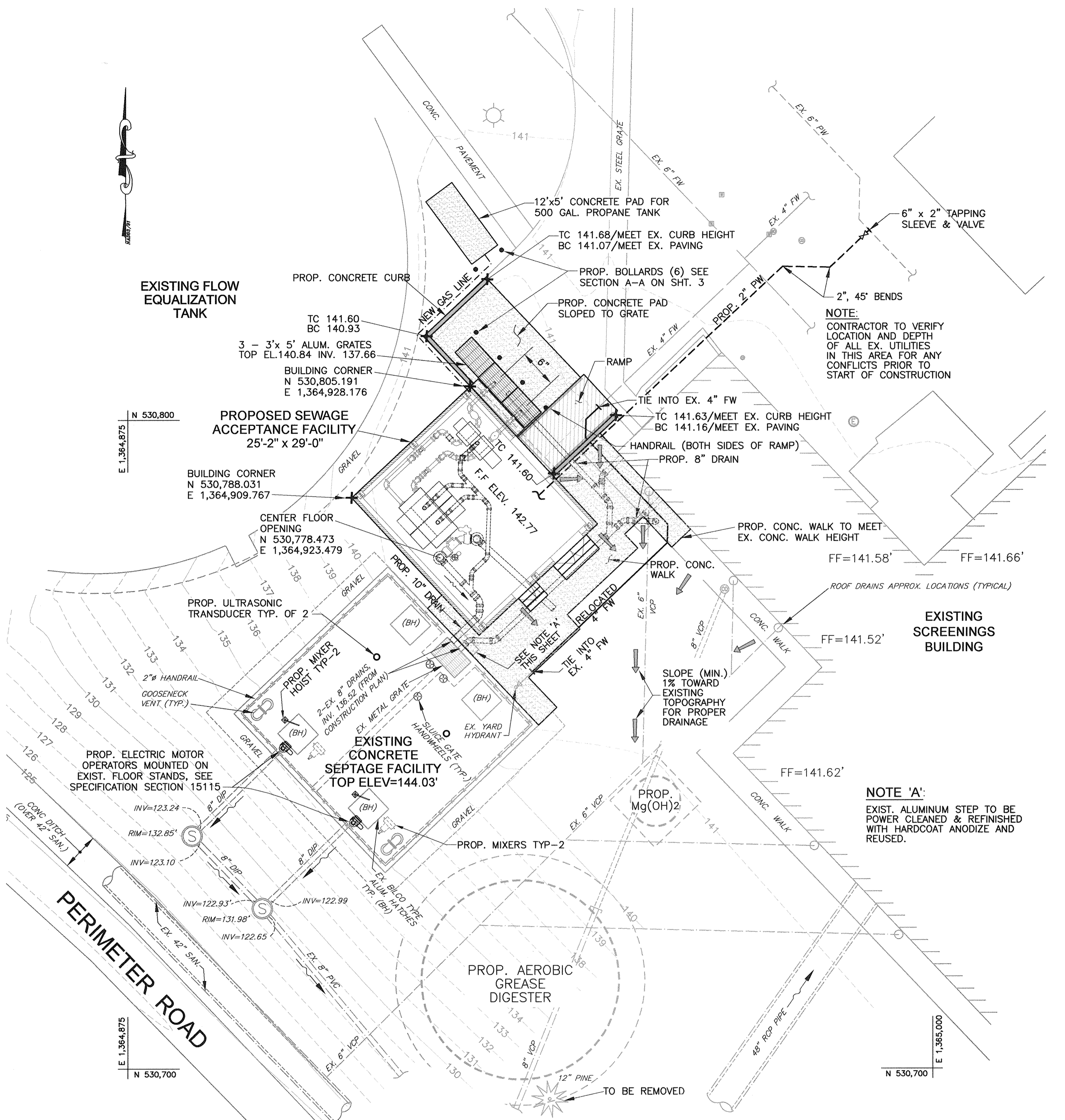


**EXISTING CONDITIONS**

SCALE : 1" = 10'



**PROPOSED SEWAGE ACCEPTANCE FACILITY**

SCALE : 1" = 10'

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

\_\_\_\_\_  
CHIEF, DEVELOPMENT ENGINEERING DIVISION      DATE

\_\_\_\_\_  
CHIEF, DIVISION OF LAND DEVELOPMENT      DATE

\_\_\_\_\_  
DIRECTOR      DATE

**PROFESSIONAL CERTIFICATION**

I, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 10966 EXPIRATION DATE: MAY 31, 2012

*Thomas W. Deltor*      2/8/12  
Signature of Engineer      Date

- LEGEND**
- DEMOLITION AREA
  - NEW CONCRETE
  - NEW CONCRETE CURB
  - NEW INLET

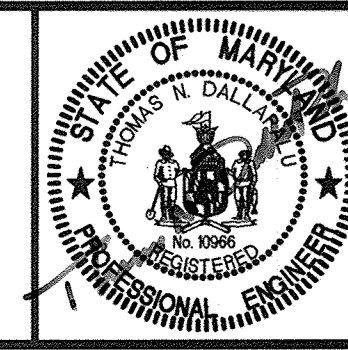
**NOTE:**  
SEE CONTRACT 20-4695 PHASE 2 SHEETS 3, 4, & 9 OF 23 FOR SITE AS-BUILT CHANGES

**DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND**

*Laurel B. Zlab*      2/9/12      *Thomas W. Deltor*      2/9/12  
DIRECTOR OF PUBLIC WORKS      DATE      CHIEF, BUREAU OF ENGINEERING      DATE

*Michael J. Butler*      2/9/12      *Thomas W. Deltor*      2/9/12  
CHIEF, BUREAU OF UTILITIES      DATE      CHIEF, UTILITY DESIGN DIVISION      DATE

**Dewberry**  
Dewberry & Davis LLC  
3150 LORD BALTIMORE DRIVE  
SUITE 211  
BALTIMORE, MD 21244-2682  
410.285.9500  
FAX: 410.265.8875



DES:	GLN/RJP				
DRN:	PWR				
CHK:	TND				
DATE:	1/7/12	BY:	NO.	REVISIONS	DATE

**EXISTING CONDITIONS AND PROPOSED SITE PLAN**

600' SCALE MAP NO. 47      BLOCK NO. 24

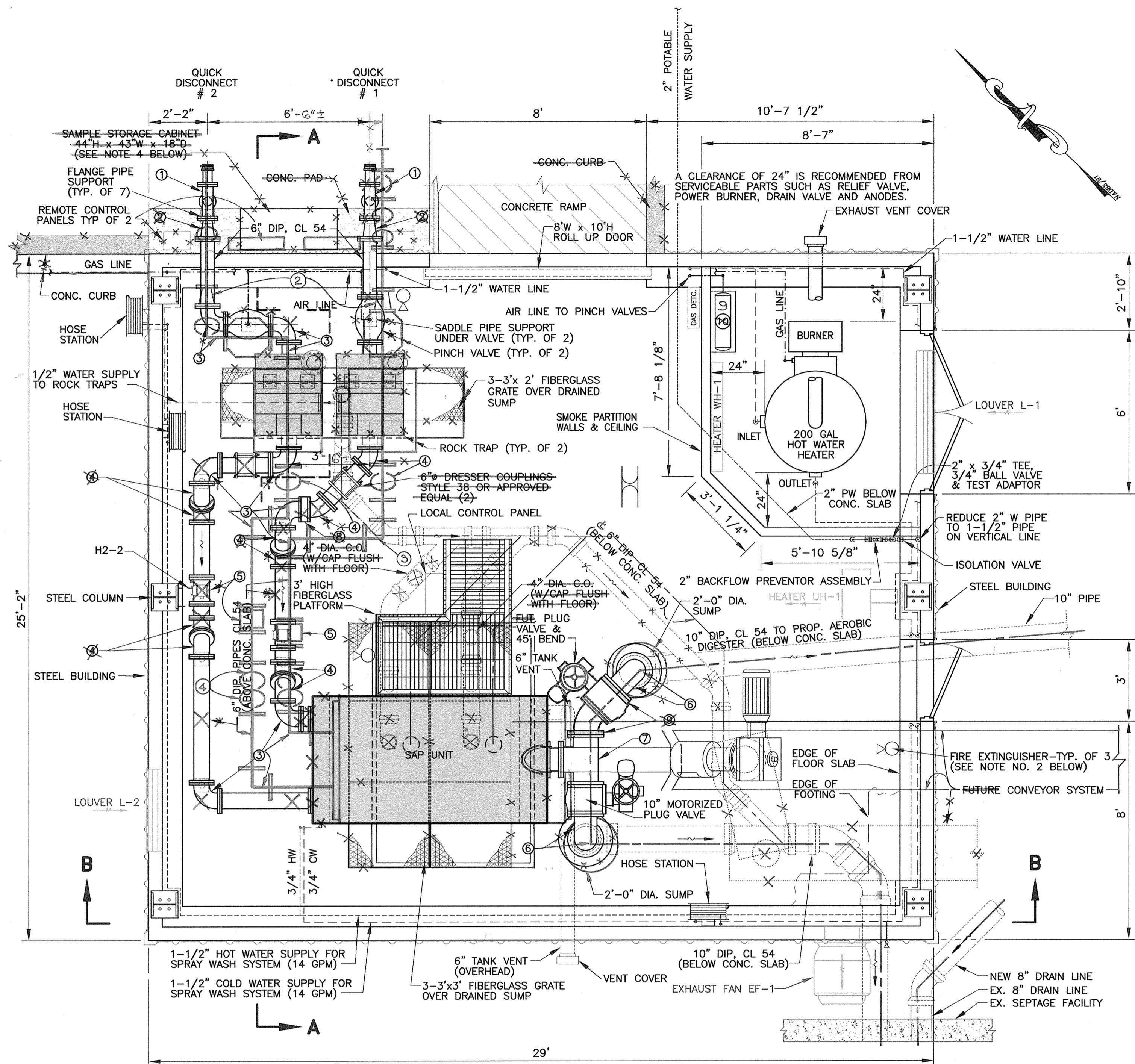
**LPWRP SCUM AND SEPTAGE FACILITY (PHASE IB)**

**CAPITAL PROJECT S-6245  
CONTRACT 20-4700**

ELECTION DISTRICT NO. 6      HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN  
SHEET 2 OF 11

Printed by: (unintentional) on Fri, 07/20/12, 2:46pm  
 Title: Layout: HOWARD COUNTY, MARYLAND - License: 10-04966 - Site: P10616.dwg  
 User: Thomas W. Deltor  
 Path: P:\Projects\2012\LPWRP\Drawings\20-4700-02-25\_CD.dwg  
 Scale: 1" = 10'  
 Plot Size: 24x36  
 Plot Date: 2/9/12 2:46pm  
 Plot User: Thomas W. Deltor  
 Plot Device: HP DesignJet T5000  
 Project: LPWRP Phase 2



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

- NOTES:**
- AIR COMPRESSOR\* SHALL BE 3.0 SCFM, 110 PSI AS MANUFACTURED BY TUTHILL OR APPROVED EQUAL.
  - FIRE EXTINGUISHER SHALL BE "KIDDE PRO 20 MP OR APPROVED EQUAL.
  - ALL WATER, AIR, OR GAS LINES SHALL BE RUN ABOVE DOORWAYS OR BUILDING PENETRATIONS.
  - SAMPLE STORAGE CABINET SHALL BE BY "JUSTRITE MODEL J893000" OR APPROVED EQUAL.

MATERIALS		
ITEM	DESCRIPTION	QUANTITY
1	4"x4"x3" FLANGED TEE	2
2	6"x4" FLANGED ECCENTRIC REDUCER	2
3	6" 90° FLANGED BENDS	2
4	6" 45° FLANGED BENDS	2
5	6" MAGNETIC FLOW METER	2
6	10" 90° FLANGED BENDS	2
7	10"x10"x10" FLANGED TEE	1
8	6" FILLER FLANGE (3" LG. ±)	1
9	AIR COMPRESSOR *	1

**PROFESSIONAL CERTIFICATION**  
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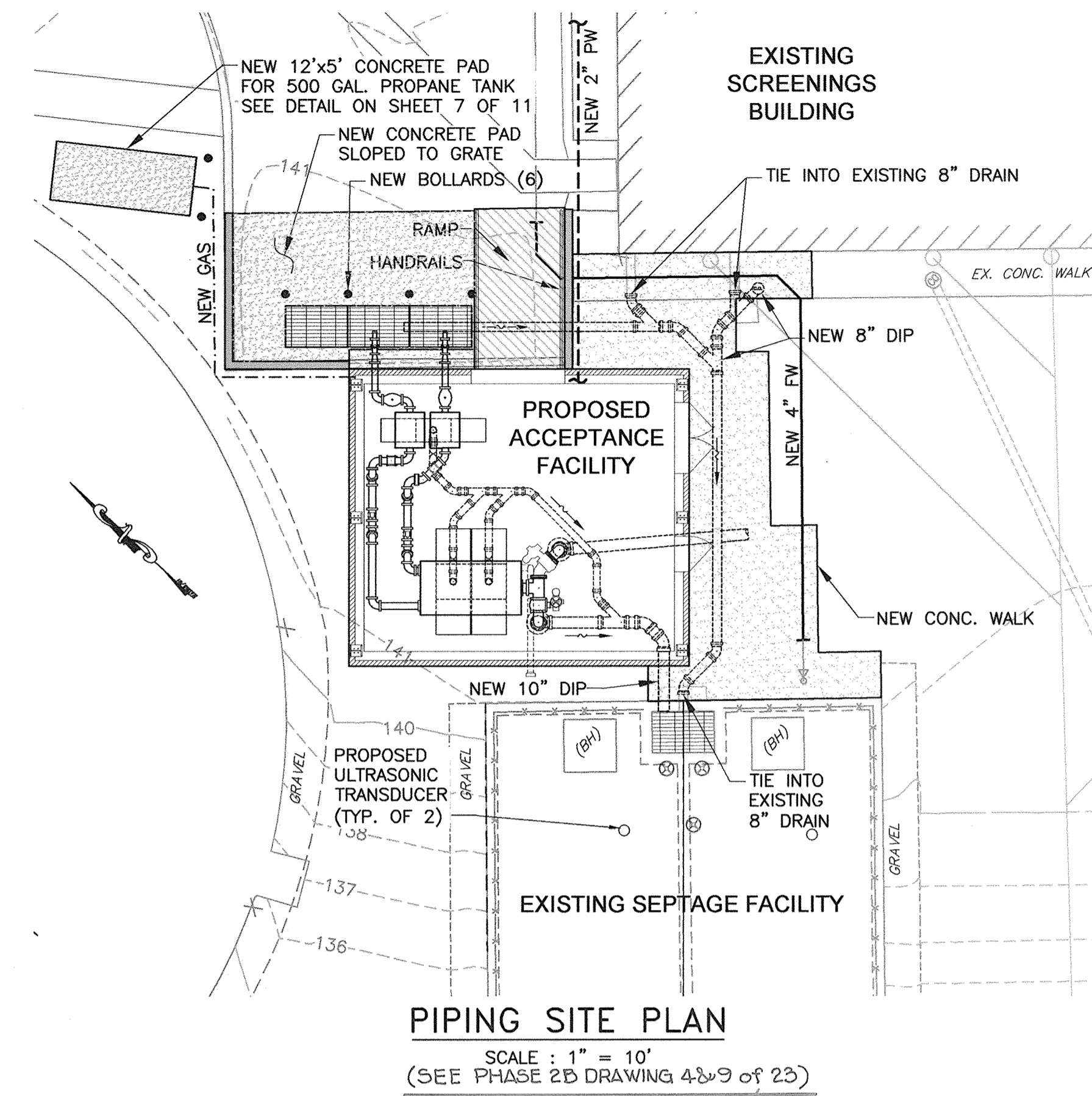
*Thomas N. Dallett*  
Signature of Engineer  
2/8/12  
Date

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

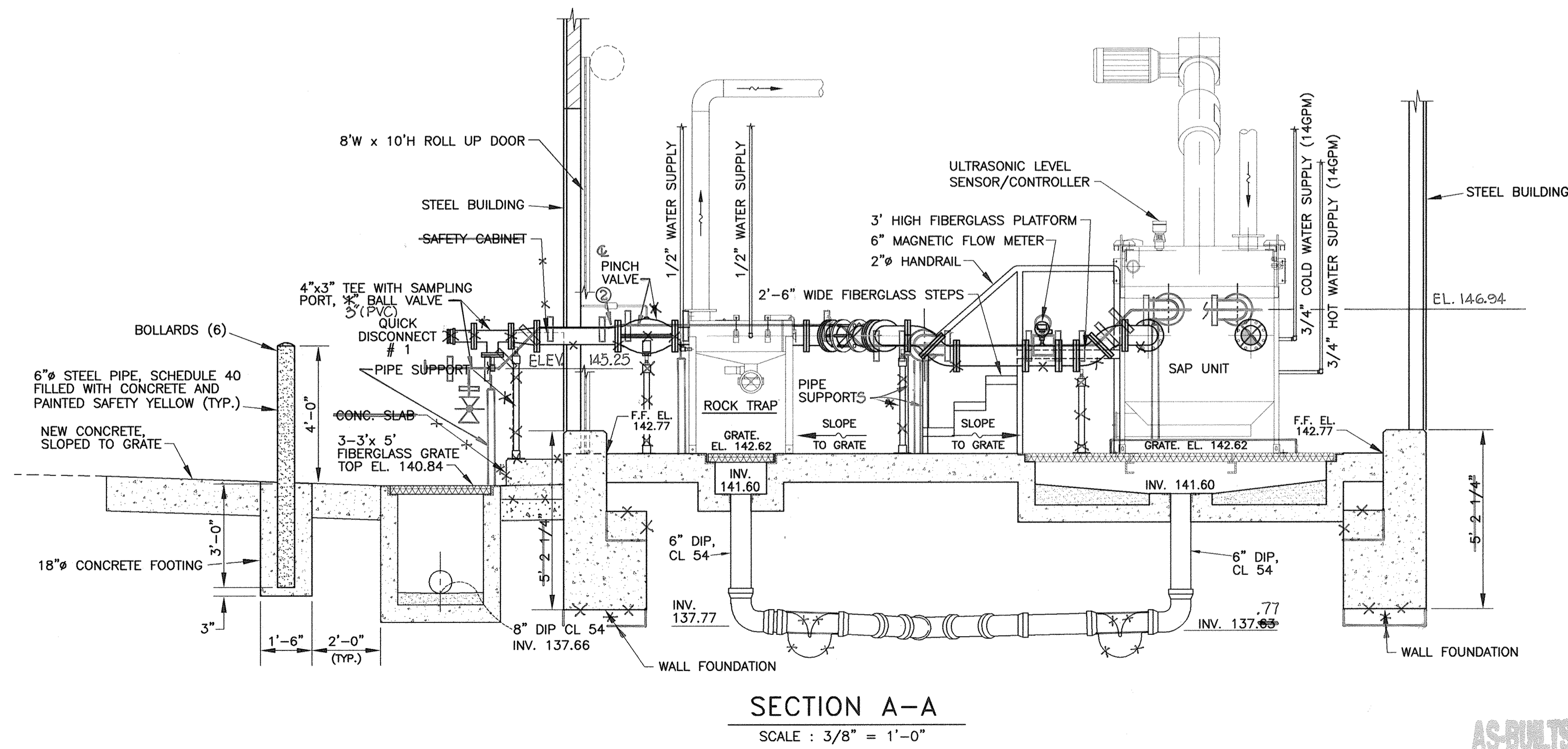
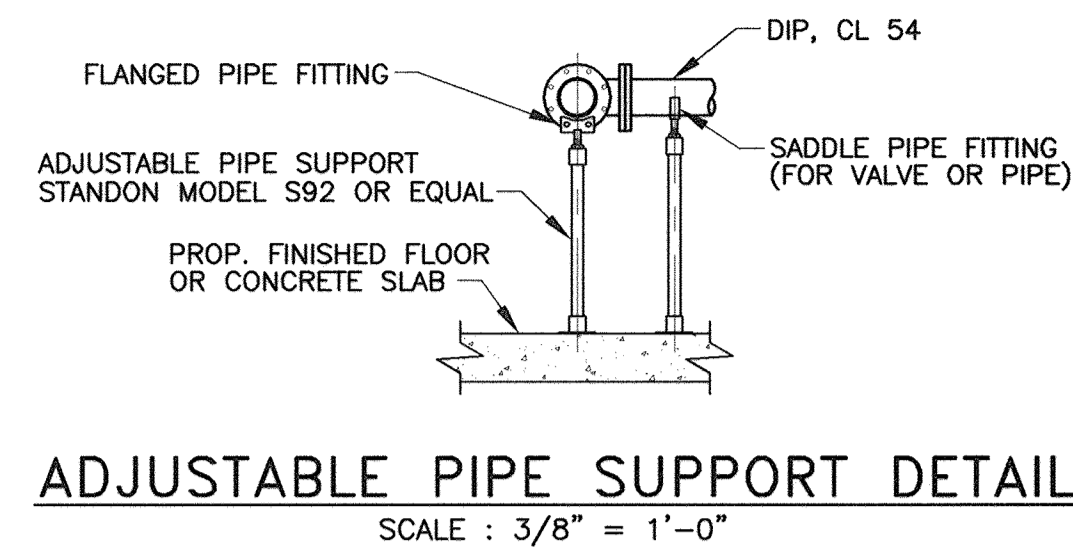
\_\_\_\_\_  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE

