Environmental Assessment
Determinations and Compliance Findings for HUD-assisted Projects
24 CFR Part 58

Project Information

Project Name: Construcción de Centro de Usos Múltiples (PR-CRP-001180)

Responsible Entity: Puerto Rico Department of Housing (PRDOH)

Grant Recipient (if different than Responsible Entity): Municipality of Barranquitas

State/Local Identifier: Puerto Rico

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Project Location: The project is located at the Barrancas ward, Nuevo Barranquitas sector, Carr. 152 ramal, km. 01 in the Municipality of Barranquitas, Puerto Rico. The project's coordinates are 18.191561, -66.305798 and the property's cadaster number is 247-000-006-38-000.

Description of the Proposed Project [24 CFR 50.12 & 58.32; 40 CFR 1508.25]**:**
The project aims to develop a multipurpose center named *Centro de Usos Múltiples de Barranquitas*. The project consists of the construction of a concrete building which will provide a space for the community to carry out multiple uses. These uses include, but are not limited to community talks, a mass vaccination area, community training, health station, graduations, social gatherings, school activities, government meetings and government activities. The project may also serve as refuge or shelter during catastrophes like hurricanes with a capacity for approximately two hundred (200) people and will be used as a support center when dealing with such emergencies. Therefore, the project is considered a 'Critical Action' (24 CFR §55.2(b)(3)(i)). However, the project is not located in a flood zone, as discussed in the Floodplain Management section. The multiple-use center will include showers, cisterns, a kitchen and renewable power sources. The center is located near the Barranquitas urban center, making it easily accessible to the municipality population.

Within the scope of works for the development of the *Centro de Usos Múltiples* of Barranquitas are the following:

1. Construction of a concrete building: The two-story structure will measure 145 feet in length (from east to west), 62 feet in width (from north to south), and 35 feet tall (from ground level to top of the parapet). The construction will include the installation of electrical pipes, water and sanitary lines, telecom lines, and storm drains. Ground disturbance for the building is expected to reach a depth of 5 feet, except for cistern area, which will be 14 feet deep. Fill will be added in the eastern section of the project area (0-20 feet in depth), while the western portion will retain the original surface. The concrete structure will be divided into the following areas:
    a. Activities area
    b. Kitchen
    c. Bathrooms with showers
    d. Service office
    e. Storage room

2. Utility connections:
    a. Water: The multi-use center's potable water system will connect to an existing, 8-inch water line located parallel and to the north of the planned facility. There will be an 8-feet long tie-in with a maximum depth of 5 feet, shown on the project plans, Sheet SP1.0 of Attachment 19.
    b. Sanitary Sewer: The sanitary sewer system will be diverted from the eastern corner of the project area by a pump station. A 3-inch diameter forced sanitary line will then transport wastewater in a westerly direction, along the northern border of the project area for approximately 500 ft, where the line will be redirected through a new receiving manhole, northward across the road, ending at the existing sanitary system. The expected ground disturbance for the new sanitary pipes and manholes will reach maximum a depth of 8 ft. See Sheet SP1.1 and Sheet SAN-OFF1.1 of Attachment 19.
    c. Electrical: A new electric system will be constructed in the eastern section of the project area and will include a 225KVA pad mounted transformer, circuit breaker, metering switchgear, and other related equipment. The mentioned electrical pad will be 21 ft long, 6 ft wide, and 6 inches thick, with a maximum expected ground disturbance of 6 inches for surface leveling. From this location, PVC pipes with electrical wiring will travel at a maximum depth of 54 inches to a new underground concrete pull box located between the multiuse center and the municipal road. From this box, the lines will continue underground to the north of the site, also at a maximum depth of 54 inches, and length of approximately 50 ft, until reaching a new pole which will replace an existing concrete pole. This will be the point of connection to the LUMA aerial line. See Sheet ES-1 of Attachment 19.

3. Parking area: Construction will include the installation of storm drainpipes and 6 concrete posts for LED lighting. Fill will be used in the entirety of the area and will vary in depth between 0-13 feet. The installation of the concrete light posts will entail ground disturbance down to a depth of 2 feet, 6 inches. Stormwater management will also be part of this project.

4. Elements of resilience:
    a. A concrete cistern with a 15,000-gallon capacity will be constructed underground for potable water retention and a fire suppression system.
    b. A photovoltaic system with batteries will be installed on a metal and concrete structure to provide solar energy to the multi-purpose center.

c. An Emergency-power Generator Unit (EGU) will be installed for continued power supply to the facility.
d. A waterproof roofing system, plus doors and windows with storm shutters will provide extra protection to the building and its contents.

5. Landscaping: Vegetation for the new multi-use center consists of trees and lawn. A total of 6 trees are to be planted in the parking area. Each tree will require a pit to be dug with a depth of 2 feet.

See Figure #1 for project location.

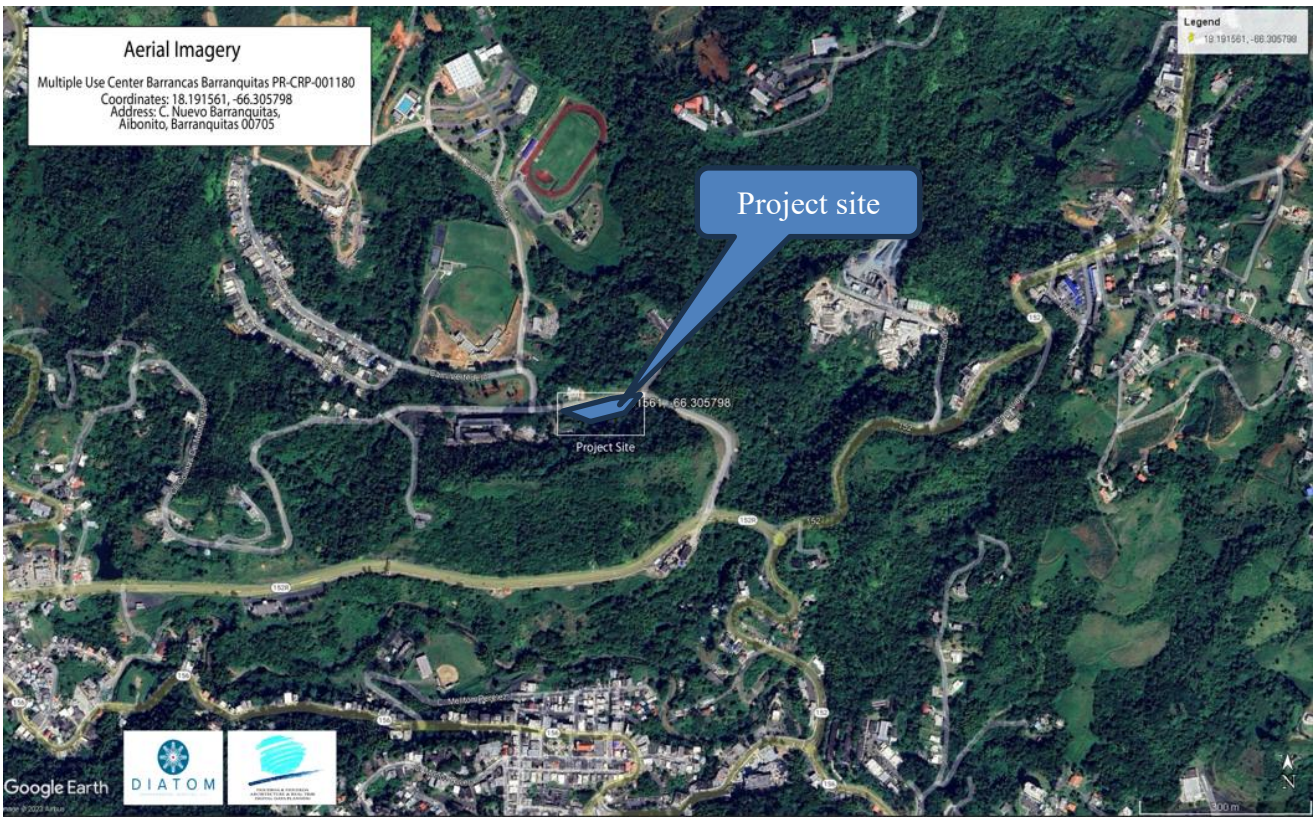


Figure 1. Aerial View of the subject property

Statement of Purpose and Need for the Proposal [40 CFR 1508.9(b)]:
In September 2017, Hurricanes Irma and María made landfall in Puerto Rico causing catastrophic island wide damage, knocking out power, water and telecommunications for the entire island and its islands municipalities. Hurricane María caused major structure and infrastructure damage to family homes, businesses and government facilities triggering the displacement of thousands of residents of the island from their homes and jobs. The Hurricanes directly impacted all seventy-eight (78) municipalities in Puerto Rico. Towns and cities across the Island experienced damage and/or destruction to public and private housing and not-for-profit facilities.

The Community Development Block Grant - Disaster Recovery (CDBG-DR) City Revitalization Program (CRP) will allow municipal governments and eligible entities to begin to address community recovery at the local level while also addressing regional needs through projects identified through thoughtful planning processes. The Program establishes funding for municipal governments and other eligible

entities to enable a variety of critical recovery activities aimed at reinvigorating downtown areas, urban centers, and key community corridors, and address critical affordable housing shortages within or near urban and downtown centers. The primary objective of this Program is to address identified needs and allow communities across Puerto Rico to restore impacted downtown areas, urban areas, and key corridors and make them more resilient to future events. The proposed project is aligned with the program in that it will establish a resilient, multi-functional community center that supports local recovery efforts and provides essential services during emergencies. The facility will address critical community needs for safe gathering spaces, emergency preparedness, and essential infrastructure, including electrical, water, and stormwater systems. The project includes sustainable features, such as a photovoltaic system and a backup generator, to ensure continuous operation during power outages. Additionally, the center will promote community resilience by incorporating stormproof construction elements and enhancing local green spaces. This project aligns with the Community Development Block Grant-City Revitalization Program's goals by revitalizing urban spaces, enhancing safety, and fostering sustainable, long-term recovery for Barranquitas.

Existing Conditions and Trends [24 CFR 58.40(a)]:
The proposed project area consists of sloped land on a hillside located at Barrancas ward, Nuevo Barranquitas sector, Carr. 152 Ramal, km. 01, in the municipality of Barranquitas, Puerto Rico 00794. According to historic imagery on Google Earth, the project area has consisted of vacant land since at least 1994. While the lot within the cadastral covers a large area (193 acres) and contains a landfill, parks, and other support structures, the project area is much smaller (0.7 acres) and contains no structures within the project boundary (see Figure 1). The environmental review is specifically for the designated project area, not the larger cadaster lot. In its current state, the land within the project area remains underutilized, providing no substantial economic, social, or community benefits to the surrounding area. In the absence of the project, the trends that are likely to continue include the following:

- **Underutilization of Land:** The parcel will remain vacant and undeveloped, perpetuating its lack of contribution to the economic and social vitality of the community. The land will likely continue to serve no functional purpose, with limited ecological or recreational value due to its current condition.
- **Lack of Community Infrastructure:** Without the development of the Centro de Usos Múltiples de Barranquitas, the community will continue to lack a designated space for critical services and activities. The absence of such a center will limit opportunities for community engagement, education, health services, and government coordination, leaving the population underserved in these key areas.
- **Reduced Resilience to Emergencies:** The region will remain vulnerable to natural disasters, particularly hurricanes, which frequently impact Puerto Rico. The lack of a designated shelter with the capacity to accommodate approximately 200 individuals will leave the municipality ill-prepared for emergency response and disaster recovery, perpetuating risks to residents during catastrophic events.
- **Reduced Economic Opportunity:** The continued absence of infrastructure development on this project area will forgo potential economic stimulation that could result from the construction and operation of the multi-use center. Employment opportunities during construction and subsequent jobs related to the operation and maintenance of the facility, as well as indirect economic benefits to local businesses from increased foot traffic, will remain unrealized.
- **Missed Opportunities for Renewable Energy:** The implementation of photovoltaic systems with batteries and other resilient energy measures as part of the project will not occur. The community will miss out on advancements in sustainability and resilience through renewable energy infrastructure that could reduce dependency on traditional energy sources and enhance energy security during outages.

Funding Information

Grant Number	HUD Program	Funding Amount
B-17-DM-72-0001; B-18-DP-72-0001; B-19-DP-78-0002; B-18-DE-72-0001	Community Development Block Grant – Disaster Recovery (CDBG-DR)	$11,938,162,230

Estimated Total HUD Funded Amount: $2,142,105.07
Estimated Total Project Cost (HUD and non-HUD funds) [24 CFR 58.32(d)]: $2,142,105.07

Compliance with 24 CFR 50.4, 58.5, and 58.6 Laws and Authorities

Record below the compliance or conformance determinations for each statute, executive order, or regulation. Provide credible, traceable, and supportive source documentation for each authority. Where applicable, complete the necessary reviews or consultations and obtain or note applicable permits of approvals. Clearly note citations, dates/names/titles of contacts, and page references. Attach additional documentation as appropriate.

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance Determinations
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 and 58.6		
Airport Hazards 24 CFR Part 51 Subpart D	Yes ☐ No ☒	The nearest civil airport is Mercedita International Airport, approx. 21 miles (111,743 feet) southwest of the project area. The nearest military airport is Luis Muñoz Marín (SJU) Joint Military Airfield with PRANG, approx. 26 mi (137,624 feet) from the project area. Since the project area is not within an Accident Potential Zone (APZ) or a Runway Protection Zone/Clear Zone (RPZ/CZ), the project is in compliance with Airport Hazards requirements. See Attachment 1 for Airport Hazards Map.
Coastal Barrier Resources Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]	Yes ☐ No ☒	The project area is not located in or adjacent to any Coastal Barrier Resource Act (CBRA) zone. The nearest unit (PR-47) is located 78,052 feet to the south of the project area. Thus, the project has no potential impact on CBRS Unit, and it is in compliance with the Coastal Barriers Resources Act. See Attachment 2 for Coastal Barrier Resources Map.
Flood Insurance Flood Disaster Protection Act of 1973 and National Flood Insurance	Yes ☐ No ☒	According to the FEMA's Flood Insurance Rate Map (FIRM), panel 72000C1160H, effective date April 19, 2005, the project area is located in Zone X, area of

Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]		minimal flood hazard. There are no Preliminary FIRM maps (PFIRM) for the project area. Therefore, the proposed project does not require flood insurance. See Attachment 3 for the FIRM.
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 & 58.5		
Clean Air Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	Yes ☒ No ☐	The proposed project complies with the National Attaining Air Quality Standards (NAAQS). Per data from the Environmental Protection Agency (EPA), the proposed project is located within an "attainment" area. It is not currently listed as an area of non-compliance per EPA's NEPAssist https://www.epa.gov/nepa/nepassist and EPA's Green Book. The closest non-attainment area is in the municipality of Guayama 45,000 feet (8.5 miles) south of the project area. Emissions during the construction phase should be limited to that of mechanical equipment and are assumed to be minimal and incidental to the construction period. During construction, the contractor will implement controls for fugitive dust. An air emission source will be installed at the site which will be limited to power outages emergencies on the island, and when the photovoltaic battery system needs support. An Emergency-power Generator Unit (EGU) will be installed within the project site to serve the facility (Attachment 19, Sheet ES-4). The unit is expected to have an integrated sub-base, doble wall (for spill prevention), 600-gal fuel storage tank with a storage capacity of six hundred (600) gallons of diesel. Since the storage container is internal and double wall, it does not require a secondary containment structure for spill prevention. According to local regulations, a permit for this generator must be obtained prior to its operation. Additional generator specifications have been included in Attachment 19, Sheet ES-4. As per proposed design and the project's scope, no impact on air quality will be expected. The proposed action complies with the Clean Air Act and 40 CFR Parts 6, 51 and 93. See Attachment 4 for Non-Attainment Map and data.
Coastal Zone Management Coastal Zone Management Act, sections 307(c) & (d)	Yes ☐ No ☒	Puerto Rico participates in the Coastal Zone Management program, which addresses the nation's coastal issues through voluntary partnership between the federal government and coastal and Great Lakes states and territories. As such, a determination of

		whether or not the project is located in, or may affect, a coastal zone is required. The Project area is not located in a Coastal Zone, it is approximately 77,750 feet (14.7 mi) from the Coastal Zone. The scope of application or jurisdiction of the Coastal Zone Management Program is defined as one kilometer (1 km) strip inland, as well as additional distances to include key coastal natural systems. The proposed project does not affect a coastal zone as defined in the Coastal Zone Management Document. This project complies with the Coastal Zone Management Act without further evaluation. https://www.drna.pr.gov/historico/oficinas/arn/recursosvivientes/costasreservasrefugios/pmzc/pmzc/pmzc2009/PMZCPR%20espanol%202009-final.pdf. See Attachment 5 for Coastal Zone Management Map.
Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)	Yes ☐ No ☒	According to information presented in the Section 106 NHPA Effect Determination form (see Historic Preservation section) the site has never been formally developed. The oldest topographic map available from the U. S. Geological Survey (USFS) is from 1964 does not show any structure at the project site. The project area was evaluated for potential contamination by conducting a Phase I Environmental Site Assessment (ESA) to identify any onsite hazards including, but not limited to, soil staining, above ground storage tanks, signs of underground storage tanks, odors, hazardous debris, etc. The Phase I ESA also evaluates the possibility of contamination sources from surrounding areas which may impact the project site. The site inspection did not identify any onsite hazards. While the lot associated with the cadastral identification number covers a large area, and contains a landfill, parks, and other support structures, the project area that will be used contains no structures within the project boundaries (see Figure 1). No other previously developed structures within the cadaster lot will be disturbed. The inspection for the Phase I ESA did not reveal onsite evidence of prior structures or industrial activity that would suggest the presence of lead or asbestos. Therefore, lead or asbestos are not considered concerns for this project area. During the site visit, the proposed project area was found to be delineated by vegetation to the south and a road to the North and to

		the West. There are educational facilities some 100 feet to the north of the project site (Head Start facility). EPA's NEPAssist was used to identify known EPA Facilities that may be sources of contamination within a 3,000-foot radius. There are records of thirteen (13) facilities and nine (9) sites within the 3,000 feet search radius. Some facilities are located within the same physical site, and some facilities are within multiple categories (e.g. one facility is both a water discharger and a hazardous waste site). Eight (8) facilities are hazardous waste generators, six (6) are water dischargers, including the municipality of Barranquitas itself, and one (1) is an ICIS-AIR air pollution facility. Notably, the Coloco Ready Mix, Inc. facility—located approximately 2,630 feet (0.5 miles) to the East of the project area—has a documented history of noncompliance with the Clean Water Act, raising concerns about potential contributions to air and water pollution through fugitive dust, emissions, and stormwater runoff. While these violations may pose risks to downstream water quality, the facility's distance from the project site and the presence of a vegetative buffer significantly reduce the likelihood of direct impacts to project end users. Moreover, the project's robust stormwater management measures are designed to mitigate indirect effects, reinforcing environmental safeguards and ensuring minimal risk from adjacent industrial activities. Finally, potable water will be sourced from the Puerto Rico Aqueduct and Sewer Authority (PRASA) which provides treatment. The Barranquitas Municipal Solid Waste Landfill was identified 1,940 feet to the northwest of the project site and within the same cadastral lot. The landfill area is slightly higher in elevation than the project site. While no ongoing operations were directly observed, historical use may pose residual risks such as soil contamination, air and water pollution, and potential health concerns. During inspection of the proposed project site for the Phase I ESA development (see Attachment 6.4), there were no indicators at the site due to contamination from illegal dumping, soil staining, or objectionable odors from the landfill. The landfill and the project site are separated by a natural topographic depression and a stream that is identified in the topographic maps (see Attachment 6.5). These natural elements serves to physically disconnect the

		landfill area from the project site, significantly reducing the risk of being contaminated by the activities from the site or due to stormwater runoff. Although any landfill has the potential for groundwater contamination, it must be noted that the project's water supply will be sourced from PRASA, and no groundwater extraction or use will occur at the project site. The Phase I ESA for the project includes a report from the landfill operator which provides information on the operation of the site. It indicates that the Barranquitas Municipal Solid Waste Landfill is an active, municipally owned facility that currently manages only non-hazardous solid waste and is under the oversight of the Puerto Rico Department of Natural and Environmental Resources (DNER). Operated by the Municipality of Barranquitas, the landfill remains in full compliance with regulatory requirements and is not subject to any administrative orders. In a proactive effort to ensure long-term environmental stewardship, the Municipality is advancing a comprehensive closure plan, now in its final design stage, with construction of the closure cap expected to begin in the coming years. This initiative—estimated to take three to five years—will be shaped by funding availability, policy alignment, and resilience to natural events. Upon closure, operational controls will transition toward enhanced environmental safeguards, including improved containment systems and reduced exposure to air and water pollutants. These measures are expected to significantly improve local environmental conditions around the site, marking a shift from active waste management to long-term stabilization. Based on the Phase I ESA information and available documentation, there is no evidence of contamination originating from the landfill. Furthermore, the planned closure of the facility is expected to eliminate any existing nuisances associated with its operations. As the site transitions through its closure process, environmental conditions are anticipated to improve significantly, supported by enhanced containment measures and long-term monitoring strategies. A review of Underground Storage Tanks (UST) data was performed using Puerto Rico Planning Board (PRPB) webdata (https://gis.jp.pr.gov/mipr/) for location of sites and DNER's Leaking Underground Storage Tanks (LUST) Active list (2024) and Inactive list (2020). The combined information revealed that the UST nearest to

		the project site is identified as SHELL SS /860993, at 2,196 feet to the south (see map in Attachment 6.6); this site is not included in any of the LUST listings. Furthermore, the distance and elevation difference between the project site and the UST makes it unlikely that any leaks would impact the project site. The *EDR Radius Map™ Report with GeoCheck®* included with the Phase I ESA indicates a site named PAPIRIN S/S (identified in the PRPB webpage as 86-1462) was not mapped "due to poor or inadequate address information." The PRPB website locates this facility over 3,000-ft to the north of the project site (not illustrated in map in Attachment 6.6 due to large distance). Therefore, there are no other LUSTs within a 3,000-ft radius of the project site. None of the identified sites within the 3,000 feet radius are of concern for the development or proposed use of the project due to distance and natural barriers. According to HUD's Notice: CPD-23-103 Departmental Policy for Addressing Radon in the Environmental Review Process, a contamination analysis must address radon in structures that are occupied or are intended to be occupied at least four (4) hours a day. Radon testing for the project has been deemed infeasible and impracticable due to several factors. No scientific or state-generated radon data for Puerto Rico exists for the past decade, and the most recent radon report, from 1995, is outdated. National resources such as the CDC's radon maps exclude Puerto Rico, and there are only two licensed radon professionals on the island, making testing highly time-consuming and costly. DIY radon kits are unreliable, not readily available, and logistically impractical. Local authorities lack specialized radon monitoring equipment, trained staff, and certified laboratories for testing. Additionally, the project site's historical vacancy reduces the likelihood of radon accumulation. As confirmed by local and federal agencies, these limitations make radon testing unfeasible, and no further evaluation is required for the environmental review. This information is included in more detail in Attachment 6. The analysis for this section revealed no environmental concerns in the project area or its immediately adjacent sites. There is no evidence that the site was impacted by previous commercial, residential, or industrial uses, thus reducing the probability of site contamination. As

		such, the project is in compliance with 24 CFR Part 50.3(i) & 58.5(i)(2). See Attachment 6 for support document for this section.
Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	Yes ☐ No ☒	Per the Official Species List from the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) website, only the Puerto Rican Boa (*Chilabothrus inornatus*) is listed for the project area. There are no critical habitats, migratory birds of conservation concern, coastal barrier resources, wildlife refuge lands, fish hatcheries, or wetlands at this location. The nearest critical habitat to the project area is 11.24 miles (59,347.2 feet) to the southeast. The Puerto Rican Boa, while potentially present in the area, is known to be a habitat generalist capable of tolerating disturbances, particularly in urban and edge environments, which minimizes the likelihood of significant impacts. Further, if a Puerto Rican Boa is found in the project area, work shall cease until the Boa moves off on its own. If the Boa does not move off, the Construction Manager shall contact the Puerto Rico Department of Natural and Environmental Resources (PRDNER) and ask them to relocate the Boa. A *No Effect* determination was made for the project, and its memo does not require submittal to the USFWS. The memorandum was reviewed and approved by the Responsible Entity's Certifying Officer (CO) on June 12, 2024. Thus, a project area-specific review of endangered species was conducted in accordance with the Fish and Wildlife Act (47 Stat. 401, as amended: 16 U.S.C. 661 et seq.) and the project is in compliance with the Endangered Species Act of 1973 and 50 CFR Part 402. No further mitigation measures are required. See Attachment 7 for NE memorandum documents and Critical Habitat Map.
Explosive and Flammable Hazards 24 CFR Part 51 Subpart C	Yes ☒ No ☐	A Field inspection was performed on September 7, 2023 (see Attachment 8) and then again for the development of the Phase I ESA (see Attachment 6.4). Also, various databases were evaluated to identify Aboveground Storage Tanks (ASTs) within 1-mile radius from the project site. The Phase I ESA identified two (2) Liquid propane gas tanks near to the property (see page 3 of 194 in report included in Attachment 6.4): "One 100-pound LPG tank is located across the street at the Head Start School, and one is located over 200 feet to the West in the Arts and Sports

		School." However, HUD's regulations exempt liquefied petroleum gas or propane (LPG/propane) containers up to 1,000 gallons that comply with industry standard, National Fire Protection Association (NFPA) Code 58 (Liquefied Petroleum Gas Code) (2017). Thus, these containers are exempted. Other ASTs may be present within the 1-mile radius but are not registered in any database that are publicly available and are located in private properties. However, there are natural barriers, such as the hill that is located to the south of the property, site elevation and mountainous terrain that shield the property from other possible explosive and flammable hazards. The project includes the installation of an Emergency-power Generator Unit (EGU) which will have an integrated, sub-base, double wall (for spill prevention), fuel tank with a capacity of 600 gallons. While the tank's capacity does not trigger federal Spill Prevention, Control, and Countermeasure (SPCC) plan requirements under 40 CFR 112 (1,320-gallon threshold), it is subject to local Puerto Rico environmental regulations. These regulations require the preparation of a spill prevention and response plan, regardless of storage quantity, to address potential risks during construction and operation and maintenance. According to HUD's regulations, the diesel fuel tank in the subbase of the EGU is subject to assessment for the Acceptable Separation Distance (ASD). The required ASD for thermal radiation affecting people is 223.55 feet from the proposed EGU's tank. The required ASD for thermal radiation affecting buildings is 39.70 feet (see Attachment 8.2 for details). Although there are no established outdoor gathering spaces (e.g., patios, courtyards, parks, or designated recreation areas) within 223.55 feet of the tank, the EGU is proposed to be located next to an ADA parking area, which may be accessed by individuals entering and exiting the building. Thus, a fire barrier has been incorporated in the design and certified by a structural engineer (see Attachment 8.2 for details). In conclusion, as designed, the project complies with HUD's explosive and flammable hazard requirements. A spill prevention and response plan will be required for the fuel tank and the fire wall must be constructed as

		per design documents. Supporting documentation can be found in Attachment 8.
Farmlands Protection Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658	Yes ☐ No ☒	The project area does not include prime or unique farmland, or other farmland of statewide or local importance as identified by the U.S. Department of Agriculture, Natural Resources Conservation Service NRCS (formerly the Soil Conservation Service). This project does not include any activities that could potentially convert farmland to non-farmland use. According to the Natural Resources Conservation Service, the project is in urban lands classified as "Non-Prime farmlands". The nearest prime farmland, if drained is located 460 feet (.08 mi) from the project area. None of the lands located within the project limits are currently used as farmlands. According to the PR zoning map, the area is within the zone "DT-G" (Distrito Dotacional General). This designation is used for areas allocated for public facilities and services, such as schools, hospitals, government buildings, and other community-oriented infrastructures. The specific uses permitted within a DT-G zone are defined by municipal regulations and the overarching planning framework established by the Puerto Rico Planning Board. Further, the Puerto Rico Planning Board's Land Use Plan (PUT) map, the proposed project area is classified as urban land. The project complies with the Farmland Protection Policy Act. https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm. See Attachment 9 for Farmlands Protection Map, Attachment 16 for the Zoning Map, Attachment 17 for the PUT Map, and Attachment 19 for the Project Plans.
Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55	Yes ☐ No ☒	The project site is classified as Zone X, which is outside of the ABFE and FEMA-designated Special Flood Hazard Area (SFHA). Critical Actions are permissible in Zone X without additional floodplain mitigation, as this zone is identified as an area of minimal flood risk. The project's location, over 1,253 feet from the nearest Zone A floodplain, ensures that it is not at risk of flooding from the 1% annual chance flood (100-year flood) or other hazards associated with proximity to high-risk flood zones. Its classification as Critical Action has been considered, and no further flood mitigation measures are required.

