GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O. BOX 2977 HAGÅTÑA, GUAM U.S.A. 96932-2977

August 15, 2018

AMENDMENT NO.: III

TO

INVITATION FOR BID NO.: GPA-092-18

FOR

TENJO VISTA FIRE ALARM/SUPPRESSION REPAIR & CERTIFY CONTRACT

Prospective Bidders are hereby notified of the following changes and responses to inquiries received from G4S Security Systems (Guam) Inc. dated August 07, 2018:

INCLUSIONS:

1. **2nd Non-Mandatory Site Visit** scheduled for 9:30 A.M., Friday, August 17, 2018. The meeting place shall be held at our GPA/GWA Procurement Office, Room 101, 1st. Floor, Gloria B. Nelson Public Service Building, 688 Route 15, Fadian Mangilao.

CHANGES:

1. Bid Opening Date is changed ***FROM*** 2:30 P.M., Thursday, August 16, 2018 ***TO NOW READ*** 10:00 A.M., Thursday, August 30, 2018.

2. Kindly ***REMOVE*** page 3a of 20 and ***REPLACE*** with page 3b of 20 (see attached). Changes are necessary to reflect updated specification requirements.

G4S Security Systems (Guam) Inc. dated 08/07/2018:

QUESTION:

1. The description of work indicates: Service, repair and/or replace ALL devices associated with the fire alarm, Sprinkler, Suppression and Foam Systems, can this scope of work be replaced with an assessment/testing of devices to determine condition of existing devices? And since there is no record that shows this has been completed at this location, this will be helpful with the prospective bidder(s) in obtaining information on the condition of the systems.

ANSWER:

Kindly refer to No.: 2 of ***CHANGES*** above.

QUESTION:

2. Can GPA provide fire alarm plans, as-built, print out of what devices are connected to the fire alarm systems, Operating Manuals (the EST Fire Alarm Systems in particular)?

ANSWER:

Kindly see attached as-built drawings.

QUESTION:

3. G4S would like to conduct further assessment of the fire alarm, sprinkler, suppression, and foam systems at this location. Who can we coordinate this?

ANSWER:

Kindly refer to No. 1 of ***INCLUSIONS*** above.

QUESTION:

4. G4S Security Systems (Guam), Inc. would like to request an extension on the bid due date from 2:30 P.M. on Thursday, August 16, 2018 to 2:30 P.M. on Thursday, August 30, 2018. This will allow us to conduct detail assessments of the existing systems.

ANSWER:

Kindly refer to No. 1 of ***CHANGES*** above.

All other Terms and Conditions in the bid package shall remain unchanged and in full force.

for JOHN M. BENAVENTE, P.E.
General Manager

NO.	DESCRIPTION	QTY.	U/I	U/P:	T/P:
1.0	To provide the Guam Power Authority, Facilities Division with Replacement, Repair, Inspection, and Certification of the Fire Alarm System to include Water Suppression, Gas Suppression, and Foam located at the Tenjo Vista Diesel Plant, Santa Rita, Guam.	Lot		$_____	$_____

COMPLY / NON-COMPLIANT:

SCOPE OF WORK:

A. Fire Alarm System:

A.1 Inspect Fire Alarm System. _____

* **A.2** Omitted. _____

* **A.3** Assess System, service, repair and/or replace ALL devices associated with fire alarm system: detectors, pull stations, batteries, annunciators, horns, strobes and other components found to be defective. _____

A.4 Test and certify system. Final inspection to be performed by the Guam Fire Department to comply with all fire codes of the National Fire Protection Association (NFPA). _____

A.5 To provide GPA with all documents signifying compliance of all inspections and certifications. _____

B. Fire Sprinkler System:

* **B.1** Assess System, service, repair and/or replace ALL components associated with the fire sprinkler system: piping, fittings, sprinkler heads and supports. _____

B.2 Inspect system supply risers and components, replace as needed. _____

B.3 Perform leak and flow tests. _____

B.4 Test and certify system. Final inspection to be performed by the Guam Fire Department to comply with all fire codes of the National Fire Protection Association (NFPA). _____

B.5 To provide GPA with all documents signifying compliance of all inspections and certifications. _____

B.6 Inspect Fire Sprinkler System.

C. FM-200 System:

C.1 Inspect FM-200 System. _____

* **C.2** Assess System, service, repair and/or replace ALL devices: nozzles, detectors, alarms, strobes, fittings, horns, and supports. _____

C.3 Verify system pressure, weight and tag of all FM-200. To ensure normal function, refill and replace components and agent as needed. _____

C.4 Test and certify system. Final inspection to be performed by the Guam Fire Department to comply with all fire codes of the National Fire Protection Association (NFPA). _____

C.5 To provide GPA with all documents signifying compliance of all inspections and certifications. _____

D. Fire Foam System:

D.1 Inspect Fire Foam System. _____

* **D.2** Assess System, service, repair and/or replace ALL devices: piping, fittings, hoses, nozzles, and supports. Replace all defective components as needed. _____

D.3 Check foam pump controller for proper operation, replace components as needed. _____

D.4 Remove, discard all old foam agents. Flush out system, all lines. _____

D.5 Refill foam agent. _____

* Changes to bid specifications.

SPECIFICATIONS REVIEWED/CONCURRED BY:

8/13/18

Jerald Guzman — Date

Facilities Manager

SPECIFICATIONS APPROVED BY:

8/15/18

Melinda C. Mafnas, P.E. — Date

Assistant General Manager of Operations

REVISIONS				
SYMBOL	DESCRIPTION	INT.	DATE	APP'D.

GENERAL CONSTRUCTION NOTES:

1. OBSERVE & COMPLY WITH ALL FEDERAL AND LOCAL LAWS REQUIRED FOR THE PROTECTION OF PUBLIC HEALTH, SAFETY & ENVIRONMENTAL QUALITY.
2. ALL DEBRIS AND TRASH FROM CONSTRUCTION SHALL BE DISPOSED OF TO THE APPROVED LANDFILL SITE AND THE CONTRACTOR SHALL COMPLY WITH ALL THE REQUIREMENTS PERTAINING TO THE USE OF DISPOSAL AREA.
3. THE EXISTENCE AND LOCATION OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES SHOWN IN THE PLANS ARE BASED ON THE LATEST AVAILABLE DATA AND INFORMATION PROVIDED BY GPA AND GWA BUT NO GUARANTY AS TO THEIR ACCURACY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF EXISTING UTILITIES AND EXERCISE CAUTION WHEN EXCAVATING IN THE AREA. ANY DAMAGES TO EXISTING UTILITIES AND STRUCTURES RESULTING FROM CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.
4. WHEREVER CONNECTIONS OF NEW UTILITIES TO EXISTING UTILITIES ARE SHOWN TO BE DONE, THE CONTRACTOR SHALL EXPOSE THE EXISTING UTILITIES AT THE PROPOSED CONNECTION TO VERIFY DEPTH AND ACTUAL LOCATION PRIOR TO EXCAVATING FOR THE NEW UTILITY LINES. IF UTILITIES NOT SHOWN IN THE PLANS ARE ENCOUNTERED OR POTENTIAL UTILITY CONFLICTS ARISES, THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER IMMEDIATELY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING EXISTING UTILITY LINE UNCOVERED IN THE EXCAVATIONS.
5. PRIOR TO COMMENCING EXCAVATION, THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER. THE CONTRACTOR SHALL COORDINATE, BE RESPONSIBLE AND PAY FOR ALL DAMAGES TO EXISTING UTILITIES AND STRUCTURES. PERSONAL INJURY RESULTING FROM CONTACT WITH EXISTING UTILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
6. EXISTING UTILITIES SHALL REMAIN IN SERVICE AND IN PLACE, UNLESS NOTED OTHERWISE. INTERRUPTION OF SERVICE SHALL BE KEPT TO A MINIMUM AND SHALL BE DONE AT THE CONTRACTOR'S EXPENSE AND ONLY WITH THE APPROVAL OF THE CONTRACTING OFFICER.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY SHEETING AND BRACING THE EXCAVATION AND STABILIZING THE EXISTING GROUND TO PROVIDE SAFE AND SECURE FROM POTENTIAL SLIDING, CAVE-INS, SETTLEMENT, AND TO SUPPORT EXISTING STRUCTURES, POWER/TELEPHONE POLES, AND OTHER FACILITIES.
8. FINISHED GRADES INDICATED ARE INCLUSIVE OF TOP SOIL (IF ANY).
9. VERIFY & CHECK ALL DIMENSIONS & DETAILS SHOWN ON THE DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCY SHALL BE IMMEDIATELY REPORTED TO THE CONTRACTING OFFICER FOR CLARIFICATIONS AND RESOLUTIONS.
10. THE CONTRACTOR SHALL PROVIDE SAFE ACCESS TO AND FROM ALL DRIVEWAYS AND STREETS NEAR THE PROJECT SITE.
11. RESTORE TO THEIR ORIGINAL CONDITION EQUAL OR BETTER, ALL EXISTING IMPROVEMENTS DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES, INCLUDING PAVEMENTS, EMBANKMENTS, DRIVEWAYS, CURBS, SIGNS, LANDSCAPING, STRUCTURES, UTILITIES, FENCES, ETC..
12. WHEN EXCAVATING NEAR EXISTING UTILITY POLES OR STRUCTURES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING SUCH POLES OR STRUCTURES DURING CONSTRUCTION AND MAKE REPAIRS TO ANY DAMAGES RESULTING FROM CONTRACTOR'S OPERATION.
13. PROPERTY CORNERS AND ROAD MONUMENTS SHOWN ON THE PLANS OR DISCOVERED DURING CONSTRUCTION SHALL BE PRESERVED AND NOT TO BE DISTURBED. IN ANY CASE, IF THE CONTRACTOR DISTURBED ANY OF THESE MARKERS OR MONUMENTS, THEY SHALL BE REPAIRED AND RESTORED TO THEIR ORIGINAL AND BETTER CONDITION AT NO ADDITIONAL COST TO THE GPA.
14. THE CONTRACTOR MUST SECURE UNDERGROUND TELEPHONE CABLE CLEARANCE PRIOR TO ANY EXCAVATION. ANY REPAIRS TO DAMAGED TELEPHONE CABLE FACILITIES OR RELOCATION OF THE SAME, SHALL BE BORNE BY THE CONTRACTOR AT NO COST TO GTA.
15. EXCAVATIONS DEEPER THAN 3 FEET AND 5 TO 10 FEET FROM EXISTING POWER POLES SHALL HAVE TRENCH SHORING. THE CONTRACTOR SHALL PROTECT AGAINST SOIL WASHOUT. IF EXCAVATION IS DEEPER THAN 3 FEET AND WITHIN 5 FEET FROM AN EXISTING POLE, THE POLE SHALL BE RELOCATED. IN ANY CASE, THE CONTRACTOR SHALL PROTECT THE INTEGRITY OF THE POLE FOUNDATION. ALL RELOCATION COSTS INCLUDING LABOR AND MATERIALS SHALL BE BURDENED BY THE CONTRACTOR. THE CONTRACTOR SHALL SUBMIT/MAKE APPLICATION WITH GPA AND SUBMIT GPA APPROVED RELOCATION PLANS PRIOR TO ANY MATERIALS ISSUED OR INSPECTIONS PERFORMED BY GPA. PROVIDE 12 INCHES MINIMUM CLEARANCE BETWEEN GPA POWER CONDUITS AND ALL NEW INSTALLATIONS. THE CONTRACTOR SHALL SECURE WORK CLEARANCE WITH GPA PRIOR TO EXCAVATION.
16. NEWLY GRADED AREAS AND AREAS DISTURBED DURING CONSTRUCTION SHALL BE PROVIDED WITH 4" THICK TOP SOIL AND PLANTED WITH SEEDS OR TURF APPROPRIATE FOR THE TYPE OF SOILS AT THE SITE. COORDINATE WITH THE CONTRACTING OFFICER FOR TYPE OF SEEDS OR PLANTINGS TO BE USED. THE CONTRACTOR SHALL MAKE USE OF EXISTING TOP SOILS AT THE SITE, AS MUCH AS POSSIBLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF SEEDS OR PLANTINGS UNTIL A 95% GROUND COVER IS ATTAINED.

LEGEND, SYMBOLS, AND ABBREVIATIONS

ABBREVIATION/ SYMBOLS	DESCRIPTION	ABBREVIATION/ SYMBOLS	DESCRIPTION
A.C.	ASPHALTIC CONCRETE	⊙	GATE POST (GP)
BC	BEGIN CURVE	GGN	GUAM GEODETIC NETWORK
BSW	BOTTOM OF SIDEWALK	GWA	GUAM WATERWORKS AUTHORITY
℄	CENTERLINE	✡	GGN STATION
CHB	CHORD BEARING	⟵	GUY WIRE (GW)
CHD	CHORD DISTANCE	INT.	INTERSECTION
CONC.	CONCRETE	INV.	INVERT
✱	COCONUT / PALM TREE	HORIZ.	HORIZONTAL
☐	CONCRETE PAD	☐	MAN HOLE (MH)
⌐○¬	CONCRETE POWER POLE (CPP)	LP	LIGHT POST
CONT.	CONTINUOS	MAX.	MAXIMUM
CT	COMBUSTION TURBINE	MECH.	MECHANICAL
△	DEFLECTION ANGLE	MIN.	MINIMUM
DWGS.	DRAWINGS	(N)	NEW
DESC.	DESCRIPTION	N	NORTH
ø	DIAMETER	P.P.	POST POLE
E	EAST	O.C.	ON CENTER
EL./ELEV, EC	ELEVATIONS END CURVE	R	RADIUS
(E)/EXIST.	EXISTING	—·— /SL	SEWER LINE
EG	EXISTING GRADE	◉	SEWER MANHOLE (SMH)
FL	FIRE LINE	S/SLP.	SLOPE
385	EXISTING CONTOUR LINE	S	SOUTH
—x—x—	FENCE LINE	~~~	SWALE
400	FINISHED CONTOUR LINE	❁	TREE
(F)	FINISHED ELEVATION	TYP.	TYPICAL
FFE	FINISHED FLOOR ELEVATION	—ws— /WL	WATERLINE, EXISTING
FG	FINISHED GRADE	—ws— /WL	WATERLINE, NEW
FM	FORCEMAIN	Ø	WATER METER (WM)
	GATE	⊗	WATER VALVE (WV)
		W	WEST
		⌐○¬	WOODEN POWER POLE (WPP)
		TSW	TOP OF SIDEWALK
		VERT.	VERTICAL

GRAPHIC SCALE

BME & SONS INC.
GENERAL CONTRACTOR & EQUIPMENT RENTAL

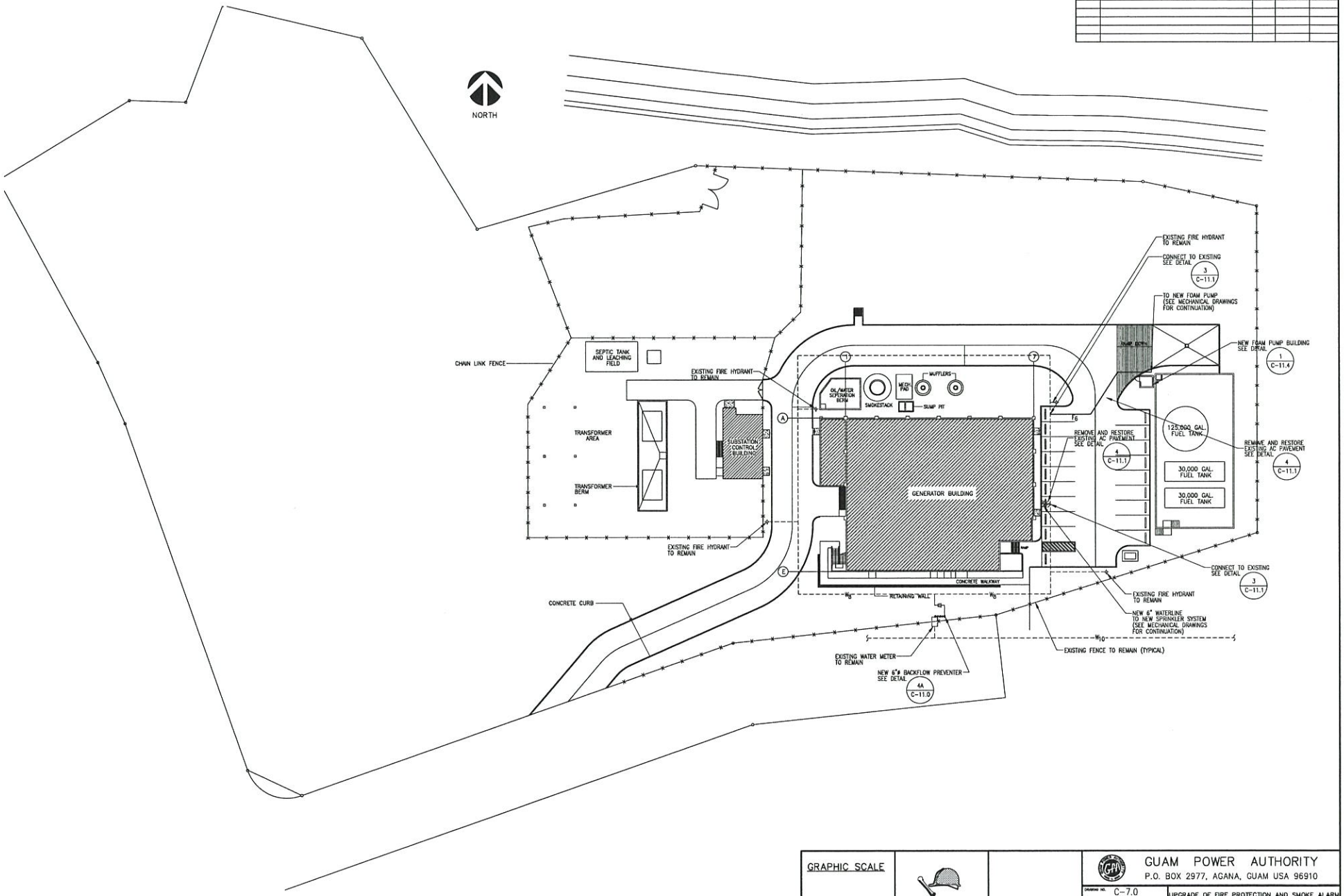
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.

AS-BUILT DRAWINGS | C-1.0

GUAM POWER AUTHORITY
P.O. BOX 2977, AGANA, GUAM USA 96910

DRAWING NO.	UPGRADE OF FIRE PROTECTION AND SMOKE ALARM SYSTEMS AT TENJO VISTA DIESEL POWER PLANT
DESIGNED	
DRAWN	GENERAL CONSTRUCTION NOTES, LEGEND, SYMBOLS AND ABBREVIATIONS
CHECKED	
ENGINEER SUPERVISOR: PERRY B. TALADOC	DATE
MANAGER OF ENGINEERING: JOVEN D. ACOSTA, P.E.	DATE
J.O. NO.: 100055	SCALE: AS SHOWN
GENERAL MANAGER: JOAQUIN C. FLORES, P.E.	DATE
	SHEET: 2 OF 22

REVISIONS				
SYMBOL	DESCRIPTION	INT.	DATE	APP'D.