\_\_\_\_\_  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE

\_\_\_\_\_  
DIRECTOR  
DATE



**PIPING SITE PLAN**  
SCALE : 1" = 10'  
(SEE PHASE 2B DRAWING 4-29 OF 23)



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

**DEPARTMENT OF PUBLIC WORKS**  
HOWARD COUNTY, MARYLAND

\_\_\_\_\_  
DIRECTOR OF PUBLIC WORKS  
DATE

\_\_\_\_\_  
CHIEF, BUREAU OF UTILITIES  
DATE

\_\_\_\_\_  
CHIEF, BUREAU OF ENGINEERING  
DATE

\_\_\_\_\_  
CHIEF, UTILITY DESIGN DIVISION  
DATE

**Dewberry**  
Dewberry & Davis LLC  
3120 LORD BALTIMORE DRIVE  
SUITE 211  
BALTIMORE, MD 21244-2662  
410.285.9500  
FAX 410.285.8875



DES: GLN/RJP  
DRN: PWR/CD  
CHK: TND  
DATE: 1/7/12

**BUILDING EQUIPMENT PLAN**  
**SECTION AND**  
**PIPING SITE PLAN**

**LPWRP SCUM AND SEPTAGE FACILITY (PHASE IB)**

**CAPITAL PROJECT S-6245**  
**CONTRACT 20-4700**

SCALE:  
AS  
SHOWN

SHEET  
3 OF 11

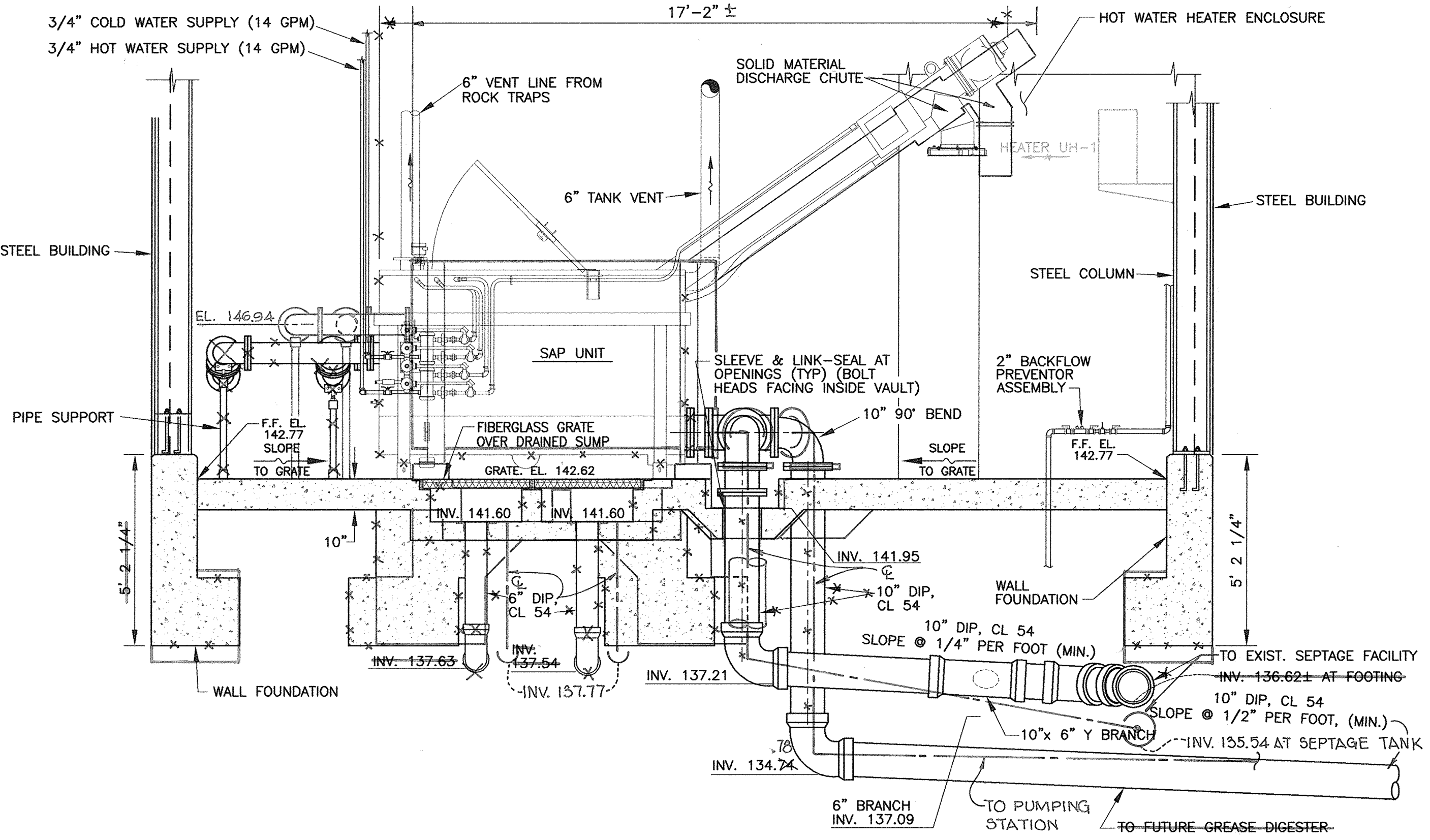
600' SCALE MAP NO. 47

BLOCK NO. 24

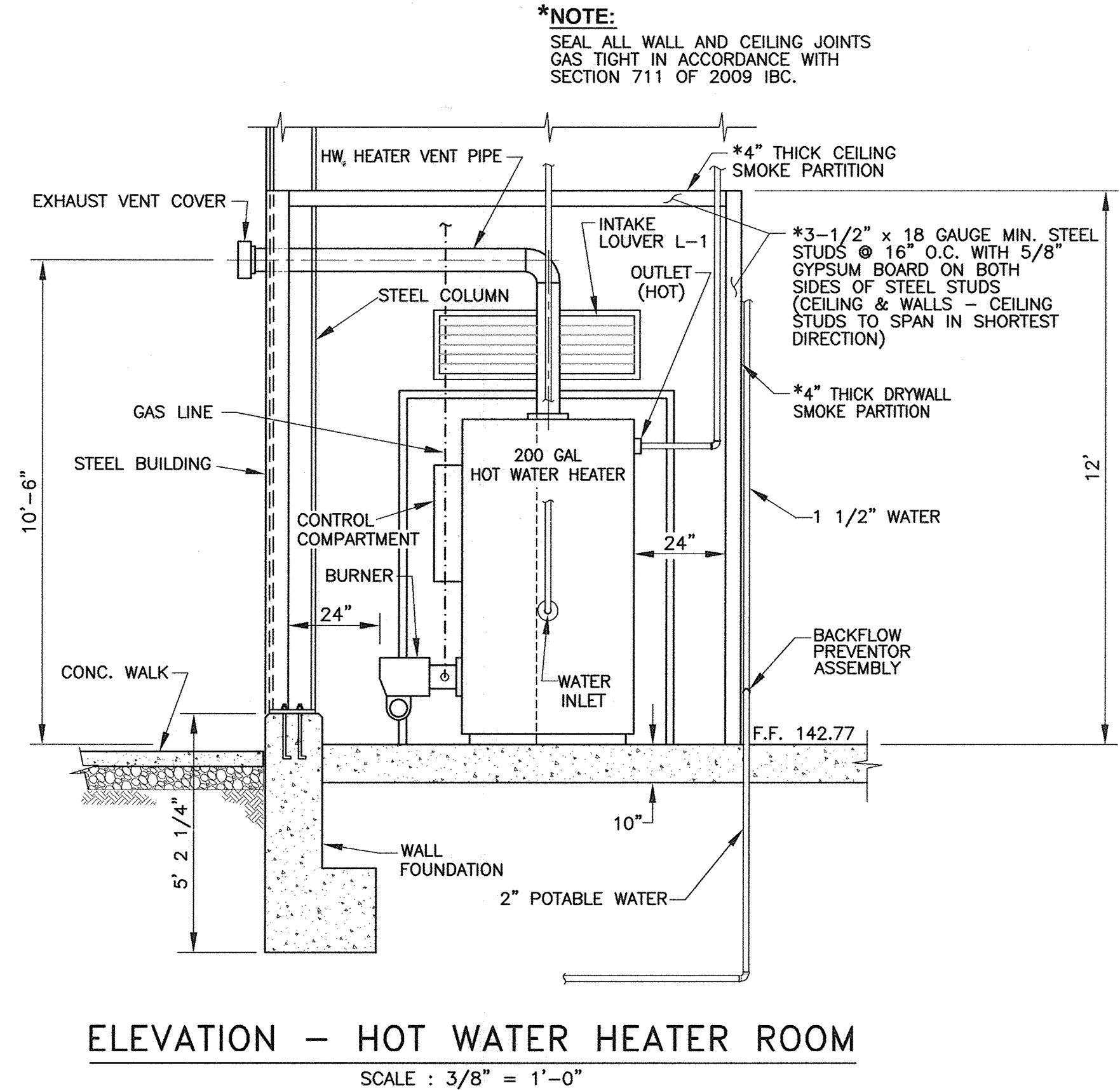
ELECTION DISTRICT NO. 6

HOWARD COUNTY, MARYLAND

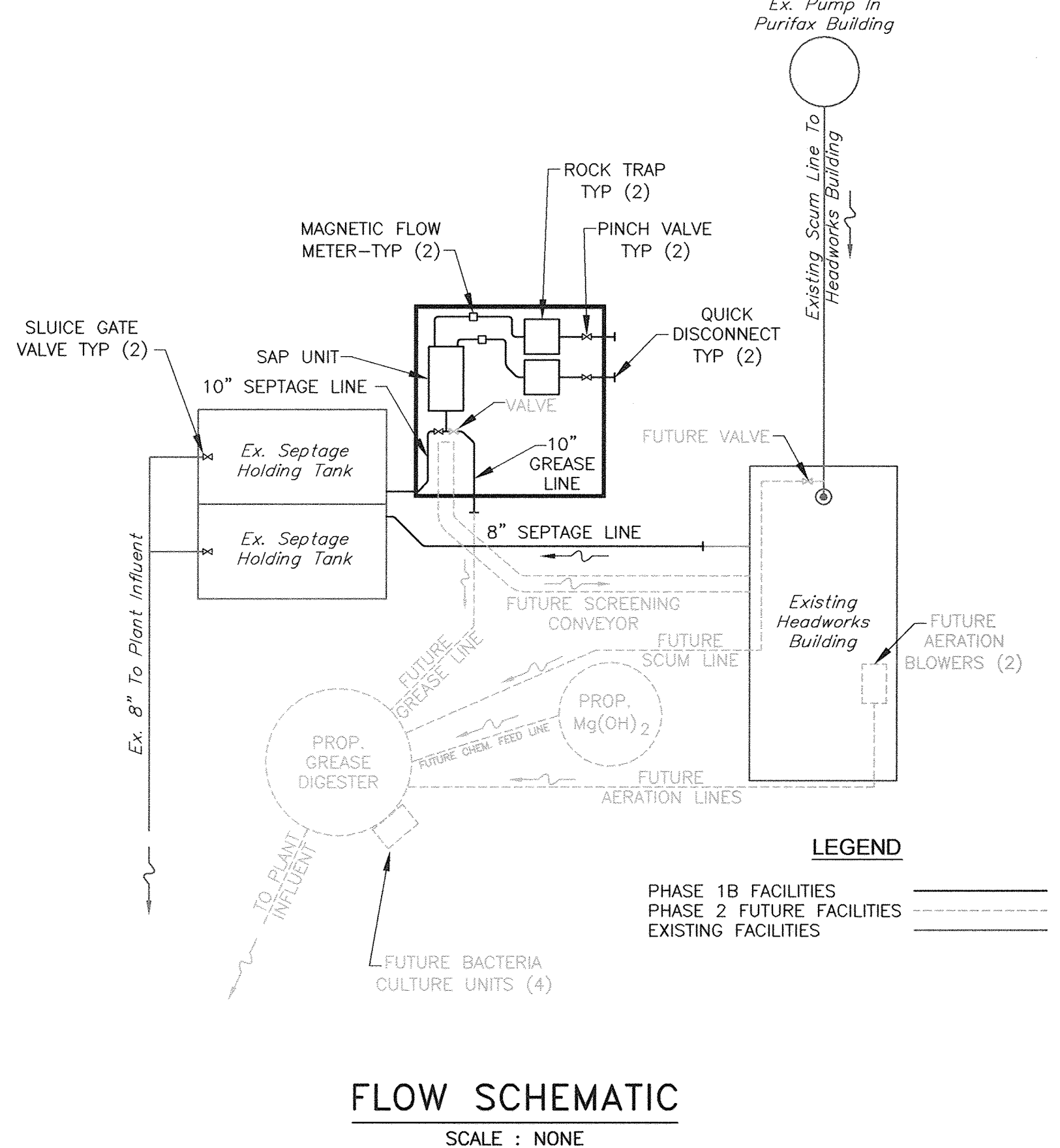
AS-BUILTS



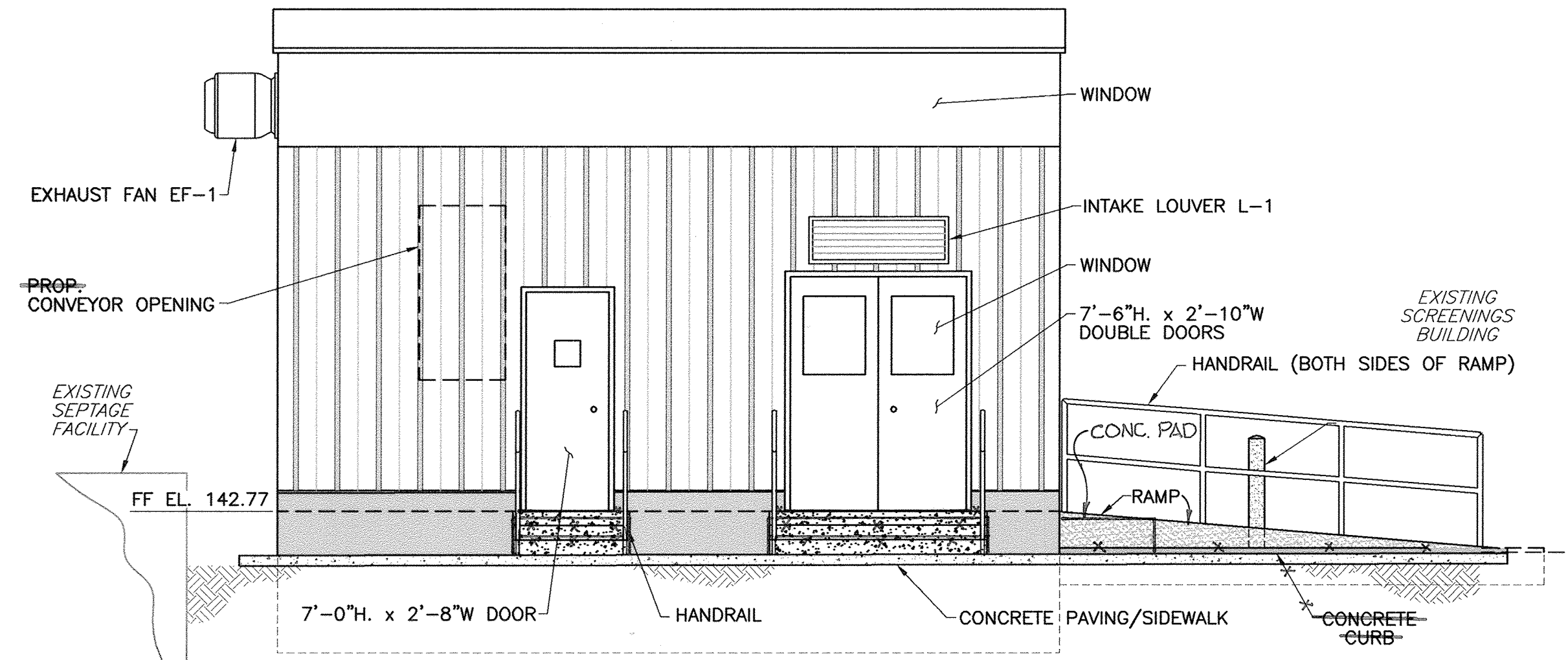
SECTION B-B  
SCALE: 3/8" = 1'-0"



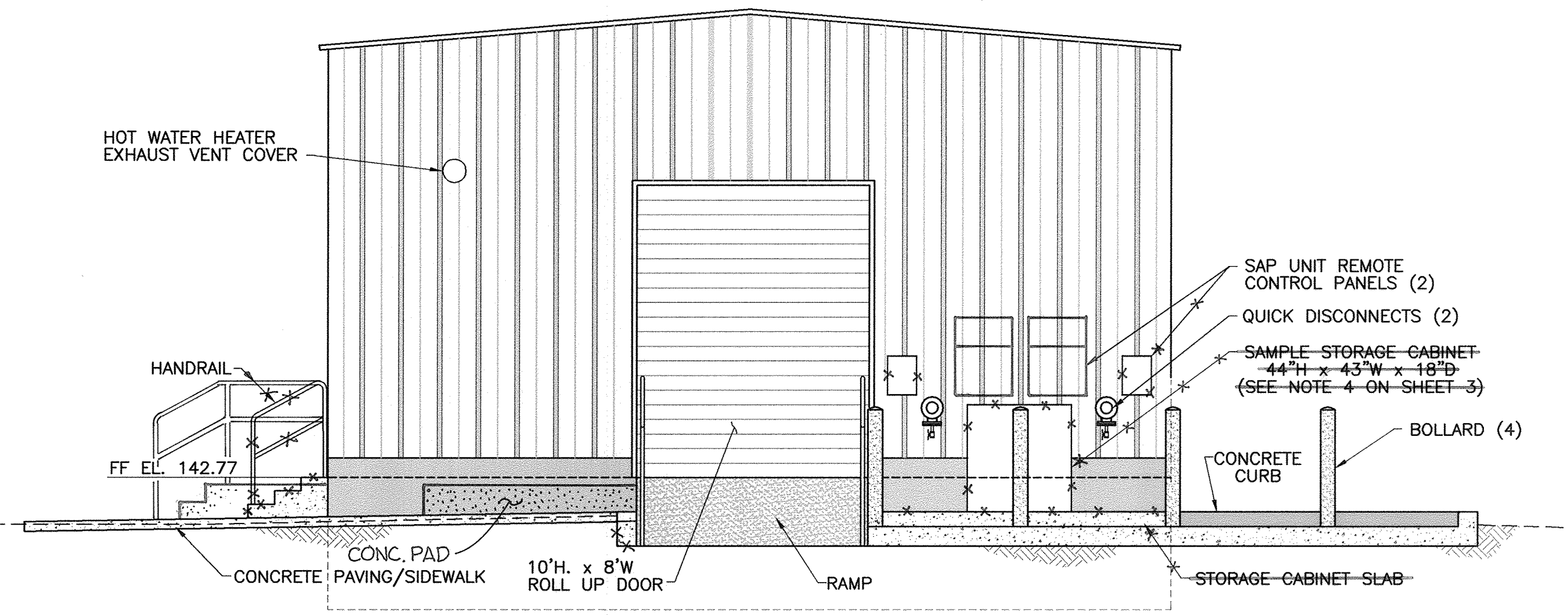
ELEVATION - HOT WATER HEATER ROOM  
SCALE: 3/8" = 1'-0"