		The project is compliant with 24 CFR Part 55 and Executive Order 11988. Supporting documentation, including FEMA FIRM panel 72000C1160H and the ABFE map, are included for reference (Attachment 3 and 10).
Historic Preservation National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800	Yes ☐ No ☒	Consultation was made with the Puerto Rico State Historic Preservation Office (SHPO) related to the proposed activities, per letter dated April 30, 2024. SHPO concurred with the determination of "no historic properties affected within the project's area of potential effects" via communication dated November 9, 2024. After this consultation process was completed, there were rectifications to the design's offsite work that differed from the information presented in the Effect Determination Form. The sanitary sewer, potable water and electric power connections were evaluated, and the PA Allowances were applied. Concurrence with this revision was evaluated by the RE representatives on 3/19/2025. Therefore, the proposed action is in compliance with Section 106 of the NHP. This project complies with the National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800. See Attachment 11 for the Section 106 Consultation Package and subsequent PA Allowances review.
Noise Abatement and Control Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B	Yes ☒ No ☐	The proposed project does not primarily involve noise-sensitive uses. However, it includes functions that may be classified as sensitive under HUD regulations (e.g., emergency shelters and health services). Therefore, a noise analysis was conducted to evaluate the potential noise impacts from the surrounding environment on the project. **Construction Noise Levels:** During construction, temporary and intermittent noise impacts are anticipated during standard construction hours (7:00 AM to 4:00 PM). Construction activities are expected to generate noise levels of 90–100 dB directly within the project area during the temporary construction period[1]. Using the inverse square law, noise levels at the nearest sensitive receptor (high school) 100 feet from the source would

[1] National Institute for Occupational Safety and Health. (n.d.). OSHA's approach to noise exposure in construction. Electronic Library of Construction Occupational Safety and Health (elcosh). Retrieved January 10, 2025, from https://www.elcosh.org/document/1666/d000573/OSHA%27s+Approach+to+Noise+Exposure+in+Construction.html

		be approximately 70–80 dB in free-field conditions[2]. However, there is tree cover surrounding the project area and in between project activities and the school. The dense tree cover between the project site and the high school is expected to provide additional attenuation of 5–10 dB[3], reducing the estimated noise level at the high school to 60–75 dB. Noise impacts will be mitigated by using equipment in good working order as well as either notifying the nearby Head Start program and school of loud activities or scheduling activities that are expected to make excessive noise outside of school hours. In compliance with 24 CFR Part 51 Subpart B, given the potential for temporary construction noise levels above 65 dB, noise attenuation features will be incorporated. This includes the following planned measures: • Controlled Work Hours: Noisy construction activities will be limited to times outside of school hours to avoid disruptions during peak academic concentration periods. • Temporary Noise Barriers: Modular noise-reduction panels will be installed to minimize sound impact. • Low-Noise Equipment: Priority will be given to machinery with silencers, and a maintenance program will be implemented to reduce unnecessary noise. • Quieter Construction Methods: Techniques that minimize the use of high-impact equipment will be utilized whenever possible. • Community Communication: If necessary, a communication plan will be established with the school to provide advance notice of potentially noisy activities. • Noise Level Monitoring: Noise levels will be periodically measured using monitoring equipment to ensure compliance with local and federal regulations. **Proximity to Noise Sources:** - Roadways: The project site is not within 1,000 feet of a major roadway with an average daily

[2] WKC Group. (n.d.). Inverse square law sound calculator. Retrieved January 10, 2025, from https://www.wkcgroup.com/tools-room/inverse-square-law-sound-calculator/

[3] Forest Research. (n.d.). Noise abatement: Benefits of greenspace. Retrieved January 10, 2025, from https://www.forestresearch.gov.uk/tools-and-resources/fthr/urban-regeneration-and-greenspace-partnership/benefits-of-greenspace/noise-abatement/

		traffic (AADT) of 10,000 or more vehicles per day, according to the PR Department of Transportation and Public Works. The nearest major roadway is PR-152 (KM 0.0-0.6) which is approximately 1,132 feet from the project site. - Railroads: The project site is not within 3,000 feet of an active railroad. The nearest railway is the Tren Urbano which is approximately 90,645 feet from the project site. - Airfields: The project site is located more than 15 miles from any military or FAA-regulated civil airfield (see Airport Hazard section above). The project site is located away from major noise sources, which ensures compliance with HUD's interior noise standard of 45 DNL. Therefore, no mitigation measures for noise will be required. **Operation Noise Levels Assessment:** An additional noise source, the backup electrical generator, is expected to increase noise level during its operation. However, the generator will only be used during emergency situations when the power grid is compromised or during other types of power outages. The generator will be equipped with Level II sound attenuated and weatherproof enclosure. Thus, this will reduce the noise emitted by this new source. Generator specifications have been included in Attachment 19, Sheet ES-4. The analysis reflects that the project does not introduce significant noise impacts to the surrounding community with appropriate mitigation during construction and equipment selection. Therefore, the project is in compliance with the Noise Control Act of 1972 and 24 CFR Part 51 Subpart B. It is not expected to introduce noise-sensitive uses in a high-noise environment, nor is it expected to create significant adverse noise impacts on surrounding areas. See Attachment 12.
Sole Source Aquifers Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149	Yes ☐ No ☒	The project is not located within a U.S. EPA-designated sole source aquifer watershed area (including stream flow source areas). There are no EPA sole source aquifers in Puerto Rico. The closest sole source aquifer is 1,027 miles (5,950,560 feet) from the project. Furthermore, the project consists of activities that are unlikely to have an adverse impact on groundwater resources. The project is in compliance with Sole Source

		Aquifer requirements. See Attachment 13 for Sole Source Aquifers Map.
Wetlands Protection Executive Order 11990, particularly sections 2 and 5	Yes ☐ No ☒	According to the USFWS Wetland Inventory Map, a riverine wetland associated with Quebrada Padilla is 931 feet (0.2 miles) from the project area. In compliance with 24 CFR Part 55.9, procedures for identifying wetlands were followed to ensure no adverse impacts on nearby wetlands. A visual assessment of the project site was conducted on September 7, 2023 (see attachment 8.1). No features were found to be consistent with HUD's definition of wetlands, which requires an area to exhibit at least two of the three wetland characteristics (hydric soils, hydrophytic vegetation, or wetland hydrology). Based on this evaluation, the project site itself does not exhibit these characteristics and is not classified as a wetland under HUD standards. The review of the USFWS Wetland Inventory Map confirmed that no wetlands are located within the project boundary. The proposed project will not require construction activities on wetlands, because no work on any water body is required for the project construction. The project design avoids direct impacts to wetlands by ensuring no construction activities will occur within or adjacent to the identified wetland or other water bodies, including Quebrada Padilla. Best management practices (BMPs) such as sediment and erosion controls will be implemented to ensure indirect impacts do not occur in accordance with 24 CFR Part 55.10. This project complies with Executive Order 11990 by avoiding direct impacts to wetlands and implementing measures to minimize potential indirect impacts. The procedures outlined in 24 CFR Part 55.9 were followed, including reviewing maps and conducting a site visit. See Attachment 8 for the Field Visit Checklist & Site Evaluation and Attachment 14 for Wetlands Map.
Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)	Yes ☐ No ☒	According to the National Park Services National Wild and Scenic River System the Icacos River, the project is located 182,901 feet (34.6 miles) from a listed Wild and Scenic River. Puerto Rico has only three Wild and Scenic Rivers which are located in the boundary between the municipalities of Rio Grande and Luquillo and in Naguabo. The proposed action is therefore not in proximity to a wild, scenic, or recreational river and is in compliance with the Wild and Scenic Rivers Act of

		1968. No formal compliance or mitigation steps are required. See Attachment 15 for Wild & Scenic Rivers Map.

Environmental Assessment Factors [24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27] Recorded below is the qualitative and quantitative significance of the effects of the proposal on the character, features and resources of the project area. Each factor has been evaluated and documented as appropriate and in proportion to its relevance to the proposed action. Verifiable source documentation has been provided and described in support of each determination, as appropriate. Credible, traceable and supportive source documentation for each authority has been provided. Where applicable, the necessary reviews or consultations have been completed and applicable permits of approvals have been obtained or noted. Citations, dates/names/titles of contacts, and page references are clear. Additional documentation is attached, as appropriate. **All conditions, attenuation or mitigation measures have been clearly identified.**

Impact Codes: Use an impact code from the following list to make the determination of impact for each factor.
(1) Minor beneficial impact
(2) No impact anticipated
(3) Minor Adverse Impact – May require mitigation
(4) Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement

Environmental Assessment Factor	Impact Code	Impact Evaluation
LAND DEVELOPMENT		
Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design	2	The project aligns closely with the existing land uses of the adjacent and surrounding properties as defined by local planning and zoning guidelines. According to the Puerto Rico Planning Board (PRPB) MIPR and the PR Land Use Plan, the soil classifications within the project's limits are designated as SU-Urban Soils, which are intended for urban development. Historic imagery on Google Earth confirms that the project area has remained vacant since at least 1994, indicating no existing development that would conflict with the proposed use (Figure 1). The parcel's classification under the current qualification map as DT-G "Dotacional General" further supports the project's compatibility with the surrounding area. The DT-G district is designed for uses related to public installations, including institutional, civic, religious, and cultural facilities, which are intended to serve the broader communities of cities and towns across Puerto Rico. The proposed Centro de Usos Múltiples de Barranquitas falls squarely within this category, as it will serve as a multipurpose community center providing spaces for public events, emergency shelters, health services, and other civic uses. Moreover, the Puerto Rico Planning Board's PUT (Plan de Usos de Terrenos) map identifies the project area as urban land, reinforcing its suitability for development in line with urban planning objectives.

		Importantly, no changes to the existing zoning or qualification districts are required for the construction of the proposed project, demonstrating full compliance with local zoning codes and urban design principles. These factors indicate that the project not only adheres to but also complements the designated land use of the area, contributing to its intended purpose of supporting public and civic activities. The project will alter the landform minimally but intentionally to accommodate the construction of the proposed Centro de Usos Múltiples de Barranquitas. Site preparation will involve grading the sloped land to create a stable foundation for the building and parking areas. Ground disturbance will include excavation to a depth of 14 feet for the cistern and other structural components, as well as the addition of fill in some areas. This alteration is necessary for the development of the project area but will not result in demonstrable destruction of the natural or man-made environment. The project area has been vacant and undeveloped since at least 1994, with no existing buildings or significant vegetation, minimizing the need for clearance of trees or alteration of natural geomorphic forms (Figure 1). The project's design aligns well with the surrounding built environment in terms of scale, density, size, and mass. The two-story building's dimensions (145 feet in length, 62 feet in width, and 35 feet in height) are proportionate to other structures in the urban center of Barranquitas and are appropriate for its intended public use. The DT-G "Dotacional General" zoning designation supports institutional and civic facilities, making the building's size and placement compatible with the area's urban framework. The project does not introduce elements that are out of character or scale with the existing physical environment. The project does not significantly affect building density in the community as it occupies a currently vacant area (Figure 1). Rather than increasing density detrimentally, it contributes positively by introducing a public facility that enhances community interaction and street-level activity. The proposed building's design complements the context of its surroundings by adhering to urban planning principles and local design guidelines. The architectural style, materials, and planned signage are in harmony with existing civic structures, avoiding any inappropriate differences in material, color, or style. The project does not represent a significant or disruptive change in size, scale, placement, or height relative to neighboring structures. To further enhance the project's environmental and community benefits, additional mitigating elements such as landscaping, including the planting of six trees in the parking area, is planned and will contribute to the area's greenery. See Attachment 17 for the Zoning Map, Attachment 18 for the PUT Map, and Attachment 20 for the Project Plans.

Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	2	According to the Puerto Rico Planning Board's PUT map, the proposed project area consists of urban soils. This classification typically applies to areas intended for urban development and includes residential, commercial, or mixed-use purposes. The following soil types are present within the project area: • **HtF (68.3%)** and **HtE (22.1%)**: These are hillside or sloped soils, which can present challenges for construction and require mitigation to prevent erosion and runoff. • **DaD (9.5%)**: These soils may have a shallow depth to bedrock, which can limit deep foundations. A depth of five (5) feet is expected in the ground disturbance associated with the construction of the building, except for the area where the cistern will be located (14 feet in depth). Fill will be added in the east section of the project area (0-20 feet in depth) in order to stabilize and level sloped areas to ensure a safe and structurally sound foundation for the new construction, while the western portion will mostly retain its original surface as this area will be used for parking. Any soil stabilization issues will be addressed during the initial construction activities. The proposed project consists of approximately 0.37 acres of new construction within the 0.7 acre project area. As the project will disturb less than one acre, the National Pollution Discharge Elimination System (NPDES) Construction General Permit (CGP) is not required. Surface water caused by a rain event will be re-directed to yard inlets located at low points around the building that will flow to the east with prevailing 1% slopes and discharged into the existing storm sewer system. BMPs such as sediment and erosion controls will be implemented to prevent runoff that is not captured by redirection efforts to storm wells. Per the US Geological Survey's topographic maps and Puerto Rico Planning Board Data, the project site drains naturally to *Quebrada Padilla* (Padilla Creek) which is located at an estimated 662 feet East of the proposed project site. At this location, the Padilla Creek drains south, towards the Barranquitas town center, and flows into the *Rio De Barranquitas* (Barranquitas River). The Barranquitas River follows a East-Southeast course and drains into the Rio Usabón, which eventually flows into the *Rio Grande de La Plata* (La Plata River). The La Plata River is the longest river in Puerto Rico and flows northbound where it drains into the Atlantic Ocean in the municipality of Dorado. The project will increase impervious surface area by 0.37 acres, potentially increasing stormwater flow to the Rio de Barranquitas and the La Plata River. The United States Geological Survey (USGS) landslide data indicates moederate landslide susceptibility due to the area's location on a hillside. However, the contractor must comply with the Sediment and Erosion

		Control Plan during construction and after use, all surfaces must be covered with grass, concrete, asphalt, or crushed rock to prevent erosion. There is no documented history of slope failure in the area, and no visual indications of previous slides or slumps, such as cracked walls, tilted trees, or leaning fences, that have been observed. The project is not expected to significantly affect or be affected by slope conditions, and the design does not include specific measures for slope stability due to the relatively flat urban setting. Additionally, no slope modification activities are planned that would remove micro-climatic conditions facilitating unique natural habitats or impact social and cultural resources. The focus of the project is on improving existing infrastructure, minimizing any changes to natural slope conditions. See Attachment 16 for Landslide Susceptibility Map, Attachment 18 for the PUT Map, and Attachment 20 for Project Drawings.
Hazards and Nuisances including Site Safety and Noise	3	Because the project area has been historically vacant open space and due to the distance between known contamination sites and the project area (see the Contamination and Toxic Substances section), no environmental contaminants were expected onsite. Based on the information in the Historic Preservation Documentation, the project site has historically been undeveloped, primarily serving as open space with no significant urban or industrial development in the immediate vicinity. Aerial photographs and maps from 1937, 1951, 1964, and 1989 included in the Section 106 documents (Attachment 11) confirm that the area remained largely vegetated or used for limited agricultural purposes. There is no record of industrial or commercial activity on the site. Therefore, it is unlikely that environmental contaminants associated with industrial or commercial use are present. This was also confirmed with recent aerial photos and project area visits conducted in September 2023, which did not identify any evidence of environmental contaminants. Contractors are required to provide health and safety plans and monitoring during construction. The design should comply with all applicable regulations to reduce natural and man-made risks to people or property damage to both the public and users of the project. Such considerations can be included as integral components of the proposed project design by the designer (engineering designs, and/or elevation or flood protection) and can be implemented with the proposed project. As discussed in the Contamination and Toxic Substances section, the project area is located approximately 2,630 feet (0.5 miles) from an asphalt and concrete manufacturing facility. The facility is unlikely to directly impact the project due to its distance. As discussed in the Clean Air section, no impact from the project would be expected given construction BMPs such as fugitive dust control that would cause cumulative impacts with the asphalt facility. As discussed in the Contamination and Toxic Substances section, while the Barranquitas Municipal Solid Waste Landfill does exist within the project's cadaster lot, it will not affect the proposed project site and its

		intended use. Project activities will not occur near the landfill or any known contaminated soil, so no hazards or nuisances are expected to or from the landfill in relation to the project. Temporary noise due to construction is expected. In compliance with 24 CFR Part 51 Subpart B, given the potential for noise levels above 65 dB, noise attenuation features will be incorporated to reduce interior noise levels. This includes the following planned measures, as discussed in the Noise section: • Controlled Work Hours: Noisy construction activities will be limited to times outside of school hours to avoid disruptions during peak academic concentration periods. • Temporary Noise Barriers: Modular noise-reduction panels will be installed to minimize sound impact. • Low-Noise Equipment: Priority will be given to machinery with silencers, and a maintenance program will be implemented to reduce unnecessary noise. • Quieter Construction Methods: Techniques that minimize the use of high-impact equipment will be utilized whenever possible. • Community Communication: If necessary, a communication plan will be established with the school to provide advance notice of potentially noisy activities. • Noise Level Monitoring: Noise levels will be periodically measured using monitoring equipment to ensure compliance with local and federal regulations. An additional noise source, the backup electrical generator, is expected to increase noise level during its operation. However, the generator will only be used during emergency situations when the power grid is compromised or during other types of power outages. Thus, this unit will not constitute a continuous source of noise. The generator will be equipped with Level II sound attenuated and weatherproof enclosure. Thus, this will reduce the noise emitted by this new source. During construction, OSHA regulations will be followed to address any construction operational hazards. Some construction activities can produce nuisances especially to the surrounding communities located at the project area. Some of these are traffic delays, dust and noise. Several measures will be implemented to reduce the impact of these nuisances, including fugitive dust control. The nuisance will be incidental to the construction phase and will vary in intensity depending on the activities being performed. No more nuisance is expected to occur when the proposed project is in operation. See Attachment 8 for the Field Visit Checklist & Site Evaluation and Attachment 11 for Historic Preservation Documentation.

Energy Consumption	2	During construction, most of the energy consumption of the construction equipment is by internal combustion engines, it will not impact the power grid. A consultation of facilities and electrical plans is in progress with LUMA to ensure compliance of all electric works and the capacity to support the project. This is an ongoing negotiation between the designer and LUMA. If any changes significantly alter the information presented in the project plans, this will require re-evaluation. The point of interconnection is within the project area directly across C. Nuevo Barranquitas from the proposed structure to an existing LUMA line (approximately 40 feet). See Attachment 20 for the Project Plans.

Environmental Assessment Factor	Impact Code	Impact Evaluation
SOCIOECONOMIC		
Employment and Income Patterns	1	The proposed project will promote the economic activity of the municipality during its construction and operation phases. New employment opportunities are expected, as additional manpower will be needed for the construction phase, including roles such as construction workers, site supervisors, and equipment operators. These positions will vary in skill sets and income levels, with most roles likely being mid to lower income and requiring specialized technical skills or manual labor expertise. The project will generate temporary work for the construction period, seventeen (17) direct and fourteen (14) indirect jobs according to the Junta de Planificación Employment Multiplier tool. Additionally, new municipal permanent staff will be added to provide maintenance services for the infrastructure to be constructed. The operational phase of the project will support economic growth and community development by hosting a wide range of activities, including community talks, mass vaccination efforts, community training sessions, health services, graduations, social gatherings, school activities, government meetings, and other civic events. These activities will attract visitors and increase engagement with local businesses. The new employees for construction are likely to come from both local and regional labor pools. A significant portion of these jobs could be filled by local residents, especially those with construction experience or relevant trade skills, positioning them to benefit directly from these opportunities. The project will positively impact local employment and income patterns, as the skills required for many of the new roles align with those present within the local workforce, providing local residents with a competitive advantage to secure these jobs.
Demographic Character Changes, Displacement	2	The community is 100% Hispanic, with 95% speaking Spanish at home and 72% having limited English proficiency. Socioeconomic indicators include 80% low-income residents, a $11,387 per capita income, 12%

		unemployment, and 23% with less than a high school education. The age distribution shows 19% are under 18, 81% are adults, and 19% are 65 or older. While Barranquitas has some urbanized areas, the project area is not located in a dense residential or urban area. The proposed project will not significantly alter the demographic characteristics of the communities involved, and no displacement would be expected as a result of project activities. Most of the proposed activities will promote multiple activities to benefit the community. Also, the project will generate new job opportunities and new business opportunities that integrate the community into the urban area. The proposed project will not create physical barriers or access difficulties that isolate a particular neighborhood or population group, nor will it hinder access to local services, facilities, and institutions, or other parts of the city. The project will not alter the tourist, historical, commercial, or residential uses since the proposed activities serve as an ancillary use of the commercial behavior of the area. No relocation of families, businesses or institutions is required for the project. No changes in the demographic character changes or displacements are expected for the construction of the proposed project.

Environmental Assessment Factor	Impact Code	Impact Evaluation
COMMUNITY FACILITIES AND SERVICES		
Educational and Cultural Facilities	1	The construction of a multipurpose community center in Barranquitas is expected to positively impact local educational and cultural facilities by providing additional spaces for learning, cultural events, and community programs. This facility could complement existing schools and cultural institutions, offering residents opportunities to engage in educational enrichment, arts, and cultural heritage activities, thereby strengthening the area's cultural identity and educational resources. The proposed action will not affect educational or cultural facilities. There will be no increase in school capacity as part of this project.
Commercial Facilities	2	The proposed action may generate an influx of visitors that will come to the area to receive services, which may have a negligible to minor increase on the demand for local business services. Near the proposed project are restaurants, gas stations[4], supermarkets, parks, and rides, which could be positively impacted by the proposed project since they provide essential and necessary services to the community in general. No commercial facilities will be negatively affected by the proposed project.

[4] Gas stations are at a distance of over 3,000 ft from the project area, per the Contamination and Toxic Substances section

Health Care and Social Services	1	The proposed project would have a positive effect on regional health facilities. As part of the activities and/or services that are intended to be offered, there is a mass vaccination area and health stations, which will constitute an additional health care services facilities in this area. The nearest health care facility is the Centro de Salud Integral de Barranquitas located over 3,000 feet from the project area. The project would not cause an increase in the demand for social services at the city or Island-wide level, on the other hand, it will help to mitigate these needs. However, the project's primary intended use is not a health care facility, so the impact on the health care sector in the area will be negligible.
Solid Waste Disposal / Recycling	3	**Construction** The proposed construction activity will result in the generation of construction debris. The waste generated during construction will not exceed the capacity of the local waste system or landfill. The project is expected to generate 4 cubic yards of waste per week during construction (less than one garbage truck full). Solid waste permitting is not expected to be required for this project as the waste generated will be within manageable limits and will be disposed of in approved facilities in compliance with federal and local regulations. The contractor will be required to prepare a recycling material plan, and to comply with state regulations for the handling of non-hazardous debris. If any hazardous waste results from this project the transportation and disposal must be in accordance with the PRDNER regulations which include accredited personnel, special enclosure work practices and permits. **Operation** The facility will introduce a new waste generation source in the region, impacting waste collection and disposal. Waste volumes will vary depending on the activities conducted on-site. Each event should include a tailored waste management approach. For instance, if the facility hosts a vaccination clinic or temporary health event, a waste management plan must be implemented to prevent biomedical waste from being commingled with domestic waste. Proper segregation and handling procedures should be established for different types of waste generated during various events. During the operation of the property, waste collection, composting, and recycling in Barranquitas Municipio will be managed by the local municipality, which is responsible for providing waste management services within its jurisdiction. The municipality has the capacity to handle regular waste collection, including the waste generated during the operation of the proposed project. These services are generally considered affordable for community residents and businesses. The operation of a community center is expected to produce moderate amounts of waste (approximately 0.5 cubic yards of waste per week),

		primarily composed of organic material, recyclables, and general trash, depending on the facility's usage and activities. The project's health services and vaccination activities may generate biohazardous waste, including sharps, which will be managed in compliance with regulations through proper storage, disposal, and certified waste services. With the municipality managing waste collection and disposal, the project will integrate into the existing waste management system.
Waste Water / Sanitary Sewers	2	**Construction** As part of the project contract documents, the project contractor will be responsible for obtaining portable toilets for construction workers and following all applicable regulations. The sanitation company responsible for the portable toilets will also be responsible for the disposal of sanitary waste in accordance with local regulations. No interruptions to service due to construction are anticipated. On January 27, 2025, PRASA/AAA approved the project's water and sewer system plans, subject to compliance with specific conditions, including connection specifications, installation requirements, and final inspection procedures. The project must adhere to all mitigation measures outlined in Attachment 20, which details requirements for interconnections, flow capacity, maintenance responsibilities, and compliance with regulatory standards. **Operation** During operation, the proposed action will generate wastewater that will be diverted into the already existing municipal sanitary system. The sanitary sewer line will run across the building to the west, connecting to a new manhole offsite on Camino Nuevo Barranquitas. See Sheet SAN-OFF1.1 of Attachment 20. The pump station will be located in the eastern portion of the lot outside of the parking area. See Sheet SP1.1 of Attachment 20. No capacity increases are anticipated. See Attachment 19 for the PRASA Approval Letter and Attachment 20 for project plans.
Water Supply	2	**Construction** The project's water demand during construction will primarily be met by non-potable water trucks, which avoids placing strain on the local potable water supply. Therefore, the project poses no risk to aquifers or water resources in the area. The estimated consumption is 2,700 gallons per day. The new water line connecting the structure to a water source will connect to the existing 8" water line directly to the north of the western corner of the proposed structure adjacent to Camino Nuevo Barranquitas, as shown on the project plans, Sheet SP1.0. No capacity increases are anticipated for this project. On January 27, 2025, PRASA/AAA approved the project's water and sewer system plans, subject to compliance with specific conditions, including connection specifications, installation requirements, and final inspection

		procedures. The project must adhere to all mitigation measures outlined in the letter from PRASA (see Attachment 19) which details requirements for interconnections, flow capacity, maintenance responsibilities, and compliance with regulatory standards. **Operation** The project will source water from PRASA. As previously discussed, a concrete cistern with a 15,000-gallon capacity will be constructed underground to a depth of 14 feet for potable water retention and a fire suppression system to ensure the facility is resilient during emergencies and disaster recovery. See Attachment 19 for the PRASA Approval Letter.
Public Safety - Police, Fire and Emergency Medical	1	The new project is not expected to strain the effectiveness of local services because its design and operational scope are well-integrated into the existing infrastructure and community resources. The facility's primary functions, including its role as a community center and emergency shelter, align with the capacity and responsibilities of local municipal services. The project site is within proximity to fire, police, and ambulance services, ensuring adequate response times during emergencies. Additionally, the site's access points and design facilitate the movement of emergency vehicles and personnel, enhancing its functionality as an emergency hub. The facility incorporates resilience measures such as backup power systems, a cistern for potable water retention and a fire suppression system, and proper waste management protocols, ensuring that it will be largely self-sufficient during normal operations and emergencies. Its planned features, including showers, a kitchen, and renewable energy systems, further enhance its role as a centralized hub for emergency response. Moreover, the proposed actions enhance public safety by providing a centralized hub for emergency response and community safety initiatives. The facility's ability to accommodate approximately 200 individuals during catastrophic events, along with its planned features such as showers, a kitchen, and renewable energy systems, as well as space to store emergency equipment will strengthen the community's preparedness and response capabilities. These benefits will complement, rather than overburden, existing municipal services.
Parks, Open Space and Recreation	1	The activities of the proposed project take place close to the center of Barranquitas. The proposed activity will have a positive impact on the surrounding open spaces and recreational facilities. The proposed project involves the development of a community center that will provide various services, directly impacting on the commercial activities of small and medium businesses close to the proposed project and the community in general. The urban area of Barranquitas barrio-pueblo had a population of approximately 2,820 in 2022. While the project area is outside this area, it is directly adjacent to it, and it would largely serve the population

		within this urban area. Given that the proposed community center's capacity of up to 200 individuals, this represents about 7.1% of the urban population. This capacity is well suited for hosting events and activities tailored to the needs of the urban community and will add to the area's current capacity for events and gatherings. The urban core of Barranquitas includes key recreational and cultural facilities such as the Plaza de Recreo de Barranquitas and other local amenities. These facilities are within walking distance for many residents of the urban area. The construction of accessible pathways will ensure ease of movement for individuals with limited mobility or cyclists, further increasing the facility's accessibility. There is no public transit available in the area, see the Transportation and Accessibility section. The proposed project will not cause any overload of existing open space or recreational or cultural facilities. It will have the opposite effect by creating an additional gathering space, which will alleviate the demand for existing facilities and provide new opportunities for community activities. The project aims to enrich the community's recreational offerings without straining current resources.
Transportation and Accessibility	3	The proposed project will introduce a community services center in the area, providing residents with essential services. The facility's central location near the Barranquitas urban center is expected to improve accessibility for users. The inclusion of a dedicated parking area with handicap-accessible spaces and improved lighting will enhance safety and convenience. Additionally, the construction of accessible pathways will facilitate movement for individuals with limited mobility and cyclists, improving overall accessibility. However, the project will lead to increased foot and vehicular traffic, particularly during events or emergencies, which may require coordination with local authorities to manage congestion and maintain traffic flow. Given that no public transit is available in the area, residents will rely on private vehicles, which could contribute to minor adverse traffic impacts, especially during peak usage times. These minor impacts would be temporary and occur only during the start and end times of events and emergencies.