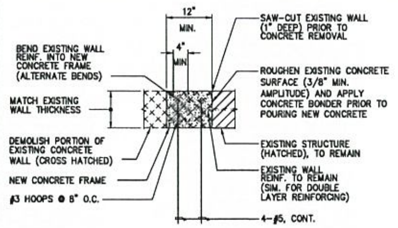
AS-BUILT DRAWINGS C-7.0

GRAPHIC SCALE

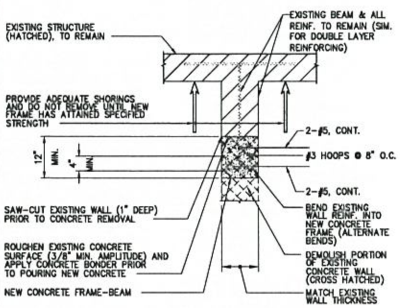
BME & SONS INC.
GENERAL CONTRACTOR & EQUIPMENT RENTAL

GUAM POWER AUTHORITY
P.O. BOX 2977, AGANA, GUAM USA 96910

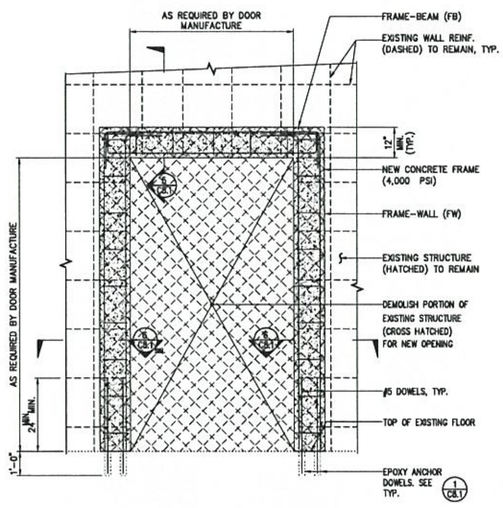
DRAWING NO. C-7.0	UPGRADE OF FIRE PROTECTION AND SMOKE ALARM SYSTEMS AT TENJO VISTA DIESEL POWER PLANT
DESIGNED	
DRAWN	TENJO DIESEL POWER PLANT – CIVIL SITE PLAN
CHECKED	
ENGINEER SUPERVISOR PERRY B. TALADOC	DATE / J.O. NO. 100050 / SCALE AS SHOWN / SHEET 3 of 22
MANAGER OF ENGINEERING JOVEN G. ACOSTA, P.E.	DATE / GENERAL MANAGER JOAQUIN C. FLORES, P.E. / DATE



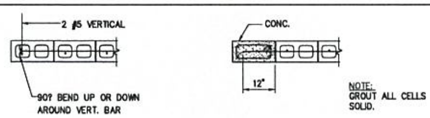
6/C8.1 FRAME WALL "FW" DETAIL
SCALE: 1-1/2"=1'-0"



5/C8.1 FRAME BEAM (FB) DETAIL
SCALE: 1-1/2"=1'-0"



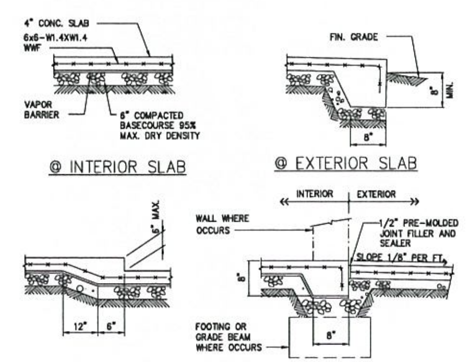
4/C8.1 TYPICAL WALL OPENING ELEVATION
SCALE: 1"= 1'-0"



@ END

CONC./CMU

3/C8.1 TYPICAL WALL CONNECTIONS
NOT TO SCALE

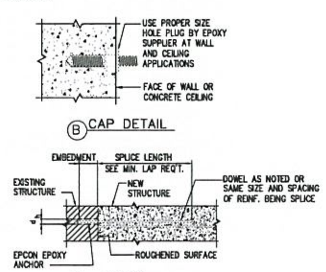


2/C8.1 SLAB ON GRADE DETAIL
NOT TO SCALE

BAR SIZE	HOLE DIA. d_h	EMBEDMENT
#3	1"	6"
#4	[illegible]	8"
#5	8"	10"
#6	6"	12"

NOTE:

1. DRILL HOLE 1/8 INCH GREATER THAN REINFORCEMENT BAR DIAMETER SIZE AND TO THE PROPER DEPTHS AS INDICATED ON THE DRAWINGS (6" MINIMUM) AND INSPECTED PRIOR TO INSTALLATION OF THE EPOXY DOWELS.
2. DO NOT DISTURB EXISTING REBARS.
3. PROPERLY CLEAN HOLES WITH COMPRESSED AIR PRIOR TO APPLICATION OF EPOXY.
4. ENGINEER'S INSPECTION OF DOWEL HOLE & OBSERVATION OF EPOXY INSTALLATION ARE REQUIRED DURING APPLICATIONS.
5. USE EPCON SYSTEM BY RAMSET/REDHEAD OR APPROVED EQUAL.
6. PROVIDE PROPER SIZE HOLE PLUG BY EPOXY SUPPLIER AT WALL AND CEILING APPLICATIONS.



1/C8.1 TYP. EPOXY ANCHOR DETAIL
SCALE: 1"= 1'-0"

ACI 318-08 MINIMUM DEVELOPMENT (EMBEDMENT AND LAP REQURIMENTS (fy=60,000 psi FOR UNCOATED OR GALVANIZED COATED DEFORMED BARS)													
	MINIMUM EMBEDMENT REQUIREMENTS (INCHES)				MINIMUM LAP REQUIREMENTS (INCHES)								
					CLASS "A" SPLICE				CLASS "B" SPLICE				
BAR SIZE	f'c = 3000 psi		f'c = 4000 psi		f'c = 3000 psi		f'c = 4000 psi		f'c = 3000 psi		f'c = 4000 psi		BAR SIZE
	TOP 2	OTHERS	TOP 2	OTHERS	TOP 2	OTHERS	TOP 2	OTHERS	TOP 2	OTHERS	TOP 2	OTHERS	
#3	21	16	18	14	21	16	18	14	27	21	23	18	#3
#4	28	22	25	19	28	22	25	19	36	29	33	25	#4
#5	36	27	31	24	36	27	31	24	47	35	40	31	#5
#6	43	33	37	28	43	33	37	28	56	43	48	36	#6
#7	62	48	54	42	62	48	54	42	81	62	70	55	#7
#8	71	55	62	47	71	55	62	47	92	72	81	61	#8

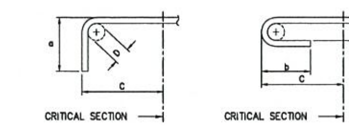
EMBEDMENT AND LAP NOTES

1. PROVIDE STANDARD ACI 90 DEGREE BEND OR HOOK IF EMBEDMENT LENGTH IS LESS THEN REQUIRED MINIMUM AS SHOWN IN TABLE. REINFORCEMENT IN WALLS, SLAB, BEAM, ETC. SHALL BE EMBEDDED INTO SUPPORTING OR INTERSECTING STRUCTURAL ELEMENTS.
2. TOP BARS ARE DEFINE WHERE HORIZONTAL REINFORCEMENT IS PLACE SUCH THAT MORE THEN 12 INCHES OF FRESH CONCRETE IS CAST BELOW THE DEVELOPMENT LAP OR SPLICE.
3. FOR SLAB, LOCATE LAPS WITHIN THE MIDDLE THIRD OF THE SPANS FOR TOP BARS AND AT SUPPORTS FOR BOTTOM BARS. USE "CLASS A" SPLICE IF LAP ARE STAGGERED. OTHERWISE USE "CLASS B" SPLICE.
4. FOR WALLS, LOCATE LAPS ANYWHERE AND USE "CLASS B" SPLICE. FOR DOUBLE CURTAIN REINFORCEMENT, STAGGER LOCATION OF LAP FROM ONE CURTAIN TO ANOTHER.
5. FOR BEAM AND COLUMNS, LOCATE LAPS AS SHOWN IN DETAILS. USE "CLASS B" SPLICES UNLESS NOTED OTHERWSE.
6. FOR DEVELOPMENT LENGTH FOR INDIVIDUAL BARS WITHIN A BUNDLE, THE DEVELOPMENT LENGTH SHALL BE THAT OF THE INDIVIDUAL BAR, INCREASE 20 PERCENT FOR THE THREE-BAR BUNDLES AND 33 PERCENT FOR THE FOUR BAR BUNDLES.

GENERAL STRUCTURAL NOTES

1. "GENERAL NOTES AND TYPICAL DETAILS" APPLY TO ALL DRAWINGS UNLESS NOTED OR SHOWN OTHERWISE.
2. FEATURES OF CONSTRUCTIONS SHOWN ARE TYPICAL AND THEY SHALL APPLY GENERALLY THROUGHOUT FOR SIMILAR CONDITIONS. BUILDING DIMENSIONS SHALL BE AS PER ARCHITECTURAL DRAWINGS UNLESS SHOWN OTHERWSE.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE WORK IS BEGUN. SLAB ELEVATIONS SHALL BE COORDINATED WITH ARCHITECTURAL DRAWINGS.
4. PROVIDE SLAB DEPRESSIONS AS REQUIRED FOR VARIOUS FLOOR FINISHES.

ACI 318-08 (SECTION 12.5) MINIMUM DEVELOPMENT REQUIRMENTS OF STANDARD HOOKS IN TENSION (fy=60,000 psi FOR EPOXY COATED DEFORMED BARS)					
BAR SIZE	MINIMUM HOOK LENGTH (HL) REQUIREMENTS		l_{dh} = "C"(DEVELOPMENT LENGTH REQUIREMENT FROM CRITICAL SECTION)		MINIMUM BEND DIAMETER (D)
	90?(a)	180?(b)	3000 psi (c)	4000 psi (c)	
#3	6	4	6	6	1 1/2"
#4	8	5	7	6	2"
#5	10	5	8	7	2 1/2"
#6	12	6	10	8	3"
#7	14	7	11	10	3 1/2"
#8	16	8	13	11	4"

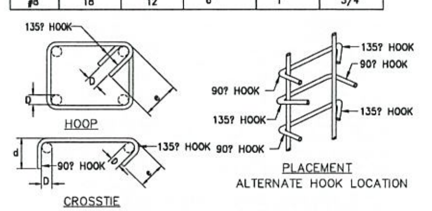


PRIMARY REINFORCING TYPICAL BENDS
NOT TO SCALE

STRUCTURAL DESIGN CRITERIA

1. BASIS OF DESIGN : INTERNATIONAL BUILDING CODE, 2009 and ASCE 7-05
2. LIVE LOAD
   ROOF, RL = 20 PSF
3. WIND FORCE: (ASCE 7-05)
   BASIC WIND SPEED = 170 MPH
   EXPOSURE CATEGORY: C
   IMPORTANCE FACTOR, Iw = 1V
   Kzt = 1
   Kd = 0.85
   GUST FACTOR, G = 0.85
   qz THE VELOCITY PRESSURE, = 0.00256 Kz Kzt Kd Iw V 2PSF
   WHERE: Kz IS THE VELOCITY PRESSURE EXPOSURE COEFFICENT
   Kz = 2.01 (z/zg)(2/alpha) FOR z < 15 FEET
   Kz = 2.01 (z/zg)(2/alpha) FOR 15 FEET ≤ z ≤ zg
   Z IS THE DISTANCE FROM THE SPECIFIED BOTTOM STORY TO THE POINT CONSIDERED
   zg AND ALPHA ARE SPECIFIED IN ASCE 7-05 TABLE 6-2
   qh IS THE VELOCITY PRESSURE AT THE SPECIFIED TOP STORY
   P = WIND PRESSURE = (WINDWARD)Cp qz G + qh G (LEEWARD)Cp
4. SEISMIC FORCE (IBC 2009)
   ECCENTRICITY RATIO = 5%
   RESPONSE MODIFICATION FACTOR, R = 5
   OCCUPANCY IMPORTANCE FACTOR = IV
   0.2 SECOND SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING), Ss = 1.5 g
   1 SECOND SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING), S1 = 0.6 g
   LONG-PERIOD TRANSITION PERIOD = 12
   SITE CLASS: D
   SEISMIC DESIGN CATEGORY: D
   Sds = 1.0 g
   Sd1 = 0.6 g
5. REINFORCED CONCRETE
   FOOTING: ---------- f'c = 3,000 PSI
   SLAB ON GRADE ---------- f'c = 3,000 PSI
   COLUMNS, WALLS, BEAMS, SUSPENDED SLAB ---------- f'c = 4,000 PSI
   OTHERS ---------- f'c = 4,000 PSI
6. REINFORCEMENT:
   REINFORCING STEEL ---------- fy = 60,000 PSI
7. MASONRY
   CMU WALLS ---------- f'm= 1,350 PSI
   GROUT ---------- f'c = 2,000 PSI
   ALL CELLS GROUTED. SPECIAL INSPECTION REQUIRED.
8. LOAD COMBINATIONS (IBC 2009)
   DL = DEAD LOAD   WL = WIND LOAD
   FL = FLOOR LOAD   EQ = EARTHQUAKE LOAD
   RL = ROOF LOAD
   COMB1: 1.4(DL)
   COMB2: 1.2(DL) + 0.5(RL)
   COMB3: 1.2(DL) + 1.6(RL)
   COMB4: 1.2(DL) + 1.6(WL) + 0.5(RL)
   COMB5: 1.2(DL) + 1.0(EQ)
   COMB6: 0.9(DL) + 1.6(WL)
   COMB7: 0.9(DL) + 1.0(EQ)
9. CONCRETE COVERING
   TOP OF ROOF SLABS ---------- 1
   BOTTOM OF ROOF SLABS ---------- 1½"
   WALL EXPOSED TO EARTH OR WEATHER ---------- 2"
   FORMED FOOTINGS ---------- 2"
   FOOTINGS & PIER CAST AGAINST EARTH ---------- 3"
10. ALLOWABLE SOIL BEARING PRESSURES
   DL + LL   DL + LL + EQ or WL
   3000 PSF (ASSUMED)   4500 PSF (ASSUMED)

MINIMUM DEVELOPMENT REQUIRMENTS OF HOOPS AND CROSS TIES					
BAR SIZE	MINIMUM HOOK LENGTH (HL) REQUIREMENTS		MINIMUM BEND DIAMETER (D)	BAR DIA. (d_b)	BAR AREA
	90?(d)	135?(e)			
#3	4	5	1 1/2"	3/8"	1/8"
#4	5	5	2"	1/2"	1/4"
#5	7	7	2 1/2"	5/8"	1/4"
#6	14	9	4 1/2"	3/4"	1/2"
#7	16	11	5 1/4"	7/8"	5/8"
#8	18	12	6"	1"	3/4"



TYP. HOOPS AND CROSS-TIES DETAIL
NOT TO SCALE

REVISIONS				
SYMBOL	DESCRIPTION	INT.	DATE	APP'D.

AS-BUILT DRAWINGS

C8.1

GRAPHIC SCALE

BME & SONS INC.
GENERAL CONTRACTOR & EQUIPMENT RENTAL

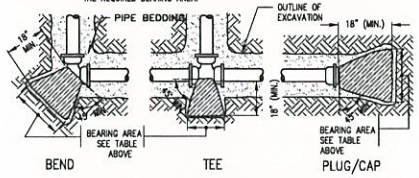
GUAM POWER AUTHORITY
P.O. BOX 2977, AGANA, GUAM USA 96910

DRAWING NO. C-8.1
UPGRADE OF FIRE PROTECTION AND SMOKE ALARM SYSTEMS AT TENJO VISTA DIESEL POWER PLANT
STRUCTURAL DESIGN CRITERIA GENERAL NOTES AND TYP. DETAILS
DESIGNED
DRAWN
CHECKED
ENGINEER SUPERVISOR PERRY B. TALADOC
MANAGER OF ENGINEERING JOVEN G. ACOSTA, P.E.
GENERAL MANAGER JOAQUIN C. FLORES, P.E.
J.O. NO. 100055
SCALE AS SHOWN
SHEET 3 of 32
DATE

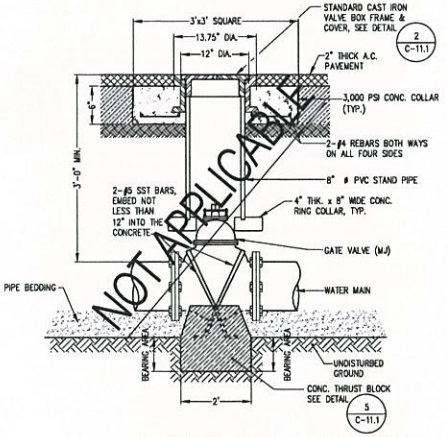
FITTINGS	BEARING AREA (SQ. FT.)			
	6" PIPE	8" PIPE	10" PIPE	12" PIPE
1/4 (90°) BEND	3.17	5.46	8.21	11.61
1/8 (45°) BEND	1.75	2.95	4.45	6.28
1/16 (22.50°) BEND	1.50	2.00	4.00	6.00
1/32 (11.25°) BEND	N/A	N/A	N/A	N/A
TEE/ GATE VALVE/PLUG	3.0	3.86	5.81	8.21

NOTES:

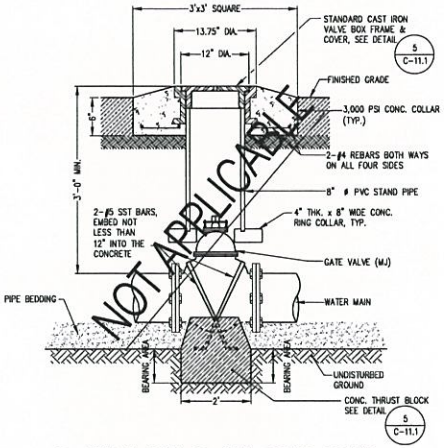
1. BEARING AREA OF CONC. THRUST BLOCKS MUST BE POURED AGAINST UNDISTURBED GROUND.
2. CONCRETE MATERIAL FOR THRUST BLOCKS SHALL BE 2,500 PSI (MINIMUM).
3. BEARING AREA SHOWN ABOVE ARE BASED ON 150 PSI DESIGN PRESSURE AND 2,500 PSF LATERAL EARTH PRESSURE.
4. TRENCHES IN THRUST BLOCK AREAS MAY NEED WIDENING AND DEEPENING TO OBTAIN THE REQUIRED BEARING AREA.