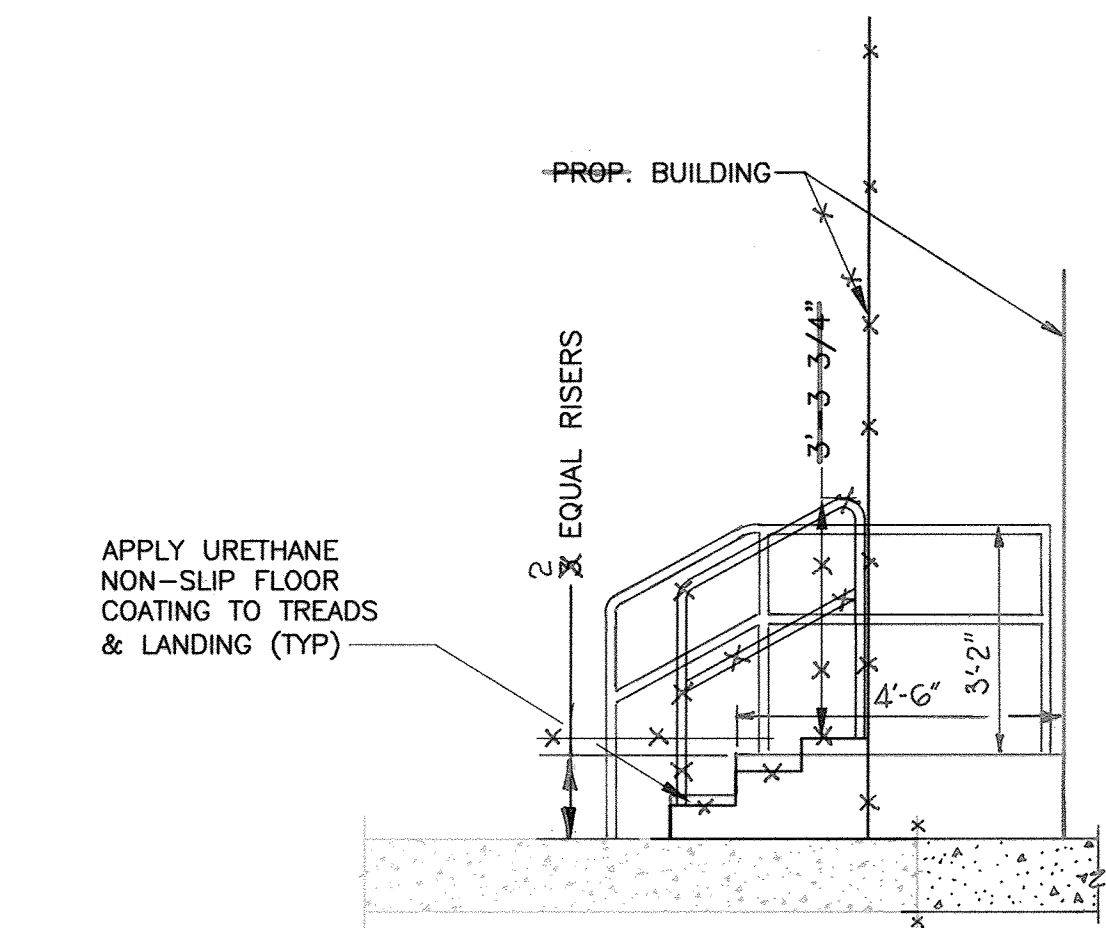
FLOW SCHEMATIC  
SCALE: NONE



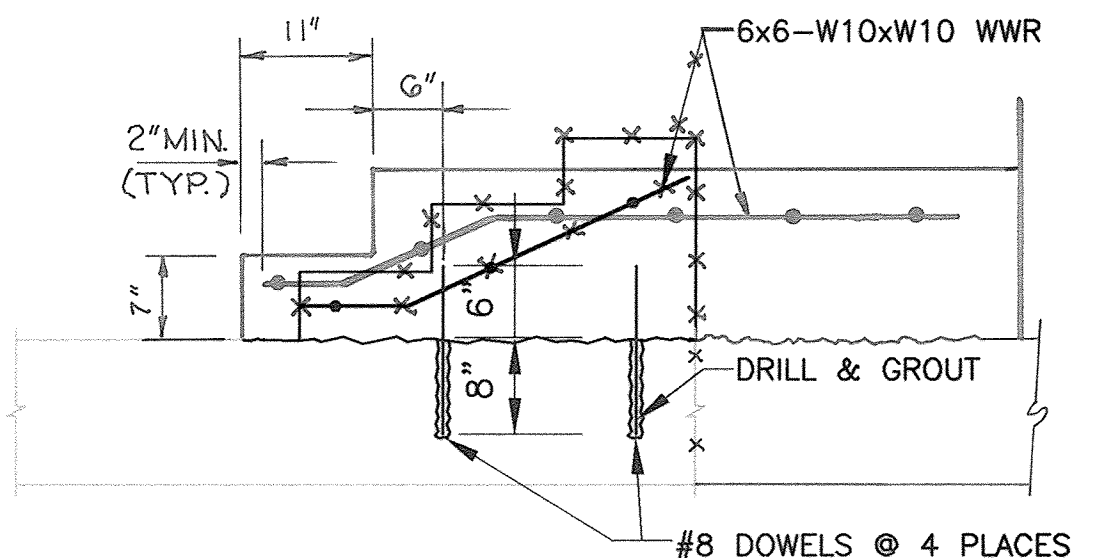
ARCHITECTURAL EAST VIEW  
SCALE: 1/4" = 1'-0"



ARCHITECTURAL NORTH VIEW  
SCALE: 1/4" = 1'-0"



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



SECTION  
SCALE: 3/4" = 1'-0"

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION \_\_\_\_\_ DATE \_\_\_\_\_

CHIEF, DIVISION OF LAND DEVELOPMENT \_\_\_\_\_ DATE \_\_\_\_\_

DIRECTOR \_\_\_\_\_ DATE \_\_\_\_\_

PROFESSIONAL CERTIFICATION

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*Thomas N. D... 2/8/12*  
Signature of Engineer Date

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*2/9/12*  
DIRECTOR OF PUBLIC WORKS DATE

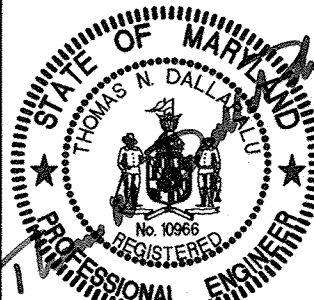
*2/9/12*  
CHIEF, BUREAU OF ENGINEERING DATE

*2/9/12*  
CHIEF, BUREAU OF UTILITIES DATE

*2/9/12*  
CHIEF, UTILITY DESIGN DIVISION DATE

**Dewberry**  
Dewberry & Davis LLC

3120 LORD BALTIMORE DRIVE  
SUITE 211  
BALTIMORE, MD 21244-2662  
410.265.9500  
FAX: 410.265.8875



DES:	GLN/RJP
DRN:	CD
CHK:	TND
DATE:	1/7/12
BY:	NO.
REVISIONS:	
DATE:	

BUILDING SECTIONS  
AND  
ARCHITECTURAL VIEWS

600' SCALE MAP NO. 47 BLOCK NO. 24

LPWRP SCUM AND SEPTAGE FACILITY (PHASE 1B)

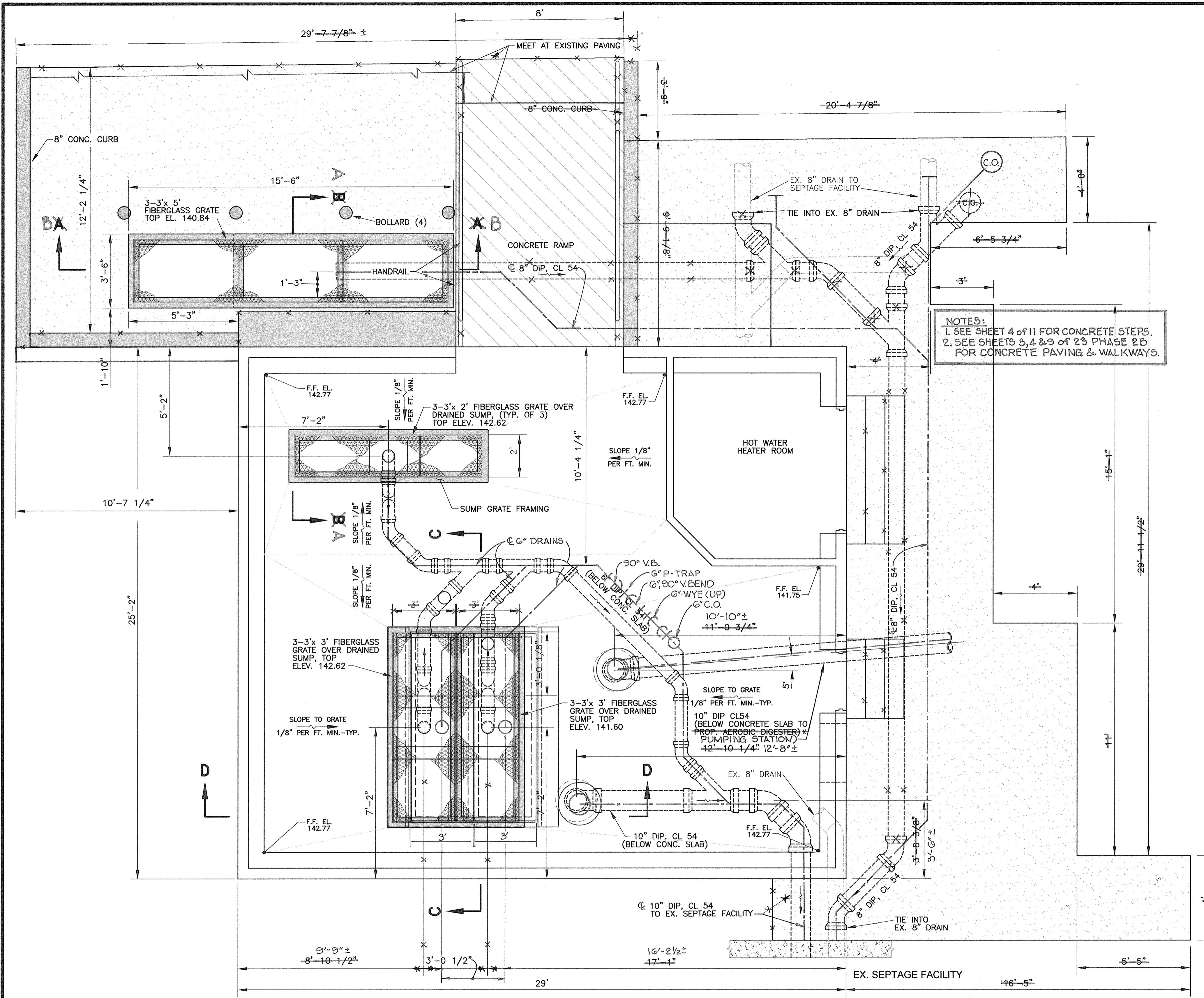
CAPITAL PROJECT S-6245  
CONTRACT 20-4700

ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND

SCALE:  
AS  
SHOWN

SHEET  
4 OF 11

Printed by (customer) on Plot Date: Feb 07, 2012 2:48pm  
 Title: LPWRP SCUM AND SEPTAGE FACILITY (PHASE 1B)  
 User: TND  
 Plot: 1/7/12  
 Project: S-6245-20-4700



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

PROFESSIONAL CERTIFICATION  
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*Thomas W. Duda*  
Signature of Engineer 2/9/12 Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION \_\_\_\_\_ DATE \_\_\_\_\_

CHIEF, DIVISION OF LAND DEVELOPMENT \_\_\_\_\_ DATE \_\_\_\_\_

DIRECTOR \_\_\_\_\_ DATE \_\_\_\_\_

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*James M. ...* 2/9/12 DATE  
DIRECTOR OF PUBLIC WORKS

*Thomas W. Duda* 2/9/12 DATE  
CHIEF, BUREAU OF UTILITIES

*Thomas W. Duda* 2/9/12 DATE  
CHIEF, UTILITY DESIGN DIVISION

**Dewberry**  
Dewberry & Davis LLC  
3120 LORD BALTIMORE DRIVE  
SUITE 211  
BALTIMORE, MD 21244-2662  
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DES:	GLN/RJP
DRN:	PWR
CHK:	TND
DATE:	1/7/12
BY:	NO.
REVISIONS:	
DATE:	

**BUILDING DRAINAGE PLAN**  
SECTIONS AND LAYOUT DIMENSIONING

600' SCALE MAP NO. 47

**LPWRP SCUM AND SEPTAGE FACILITY (PHASE IB)**

CAPITAL PROJECT S-6245  
CONTRACT 20-4700

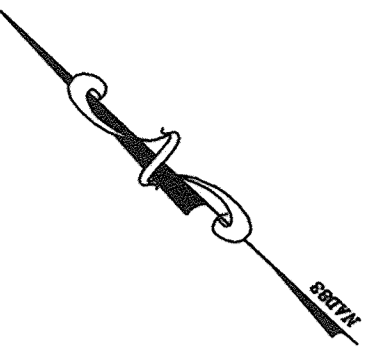
ELECTION DISTRICT NO. 6

HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN

SHEET 5 OF 11





**STRUCTURAL NOTES**

- A. SEE CIVIL/MECHANICAL DRAWINGS FOR LOCATION AND SIZE OF ALL SLAB PENETRATIONS AND FLOOR DRAINS.
- B. SEE CIVIL DRAWINGS FOR ALL ELEVATIONS NOT SHOWN ON THIS SHEET.
- C. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS PRIOR TO COMMENCING WORK.

**D. CODES AND SPECIFICATIONS:**

1. INTERNATIONAL BUILDING CODES (I.B.C.) 2006
2. BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY (ACI 318)
3. CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES AND COMMENTARY (ACI 350-01)

**E. DESIGN LOADS:**

1. FLOOR LIVE LOAD..... 100 PSF
2. GROUND SNOW ..... 25 PSF
3. WIND LOADS:
  - a. BASIC WIND SPEED ..... 90 MPH
  - b. EXPOSURE ..... C
4. SEISMIC LOADS:
  - a. SPECTRAL RESPONSE COEFFICIENT S<sub>s</sub> = 0.159
  - b. SITE CLASS..... D

**F. CAST IN PLACE CONCRETE:**

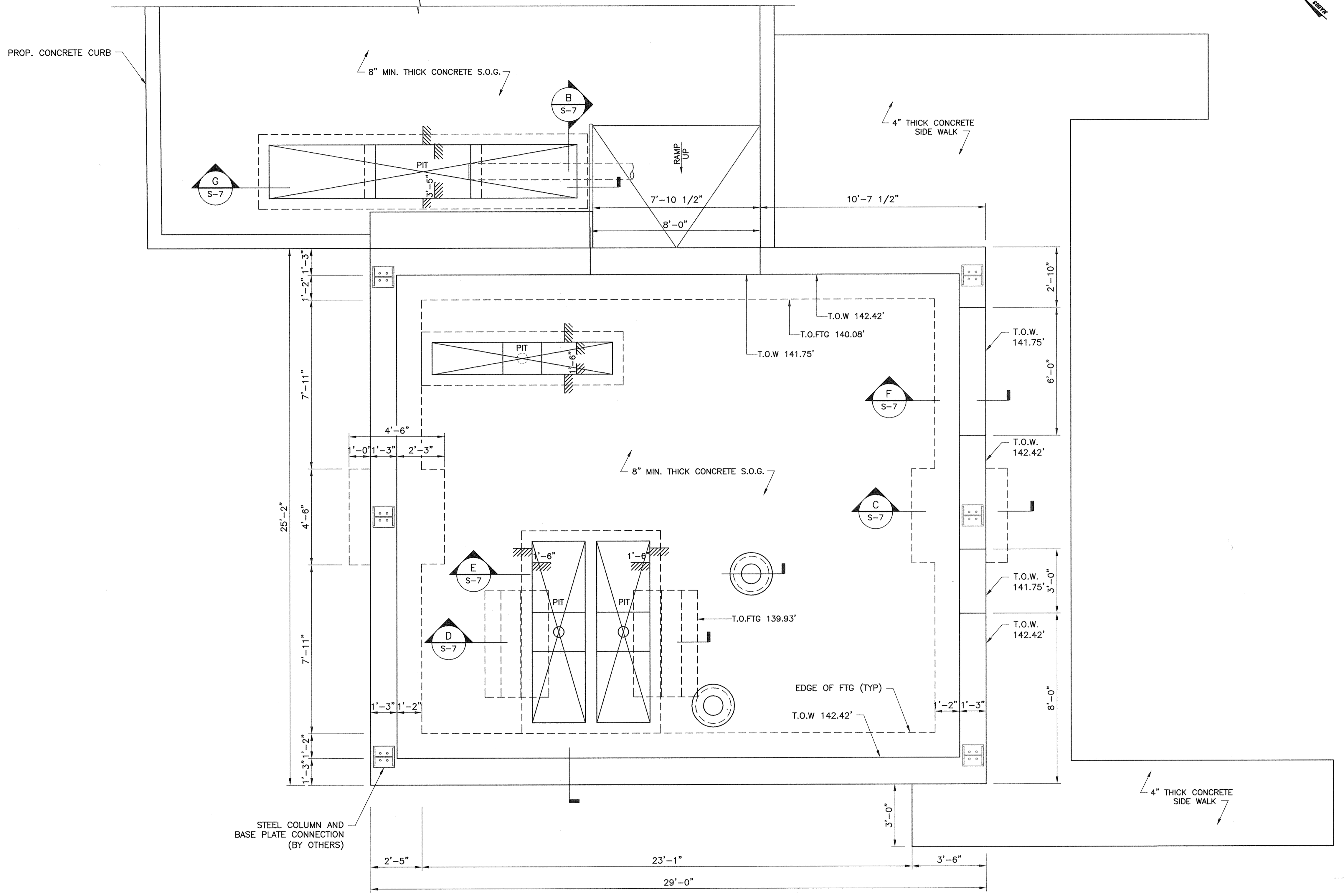
1. UNLESS NOTED OTHERWISE, ALL CAST IN PLACE CONCRETE SHALL BE AIR ENTRAINED WITH A MAXIMUM SLUMP OF 4 INCHES. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE ACI 318 AND ACI 301. CONCRETE SHALL ATTAIN MINIMUM 28 DAY STRENGTH OF 4000 PSI UNLESS OTHERWISE APPROVED.
2. ALL REINFORCING STEEL FOR CONCRETE SHALL CONFORM TO ASTM SPECIFICATIONS A 615, GRADE 60 FOR BARS AND A 185 FOR WELDED WIRE FABRIC. REINFORCING DETAILS SHALL BE IN ACCORDANCE WITH CURRENT ACI "MANUAL OF STANDARD PRACTICES FOR DETAILING REINFORCED CONCRETE STRUCTURES". BAR LAPS SHALL BE CLASS "B" TENSION LAPS. PROVIDE CONCRETE COVER OVER REINFORCING BARS IN ACCORDANCE WITH ACI 318. HOOKS SHOWN SHALL BE STANDARD HOOKS UNLESS OTHERWISE DIMENSIONED.