Environmental Assessment Factor	Impact Code	Impact Evaluation
NATURAL FEATURES		
Unique Natural Features, Water Resources	2	There are no unique natural features within or adjacent to the project area. Outside of the project area, unique natural resources include the San Cristóbal Canyon, the deepest canyon in Puerto Rico and the West Indies, approximately two miles south of the project area. Within San Cristóbal Canyon is Salto La Vaca, the highest waterfall in Puerto Rico. Given that the project is located nearly two miles from San Cristóbal

		Canyon and Salto La Vaca, direct impacts on these natural features would not occur. The distance reduces the potential for effects such as views impediment, stormwater runoff, sedimentation, or pollution to reach the canyon or waterfall. Similarly, the project's activities are not expected to contribute significantly to visitor pressure, as its primary function is to serve the local community rather than attract large numbers of tourists. The project area is generally outside of Puerto Rico's karst belts by approximately 10 miles, which occur on the northern and southwestern portions of the island[5]. The nearest karst-restricted, special, and buffer zones are located within 10–12 miles of the project area in the northern karst belt. These zones are regulated to protect the unique ecological and hydrological systems associated with karst terrains. The distance of the project from these zones minimizes risk of impacts on karst features. Additionally, there are no known mogotes, sinkholes, caves, or significant karstic formations within the project area or immediate vicinity. The proposed project is not expected to cause any water quality problems at or around the construction site. No water bodies are known to exist within the project area. The nearest water body is the Rio de Barranquitas which encircles the urban area, approximately 0.2 mi (800 ft) from the project area at its nearest point. Construction activities must implement BMPs, including erosion and sediment controls, to prevent any potential runoff impacts. The project does not involve discharges or sewage effluents to surface water bodies. During operation, stormwater will be directed to the existing gradient, ensuring proper drainage without impacting surface waters or nearby ecosystems. The project will increase impervious surface area, potentially increasing stormwater flow to the Rio de Barranquitas and the La Plata River. Vegetation for the multi-use center includes trees and lawn, with six trees to be planted in the parking area, helping to offset some stormwater impacts. As previously discussed BMPs for sediment and erosion controls will be implemented during construction. These will not be needed during operation because the site will be stabilized.
Vegetation, Wildlife	2	Construction activities will take place in the project area at Calle Nuevo Barranquitas of the municipality of Barranquitas, and it is not anticipated that endangered wildlife species, trees, vegetation, or native plant community habitats will be adversely affected. The contractor will comply with the Planting and Reforestation Plan of the current Joint Regulation. The project is not expected to create conditions favorable to pests. Proper waste management during construction and operation, including regular disposal, sealed storage, and compliance with PRDNER

[5] Rodríguez, M., & Alvarado, G. E. (2020). Sinkholes and karst in Puerto Rico: Picturesque and problematic. ResearchGate. Retrieved January 10, 2025, from https://www.researchgate.net/publication/341812194_Sinkholes_and_karst_in_Puerto_Rico_Picturesque_and_problematic?_tp=eyJjb250ZXh0Ijp7ImZpcnN0UGFnZSI6Il9kaXJlY3QiLCJwYWdlIjoiX2RpcmVjdCJ9fQ

		regulations, will prevent attractants. Additionally, the facility's design and maintenance will minimize habitats conducive to pest proliferation. Local regulations will require that mitigation be implemented for the loss of trees. This may result in replanting and/or compensatory mitigation. This will be agreed with the Department of Natural and Environmental Resources. However, the proposed project will not require the cutting or pruning of trees. No mitigation is required for the loss of trees according to the local regulations. The project will enhance the vegetation in the area as it includes landscaping activities in the area. Per the Official Species List from USFWS IPaC, only the Puerto Rican Boa is found in the project area, with no critical habitats, migratory birds of conservation concern, coastal barrier resources, wildlife refuge lands, fish hatcheries, or wetlands present. The nearest critical habitat is 11.24 miles away. The Boa, a habitat generalist, is unlikely to be significantly impacted due to the urban setting and mitigation measures, including halting work if a Boa is encountered and coordinating with PRDNER for relocation. The No Effect memorandum, approved by PRDOH on June 12, 2024, confirms compliance with the Endangered Species Act and 50 CFR Part 402. See the Endangered Species section and Attachment 7 for additional details.
Other Factors	2	N/A

Environmental Assessment Factor	Impact Code	Impact Evaluation
CLIMATE AND ENERGY		
Energy Efficiency	1	The project incorporates energy-efficient features to minimize its environmental impact and operational costs. The inclusion of a photovoltaic system with battery storage ensures that the facility utilizes renewable energy, reducing reliance on traditional power sources and lowering greenhouse gas emissions. Energy-efficient LED lighting in the parking area and throughout the building further supports sustainable energy use. Any energy demand from traditional sources will be at least partially offset by the addition of renewables. Additionally, the building design emphasizes resilience and efficiency, including proper insulation and waterproofing, which reduces energy demands for heating, cooling, and maintenance. The project is designed to meet current federal and local energy codes. Construction machinery will not be connected to the power grid, resulting in minimal impact on energy consumption during the construction phase. The project area is serviced by LUMA, and the improved lighting system will connect to existing power points within the project boundaries. The project does not project a significant increase in greenhouse gas emissions since it mainly involves non-residential infrastructure.

		The project does not involve new residential construction or substantial rehabilitation of single-family or multi-family buildings; therefore, Energy Star performance standards are not applicable. The project has not been specifically rated under LEED, Enterprise Green Communities, or other green standards, but it incorporates energy-efficient measures.

Additional Studies Performed:
During the planning phase of the project, the following studies were carried out:

- OGPe Consultation: Reviewing permits and zoning compatibility.
- SHPO (State Historic Preservation Office) Consultation: Assessed potential impacts on historic properties.
- ICP (Institute of Puerto Rican Culture) Consultation: Evaluated cultural and archaeological impacts.
- DTOP (Puerto Rico Department of Transportation and Public Works) Consultation: Assessing transportation impacts and infrastructure compatibility.
- LUMA Energy Consultation: Evaluating electrical service capacity and infrastructure needs.
- PRASA/AAA Consultation: Confirmed water system capacities and infrastructure compatibility.
- ACT (Puerto Rico Highway and Transportation Authority): Assessing transportation-related concerns.
- Municipality of Barranquitas Consultation: Reviewing local compatibility and municipal service capacity.

Field Inspection (Date and completed by)**:**
Field inspection was carried out by Diatom Environmental Services, LLC's Environmental Professional on September 7, 2023. The inspection confirmed that the project area is free from significant environmental concerns. There are no flood control structures, such as levees or pumping stations, on or around the project area. Additionally, no evidence of toxic chemicals or hazardous materials, including spills, leaks, or storage, was found either on-site or in the surrounding area. The evaluation confirmed the absence of underground storage tanks, pipelines, or hazardous material disposal sites. While there are no hazardous operations present on the project area, small car repair shops operate within 3,000 ft, and the area includes bakeries, food trucks, and food markets with diesel generators. Overall, the project area is deemed safe and suitable for the proposed construction, with no identified environmental risks. Project area photos below. See Attachment 8 for complete Field Inspection documentation and project area photos.

List of Sources, Agencies and Persons Consulted [40 CFR 1508.9(b)]**:**

- Oficina de Gerencia de Permisos (OGPe)

- State Historic Preservation Office (SHPO)
- Instituto de Cultura Puertorriqueña (ICP)
- Departamento de Transportación y Obras Públicas (DTOP)
- LUMA Energy
- Puerto Rico Department of Natural and Environmental Resources (DNER)
- Puerto Rico Aqueduct and Sewer Authority (PRASA/AAA)
- Autoridad de Carreteras y Transportación (ACT)
- Municipality of Barranquitas
- PR Planning Board/Junta de Planificación MIPR https://gis.jp.pr.gov/mipr/
- Centro de Recaudaciones de Impuestos Municipales (CRIM) https://catastro.crimpr.net/cdprpc/
- Advisory Base Flood Elevation Map. Accessible at: https://gis-r2-fema.hub.arcgis.com/pages/puertorico
- Environmental Protection Agency (EPA), 2024. Envirofacts. Accessible at: ttps://nepassisttool.epa.gov/nepassist/nepamap.aspx
- EPA. 2024. Puerto Rico Nonattainment/Maintenance Status for Each County by Year forAll Criteria Pollutants. Accessible at: https://www3.epa.gov/airquality/greenbook/anayo_pr.htm
  EPA. Sole Source Aquifers. 2023. Accessible at:https://nepassisttool.epa.gov/nepassist/nepamap.asp
- EPA Office of Air and Radiation (OAR) - Office of Air Quality Planning and Standards (OAQPS), Nonattainment Areas (MapServer). Accessible at: https://gispub.epa.gov/arcgis/rest/services/OAR_OAQPS/NonattainmentAreas/MapServer
- Federal Aviation Administration (FAA). 2023. National Transportation Atlas Database. Accessible at: https://www.bts.gov/ntad
- US Fish and Wildlife Service - US Coastal Barrier Resources System Mapper at: https://www.fws.gov/program/coastal-barrier-resources-act/maps-and-data
- US Fish and Wildlife Service - National Wetlands Inventory at: https://www.fws.gov/wetlands/data/Mapper.html
- US Fish and Wildlife Service - https://www.fws.gov/media/blanket-clearance-letter-federally-sponsored-projects-housing-and-urban-development
- US Fish and Wildlife Service. IPaC Report. Accessible at: https://ipac.ecosphere.fws.gov/location/index
- National Oceanic and Atmospheric Administration (NOAA)/ PR DNER Coastal Zone Management boundary at: https://www.drna.pr.gov/historico/oficinas/arn/recursosvivientes/coastasreservasrefugios/pmzc/pmzc2009/PMZCPR%20espanol%202009-final.pdf
- Wild and Scenic Rivers at: https://rivers.gov/
- US Department of Agriculture – National Resources Conservation Farmland Protection at: https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm
- U.S. Geological Survey Geologic Map No. I-336 The Barranquitas Quadrangle https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

List of Permits Obtained:

- Autoridad de Acueductos y Alcantarillados (PRASA), AAA-RE-23-10-0013 Barranquitas, 27 de enero de 2025: *Aprobación de Planos* (Approval of Plans) (Attachment 19)

Public Outreach [24 CFR 50.23 & 58.43]**:**
As a result of the Environmental Review process, a combined public notice for the proposed project, Finding of No Significant Impact and Notice of Intent to Request Release of Funds (FONSI-NOI-RROF), will be published in a

newspaper of island-side circulation. This notice will have a Spanish translation. Any substantive comments received will be addressed and incorporated into the final environmental assessment document.

During construction, public outreach will be conducted through a required project sign installed at the site. This sign will provide information about the project and include contact details for the public to submit comments or inquiries.

Cumulative Impact Analysis [24 CFR 58.32]**:**

Cumulative impacts result from the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future actions, regardless of what entity (government or private) undertakes such other actions. The proposed Centro de Usos Múltiples de Barranquitas project may contribute to cumulative impacts when considered alongside other past, present, and reasonably foreseeable future actions in the area. Past and ongoing development in Barranquitas, including urban expansion, road infrastructure improvements, and community facilities, has gradually transformed the landscape and increased resource demands. The construction of the community center will incrementally add to these changes by introducing new impermeable surfaces, potentially increasing eventual indirect stormwater flow to the Rio de Barranquitas and the La Plata River is planned to be directed to the stormwater system (see Waste Water / Sanitary Sewers). The project design will ensure that current stormwater flow into the river is maintained, thereby minimizing any additional strain on local water resources downstream. The project will contribute to cumulative waste generation, including construction debris and operational waste such as biohazard materials, which will be managed in compliance with local regulations to prevent significant environmental impacts.

When combined with other foreseeable actions, such as further urban development or infrastructure projects, the cumulative impacts may include a reduction in permeable land, increased traffic congestion, and heightened demand for public services. However, the incorporation of renewable energy systems, stormwater management practices, and compliance with regulatory standards will mitigate these effects. Overall, while the project will incrementally contribute to existing and future impacts, its design ensures these contributions remain insignificant while contributing long-term benefits to the community.

Alternatives [24 CFR 58.40(e); 40 CFR 1508.9]:

Proposed Action

The proposed Centro de Usos Múltiples de Barranquitas project, identified as the preferred alternative, involves the construction of a two-story multipurpose community center to address critical community needs. This facility will provide space for activities such as community training, health services, social gatherings, and emergency shelter during disasters. Prior to the implementation of this project, the municipality of Barranquitas faces limited access to health and social services, leaving residents underserved in these essential areas. The development of this center will allow the municipality to expand its provision of life-essential services, addressing longstanding gaps in the community. Furthermore, the project will repurpose an unused area, converting it into a valuable and active community resource, ensuring that the project area fulfills its potential to serve and benefit residents.

Alternatives Considered but Not Selected

Rather than a community center, the area could be designed to construct a compact residential development (single-family or multi-family). This type of development would have medical offices, hospitals, and commercial areas surrounding them that could be used in residential and commercial projects. The project area could also be used for the development of a commercial building. Due to its surroundings, the area could be used to construct medical services or commercial space offices such as therapists, pharmacies, and medical offices that can provide supplementary services to the surrounding hospitals and clinics. These alternatives could give an adequate use of the property under evaluation but were discarded due to the government benefits that could be received for

developing the Centro de Usos Múltiples. As stated before, the proposed project will provide the residents of Barranquitas with a much-needed center for multiple uses to satisfy essential life needs, near the downtown area.

No Action Alternative [24 CFR 58.40(e)]:
Under the No Action Alternative, the Proposed Action would not be implemented, and the project area would remain in its current state as an unused open area. This would result in the continuation of limited access to health, social, and community services within the municipality of Barranquitas, leaving residents without critical resources, such as emergency shelter, health services, and spaces for community gatherings or training programs. Additionally, the lack of action would fail to provide the municipality with enhanced resilience against natural disasters, leaving residents more vulnerable during emergencies.

Summary of Findings and Conclusions:
This project will provide the citizens with new public infrastructure that serves all levels of residents by providing a center for multiple uses to benefit the residents and employees of the municipality of Barranquitas. It will also help attract visitors from other areas that need such services, likely increase the municipality's economic activities. Due to the environmental characteristics of the project area and the Proposed Action activities and mitigation measures, there will be no significant environmental impact due to this action. Providing the appropriate public access infrastructure improves landscape conditions without impacting ecological resources in the area. Therefore, this project will have social, economic, and environmental benefits in the coming years.

Mitigation Measures and Conditions [40 CFR 1505.2(c)]

Summarize below all mitigation measures adopted by the Responsible Entity to reduce, avoid, or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements, and other relevant documents. The mitigation plan should clearly identify the staff responsible for implementing and monitoring mitigation measures.

Law, Authority, or Factor	Mitigation Measure
Clean Air Act	Obtain an Air Permit (*Permiso de Fuentes de Emisión- PFE- or Permiso General para Generadores de Electricidad*) prior to the operation of the generator. Ensure emissions from the generator comply with permissible levels specified under the permit. Implement fugitive dust controls during construction to minimize dust emissions.
Explosive and Flammable Hazards	A spill prevention and response plan will be required for the fuel tank and the fire wall must be constructed as per design documents.
Endangered Species Act	If a Puerto Rican Boa is found in the project area, work shall cease until the Boa moves off on its own. No additional mitigation measures are required.
Water Supply Waste Water / Sanitary Sewers	Comply with requirements from the Puerto Rico Aqueduct and Sewer Authority (PRASA). See Attachment 18 for a full list of mitigation measures and requirements.
Noise	Noise attenuation measures to be implemented during construction: • Noisy construction activities will be limited to times outside of school hours to avoid disruptions during peak academic concentration periods. • Modular noise-reduction panels will be installed to minimize sound impact. • Priority will be given to machinery with silencers, and a maintenance program will be implemented to reduce unnecessary noise. • Techniques that minimize the use of high-impact equipment will be utilized whenever possible. • If necessary, a communication plan will be established with the school to provide advance notice of potentially noisy activities. • Noise levels will be periodically measured using monitoring equipment to ensure compliance with local and federal regulations. Mitigation measures included in the design: • The emergency-power generator unit will include a Level II sound attenuated weatherproof enclosure.
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	Sediment and Erosion Control Plan

Determination:

☒ **Finding of No Significant Impact** [24 CFR 58.40(g)(1); 40 CFR 1508.27]
The project will not result in a significant impact on the quality of the human environment.

☐ **Finding of Significant Impact** [24 CFR 58.40(g)(2); 40 CFR 1508.27]
The project may significantly affect the quality of the human environment.

Preparer Signature:  Date: October 10, 2025

Name/Title/Organization: Javier Vélez Arocho, Diatom Environmental Services, LLC

Certifying Officer Signature: Digitally signed by Santa D. Ramírez Lebrón Date: 2025.10.21 14:46:30 -04'00' Date: October 21, 2025

Name/Title: Santa D. Ramírez Lebrón / Permits and Environmental Compliance Specialist

This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environmental Review Record (ERR) for the activity/project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).

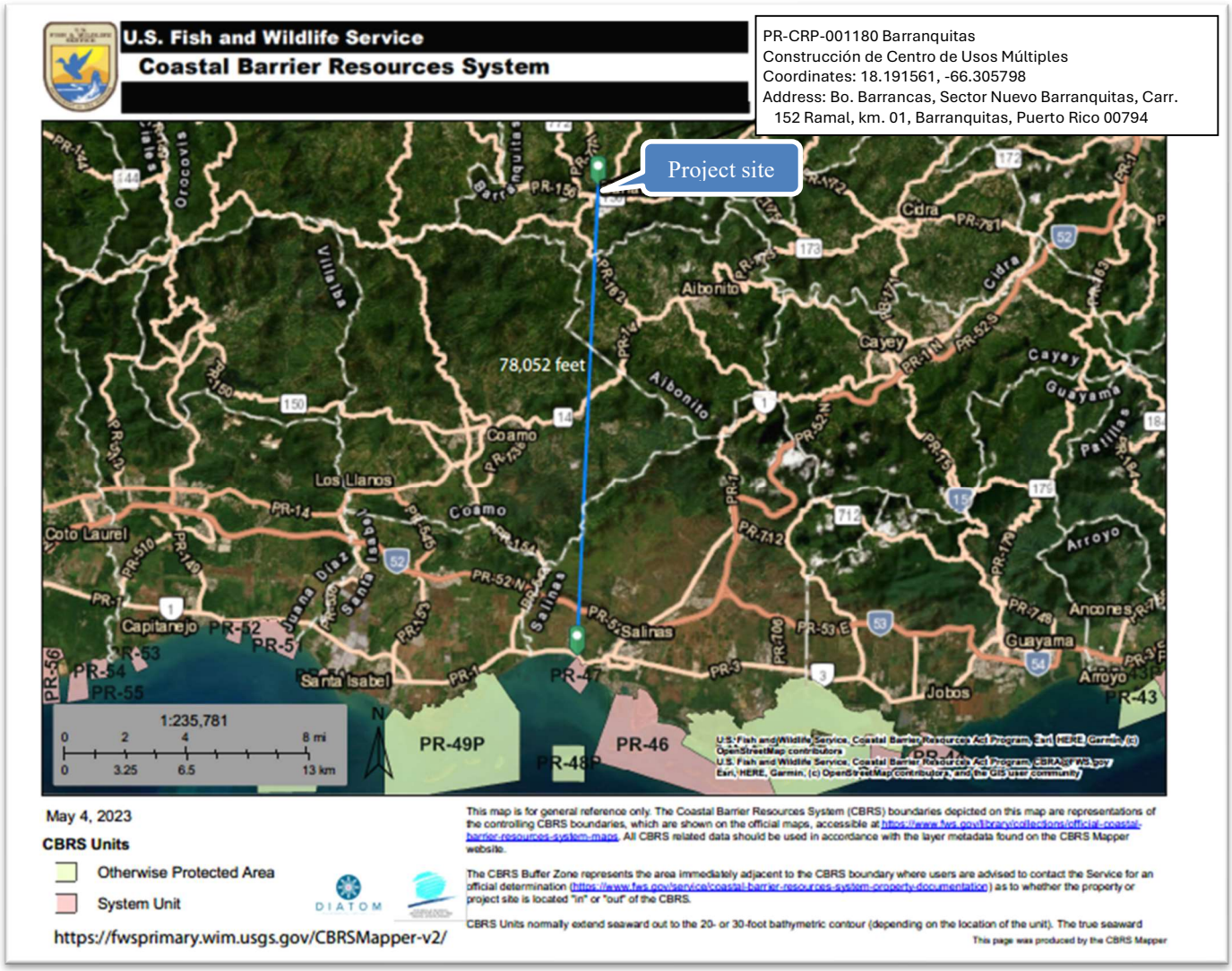
List of attachments

1	Airport Hazards Map
2	Coastal Barriers Resources Map
3	Flood Insurance Rate Map (FIRM)
4	Clean Air 4.1 Nonattainment Areas Map 4.2 U.S. Environmental Protection Agency – Green Book data
5	Coastal Zone Management Map
6	6.1 Contamination and Toxic Substances 3,000-ft radius map and information on identified sites 6.2 Echo reports 6.3 Radon memo, attachments and notice 6.4 Phase I Environmental Site Assessment 6.5 Section of USGS Topographic map with natural barriers between landfill and project site 6.6 Underground Storage Tank (UST) map 6.7 Leaking UST listing 2024
7	Endangered Species: No Effect Memorandum and Critical Habitat map
8	Explosive and Flammable Hazards 8.1 Field Visit Checklist & Site Evaluation 8.2 Acceptable Separation Distance (ASD) analysis
9	Farmland Classification
10	Floodplain Management: Advisory Base Flood Elevation (ABFE) Map
11	Historic Preservation
12	Distance to noise sources
13	Sole Source Aquifers
14	Wetlands Map
15	Wild and Scenic Rivers Map
16	Landslide Susceptibility Map
17	Zoning Map
18	Land Use Plan (PUT) Map
19	PRASA Approval Letter
20	Project Drawings

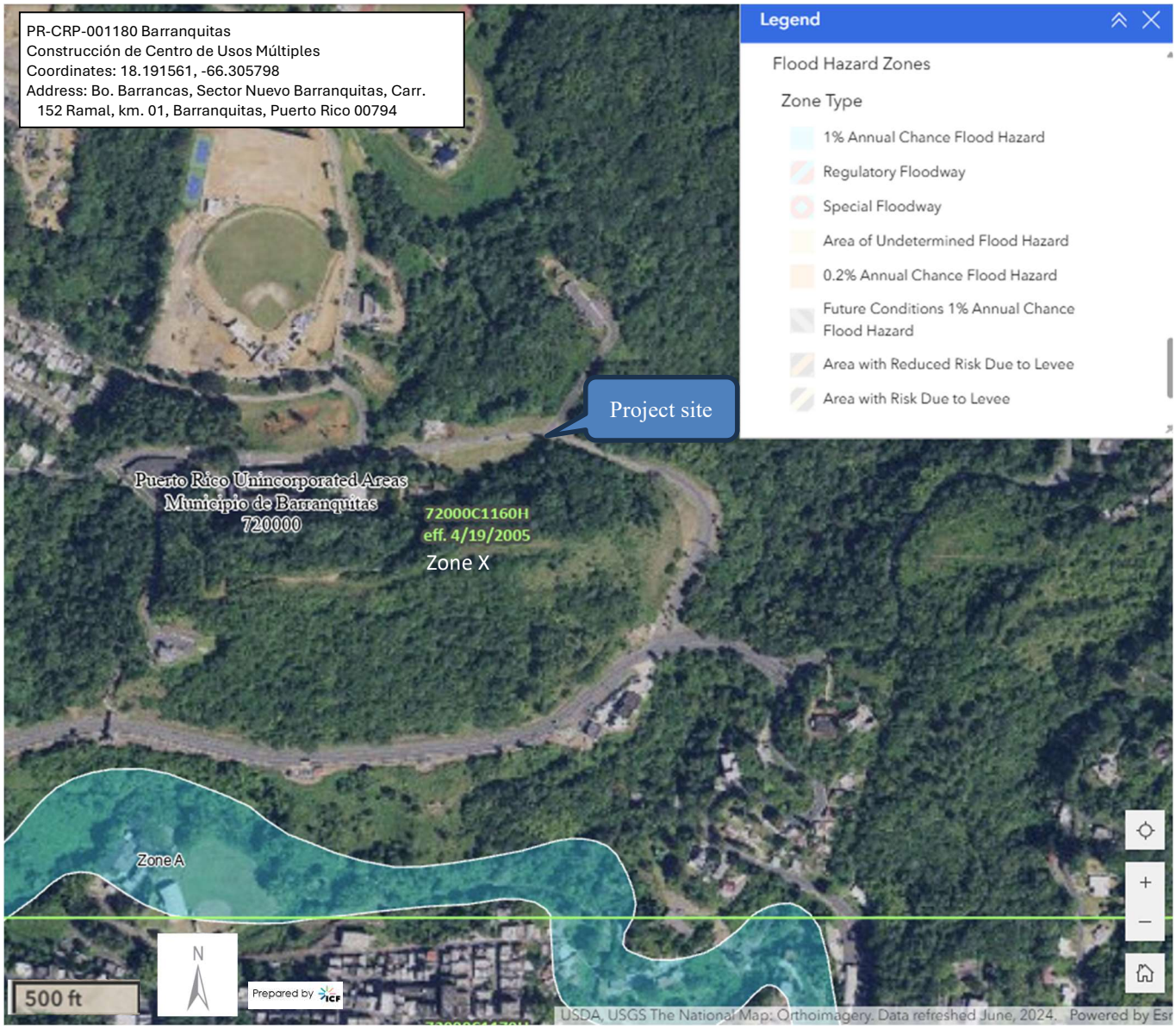
1. Airport Hazards

Source: Google Earth (Spatial Reference: WGS84) at URL: https://earth.google.com/

2. Coastal Barriers Resources



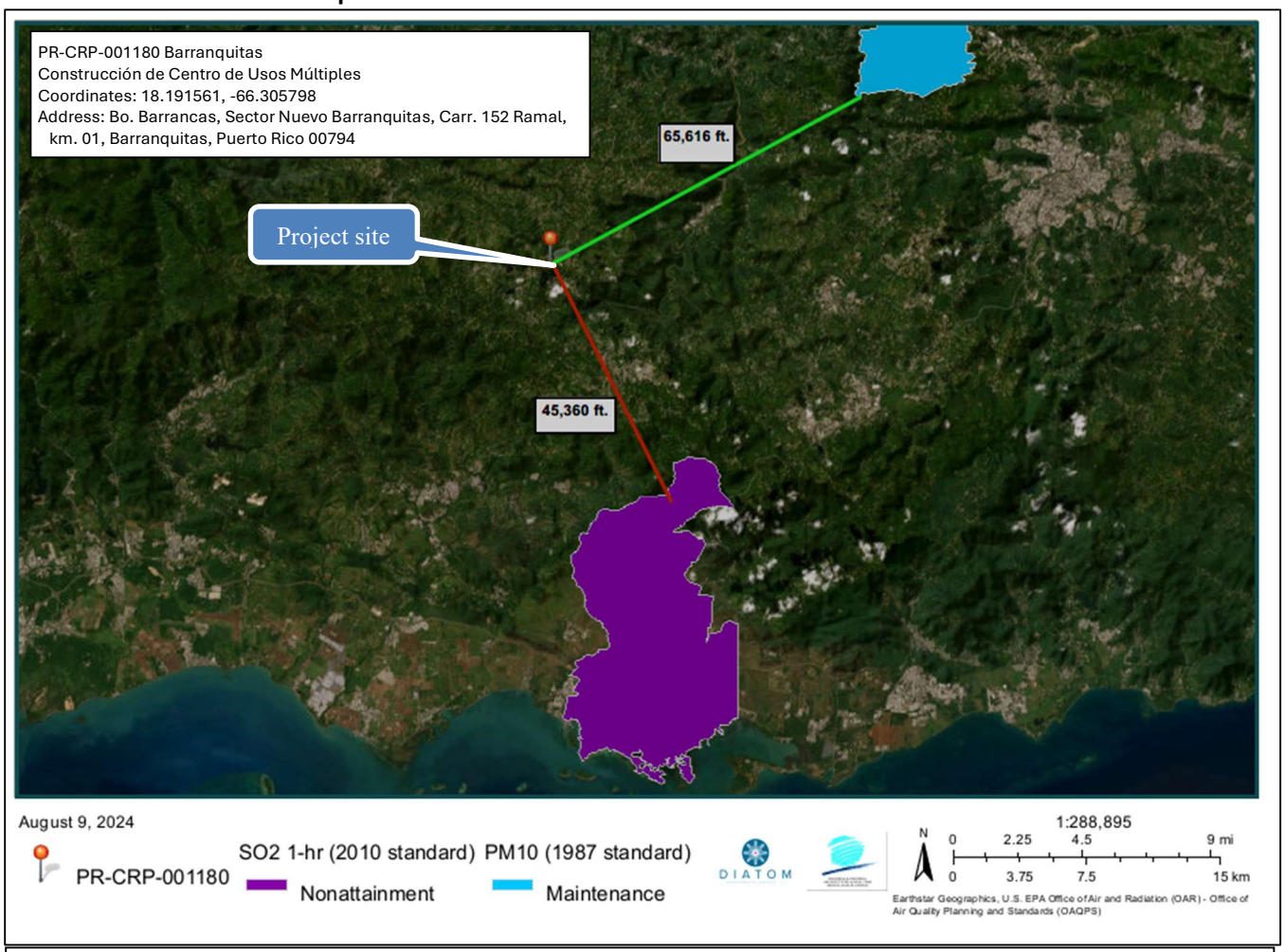
3. Flood Insurance Rate Map (FIRM)



Source: FEMA FIRM (Spatial Reference: NAVD88), accessed March 18, 2025 at URL https://experience.arcgis.com/experience/e492db86d9b348399f4bd20330b4b274/page/Page?views=Effective%2CView-7---Additional-Help

4. Clean Air

4.1 Nonattainment Areas Map



Source: U.S. Environmental Protection Agency (EPA) NEPAssist (Spatial Reference: GRS80) at URL https://www.epa.gov/nepa/nepassist

4.2 U.S. Environmental Protection Agency – Green Book data

Source: https://www3.epa.gov/airquality/greenbook/anayo_pr.html

logo

Puerto Rico Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants

Data is current as of February 28, 2025

Listed by County, NAAQS, Area. The 8-hour Ozone (1997) standard was revoked on April 6, 2015 and the 1-hour Ozone (1979) standard was revoked on June 15, 2005.