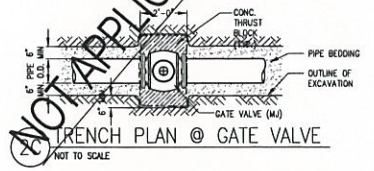
5 CONCRETE THRUST BLOCK SCHEDULE
NOT TO SCALE



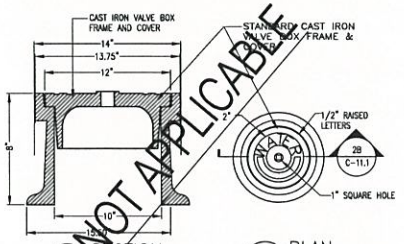
3B VALVE BOX @ ROAD AREAS
NOT TO SCALE



3A VALVE BOX @ OFF-ROAD AREAS
NOT TO SCALE



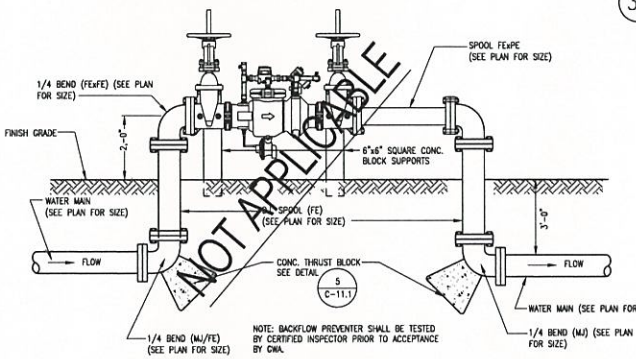
2C TRENCH PLAN @ GATE VALVE
NOT TO SCALE



2B SECTION
NOT TO SCALE

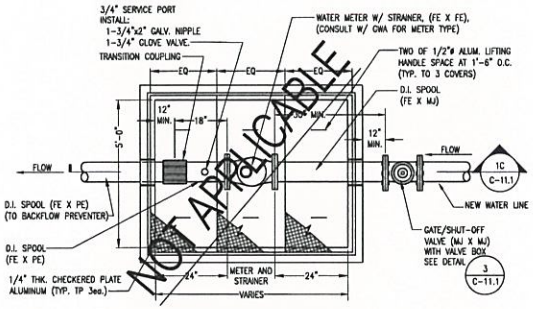
2A PLAN
NOT TO SCALE

2 VALVE BOX FRAME & COVER DETAIL
NOT TO SCALE

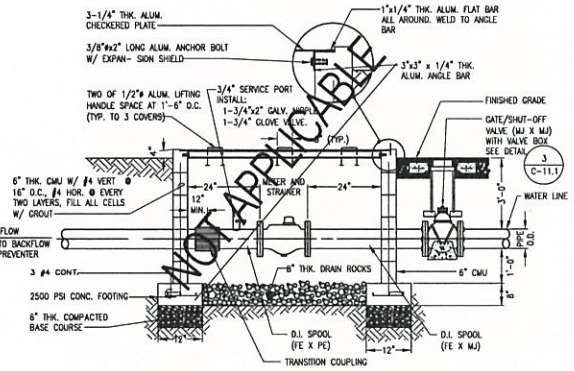


4B FOR NEW WATER LINE
NOT TO SCALE

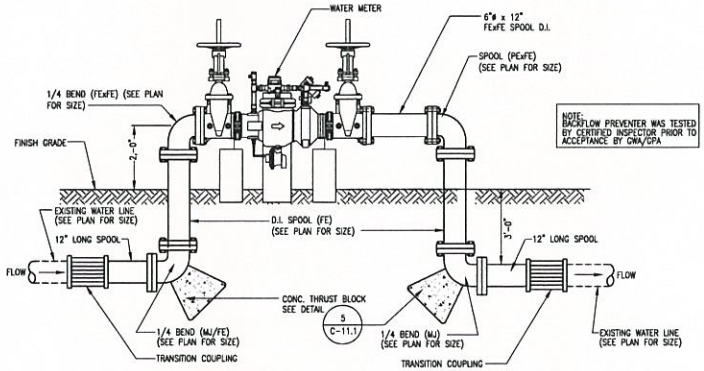
3 VALVE BOX DETAIL
NOT TO SCALE



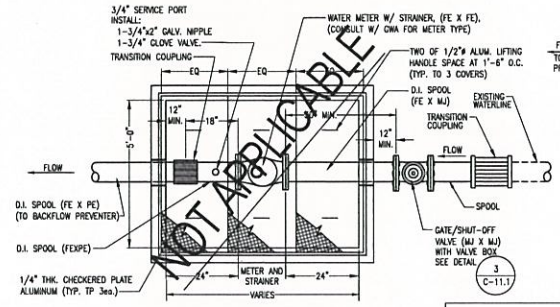
1B @ NEW WATER LINE
NOT TO SCALE



1C SECTION
NOT TO SCALE



4A FOR EXISTING WATER LINE
NOT TO SCALE



1A @ EXISTING WATER LINE
NOT TO SCALE

4 REDUCED PRESSURE BACKFLOW PREVENTER DET.
NOT TO SCALE

1 WATER METER DETAIL
NOT TO SCALE

AS-BUILT DRAWINGS C-11.0

GRAPHIC SCALE

BME & SONS INC.
GENERAL CONTRACTOR & EQUIPMENT RENTAL

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.

GUAM POWER AUTHORITY
P.O. BOX 2977, AGANA, GUAM USA 96910

DRAWING NO.	C-11.0
DESIGNED	
DRAWN	
CHECKED	
ENGINEER SUPERVISOR	PERRY B. TALADOC
MANAGER OF ENGINEERING	JOHN G. ACOSTA, P.E.

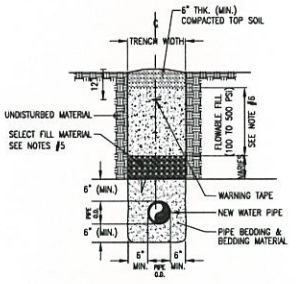
UPGRADE OF FIRE PROTECTION AND SMOKE ALARM SYSTEMS AT TENJO VISTA DIESEL POWER PLANT

DETAILS

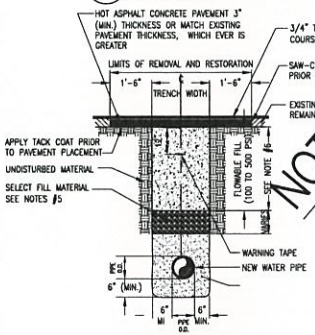
DATE		J.O. NO. 100055	SCALE AS SHOWN	SHEET 5 OF 22
DATE		GENERAL MANAGER JOAQUIN C. FLORES, P.E.		DATE

REVISIONS				
SYMBOL	DESCRIPTION	INT.	DATE	APP'D.

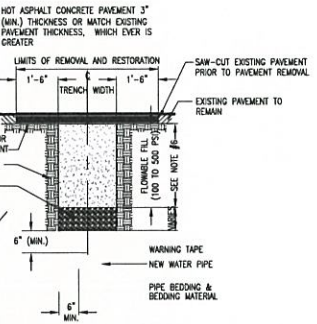
REVISIONS				
SYMBOL	DESCRIPTION	INT.	DATE	APP'D.



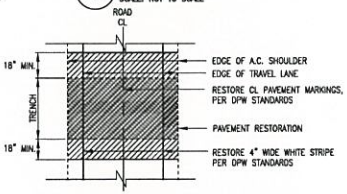
6D @ OUTSIDE OF SHOULDER BUT INSIDE OF ROAD R/W
SCALE: NOT TO SCALE



6B @ PAVED ROAD
SCALE: NOT TO SCALE



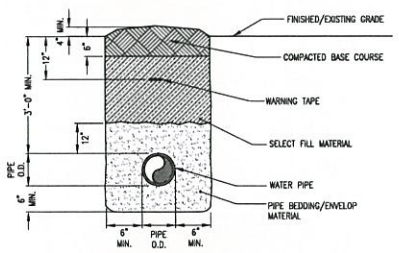
6C @ PAVED ROAD SHOULDER
SCALE: NOT TO SCALE



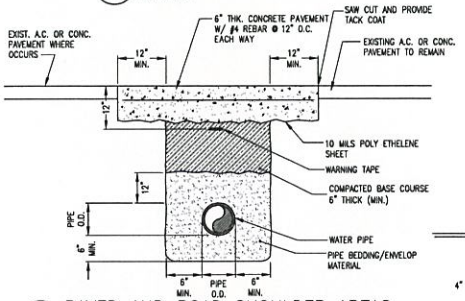
6A TRENCH ON TRANSVERSE CUTS
NOT TO SCALE

NOT APPLICABLE

6 ROAD RESTORATION DETAIL @ DPW ROADS
SCALE: NOT TO SCALE

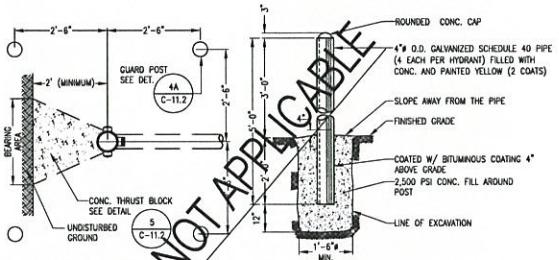


4B OFF ROAD AREAS
NOT TO SCALE



4A PAVED AND ROAD SHOULDER AREAS
NOT TO SCALE

4 WATERLINE ON OTHER ROADS/AREAS
NOT TO SCALE

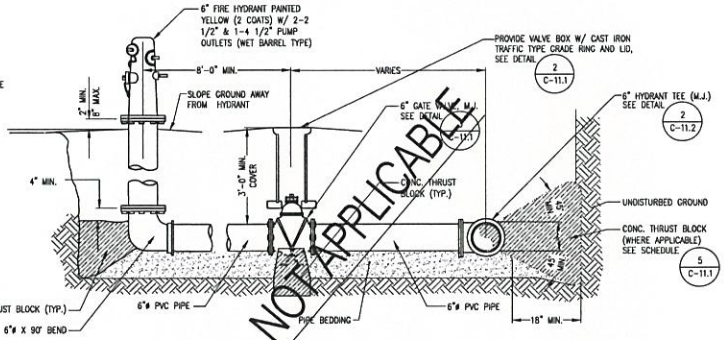


2B PLAN
NOT TO SCALE

NOT APPLICABLE

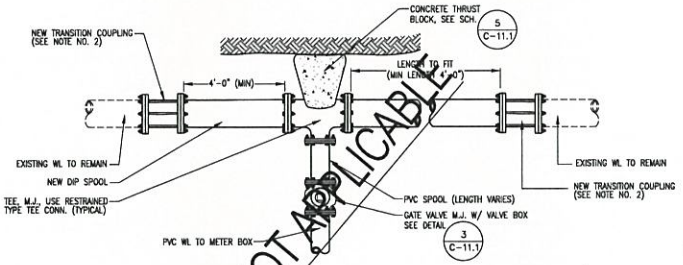
2A ELEVATION
NOT TO SCALE

2 FIRE HYDRANT GUARD POST DETAILS
NOT TO SCALE



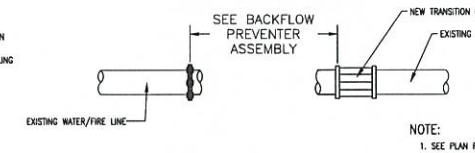
NOT APPLICABLE

1 FIRE HYDRANT ASSEMBLY DETAIL
NOT TO SCALE



NOT APPLICABLE

5 CONNECTION TO EXISTING WATER MAIN
NO TO SCALE



NOTE:
1. SEE PLAN FOR PIPE SIZE

3 CONNECTION TO EXISTING WATERLINE
NOT TO SCALE

GRAPHIC SCALE

BME & SONS INC.
GENERAL CONTRACTOR & EQUIPMENT RENTAL

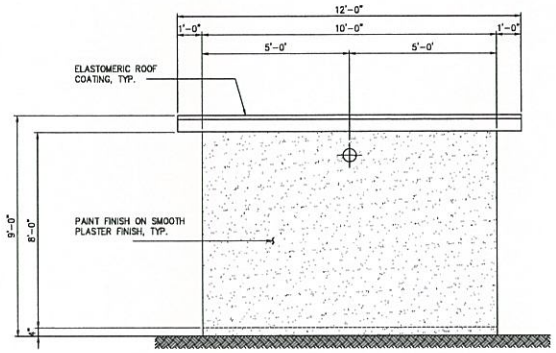
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.

GUAM POWER AUTHORITY
P.O. BOX 2977, AGANA, GUAM USA 96910

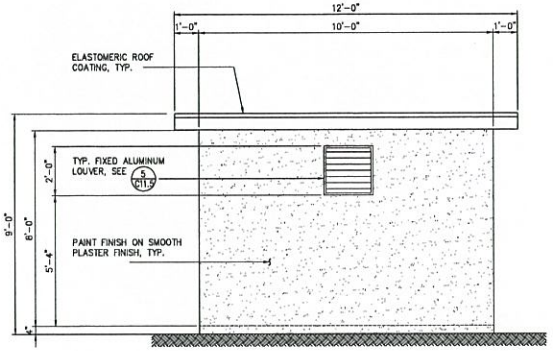
DRAWING NO. C-11.1	UPGRADE OF FIRE PROTECTION AND SMOKE ALARM SYSTEMS AT TENJO VISTA DIESEL POWER PLANT
DESIGNED	
DRAWN	DETAILS
CHECKED	
ENGINEER SUPERVISOR: PERRY B. TALADOC	DATE: J.O. NO. 100055 SCALE: AS SHOWN SHEET: 6 OF 22
MANAGER OF ENGINEERING: JOVEN C. ACOSTA, P.E.	DATE: GENERAL MANAGER: JOAQUIN C. FLORES, P.E. DATE:

AS-BUILT DRAWINGS C-11.1

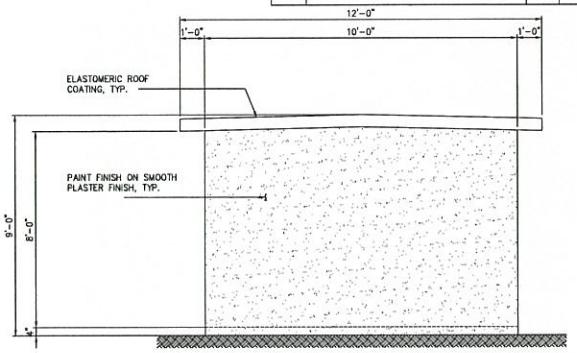
REVISIONS				
SYMBOL	DESCRIPTION	INT.	DATE	APP'D.



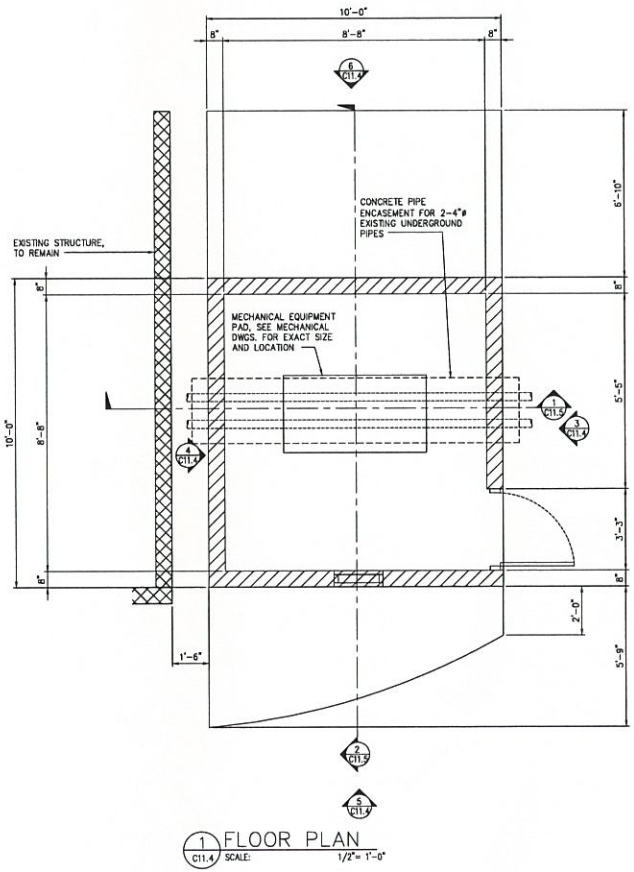
4 C11.4 RIGHT SIDE ELEVATION
SCALE: 1/2"= 1'-0"



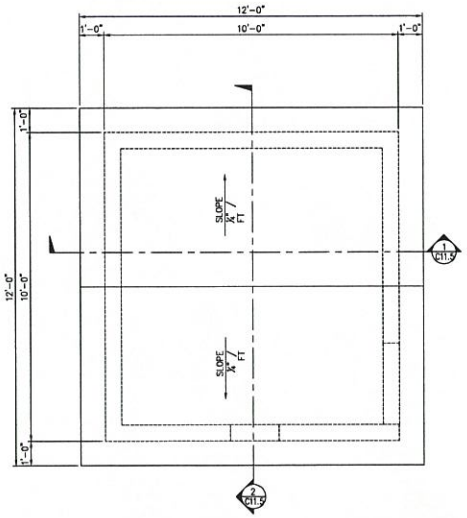
5 C11.4 LEFT SIDE ELEVATION
SCALE: 1/2"= 1'-0"



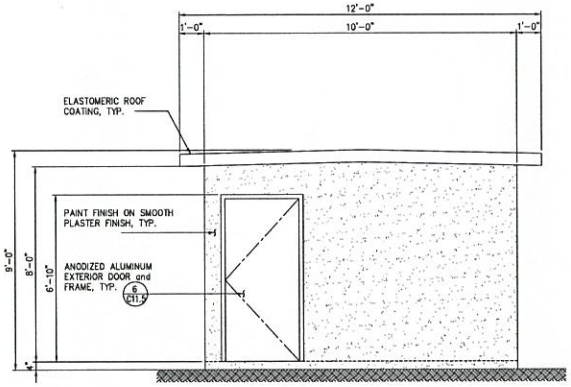
6 C11.4 REAR ELEVATION
SCALE: 1/2"= 1'-0"



1 C11.4 FLOOR PLAN
SCALE: 1/2"= 1'-0"



2 C11.4 ROOF PLAN
SCALE: 1/2"= 1'-0"



3 C11.4 FRONT ELEVATION
SCALE: 1/2"= 1'-0"

GRAPHIC SCALE

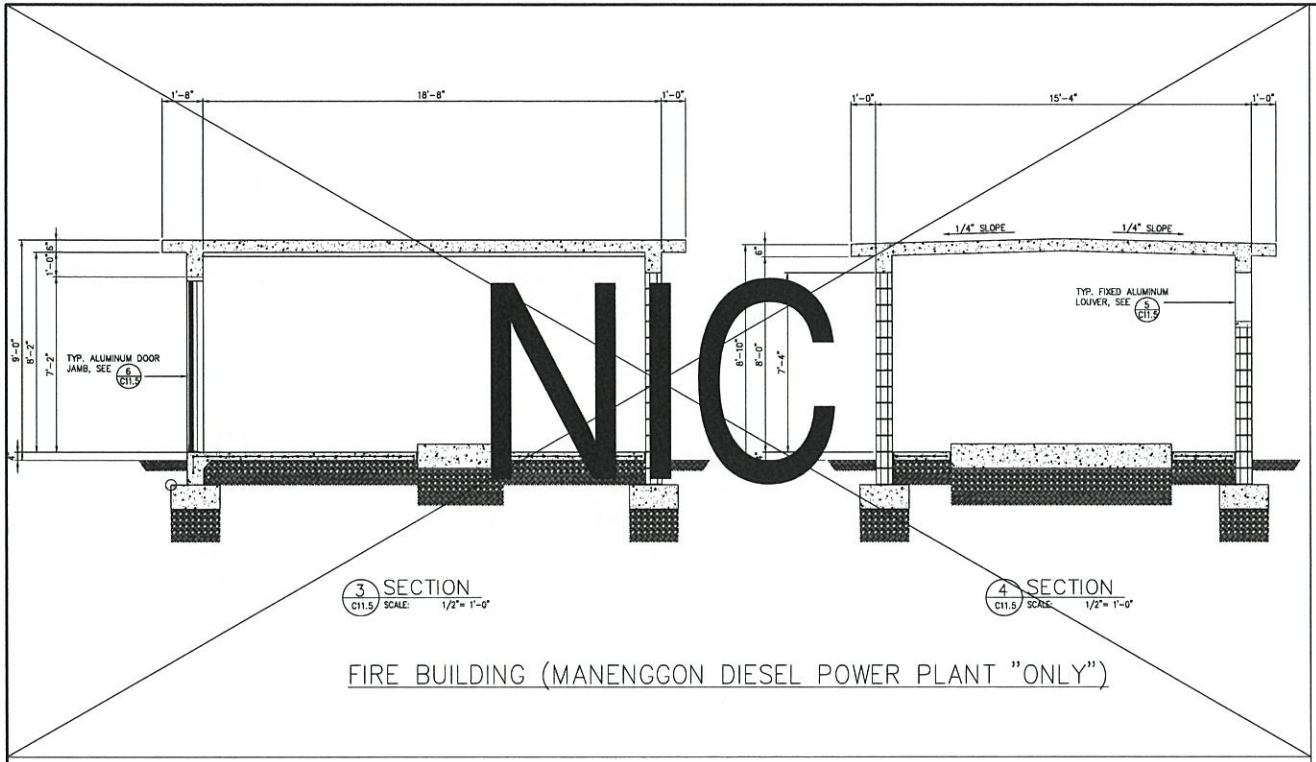
BME & SONS INC.
GENERAL CONTRACTOR & EQUIPMENT RENTAL

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.