**G. FOUNDATIONS:**

1. PROVIDE POLYETHYLENE PLASTIC VAPOR BARRIER OVER A MINIMUM 12 INCHES #57 STONE UNDER SLAB ON GRADE.
2. PROVIDE A MINIMUM NET ALLOWABLE BEARING CAPACITY OF 2,000 PSF BELOW ALL THE FOOTINGS AND TO A DISTANCE OUTSIDE THEIR PERIMETER SO AS TO INSURE PROPER FOUNDATION PERFORMANCE AS VERIFIED BY THE GEOTECHNICAL ENGINEER.
3. ALL SUBGRADE, FOOTING EXCAVATIONS, COMPACTED FILL AND BACKFILL SHALL BE INSPECTED AND TESTED BY A GEOTECHNICAL ENGINEER REGISTERED AS A PROFESSIONAL ENGINEER IN THE STATE OF MARYLAND TO VERIFY CONFORMANCE WITH THE RECOMMENDATIONS HEREIN.
4. DURING CONSTRUCTION AND BACKFILLING OPERATIONS THE GROUND WATER LEVEL SHALL BE MAINTAINED AT 2 FEET (MIN.) BELOW THE BOTTOM OF THE EXCAVATION.

**LEGEND**

- 1'-0" INDICATES SLAB DEPRESSION
- S.O.G. SLAB ON GRADE
- T.O.FTG. TOP OF FOOTING
- T.O.S. TOP OF SLAB
- T.O.W. TOP OF WALL



**(A) FOUNDATION PLAN**  
 S-6 SCALE: 3/8"=1'-0"  
 (SEE DRAINAGE PLAN ON SHEET 5 OF 11)

SEE SHEET 7 FOR SECTION CUTS SHOWN ON THIS SHEET

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

\_\_\_\_\_  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

\_\_\_\_\_  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

\_\_\_\_\_  
 DIRECTOR DATE

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*[Signature]*  
 Signature of Engineer Date 2-1-12

**DEPARTMENT OF PUBLIC WORKS**  
 HOWARD COUNTY, MARYLAND

*[Signature]* 2/1/12  
 DIRECTOR OF PUBLIC WORKS DATE

*[Signature]* 2/1/12  
 CHIEF, BUREAU OF UTILITIES DATE

*[Signature]* 2/9/12  
 CHIEF, BUREAU OF ENGINEERING DATE

*[Signature]* 2/9/12  
 CHIEF, UTILITY DESIGN DIVISION DATE

**Dewberry**  
 Dewberry & Davis LLC

3100 LORD BALTIMORE DRIVE  
 SUITE 211  
 BALTIMORE, MD 21244-2062  
 410.295.9500  
 FAX: 410.295.9875



DES:	YHD/KY				
DRN:	YHD/KY				
CHK:	FHK				
DATE:	1/31/12	BY	NO.	REVISIONS	DATE

**STRUCTURAL**  
**FOUNDATION PLAN AND NOTES**

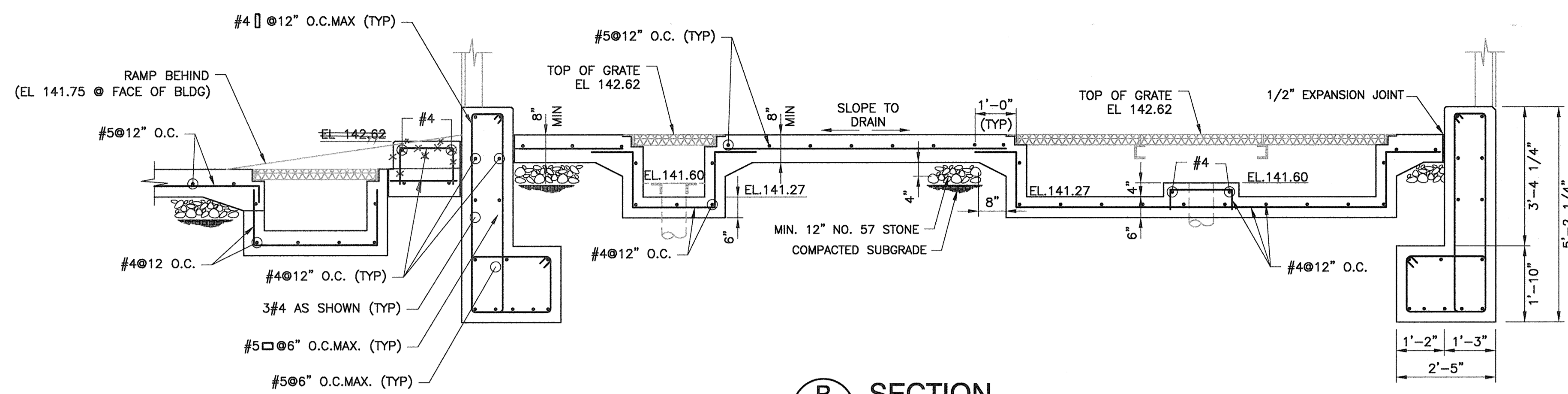
600' SCALE MAP NO. 47 BLOCK NO. 24

**LPWRP SCUM AND SEPTAGE FACILITY (PHASE IB)**

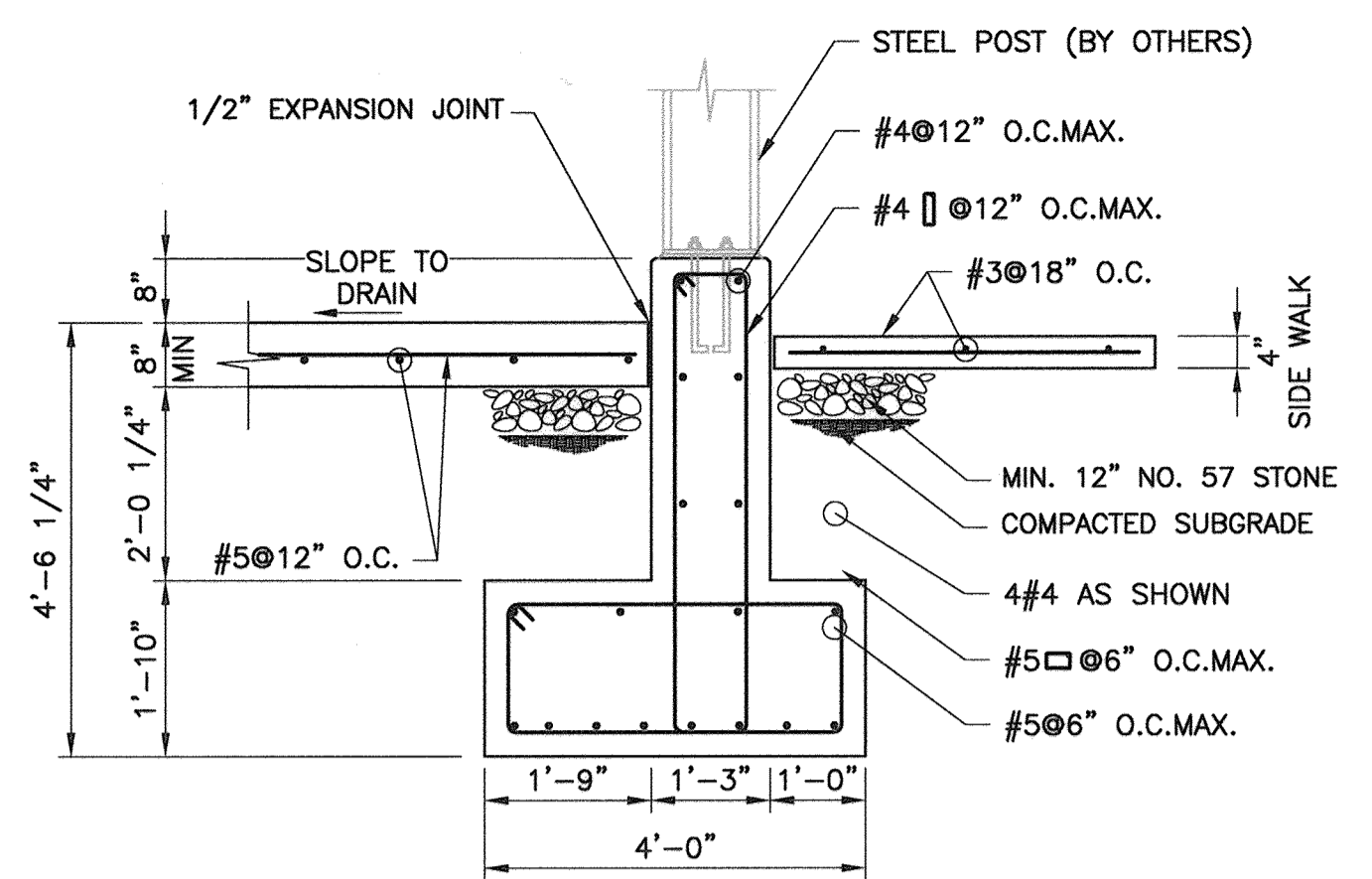
**CAPITAL PROJECT S-6245**  
**CONTRACT 20-4700**

ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND

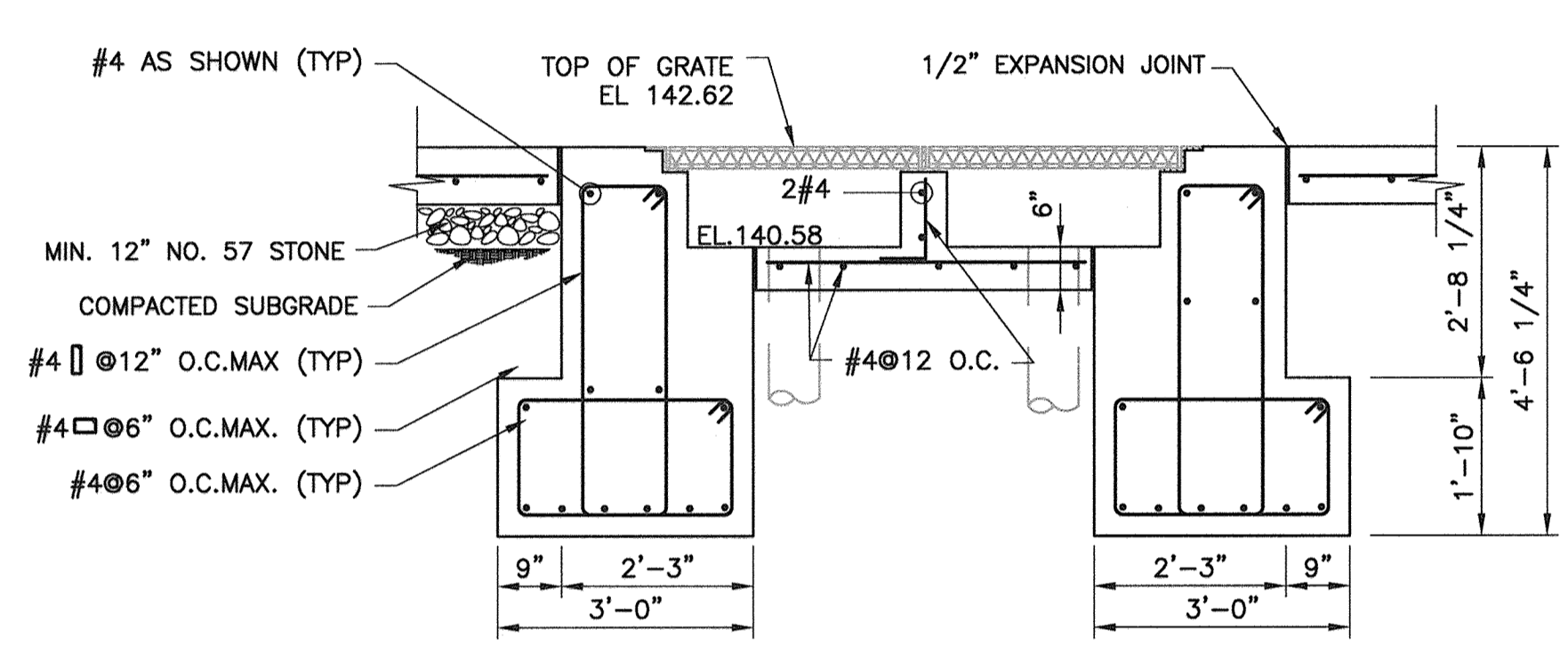
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**B SECTION**  
S-7 SCALE: 1/2"=1'-0"

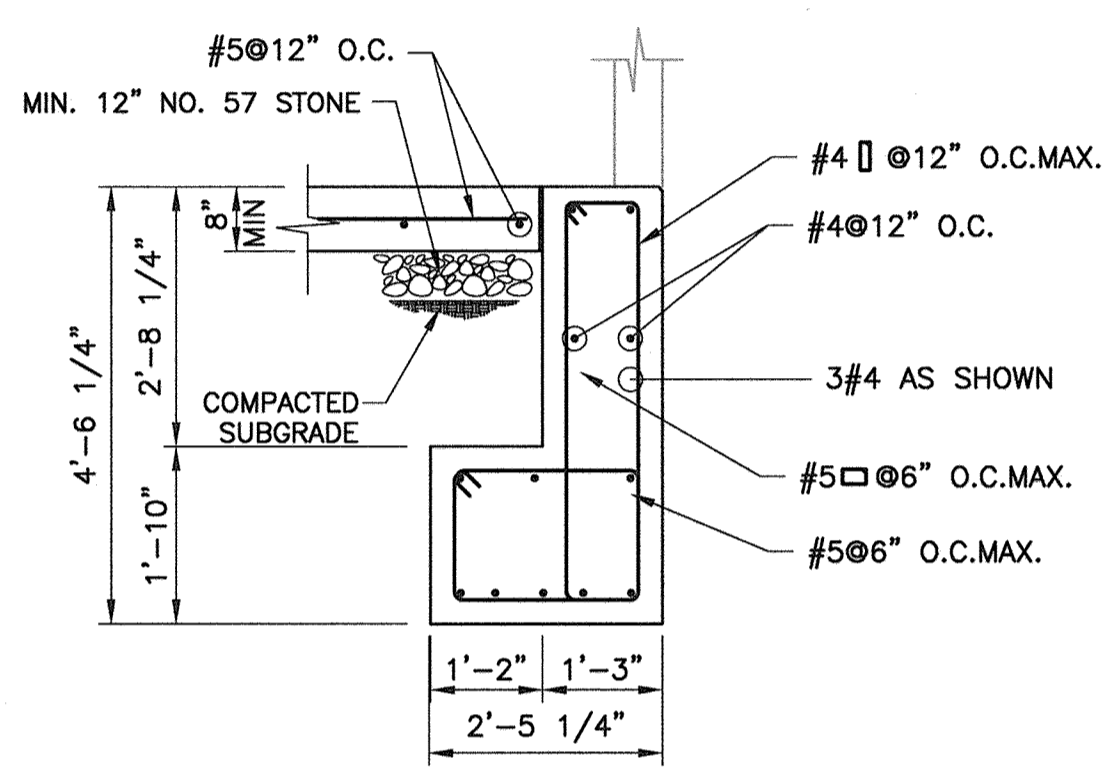


**C SECTION**  
S-7 SCALE: 1/2"=1'-0"

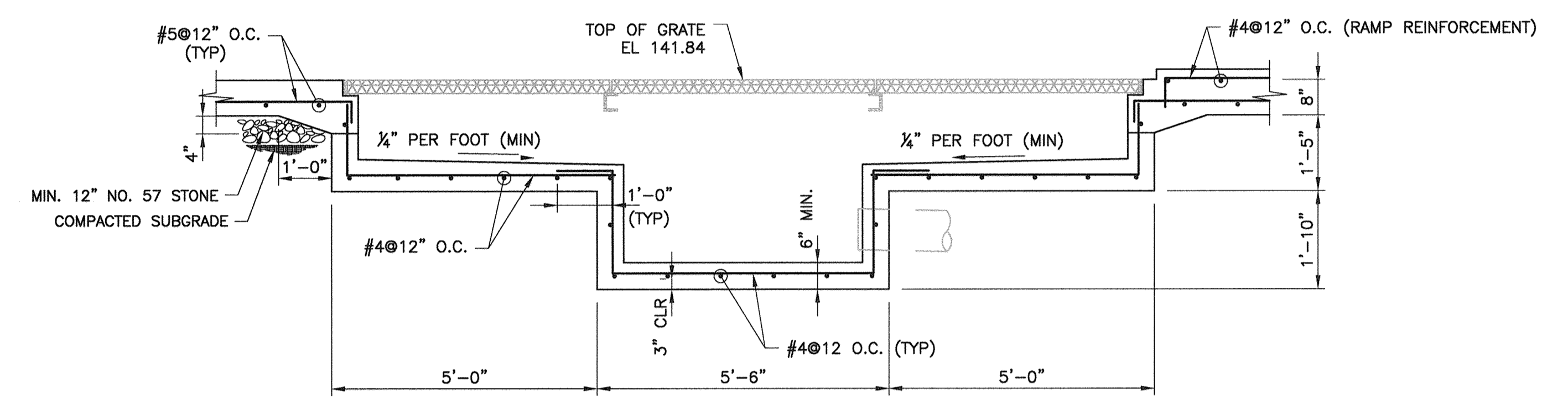


(SEE SECTION B-B SHEET 4 OF 11)

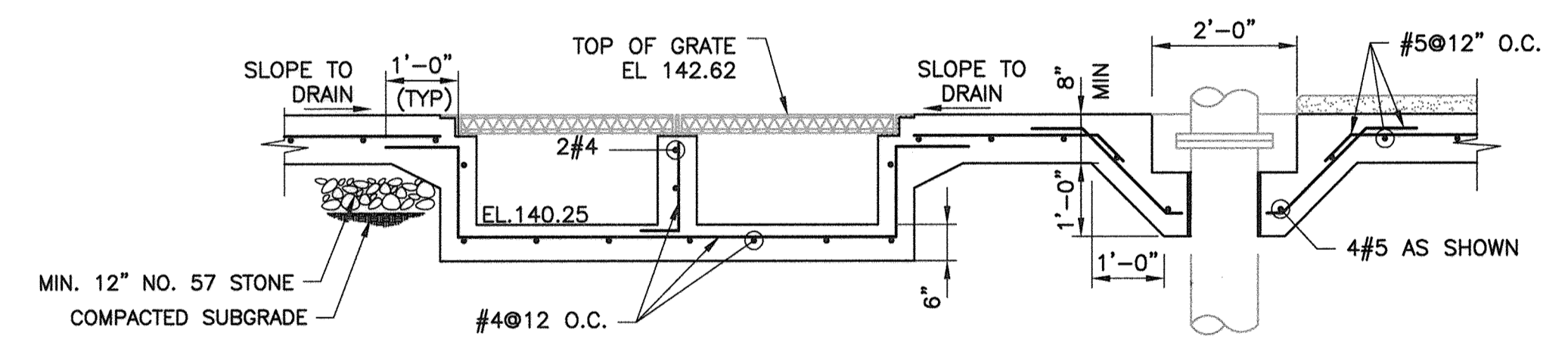
**D SECTION**  
S-7 SCALE: 1/2"=1'-0"