* The 1997 Primary Annual PM-2.5 NAAQS (level of 15 $\mu g/m^3$) is revoked in attainment and maintenance areas for that NAAQS. For additional information see the PM-2.5 NAAQS SIP Requirements Final Rule, effective October 24, 2016. (81 FR 58009)

Change the State:
PUERTO RICO GO

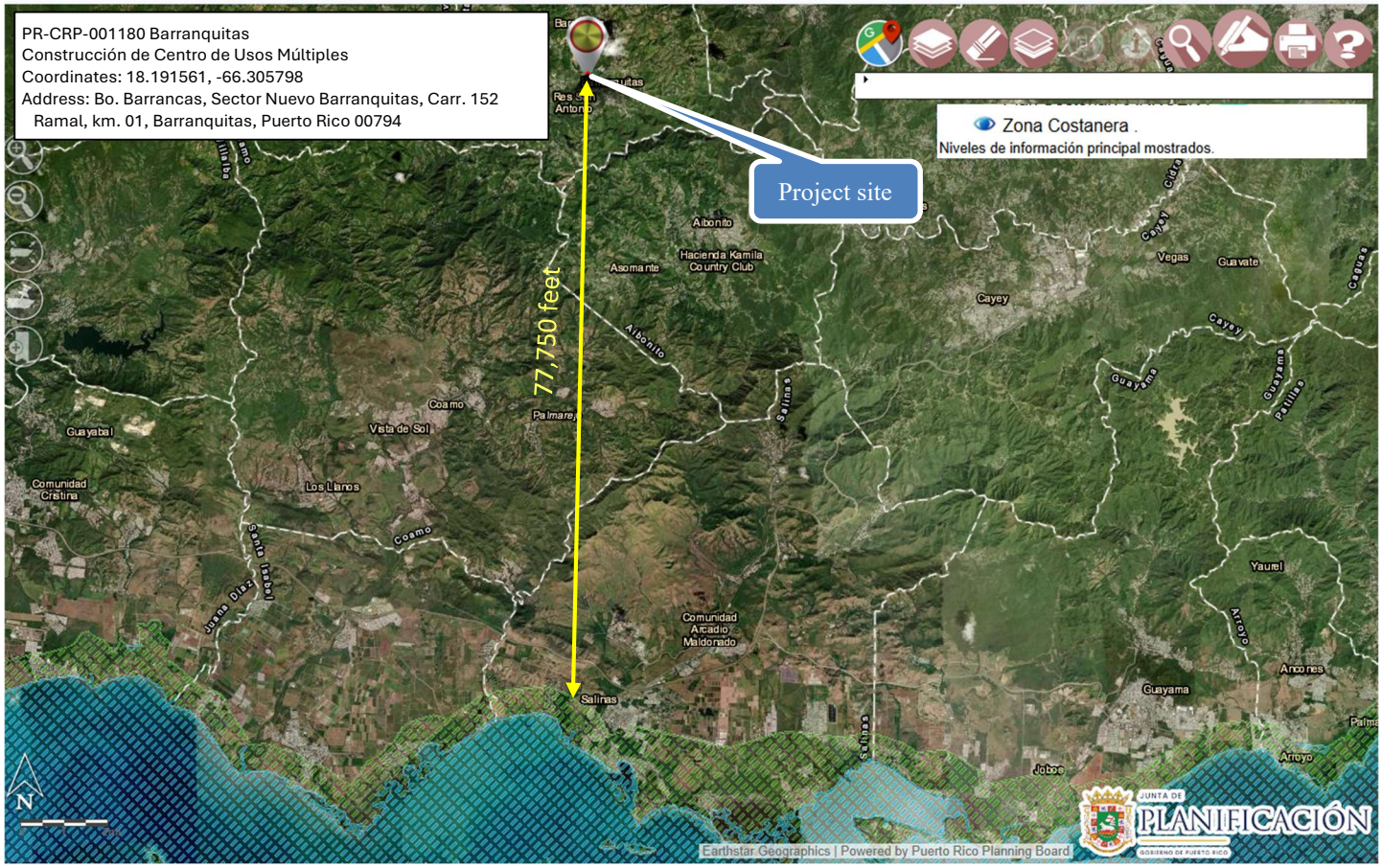
Important Notes

Download National Dataset: dbf | xls | Data dictionary (PDF)

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
PUERTO RICO								
Arecibo Municipio	Lead (2008)	Arecibo, PR	1112131415161718192021222324 25	/ /		Part	32,185	72/013
Bayamon Municipio	Sulfur Dioxide (2010)	San Juan, PR	1819202122232425	/ /		Part	22,921	72/021
Catano Municipio	Sulfur Dioxide (2010)	San Juan, PR	1819202122232425	/ /		Whole	28,140	72/033
Guaynabo Municipio	PM-10 (1987)	Mun. of Guaynabo, PR	92939495969798990001020304050607080 9	02/11/2010	Moderate	Part	90,470	72/061
Guaynabo Municipio	Sulfur Dioxide (2010)	San Juan, PR	1819202122232425	/ /		Part	23,802	72/061
Salinas Municipio	Sulfur Dioxide (2010)	Guayama-Salinas, PR	1819202122232425	/ /		Part	23,401	72/123
San Juan Municipio	Sulfur Dioxide (2010)	San Juan, PR	1819202122232425	/ /		Part	147,963	72/127
Toa Baja Municipio	Sulfur Dioxide (2010)	San Juan, PR	1819202122232425	/ /		Part	52,441	72/137

Important Notes

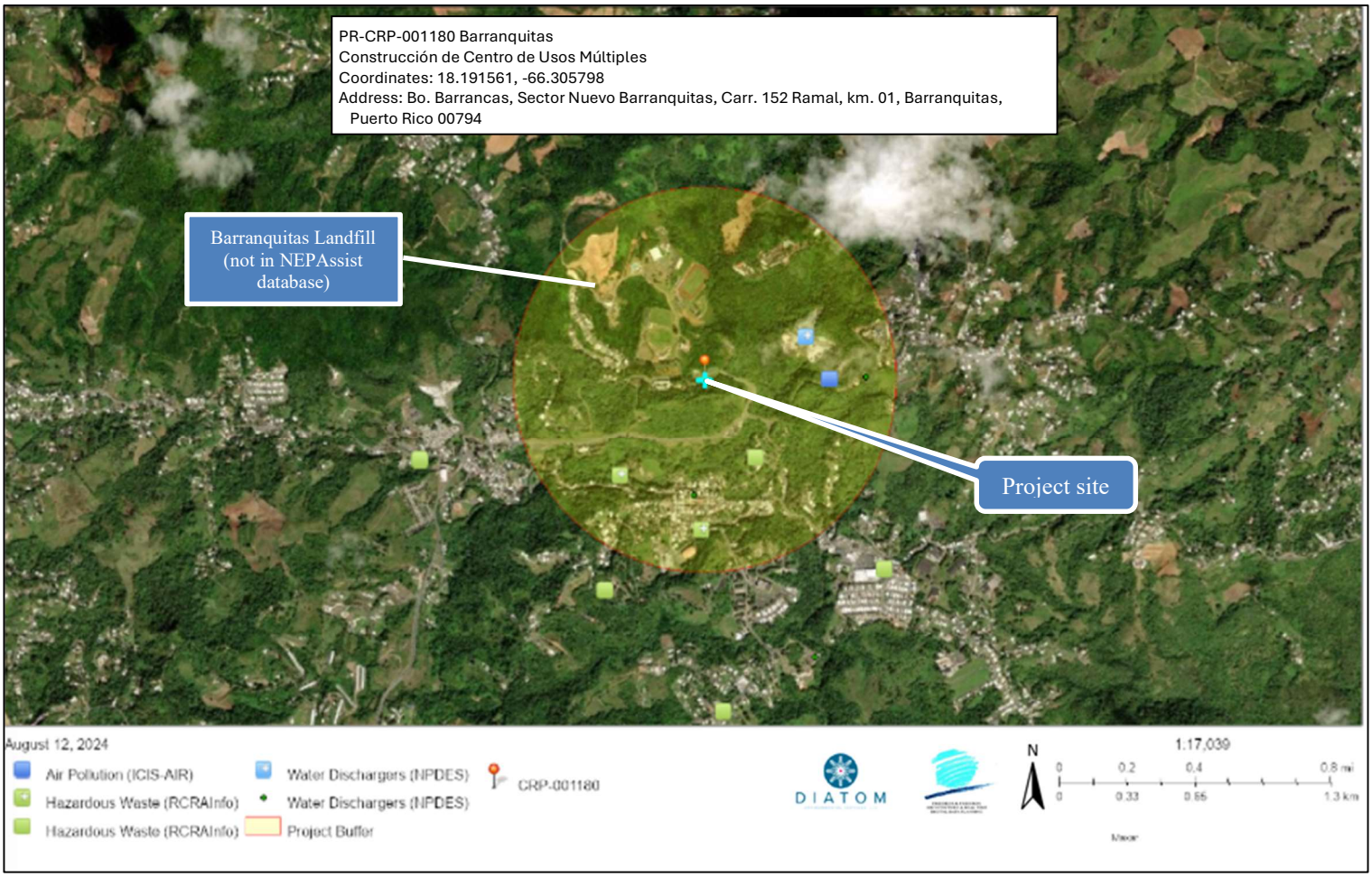
5. Coastal Zone Management Map



Source: US National Oceanic and Atmospheric Administration (NOAA), US Coastal Zone Management Act boundary (Spatial Reference: WGS84) at URL https://koordinates.com/layer/20522-us-coastal-zone-management-act-boundary/

6. Contamination and Toxic Substances

6.1 Contamination and Toxic Substances in 3,000 ft. buffer



Source: EPA NEPAssist (Spatial Reference: GRS80), accessed March 18, 2025 at URL https://nepassisttool.epa.gov/nepassist/nepamap.aspx

Contamination and Toxic Substances Table

PR-CRP-001180

ID	EPA Facility	Distance from Project Site	Direction from Project Site	Description
1	Water Discharger (NPDES)	.22 mi (1161.6 ft)	East	Betterecycling Corporation - Barranquitas
2	Water Discharger (NPDES) and Hazardous Waste (RCRAInfo)	.26 mi (1372.8 ft)	East	PUERTO RICO ASPHALT, LLC - BARRANQUITAS
2	Water Discharger (NPDES)	.26 mi (1372.8 ft)	East	BETTERECYCLING CORPORATION - BARRANQUITAS
2	Water Discharger (NPDES)	.26 mi (1372.8 ft)	East	AC807544 - LANDSLIDE REPAIRS IN BARRANQUITAS, PUERTO RICO
3	Air Pollution (ICIS-AIR) and Hazardous Waste (RCRAInfo)	.31 mi (1636.8 ft)	East	Betteroads Asphalt Plt 11
4	Hazardous Waste (RCRAInfo)	.37 mi (1953.6 ft)	Southwest	Escuela Jose C Berdecia
5	Hazardous Waste (RCRAInfo)	.34 mi (1795.2 ft)	South	Dept Of Ed - Pablo Colon Berdecia
6	Water Discharger (NPDES)	.34 mi (1795.2 ft)	South	Municipality Of Barranquitas
7	Hazardous Waste (RCRAInfo)	.25 mi (1320 ft)	South	Barranquitas Stp
8	Hazardous Waste (RCRAInfo)	.44 mi (2323.2 ft)	South	PR PUBLIC HOUSING ADM RES VILLA UNIVERSI
8	Hazardous Waste (RCRAInfo)	.44 mi (2323.2 ft)	South	MIKE FOTO
8	Hazardous Waste (RCRAInfo)	.44 mi (2323.2 ft)	South	CENTRO DE SALUD INTEGRAL DE LA MONTANA
9	Water Discharger (NPDES)	.44 mi (2,346.4 ft)	East	COLOCO READY MIX, INC.

6.2 ECHO Reports

Detailed Facility Report

Facility Summary

ESCUELA JOSE C BERDECIA

CALLE MELITON PERELEZ, BARRANQUITAS, PR 00794

FRS (Facility Registry Service) ID: 110007810903

EPA Region: 02

Latitude: 18.18747

Longitude: -66.30964

Locational Data Source: FRS

Industries: --

Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	--
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information

Clean Water Act (CWA): No Information

Resource Conservation and Recovery Act (RCRA): Inactive Other, (PRD987373339), Inactive Other, (PR0000011205)

Safe Drinking Water Act (SDWA): No Information

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information

Greenhouse Gas Emissions (eGGRT): No Information

Toxic Releases (TRI): No Information

Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Go To Enforcement/Compliance Details

Known Data Problems <https://epa.gov/resources/echo-data/known-data-problems>

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110007810903					N	18.18747	-66.30964
RCRAInfo	RCRA	PRD987373339	Other	Inactive()			N		
RCRAInfo	RCRA	PR0000011205	Other	Inactive()			N		

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110007020903	ESCUELA JOSE C BERDECIA	CALLE MELITON PERELEZ, BARRANQUITAS, PR 00794	Barranquitas Municipio
RCRAInfo	RCRA	PR0987373339	ESCUELA JOSE C BERDECIA	MELITON PERALES ST, BARRANQUITAS, PR 00618	Barranquitas Municipio
RCRAInfo	RCRA	PR0000011205	DEPT OF ED - JOSE BERROS BERDECIA	CALLE MELITON PERALES - PUEBLO, BARRANQUITAS, PR 00618	Barranquitas Municipio

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description

No data records returned

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description

No data records returned

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)

No data records returned

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)

No data records returned

Entries in italics are not included in ECHO's Compliance Monitoring Activity counts because they are not compliance monitoring strategy <https://www.epa.gov/compliance/compliance-monitoring-programs> *activities or because they are not counted as inspections within EPA's Annual Results* <https://www.epa.gov/enforcement/enforcement-data-and-results>.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	PR0987373339	No	09/01/2024	0	09/01/2024
RCRA	PR0000011205	No	09/01/2024	0	09/01/2024

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type		QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11
RCRA (Source ID: PR0000011205)			10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22	01/01-03/31/23	04/01-06/30/23	07/01-09/30/23	10/01-12/31/23	01/01-03/31/24	04/01-06/30/24
	Facility-Level Status		No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation	Agency											
RCRA (Source ID: PR0987373339)			10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22	01/01-03/31/23	04/01-06/30/23	07/01-09/30/23	10/01-12/31/23	01/01-03/31/24	04/01-06/30/24
	Facility-Level Status		No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation	Agency											

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date

No data records returned

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/ Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/ Filed Date	Settlement/ Actions	Settlement/ Action Date	Federal Penalty Assessed	State/ Local Penalty Assessed	Penalty Amount Collected	SEP Value	Comp Action Cost

No data records returned

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (RAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (RAD (Reach Address Database))	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-Listed Aquatic Species?

No data records returned

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Ecological Use	Fish Consumption Use	Recreation Use	Other Use

No data records returned

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)

No data records returned

Pollutants

Toxics Release Inventory History of Reported Chemicals Released or Transferred in Pounds per Year at Site

TRI Facility ID	Year	Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Disposal to Land	Total On-Site Releases	Total Off-Site Transfers

No data records returned

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name

No data records returned

Community

Environmental Justice

This section shows indexes from EJScreen, EPA's screening tool for environmental justice (EJ) concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. Use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Potential Environmental Justice Concerns

US Territory

Supplemental/EJ index percentiles >= 90 (Census block group)

Supplemental/EJ index percentiles >= 90 (1-mile average)

EJScreen Indexes Shown

Index Type: Supplemental (default)

Related Reports

EJScreen Community Report

Download Data

Census Block Group ID: 720189524002	US (Percentile)			State (Percentile)		
Supplemental Indexes	Facility Census Block Group	1-mile Avg	1-mile Max	Facility Census Block Group	1-mile Avg	1-mile Max
Count of Indexes At or Above 90th Percentile	1	0	1	0	0	1
Particulate Matter 2.5	--	N/A	--	--	N/A	--
Ozone	--	N/A	--	--	N/A	--
Diesel Particulate Matter	0	0	0	35	38	52
Air Toxics Cancer Risk	21	35	52	0	0	66
Air Toxics Respiratory Hazard Index	17	22	36	0	0	66
Toxic Releases to Air	● 86	● 93	● 98	76	82	● 94

Census Block Group ID: 720399524002	US (Percentile)			State (Percentile)		
Supplemental Indexes	Facility Census Block Group	1-mile Avg	1-mile Max	Facility Census Block Group	1-mile Avg	1-mile Max
Traffic Proximity	93	95	98	55	56	89
Lead Paint	86	82	97	76	63	84
Risk Management Plan (RMP) Facility Proximity	37	61	88	11	11	21
Hazardous Waste Proximity	49	55	64	4	3	8
Superfund Proximity	96	94	99	55	59	72
Underground Storage Tanks (UST)	97	83	97	61	62	81
Wastewater Discharge	65	61	99	4	11	66

Map Display Based on: (•) US ( ) State

Display Map Layer: Summary - Number of Indexes

( ) Facility 1-mile Radius ☐ Facility Census Block Group

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Demographic Profile of Surrounding Area (1-Mile Radius)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2017 - 2021 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. Census boundaries and demographic data for U.S. Territories are based on the "2020 Island Areas Demographic Profiles" from the U.S. Census Bureau. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary <https://epa.gov/help/reports/dfr-data-dictionary#demographic>.

General Statistics (U.S. Census)	
Total Persons	4,369
Population Density	1,446/sq mi
Housing Units in Area	1,829

General Statistics (ACS (American Community Survey))	
Total Persons	5,295
Percent People of Color	100%
Households in Area	1,561
Households on Public Assistance	117
Persons With Low Income	4,131
Percent With Low Income	78%

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	294 (6%)
Minors 17 years and younger	1,162 (25%)
Adults 18 years and older	3,497 (75%)
Seniors 65 years and older	662 (13%)

Race Breakdown (U.S. Census) - Persons (%)	
White	2,965 (67%)
African-American	289 (6%)
Hispanic-Origin	4,519 (96%)
Asian/Pacific Islander	2 (0%)
American Indian	22 (0%)

Geography	
Radius of Selected Area	1 mi.
Center Latitude	18.18747
Center Longitude	-66.10864
Land Area	100%
Water Area	0%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	700 (44.76%)
$15,000 - $25,000	316 (20.2%)
$25,000 - $50,000	426 (27.24%)
$50,000 - $75,000	62 (3.96%)
Greater than $75,000	60 (3.84%)

Race Breakdown (U.S. Census) - Persons (%)	
Other/Multiracial	291 (8%)
Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	526 (14.86%)
9th through 12th Grade	385 (10.83%)
High School Diploma	951 (26.76%)
Some College/1-year	616 (16.97%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	737 (19.89%)

Detailed Facility Report

Facility Summary

COLOCO READY MIX, INC.

PR-152 KM 1.0, BARRANQUITAS, PR 00794

FRS (Facility Registry Service) ID: 110066888087

EPA Region: 02

Latitude: 18.191704

Longitude: -66.298503

Locational Data Source: NPDES

Industries: --

Indian Country: N

Enforcement and Compliance Summary

Statute	CWA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	--
Compliance Status	Significant/Category I Noncompliance
Qtrs in Noncompliance (of 12)	12
Qtrs with Significant Violation	12
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information

Clean Water Act (CWA): Non-Major, Permit Effective (PRR053194)

Resource Conservation and Recovery Act (RCRA): No Information

Safe Drinking Water Act (SDWA): No Information

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information

Greenhouse Gas Emissions (eGGRT): No Information

Toxic Releases (TRI): No Information

Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Go To Enforcement/Compliance Details

Known Data Problems <https://epa.gov/resources/echo-data/known-data-problems>

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110066888087					N	18.191704	-66.298503
ICIS-NPDES	CWA	PRR053194	Non-Major: General Permit Covered Facility	Effective	Industrial Stormwater	02/28/2026	N	18.191704	-66.298503

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110066888087	COLOCO READY MIX, INC.	PR-152 KM 1.0, BARRANQUITAS, PR 00794	

System	Statute	Identifier	Facility Name	Facility Address	Facility County
ICIS-NPDES	CWA	PR0031194	COLOCO READY MIX, INC.	PR-152, KM. 1.0, BARRANQUITAS, PR 00794	Barranquitas Municipio

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
ICIS-NPDES	PR0031194	3273	Ready-Mixed Concrete

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description

No data records returned

Facility Industrial Effluent Guidelines

Identifier	Effluent Guideline (40 CFR Part)	Effluent Guideline Description

No data records returned

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)

No data records returned

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)

No data records returned

Entries in italics are not included in ECHO's Compliance Monitoring Activity counts because they are not compliance monitoring strategy <https://www.epa.gov/compliance/compliance-monitoring-programs> activities or because they are not counted as inspections within EPA's Annual Results <https://www.epa.gov/enforcement/enforcement-data-and-results>.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
CWA	PR0031194	Yes	03/31/2024	12	06/02/2024

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9
CWA (Source ID: PR0031194)		04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22	01/01-03/31/23	04/01-06/30/
	Facility-Level Status	Significant Category I Noncompliance	Significant Category I Noncompliance	Significant Category I Noncompliance	Significant Category I Noncompliance	Significant Category I Noncompliance	Significant Category I Noncompliance	Significant Category I Noncompliance	Significant Category I Noncompliance	Significant Cate I Noncompliar
	Quarterly Noncompliance Report History	Failure to Report DMR - Not Received	Failure to Report DMR - Not Received	Failure to Report DMR - Not Received	Failure to Report DMR - Not Received	Failure to Report DMR - Not Received	Failure to Report DMR - Not Received	Failure to Report DMR - Not Received	Failure to Report DMR - Not Received	Failure to Rep DMR - Not Rece
	Late or Missing Discharge Monitoring Report (DMR) Measurements									
	Counts of Missing DMR Measurements		1	1	1	2	1	1	1	2

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date

No data records returned

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/ Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/ Filed Date	Settlement/ Action	Settlement/ Action Date	Federal Penalty Assessed	State/ Local Penalty Assessed	Penalty Amount Collected	SEP Value	Comp Action Cost

No data records returned

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (RAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (RAD (Reach Address Database))	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
21010006070M	No Location	NATURAL DRAIN TOWARD RIO LIGARON	No	No	Coliform, fecal general	Yes

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Ecological Use	Fish Consumption Use	Recreation Use	Other Use
PR	2022	PRER2001	RIO USABON	Impaired - With Restoration Plan	PATHOGENS	Not Assessed	Insufficient Information	--	Not Supporting	--

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)

No data records returned

Pollutants

Toxics Release Inventory History of Reported Chemicals Released or Transferred in Pounds per Year at Site

TRI Facility ID	Year	Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Disposal to Land	Total On-Site Releases	Total Off-Site Transfers

No data records returned

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name

No data records returned

CWA (Clean Water Act) Discharge Monitoring Report (DMR) Pollutant Loadings

DMR and TRI Multi-Year Loading Report

NPDES ID	Description

No data records returned

Community

Environmental Justice

This section shows indexes from EJScreen, EPA's screening tool for environmental justice (EJ) concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. Use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Potential Environmental Justice Concerns

US Territory

Supplemental/EJ index percentiles >= 90 (Census block group)

Supplemental/EJ index percentiles >= 90 (1-mile average)

EJScreen Indexes Shown

Index Type: Supplemental (default)

Related Reports

EJScreen Community Report

Download Data

Census Block Group ID: 720199522001	US (Percentile)			State (Percentile)		
Supplemental Indexes	Facility Census Block Group	1-mile Avg	1-mile Max	Facility Census Block Group	1-mile Avg	1-mile Max
Count of Indexes At or Above With Percentile	4	4	5	0	0	1
Particulate Matter 2.5	--	N/A	--	--	N/A	--
Ozone	--	N/A	--	--	N/A	--
Diesel Particulate Matter	4	4	5	51	45	56
Air Toxics Cancer Risk	51	47	54	66	17	77
Air Toxics Respiratory Hazard Index	36	29	37	66	19	77
Toxic Releases to Air	● 99	● 99	● 99	77	93	● 94
Traffic Proximity	89	● 94	● 98	45	54	89

Census Block Group ID: 720199522011	US (Percentile)			State (Percentile)		
Supplemental Indexes	Facility Census Block Group	1-mile Avg	1-mile Max	Facility Census Block Group	1-mile Avg	1-mile Max
Lead Paint	● 84	● 83	● 97	73	66	84
Risk Management Plan (RMP) Facility Proximity	67	64	88	18	13	16
Hazardous Waste Proximity	56	60	67	6	6	12
Superfund Proximity	● 86	● 99	● 99	69	65	73
Underground Storage Tanks (UST)	0	43	● 97	0	0	81
Wastewater Discharge	● 90	66	● 98	18	13	36

Map Display Based on: ◉ US ○ State

Display Map Layer: Summary - Number of Indexes

○ Facility 1-mile Radius ☐ Facility Census Block Group

Earthstar Geographics

Powered by Esri <https://www.esri.com/>

Demographic Profile of Surrounding Area (1-Mile Radius)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2017 - 2021 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. Census boundaries and demographic data for U.S. Territories are based on the "2020 Island Areas Demographic Profiles" from the U.S. Census Bureau. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary <https://epa.gov/help/reports/dfr-data-dictionary#demographic>.