GUAM POWER AUTHORITY
P.O. BOX 2977, AGANA, GUAM USA 96910

DRAWING NO. C-11.4	UPGRADE OF FIRE PROTECTION AND SMOKE ALARM SYSTEMS AT TENJO VISTA DIESEL POWER PLANT
DESIGNED	MENENGDON, TENJO VISTA AND TALOFOFO DIESEL POWER PLANTS: FGRM PUMP HOUSE PLANS AND ELEVATIONS
DRAWN	
CHECKED	
ENGINEER SUPERVISOR: PERRY B. TALADOC	DATE: J.O. NO. 100065 SCALE: AS SHOWN SHEET: 7 OF 22
MANAGER OF ENGINEERING: JOVEN G. ACOSTA, P.E.	DATE: GENERAL MANAGER: JOAQUIN C. FLORES, P.E. DATE:

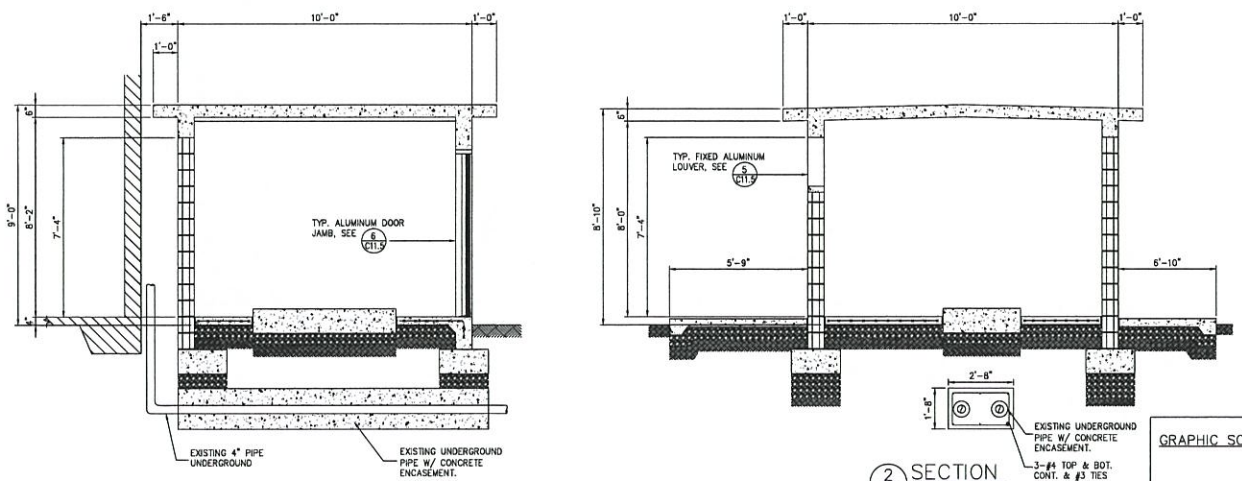
AS-BUILT DRAWINGS C-11.4



3 SECTION C11.5 SCALE: 1/2"= 1'-0"

4 SECTION C11.5 SCALE: 1/2"= 1'-0"

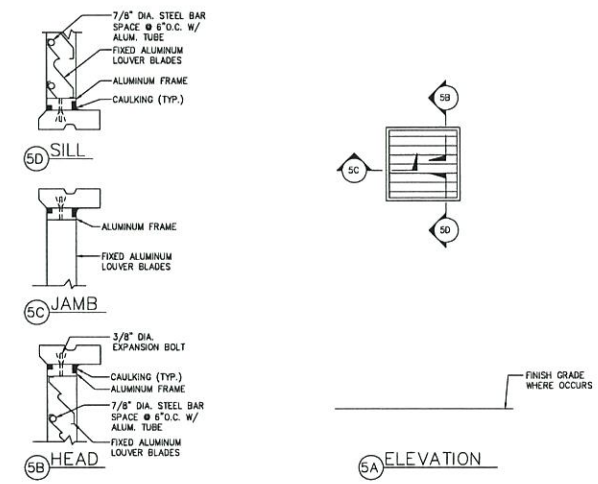
FIRE BUILDING (MANENGGON DIESEL POWER PLANT "ONLY")



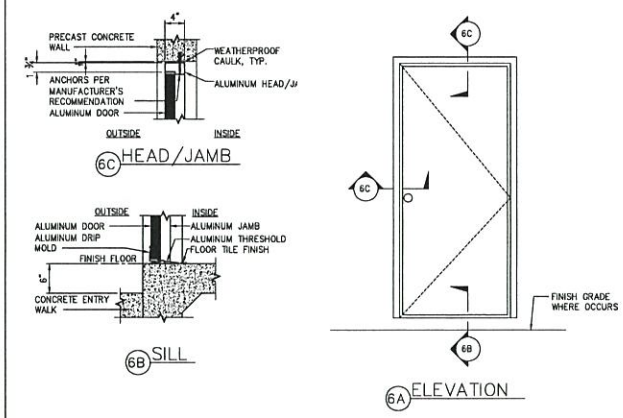
1 SECTION C11.5 SCALE: 1/2"= 1'-0"

2 SECTION C11.5 SCALE: 1/2"= 1'-0"

FOAM BUILDING



5 FIXED ALUMINUM LOUVER DETAIL C11.5 NOT TO SCALE



6 DOOR DETAIL C11.5 NOT TO SCALE

GRAPHIC SCALE

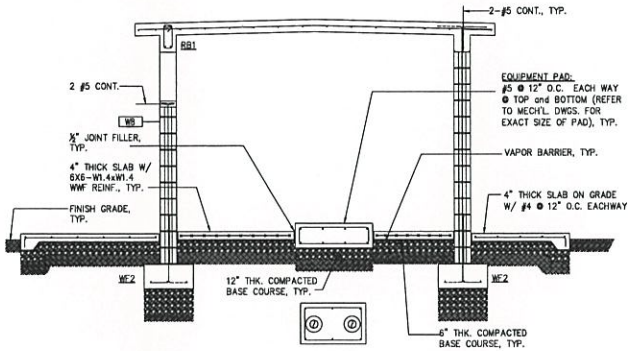
AS-BUILT DRAWINGS C-11.5

BME & SONS INC.
GENERAL CONTRACTOR & EQUIPMENT RENTAL

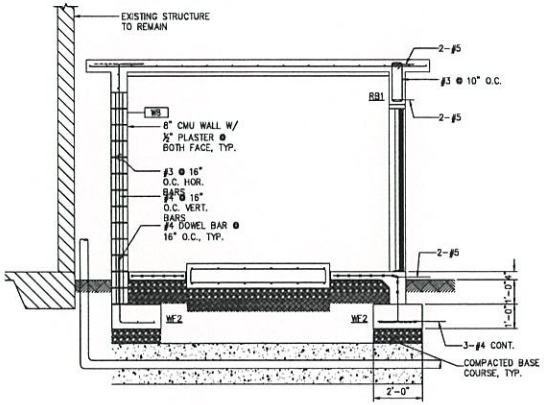
GUAM POWER AUTHORITY
P.O. BOX 2977, AGANA, GUAM USA 96910

DRAWING NO. C-11.5	UPGRADE OF FIRE PROTECTION AND SMOKE ALARM SYSTEMS AT TENJO VISTA DIESEL POWER PLANT
DESIGNED	
DRAWN PCP/AGC	MANENGGON, TENJO VISTA AND TALOFOFO DIESEL POWER PLANT: FOAM BUILDING SECTIONS, FIRE BUILDING SECTIONS AND DOOR & WINDOW DETAILS
CHECKED	
ENGINEER SUPERVISOR PERRY B. TALAOOC	DATE / J.O. NO. 100055 / SCALE AS SHOWN / SHEET 8 OF 22
MANAGER OF ENGINEERING JOVEN G. ACOSTA, P.E.	DATE / GENERAL MANAGER JOAQUIN C. FLORES, P.E. / DATE

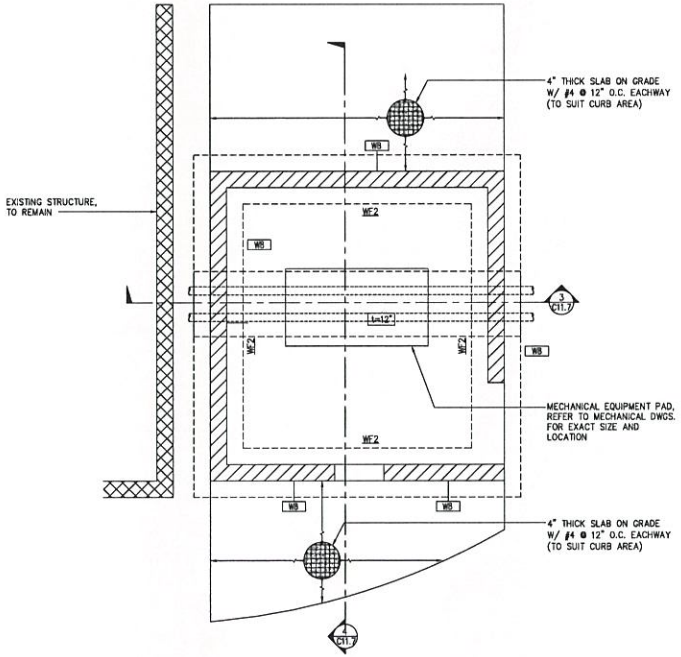
REVISIONS				
SYMBOL	DESCRIPTION	INT.	DATE	APP'D.



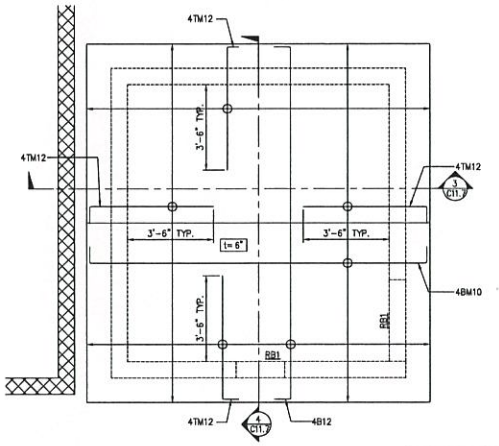
4 C11.7 SECTION
SCALE: 1/2"= 1'-0"



3 C11.7 SECTION
SCALE: 1/2"= 1'-0"



1 C11.7 FOUNDATION PLAN
SCALE: 1/2"= 1'-0"

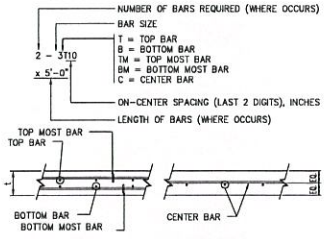


2 C11.7 ROOF FRAMING PLAN
SCALE: 1/2"= 1'-0"

LEGEND:

WF1	WALL FOOTING DESIGNATION
WB-A	WALL DESIGNATION
RB1	ROOF BEAM DESIGNATION

SLAB REINFORCING



GRAPHIC SCALE

BME & SONS INC.
GENERAL CONTRACTOR & EQUIPMENT RENTAL

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.

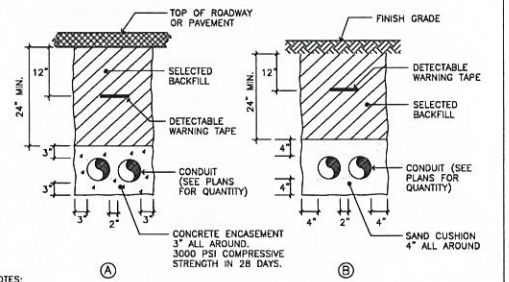
GUAM POWER AUTHORITY
P.O. BOX 2977, AGANA, GUAM USA 96910

DRAWING NO. C-11.7	UPGRADE OF FIRE PROTECTION AND SMOKE ALARM SYSTEMS AT TENJO VISTA DIESEL POWER PLANT
DESIGNED	
DRAWN POP/AGC	TALOFOFO DIESEL POWER PLANT: FOAM PUMP HOUSE, FOUNDATION, ROOF FRAMING PLAN AND SECTIONS
CHECKED	
ENGINEER SUPERVISOR PERRY B. TALADOC	DATE / A.O. NO. 100050 / SCALE AS SHOWN / SHEET 9 of 22
MANAGER OF ENGINEERING JOHN D. ACOSTA, P.E.	DATE / GENERAL MANAGER JOAQUIN C. FLORES, P.E. / DATE

AS-BUILT DRAWINGS C-11.7

GENERAL NOTES

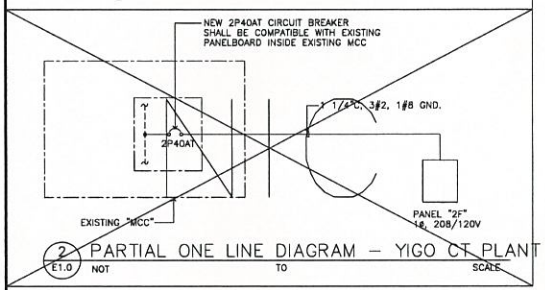
1. WORK SHALL COMPLY WITH ORDINANCES OF THE GOVERNMENT OF GUAM DEPARTMENT OF PUBLIC WORKS, NATIONAL ELECTRIC CODE, NATIONAL ELECTRICAL SAFETY CODE AND APPLICABLE SPECIFICATIONS AND REQUIREMENTS OF GPA AND GFD.
2. INSPECTION SKILLS AND COMPETENCY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE INSPECTORS OF GPA AND ENGINEER. ALL CONCRETE POURING, HANDHOLE FABRICATIONS, AND DUCT LAYING SHALL BE PERFORMED IN THE PRESENCE OF THE RESPECTIVE UTILITY AGENCIES AND COMPANY'S INSPECTOR. NOTIFICATION SHALL BE GIVEN 48 HOURS IN ADVANCE.
3. THE CONTRACTOR SHALL DETERMINE AND VERIFY LOCATION OF EXISTING UTILITIES PRIOR TO START OF WORK. OBTAIN WORK CLEARANCES FROM USING AGENCIES PRIOR TO ANY EXCAVATION/TRENCHING WORK. DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO GUAM POWER AUTHORITY.
4. SUPPORTING STRUCTURES FOR OUTDOOR EQUIPMENT SHALL BE CORROSION RESISTANT.
5. OUTDOOR INSTALLATIONS SHALL BE RATED TO WITHSTAND 175 MPH SUSTAINED WINDLOAD.
6. SURFACES DISTURBED DUE TO INSTALLATION OF ELECTRICAL EQUIPMENT, CONDUIT, AND WIRING SHALL BE RESTORED TO ITS ORIGINAL CONDITION OR BETTER.



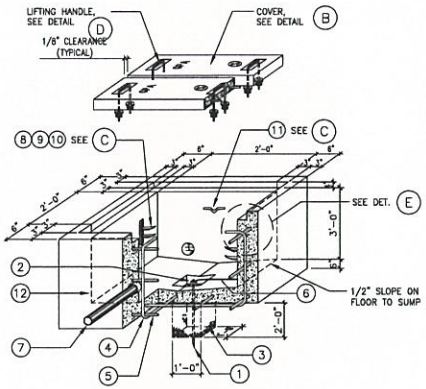
NOTES:

1. DETAIL (A) SHALL BE IMPLEMENTED WHERE DUCT IS SUBJECT TO VEHICULAR TRAFFIC.
2. DETAIL (B) SHALL BE IMPLEMENTED WHERE DUCT IS NOT SUBJECT TO ANY VEHICULAR TRAFFIC. HOWEVER, DUCT TRANSITION TO TYPE (A) SHALL BE IMPLEMENTED AT BENDS, CURVES, OR ELBOWS AND SHALL EXTEND TO AT LEAST A FOOT BEYOND THE CURVED PORTION.