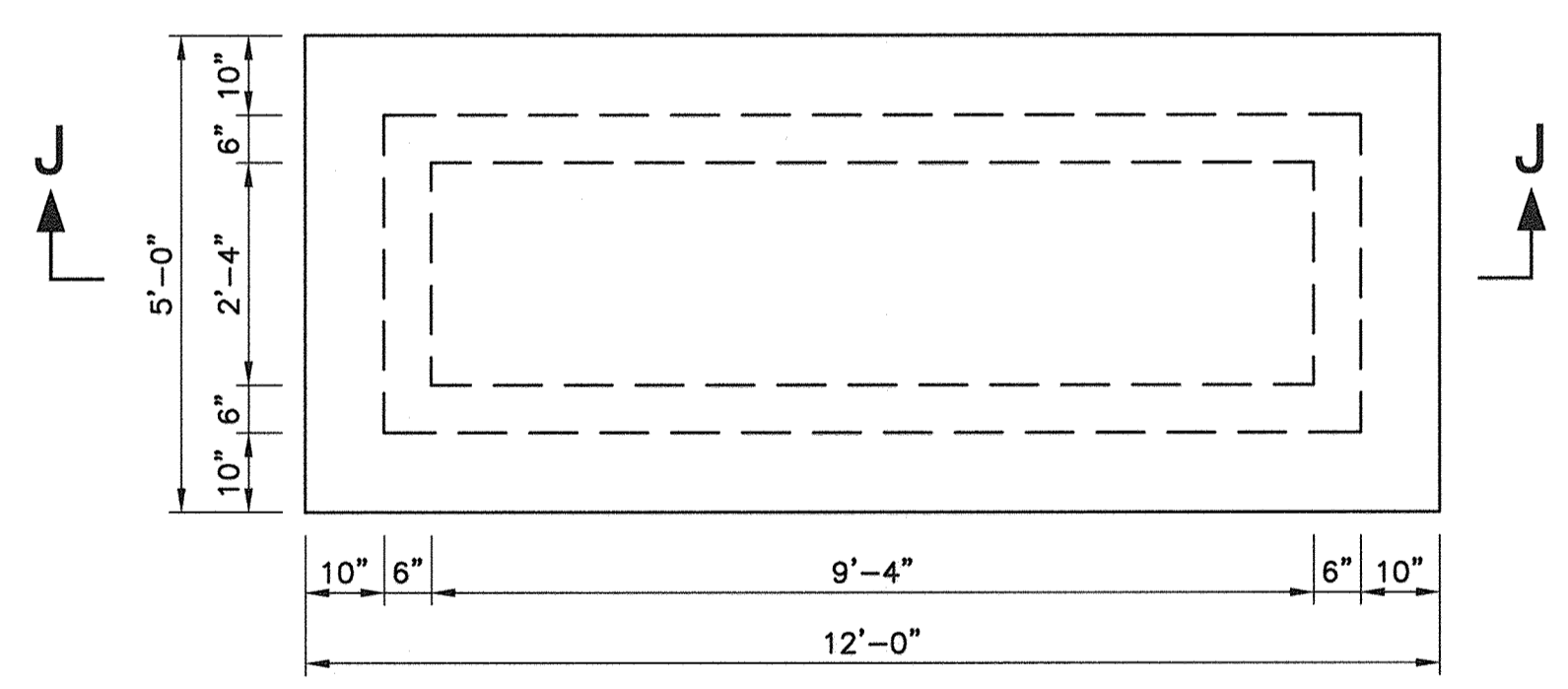
**F SECTION**  
S-7 SCALE: 1/2"=1'-0"



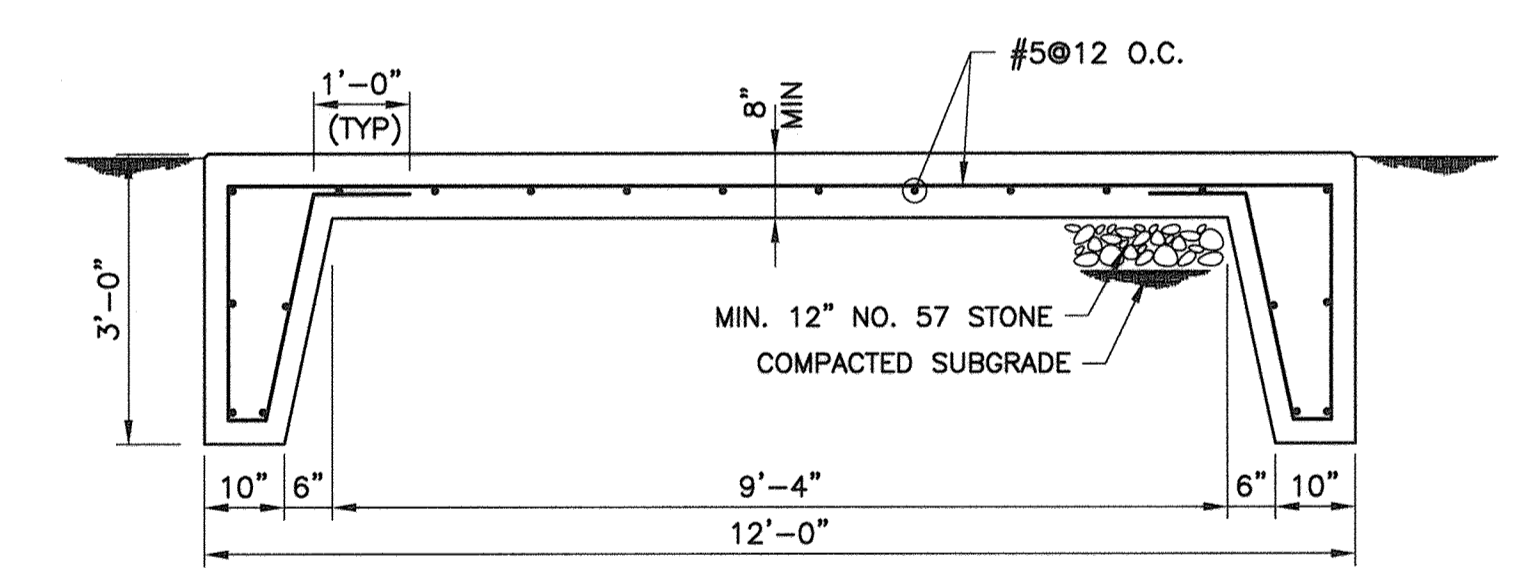
**G SECTION**  
S-7 SCALE: 1/2"=1'-0"



**E SECTION**  
S-7 SCALE: 1/2"=1'-0"

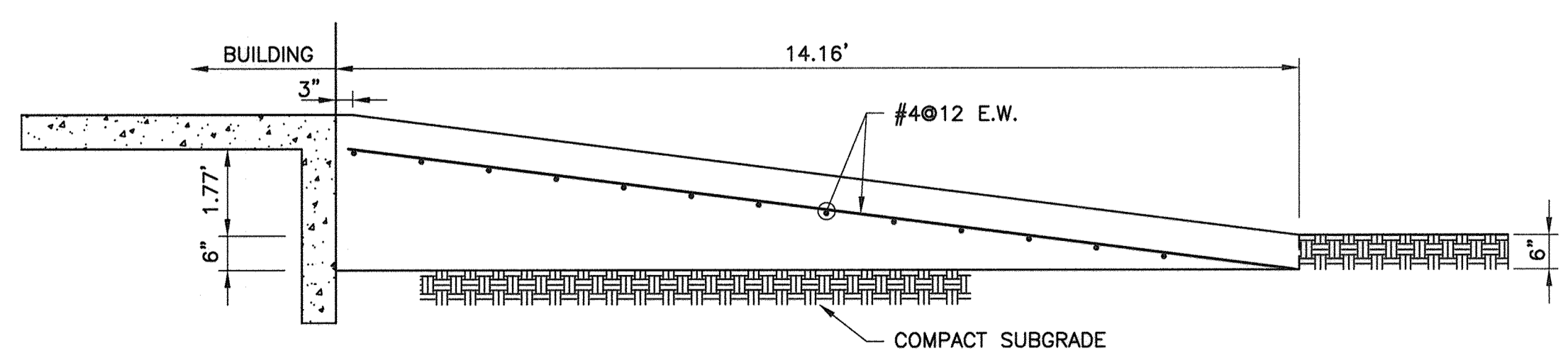


**PLAN**  
SCALE: 1/2"=1'-0"



**SECTION J**  
SCALE: 1/2"=1'-0"

**SLAB ON GRADE FOR PROPANE TANK**



**ROLL-UP DOOR RAMP**

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

\_\_\_\_\_  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE \_\_\_\_\_

\_\_\_\_\_  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE \_\_\_\_\_

\_\_\_\_\_  
DIRECTOR DATE \_\_\_\_\_

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*[Signature]*  
Signature of Engineer Date: 2-1-12

**DEPARTMENT OF PUBLIC WORKS**  
HOWARD COUNTY, MARYLAND

*[Signature]* 2/9/12  
DIRECTOR OF PUBLIC WORKS DATE

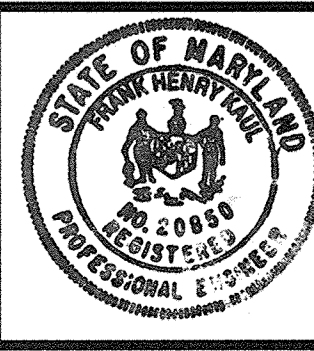
*[Signature]* 2/9/12  
CHIEF, BUREAU OF UTILITIES DATE

*[Signature]* 2/9/12  
CHIEF, BUREAU OF ENGINEERING DATE

*[Signature]* 2/9/12  
CHIEF, UTILITY DESIGN DIVISION DATE

**Dewberry**  
Dewberry & Davis LLC

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BALTIMORE, MD 21244-2662  
410.285.3500  
FAX: 410.285.8875



DES:	YHD/KY
DRN:	YHD/KY
CHK:	FHK
DATE:	1/31/12
BY:	NO.
REVISIONS:	DATE

**STRUCTURAL PLAN AND SECTIONS**

600' SCALE MAP NO. 47 BLOCK NO. 24

**LPWRP SCUM AND SEPTAGE FACILITY (PHASE IB)**

**CAPITAL PROJECT S-6245**  
CONTRACT 20-4700

ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN

SHEET 7 OF 11

AS-BUILTS

Plotted by: (Administrator) on Feb 21, 2012 11:18am  
 Title: Layout Name: S-7-00001615.dwg  
 User: S-7-00001615  
 Plot Device: HP DesignJet 5000 Series  
 Plot Date: 2/21/12 11:18 AM  
 Plot Path: \\server\plotters\hp\5000series\5000series.dwg

**ELECTRICAL SYMBOLS**

- FLUORESCENT OR INCANDESCENT LIGHTING FIXTURE. SEE LIGHTING FIXTURE SCHEDULE FOR TYPE AND MOUNTING.
- WALL MOUNTED LIGHTING FIXTURE. SEE LIGHTING FIXTURE SCHEDULE.
- ⊞ WALL MOUNTED COMBINATION EM/EXIT LIGHTING FIXTURE. SEE LIGHTING FIXTURE SCHEDULE.
- \$ SINGLE POLE TOGGLE SWITCH - 20 AMP, 120 VOLT, M.H. 48" AFF, UNLESS NOTED OTHERWISE.
- \$3 THREE WAY TOGGLE SWITCH - 20 AMP, 120 VOLT, M.H. 48" AFF, UNLESS NOTED OTHERWISE.
- \$M MOTOR RATED SWITCH WITH THERMAL OVERLOAD PROTECTION, MOUNT ADJACENT TO OR ON THE MOTOR BEING CONTROLLED.
- ⊙ JUNCTION BOX, CEILING OR WALL MOUNTED.
- ⊕ DOUBLE DUPLEX GROUNDING TYPE RECEPTACLE - 20 AMP, 120 VOLT, NEMA 5-20R, M.H. 18" AFF, UNLESS NOTED OTHERWISE.
- ⊖ DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER PROTECTION - 20 AMP, 120 VOLT, NEMA 5-20R, M.H. 48" AFF, UNLESS NOTED OTHERWISE.
- DISCONNECT SWITCH, AMP, VOLT, POLES AND FUSING AS NOTED ON DRAWING.
- ⊠ UNLESS OTHERWISE NOTED, FUSIBLE SWITCH COMBINATION MAGNETIC STARTER WITH HOA AND 120 VAC CONTROL CIRCUIT TRANSFORMER, NEMA 1 ENCLOSURE.
- ⊙ ELECTRIC MOTOR CONNECTION - HORSEPOWER AS NOTED.
- #10 BRANCH CIRCUIT CONDUIT AND WIRING WITH A DEDICATED EQUIPMENT GROUND WIRE. CROSSMARKS AND NUMERALS INDICATE NUMBER AND SIZE OF CONDUCTORS, AND SHOWN ONLY WHERE REQUIRED FOR CLARITY.
- BRANCH CIRCUIT CONDUIT AND WIRING WITH A DEDICATED EQUIPMENT GROUND WIRE, UNDER GROUND OR UNDER SLAB. CROSSMARKS AND NUMERALS INDICATE NUMBER AND SIZE OF CONDUCTORS, AND SHOWN ONLY WHERE REQUIRED FOR CLARITY.
- 2 HOMERUN WIRING WITH A DEDICATED EQUIPMENT GROUND WIRE TO THE REFERENCED PANELBOARD. ARROW HEADS AND NUMERALS INDICATE THE CIRCUIT NUMBERS.
- × CONDUIT SEALING FITTING

- CONTACT - NORMALLY OPEN
- CONTACT - NORMALLY CLOSED
- OVERLOAD RELAY HEATER
- MAGNETIC STARTER WITH NEMA SIZE INDICATED
- M CIRCUIT BREAKER, MAGNETIC TRIP ONLY, FRAME SIZE SHOWN, 3 POLE UNLESS INDICATED OTHERWISE.
- 400 225 FUSED SWITCH, SWITCH AND FUSE CURRENT RATING INDICATED, 3 POLE UNLESS INDICATED OTHERWISE.
- 100 SWITCH - CURRENT RATING INDICATED, 3 POLE UNLESS INDICATED OTHERWISE.
- LIGHTNING ARRESTER
- FUSE
- GROUND

- or — TRANSFORMER, SECONDARY VOLTAGES, PHASE AND RATING INDICATED AS APPLICABLE
- 120V or 120/240V 15 KVA 1 PH
- PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY OPEN
- PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY CLOSED
- REMOTE DEVICE

**ELECTRICAL SYMBOLS CONTINUED**

- LIMIT SWITCH
- ON DELAY
  - NOTC TIMING RELAY CONTACT NORMALLY OPEN TIMED CLOSED
  - NCTO TIMING RELAY CONTACT NORMALLY CLOSED TIMED OPEN
- OFF DELAY
  - NOTO TIMING RELAY CONTACT NORMALLY OPEN TIMED OPEN
  - NCTC TIMING RELAY CONTACT NORMALLY CLOSED TIMED CLOSED
- TEMPERATURE SWITCH
- FLOAT SWITCH
- RORC MAGNETIC RELAY COIL
- 480/3 -EQUIPMENT VOLTAGE
- INDICATES PHASE
- INDICATES VOLTAGE

SELECTOR SWITCH - MAINTAINED CONTACT - CHART IDENTIFIES OPERATION:

CKT.	POSITION			
	HAND	OFF	AUTO	
1	X	0	0	X
2	0	0	0	X

X - CLOSED CONTACT  
O - OPEN CONTACT

CURRENT TRANSFORMER

INDICATING LIGHT - LETTER INDICATES COLOR  
A - AMBER G - GREEN  
B - BLUE R - RED  
C - CLEAR W - WHITE

⊕ PHASE OR DIAMETER

**FIRE ALARM SYMBOLS**

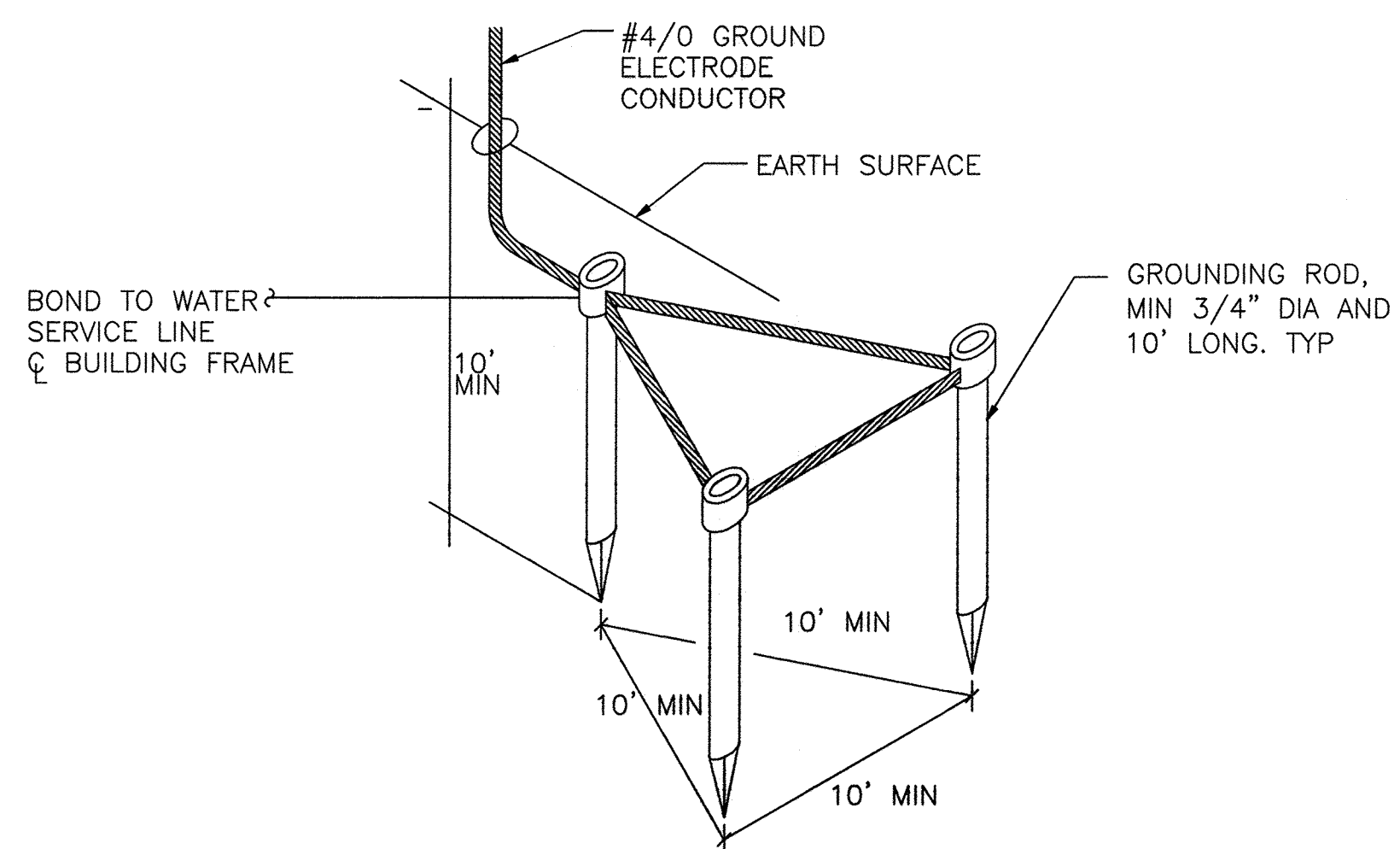
- F FIRE ALARM MANUAL PULL STATION
- 34cd FIRE ALARM HORN WITH FLASHING LIGHT. NUMERAL INDICATES CANDELA LEVEL. WALL MOUNTED CEILING MOUNTED IF SUBSCRIPT C IS INDICATED
- S SMOKE DETECTOR, CEILING MOUNTED
- H HEAT DETECTOR, CEILING MOUNTED
- FACP FIRE ALARM CONTROL PANEL