General Statistics (U.S. Census)	
Total Persons	4,655
Population Density	1,318/sq. mi.
Housing Units in Area	1,377

General Statistics (ACS (American Community Survey))	
Total Persons	3,959
Percent People of Color	100%
Households in Area	1,235
Households on Public Assistance	72
Persons With Low Income	3,153
Percent With Low Income	81%

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	234 (5%)
Minors 17 years and younger	988 (21%)
Adults 18 years and older	3,668 (79%)
Seniors 65 years and older	614 (13%)

Race Breakdown (U.S. Census) - Persons (%)	
White	3,494 (67%)
African-American	246 (5%)
Hispanic-Origin	4,616 (100%)
Asian/Pacific Islander	2 (0%)
American Indian	17 (0%)
Other/Multiracial	276 (7%)

Geography	
Radius of Selected Area	1 mi.
Center Latitude	18.191704
Center Longitude	-66.268533
Land Area	100%
Water Area	0%

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	426 (16.9%)
9th through 12th Grade	310 (12.32%)
High School Diploma	647 (25.85%)
Some College/1-year	368 (14.26%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	497 (19.26%)

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	563 (45.39%)
$15,000 - $25,000	280 (22.87%)
$25,000 - $50,000	314 (25.43%)
$50,000 - $75,000	40 (3.24%)
Greater than $75,000	36 (3.09%)

Detailed Facility Report

Facility Summary

BETTEROADS ASPHALT PLT 11

PR-152 KM 1.0 BO QUEBRADA, BARRANQUITAS, PR 00794

FRS (Facility Registry Service) ID: 110007812929

EPA Region: 02

Latitude: 18.191606

Longitude: -66.300173

Locational Data Source: RCRAINFO

Industries: Petroleum and Coal Products Manufacturing

Indian Country: N

Enforcement and Compliance Summary

Statute	CAA
Compliance Monitoring Activities (5 years)	1
Date of Last Compliance Monitoring Activity	07/28/2022
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	–
Formal Enforcement Actions (5 years)	–
Penalties from Formal Enforcement Actions (5 years)	–
EPA Cases (5 years)	–
Penalties from EPA Cases (5 years)	–
Statute	**RCRA**
Compliance Monitoring Activities (5 years)	–
Date of Last Compliance Monitoring Activity	–
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	–
Formal Enforcement Actions (5 years)	–
Penalties from Formal Enforcement Actions (5 years)	–
EPA Cases (5 years)	–
Penalties from EPA Cases (5 years)	–

Regulatory Information

Clean Air Act (CAA): Operating Minor (PR0000007201900018)

Clean Water Act (CWA): No Information

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information

Greenhouse Gas Emissions (eGGRT): No Information

Resource Conservation and Recovery Act (RCRA): Inactive Other, (PRD987381241)

Toxic Releases (TRI): No Information

Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details

Known Data Problems <https://epa.gov/resources/echo-data/known-data-problems>

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110007812609					N	18.191606	-66.393173
ICIS-Air	CAA	PR0000007201900018	Minor Emissions	Operating	CAAGACTM, CAAMSPS, CAASIP		N	18.191611	-66.393167
RCRAInfo	RCRA	PRD987381241	Other	Inactive ()			N	18.191606	-66.393173

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110007812609	BETTERROADS ASPHALT PLT 11	PR-152 KM 1.0 BO QUEBRADA, BARRANQUITAS, PR 00794	Barranquitas Municipio
ICIS-Air	CAA	PR0000007201900018	BETTERROADS ASPHALT PLT 11	PR 152 KM 1.0 BO. QDA. GRANDE, BARRANQUITAS, PR 00794	Barranquitas Municipio
RCRAInfo	RCRA	PRD987381241	BETTERROADS ASPHALT CORP	PR 152 KM 1.0, BARRANQUITAS, PR 00618	Barranquitas Municipio

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
ICIS-Air	PR0000007201900018	2951	Asphalt Paving Mixtures And Blocks

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
ICIS-Air	PR0000007201900018	324121	Asphalt Paving Mixture and Block Manufacturing

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)

No data records returned

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
CAA	PR0000007201900018	ICIS-Air	Inspection/Evaluation	FCE Off-Site - Review of CAA Response	EPA	10/28/2020	
CAA	PR0000007201900018	ICIS-Air	Inspection/Evaluation	FCE On-Site	EPA	07/28/2020	
CAA	PR0000007201900018	ICIS-Air	Inspection/Evaluation	FCE On-Site	EPA	10/07/2019	

Entries in italics are not included in ECHO's Compliance Monitoring Activity counts because they are not compliance monitoring strategy <https://www.epa.gov/compliance/compliance-monitoring-programs> activities or because they are not counted as inspections within EPA's Annual Results <https://www.epa.gov/enforcement/enforcement-data-and-results>.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
CAA	PR0000007201900018	No	08/01/2024	0	08/12/2024
RCRA	PRD987381241	No	08/01/2024	0	08/12/2024

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type				QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	
CAA (Source ID: PR0000007201900018)					10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22	01/01-03/31/23	04/01-06/30/23	07/01-09/30/23	10/01-12/31/23	01/01-03/31/24	04/0
	Facility-Level Status				No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	N
	HPV History														
	Violation Type	Agency	Programs	Pollutants											

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11
RCRA (Source ID: PRD987381241)		10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22	01/01-03/31/23	04/01-06/30/23	07/01-09/30/23	10/01-12/31/23	01/01-03/31/24	04/01-06/30/24

Statute	Program/Pollutant/Violation Type		QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11
	Facility-Level Status		No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation	Agency											

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date

No data records returned

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/ Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/ Filed Date	Settlement/ Actions	Settlement/ Action Date	Federal Penalty Assessed	State/ Local Penalty Assessed	Penalty Amount Collected	SEP Value	Comp Action Cost

No data records returned

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (BAD (Beach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (BAD (Beach Address Database))	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?

No data records returned

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Ecological Use	Fish Consumption Use	Recreation Use	Other Use

No data records returned

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)

No data records returned

Pollutants

Toxics Release Inventory History of Reported Chemicals Released or Transferred in Pounds per Year at Site

TRI Facility ID	Year	Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Disposal to Land	Total On-Site Releases	Total Off-Site Transfers

No data records returned

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name

No data records returned

Community

Environmental Justice

This section shows indexes from EJScreen, EPA's screening tool for environmental justice (EJ) concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. Use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Potential Environmental Justice Concerns

US Territory

Supplemental/EJ index percentiles >= 90 (Census block group)

Supplemental/EJ index percentiles >= 90 (1-mile average)

EJScreen Indexes Shown

Index Type: Supplemental (default)

Related Reports

EJScreen Community Report

Download Data

Census Block Group ID: 720189522001	US (Percentile)			State (Percentile)		
Supplemental Indexes	Facility Census Block Group	1-mile Avg	1-mile Max	Facility Census Block Group	1-mile Avg	1-mile Max
Count of Indexes At or Above 90th Percentile	4	4	5	0	0	1
Particulate Matter 2.5	–	N/A	–	–	N/A	–
Ozone	–	N/A	–	–	N/A	–
Diesel Particulate Matter	4	4	5	51	44	56
Air Toxics Cancer Risk	51	45	54	66	16	77
Air Toxics Respiratory Hazard Index	36	28	37	66	17	77
Toxic Releases to Air	● 90	● 93	● 98	77	63	● 94
Traffic Proximity	89	● 95	● 99	45	37	89
Lead Paint	● 94	● 94	● 97	70	69	94
Risk Management Plan (RMP) Facility Proximity	67	63	88	16	13	16
Hazardous Waste Proximity	56	58	67	6	6	13
Superfund Proximity	● 90	● 93	● 99	69	64	73
Underground Storage Tanks (UST)	0	61	● 97	0	0	81
Wastewater Discharge	● 90	84	● 98	18	12	66

Map Display Based on: (●) US ( ) State

Display Map Layer: Summary - Number of Indexes

( ) Facility 1-mile Radius [ ] Facility Census Block Group

Demographic Profile of Surrounding Area (1-Mile Radius)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2017 - 2021 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. Census boundaries and demographic data for U.S. Territories are based on the "2020 Island Areas Demographic Profiles" from the U.S. Census Bureau. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary <https://epa.gov/frs/help/reports/dfr-data-dictionary#demographic>.

General Statistics (U.S. Census)	
Total Persons	4,308
Population Density	1,367/sq.mi.
Housing Units in Area	1,641

General Statistics (ACS (American Community Survey))	
Total Persons	4,226
Percent People of Color	100%
Households in Area	1,308
Households on Public Assistance	61
Persons With Low Income	3,366
Percent With Low Income	81%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	18.191408
Center Longitude	-66.300173
Land Area	100%
Water Area	0%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	597 (45.71%)
$15,000 - $25,000	282 (22.36%)
$25,000 - $50,000	327 (25.0%)
$50,000 - $75,000	40 (3.06%)
Greater than $75,000	40 (3.06%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	201 (5%)
Minors 17 years and younger	1,047 (25%)
Adults 18 years and older	3,161 (75%)
Seniors 65 years and older	630 (15%)

Race Breakdown (U.S. Census) - Persons (%)	
White	3,631 (86%)
African-American	263 (6%)
Hispanic Origin	4,165 (99%)
Asian/Pacific Islander	1 (0%)
American Indian	17 (0%)
Other/Multiracial	295 (7%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	480 (16.62%)
9th through 12th Grade	326 (11.28%)
High School Diploma	712 (25.73%)
Some College/1-year	411 (14.23%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	536 (19.3%)

Detailed Facility Report

Facility Summary

ESCUELA JOSE C BERDECIA

CALLE MELITON PERELEZ, BARRANQUITAS, PR 00794

FRS (Facility Registry Service) ID: 110007810903

EPA Region: 02

Latitude: 18.18747

Longitude: -66.30964

Locational Data Source: FRS

Industries: --

Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	--
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information

Clean Water Act (CWA): No Information

Resource Conservation and Recovery Act (RCRA): Inactive Other, (PRD987373339), Inactive Other, (PR0000011205)

Safe Drinking Water Act (SDWA): No Information

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information

Greenhouse Gas Emissions (eGGRT): No Information

Toxic Releases (TRI): No Information

Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Go To Enforcement/Compliance Details

Known Data Problems <https://epa.gov/resources/echo-data/known-data-problems>

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110007810903					N	18.18747	-66.30964
RCRAInfo	RCRA	PRD987373339	Other	Inactive ()			N		
RCRAInfo	RCRA	PR0000011205	Other	Inactive ()			N		

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110007818903	ESCUELA JOSE C BERDECIA	CALLE MELITON PERELEZ, BARRANQUITAS, PR 00794	Barranquitas Municipio
RCRAInfo	RCRA	PRD987373339	ESCUELA JOSE C BERDECIA	MELITON PERALES ST, BARRANQUITAS, PR 00618	Barranquitas Municipio
RCRAInfo	RCRA	PR0000011205	DEPT OF ED - JOSE BERROS BERDECIA	CALLE MELITON PERELES - PUEBLO, BARRANQUITAS, PR 00618	Barranquitas Municipio

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description

No data records returned

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description

No data records returned

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)

No data records returned

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)

No data records returned

Entries in italics are not included in ECHO's Compliance Monitoring Activity counts because they are not compliance monitoring strategy <https://www.epa.gov/compliance/compliance-monitoring-programs> *activities or because they are not counted as inspections within EPA's Annual Results* <https://www.epa.gov/enforcement/enforcement-data-and-results>.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	PRD987373339	No	09/01/2024	0	09/02/2024
RCRA	PR0000011205	No	09/01/2024	0	09/02/2024

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type		QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11
RCRA (Source ID: PR0000011205)			10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22	01/01-03/31/23	04/01-06/30/23	07/01-09/30/23	10/01-12/31/23	01/01-03/31/24	04/01-06/30/24
	Facility-Level Status		No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation	Agency											
RCRA (Source ID: PRD987373339)			10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22	01/01-03/31/23	04/01-06/30/23	07/01-09/30/23	10/01-12/31/23	01/01-03/31/24	04/01-06/30/24
	Facility-Level Status		No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation	Agency											

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date

No data records returned

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/ Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/ Filed Date	Settlement(s)/ Actions	Settlement/ Action Date	Federal Penalty Assessed	State/ Local Penalty Assessed	Penalty Amount Collected	SEP Value	Comp Action Cost

No data records returned

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (RAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (RAD (Reach Address Database))	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-Listed Aquatic Species?

No data records returned

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Ecological Use	Fish Consumption Use	Recreation Use	Other Use

No data records returned

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)

No data records returned

Pollutants

Toxics Release Inventory History of Reported Chemicals Released or Transferred in Pounds per Year at Site

TRI Facility ID	Year	Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Disposal to Land	Total On-Site Releases	Total Off-Site Transfers

No data records returned

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name

No data records returned

Community

Environmental Justice

This section shows indexes from EJScreen, EPA's screening tool for environmental justice (EJ) concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. Use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Potential Environmental Justice Concerns

US Territory

Supplemental/EJ index percentiles >= 90 (Census block group)

Supplemental/EJ index percentiles >= 90 (1-mile average)

EJScreen Indexes Shown

Index Type: Supplemental (default)

Related Reports

EJScreen Community Report

Download Data

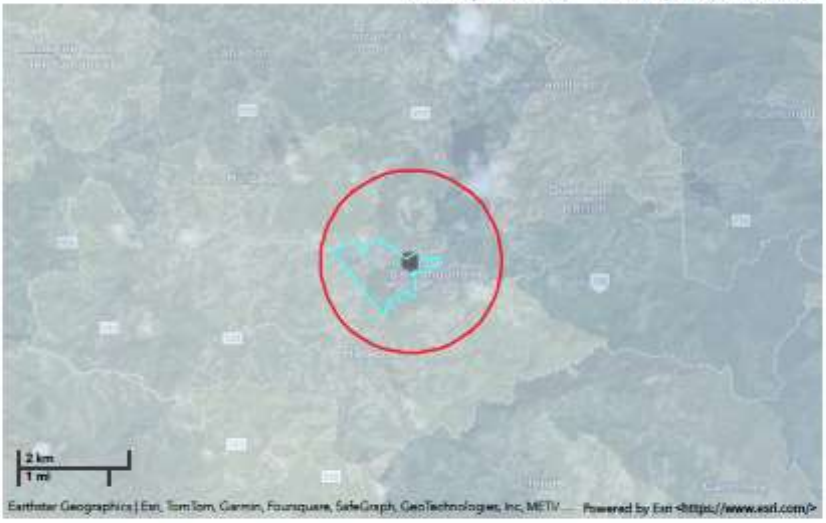
Census Block Group ID: 720189524002	US (Percentile)			State (Percentile)		
Supplemental Indexes	Facility Census Block Group	1-mile Avg	3-mile Max	Facility Census Block Group	1-mile Avg	3-mile Max
Count of Indexes At or Above With Percentile	1	4	1	0	0	1
Particulate Matter 2.5	–	N/A	–	–	N/A	–
Ozone	–	N/A	–	–	N/A	–
Diesel Particulate Matter	4	4	6	35	38	52
Air Toxics Cancer Risk	21	35	53	0	0	66
Air Toxics Respiratory Hazard Index	17	22	36	0	0	66
Toxic Releases to Air	● 86	● 89	● 98	79	82	● 94

Census Block Group ID: 720199524002	US (Percentile)			State (Percentile)		
Supplemental Indexes	Facility Census Block Group	1-mile Avg	1-mile Max	Facility Census Block Group	1-mile Avg	1-mile Max
Traffic Proximity	83	93	99	55	56	89
Lead Paint	96	92	97	78	63	84
Risk Management Plan (RMP) Facility Proximity	37	61	88	11	11	21
Hazardous Waste Proximity	49	55	64	4	5	8
Superfund Proximity	96	94	99	55	59	72
Underground Storage Tanks (UST)	97	80	97	81	62	81
Wastewater Discharge	65	81	99	4	11	66

Map Display Based on: (•) US ( ) State

Display Map Layer: Summary - Number of Indexes

( ) Facility 1-mile Radius [ ] Facility Census Block Group



Demographic Profile of Surrounding Area (1-Mile Radius)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2017 - 2021 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. Census boundaries and demographic data for U.S. Territories are based on the "2020 Island Areas Demographic Profiles" from the U.S. Census Bureau. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary <https://epa.gov/help/reports/dfr-data-dictionary#demographic>.

General Statistics (U.S. Census)	
Total Persons	4,564
Population Density	1,446/sq mi.
Housing Units in Area	1,829

General Statistics (ACS (American Community Survey))	
Total Persons	5,265
Percent People of Color	100%
Households in Area	1,560
Households on Public Assistance	117
Persons With Low Income	4,131
Percent With Low Income	79%

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	296 (6%)
Minors 17 years and younger	1,162 (25%)
Adults 18 years and older	3,407 (75%)
Seniors 65 years and older	682 (15%)

Race Breakdown (U.S. Census) - Persons (%)	
White	3,965 (87%)
African-American	289 (6%)
Hispanic-Origin	4,529 (99%)
Asian/Pacific Islander	2 (0%)
American Indian	22 (0%)

Geography	
Radius of Selected Area	1 mi.
Center Latitude	18.11747
Center Longitude	-66.10944
Land Area	100%
Water Area	0%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	700 (44.76%)
$15,000 - $25,000	314 (20.2%)
$25,000 - $50,000	426 (27.24%)
$50,000 - $75,000	62 (3.96%)
Greater than $75,000	60 (3.84%)

Race Breakdown (U.S. Census) - Persons (%)	
Other/Multiracial	291 (9%)
Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	526 (14.86%)
9th through 12th Grade	380 (10.83%)
High School Diploma	951 (26.76%)
Some College/1-year	610 (16.97%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	737 (19.88%)

Detailed Facility Report

Facility Summary

MUNICIPALITY OF BARRANQUITAS

23 LUIS MUÑOZ RIVERA ST, BARRANQUITAS, PR 00794

FRS (Facility Registry Service) ID: 110064634007

EPA Region: 02

Latitude: 18.186611

Longitude: -66.306278

Locational Data Source: NPDES

Industries: --

Indian Country: N

Enforcement and Compliance Summary

Statute	CWA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	09/16/2012
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information

Clean Water Act (CWA): Non-Major, Permit Expired (PRR040056)

Resource Conservation and Recovery Act (RCRA): No Information

Safe Drinking Water Act (SDWA): No Information

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information

Greenhouse Gas Emissions (eGGRT): No Information

Toxic Releases (TRI): No Information

Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Go To Enforcement/Compliance Details

Known Data Problems <https://epa.gov/resources/echo-data/known-data-problems>

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110064634007					N	18.186611	-66.306278
ICIS-NPDES	CWA	PRR040056	Non-Major: General Permit Covered Facility	Expired	Urban Stormwater (Small MS4)	06/30/2021	N	18.186611	-66.306278

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110064634007	MUNICIPALITY OF BARRANQUITAS	23 LUIS MUÑOZ RIVERA ST, BARRANQUITAS, PR 00794	

System	Statute	Identifier	Facility Name	Facility Address	Facility County
ICIS-NPDES	CWA	PR0040056	MUNICIPALITY OF BARRANQUITAS	23 LUIS MUÑOZ RIVERA ST, BARRANQUITAS, PR 00794	Barranquitas Municipio

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description

No data records returned

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description

No data records returned

Facility Industrial Effluent Guidelines

Identifier	Effluent Guideline (40 CFR Part)	Effluent Guideline Description

No data records returned

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)

No data records returned

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)

No data records returned

Entries in italics are not included in ECHO's Compliance Monitoring Activity counts because they are not compliance monitoring strategy <https://www.epa.gov/compliance/compliance-monitoring-programs> *activities or because they are not counted as inspections within EPA's Annual Results* <https://www.epa.gov/enforcement/enforcement-data-and-results>.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
CWA	PR0040056	No	03/31/2024	0	08/02/2024

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11
CWA (Source ID: PR0040056)		04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22	01/01-03/31/23	04/01-06/30/23	07/01-09/30/23	10/01-12/31/23
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Quarterly Noncompliance Report History											

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date

No data records returned

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/ Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/ Filed Date	Settlement/ Actions	Settlement/ Action Date	Federal Penalty Assessed	State/ Local Penalty Assessed	Penalty Amount Collected	SEP Value	Comp. Action Cost

No data records returned

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (RAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (RAD (Reach Address Database))	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act) -listed Aquatic Species?
21010006050704	Rio Usabon	--	No	No	--	Yes

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Ecological Use	Fish Consumption Use	Recreation Use	Other Use
PR	2022	PRER201	RIO USABON	Impaired - With Restoration Plan	PATHOGENS	Not Assessed	Insufficient Information	--	Not Supporting	--

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)

No data records returned

Pollutants

Toxics Release Inventory History of Reported Chemicals Released or Transferred in Pounds per Year at Site

TRI Facility ID	Year	Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Disposal to Land	Total On-Site Releases	Total Off-Site Transfers

No data records returned

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name

No data records returned

CWA (Clean Water Act) Discharge Monitoring Report (DMR) Pollutant Loadings

DMR and TRI Multi-Year Loading Report

NPDES ID	Description

No data records returned

Community

Environmental Justice

This section shows indexes from EJScreen, EPA's screening tool for environmental justice (EJ) concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. Use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Potential Environmental Justice Concerns

US Territory

Supplemental/EJ index percentiles >= 90 (Census block group)

Supplemental/EJ index percentiles >= 90 (1-mile average)

EJScreen Indexes Shown

Index Type: Supplemental (default)

Related Reports

EJScreen Community Report

Download Data

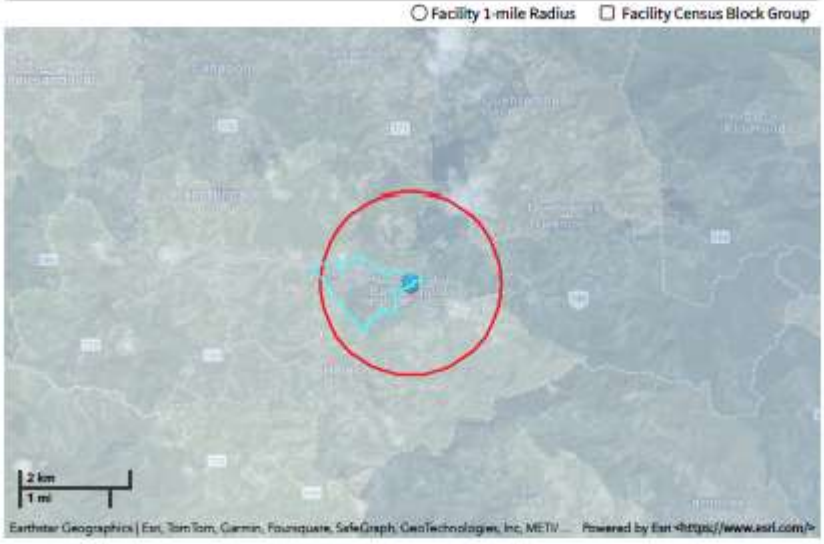
Census Block Group ID: 720199524001 Supplemental Indexes	US (Percentile) Facility Census Block Group	US (Percentile) 1-mile Avg	US (Percentile) 1-mile Max	State (Percentile) Facility Census Block Group	State (Percentile) 1-mile Avg	State (Percentile) 1-mile Max
Count of Indexes At or Above 90th Percentile	5	4	5	0	0	1
Particulate Matter 2.5	–	N/A	–	–	N/A	–
Ozone	–	N/A	–	–	N/A	–
Diesel Particulate Matter	4	4	5	35	46	56
Air Toxics Cancer Risk	21	39	54	0	0	77
Air Toxics Respiratory Hazard Index	17	23	27	0	0	77
Toxic Releases to Air	● 99	● 99	● 99	79	82	● 94
Traffic Proximity	● 91	● 95	● 98	55	57	89
Lead Paint	● 96	● 92	● 97	76	66	84
Risk Management Plan (RMP) Facility Proximity	57	62	69	11	12	18
Hazardous Waste Proximity	49	56	67	4	5	12
Superfund Proximity	● 96	● 99	● 99	55	61	72
Underground Storage Tanks (UST)	● 97	77	● 97	81	62	81

Census Block Group ID: 720199524002	US (Percentile)			State (Percentile)		
Supplemental Indexes	Facility Census Block Group	1-mile Avg	1-mile Max	Facility Census Block Group	1-mile Avg	1-mile Max
Wastewater Discharge	65	83	98	4	9	66

Map Display Based on: (•) US ( ) State

Display Map Layer: Summary - Number of Indexes

( ) Facility 1-mile Radius [ ] Facility Census Block Group



Demographic Profile of Surrounding Area (1-Mile Radius)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2017 - 2021 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. Census boundaries and demographic data for U.S. Territories are based on the "2020 Island Areas Demographic Profiles" from the U.S. Census Bureau. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary <https://epa.gov/help/reports/dfr-data-dictionary#demographic>.

General Statistics (U.S. Census)	
Total Persons	4,741
Population Density	1,351/sq.mi.
Housing Units in Area	1,888

General Statistics (ACS (American Community Survey))	
Total Persons	5,293
Percent People of Color	100%
Households in Area	1,371
Households on Public Assistance	111
Persons With Low Income	4,222
Percent With Low Income	81%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	18.188811
Center Longitude	-66.386278
Land Area	100%
Water Area	0%

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	305 (6%)
Minors 17 years and younger	1,199 (25%)
Adults 18 years and older	3,542 (75%)
Seniors 65 years and older	714 (15%)

Race Breakdown (U.S. Census) - Persons (%)	
White	4,117 (87%)
African-American	297 (6%)
Hispanic-Origin	4,694 (99%)
Asian/Pacific Islander	1 (0%)
American Indian	22 (0%)
Other/Multiracial	304 (6%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	542 (15.34%)
9th through 12th Grade	376 (10.64%)
High School Diploma	935 (26.46%)
Some College/1-year	602 (17.04%)

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	714 (45.42%)
$15,000 - $25,000	322 (20.48%)
$25,000 - $50,000	436 (27.74%)
$50,000 - $75,000	48 (3.05%)
Greater than $75,000	51 (3.24%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	665 (18.39%)

6.3 Radon Memo

6.3 Radon Memorandum to File

Date: February 26, 2025

From: Gray Bannister
Environmental Planner
CDBG-DR Program
City Revitalization Program
Puerto Rico Department of Housing

Application Number: PR-CRP-001180
Project: Centro de Usos Múltiples de Barranquitas

Re: Justification for the Infeasibility and Impracticability of Radon Testing

After reviewing Application Number PR-CRP-001180 under the City Revitalization Program (**CRP**), administered by the Puerto Rico Department of Housing (**PRDOH**), to complete the property's contamination analysis in accordance with 24 C.F.R. § 50.3(i) and 24 C.F.R. § 58.5(i), we have determined that testing the property's radon levels is infeasible and impracticable.

Per the U.S. Department of Housing and Urban Development's (**HUD**) CPD Notice 23-103, the recommended best practices and alternative options for radon testing are infeasible and impracticable in this case due to the following reasons:

- As required by the CPD Notice 23-103, the scientific data reviewed in lieu of testing must consist of a minimum of ten documented test results over the previous ten years. If there are less than ten documented results over this period, it is understood that there is a lack of scientific data. The latest report for radon testing in Puerto Rico was prepared in 1995 by the U.S. Department of

the Interior in Cooperation with the U.S. Environmental Protection Agency. No other completed studies and reports on radon testing are available in Puerto Rico.

- There is no available science-based or state-generated information for Puerto Rico for the last ten years that can be used to determine whether the project site is in a high-risk area. The Department of Health and Human Services, Centers for Disease Control and Prevention (**CDC**), National Environmental Public Health Tracking, and Radon Testing map do not include Puerto Rico data.

- There are only two (2) licensed professionals in Puerto Rico who can conduct radon testing using the American National Standards Institute/American Association of Radon Scientists and Technologists (**ANSI/AARST**) testing standards, which makes it difficult, time-consuming, and highly expensive to coordinate and secure a site visit for the contamination evaluation.

- Do-it-yourself (**DIY**) radon test kits are known to be unreliable in assuring and controlling the quality of the test results; they are not readily available in Puerto Rico, and the cost and time required for purchasing and sending them for analysis are unreasonable when weighed against the results' reliability and the need for prompt results.

- Local authorities in Puerto Rico do not have the specialized radon monitoring equipment or trained staff needed to conduct the radon testing analysis and ensure proper quality control and quality assurance practices are adhered to. We also do not have a radiation laboratory certified for radon testing.

- The project site has remained historically vacant, with no prior residential, commercial, or industrial use, reducing the likelihood of radon accumulation or exposure risk from previous activities.

As part of the evaluation for this determination, PRDOH sent information requests to six (6) local agencies at the state and federal levels. We received responses from the following agencies:

- United States Geological Survey;
- Centers for Disease Control and Prevention;
- Puerto Rico Department of Health; and
- United States Environmental Protection Agency.

The agencies mentioned above confirmed the lack of scientific data on Radon testing for Puerto Rico and the technical difficulties that we face to comply with HUD's Radon testing requirement. For the above-mentioned reasons, Radon testing is infeasible and impracticable for this property, and no further consideration of Radon is needed for the environmental review.

Radon
Attachments

GOVERNMENT OF PUERTO RICO
DEPARTMENT OF HOUSING

August 20, 2024

Mrs. Carmen R. Guerrero Pérez
Director
Caribbean Environmental Protection Division
City View Plaza II – Suite 7000
#48 Rd. 165 km 1.2
Guaynabo, PR 00968-8069

Via email: guerrero.carmen@epa.gov

RE: Request for Information regarding available data on radon testing and levels within Puerto Rico

The Puerto Rico Department of Housing (PRDOH) kindly requests your assistance in gathering data, information, or reports related to radon testing in Puerto Rico, as this information is crucial for our compliance with the U.S. Department of Housing and Urban Development (HUD) Community Planning and Development (CPD) Notice CDP-23-103.