1 / E1.0 TYPICAL DUCT SECTION
NOT TO SCALE



2 / E1.0 PARTIAL ONE LINE DIAGRAM – YIGO CT PLANT
NOT TO SCALE

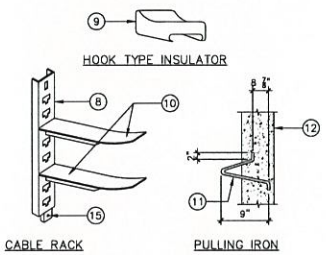


A HANDHOLE DETAIL
NOT TO SCALE

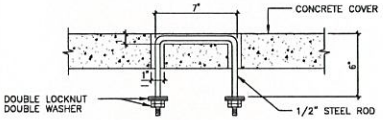
ITEM	BILL OF MATERIALS
1	5/8"ø X 8'-0" COPPER WELD GROUND ROD
2	5/8"ø COPPER GROUND ROD CLAMP
3	3/4"ø MAXIMUM GRAVEL SIZE, FILL TO FINISH FLOOR
4	#4 REBAR @ 10" O.C. VERTICAL
5	#4 REBAR @ 10" O.C. HORIZONTAL
6	#6 COPPER WIRE (SOLID) FOR GROUNDING HARDWARE
7	CONDUIT WITH END BELL 6" FROM FLOOR SLAB, SIZE AND QUANTITY AS REQUIRED
8	CABLE RACK HOT DIP GALVANIZED
9	HOOK TYPE INSULATOR
10	INSULATOR WELDED SUPPORT
11	PULLING IRON 7/8"ø GALVANIZED, LOCATED AT OPPOSITE END OF EACH CONDUIT ENTRANCE
12	6" THICK CONCRETE FLOOR SLAB AND WALL AT 3000 PSI YEILD STRENGTH OF GRADE 40 FOR REBARS
13	4" X 4" X 3/8" ANGLE IRON HOT DIP GALVANIZED
14	3/8"ø STEEL ROD WELDED TO FRAME EVERY 12" O.C.
15	SLOT FOR 1/2" BOLT AND LEAD ANCHOR
16	1/2"ø STEEL LIFTING DEVICE GALVANIZED
17	DOUBLE LOCKNUT, 1/2"ø HOLE
18	DOUBLE ROUND WASHER 2"ø WITH 5/8"ø HOLE
19	4" X 4" X 1/4" ANGLE IRON, HOT DIP GALVANIZED ALL AROUND
20	#4 HOR. REBAR WELDED TO ANGLE FRAME
21	#4 VERT. REBAR WELDED TO ANGLE FROM AND OTHER REBAR
22	4" THICK CONCRETE AT 3000 PSI
23	1/2"ø STEEL ROD LIFTING HANDLE

NOTES:

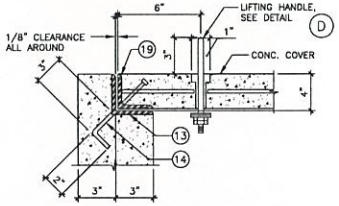
1. COORDINATE LAYOUT AND EXACT DIMENSIONS WITH GPA ENGINEERING PRIOR TO INSTALLATION.
2. THIS HANDHOLE IS TO BE USED IN LOCATIONS WHERE NOT MORE THAN 3 JUNCTIONS OF SECONDARY WILL BE INSTALLED.
3. GROUND ALL HARDWARE IN THE HANDHOLE.
4. TOP OF THE HANDHOLE SHALL BE FLUSH WITH THE SIDEWALK SURFACE, OTHERWISE THERE SHOULD BE A 2" CLEARANCE FROM THE FINISHED GROUND SURFACE.
5. AREA OF CONDUIT ENTRANCES SHOULD BE 6" MINIMUM FROM THE FLOOR SLAB, 10" MINIMUM FROM THE LEFT OR RIGHT SIDE WALL, AND 15" MINIMUM FROM THE TOP OF THE HANDHOLE.
6. PROVIDE APPROXIMATE 1/8" CLEARANCE BETWEEN HANDHOLE COVERS AND BETWEEN COVERS AND LEDGE SIDES.
7. ALL LETTERING SHALL BE 3" WITH A 1/4" EMBEDMENT.
8. INDICATE "GPA" ON EVERY HANDHOLE COVER WITH THE LETTER "S" FOR SECONDARY OR "P" FOR PRIMARY AND CENTERED AS SHOWN.



C CABLE RACK, INSULATOR AND PULLING IRON DETAILS
NOT TO SCALE



D LIFTING HANDLE DETAIL
NOT TO SCALE



E COVER SEAT MOUNTING DETAIL
NOT TO SCALE

ELECTRICAL SYMBOL LIST

EXIST	NEW	DESCRIPTION
		FLUORESCENT, FIXTURE
		RECEPTACLE, DUPLEX, 20A, 120V, NEMA 5-20R
	$a	SWITCH, FLUSH TUMLBER, WALL MOUNTED, "A" LETTER INDICATES FIXTURE OR DEVICE CONTROLLED BY SWITCH "a", OTHER LETTERS SAME
	D	SMOKE DETECTOR
	DA	SMOKE DETECTOR ASSOCIATED WITH FIRE PROTECTION SYSTEM
	H	HEAT DETECTOR
		FIRE ALARM MANUAL PULL STATION
		ALARM BELL
		VISUAL ALARM, WALL MOUNTED
		FIRE ALARM AUDIO/VISUAL ALARM, HORN
	M	MOTOR CONNECTION
	E	EQUIPMENT CONNECTION
		EQUIPMENT DISCONNECT SWITCH, HP RATED
		MAGNETIC MOTOR STARTER FURNISHED BY MECHANICAL, INSTALLED AND WIRED UNDER ELECTRICAL WORK
	FACP	FIRE ALARM CONTROL PANEL
	ANN (LCD)	FIRE ALARM ANNUNCIATOR
		RACEWAY, CONCEALED BELOW FINISH FLOOR OR GROUND. NUMBER OF WIRES WITHIN AS REQUIRED INCLUDING GROUND
		RACEWAY, EXPOSED, NUMBER OF WIRES WITHIN AS REQUIRED INCLUDING GROUND
	T	TELEPHONE RACEWAY
		ARROW, HOMERUN TO CABINET OR PANEL AS INDICATED. NUIMBER OF WIRES WITHIN AS REQUIRED INCLUDING GROUND
	E1.0	INDICATOR, DETAIL : TOP HALF–DETAIL NUMBER BOTTOM HALF–SHEET NUMBER (DETAIL LOCATION)
	A	LIGHT FIXTURE INDICATOR, "A" INDICATES TYPE A, OTHER LETTERS SAME
	1	NOTE INDICATOR
	AFF/AFG	ABOVE FINISH FLOOR/GRADE
	FA	FIRE ALARM
	GPA	GUAM POWER AUTHORITY
	GFD	GUAM FIRE DEPARTMENT

MOUNTING HEIGHT SCHEDULE
(UNLESS OTHERWISE INDICATED)

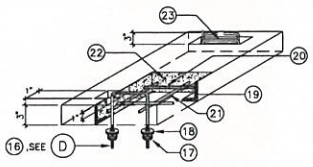
DEVICE ON PLAN	MOUNTING HEIGHT	REFERENCE POINT: FLOOR	CEILING	TO	Q	TOP	REMARKS
	4'-0"	•			•		
,	80"	•				•	WHICHEVER IS LOWER
	5'-6"	•				•	
	5'-6"	•				•	

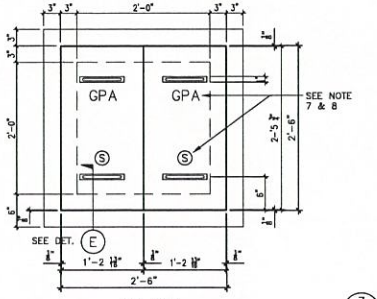
LIGHT FIXTURE SCHEDULE

FIXTURE TYPE	LAMP DATA NO.	WATTS	MOUNTING CEILING	WALL	DESCRIPTION	MANUFACTURER'S CAT. NO. OR APPROVED EQUAL
A	2	32	SURF.		FLUORESCENT, DAMP LOCATION ENCLOSED AND GASKETED FIXTURE, IMPACT RESISTANT UV RESISTANT, REINFORCED POLYESTER FIBERGLASS HOUSING. HIGH IMPACT ACRYLIC DIFFUSER. ELECTRONIC BALLAST.	LITHONIA DM232–AR–120–GEB
B	1	13		SURF.	COMPACT FLUORESCENT, DIE–CAST ALUMINUM HOUSING. OPAL GLASS DIFFUSER. SUITABLE FOR WET LOCATIONS.	PRESCOLITE WB13–2
C	1	22		SURF.	DECORATIVE WALL–PAKS, POLYCARBONATE CYLINDER, FLUORESCENT, DIE–CAST ALUMINUM HOUSING.	LITHONIA WPCW 22DTT 120 DWH

PANEL: "2F" | VOLTS: 120/208 | PHASE: 1ø | WIRE: 3W | A/C RATING: AIC
LOCATION: ■ INDOOR □ OUTDOOR □ DRY □ WET | ENCL. TYPE: NEMA 1 | MTG: ■ SURF. □ FLUSH | AMPERE: 50A | MAINS: ■ BREAKER □ LUGS ONLY
■ NEUTRAL BUS ■ GROUND BUS | □ ISOLATED GROUND BUS | NEUTRAL BUS GND. BONDING: □ YES ■ NO

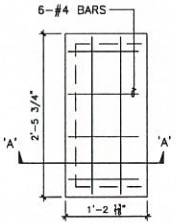
BRANCH CIRCUIT DESCRIPTION	WIRE SIZE	POLE / BKR	CKT NO.	LOAD – KVA A	LOAD – KVA B	CKT NO.	POLE / BKR	WIRE SIZE	BRANCH CIRCUIT DESCRIPTION
LIGHT/POWER–FOAM BLDG.	#12	1/20	1	0.4	0.4	2	1/20	#10	LIGHT/POWER–FIRE PUMP BLDG.
FIRE PUMP CONTROLLER	#10	1/20	3		1.9	4	1/20	#10	JACKET WATER HEATER
SPARE	–	1/20	5	1.0	1.0	6	1/20	–	SPARE
SPACE	–	–	7		–	8	–	–	SPACE
PFB	–	–	9	–	–	10	–	–	PFB
PFB	–	–	11	–	–	12	–	–	PFB
			TOTAL KVA/Ø:	2.8	3.4	REMARKS:			
			CONNECTED KVA:	6.2 KVA					
			DEMAND FACTOR:	80%	I = 23.85A				
			DEMAND LOAD:	4.96 KVA					

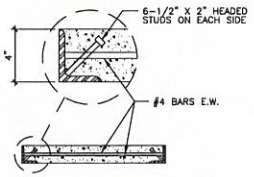




PLAN

B HANDHOLE COVER DETAIL
NOT TO SCALE





SECTION "A–A"

3 / E1.0 2'x2'x3' HANDHOLE DETAIL (TRAFFIC RATED)
NOT TO SCALE

GRAPHIC SCALE

BME & SONS INC.
GENERAL CONTRACTOR & EQUIPMENT RENTAL

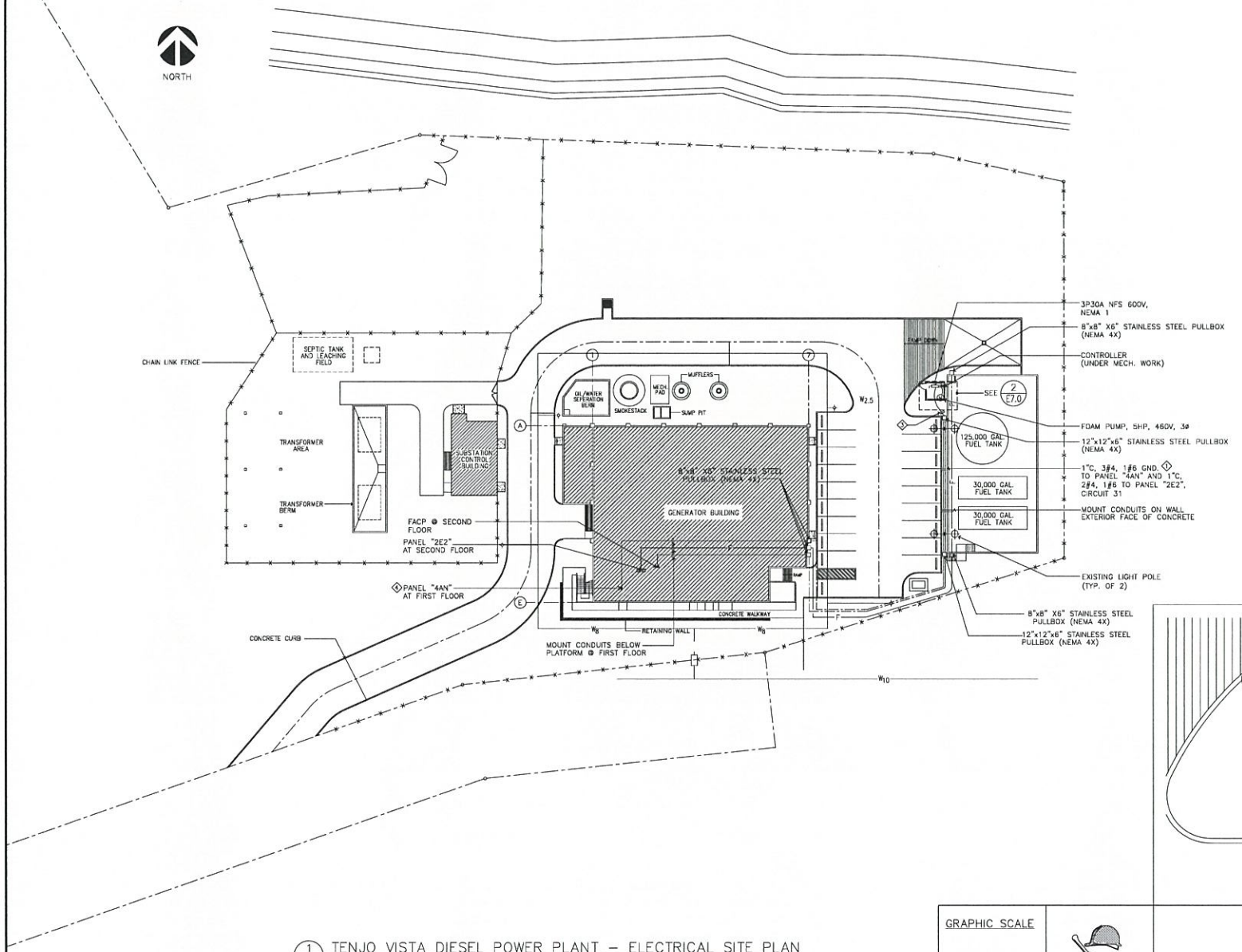
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.

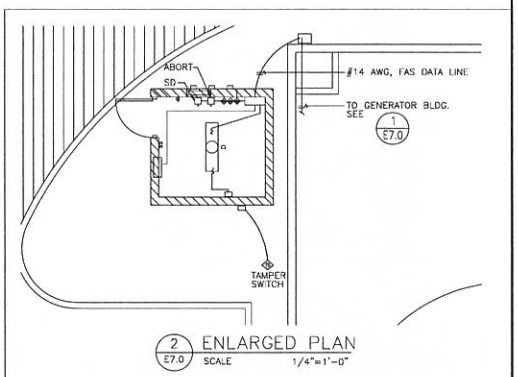
GUAM POWER AUTHORITY
P.O. BOX 2977, AGANA, GUAM USA 96910

DRAWING NO. E1.0
UPGRADE OF FIRE PROTECTION AND SMOKE ALARM SYSTEMS AT TENJO VISTA DIESEL POWER PLANT
DESIGNED
DRAWN
CHECKED
ELECTRICAL SYMBOL LIST & SCHEDULE
ENGINEER SUPERVISOR: PENNY B. TALADOC
DATE
J.O. NO. 100050
SCALE AS SHOWN
SHEET 18 OF 22
MANAGER OF ENGINEERING: JOVEN D. ACOSTA, P.E.
DATE
GENERAL MANAGER: JOAQUIN C. FLORES, P.E.
DATE

AS–BUILT DRAWINGS | E1.0

REVISIONS				
SYMBOL	DESCRIPTION	INT.	DATE	APP'D.





2/E7.0 ENLARGED PLAN
SCALE 1/4"=1'-0"

1/E7.0 TENJO VISTA DIESEL POWER PLANT – ELECTRICAL SITE PLAN
SCALE 1"=20'-0"

GRAPHIC SCALE
20' 10' 0' 20'
SCALE: 1"=20'-0"
4' 2' 0' 4'
SCALE: 1/4"=1'-0"

BME & SONS INC.
GENERAL CONTRACTOR & EQUIPMENT RENTAL

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.

AS-BUILT DRAWINGS E7.0

GUAM POWER AUTHORITY
P.O. BOX 2977, AGANA, GUAM USA 96910

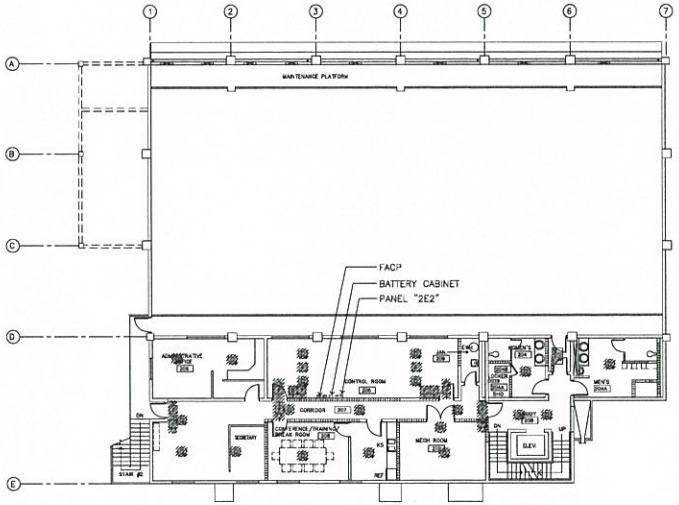
DRAWING NO.	E7.0
DESIGNED	
DRAWN	
CHECKED	
ENGINEER SUPERVISOR	PERRY B. TALADOC
MANAGER OF ENGINEERING	JOVEN C. ACOSTA, P.E.