**ABBREVIATIONS**

- |               |  |               |   |
|---------------|--|---------------|---|
| A, AMP        | AMPERE   | LOC           | LOCATION  |
| AFF           | ABOVE FINISHED FLOOR   | LTS           | LIGHTS  |
| AIC           | SYMMETRICAL AMPERE INTERRUPTING RATING                       | MAT'L         | MATERIAL  |
| AL            | ALUMINUM   | MECH          | MECHANICAL  |
| ANCH          | ANCHOR   | MCB           | MAIN CIRCUIT BREAKER                                      |
| APPROX        | APPROXIMATE  | MTD           | MOUNTED   |
| BLD           | BUILDING   | NEC           | NATIONAL ELECTRICAL CODE                                  |
| BRKR          | CIRCUIT BREAKER  | NTS           | NOT TO SCALE  |
| C             | CONDUIT  | OD            | OUTSIDE DIAMETER  |
| CKT           | CIRCUIT  | OH, OHE       | OVERHEAD ELECTRICAL                                       |
| CL            | CENTERLINE   | OPN'G         | OPENING   |
| CO            | COMPANY  | P             | POLE OR PHASE   |
| CONC          | CONCRETE   | PL            | PLATE   |
| CONT          | CONTROL  | PNL, PANEL    | CIRCUIT BREAKER PANELBOARD                                |
| CT            | CURRENT TRANSFORMER  | PRI           | PRIMARY VOLTAGE (ABOVE 600 VOLTS)                         |
| CTR           | CONTROL  | PWR           | POWER   |
| DIA           | DIAMETER   | QTY           | QUANTITY  |
| DN            | DOWN   | RCP           | REACTOR CONTROL PANEL                                     |
| DP            | DEEP   | RECEPT        | RECEPTACLE  |
| DWG           | DRAWING  | RQ'D          | REQUIRED  |
| EA            | EACH   | RQM'TS        | REQUIREMENTS  |
| EC            | EMPTY CONDUIT  | SEC           | SECONDARY VOLTAGE (600 VOLTS OR LESS)                     |
| ELEC, ELECT'L | ELECTRICAL   | SPR           | STANDARD PRACTICE RECOMMENDATION, SIZE FOR CRUSHED STONE  |
| EMBED         | EMBEDMENT DEPTH  | SS            | STAINLESS STEEL   |
| ENCL          | ENCLOSURE  | STA           | STATION, AS IN PUMP STATION                               |
| EQ            | EQUAL  | STR           | STRUCTURE   |
| EQUIP         | EQUIPMENT  | SVC           | SERVICE   |
| EXIST         | EXISTING   | SURF          | SURFACE   |
| EXP           | EXPANSION  | SW            | SWITCH  |
| FC            | FOOTCANDLE   | T             | TRANSFORMER   |
| FR            | FROM   | TEL           | TELEPHONE   |
| GALV          | GALVANIZED   | THRU          | THROUGH   |
| GEC           | GROUND ELECTRODE CONDUCTOR                                   | TRANS, TRANSF | TRANSFORMER OR TRANSFER                                   |
| GFCI          | GROUND FAULT CIRCUIT INTERRUPTER (5 MILLIAMPERE SENSITIVITY) | TSTAT         | THERMOSTAT  |
| GND           | GROUND   | TYP           | TYPICAL   |
| H             | HIGH   | UG, UGE       | UNDERGROUND ELECTRICAL                                    |
| HP            | HORSEPOWER   | UT, UGT       | UNDERGROUND TELEPHONE                                     |
| HT            | HEATER   | V             | VOLTS   |
| KAIC          | 1000 AIC   | VAC           | VOLTS A.C.  |
| KVA           | KILOVOLT-AMPERES   | W             | WIDE OR WIRE  |
| KW            | KILOWATTS  | W/W           | WIREFRAY  |
| L             | ANGLE, LENGTH  | XP            | EXPLOSION PROOF (CLASS I DIVISION I GROUP D UNLESS NOTED) |

**CONDUIT & WIRE SIZE SCHEDULE**  
(UNLESS OTHERWISE SHOWN)

CIRCUIT BREAKER TRIP	GROUND WIRE SIZE	1 OR 2 POLE		3 POLE	
		CONDUIT	WIRE	CONDUIT	WIRE
15A	1 #12	3/4"	#12	3/4"	#12
20A	1 #12	3/4"	#12	3/4"	#12
30A	1 #10	3/4"	#10	3/4"	#10
40A	1 #10	3/4"	#8	1"	#8
50A	1 #10	3/4"	#8	1"	#8
60A	1 #8	1"	#6	1"	#6
70A	1 #8	1"	#4	1-1/4"	#4
80A	1 #8	1-1/4"	#4	1-1/4"	#4
90A	1 #8	1-1/4"	#2	1-1/4"	#2
100A	1 #8	1-1/4"	#2	1-1/4"	#2

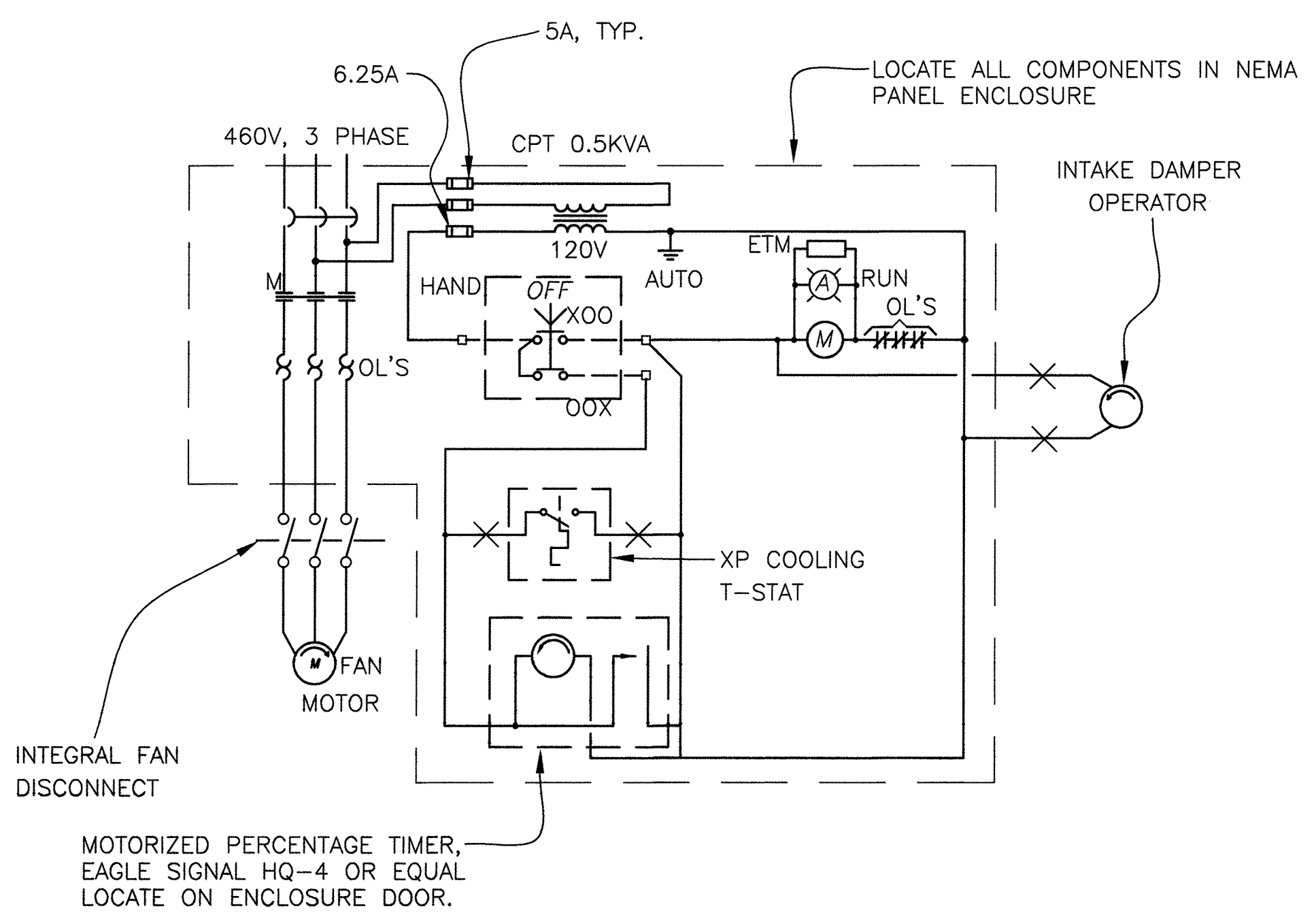


**GROUNDING ELECTRODE DETAIL**  
SCALE: NOT TO SCALE

**GENERAL ELECTRICAL CONSTRUCTION NOTES**

THE DRAWINGS INDICATE THE EXTENT AND GENERAL ARRANGEMENT OF THE ELECTRICAL SYSTEMS.

- LOCATIONS OF LINES AND EQUIPMENT SHALL BE DETERMINED FROM ACTUAL FIELD CONDITIONS. THE OUTLINES OF THE CONSTRUCTION SHOWN ON THE ELECTRICAL DRAWINGS ARE INTENDED ONLY AS A GUIDE TO INDICATE RELATIVE LOCATIONS OF THE WORK. REFER TO THE APPLICABLE DRAWINGS OF OTHER TRADES AND THE EQUIPMENT SUPPLIER'S INSTALLATION DRAWINGS FOR EXACT LOCATIONS AND ARRANGEMENTS.
- THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION AND PROPER RELATION OF HIS WORK TO THE FACILITY STRUCTURES AND TO THE WORK OF OTHER TRADES. NO ADDITIONAL COMPENSATION NOR EXTENSION OF COMPLETION TIME WILL BE GRANTED FOR EXTRA WORK CAUSED BY THE LACK OF COORDINATION.
- DUE TO DIFFERENCES IN VARIOUS MANUFACTURER'S EQUIPMENT CONNECTIONS AND MOTOR CURRENTS, THE ELECTRICAL CONTRACTOR SHALL COORDINATE HIS INSTALLATION WITH THAT EQUIPMENT ACTUALLY FURNISHED AND SHALL VERIFY THE CORRECT SIZES AND DETAILS OF INSTALLATION BEFORE ROUGHING IN.
- RECEPTACLES, SWITCHES, THERMOSTATS, AND OTHER SIMILAR ITEMS SHALL ALIGN VERTICALLY OR HORIZONTALLY WITH EACH OTHER, WITH THE STRUCTURE AND OTHER FEATURES THEREOF WHEN IT APPEARS OBVIOUS AND LOGICAL THAT THEY SHOULD. THE ELECTRICAL CONTRACTOR SHALL CONSULT WITH THE GENERAL CONSTRUCTION SUPERINTENDENT REGARDING THIS REQUIREMENT AND ALSO FOR THE LOCATION OF EQUIPMENT, DOOR SWINGS, BLOCK COURSING, ALIGNMENT OF THIS AND OTHER SIMILAR FEATURES BEFORE ROUGHING-IN FOR THESE COMPONENTS.
- ALL CONDUITS ENTERING UNDERGROUND STRUCTURES SHALL HAVE WATER-TIGHT EXPANSION WALL SEALS.
- THE CORRECT NUMBER OF WIRES MAY NOT BE INDICATED FOR ALL CIRCUITS, ONLY THOSE WHERE CLARIFICATION IS NECESSARY. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL WIRES NECESSARY FOR THE PROPER FUNCTION OF THE SYSTEM WHETHER INDICATED ON DRAWINGS OR NOT.
- ALL CONDUITS WITH WIRING ENTERING UNDERGROUND STRUCTURES WHERE WATER MIGHT ENTER THE CONDUIT AND DRAIN INTO THE STRUCTURE, SHALL BE FITTED WITH WATER-TIGHT BUSHINGS WITH SEALING COMPOUND SUCH AS OZ/GEDNEY STYLE CSB.
- ALL ABOVE GROUND RACEWAYS & RACEWAYS INSIDE STRUCTURES SHALL BE RUN EXPOSED.



**SCHEMATIC, FAN EF-1 CONTROL**  
NTS

× CONDUIT SEALING FITTING

AS BUILTS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION \_\_\_\_\_ DATE \_\_\_\_\_  
 CHIEF, DIVISION OF LAND DEVELOPMENT \_\_\_\_\_ DATE \_\_\_\_\_  
 DIRECTOR \_\_\_\_\_ DATE \_\_\_\_\_

PROFESSIONAL CERTIFICATION  
 I, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 11529 EXPIRATION DATE: JULY 9, 2013  
*New Wayne Klein* 2/7/12  
 Signature of Engineer Date

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

*Jay D. Zlab* 2/9/12  
 DIRECTOR OF PUBLIC WORKS DATE  
*Thomas E. Suttler* 2/9/12  
 CHIEF, BUREAU OF ENGINEERING DATE  
*Shirley A. Zlab* 2/9/12  
 CHIEF, BUREAU OF UTILITIES DATE  
*Ch. O. ...* 2/9/12  
 CHIEF, UTILITY DESIGN DIVISION DATE

**Dewberry**  
 Dewberry & Davis LLC  
 3120 LORD BALTIMORE DRIVE  
 SUITE 211  
 BALTIMORE, MD 21244-2882  
 410.265.9500  
 FAX: 410.265.8875



DES:	DB			
DRN:	ST			
CHK:	DB			
DATE:	2/7/12			
BY:	NO.			
		REVISIONS		
			DATE	

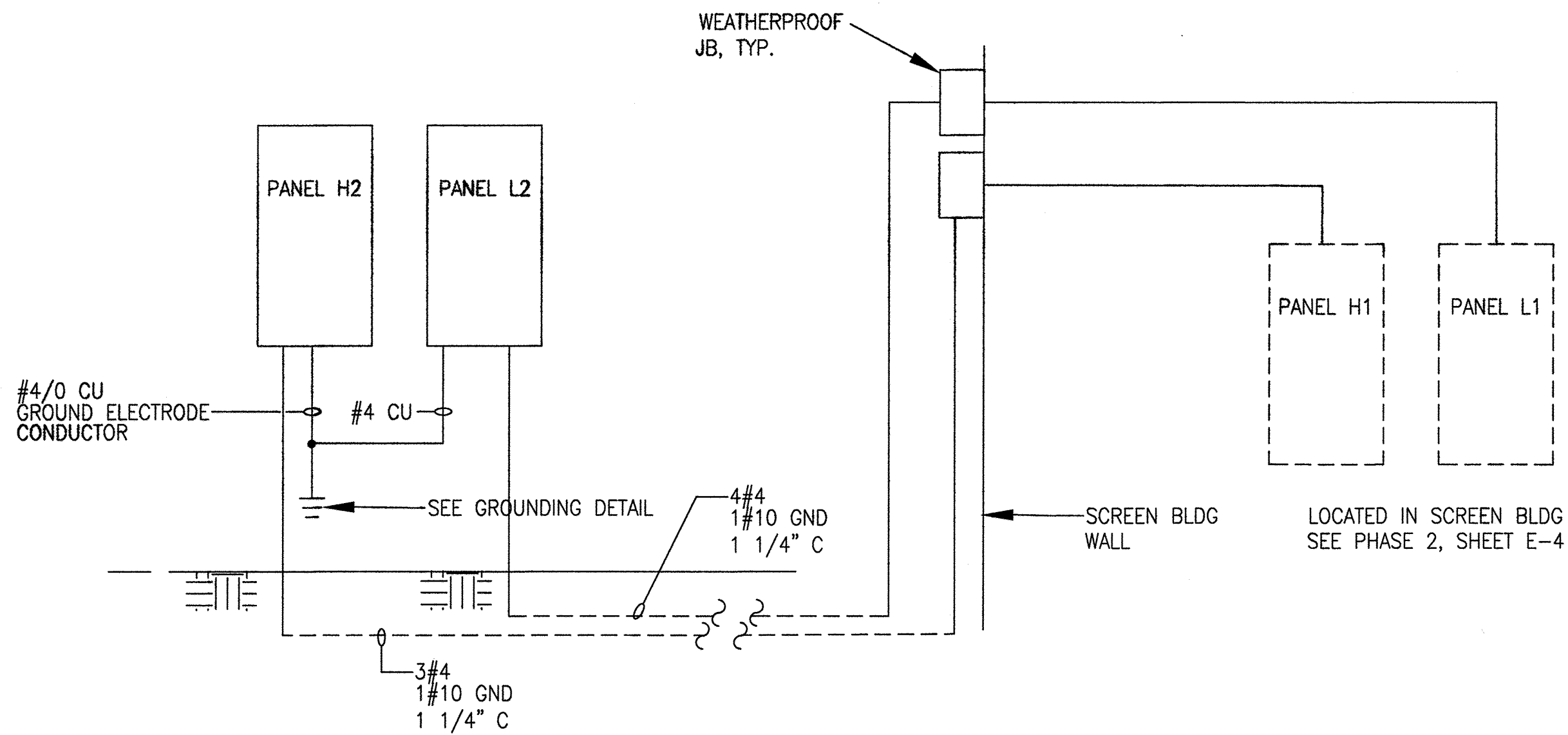
E1 ELECTRICAL SYMBOLS AND NOTES

LPWRP SCUM AND SEPTAGE FACILITY (PHASE IB)

CAPITAL PROJECT S-6245  
 CONTRACT 20-4700  
 ELECTION DISTRICT NO. 6  
 HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN  
 SHEET 8 OF 11





**1 ELECTRIC POWER RISER DIAGRAM**  
SCALE: NOT TO SCALE

NOTE: SEE SHT. E-4 FOR LOCATION OF PANELS.

PANEL SCHEDULE												
PANEL: L2		60 AMPS, MAIN CIRCUIT BREAKER						PHASE: 3				
POLE SPACES: 18		MOUNTING: SURFACE						WIRE: 4				
LOCATION: SAP		120/208 VOLTS						NEMA 3R ENCLOSURE				
LOAD	KW/PHASE			CIR/BKR			WIRE			LOAD		
	A	B	C	NO.	TRIP	NO.	NO.	NO.	A	B	C	
LIGHTS	0.42			1	20	12	1	A	2			SPARE
LIGHTS		1.1		1	20	12	3	B	4			SPARE
AIR COMP.			0.9	2	20	12	5	C	6			SPARE
GAS DETECTOR		0.9		7	A	8	12	2	15	1		UH-3
WATER HEATER		0.4		1	15	12	9	B	10			RECEPTACLES
ACCESS CTR	0.8		0.67	1	20	12	11	C	12	12	1	20
SPACE				13	A	14						SPACE
SPACE				15	B	16						SPACE
SPACE				17	C	18						SPACE

SUITABLE FOR SERVICE ENTRANCE EQUIPMENT

PANEL SCHEDULE													
PANEL: H2		60 AMPS, MAIN CIRCUIT BREAKER						PHASE: 3					
POLE SPACES: 30		MOUNTING: SURFACE						WIRE: 3					
LOCATION: SAP		480 VOLTS						NEMA 3R ENCLOSURE					
LOAD	KW/PHASE			CIR/BKR			WIRE			LOAD			
	A	B	C	NO.	TRIP	NO.	NO.	NO.	A	B	C		
UH-1	3.3			3	20	12	1	A	2			UH-2	
		3.3		3	B	4				3.3			
			3.3				5	C	6				
EF-1	0.3			3	15	12	7	A	8	12	3	20	1
		0.3					9	B	10				2
			0.3				11	C	12				2
SLUICE GATES	0.5			3	15	12	13	A	14				SPARE
		0.5					15	B	16				
			0.5				17	C	18				
PLUG VALVE	0.3			3	15	12	19	A	20				SPARE
		0.3					21	B	22				
			0.3				23	C	24				
SPACE				25	A	26							SPACE
				27	B	28							SPACE
				29	C	30							SPACE

SUITABLE FOR SERVICE ENTRANCE EQUIPMENT

FAN SCHEDULE										
EQUIP. NO.	TYPE	AIR FLOW (CFM)	EXTERNAL STATIC WG	RPM	HP	VOLTAGE PHASE	MOTOR TYPE	CONTROL TYPE	FEATURES	MODEL
EF-1	BELT DRIVE SIDE WALL CENTRIFUGAL - ALUMINUM CONSTRUCTION, STAINLESS STEEL SHAFT AND FASTENERS, MOUNT AT EAVE HEIGHT	950	0.2	947	1/4	460/3	EXP	TSTAT AND TIMER AS DETAILED	AUTO BELT TENSIONERS	GREENHECK CWB-121-4

LIGHT FIXTURE SCHEDULE					
MARK	SYMBOL	DESCRIPTION	LAMP	MANUFACTURER TYPE	REMARKS
A	□	2 LAMP 4' FLUORESCENT WHITE ENAMEL OPEN REFLECTOR. 8% UPLIGHT. 120 VOLT	2-32W T8	LITHONIA LA MULTI-TAP BALLAST	PENDANT MOUNT UP 10'
B	○	METAL HALIDE CLASS I, DIVISION 1. EPOXY COATED ALUMINUM BODY, GLASS GLOBE, POLYESTER DOME HOOD. 120 VOLT	175 W. PULSE START MH	APPLETON CODE MASTER JR W/ PULSE START MULTI-TAP BALLAST	PENDANT MOUNT UP 13'
C	□	WALL MOUNT COMPACT FLUORESCENT OUTDOOR WALL MOUNT. CAST ALUMINUM BODY, GLASS LENS, NATURAL ALUMINUM FINISH	2-42 W TRT	LITHONIA TWF W/ MULTI-TAP BALLAST	WALL MOUNT ON BUILDING. HEIGHT AS DIRECTED BY THE ENGINEER. PROVIDE PHOTO CONTROL.
D	□	WALL MOUNT COMBINATION EM/EXIT WALL MOUNT FIXTURE. WITH REMOTE HEAD CLASS 1, DIV. 1	3-14W TUNGSTEN HALOGEN	CROUSE HINDS ELPS502 EXD GB AND EVLA12	WALL MOUNT ABOVE DOOR

HVAC LOUVER SCHEDULE							TYPE:	REMARKS
MARK NO.	TYPE	USE	HxW (IN)	FREE AREA	CONSTRUCTION			
L-1	STATIONART EXTRUDED ALUMINUM, DRAINABLE BLADE	INTAKE	18"x54"	2.26	EXTRUDED ALUMINUM	RUSKIN GFL800D DRAINABLE BLADE	SEE NOTES-1, 2, 3.	
L-2	MOTORIZED ADJUSTABLE DRAINABLE BLADE LOUVER. MOTOR OPEN, SPRING CLOSED	INTAKE	36"x36"	2.45	EXTRUDED ALUMINUM	RUSKIN ELM811D 120 VAC ACTUATOR IN CLASS 1, DIV 1 HOUSING	SEE NOTES-1, 2, 4.	