This Notice emphasizes the importance of radon testing and mitigation in ensuring safe living environments, particularly in HUD-assisted properties. PRDOH, as the grantee of the Community Development Block Grant for Disaster Recovery and Mitigation (CDBG-DR/MIT), is responsible for ensuring compliance with environmental requirements under CDBG-DR/MIT programs. To fulfill our obligations under this Notice, we must compile comprehensive and up-to-date information on radon levels, testing practices, and any mitigation efforts within the islands of Puerto Rico.

Specifically, we are seeking for possible availability of the following information:

Radon testing data – Results from radon testing conducted within your agency's purview, including details on location, testing methods, and recorded radon levels.

Reports and assessments – Any reports, studies, or assessments your agency has produced or commissioned that address radon testing or mitigation.

Policies and guidelines – Information or any policy, guideline, or protocol your agency follows concerning radon testing, exposure limits, or mitigation.

Historical data – if available, historical data or trends in radon levels within the regions you monitor that may impact HUD-assisted housing.

This information is vital to ensure that our radon management strategies are practical and compliant with federal requirements. If some of this information may be sensitive or confidential, we are prepared to discuss any necessary agreements or protocols for sharing this data securely.

Please let us know if you require additional details or have any questions regarding this request. We would greatly appreciate your response by September 15, 2024, so we can incorporate this data into our ongoing compliance efforts.

Thank you in advance for your cooperation and support. We look forward to working together on this critical initiative.

Sincerely,

William O. Rodríguez Rodríguez, Esq.
Secretary

Cc:
Mr. Oleg Povetko, Povetko.Oleg@epa.gov
Mr. Matthew Laurita, laurita.matthew@epa.gov

GOVERNMENT OF PUERTO RICO
DEPARTMENT OF HOUSING

August 20, 2024

Dr. Silvina Cancelos
Professor
College of Engineering
University of Puerto Rico – Mayagüez Campus
259 Norte Blvd. Alfonso Valdés Cobián
Mayagüez, Puerto Rico

Via email: silvina.cancelos@upr.edu

RE: Request for Information regarding available data on radon testing and levels within Puerto Rico

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Barbosa Ave. #606, Building Juan C. Cordero Dávila, Río Piedras, PR 00918 | PO Box 21365 San Juan, PR 00928-1365
Tel. (787) 274-2527 | www.vivienda.pr.gov

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Thank you in advance for your cooperation and support. We look forward to working together on this critical initiative.

Sincerely,

William O. Rodríguez Rodríguez, Esq.
Secretary

Cc:
Dr. Carlos Marín, carlos.marin3@upr.edu

GOVERNMENT OF PUERTO RICO
DEPARTMENT OF HOUSING

August 20, 2024

Dr. Jessica Irizarry
Director
Office of Island Affairs
U.S. Centers for Disease Control and Prevention
1324 Cll Canada, San Juan, 00920
Guaynabo, PR 00968-8069

Vía email: OIA@cdc.gov

RE: Request for information regarding available data on radon testing and levels within Puerto Rico

The Puerto Rico Department of Housing (PRDOH) kindly requests your assistance in gathering data, information, or reports related to radon testing in Puerto Rico, as this information is crucial for our compliance with the U.S. Department of Housing and Urban Development (HUD) Community Planning and Development (CPD) Notice CDP-23-103.

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Sincerely,

William O. Rodríguez Rodríguez, Esq.
Secretary

GOVERNMENT OF PUERTO RICO
DEPARTMENT OF HOUSING

August 20, 2024

Mrs. Anaís Rodríguez
Secretary
Puerto Rico Department of Natural Resources
Carretera 8838, km. 6.3, Sector El Cinco,
Río Piedras San Juan, PR 00926

Vía email: anais.rodriguez@drna.pr.gov

RE: Request for information regarding available data on radon testing and levels within Puerto Rico

The Puerto Rico Department of Housing (PRDOH) kindly requests your assistance in gathering data, information, or reports related to radon testing in Puerto Rico, as this information is crucial for our compliance with the U.S. Department of Housing and Urban Development (HUD) Community Planning and Development (CPD) Notice CDP-23-103.

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Sincerely,

William O. Rodríguez Rodríguez, Esq.
Secretary

Cc:
Mr. Luis Márquez, secretariaaire@drna.pr.gov
Eng. Amarilys Rosario, aire@drna.pr.gov
Mrs. Elid Ortega, eortega@drna.pr.gov

GOVERNMENT OF PUERTO RICO
DEPARTMENT OF HOUSING

August 20, 2024

Dr. Carlos R. Mellado López
Secretary
Puerto Rico Department of Health
PO Box 70184
San Juan, PR 00936-8184

Vía email: drcarlos.mellado@salud.pr.gov

RE: Request for Information regarding available data on radon testing and levels within Puerto Rico

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Sincerely,

William O. Rodríguez Rodríguez, Esq.
Secretary

Cc:
Mr. Raúl Hernández Doble, rhernandez2@salud.pr.gov

GOVERNMENT OF PUERTO RICO
DEPARTMENT OF HOUSING

August 20, 2024

Mrs. Holly Weyers
Regional Director, Southeast – Puerto Rico
US Geological Survey
3916 Sunset Ridge Road
Raleigh, NC 27607

Vía email: hsweyers@usgs.gov

RE: Request for Information regarding available data on radon testing and levels within Puerto Rico

The Puerto Rico Department of Housing (PRDOH) kindly requests your assistance in gathering data, information, or reports related to radon testing in Puerto Rico, as this information is crucial for our compliance with the U.S. Department of Housing and Urban Development (HUD) Community Planning and Development (CPD) Notice CDP-23-103.

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Barbosa Ave. #606, Building Juan C. Cordero Dávila, Río Piedras, PR 00918 | PO Box 21365 San Juan, PR 00928-1365
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Thank you in advance for your cooperation and support. We look forward to working together on this critical initiative.

Sincerely,

William O. Rodríguez Rodríguez, Esq.
Secretary

Cc:
Mr. R. Randall Schumann, rschumann@usgs.gov

From: Charp, Paul (CDC/NCEH/DEHSP) <pac4@cdc.gov>
Sent: Tuesday, September 3, 2024 6:36 AM
To: Miranda, Sandra (CDC/PHIC/DPS); Irizarry, Jessica (CDC/PHIC/DPS); Rzeszotarski, Peter (CDC/NCEH/DEHSP); Vinson, D. Aaron (CDC/NCEH/DEHSP)
Cc: Kostak, Liana (CDC/PHIC/DPS); Vazquez, Germaine (CDC/NCEH/DEHSP)
Subject: RE: REHi: Puerto Rico Request for Information- Randon testing and levels

Good morning, Sandra and others,

In response to the request from Mr. William Rodriguez of the Department of Housing, Government of Puerto Rico, I have reviewed all the available data within the CDC National Environmental Public Health Tracking Network system for data related to radon in Puerto Rico. In addition to the tracking data available on the internet, I also reached out to Mr. Aaron Vinson of the NCEH Tracking Branch.

I was not able to find any data in the CDC systems and this was confirmed by Mr. Vinson. We also reached out the US Environmental Protection Agency who indicated they had no radon data in their systems. Please relay this information to Mr. Rodríguez in your response to his requests

If you have any additional questions, please contact me.

Thank you and best regards,

Paul A. Charp, Ph.D., Fellow, HPS
Senior Health Physicist
Emerging Environmental Hazards and Health Effects Branch (EEHHEB)
Division of Environmental Health Science and Practice (DEHSP)
National Center for Environmental Health (NCEH)
Centers for Disease Control and Prevention (CDC)
pcharp@cdc.gov
770-488-0723 office
404.388.0614 Cell

From: Schumann, R. Randall <rschumann@usgs.gov>
Sent: Wednesday, August 21, 2024 4:39 PM
To: Melanie Medina Smaine <mmedina@vivienda.pr.gov>; Weyers, Holly S <hsweyers@usgs.gov>
Cc: Elaine Dume Mejia <Edume@vivienda.pr.gov>; Luz S Colon Ortiz <Lcolon@vivienda.pr.gov>; Aldo A. Rivera-Vazquez <aarivera@vivienda.pr.gov>
Subject: RE: Request for Information- Radon testing and levels

Dear Ms. Medina Smaine,

In the early 1990s the U.S. Geological Survey (USGS) conducted geologic assessments of radon potential for all 50 states and the territories of Guam and Puerto Rico, in collaboration with the U.S. EPA. I conducted the geologic radon potential assessment for Puerto Rico. The PDF file of the report is too large to attach to this message but it can be obtained at https://pubs.usgs.gov/of/1993/0292k/report.pdf. The USGS did not conduct indoor radon testing and we did not conduct field studies associated with this assessment; it was based on existing data. Mr. David Saldana of the Puerto Rico Department of Health kindly provided us with data for 610 homes that were tested for indoor radon by his agency between 1993 and 1995, which are summarized in the report. I am not aware of any other radon-related geologic studies conducted in the Commonwealth of Puerto Rico by the U.S. Geological Survey.

Best regards,

R. Randall Schumann
Scientist Emeritus
U.S. Geological Survey
Geosciences and Environmental Change Science Center
Denver, Colorado, USA
rschumann@usgs.gov
https://www.usgs.gov/staff-profiles/r-randall-schumann

From: Raul Hernandez Doble <rhernandez2@salud.pr.gov>
Sent: Wednesday, August 21, 2024 2:13:31 PM
To: Melanie Medina Smaine <mmedina@vivienda.pr.gov>; Dr. Carlos Mellado <drcarlos.mellado@salud.pr.gov>
Cc: Elaine Dume Mejia <Edume@vivienda.pr.gov>; Luz S Colon Ortiz <Lcolon@vivienda.pr.gov>; Aldo A. Rivera-Vazquez <aarivera@vivienda.pr.gov>; Mayra Toro Tirado <mtoro@salud.pr.gov>
Subject: RE: [EXTERNAL]Request for Information- Randon testing and levels

Good afternoon. Ms. Medina

I regret to inform that we do not have any recent information on radon testing, since we do not have a certified radiation laboratory certified for radon testing. There are companies that sell test kits available online that can be done and mailed to a testing laboratory. There are also lists of radon contractors and these companies that process radon testing cartridges with instructions, on the Environmental Protection Agency Indoor air Quality web page. The last radon study in Puerto Rico done by the PR Department of Health was done on the year 1993.

Raul Hernandez Doble
Director, Seccion Salud Radiologica
Division de Salud Ambiental
Secretaria Auxiliar para la Vigilancia y la Proteccion de la Salud Publica
rhernandez2@salud.gov.pr
Phone: (787)765-2929 ext. 3210

From: Reyes, Brenda <Reyes.Brenda@epa.gov>
Sent: Wednesday, September 18, 2024 11:48 AM
To: Cesar O Rodriguez Santos <cesarrodriguez@drna.pr.gov>; Maritza Rosa Olivares <maritzarosaolivares@drna.pr.gov>; Silvina Cancelos Mancini <silvina.cancelos@upr.edu>; Melanie Medina Smaine <mmedina@vivienda.pr.gov>
Cc: Elaine Dume Mejia <Edume@vivienda.pr.gov>; Luz S Colon Ortiz <Lcolon@vivienda.pr.gov>; Aldo A. Rivera-Vazquez <aarivera@vivienda.pr.gov>; Povetko, Oleg (he/him/his) <Povetko.Oleg@epa.gov>
Subject: RE: Request for Information- Randon testing and levels

Saludos.

La EPA esta trabajando una respuesta a su petición. Se sometió borrador a la directora y el subdirector para su aprobación y firma.

Brenda Reyes Tomassini
Public Affairs
U.S. EPA
Region 2
Caribbean Environmental Protection Division
(787) 977-5869/(787) 977-5865
Mobile: 202-834-1290

From: Silvina Cancelos Mancini <silvina.cancelos@upr.edu>
Sent: Friday, September 6, 2024 15:04
To: Melanie Medina Smaine <mmedina@vivienda.pr.gov>
Cc: Elaine Dume Mejia <Edume@vivienda.pr.gov>; Luz S Colon Ortiz <Lcolon@vivienda.pr.gov>; Aldo A. Rivera-Vazquez <aarivera@vivienda.pr.gov>; Maritza Rosa Olivares <maritzarosaolivares@drna.pr.gov>; Reyes, Brenda <Reyes.Brenda@epa.gov>; Povetko, Oleg <Povetko.Oleg@epa.gov>
Subject: Re: Request for Information- Randon testing and levels

Estimada Melanie Medina
Quería dejarle saber que recibimos su correo el 21 de agosto al igual que el de Maritza Rosa el pasado 4 de septiembre. Ya las personas involucradas de EPA, junto conmigo y el Dr. Marín estamos al tanto del asunto y estamos trabajando para poder enviarles la información.

Atentamente

Silvina Cancelos
Professor
Associate Director
Mechanical Engineering Department
University of Puerto Rico - Mayaguez
Call BOX 9000 Mayaguez PR 00680
Tel: 787-832-4040 ext 5956
email: silvina.cancelos@upr.edu

Bubble Dynamics Lab
University of Puerto Rico - Mayagüez

EPA REGION 2
CARIBBEAN ENVIRONMENTAL PROTECTION DIVISION

September 23, 2024

VIA EMAIL

William O. Rodríguez Rodríguez, Esq.
Secretary
Puerto Rico Department of Housing
Barbosa Ave. 606 Building Juan C. Cordero
San Juan, PR 00917
Email: W.Rodriguez@vivienda.pr.gov

RE: EPA Response to August 20, 2024 request for information of data on radon testing and levels in Puerto Rico

Dear Honorable Secretary Rodríguez Rodríguez:

This communication is in response to your letter of August 20, 2024 addressed to the Puerto Rico Department of Natural and Environmental Resources (DNER) and referred to the U.S. Environmental Protection Agency (EPA) regarding available data on radon testing and levels within Puerto Rico.

EPA's National Radon Action Plan 2021–2025 sets a goal for the nation to find, fix and prevent high indoor radon levels in 8 million buildings by 2025 and prevent 3,500 lung cancer deaths per year. Under this Plan, leaders from across multiple sectors are working together to plan, guide, and sustain nationwide action to prevent exposure to radon.

Due to the lack of data in Puerto Rico, EPA undertook an investigation in collaboration with the University of Puerto Rico-Mayaguez (UPRM) Campus, Departments of Civil Engineering and Surveying and Mechanical Engineering, to find out if radon presented a problem in Puerto Rico. Up until 2021, the only data we had for Puerto Rico was a 1993-1995 mail-in radon screening study referred to by the U.S. Geological Survey report (USGS, 1995) in which the USGS concluded that several areas of Puerto Rico have the geologic potential to generate indoor radon levels exceeding the EPA Action Level of 4 pCi/L (picocuries per liter), perhaps locally reaching very high levels above 50 pCi/L, if a house construction and ventilation allow for soil-gas radon to enter and concentrate within the structure.[1] According to the USGS report, most of these areas are located in the northwest part of the island. Please note that the actual 1993-1995 study documentation is not available to the EPA.

Typical radon testing technology used in mainland United States (charcoal canisters or electric-powered devices) are impractical in Puerto Rico because of high humidity and power outages. The recovery and rebuilding of communities following the aftermath of 2017 Hurricanes Irma and Maria presented an opportunity to develop radon prevention and mitigation strategies in 2019. Initially, EPA sampled indoor radon air in over 170 single-family residences in the municipalities of San Sebastian, Lares, Ciales, Arecibo, Morovis, Camuy, and Hatillo and later expanded the project to other municipalities such as Rincon, Aguada, Aguadilla, Isabela, Quebradillas, Barceloneta and Vega Baja. The quality assurance protocols were anchored in American National Standards Institute/American Association of Radon Scientists and Technologists (ANSI/AARST) standards of practice (ANSI/AARS, 2019). The sampling was designed in two stages: scoping and confirmatory sampling. The scoping sampling was conducted using Corentium Home (CH) electronic monitors and E-Perm systems. Locations measuring above the EPA Action Level of 4 pCi/L with CH were measured at the second stage of the sampling using RAD7 and Corentium Pro Continuous Radon Monitors (CRMs). Nationally certified radon sampling professionals led by one such professional from the UPRM conducted confirmatory sampling in the second stage. Also, during the study, the nationally certified radon mitigation professionals inspected several homes with elevated indoor radon levels.

Mapping radon in Puerto Rico proved to be a complicated endeavor given the COVID-19 pandemic in 2020. EPA and UPRM continue to work on the project, however, results have not been finalized, and no scientific report has been published yet. Unfortunately, EPA cannot share preliminary data at this time because it contains privileged information. Nevertheless, preliminary data from the study does show homes with levels over 4 pCi/L (EPA Action Level) that might need mitigation to protect the health of their inhabitants.

Although many states have developed laws and regulations governing radon disclosure, certification, and mitigation, Puerto Rico lacks legislation or mandatory radon testing provisions for new construction, remodeling, selling or buying homes. Given this loophole and aiming to answer your request, the EPA can provide information on Best Management Practices for sampling indoor radon in Puerto Rico.

[1] **Reference**: USGS. Geologic Radon Potential of Guam and Puerto Rico, Report 93-292-K. Washington, DC: USGS. Retrieved 9/11/2024, from https://pubs.usgs.gov/of/1993/0292k/report.pdf.

CITY VIEW PLAZA II BUILDING, 7TH FLOOR
ROUTE 165 GUAYNABO, PR 00968

If you have any questions or need any additional information, please contact me at 787-977-5865 or guerrero.carmen@epa.gov or have your staff contact Reyes, Brenda at reyes.brenda@epa.gov or (787) 977-5869.

Sincerely,

CARMEN GUERRERO PEREZ

Digitally signed by CARMEN GUERRERO PEREZ
Date: 2024.09.23 09:41:39 -04'00'

Carmen R. Guerrero Pérez
Director

cc: Roberto Mendez, Esq (Acting Secretary, PR Department of Natural and Env. Resources)
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U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-7000

OFFICE OF COMMUNITY PLANNING
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Program Environmental Clearance Officers
Responsible Entities
Public Housing Authorities
Tribes
Tribally Designated Housing Entities

Notice: CPD-23-103

Issued: January 11, 2024
This notice will be effective 90 days after the date issued. For Tribes, Tribally Designated Housing Entities, and Department of Hawaiian Homelands Recipients, however, it will be effective two years after the date issued.

Expires: This Notice is effective until amended, superseded, or rescinded

SUBJECT: Departmental Policy for Addressing Radon in the Environmental Review Process

I. Purpose

The purpose of this Notice is to clarify that radon must be considered in the contamination analysis for 24 CFR Parts 50 or 58, as applicable; to provide guidance on recommended best practices for considering radon; and to identify the U.S. Department of Housing and Urban Development (HUD) programs that have established specific radon guidance. This Notice does not impose radon testing requirements; however, it does include guidance on strategies for considering radon in the site contamination analysis.

This notice applies *only* to projects that are subject to HUD's contamination regulations at 24 CFR 50.3(i) or 24 CFR 58.5(i). It does not apply to the purchase of single family homes with an FHA-backed mortgage nor Section 184 and Section 184A loan guarantees. This notice also does *not* preempt any existing, federal state, or local requirements regarding radon. It also does not preempt the radon requirements found in HUD's Office of Housing programs following the Multifamily Accelerated Processing (MAP) Guide, Healthcare Mortgage Insurance Program Handbook, Rental Assistance Demonstration Program Notice and supplemental guidance, or other current or future radon guidance that is more prescriptive. See section IV of this notice for links to Housing radon guidance documents.

Compliance with this notice is required 90 days after the date issued for all HUD programs subject to 24 CFR Parts 50 and 58, with the exception of Tribe, Tribally Designated Housing Entity (TDHE), and Department of Hawaiian Homeland (DHHL) recipients. In

recognition of the need to provide additional support for radon programs, compliance with this notice is required starting January 11, 2026 for Tribe, TDHE, and DHHL recipients.

II. Radon and its health effects

Radon is a radioactive gas that forms when radium and certain other radioactive metals break down in rocks, soil, and water.[1] It is found in nearly all soils and moves through the soil to the air and into structures through cracks and other areas of permeability. Building materials and groundwater may also be a source of indoor radon. Once inside, radon concentrations can build to high levels, regardless of the age, condition, or design of the building.

The most common pathway for human exposure to radon is inhalation indoors. Radon is the number one cause of lung cancer in non-smokers and the second leading cause of lung cancer overall.[2] The risk of adverse health effects from radon in indoor air depends largely on two main variables: the level of radon exposure and the length of time exposed. Many radon-induced lung cancers can be prevented by testing and reducing radon levels in existing buildings and by using radon resistant construction techniques for all new construction.[3]

The goal for mitigating radon in buildings is to reduce radon concentrations in indoor air as low as reasonably achievable and practicable considering the efficacy of current industry-standard radon reduction systems and environmental conditions (e.g., geology and climate). The most effective strategy to protect the health and safety of occupants is to prevent radon from entering the building by using radon resistant construction techniques; another effective strategy is to reduce the level of radon inside existing buildings by installing and operating a radon reduction system. An effective radon reduction system achieves two main goals: it reduces the concentration of radon gas in the home by venting it safely outside the structure and removes the radon gas from under the foundation before it can come into the home.

III. Considering radon in the environmental review

HUD's environmental regulations at 24 CFR 58.5(i)(2)(i) and (ii)[4] state that,

> [i]t is HUD's policy that all properties that are being proposed for use in HUD programs **be free of hazardous materials, contamination, toxic chemicals and gases, and radioactive substances**, where a hazard could affect the health and safety of occupants or conflict with the intended utilization of the property.
>
> The environmental review of multifamily housing . . . , **must include the evaluation of** . . . other evidence of contamination on or near the site, to ensure that occupants of proposed sites are not

[1] National Institute of Health, Periodic Table, Element Summary, "Radon", https://pubchem.ncbi.nlm.nih.gov/element/Radon.
[2] U.S. Environmental Protection Agency, "Health Risk of Radon", https://www.epa.gov/radon/health-risk-radon.
[3] https://www.epa.gov/radon/health-risk-radon.
[4] HUD's contamination policy at 24 CFR 50.3(i)(1) and (2) implements the same substantive policy with slightly different text, https://www.ecfr.gov/current/title-24/subtitle-A/part-50/subpart-A/section-50.3.

adversely affected by any of the hazards listed in paragraph (i)(2)(i) of this section.

As radon is a radioactive substance, HUD or the responsible entity (RE) must consider it as part of the site contamination analysis for projects that:

- Require an environmental review at the level of *Categorically Excluded Subject to 50.4 or 58.5* ("CEST"), *Environmental Assessment*, or *Environmental Impact Statement*; and
- Involve structures that are occupied or are intended to be occupied at least four (4) hours a day.

Note: HUD's contamination policy does not apply to projects that are Exempt or Categorically Excluded Not Subject to 50.4 or 58.5 ("CENST").

HUD encourages environmental review preparers to follow the most recent U.S. Environmental Protection Agency (EPA) recommendations about assessing the health risk from radon exposure and when to reduce radon levels in indoor air. Because more people are exposed to moderate levels of radon, most radon-induced lung cancer results from long-term exposure to low or moderate radon levels in the home, as opposed to short term exposure to very high levels of radon.[5] The EPA recommends homes be fixed if the radon level is 4 pCi/L or more. Because there is no known safe level of exposure to radon, EPA also recommends that Americans consider fixing their home for radon levels between 2 pCi/L and 4 pCi/L[6]. Indoor air radon levels vary across the U.S. and from parcel to parcel due to differences in geology, climate, seasonal variation, building construction, and other conditions. Additionally, because radon cannot be seen, tasted, or smelled, the only method for determining the precise radon level in a specific building is to test the indoor air.

Exemptions from having to consider radon in the contamination analysis[7]:

- Buildings with no enclosed areas having ground contact.
  - Buildings containing crawlspaces, utility tunnels, or parking garages would *not* be exempt, however buildings built on piers would be exempt, provided that there is open air between the lowest floor of the building and the ground.
- Buildings that are not residential and will not be occupied for more than 4 hours per day.
- Buildings with existing radon mitigation systems - document radon levels are below 4 pCi/L[8] with test results dated within two years of submitting the application for HUD assistance and document the system includes an ongoing maintenance plan that includes periodic testing to ensure the system continues to meet the current EPA recommended levels. If the project does not require an application, document test results dated within

[5] World Health Organization, *Handbook on Indoor Radon; A Public Health Perspective* (January 1, 2009). p. x, 2, https://www.who.int/publications/i/item/9789241547673.
[6] https://www.epa.gov/radon/what-epas-action-level-radon-and-what-does-it-mean
[7] These exemptions are specific to this notice and do not all comport with the requirements in the MAP Guide, Healthcare Mortgage Insurance Program Handbook, RAD Program Notice and supplemental guidance or other program guidance.
[8] Or the EPA's current recommended level for reducing radon levels in indoor air, https://www.epa.gov/radon/health-risk-radon.

two years of the date the environmental review is certified. Refer to program office guidance to ensure compliance with program requirements.

- Buildings tested within five years[9] of the submission of application for HUD assistance: test results document indoor radon levels are below current the EPA's recommended action levels of 4.0 pCi/L. For buildings with test data older than five years, any new environmental review must include a consideration of radon using one of the methods in Section A below.

A. How to consider radon in the HUD Environmental Review

This section details how environmental review preparers may consider radon in the HUD environmental review in order to satisfy 24 CFR 50.3(i) or 24 CFR 58.5(i) [10]. This section provides a recommended "best practice" method; however, preparers may utilize one of the alternate options if they choose not to implement the best practice.

i. Recommended Best Practice

When considering radon in the contamination analysis, HUD strongly recommends using the American National Standards Institute/American Association of Radon Scientists and Technologists (ANSI/AARST) radon testing standards for single- and multi- family buildings, schools, and large buildings, including those constructed using radon-resistant construction techniques.[11] The ANSI/AARST standard describes how to conduct testing, interpret test results, and draft a Radon Test Report to document the process for the building owner (and to use as documentation for the ERR).

The ANSI/AARST standards can be viewed online for free and are intended to be implemented by licensed radon professionals. To find a licensed radon professional in your area contact the State/Tribe's radon program office,[12] National Radon Proficiency Program (NRPP),[13] or the National Radon Safety Board (NRSB).[14]

There may also be state and/or local radon requirements, depending on the jurisdiction. Contact the relevant State/Tribal radon control program to ensure the project complies with State/Tribal requirements.[15]

Note: Although testing is not required under this notice, *testing is the only way to determine the radon level within a building.*

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[9] Note that the allowance for the use of test results within the previous five years is specific to this notice and does *not* comport with the ANSI/AARST standards.

[10] This section does not apply to projects that are subject to the MAP Guide, Healthcare Mortgage Insurance Program Handbook or RAD Program Notice and supplemental guidance or other current or future HUD radon guidance that is more prescriptive.

[11] ANSI/AARST Standards (In lieu of developing a federal radon testing standard, the EPA references the ANSI/AARST Standards), https://standards.aarst.org/ (https://www.epa.gov/radon/radon-standards-practice).

[12] The National Radon Program Services, "State Radon Programs Information", https://sosradon.org/state.

[13] NRPP, https://nrpp.info.

[14] NRSB, https://www.nrsb.org.

[15] https://sosradon.org/state.

ii. Alternative Options

Using the ANSI/AARST radon testing standards is not the only option available for considering the risk that occupants may be exposed to high radon levels.[16] If the environmental review preparer chooses not to conduct radon testing per the ANSI/AARST standards, one of the following alternative strategies[17] must be used to consider radon in the contamination analysis. Review the HUD program office guidance in Section IV to ensure the strategy used to consider radon in the contamination analysis complies with specific program office requirements for the project.[18]

1. Do-it-yourself (DIY) radon test kits may be used to measure radon levels in single-family dwelling units. In HUD single-family buildings[19] with multiple units, one DIY test kit must be used for each dwelling unit. DIY radon test kits may be available for low or no cost through State/Tribal radon program offices and are available to purchase through the National Radon Program Services website and some state radon control program websites.[20]

When using a DIY test kit, there can be quality control issues that affect the quality of the test results. To ensure the DIY test results are as accurate as possible, it is important to read the entire test kit instructions before activating the test device and to follow them fully. The EPA's *Citizen's Guide to Radon*[21] and the ANSI/AARST standard for testing single-family housing are excellent resources for detailed instructions about conducting the radon test, including where to place the test device(s), how to prepare the home (whether to close the windows, turn off fans, the length of time to test), how to document the test process, and interpret the results. HUD encourages that test devices be approved by either the NRPP or NRSB. Contact the National Radon Program Services helpline, the State/Tribal radon program office, or the local health department for assistance.[22]

2. In remote or other areas where there are no licensed/certified radon professionals and/or DIY test kits cannot be shipped to a lab in sufficient time, the local government, such as a local health department or environmental department, may decide to purchase radon monitoring equipment and train staff to use it. Monitoring equipment, such as continuous radon monitors, should be used in accordance with the manufacturer's instructions and intended use and staff should ensure proper quality control and quality assurance practices are adhered to.