UPGRADE OF FIRE PROTECTION AND SMOKE ALARM SYSTEMS AT TENJO VISTA DIESEL POWER PLANT

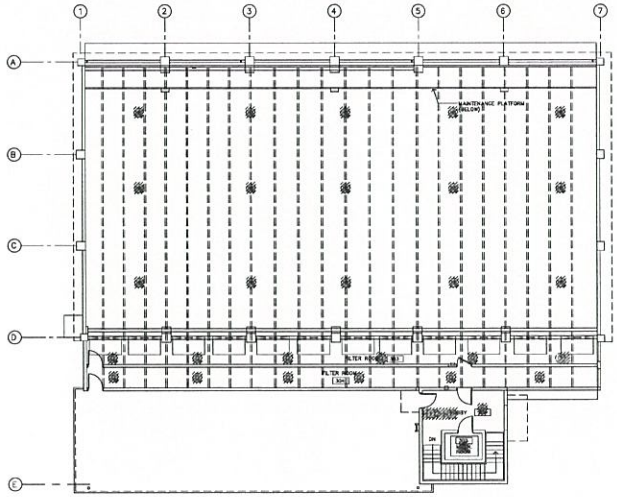
TENJO VISTA DIESEL POWER PLANT – ELECTRICAL SITE PLAN

DATE	J.O. NO.	SCALE	SHEET
	100055	AS SHOWN	19 OF 22
DATE	GENERAL MANAGER JOAQUIN C. FLORES, P.E.		DATE

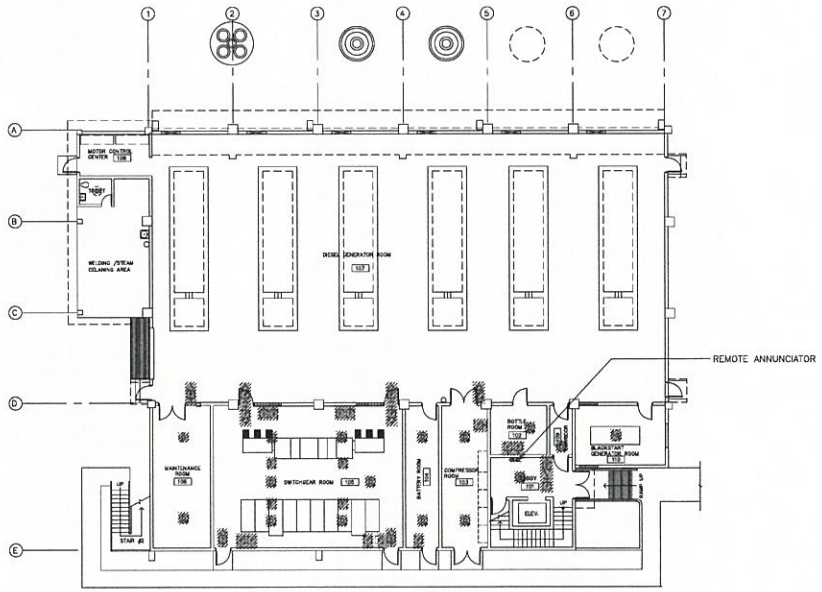
REVISIONS				
SYMBOL	DESCRIPTION	INT.	DATE	APP'D.



2 E7.1 TENJO VISTA DIESEL POWER PLANT – SECOND FLOOR REMOVAL FIRE ALARM PLAN
SCALE: 3/32"=1'-0"



3 E7.1 TENJO VISTA DIESEL POWER PLANT – THIRD FLOOR REMOVAL FIRE ALARM PLAN
SCALE: 3/32"=1'-0"



1 E7.1 TENJO VISTA DIESEL POWER PLANT – FIRST FLOOR REMOVAL FIRE ALARM PLAN
SCALE: 3/32"=1'-0"

AS-BUILT DRAWINGS E7.1

GRAPHIC SCALE
10' 5' 0 10'
SCALE: 3/32"=1'-0"

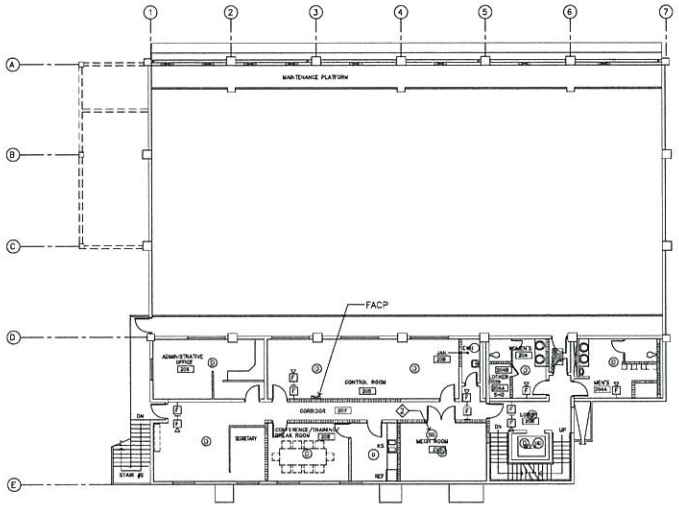
BME & SONS INC.
GENERAL CONTRACTOR & EQUIPMENT RENTAL

I, HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.

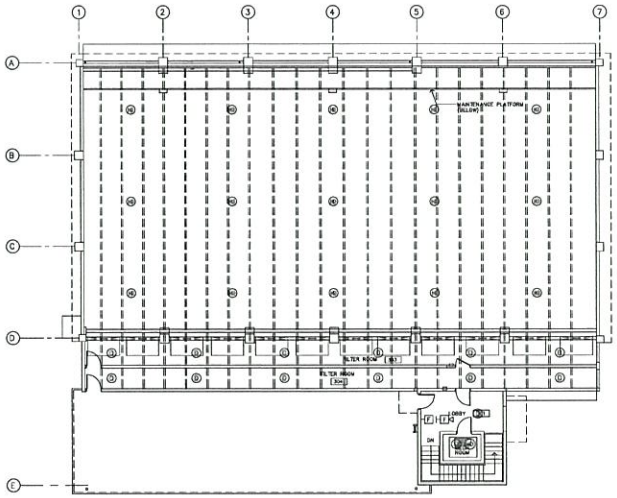
GUAM POWER AUTHORITY
P.O. BOX 2977, AGANA, GUAM USA 96910

DRAWING NO. E7.1	UPGRADE OF FIRE PROTECTION AND SMOKE ALARM SYSTEMS AT TENJO VISTA DIESEL POWER PLANT
DESIGNED	
DRAWN	TENJO VISTA DIESEL POWER PLANT – REMOVAL FIRE ALARM PLAN
CHECKED	
ENGINEER SUPERVISOR PERRY B. TALADOC	DATE / J.O. NO. 100055 / SCALE AS SHOWN / SHEET 20 of 22
MANAGER OF ENGINEERING JOVEN C. ACOSTA, P.E.	DATE / GENERAL MANAGER JOAQUIN C. FLORES, P.E. / DATE

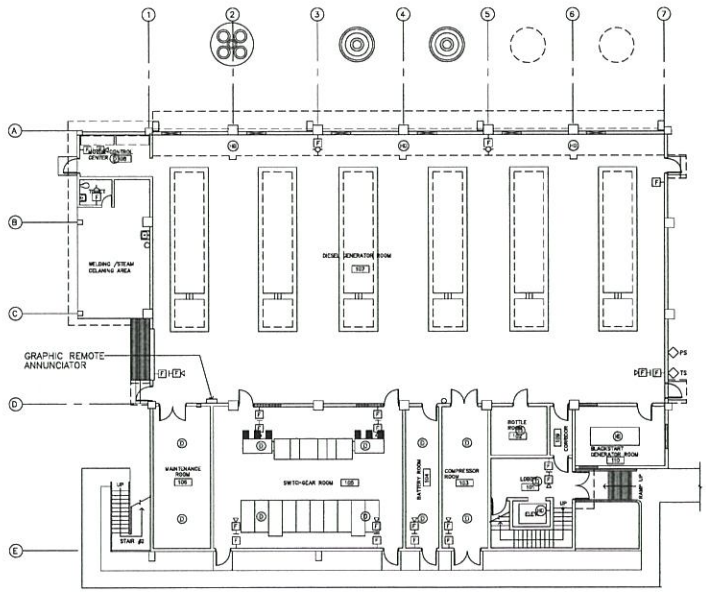
REVISIONS				
SYMBOL	DESCRIPTION	INT.	DATE	APP'D.



2 / E7.2 TENJO VISTA DIESEL POWER PLANT – SECOND FLOOR FIRE ALARM PLAN
SCALE: 3/32"=1'-0"



3 / E7.2 TENJO VISTA DIESEL POWER PLANT – THIRD FLOOR FIRE ALARM PLAN
SCALE: 3/32"=1'-0"



1 / E7.2 TENJO VISTA DIESEL POWER PLANT – FIRST FLOOR FIRE ALARM PLAN
SCALE: 3/32"=1'-0"

AS-BUILT DRAWINGS E7.2

GRAPHIC SCALE
10' 5' 0 10'
SCALE: 3/32"=1'-0"

BME & SONS INC.
GENERAL CONTRACTOR & EQUIPMENT RENTAL

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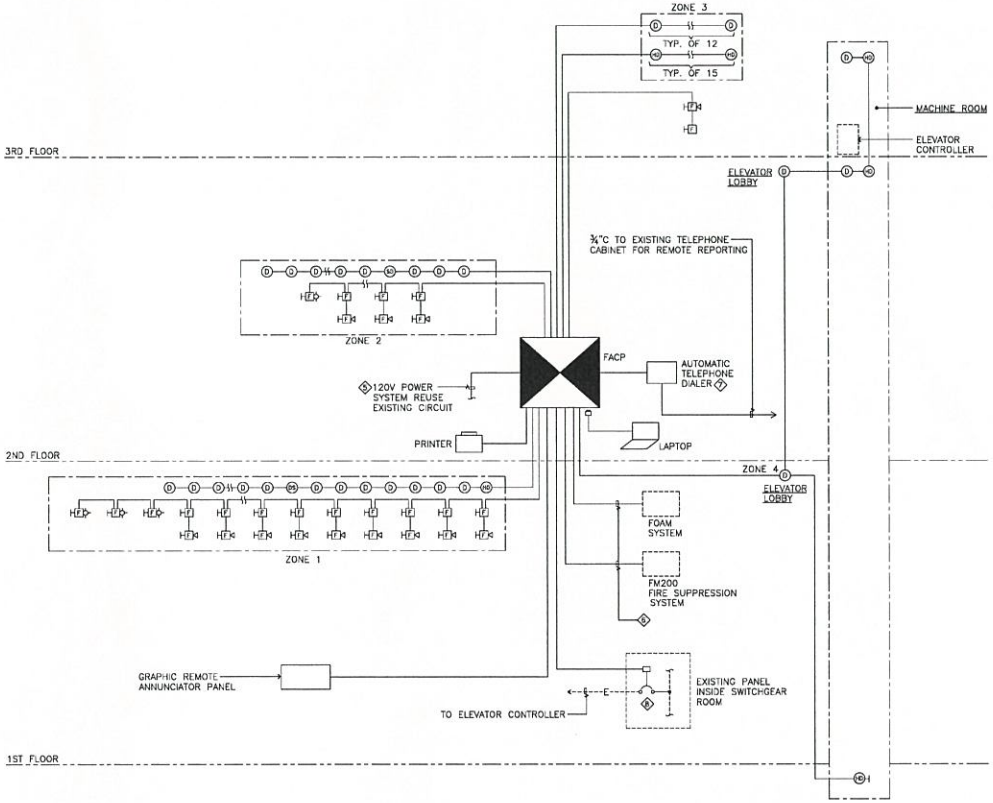
GUAM POWER AUTHORITY
P.O. BOX 2977, AGANA, GUAM USA 96910

DRAWING NO. E7.2	UPGRADE OF FIRE PROTECTION AND SMOKE ALARM SYSTEMS AT TENJO VISTA DIESEL POWER PLANT
DESIGNED	
DRAWN	TENJO VISTA DIESEL POWER PLANT – NEW FIRE ALARM PLAN
CHECKED	
ENGINEER SUPERVISOR: FERRY B. TALADOC	DATE: J.O. NO. 100055 SCALE: AS SHOWN SHEET: 21 of 22
MANAGER OF ENGINEERING: JOVEN D. ACOSTA, P.E.	DATE: GENERAL MANAGER: JOAQUIN C. FLORES, P.E. DATE:

REVISIONS				
SYMBOL	DESCRIPTION	INT.	DATE	APP'D.



1 E7.3 TENJO VISTA DIESEL POWER PLANT – RISER DIAGRAM
NOT TO SCALE

SYSTEM INPUT	SYSTEM OUTPUT	ANNUNCIATE ALARM SIGNAL AT FACP	ANNUNCIATE SUPERVISORY SIGNAL AT FACP	ANNUNCIATE TROUBLE SIGNAL AT FACP	TRANSMIT SIGNAL TO ALL ANNUNCIATORS	INITIATE AUTOMATIC TELEPHONE DIALER TO CALL OPA DISPATCH	INITIATE AUDIO AND VISUAL NOTIFICATION DEVICES	SHUT DOWN ASSOCIATED AIR HANDLING UNIT	SHUT DOWN ELEVATOR POWER	SEND ELEVATOR TO DESIGNATED FLOOR	RELEASE DOOR HOLDERS	CLOSE DAMPER
MANUAL PULL STATION		•			•	•	•				•	
SMOKE DETECTOR, HEAT DETECTOR		•			•	•	•					
DUCT SMOKE DETECTOR (FIRE/SMOKE DAMPER)				•	•	•	•	•			•	•
TAMPER SWITCH			•		•	•					•	
SPRINKLER PRESSURE SWITCH		•			•	•	•				•	
WATER FLOW SWITCH		•			•	•	•					
ELEVATOR LOBBY SMOKE DETECTOR		•			•	•	•			•	•	
ELEVATOR MACHINE ROOM SMOKE DETECTOR		•			•	•	•			•	•	
ELEVATOR MACHINE ROOM HEAT DETECTOR		•			•	•	•		•	•	•	
ELEVATOR SHAFT HEAT DETECTOR		•			•	•	•		•	•	•	
ELEVATOR PIT HEAT DETECTOR		•			•	•	•		•	•		
FM 200 SYSTEM ACTIVATION		•			•	•	•			•	•	
FOAM SYSTEM ACTIVATION		•			•	•	•			•	•	
ANY TROUBLE CONDITION				•								

2 E7.3 TENJO VISTA DIESEL POWER PLANT – FIRE ALARM MATRIX TABLE
NOT TO SCALE

AS-BUILT DRAWINGS E7.3

GRAPHIC SCALE

BME & SONS INC.
GENERAL CONTRACTOR & EQUIPMENT RENTAL

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.

GUAM POWER AUTHORITY
P.O. BOX 2977, AGANA, GUAM USA 96910

DRAWING NO. E7.3	UPGRADE OF FIRE PROTECTION AND SMOKE ALARM SYSTEMS AT TENJO VISTA DIESEL POWER PLANT
DESIGNED	
DRAWN	TENJO VISTA DIESEL POWER PLANT – RISER DIAGRAM & FIRE ALARM MATRIX TABLE
CHECKED	
ENGINEER SUPERVISOR FERRY B. TALACOC	DATE / J.O. NO. 100055 / SCALE AS SHOWN / SHEET 22 of 22
MANAGER OF ENGINEERING JOVEN G. ACOSTA, P.E.	DATE / GENERAL MANAGER JOAQUIN C. FLORES, P.E. / DATE

REVISIONS				
SYMBOL	DESCRIPTION	INT.	DATE	APP'D.

LEGEND:

SYMBOL	ABBREVIATION	DESCRIPTION
	PS	PULL STATION
		CONTROL PANEL
SD		SMOKE DETECTOR
D		DETECTOR BASE
		THERMAL DETECTOR
N OR	N	NOZZLE
A		ABORT SWITCH
P		PRESSURE SWITCH
R		RELEASE BUTTON - HALON
M		MOTORIZED DAMPER
	PFE	PORTABLE FIRE EXTINGUISHER
	PFEC	PORTABLE FIRE EXTINGUISHER WITH CABINET
R		STROBE RED
A		STROBE AMBER
S	S	SIREN
H	H	HORN
B	B	BELL
		PIPE ELBOW, DOWN
		PIPE ELBOW, UP
		PIPE TEE, DN
		PIPE TEE, UP
		PIPE CAP OR PLUG
	BV	BALL VALVE
	AFF	ABOVE FLOOR FINISH
	CT	COMBUSTION TURBINE
	CONT'N.	CONTINUATION
	GV	GATE VALVE
	N.O.	NORMALLY OPEN
	N.C.	NORMALLY CLOSED
	O.S.&Y.	OUTSIDE STEM & YOKE
	PG	PRESSURE GAUGE
	SP	STATIC PRESSURE
	TYP.	TYPICAL

SCOPE OF WORK:

1. TENJO VISTA DIESEL POWER PLANT

   POWER PLANT

   A. PROVIDE WET TYPE SPRINKLER FIRE PROTECTION SYSTEM.

   B. PROVIDE NEW BACKFLOW PREVENTER

   C. REMOVE EXISTG. AND PROVIDE NEW FIRE ALARM SYSTEM

   D. RE-CHARGE EXISTING PORTABLE FIRE EXTINGUISHERS.

   CONTROL ROOM/SWITCHGEAR ROOM

   A. RE-COMMISSION EXISTING FM-200 FIRE SUPPRESSION SYSTEM.

   B. RE-CHARGE EXISTING PORTABLE FIRE EXTINGUISHERS.

   OFFICES

   A. PROVIDE WET TYPE SPRINKLER FIRE PROTECTION SYSTEM.

   B. RE-CHARGE EXISTING PORTABLE FIRE EXTINGUISHERS.

   FUEL STORAGE TANKS

   A. PROVIDE FOAM FIRE FIGHTING SYSTEM.

   B. PROVIDE NEW FOAM BUILDING

AS-BUILT DRAWINGS FP1.0

GRAPHIC SCALE

30' 15' 10' 5' 0 10' 30'

SCALE: 1"=20'-0"

BME & SONS INC.