**NOTES:**

- COLOR TO MATCH BUILDING COLOR.
- PROVIDE REMOVABLE INTERIOR ALUMINUM BIRD SCREEN
- MOUNT ABOVE DOOR
- MOUNT TOP AT BUILDING EAVE HEIGHT

ELECTRIC HEATER SCHEDULE					TYPE:
MARK NO.	TYPE	CAPACITY	VOLTS/PHASE	DESCRIPTION	
WH-1	INSTITUTIONAL SLOPE TOP ELECTRIC WALL CONVECTOR	1500 W	480/1	4' LENGTH X 5" DEPTH STEEL CONSTRUCTION, STAINLESS STEEL ELEMENT, INTEGRAL THERMOSTAT AND THERMAL OVERLOAD	TPI 8800 SERIES MOUNT BOTTOM UP 5"
UH-1/UH-2	HAZARDOUS LOCATION HORIZONTAL SUSPENSION ELECTRIC UNIT HEATER	10 KW	480/3	STEEL AND STAINLESS STEEL CONSTRUCTION, THERMAL CUTOUT, INTEGRAL DISCONNECT, CONTACTOR, AND TRANSFORMER, WALL MOUNTED THERMOSTAT, WALL MOUNTING BRACKET	TPI HLA SERIES WITH HLT THERMOSTAT MOUNT BOTTOM UP 8'
UH-3	COMPACT HORIZONTAL SUSPENSION ELECTRIC UNIT HEATER	1.9 KW	208/1	INTEGRAL THERMOSTAT W/POSITIVE OFF MOUNTING BRACKET	BERKO PHFP25 MOUNT BOTTOM UP 7'6"

REFER TO EXHIBIT E FOR THE AS CONSTRUCTED PANEL SCHEDULES

AS BUILT

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

\_\_\_\_\_  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE \_\_\_\_\_

\_\_\_\_\_  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE \_\_\_\_\_

\_\_\_\_\_  
DIRECTOR DATE \_\_\_\_\_

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*Darin Wayne Klein* 2/7/12  
Signature of Engineer Date

**DEPARTMENT OF PUBLIC WORKS**  
HOWARD COUNTY, MARYLAND

*Ray K. Zlatn* 2/9/12  
DIRECTOR OF PUBLIC WORKS DATE

*Thomas E. Butler* 2/9/12  
CHIEF, BUREAU OF ENGINEERING DATE

*Steve Chan* 2/9/12  
CHIEF, BUREAU OF UTILITIES DATE

*Debra L. ...* 2/9/12  
CHIEF, UTILITY DESIGN DIVISION DATE

**Dewberry**  
Dewberry & Davis LLC  
3120 LORD BALTIMORE DRIVE SUITE 211 BALTIMORE, MD 21244-2882 410.285.9200 FAX: 410.285.8875

*[Professional Seal]*

DES: DB  
DRN: ST  
CHK: DB  
DATE: 2/7/12

BY NO. REVISIONS DATE

**E-2 ELECTRICAL SCHEDULES & DETAILS**

600' SCALE MAP NO. 47 BLOCK NO. 24

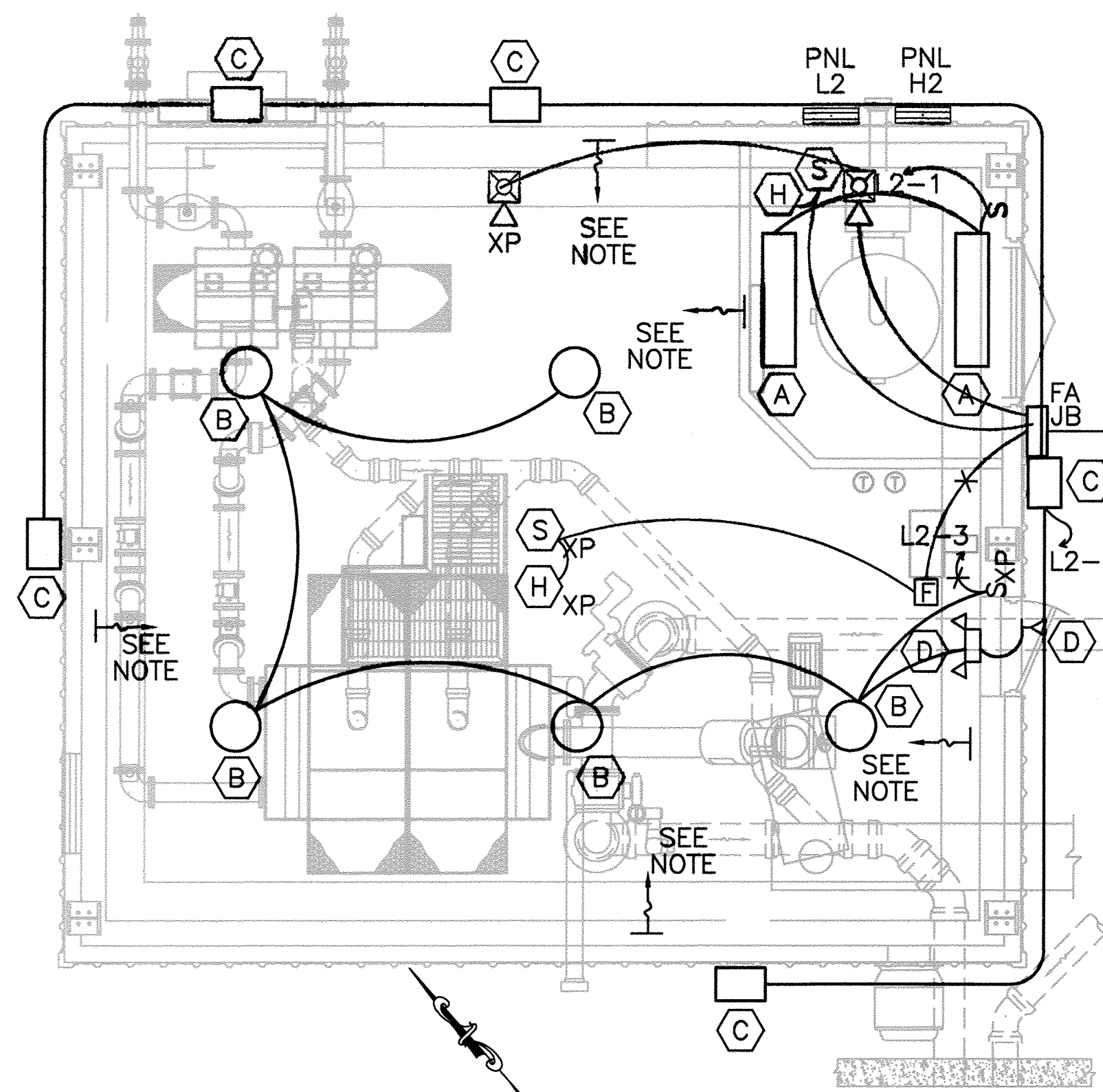
**LPWRP SCUM AND SEPTAGE FACILITY (PHASE IB)**

CAPITAL PROJECT S-6245  
CONTRACT 20-4700

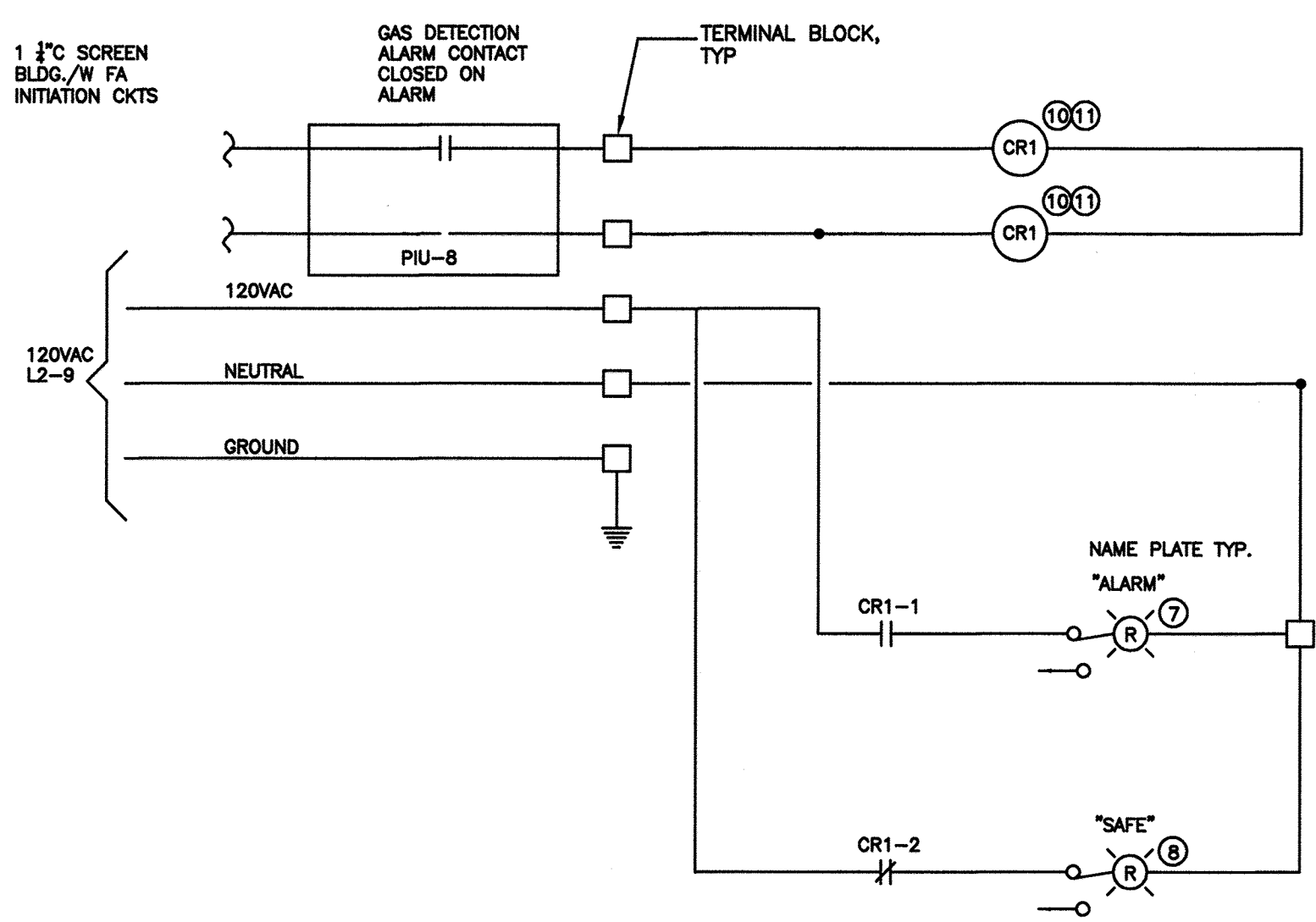
ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN  
SHEET 9 OF 11

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Last Saved: Fri, 08 Feb 2012 4:36pm  
User: dbr...



ITEM	DESCRIPTION
1	ENCLOSURE, NEMA 4X, 316SS
2	BACK PANEL
3	DIN RAIL
4	END ANCHOR
5	TERMINAL BLOCKS
6	END BARRIER
7	PILOT LIGHT, PUSH-TO-TEST - RED
8	PILOT LIGHT, PUSH-TO-TEST - GREEN
9	TERMINAL BLOCK, GROUND, YEL/GRN
10	RELAY CONTROL
11	RELAY, SOCKET, PIN TYPE



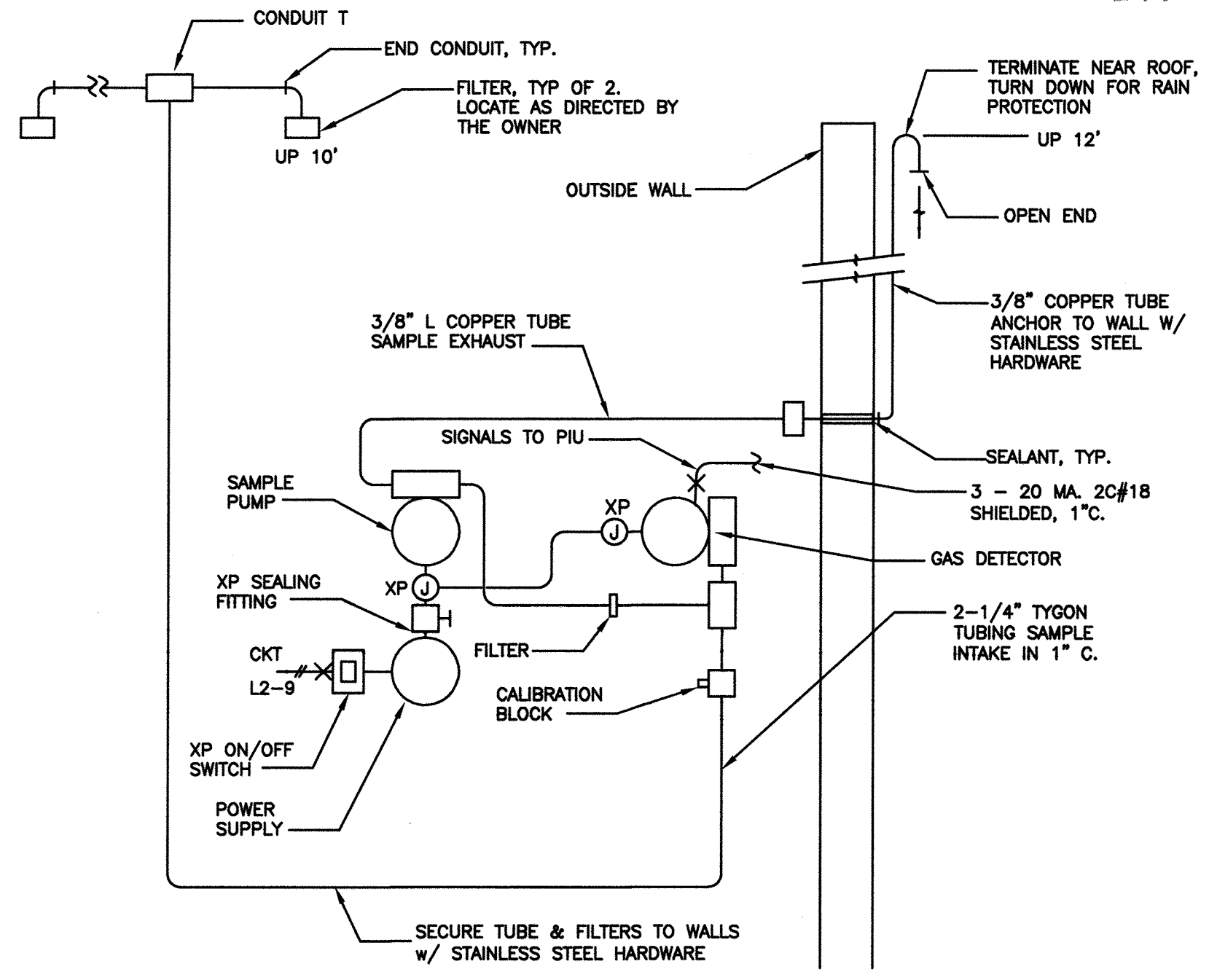
**LIGHTING AND FIRE ALARM PLAN**

SCALE: 1/4" = 1'-0"  
NOTE: LIMITS OF CLASSIFIED AREA

REFER TO EXHIBITS A,B, & E FOR THE AS CONSTRUCTED INFORMATION

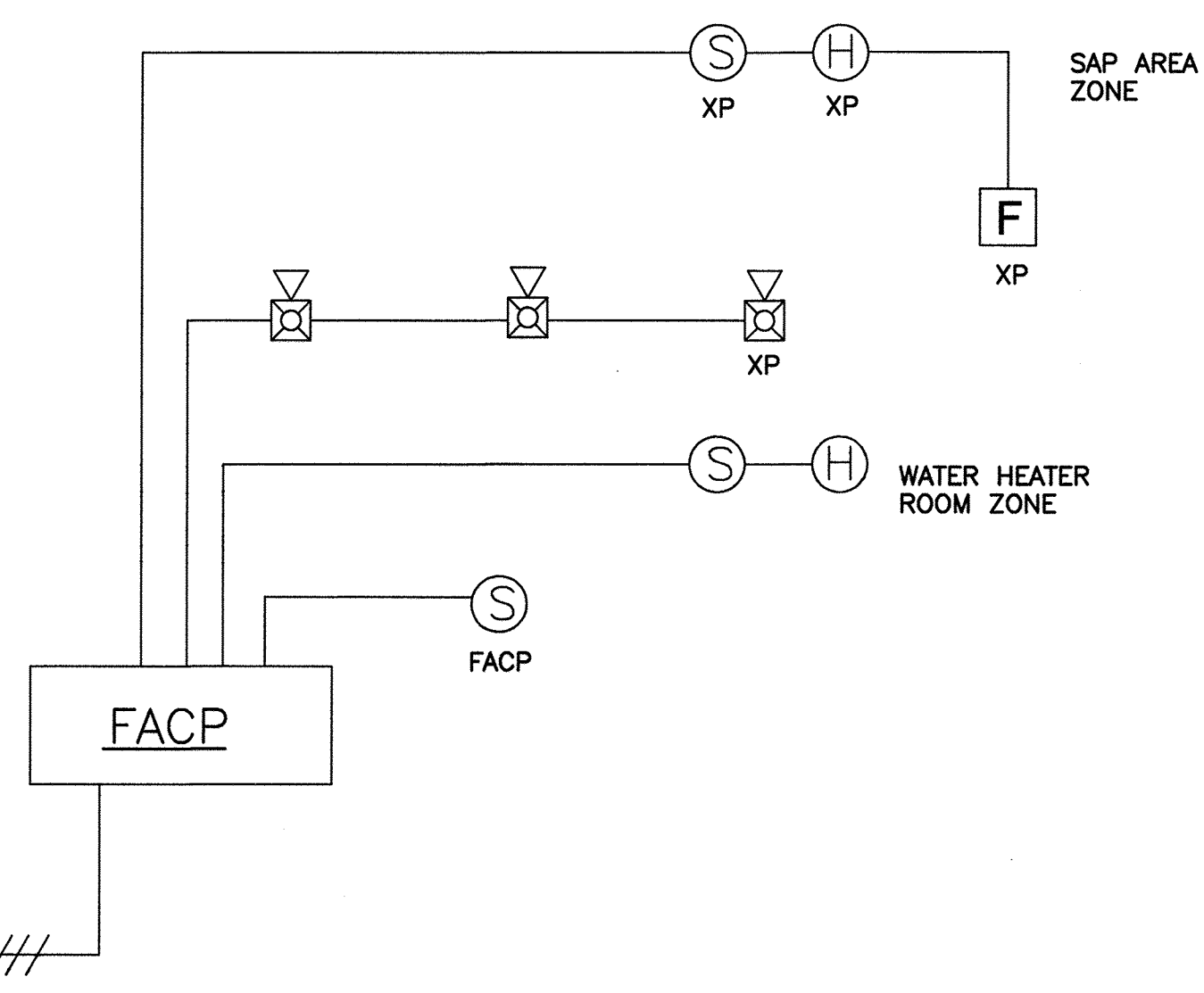
**SCHEMATIC, GAS DETECTION ALARM**

N.T.S.