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[16] High levels of radon are those that are at or above 4 pCi/L.
[17] Alternative to measuring radon levels in indoor air using the ANSI/AARST standards.
[18] Note: REs and HUD must also ensure that the strategy used complies with any state or local laws and regulations regarding radon.
[19] HUD defines "single family building" as a residential building with one to four dwelling units.
[20] National Radon Program Services, https://sosradon.org/purchase-kits.
[21] EPA, *A Citizen's Guide to Radon: The Guide to Protecting Yourself and Your Family from Radon* (EPA 402/K-12/002, December 2016), https://www.epa.gov/radon/publications-about-radon.
[22] The National Radon Program Services, which has phone, email, and mail connections, is operated by Kansas State University for the US EPA, https://sosradon.org/Contact. (The phone numbers may also be reached by persons with hearing or speech difficulties by dialing 711 via teletype (TTY) or telecommunications device for the deaf (TDD)).

3. Scientific data review. Available science-based information may be used to determine whether the project site is located in an area that has average documented radon levels at or above 4 pCi/L. Contact the State/Tribal radon program office (or health department), as needed, for assistance with obtaining and interpreting available science-based information about radon levels in the area. Science-based information includes, but is not limited to:

- State/Tribe-generated radon information, such as surveys of radon levels from collecting radon measurement data or geological studies that identify high risk areas.
- Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), National Environmental Public Health Tracking, Radon Testing map.[23] This map provides radon test data from national radon testing laboratories and states that can be viewed by state or county. Radon test data ranges from 1988 to the present.

Environmental review preparers may *not* use the EPA Map of Radon Zones nor EPA State Maps of Radon Zones for considering radon levels at a project site for compliance with 24 CFR 50.3(i) or 24 CFR 58.5(i) because it is not appropriate for a site-specific analysis of radon risk, which is required for a HUD environmental review.

Note: Although science-based, a document review *does not* determine the radon level in a specific building; where feasible, HUD recommends using one of the radon testing strategies.

When conducting a scientific data review in lieu of testing, there must be a minimum of 10 (ten) documented test results over the previous 10 years for which data is available in a given county for the scientific data review approach to be utilized. If there are less than 10 documented results over this period, then there is a lack of scientific data for the purposes of this notice and no further consideration of radon is needed if testing is infeasible or impracticable.

Additionally, testing data utilized should cover the smallest geographic area for which the minimum amount of documented test results exist, up in size to the county in which the project is located. The best available data must be used. Best available data refers to the most current data that best indicates the level of radon concentration at a project site. Whenever possible, utilize the average of the previous 10 years of data.

There may be certain scenarios in which use of the Recommended Best Practice or Alternative Options identified above may not be feasible or practicable due to limited access to testing (e.g., lack of licensed radon professionals in the project area) and lack of scientific data (e.g., there are less than 10 documented test results over the previous 10 years). Refer to section **C. Documenting the environmental review record** below for documentation requirements in these scenarios.

[23] CDC, "National Environmental Public Health Tracking, Radon Testing", https://www.cdc.gov/nceh/tracking/topics/RadonTesting.htm.

B. Mitigating Radon

When radon testing determines indoor air radon levels are at or above 4 pCi/L or the scientific data review determines the project site is located in an area that has documented radon levels at or above 4 pCi/L, the Environmental Review Record (ERR) must include a mitigation plan. When the determination is based on a scientific data review, if feasible, HUD recommends conducting radon testing (using one of the testing strategies described in the previous sections) to confirm radon levels in the building(s) proposed for HUD funding. If testing then demonstrates that radon levels within the building are below 4 pCi/L, mitigation would *not* be required; environmental review preparers can simply document the test results in the ERR.

The mitigation plan[24] must identify the radon level; consider the risk to occupants' health; describe the radon reduction system that will be installed; whenever possible, establish an ongoing maintenance plan to ensure the system is operating as intended; establish a reasonable timeframe for implementation (i.e., integrate radon mitigation activities into an annual plan or a 5-year plan that is already completed for HUD funded activities); and require post-installation testing. Where feasible, post-installation testing should be conducted by a licensed radon professional. In an area where there are no licensed radon professionals, there may be other personnel, such as trained staff, other professionals (i.e., engineers, geologist, scientists, public health staff) who have experience conducting radon testing or have the relevant skills and knowledge to follow the device instructions or ANSI/AARST test protocols and mitigation standards. For assistance Contact the EPA's local radon program office, state/Tribe radon program office, the National Radon Program Services,[25] or refer to the applicable ANSI/AARST standard for guidance.

If using the ANSI/AARST mitigation standard to install the radon reduction system, follow the guidance in the standard to draft the mitigation and the operation, maintenance, and monitoring plans.

C. Documenting the environmental review record

Under HUD's regulations, 24 CFR 58.38(a)(3) or 50.11, HUD, or the RE, is required to document the radon evaluation as part of the contamination analysis in the ERR. For ERRs documented using the HUD Environmental Review Online System (HEROS), document the radon evaluation in the Contamination and Toxic Substances factor Compliance Determination screen and upload supporting documentation. For Office of Housing projects, document the radon evaluation in the HEROS Housing Requirements Screen.

If testing is not conducted and not otherwise required by program guidance, the documentation will need to provide evidence of average documented radon test results covering the project site or its county, other science-based information suggesting radon levels at the project site, or evidence of a lack thereof.

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[24] Example of an areawide radon testing plan: Home Forward, Multnomah County, Oregon at: http://homeforward.org/content/radon-information.

[25] EPA Regional, State, and Tribal Radon contacts, https://www.epa.gov/radon/epa-map-radon-zones-and-supplemental-information#datainfo; National Radon Program Services, https://sosradon.org/main or 800 644-6999.

In instances where radon testing will be conducted but cannot be conducted until after the environmental review record is certified -such as with new construction or certain rehabilitation projects- then the initial documentation would not include a radon evaluation but must include a condition for post-construction radon testing followed by mitigation if needed. The environmental preparer must update the environmental review record with the radon evaluation and proof of any required mitigation when complete.

Acceptable methods to document radon consideration in the ERR include:

- ANSI/AARST standard: Include a copy of the test report and mitigation plan (if applicable) as described in the standard in the ERR. For Office of Housing programs, follow program guidance requirements on timing and documentation.

- DIY and other radon test strategies: Document the test device, time period of test, test conditions (HVAC system off windows closed, outside temperature), test results, and other conditions relevant to test conditions. Refer to the applicable ANSI/AARST standard as guidance.

- Review of CDC radon testing data, geologic studies/maps, other scientific data: Describe and cite the maps and data used to determine the area wide radon levels and include copies of all supporting documentation (maps/studies) in the ERR.

- In instances where HUD grantees, applicants, and recipients are unable to obtain science-based data, environmental review preparers must consider the feasibility of radon testing if they have not already. If the grantee, applicant, or recipient determines that testing is infeasible or impracticable, the environmental review must document the basis for this determination.[26]. Acceptable documentation in these scenarios where testing is infeasible and science-based data is not available includes but is not limited to: correspondence with state and local radon control agencies indicating a lack of scientific data evidencing radon levels at the project site, a copy of CDC Environmental Health Tracking Network information showing the project site is located in a county with a lack of scientific data, and a basis for the conclusion that testing would be infeasible or impracticable. The RE, grantee, applicant, or recipient is not required to submit additional documentation substantiating their decision that testing is infeasible or impracticable.

- When all this is documented in the ERR, *no* further consideration of radon is needed and no further action with respect to radon is needed for the environmental review. .

Examples of acceptable documentation of radon consideration in the ERR:

- A project site is located in a county in which the CDC Radon Testing data shows that more than 10 tests have been conducted over the last 10 years. The average of the 200 tests completed in the county over the last 10 years is 4.5 pCi/L. Since scientific data

[26] Common instances where this determination may occur include a lack of funding for testing or the cost of testing is prohibitively high when compared with the cost of a particular low-dollar project.

indicates that average radon levels in the county in which the project is located are greater than 4.0 pCi/L, the grantee must either test for radon or formulate a mitigation plan they will implement.

- Radon testing data from the CDC Environmental Public Health Tracking Network map shows data for the county in which the project site is located, which is the smallest area for which data is available. The data shows the annual mean pre-mitigation radon measurement in tested buildings for the most recent 10-year period as 1.8 pCi/L. There is no other available evidence of radon levels in the area. The local government chooses to establish a radon testing plan to confirm radon levels in specific buildings are below 4 pCi/L. The test plan timeframe aligns with the RE's housing rehabilitation plan.

- A project site is located in a county in which the CDC Radon data shows that more than 10 tests have been conducted over the last 10 years. The average of the 220 tests completed in the county over the last 10 years in 3.2 pCi/L. The responsible entity or HUD reviewer documents the results in the environmental review records and therefore satisfies this notice's requirement that radon be considered as part of the environmental review process.

- A project site is located in a county in which the CDC data shows that fewer than 10 tests have been conducted over the last 10 years. The RE or HUD reviewer documents the lack of scientific data in the environmental review records. The RE has reviewed the cost of radon testing for the project and determined that testing is infeasible because the cost to test for this project would cut too much into the project's small budget. They note this determination in the environmental review record.

The local EPA radon contact person and the National Radon Program Services may be able to assist with developing a testing plan. The EPA's *A Citizen's Guide to Radon* (for single family homes) and the ANSI/AARST standards (single family and multifamily buildings) are a good source for guidance on the information that is included in a test plan.

Note: HUD or a Responsible Entity must reject projects in areas that have sufficient documented radon levels at or above 4 pCi/L if no mitigation has been proposed or performed.

IV. HUD program office documents addressing radon

Current HUD program office guidance regarding radon testing and mitigation is listed below. Each HUD program office is responsible for issuing program-specific radon guidance. Program guidance may be updated as Departmental policies develop; be sure to use the most current guidance. Additionally, this notice does not preempt or modify existing HUD program-specific radon requirements, such as those found in the Multifamily Accelerated Processing (MAP) Guide, the Healthcare Mortgage Insurance Program Handbook 4232.1 Rev-1, the RAD Program Notice and Supplemental Notice 4B, or other current or future radon guidance that is more prescriptive**.** For questions concerning program office guidance, contact your program office representative.

- Office of Housing, *Multifamily Housing, Multifamily Accelerated Processing Guide* (4430.G), Section 9.6.3, https://www.hud.gov/program_offices/administration/hudclips/guidebooks/hsg-gb4430
- Office of Housing, Office of Residential Care Facilities, *Healthcare Mortgage Insurance Program Handbook* (4232.1), Section 7.8, Rev-1), or most recent edition, https://www.hud.gov/sites/documents/42321S2C7HSGH.PDF
- Office of Housing, Office of Recapitalization, Rental Assistance Demonstration (RAD) Program (Notice H-2019-09 PIH-2019-23 (HA)) and Supplemental Notice 4B (Notice H-2023-08 PIH-2023-19 (HA)), https://www.hud.gov/RAD/library/notices
    - Quick Reference Guide, Environmental Review Requirements for RAD Conversions (2020), https://www.hudexchange.info/resource/4216/environmental-review-requirements-for-rad-transactions/. Check RAD Resource Desk for future guidance, https://www.radresource.net/index.cfm
- Office of Public and Indian Housing (PIH), Radon Information for PIH Programs (Notice 2013-06 (HA)), https://www.hud.gov/sites/documents/PIH2013-06.PDF and https://www.hudexchange.info/programs/radon/

V. Resources

A. HUD resources for implementation of this notice

Costs for radon testing and mitigation are considered eligible program costs for many HUD grant programs. As such, costs for radon testing and mitigation could be included in the total project costs funded or insured by HUD. **Note:** Costs for ongoing operation and/or maintenance of installed mitigation systems may not be eligible under certain HUD programs. For questions about the eligibility of the ongoing maintenance of radon mitigation systems, as well as other funding-specific questions, contact your HUD program office contact.

Table A on the following page, notes the major HUD programs for which radon testing and/or mitigation under 24 CFR 50.3(i) or 24 CFR 58.5(i) is an eligible program expense. This list is non-exhaustive; for other HUD programs please contact the appropriate program office contact.

Table A: HUD programs and radon testing and mitigation as an eligible expense

Program or grant name	**Is radon testing an eligible expense?**	**Is radon mitigation an eligible expense?[27]**
Community Development Block Grant (CDBG)	Yes	Yes
Community Development Block Grant CARES Act (CDBG-CV)	Yes	Yes
Community Development Block Grant Disaster Recovery (CDBG-DR)	Yes	Yes
Community Development Block Grant Mitigation (CDBG-MIT)	Yes	Yes
Community Project Funding (CPF) Grants	Yes	Yes
Continuum of Care Program (CoC)	Yes	Yes
Emergency Solutions Grants Program	Yes	Yes
FHA-Insured Healthcare Loans	Yes	Yes
FHA-Insured Multifamily Loans	Yes	Yes
Green and Resilient Retrofit Program (GRRP)	Yes	Yes
HOME Investment Partnerships American Rescue Plan Program (HOME-ARP)	Yes	Yes
HOME Investment Partnerships Program (HOME)	Yes	Yes
Housing Opportunities for Persons With AIDS (HOPWA)	Yes	Yes
Housing Trust Fund (HTF)	Yes	Yes
HUD Section 8 renewals with capital repairs	Yes	Yes
HUD Section 8(bb) Transfer of Budget Authority.	Yes	Yes
Indian Community Development Block Grant (ICDBG)	Yes	Yes
Indian Housing Block Grant Program (IHBG)	Yes	Yes
Public Housing Capital and Operating Funds	Yes	Yes
Rental Assistance Demonstration (RAD)	Yes	Yes
Section 108 Loan Guarantee Program	Yes	Yes
Section 202 Supportive Housing for the Elderly Program	Yes	Yes
Section 811 Supportive Housing for Persons with Disabilities Program	Yes	Yes
Self-Help Homeownership Opportunity Program (SHOP)	Yes	Yes
Transfers of Rental Assistance with HUD Held or Insured Debt and/or Use Restrictions ("Section 209 Transfers.")	Yes	Yes

[27] Note: The term “radon mitigation” refers only to initial installation of a radon mitigation system and does ***not*** encompass ongoing maintenance.

B. Other radon resources

- EPA radon website, https://www.epa.gov/radonNational Radon Program Services, https://sosradon.org/
    - Helpline: 1-800-557-2366
    - Comprehensive radon information, links to state radon programs and radon testing and mitigation information, and access to radon helplines
- CDC, National Center for Environmental Health, "Radon", https://www.cdc.gov/radon/
    - National Environmental Public Health Tracking Network testing data map: https://www.cdc.gov/nceh/tracking/topics/RadonTesting.htm
- ANSI/AARST radon testing protocols and mitigation standards, https://standards.aarst.org/
- HUD 3-part radon webinar series sponsored by the Office of Lead Hazard Control and Healthy Homes and Public and Indian Housing, https://www.hudexchange.info/programs/radon/
- Office of Lead Hazard Control and Healthy Homes, *About Radon*, https://www.hud.gov/program_offices/healthy_homes/healthyhomes/radon
- OEE, *Radon Fact Sheet*, https://www.hudexchange.info/resource/4955/oee-radon-fact-sheet/
- OEE Radon and HUD-Assisted Projects Webinar Series, https://www.hudexchange.info/news/radon-and-hud-assisted-projects-webinar-series/

For questions concerning this Notice, contact your local OEE field environmental office staff, https://www.hudexchange.info/programs/environmental-review/hud-environmental-staff-contacts/

6.4 Phase I Environmental Site Assessment (see following pages)

September 21, 2025

,

Subject: Phase I Environmental Site Assessment
Barrancas ward, Nuevo Barranquitas sector, Carr. 152 Ramal, km. 01
Barranquitas, PR 00794
Project No. 2025-04

Dear :

Please find enclosed the Phase I Environmental Site Assessment we have completed for the above referenced subject property. We appreciate this opportunity to serve you. Please contact me if you have any questions about the report.

Sincerely,
Diatom Environmental Services, LLC

Javier Velez Arocho
President

Javier Velez Arocho
President

Phase I Environmental Site Assessment Report

MUNICIPAL PARCEL
Barrancas ward, Nuevo Barranquitas sector, Carr. 152 Ramal, km. 01
Barranquitas, PR 00794

Prepared by
Diatom Environmental Services, LLC
Calle Francia F7 Garden Court
Guaynabo, PR 00966

Prepared for
,

May 23, 2025
Project # 2025-04

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Appendices

1.0 GENERAL INFORMATION

Project Information:
Centro de Usos Múltiples de Barranquitas
PR-CRP-001180
Project Number:
2025-04

Consultant Information:
Diatom Environmental Services, LLC
Calle Francia F7 Garden Court
Guaynabo, PR 00966
Phone: Unknown
Fax: Unknown
E-mail Address:
Inspection Date:
Report Date: May 23, 2025

Site Information:
MUNICIPAL PARCEL
Barrancas ward, Nuevo Barranquitas sector, Carr. 152 Ramal, km. 01
Barranquitas, PR 00794
Latitude, Longitude: 18.191701, -66.305955
Site Access Contact:

Client Information:

,

Site Assessor

Javier Velez Arocho
President

Senior Reviewer

Javier Velez Arocho
President

Certification:

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in 40 CFR Part 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Javier Velez Arocho - President

2.0 EXECUTIVE SUMMARY

Diatom Environmental Services, LLC performed a Phase I Environmental Site Assessment (Phase I ESA) of MUNICIPAL PARCEL located at Barrancas ward, Nuevo Barranquitas sector, Carr. 152 Ramal, km. 01 Barranquitas, PR (subject property). The purpose of the Phase I ESA is to identify recognized environmental conditions (RECs) in accordance with ASTM Standard E1527-21.

2.1 Subject Property Description

The main parcel consist of approximately 5.92 acres (6.0997 cuerdas) of undeveloped land. The site is considered a greenfield cover with sod and border with lands of the original property of approximately 200 acres of undeveloped lands. The property is being considered for the construction of a Multi-Use Center funded by the US Department of Home and Urban Development. The property is located at Barrancas ward, Nuevo Barranquitas sector, Carr. 152 Ramal, km. 01, in the municipality of Barranquitas, Puerto Rico 00794.

2.2 Data Gaps

ASTM E1527-21 identifies a "data gap" as the lack or inability to obtain information required by the standard practice despite good faith efforts by the Environmental Professional or the User. Any data gaps resulting from the Phase I ESA described in this report are listed and discussed below.

Deletions or Exceptions from Scope of Work Referenced in Section 1.4:None Weather-Related Restrictions to Site Reconnaissance:None Facility Access Restrictions to Site Reconnaissance:None Other Site Reconnaissance Restrictions:None Data Gaps from Environmental Records Review:- At the date of the completion of this report, no response from the Underground Storage Tanks Area was received.Data Gaps from Historical RecordsReview:None Data Gaps from Interviews:None Other Data Gaps: None

2.3 Environmental Report Summary

Report Section		No Further Action	REC	HREC	CREC	Issue / Further Investigation	Comments
5.3	**Current Use of Subject Property**	X					The property is a greenfield, undeveloped land.
5.5	**Adjoining Property Information**	X					

Report Section		No Further Action	REC	HREC	CREC	Issue / Further Investigation	Comments
6.3.1	**Hazardous Substances**	X					
6.3.2	**Petroleum Products**	X					
6.3.3	**Underground Storage Tanks (USTs)**	X					
6.3.4	**Aboveground Storage Tanks (ASTs)**	X					There are two LPG tanks nearby. One 100-pound LPG tank is located across the street at the Head Start School, and one is located over 200 feet to the West in the Arts and Sports School.
6.3.5	**Strong, Pungent, or Noxious Odors**	X					
6.3.6	**Standing Surface Water and Pools or Sumps Containing Liquids Likely to be Hazardous Substances or Petroleum Products**	X					
6.3.7	**Drums, Totes, and Intermediate Bulk Containers**	X					
6.3.8	**Hazardous Substance and Petroleum Product Containers Not in Connection With Identified Uses**	X					
6.3.9	**Unidentified Substance Containers**	X					

Report Section		No Further Action	REC	HREC	CREC	Issue / Further Investigation	Comments
6.3.10	**PCB-Containing Items**	X					
6.3.11	**Drains and Sumps**	X					
6.3.12	**Pits, Ponds, or Lagoons**	X					
6.3.13	**Solid Waste**	X					
6.3.14	**Stained Soil or Pavement**	X					
6.3.15	**Stressed Vegetation**	X					
6.3.16	**Wells**	X					
6.3.17	**Other**	X					
7.1	**Standard Environmental Record Resources**	X					
7.4.1	**Historical Summary**	X					
7.4.6	**Previous Environmental Reports**	X					

2.4 Recommendations

Based on the observations and data described above, the reconnaissance of the Subject Property and surrounding area did not identify evidence of a REC or HREC except the following:
1. There are no recognized environmental conditions on this property. Based on the stated finding, no further investigation work is recommended. There is no known environmental liability to limit or condition a sale-purchase transaction or refinancing regarding this parcel of land. This conclusion is based on the results of this due diligence effort and all the facts and data gathered to support said determination.

Based on the above facts and all other findings, further investigation work is not advisable. This conclusion is based on the results of this due diligence effort and all the facts and data gathered to support said determination.

3.0 INTRODUCTION

Diatom Environmental Services, LLC performed a Phase I Environmental Site Assessment (Phase I ESA) of the Centro de Usos Múltiples de Barranquitas PR-CRP-001180 located at Barrancas ward, Nuevo Barranquitas sector, Carr. 152 Ramal, km. 01 in Barranquitas, PR (subject property).

3.1 Purpose

The purpose of this Phase I ESA is to investigate and identify recognized environmental conditions (RECs) and controlled recognized environmental conditions (CRECs) associated with the subject property and/or surrounding properties.

ASTM Standard Practice E1527-21 defines **REC**s as: (1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment. A de minimis condition is not a REC. De minimis conditions relate to a release that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

ASTM Standard Practice E1527-21 defines **CREC**s as: REC affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls.

ASTM Standard Practice E1527-21 defines **HREC**s as: a previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (for example, activity and use limitations or other property use limitations). A HREC is not a REC.

3.2 Scope of Work

The Phase I ESA conducted at the subject property was in general accordance with ASTM Standard E 1527-21 and included the following:

- A site reconnaissance and visual survey of properties proximate to the subject property,

- Review of records and interviews with regulatory officials and representatives regarding current and former operations at the subject property,
- A review of historical resources, such as: property records, topographic maps, fire insurance maps, city directories, and aerial photographs,
- Review of previous environmental site assessments, if made available,
- Review of State and Federal environmental database information, and
- Evaluation of information and preparation of the report provided herein.

Typically, a Phase I ESA does not include sampling or testing of air, soil, groundwater, surface water, or building materials. These activities would be carried out under separate cover, if necessary.

3.3 Significant Assumptions

There is a possibility that even with the proper application of these methodologies conditions may exist that could not be identified within the scope of the assessment or which were not reasonably identifiable from the available information. Diatom Environmental Services, LLC believes that the information obtained from the record review and the interviews concerning the subject property is reliable. However, Diatom Environmental Services, LLC cannot and does not warrant or guarantee that the information provided by these other sources is accurate or complete. The methodologies of this assessment are not intended to produce all inclusive or comprehensive results, but rather to provide the Municipal Government of Barranquitas with information relating to the subject property.

3.4 Limitations and Exceptions

Limitations and exceptions to ASTM Standard E1527-21 noted during the course of the Phase I ESA are discussed below.

No limitations or exceptions to ASTM Standard E1527-21 were noted during the course of this Phase I ESA.

3.5 Deviations

No deviations from the recommended scope of ASTM Standard E 1527-21 were performed as part of this Phase I ESA with the exception of any additions noted in Detailed Scope of Services.

3.6 Special Terms and Conditions

Authorization to perform this assessment was given by the client on May 9, 2025. Instructions as to the location of the subject property, access, and an explanation of the subject property and facilities to be assessed were provided by the Municipality of Barranquitas.

3.7 Reliance

This report has been prepared for the sole benefit of the client. The report may not be relied upon by any other person or entity without the express written consent of the Municipality of Barranquitas.

4.0 USER-PROVIDED INFORMATION

As part of this Phase I ESA, Diatom Environmental Services, LLC requested certain information from the "User" the Municipality of Barranquitas. This section describe tasks to be performed by the User.

4.1 Activity/Use Limitations

The Municipality did not make Diatom Environmental Services, LLC aware of known Activity and Use Limitations (AUL) associated with the subject property.

4.2 Specialized Knowledge

The Municipality of Barranquitas did not report any specialized knowledge of this subject property.

Diatom Environmental Services, LLC has no specialized knowledge of the subject property outside of the research which was conducted and reported as part of this report.

The subject property ownership and tenants as well as all individuals who were interviewed as part of this investigation, have not reported any specialized knowledge of this subject property outside of what is contained in this report.

4.3 Valuation Reduction for Environmental Issues

Diatom Environmental Services, LLC has not been provided with information related to a valuation reduction due to environmental issues.

4.4 Owner, Subject Property Manager, and Occupant Information

No written or verbal communication with the subject property owner, manager and tenants revealed information which suggested that there are RECs associated with the subject property.

4.5 Reason For Performing Phase I ESA

Diatom Environmental Services, LLC understands that the findings of this study will be used to evaluate a pending financial transaction in connection with the subject property.

5.0 SUBJECT PROPERTY DESCRIPTION

In the Barrancas neighborhood of the jurisdiction of Barranquitas, Puerto Rico, with an approximately area of 5.92 acres, It borders on the NORTH with Calle Escuela Superior Nueva, on the South with lands of the Villaronga Brothers and Santiago Heirs, on the EAST with Calle Escuela Superior Nueva, and to the WEST with Department of Education's Specialized High School for Arts, Commerce and Sports Luis Muñoz Marín.

5.1 Location and Legal Description

The subject property is known as MUNICIPAL PARCEL and is located at Barrancas ward, Nuevo Barranquitas sector, Carr. 152 Ramal, km. 01, Barranquitas, PR. Information obtained from the Barranquitas CRIM indicated that the tax assessment parcel number for the subject property is 247-000-006-38.

5.2 Subject Property and Surrounding Area Description

The subject property consists of approximately 5.92 acres and is completely undeveloped with sparse institutional development to the north and northwest. The ground surface at the subject property slopes to the north. The property is located in the Barrancas Ward within the urban area of Barranquitas, classified primarily as urban land. The surrounding lands are classified as urban, road infrastructure and conservation l. At the time of the ESA, the site has been maintained idle. The property has both electrical power and water infrastructure crossing the boundaries of the parcel. The site see Appendix for maps, consists of a parcel used decades ago to grow minor crops. The whole parcel is covered with grass. There are no structures within the premises. There are municipal and state paved roads around the premises. The adjoining properties to "Subject Property parcel are of mixed use. Houses and small businesses, and conservation lands were observed on the southern side of the property.
The subject property is zoned Urban lands.

5.3 Current Use of Subject Property

The subject property is undeveloped. In our research, Diatom Environmental Services, LLC has not found any evidence that the subject property has every been developed.

According to the City of Barranquitas CRIM Department, the subject property is zoned Urban. The occupancy at the time of the site reconnaissance was reported to be 0% percent.

5.4 Description of Structures and Other Improvements

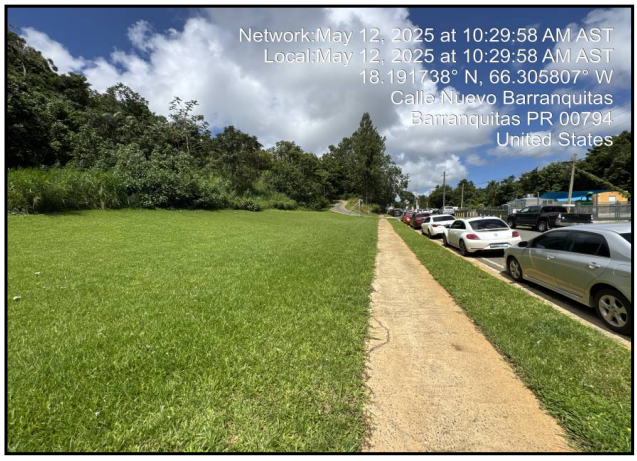
There are no structures within the property.