GENERAL CONTRACTOR & EQUIPMENT RENTAL

P.O. Box 24403, GMF, Barrigada, Guam 96921
Tel: 671.565.2263 Fax: 671.565.2269
Email: bmeguam@ite.net

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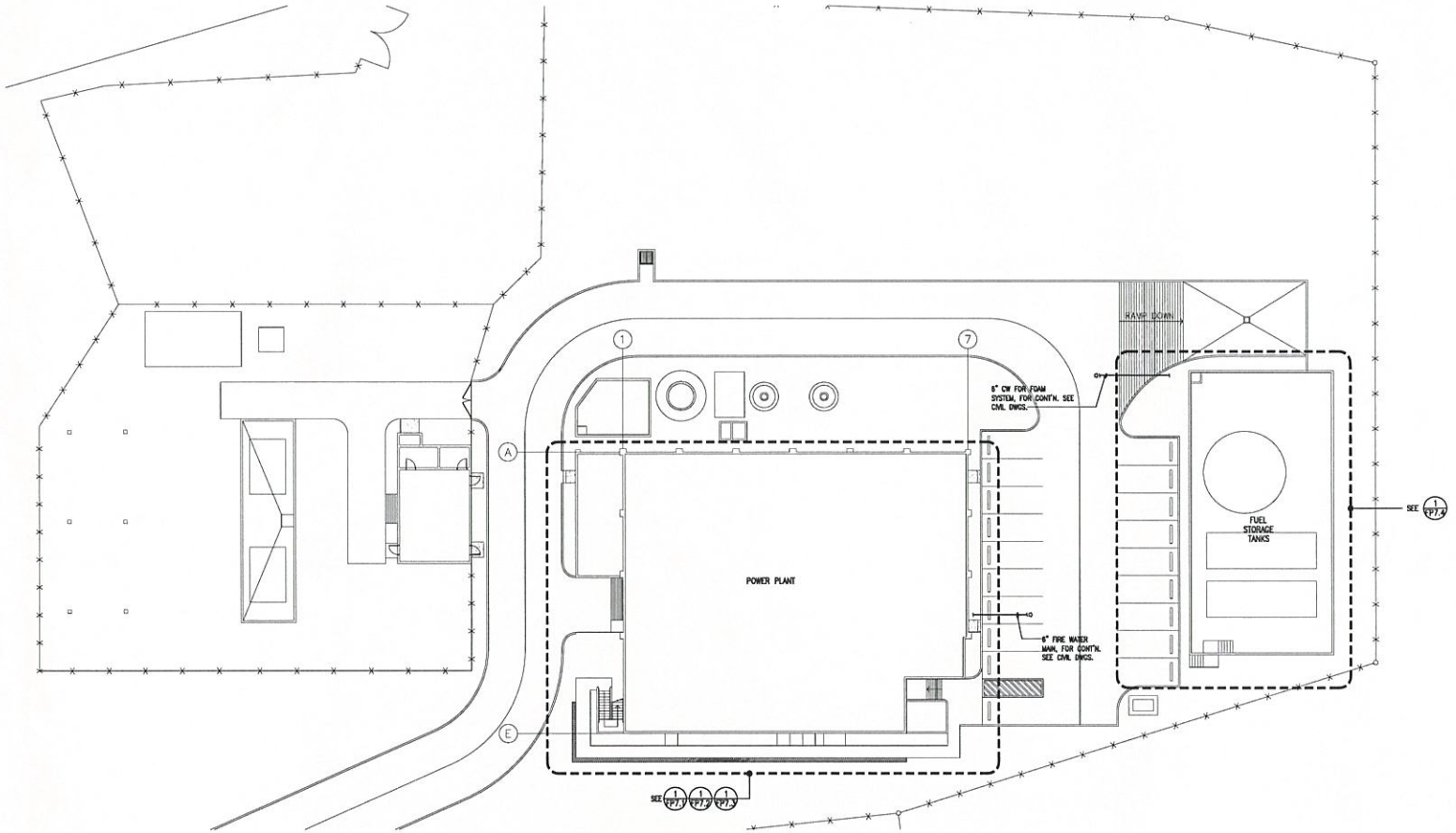
GUAM POWER AUTHORITY
P.O. BOX 2977, AGANA, GUAM USA 96910

DRAWING NO. FP1.0	UPGRADE OF FIRE PROTECTION AND SMOKE ALARM SYSTEMS AT TENJO VISTA DIESEL POWER PLANT
DESIGNED	LEGEND
DRAWN	
CHECKED	
ENGINEER SUPERVISOR: PERRY G. SALADOC	DATE:
JOB NO. 100056	SCALE: AS SHOWN
SHEET 10 of 22	
DIVISION OF ENGINEERING: JOVEN D. ACOSTA, P.E.	DATE:
DIVISION MANAGER: JOAQUIN C. FLORES, P.E.	DATE

REVISIONS				
SYMBOL	DESCRIPTION	INT.	DATE	APP'D.



1 FP7.0 FIRE PROTECTION SITE PLAN
SCALE 1"=15'-0"

GRAPHIC SCALE
15' 10' 5' 0 15'
SCALE: 1"=15'-0"

AS-BUILT DRAWINGS FP7.0

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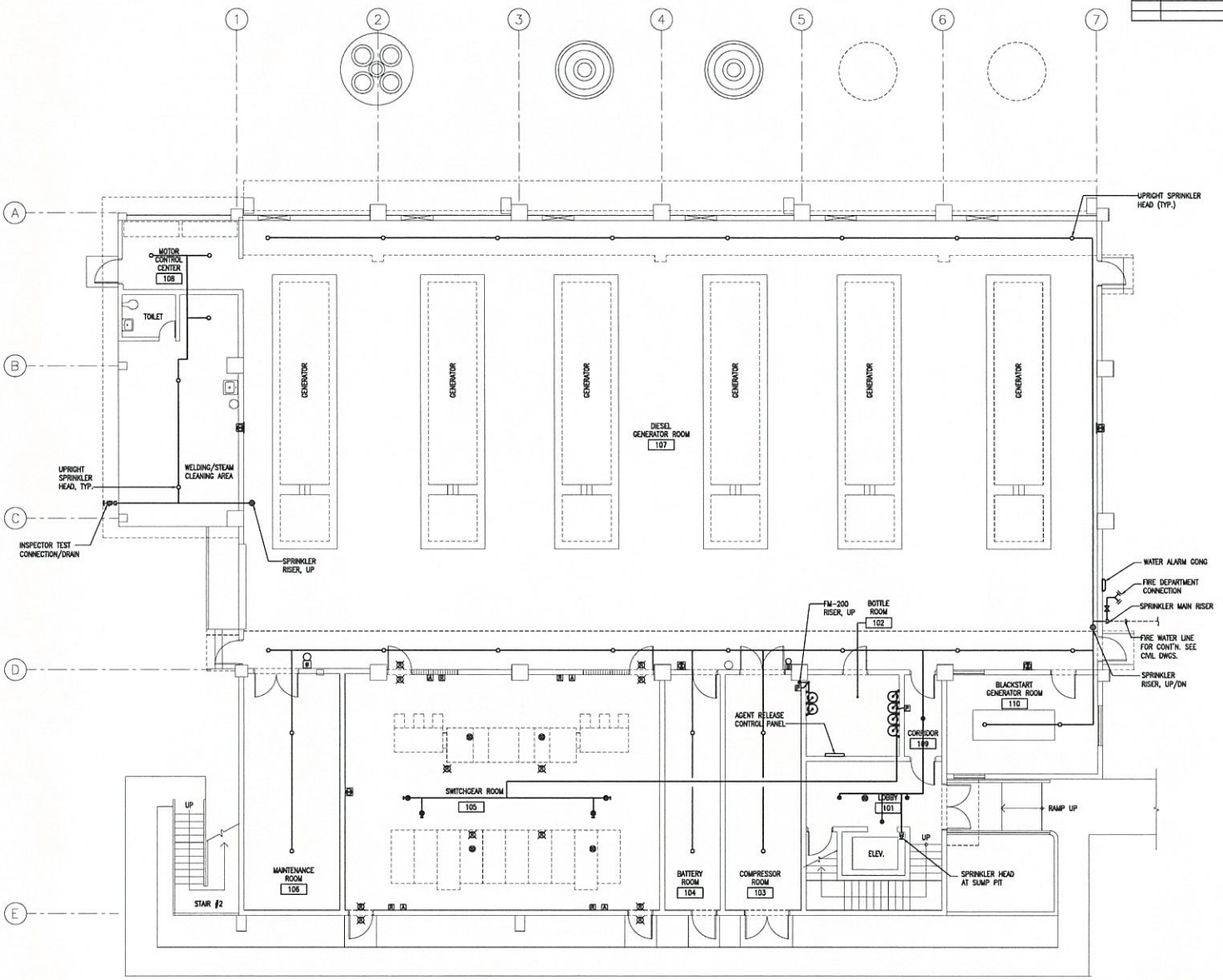
P.O. BOX 2977, AGANA, GUAM USA 96910

DRAWING NO. FP7.0	UPGRADE OF FIRE PROTECTION AND SMOKE ALARM SYSTEMS AT TENJO VISTA DIESEL POWER PLANT
DESIGNED	
DRAWN	TENJO VISTA DIESEL POWER PLANT – SITE PLAN
CHECKED	
ENGINEER SUPERVISOR PERRY B. TALADOC	DATE / JOB NO. 100055 / SCALE AS SHOWN / SHEET 10 OF 22
MANAGER OF ENGINEERING JOHN G. ACOSTA, P.E.	DATE / GENERAL MANAGER JOAQUIN C. FLORES, P.E. / DATE

REVISIONS				
SYMBOL	DESCRIPTION	INT.	DATE	APP'D.



1 FIRE PROTECTION PLAN - FIRST FLOOR
FP6.1 SCALE 3/16"=1'-0"

GRAPHIC SCALE

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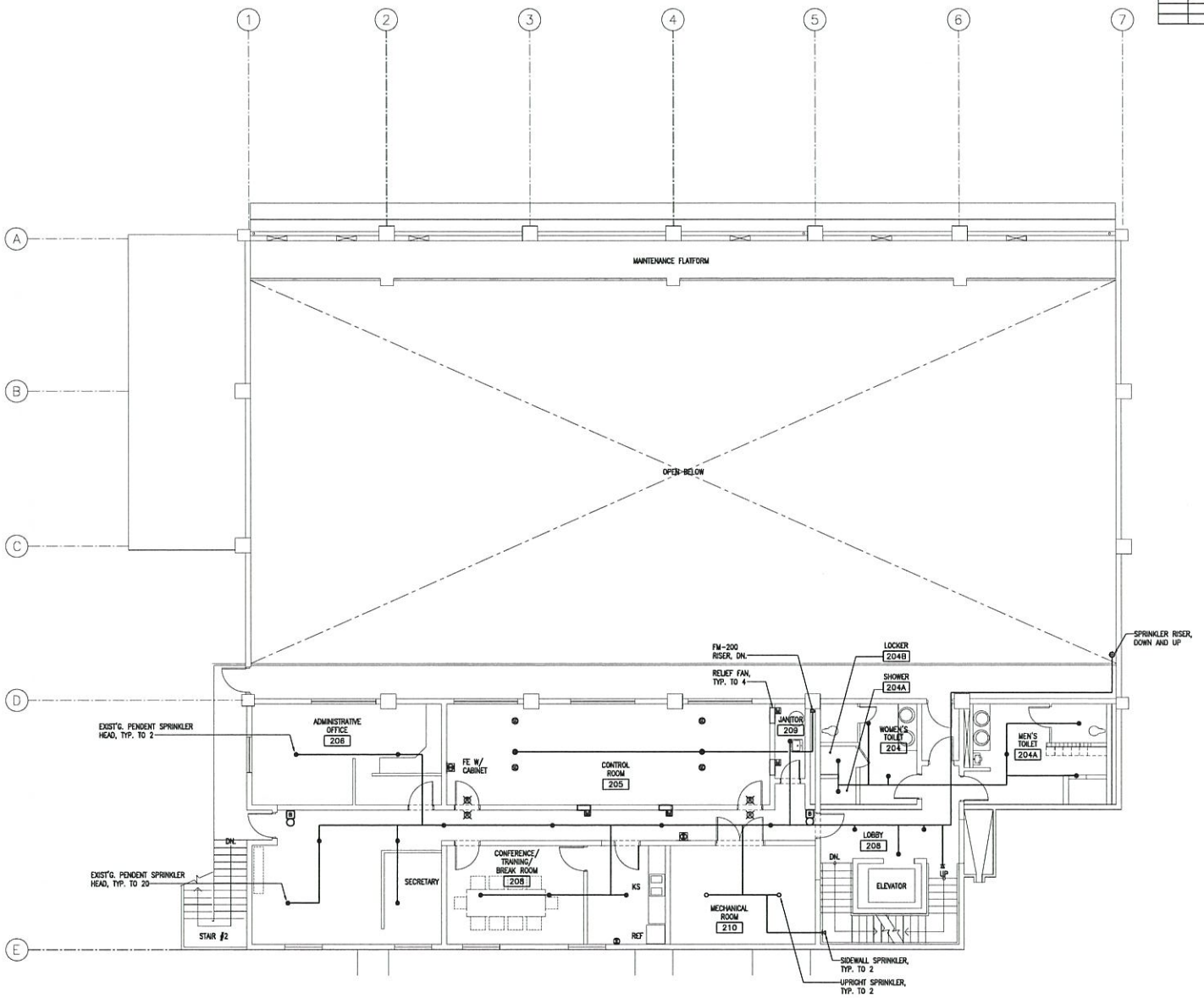
DRAWING NO. FP7.1	UPGRADE OF FIRE PROTECTION AND SMOKE ALARM SYSTEMS AT TENJO VISTA DIESEL POWER PLANT
DESIGNED	TENJO VISTA DIESEL POWER PLANT – FM-200 FIRE SUPPRESSION SYSTEM RE-COMMISSIONING PLAN
DRAWN	
CHECKED	
PROJECT SUPERVISOR PERRY B. TALADOC	DATE
MANAGER OF ENGINEERING JOHN G. ACOSTA, P.E.	DATE
LA. NO. 100055	SCALE AS SHOWN
GENERAL MANAGER JOAQUIN C. FLORES, P.E.	DATE
SHEET 12 OF 22	

AS-BUILT DRAWINGS FP7.1

REVISIONS				
SYMBOL	DESCRIPTION	INT.	DATE	APP'D.



1 FP7.2 FIRE PROTECTION PLAN - SECOND FLOOR
SCALE 3/16"=1'-0"

AS-BUILT DRAWINGS FP7.2

GRAPHIC SCALE
4' 2' 1' 0 2' 4'
SCALE: 3/16"=1'-0"

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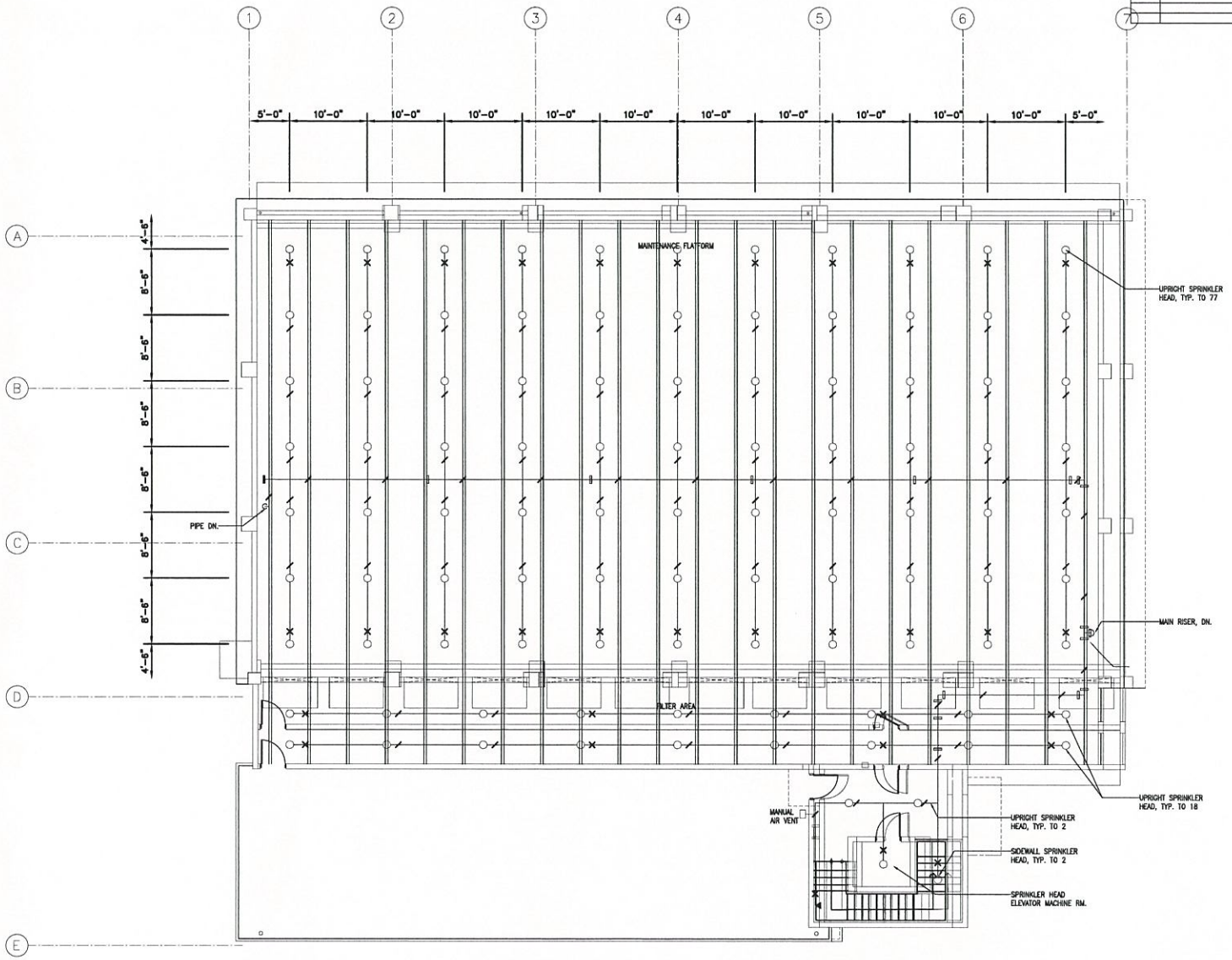
DRAWING NO. FP7.2	UPGRADE OF FIRE PROTECTION AND SMOKE ALARM SYSTEMS AT TENJO VISTA DIESEL POWER PLANT
DESIGNED	
DRAWN	TENJO VISTA DIESEL POWER PLANT – FIRE PROTECTION PLAN (SECOND FLOOR)
CHECKED	
ENGINEER SUPERVISOR: PERRY B. TALACOC	DATE / JOB NO. 100066 / SCALE AS SHOWN / SHEET 13 of 22
MANAGER OF ENGINEERING: JOVEN G. ACOSTA, P.E.	DATE / ORIGINAL MANAGER: JOAQUIN C. FLORES, P.E. / DATE

REVISIONS				
SYMBOL	DESCRIPTION	INT.	DATE	APP'D.