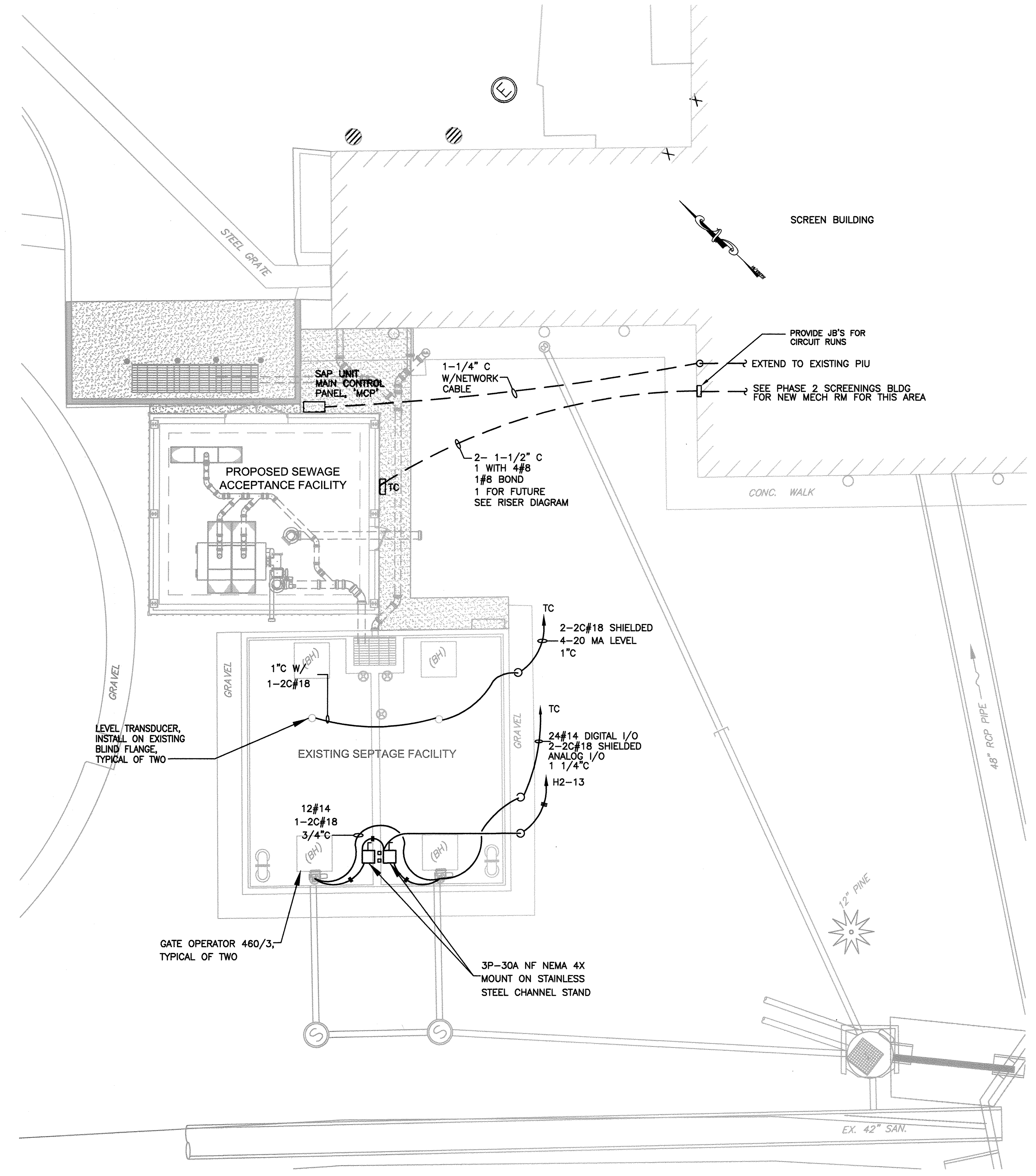
**DETAIL, COMBUSTIBLE GAS SENSOR INSTALLATION**

N.T.S.



**FIRE ALARM RISER DIAGRAM**

N.T.S.



**SEPTAGE HOLDING ELECTRICAL SITE PLAN**

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

REFER TO EXHIBITS A,C, AND EXHIBIT E FOR THE AS CONSTRUCTED CONDITIONS

AS BUILT

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION \_\_\_\_\_ DATE \_\_\_\_\_

CHIEF, DIVISION OF LAND DEVELOPMENT \_\_\_\_\_ DATE \_\_\_\_\_

DIRECTOR \_\_\_\_\_ DATE \_\_\_\_\_

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*Samuel Klein* 2/7/12  
Signature of Engineer Date

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

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*Thomas S. Suttler* 2/9/12  
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3120 LORD BALTIMORE DRIVE  
SUITE 211  
BALTIMORE, MD 21244-2882  
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**E-3 ELECTRICAL PLANS & DETAILS**

600' SCALE MAP NO. 47  
BLOCK NO. 24

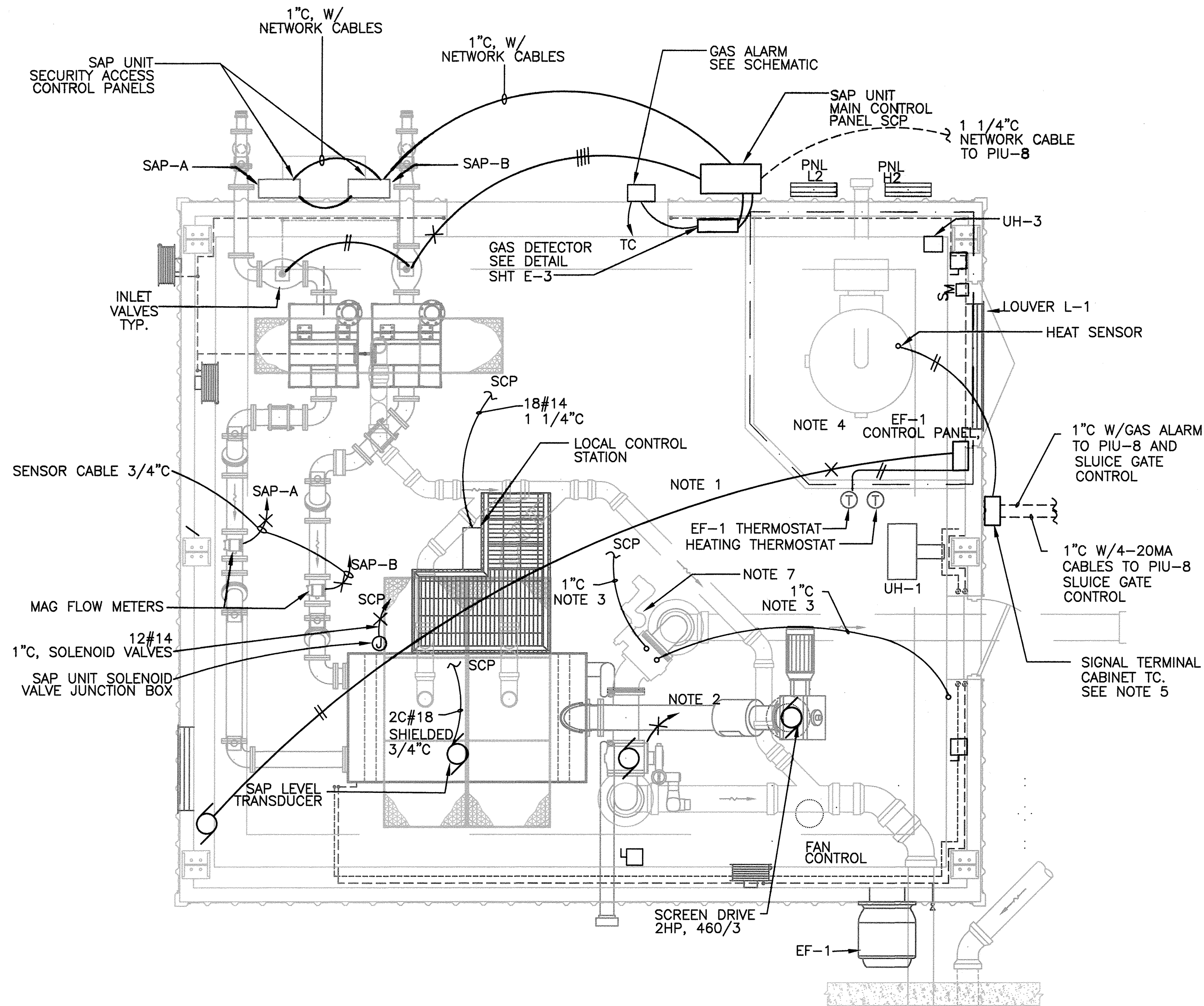
**LPWRP SCUM AND SEPTAGE FACILITY (PHASE IB)**

CAPITAL PROJECT S-6245  
CONTRACT 20-4700

ELECTION DISTRICT NO. 6  
HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN  
SHEET 10 OF 11

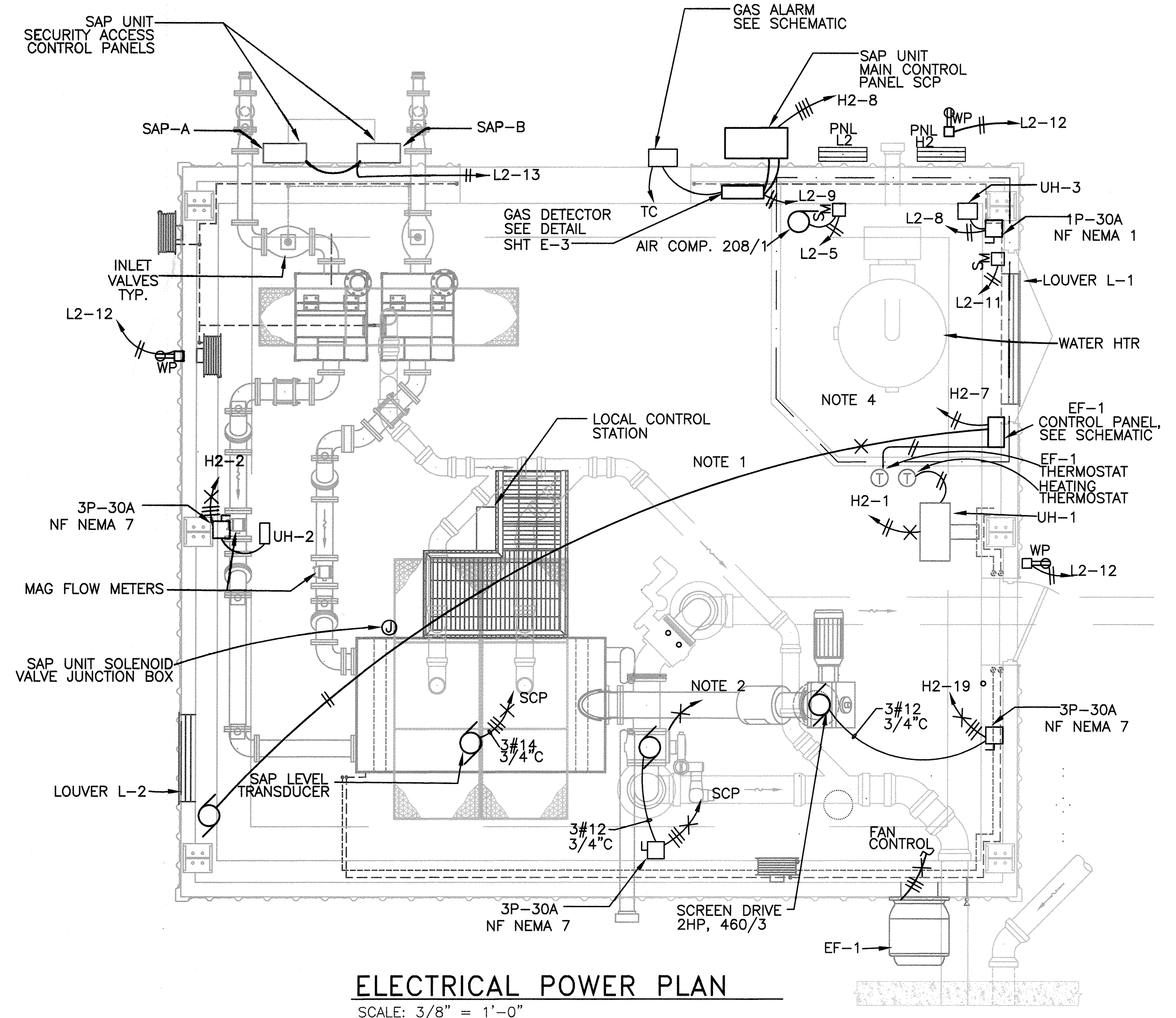
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 Plot Location: [Name], [Address], [City], [State], [Zip]  
 File Name: [Name].dwg, [Date], [Time]  
 Plot Scale: [Scale], [Units]  
 Plot Orientation: [Orientation]  
 Plot Color: [Color]  
 Plot Lineweight: [Lineweight]  
 Plot Linetype: [Linetype]  
 Plot LinetypeScale: [LinetypeScale]  
 Plot PlotStyle: [PlotStyle]  
 Plot Sheet: [Sheet]  
 Plot Title: [Title]



**ELECTRICAL SIGNAL PLAN**

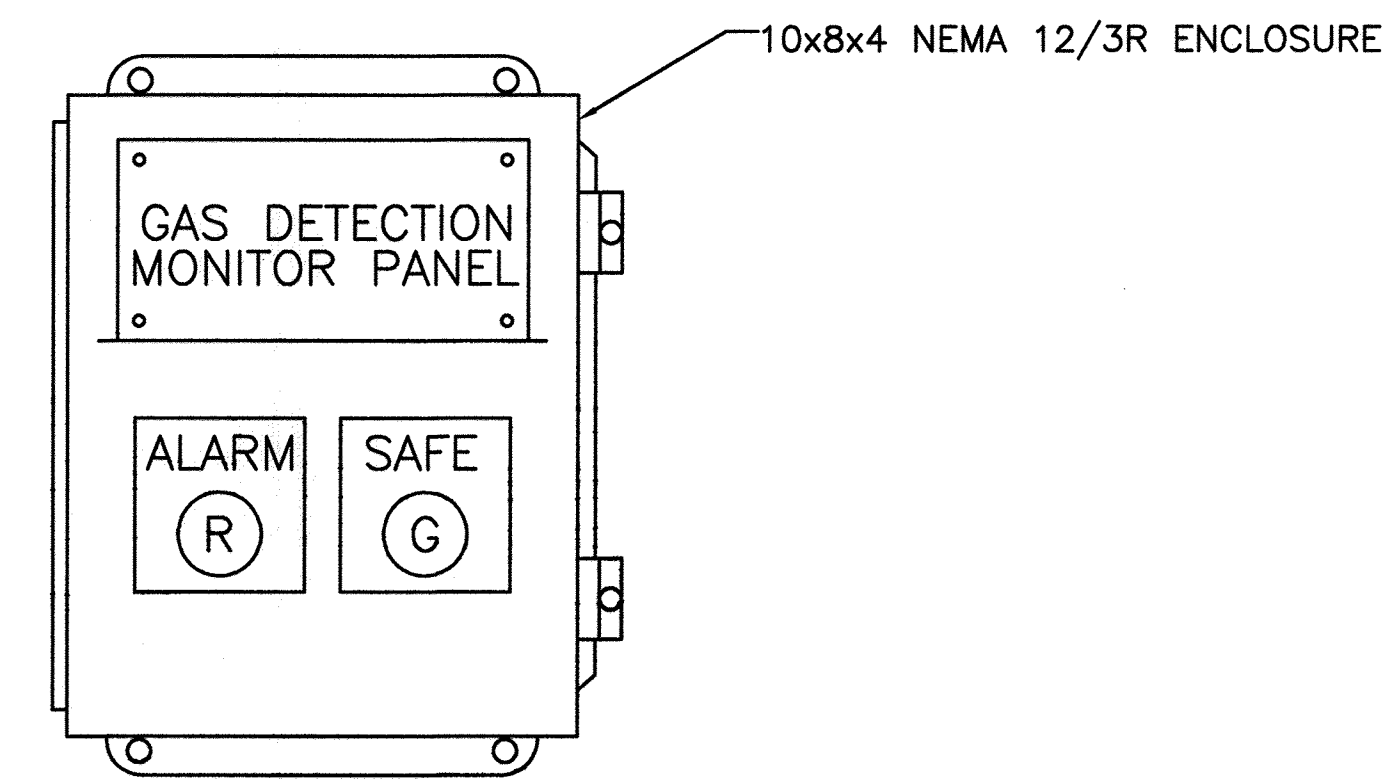
SCALE: 3/8" = 1'-0"  
SEE NOTE 6

FOR THE RECORD CONSTRUCTED ELECTRICAL WORK IN THIS AREA SEE EXHIBITS A, B, E AND EXHIBIT F



**ELECTRICAL POWER PLAN**

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



**ELEVATION BUILDING GAS DETECTION ALARM PANEL**

SCALE: NOT TO SCALE

**NOTES:**

- ALL ELECTRICAL WORK INSIDE SAP AREA OF BUILDING SHALL BE CLASS 1, DIVISION 1.
- VALVE CONTROL TO SCP. 12#14, 2C#18 SHIELDED, 1" C.
- EMPTY CONDUIT FOR PLUG VALVE INSTALLED UNDER PHASE 2 WORK.
- NON CLASSIFIED AREA.
- 16"x24" NEMA 4 PANEL ENCLOSURE WITH TERMINALS. PROVIDE CONDUCTIVE BARRIER BETWEEN ANALOG AND DIGITAL SIGNAL TERMINALS.
- REFER TO THE COMBINED P & ID IN THE PHASE 2 WORK FOR ADDITIONAL ELECTRICAL AND PROCESS CONTROL REQUIREMENTS.
- THE GREASE PLUG VALVE WILL BE INSTALLED UNDER THE PHASE 2 WORK. PROVIDE EMPTY CONDUITS AS NOTED FOR THIS VALVE. VALVE WILL BE CONNECTED TO SAME CIRCUIT AS SHOWN.

AS BUILTS

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

\_\_\_\_\_  
CHIEF, DEVELOPMENT ENGINEERING DIVISION      DATE

\_\_\_\_\_  
CHIEF, DIVISION OF LAND DEVELOPMENT      DATE

\_\_\_\_\_  
DIRECTOR      DATE

**PROFESSIONAL CERTIFICATION**  
I, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 11529 EXPIRATION DATE: JULY 9, 2013

*David Wayne Klein*      2/7/12  
Signature of Engineer      Date

**DEPARTMENT OF PUBLIC WORKS**  
HOWARD COUNTY, MARYLAND

*Langh*      2/6/12      DATE  
DIRECTOR OF PUBLIC WORKS

*Primmer & Butler*      2/8/12      DATE  
CHIEF, BUREAU OF ENGINEERING

*Chen*      2/6/12      DATE  
CHIEF, BUREAU OF UTILITIES

*DePaola*      2/9/12      DATE  
CHIEF, UTILITY DESIGN DIVISION

**Dewberry**  
Dewberry & Davis LLC  
3120 LORD BALTIMORE DRIVE  
SUITE 211  
BALTIMORE, MD 21244-2882  
410.265.8500  
FAX: 410.265.8575



DES:	DB			
DRN:	ST			
CHK:	DB			
DATE:	2/7/12			
BY	NO.	REVISIONS	DATE	

**E-4 ELECTRICAL POWER PLAN & DETAILS**

600' SCALE MAP NO. 47      BLOCK NO. 24

**LPWRP SCUM AND SEPTAGE FACILITY (PHASE IB)**

CAPITAL PROJECT S-6245  
CONTRACT 20-4700

ELECTION DISTRICT NO. 6      HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN

SHEET 11 OF 11

Printed by: (David Klein) on: Wed, 02/07/2012 - 15:01:00  
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