1 FP7.3 FIRE PROTECTION PLAN - THIRD FLOOR
SCALE 3/16"=1'-0"

GRAPHIC SCALE
SCALE: 3/16"=1'-0"

AS-BUILT DRAWINGS FP7.3

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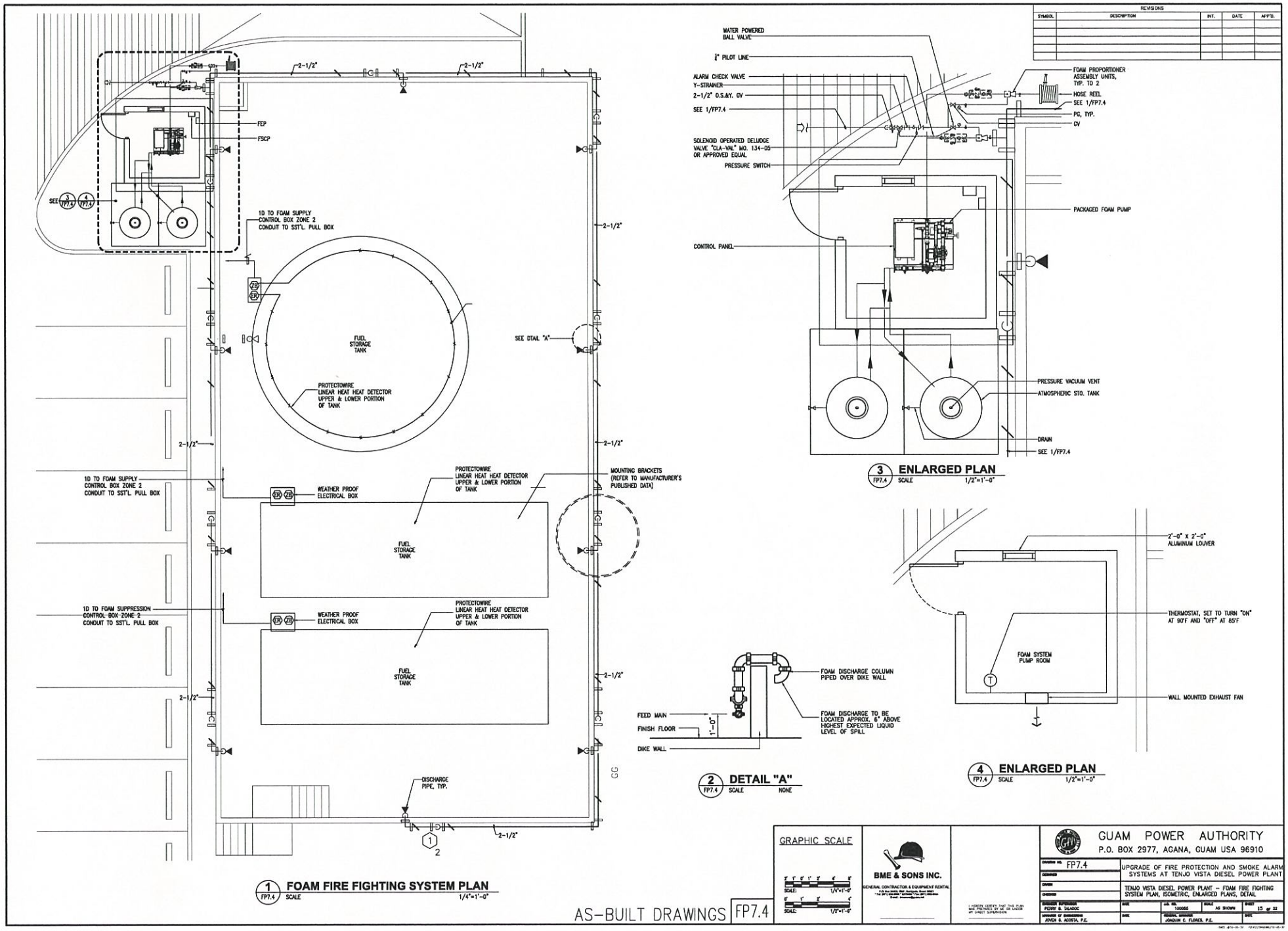
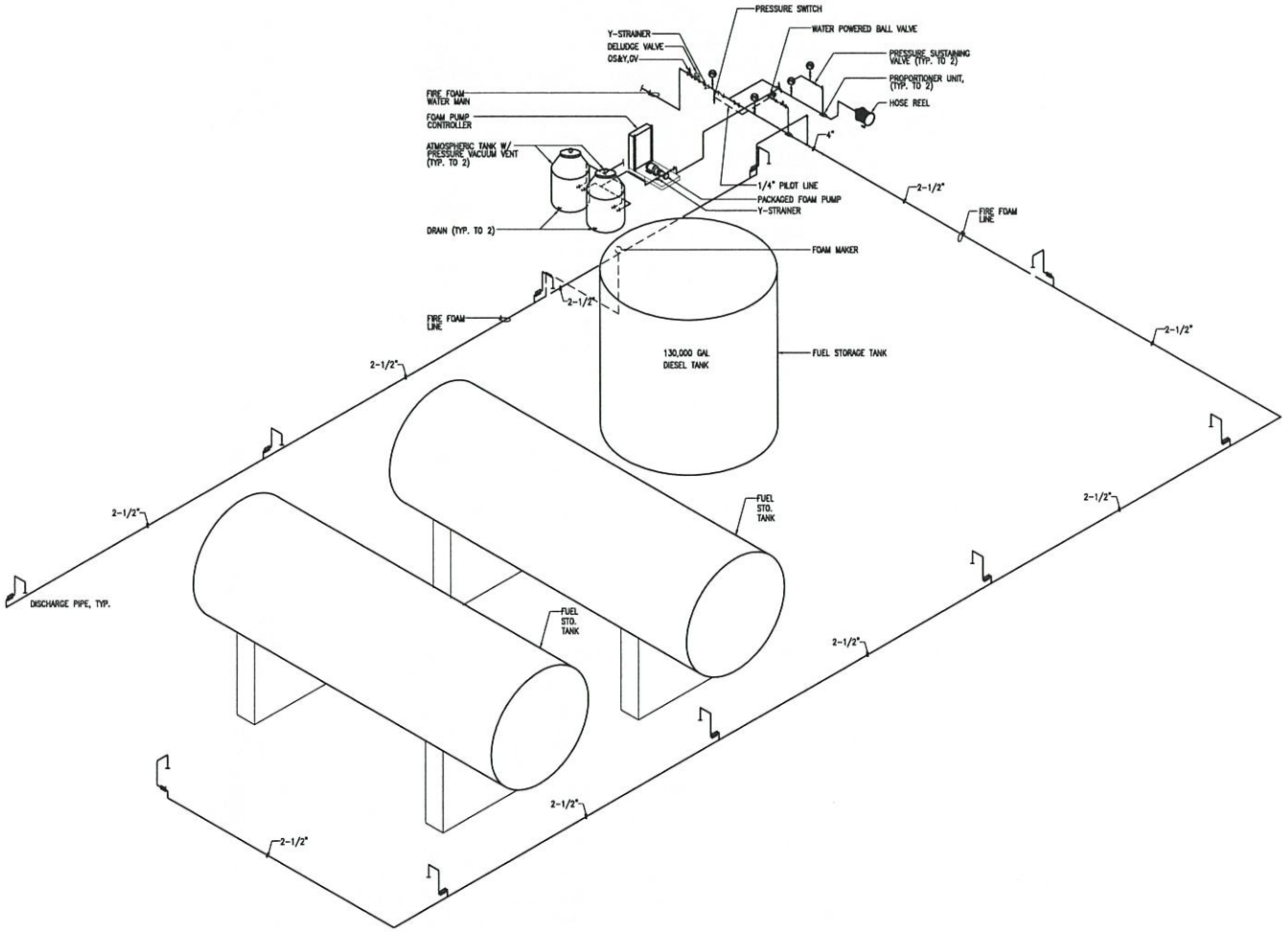
GUAM POWER AUTHORITY
P.O. BOX 2977, AGANA, GUAM USA 96910

DRAWING NO.	FP7.3
DESIGNED	
DRAWN	
CHECKED	
PROJECT TITLE	UPGRADE OF FIRE PROTECTION AND SMOKE ALARM SYSTEMS AT TENJO VISTA DIESEL POWER PLANT
DRAWING TITLE	TENJO VISTA DIESEL POWER PLANT – FIRE PROTECTION PLAN (THIRD FLOOR)
PROJECT SUPERVISOR	PERRY B. SALADOC
MANAGER OF ENGINEERING	JOVEN G. ACOSTA, P.E.
A.A. NO.	100056
SCALE	AS SHOWN
SHEET	14 of 22
GENERAL MANAGER	JOAQUIN C. FLORES, P.E.
DATE	



REVISIONS
SYMBOL
DESCRIPTION
INT.
DATE
APP'D.
2-1/2"
FEP
FSCP
SEE 3 FP7.4 4 FP7.4
1D TO FOAM SUPPLY CONTROL BOX ZONE 2 CONDUIT TO SST'L. PULL BOX
FUEL STORAGE TANK
PROTECTOWIRE LINEAR HEAT HEAT DETECTOR UPPER & LOWER PORTION OF TANK
SEE DTAIL "A"
1D TO FOAM SUPPLY CONTROL BOX ZONE 2 CONDUIT TO SST'L. PULL BOX
WEATHER PROOF ELECTRICAL BOX
MOUNTING BRACKETS (REFER TO MANUFACTURER'S PUBLISHED DATA)
1D TO FOAM SUPPRESSION CONTROL BOX ZONE 2 CONDUIT TO SST'L. PULL BOX
DISCHARGE PIPE, TYP.
GG
1
2
1 FOAM FIRE FIGHTING SYSTEM PLAN
FP7.4 SCALE 1/4"=1'-0"
WATER POWERED BALL VALVE
¼" PILOT LINE
ALARM CHECK VALVE
Y-STRAINER
2-1/2" O.S.&Y. GV
SEE 1/FP7.4
SOLENOID OPERATED DELUDGE VALVE "CLA-VAL" MO. 134-05 OR APPROVED EQUAL
PRESSURE SWITCH
FOAM PROPORTIONER ASSEMBLY UNITS, TYP. TO 2
HOSE REEL
SEE 1/FP7.4
PG, TYP.
GV
PACKAGED FOAM PUMP
CONTROL PANEL
PRESSURE VACUUM VENT
ATMOSPHERIC STO. TANK
DRAIN
SEE 1/FP7.4
3 ENLARGED PLAN
FP7.4 SCALE 1/2"=1'-0"
FOAM DISCHARGE COLUMN PIPED OVER DIKE WALL
FOAM DISCHARGE TO BE LOCATED APPROX. 6" ABOVE HIGHEST EXPECTED LIQUID LEVEL OF SPILL
FEED MAIN
FINISH FLOOR
DIKE WALL
1'-0"
2 DETAIL "A"
FP7.4 SCALE NONE
2'-0" X 2'-0" ALUMINUM LOUVER
THERMOSTAT, SET TO TURN "ON" AT 90°F AND "OFF" AT 85°F
FOAM SYSTEM PUMP ROOM
WALL MOUNTED EXHAUST FAN
4 ENLARGED PLAN
FP7.4 SCALE 1/2"=1'-0"
GRAPHIC SCALE
SCALE: 1/4"=1'-0"
SCALE: 1/2"=1'-0"
BME & SONS INC.
GENERAL CONTRACTOR & EQUIPMENT RENTAL
GUAM POWER AUTHORITY
P.O. BOX 2977, AGANA, GUAM USA 96910
FP7.4
UPGRADE OF FIRE PROTECTION AND SMOKE ALARM SYSTEMS AT TENJO VISTA DIESEL POWER PLANT
TENJO VISTA DIESEL POWER PLANT – FOAM FIRE FIGHTING SYSTEM PLAN, ISOMETRIC, ENLARGED PLANS, DETAIL
PERRY B. TALADOC
JOVEN G. ACOSTA, P.E.
100066
AS SHOWN
15 of 22
JOAQUIN C. FLORES, P.E.
AS-BUILT DRAWINGS FP7.4

REVISIONS				
SYMBOL	DESCRIPTION	INT.	DATE	APP'D.



1 FP7.5 **FOAM FIRE FIGHTING SYSTEM PIPING ISOMETRIC**
NOT TO SCALE

GRAPHIC SCALE

AS-BUILT DRAWINGS FP7.5

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DRAWING NO. FP7.5

UPGRADE OF FIRE PROTECTION AND SMOKE ALARM SYSTEMS AT TENJO VISTA DIESEL POWER PLANT

TENJO VISTA DIESEL POWER PLANT – FOAM FIRE FIGHTING SYSTEM PIPING ISOMETRIC

DESIGNER SUPERVISOR: PERRY B. TALADOC	DATE	J.O. NO. 100055	SCALE: AS SHOWN	SHEET 16 OF 22
MANAGER OF ENGINEERING: JOVEN G. ACOSTA, P.E.	DATE	MANAGER, MANAGER: JOAQUIN C. FLORES, P.E.	DATE

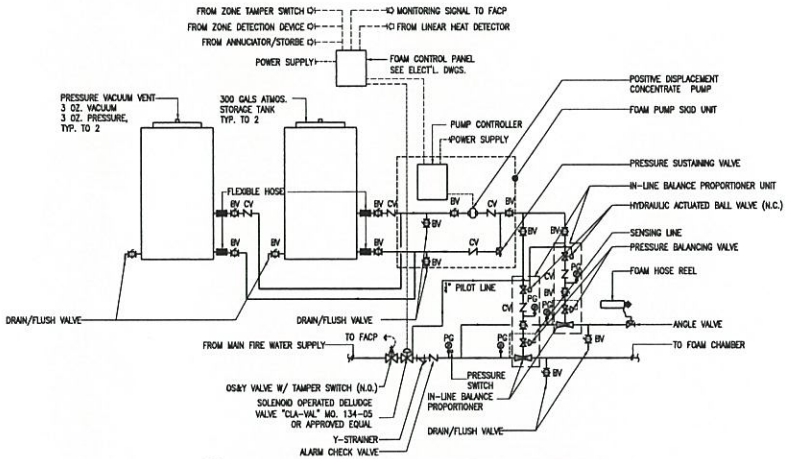
REVISIONS				
SYMBOL	DESCRIPTION	INT.	DATE	APP'D.

SEQUENCE OF OPERATION

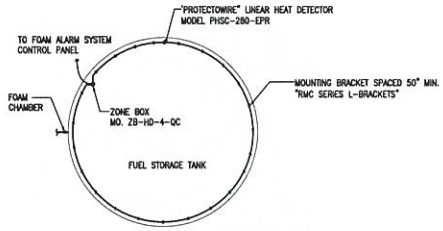
1. A REMOTE SIGNAL FROM LINEAR HEAT DETECTORS LOCATED AT HAZARD AREA IS RECEIVED BY THE FOAM PUMP CONTROL PANEL. FOAM PUMP CONTROL PANEL WILL SEND SIGNAL TO MAIN FIRE ALARM CONTROL PANEL TO ACTIVATE ALARM SYSTEM.
2. MOTORIZED VALVE AT MAIN FIRE WATER SUPPLY WILL OPEN ALLOWING WATER TO FLOW AT ALARM CHECK VALVE DOWNSTREAM OF IN-LINE BALANCE PROPORTIONER UNIT CONSEQUENTLY OPENING THE HYDRAULIC ACTUATED BALL VALVE TO ALLOW FOAM CONCENTRATE TO FLOW THROUGH THE IN-LINE BALANCE PROPORTIONER UNIT.
3. THE FOAM PUMP CONTROLLER STARTS THE ELECTRIC MOTOR WHICH IN TURN DRIVES THE FOAM CONCENTRATE PUMP.
4. THE FOAM CONCENTRATE PUMP DELIVERS FOAM CONCENTRATE TO THE IN-LINE BALANCE PROPORTIONER UNIT AT PRESSURE DETERMINED BY THE PRESSURE SUSTAINING VALVE. THE PRESSURE SETTING IS TYPICALLY 20-30 PSI HIGHER THAN THE AVAILABLE WATER PRESSURE AT THE IN-LINE BALANCE PROPORTIONER UNIT.
5. THE IN-LINE BALANCE PROPORTIONER UNIT BALANCES THE PRESSURE OF THE FOAM CONCENTRATE TO THE FIRE WATER SUPPLY VIA BALANCING VALVE SENSING LINES. EXCESS FOAM CONCENTRATE IS ROUTED BACK TO THE FOAM CONCENTRATE TANK VIA RETURN LINES.
6. THE FOAM CONCENTRATE ENTERS THE SIDE OF THE RATIO FLOW CONTROLLER OF THE IN-LINE BALANCE PROPORTIONER AND MIXES WITH THE FIRE WATER AT DESIRED PERCENTAGE OF 3% CONCENTRATE TO 97% WATER FOR A 100% FOAM SOLUTION.
7. FOAM SOLUTION IS THEN DELIVERED TO FOAM CHAMBERS, FOAM OUTLETS AND HOSE REEL UNIT.
8. FOAM HOSE REEL CAN BE ACTIVATED MANUALLY THROUGH MANUAL SWITCH AT THE FOAM PUMP CONTROLLER.

LEGEND

ABBREV.	DESCRIPTION
BV	BALL VALVE
CV	CHECK VALVE
FACP	FIRE ALARM CONTROL PANEL
ILBP	IN-LINE BALANCE PROPORTIONER
PG	PRESSURE GAUGE
N.C.	NORMALLY CLOSED VALVE
N.O.	NORMALLY OPEN VALVE



1 FP7.6 **FOAM FIRE FIGHTING SYSTEM SCHEMATIC**
NOT TO SCALE



2 FP7.6 **LINEAR HEAT DETECTOR INSTALLATION DETAIL**
NOT TO SCALE

GRAPHIC SCALE

AS-BUILT DRAWINGS FP7.6

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DRAWING NO. FP7.6	UPGRADE OF FIRE PROTECTION AND SMOKE ALARM SYSTEMS AT TENJO VISTA DIESEL POWER PLANT
DESIGNED	TENJO VISTA DIESEL POWER PLANT – FOAM FIRE FIGHTING SYSTEM, SCHEMATIC, LINEAR HEAT DETECTOR INSTALLATION DETAIL
DRAWN	
CHECKED	
ENGINEER SUPERVISOR PERRY B. TALADOC	DATE / J.O. NO. 100066 / SCALE AS SHOWN / SHEET 17 OF 22
MANAGER OF ENGINEERING JOVEN S. ACOSTA, P.E.	DATE / DESIGN, REVIEWED JOAQUIN C. FLORES, P.E. / DATE

REVISIONS				
SYMBOL	DESCRIPTION	INT.	DATE	APP'D.

GUAM POWER AUTHORITY

UPGRADE OF FIRE PROTECTION AND SMOKE ALARM SYSTEMS AT TENJO VISTA DIESEL POWERPLANT

LOCATION MAP

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C7.0	3 OF 22	TENJO DIESEL POWER PLANT – CIVIL SITE PLAN
C8.1	4 OF 22	STRUCTURAL DESIGN CRITERIA, GENERAL NOTES, AND TYPICAL DETAILS
C11.0	5 OF 22	DETAILS
C11.1	6 OF 22	DETAILS
C11.4	7 OF 22	FOAM PUMP HOUSE AND ELEVATIONS
C11.5	8 OF 22	FIRE/FOAM PUMP HOUSE SECTIONS AND DETAILS
C11.7	9 OF 22	FOAM PUMP HOUSE FOUNDATION AND ROOF FRAMING PLANS AND SECTIONS
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FP7.4	15 OF 22	TENJO VISTA DIESEL POWER PLANT – FOAM FIRE FIGHTING SYSTEM PLAN
FP7.5	16 OF 22	TENJO VISTA DIESEL POWER PLANT – FOAM FIRE FIGHTING SYSTEM PIPING ISOMETRIC
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E7.2	21 OF 22	TENJO VISTA DIESEL POWER PLANT – NEW FIRE ALARM PLAN
E7.3	22 OF 22	TENJO VISTA DIESEL POWER PLANT – RISER DIAGRAM

DRAWING NUMBER	SHEET NUMBER	DESCRIPTION

DRAWING NUMBER	SHEET NUMBER	DESCRIPTION

AS-BUILT DRAWINGS T1.0

GRAPHIC SCALE

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P.O. BOX 2977, AGANA, GUAM USA 96910

DRAWING NO.	T1.0
DESIGNED	
DRAWN	
CHECKED	
ENGINEER SUPERVISOR	PERRY B. TALADOC
MANAGER OF ENGINEERING	JOVEN G. ACOSTA P.E.

UPGRADE OF FIRE PROTECTION AND SMOKE ALARM SYSTEMS AT TENJO VISTA DIESEL POWER PLANT

TITLE SHEET

DATE	J.O. NO.	SCALE	SHEET
	190055	AS SHOWN	1 OF 22

DATE	GENERAL MANAGER	DATE
	JOAQUIN C. FLORES, P.E.	