5.5 Adjoining Property Information

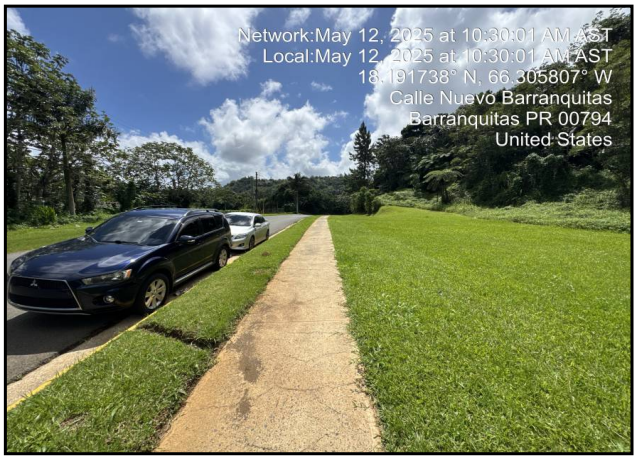
During the site reconnaissance, Diatom Environmental Services, LLC observed the following land use on properties in the immediate vicinity of the subject property. To the North, a Head Start School is located across the street. This is a one-floor structure with playground, kitchen and classroom. To the South, the property has border with undeveloped and forested lands property of Villarongo Brothers and the Santiago Heirs. To the West the property borders with the Specialized High School for the Arts, Commerce and Sports. To the East, the property borders with the Nueva Escuela Street. All properties does not show signs of environmental concerns.

Adjoining Property Information			
Direction From Subject Property	**Occupant**	**Use**	**Comments**
South	Villarongo Brothers and Santiago Heirs	Undeveloped	Undeveloped Lands
East	Calle Escuela Superior Nueva	Institutional	Municipal Street
West	Department of Education Specialized HighSchool for Arts, Commerce and Sports	Institutional	High School
North	Calle Escuela Superior Nueva	Institutional	Municipal Street

ASSOCIATED PHOTOGRAPHS

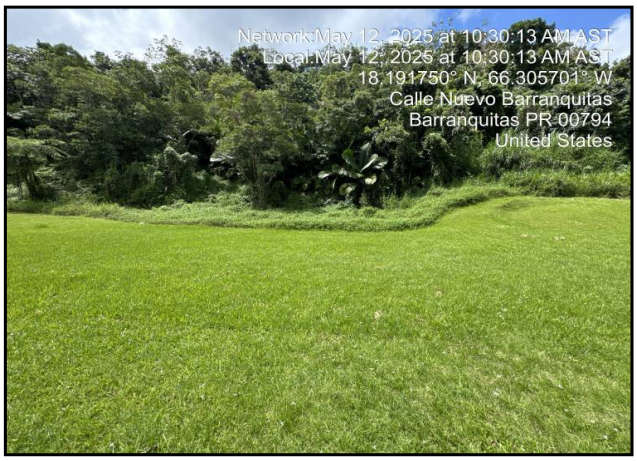


View to the West

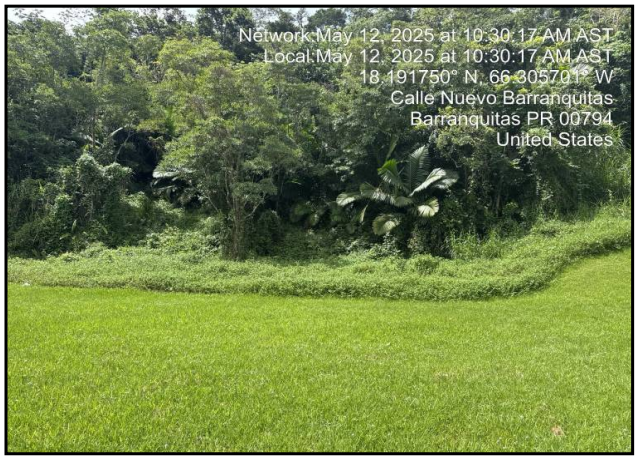


View to the East

View to the East



View to the South



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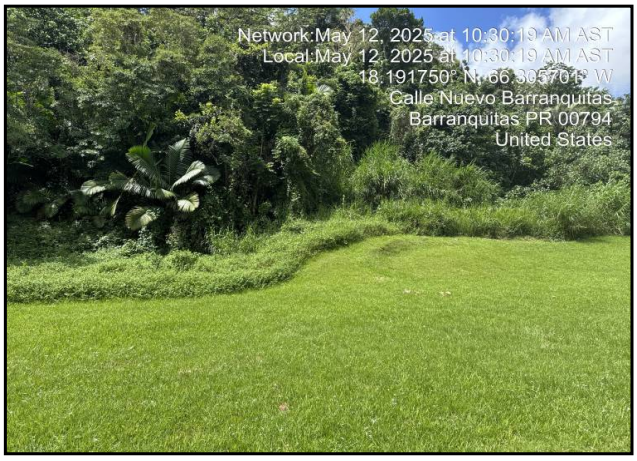
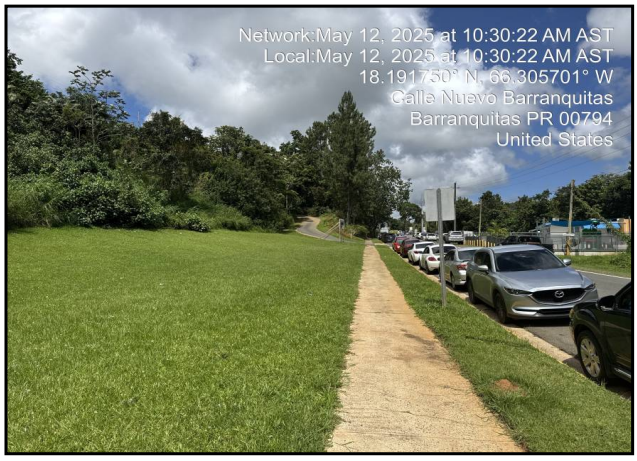
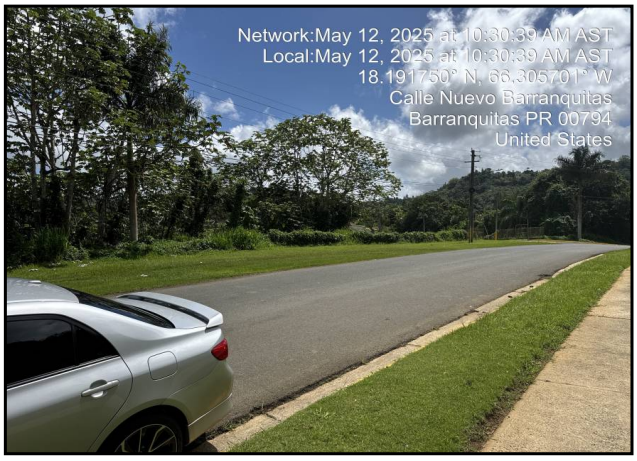


View to the South

ASSOCIATED PHOTOGRAPHS continued



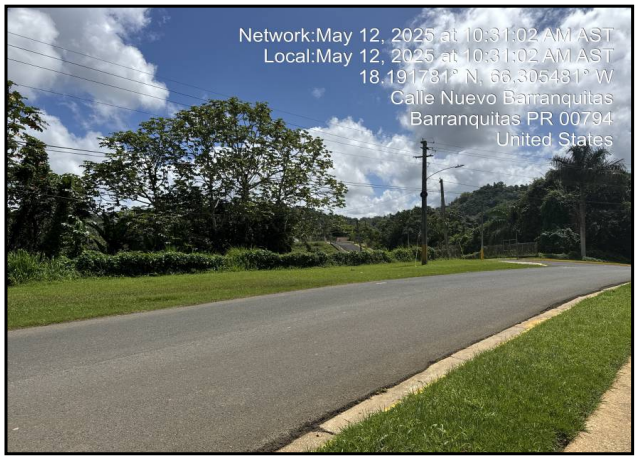
View to the West



View to the North

Detail of Storm drain to the North

View to the North

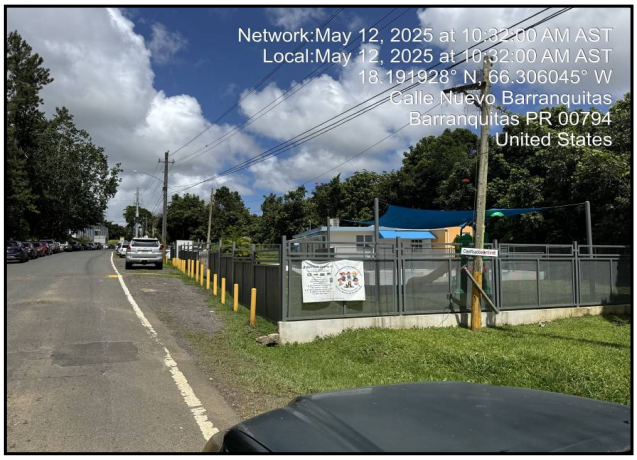


View to the North

View to the South

ASSOCIATED PHOTOGRAPHS continued

View to the West



View to the Northwest

6.0 SITE RECONNAISSANCE

The site reconnaissance was conducted on May 12, 2025 by Javier Velez Arocho, Environmental Consultant with Diatom Environmental Services, LLC. Weather conditions at the time of the site reconnaissance were sunny with temperature of 81F. Photographs of pertinent features identified during the site reconnaissance are included in the Photograph Appendix.

6.1 Methodology and Limiting Conditions

The site reconnaissance consisted of observing the boundaries of the subject property and systematically traversing the subject property to provide an overlapping field of view, wherever possible.

Diatom utilized the following methodology to observe the Subject Property:Traverse the outer Subject Property boundary.Traverse transects across the Subject Property.Traverse the periphery of all structures on the Subject Property. Visually observe accessible interior areas expected to be used by occupants or the public. Javier Vélez Arocho of Diatom conducted a reconnaissance of the subject property on Tuesday, May 12, 2025. Weather conditions at the time of the site reconnaissance consisted of sunny skies. During the site reconnaissance, DES physically observed open areas of the subject property. All of its areas were accessible and no physical obstructions observed during the site inspection. Photographs obtained during DES's site reconnaissance are provided in the Appendix.

The following resource quality limitations were identified: Sanborn Fire Insurance Maps: According to EDR®, No Sanborn Maps area vailable for the locations under study.

6.2 General Subject Property Setting

he subject property consists of approximately 5.92 acres of undeveloped lands in the Barrancas neighborhood of the jurisdiction of Barranquitas,Puerto Rico. It borders on the NORTH with Calle Nueva Escuela., on the SOUTH with lands of the Villarongo Brothers and Santiago Heirs, on the EAST with the Calle Nueva Escuela, and to the WEST with the Department of Education Specialized High School for the Arts, Commerce and Sports. The property is located approximately at the end of Calle Nueva Escuela in the municipality of Barranquitas in Barrancas Ward.

The lands identified as the Municipal Parcel Tract identified with cadaster number 247-000-006-38 in Barranquitas, Puerto Rico.

6.3 Site Visit Findings

Based on the observations and data described above, the reconnaissance of the Subject Property and surrounding area did not identify evidence of a REC or HREC except the following:

1. There are no recognized environmental conditions on this property. Based on the stated finding, no further investigation work is recommended. There is no known environmental liability to limit or condition a transfer transaction regarding this parcel of land. This conclusion is based on the results of this due diligence effort and all the facts and data gathered to support said determination. Based on the above facts and all other findings, further investigation work is not advisable. This conclusion is based on the results of this due diligence effort and all the facts and data gathered to support said determination.

Condition, Feature or Operation Observed or Identified?	Yes	No
Hazardous Substances		X
Petroleum Products		X
Underground Storage Tanks (USTs)		X
Aboveground Storage Tanks (ASTs)		X
Strong, Pungent, or Noxious Odors		X
Standing Surface Water and Pools or Sumps Containing Liquids Likely to be Hazardous Substances or Petroleum Products		X
Drums, Totes, and Intermediate Bulk Containers		X
Hazardous Substance and Petroleum Product Containers Not in Connection With Identified Uses		X
Unidentified Substance Containers		X
PCB-Containing Items		X
Stains or Corrosion on Floors, Walls, or Ceilings		X
Drains and Sumps		X
Pits, Ponds, or Lagoons		X
Solid Waste		X
Stained Soil or Pavement		X
Stressed Vegetation		X
Wells		X
Other		

6.3.1 Hazardous Substances

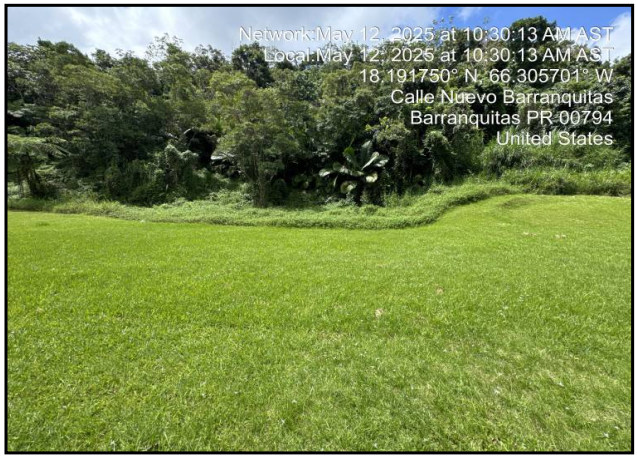
No hazardous substances were observed on the subject property during the site reconnaissance.

Hazardous Substances			
Material	**Quantity**	**Use**	**Comments**

6.3.2 Petroleum Products

No petroleum products were identified on the subject property during the site reconnaissance.

ASSOCIATED PHOTOGRAPHS



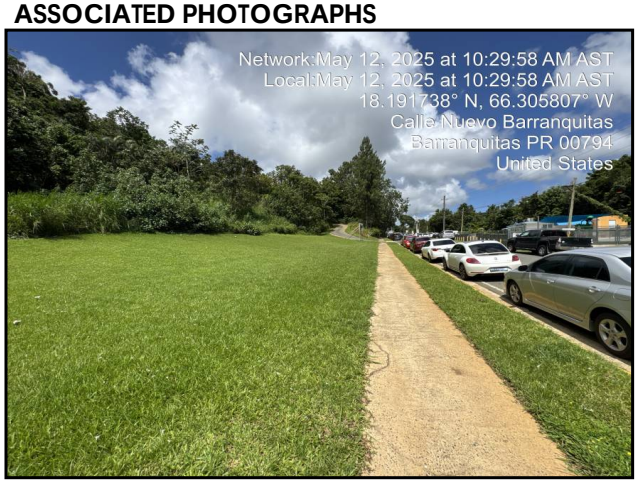
View to the South

View to the South

6.3.3 Underground Storage Tanks (USTs)

No obvious evidence of underground storage tanks (USTs) was identified on the subject property during the site reconnaissance.

ASSOCIATED PHOTOGRAPHS



View to the West

View to the East

ASSOCIATED PHOTOGRAPHS continued

View to the South

6.3.4 Aboveground Storage Tanks (ASTs)

No aboveground storage tanks (ASTs) were observed on the subject property during the site reconnaissance.

ASSOCIATED PHOTOGRAPHS

View to the South

View to the South

6.3.5 Strong, Pungent, or Noxious Odors

No strong, pungent, or noxious odors were observed during the site reconnaissance.

6.3.6 Standing Surface Water and Pools or Sumps Containing Liquids Likely to be Hazardous Substances or Petroleum Products

No standing surface water, pools or sumps containing liquids likely to be hazardous substances or petroleum products were observed during the site reconnaissance.

6.3.7 Drums, Totes, and Intermediate Bulk Containers

No other suspect containers were identified on the subject property during the site reconnaissance.

6.3.8 Hazardous Substance and Petroleum Product Containers Not in Connection With Identified Uses

No hazardous substance or petroleum product containers not in connection with identified uses were observed on the subject property during the site reconnaissance.

6.3.9 Unidentified Substance Containers

No unlabeled drums were observed throughout the subject property area.

6.3.10 PCB-Containing Items

No equipment likely to contain PCBs was observed in the subject building during the site reconnaissance.

6.3.11 Drains and Sumps

No discharge features (floor drains, catch basins, oil/water separators, etc.) were observed on the subject property during the site reconnaissance.

6.3.12 Pits, Ponds, or Lagoons

No pits, ponds or lagoons were observed on the subject property during the site reconnaissance.

6.3.13 Solid Waste

No readily apparent evidence of solid waste dumping, suspect fill material, or landfills was identified on the subject property during the site reconnaissance.

6.3.14 Stained Soil or Pavement

No stressed vegetation (from something other than insufficient water) was observed on the subject property during the site reconnaissance.

ASSOCIATED PHOTOGRAPHS

View to the East

View to the West

6.3.15 Stressed Vegetation

No stressed vegetation (from something other than insufficient water) was observed on the subject property during the site reconnaissance.

6.3.16 Wells

No wells were observed on the subject property during the site reconnaissance.

6.3.17 Other

None were observed.

7.0 RECORDS REVIEW

The purpose of the records review is to obtain and review records that will help identify RECs in connection with the subject property.

7.1 Standard Environmental Record Resources

Diatom Environmental Services, LLC contracted Environmental Data Resources, Inc. (EDR) to conduct a search of Federal and State databases containing known and suspected sites of environmental contamination. The number of listed sites identified within the approximate minimum search distance (AMSD) from the Federal and State environmental records database listings specified in ASTM Standard E 1527-21 are summarized in the following table. Detailed information for sites identified within the AMSDs is provided below, along with an opinion about the significance of the listing to the analysis of recognized environmental conditions in connection with the subject property. Copies of the EDR research data and a description of the databases are included in Appendix D of this report.

Subject Property	
Site Name:	ULSAR INTERNATIONAL INC.
Databases:	SEMS-ARCHIVE
Address:	ST#1, HONDURAS WARD, EL PORTON SECTOR
Comments:	

7.1.1 Regulatory File Review

7.2 Additional Environmental Record Resources

No additional environmental record sources were utilized.

7.3 Physical Setting

General site settings including topography, surface water bodies, geology and hydrology are detailed in the following sections.

7.3.1 Topography

Based on a review of the 2018 USGS topographic map for the subject property area, groundwater is inferred to flow to the North toward the Padilla Creek and the Barranquitas River.

7.3.2 Surface Water Bodies

The nearest surface water in the vicinity of the subject property is the Padilla Creek located approximately 700 feet to the North of the subject property. No surface water is located on the subject property.

7.3.3 Geology and Hydrology

Based on the soil survey maps published by the USDA Soil Conservation Service (2022), the subject property is mapped as (Multiple Use Center Barrancas Barranquitas PR-CRP-001180), which is made up of DaD Daguey clay, 12 to 20 percent slopes 45.7 11.9% HtE Humatas clay, 20 to 40 percent slopes 65.9 17.2% HtF Humatas clay, 40 to 60 percent slopes 250.1 65.3% MoF Maricao clay, 20 to 60 percent slopes 1.5 0.4% MxF Mucara clay, 40 to 60 percent slopes 6.7 1.8% Uv Urban land-Vega Alta complex, 2 to 12 percent slopes 12.7 3.3% Totals for Area of Interest 382.7 100.0%

Based upon information in the 2022 U.S. Department of Agriculture Soil Survey of Barranquitas County, PR; the Barranquitas River is located to the southeast of the target property. The Barranquitas River is the main source of potable water for the town's urban area.

The depth to water is estimated to be greater than 100 feet below the surface of the soil. Water generally flows toward the North from the subject property. No on-site water wells or springs were observed during the subject property reconnaissance. The nearest surface water in the vicinity of the subject property is the Padillas Creek located approximately 700 feet to the North. No settling ponds, lagoons, surface impoundments, wetlands or natural catch basins were observed at the subject property during this investigation.

Source of Map: Natural Resources Conservation ServiceWeb Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required. This product is generated from the USDA-NRCS certified data as of the version date(s) listed below. Soil Survey Area: San Juan Area, Puerto RicoSurvey Area Data: Version 16, Sep 12, 2022 Soil map units are labeled (as space allows) for map scales 1:50,000 or larger. Date(s) aerial images were photographed: Jan 23, 2022—Mar 1, 2022 The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

7.4 Historical Use

The objective of reviewing historical resources is to develop a history of the previous uses of the subject property and surrounding area, in order to help identify the likelihood of past uses which might have led to RECs in connection with the subject property.

7.4.1 Historical Summary

Historical information identifying the past use of the subject property was obtained from a variety of sources as detailed in Appendix E of this report and included: [City Directories, Aerial Photographs, Sanborn Fire Insurance Maps, and/or Topographic Maps].

7.4.2 City Directories

City Directories for the subject property and surrounding area were not readily available or reviewable.

7.4.3 Aerial Photos

Available aerial photographs dated [1977, 1994 and 2004], from [EDR®] were reviewed for this Environmental Site Assessment. Copies of selected photographs are included in Appendix C of this report.

Aerial Photos		
Date(s)	**Property Comments**	**Surrounding Area Comments**
1977	Green Field	Undeveloped Lands
1994	Green Field	Undeveloped Lands
2004	Green Field	Undeveloped Lands

7.4.4 Sanborn/Historical Maps

There are no Sanborn/Historical Maps

7.4.5 Historical Topographic Maps

Available topographic maps dated [1946, 1947, 1953, 1957, 1982, 2013, and 2018], from [EDR®] were reviewed for this Environmental Site Assessment. Copies of selected maps are included in Appendix C of this report. A summary of topographic maps are provided below.

Historical Topographic Maps			
Date(s)	**Quad**	**Property Comments**	**Surrounding Area Comments**
1946	Barranquitas	Undeveloped	Undeveloped

Date(s)	Quad	Property Comments	Surrounding Area Comments
1947,1947,1947,1947	Barranquitas NO,Barranquitas SO,Barranquitas SE,Barranquitas NE	Undeveloped	Undeveloped
1953	Barranquitas	Undeveloped	Undeveloped
1957	Barranquitas	Undeveloped	Undeveloped
1982	Barranquitas	Undeveloped	Undeveloped
2013	Barranquitas	Undeveloped	Undeveloped
2018	Barranquitas	Undeveloped	Undeveloped

7.4.6 Previous Environmental Reports

No previous environmental reports were identified or made available by the client/user during the Phase I ESA.

7.4.7 Building Department Records

Records from Barranquitas CRIM were reviewed for evidence indicating the developmental history of the subject property, and for the presence of documentation relative to underground storage tanks. The records indicate the current subject property has no structures. Prior land use was indicated as greenfield for more than 40 years.

7.4.8 Title Records

Title records were provided by the user/client. Please refer to the Records Review section for current and historical ownership/use of the subject property. The client did provided resolutions form the Puerto Rico Planning Board regarding the survey and registration of the property with the state government of Puerto Rico.

7.4.9 Other Historical Records

No additional historical records were available.

7.5 Environmental Liens and Activity/Use Limitations

Proposed AAI Standards require the environmental professional to be provided with all information regarding environmental cleanup liens associated with the subject property.
No indication of environmental liens associated with the subject property, past environmental concerns regarding the subject property, or any use limitations affecting
the subject property was informed by the owner representative or contained in the information provided by the client.

7.6 Vapor Encroachment Evaluation

Do not apply to this Phase I EA.

Standard Environmental Records	Maximum Search Distance*	Property Total	Total within 1/10 mile from Property	Total between 1/10-1/3 mile from Property
Federal NPL	0.333			
Federal CERCLIS	0.333			
Federal RCRA CORRACTS facilities list	0.333			
Federal RCRA TSD facilities list	0.333			
Federal RCRA generators list	property			
Federal institutional controls / engineering controls registries	0.333			
Federal ERNS list	property			
State and tribal - equivalent NPL	not searched			
State and tribal - equivalent CERCLIS	0.333			
State and tribal landfill / solid waste disposal	0.333			
State and tribal leaking storage tank lists	0.333			
State and tribal registered storage tank lists	property			
State and tribal institutional control / engineering control registries	0.333			
State and tribal voluntary cleanup sites	0.333			
State and tribal Brownfield sites	0.333			
Other Standard Environmental Records	0.333			

*Each category may include several separate databases, each having a different search distance. For each category, the table reports the maximum search distance applied.

Historical Use Records	Maximum Search Distance*	Property Total	Total within 1/10 mile from Property	Total between 1/10-1/3 mile from Property
Former manufactured Gas Plants	0.333			
Historical Gas Stations	0.25			
Historical Dry Cleaners	0.25			

*Each category may include several separate databases, each having a different search distance. For each category, the table reports the maximum search distance applied.

8.0 INTERVIEWS

Interviews were completed and added in the Appendix A.

9.0 NON-SCOPE CONSIDERATIONS

10.0 FINDINGS AND OPINIONS

Diatom Environmental Services has chosen an appropriate effort consistent with ASTM International Standard E 1527-21 for evaluating the property's status. Based on the scope of the assessment, no RECs and HRECs were identified for the subject property. One active sites under SEMS (Superfund Enterprise Management System) database within .5 mile radius (1,392). According to the USEPA-NFRAP the site does not qualify for the NPL based on existing information. No direct impacts from the site to the target property are expected.

11.0 CONCLUSIONS

Diatom Environmental Services has chosen an appropriate effort consistent with ASTM International Standard E 1527-21 for evaluating the property's status. Based on the scope of the assessment, no RECs and HRECs were identified for the subject property. One active sites under SEMS program is within a .5-mile radius of the subject property, but no direct impacts are expected from this site.

12.0 RECOMMENDATIONS

Based on the observations and data described above, the reconnaissance of the Subject Property and surrounding area did not identify evidence of a REC or HREC except the following:1. There are no recognized environmental conditions on this property. Based on the stated finding, no further investigation work is recommended. There is no known environmental liability to limit or condition a sale-purchase transaction or refinancing regarding this parcel of land. This conclusion is based on the results of this due diligence effort and all the facts and data gathered to support said determination.

Based on the above facts and all other findings, further investigation work is not advisable. This conclusion is based on the results of this due diligence effort and all the facts and data gathered to support said determination.

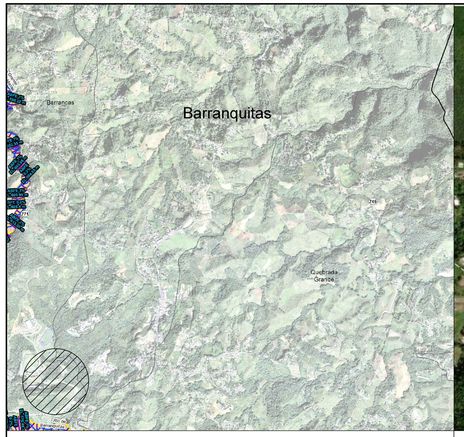
13.0 REFERENCES

Enclosed refererences.

References		
Source Reviewed	**Date(s)**	**Source Details**
EDR Aerial Photo Decade Package (Inquiry Number 7986065.8S) Ship Date: May 13th, 2025	1977, 1994, 2004	EDR, 6 Armstrong Road, Shelton, CT 06484, (800) 352-0050.
EDR City Directory Abstract (Inquiry Number 7986065.5S) Ship Date: May 13th, 2025	1992, 1995, 2000, 2005, 2010, 2014, 2017, 2020	EDR, 6 Armstrong Road, Shelton, CT 06484, (800) 352-0050.
EDR Historical Topo Map (Inquiry Number 7986065.4S) Ship Date: May 12th, 2025	1946, 1947,1947,1947,1947, 1953, 1957, 1982, 2013, 2018	EDR, 6 Armstrong Road, Shelton, CT 06484, (800) 352-0050.
EDR Sanborn Map Search/Print (Inquiry Number 7986065.3S) Ship Date: May 12th, 2025		EDR, 6 Armstrong Road, Shelton, CT 06484, (800) 352-0050.
EDR Radius Map Report (Inquiry Number 7986065.2S) Ship Date: May 13th, 2025		EDR, 6 Armstrong Road, Shelton, CT 06484, (800) 352-0050.

Appendix A:

Figures



MAPA DE FEMA

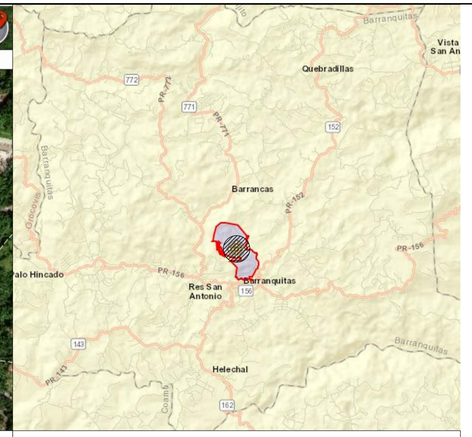
NO A ESCALA

MAPA REVISADO: 12/MAYO/2018

NUMERO DE MAPA: 72000C1160H ZONA X

IMAGEN AEREA (GOOGLE MAP)

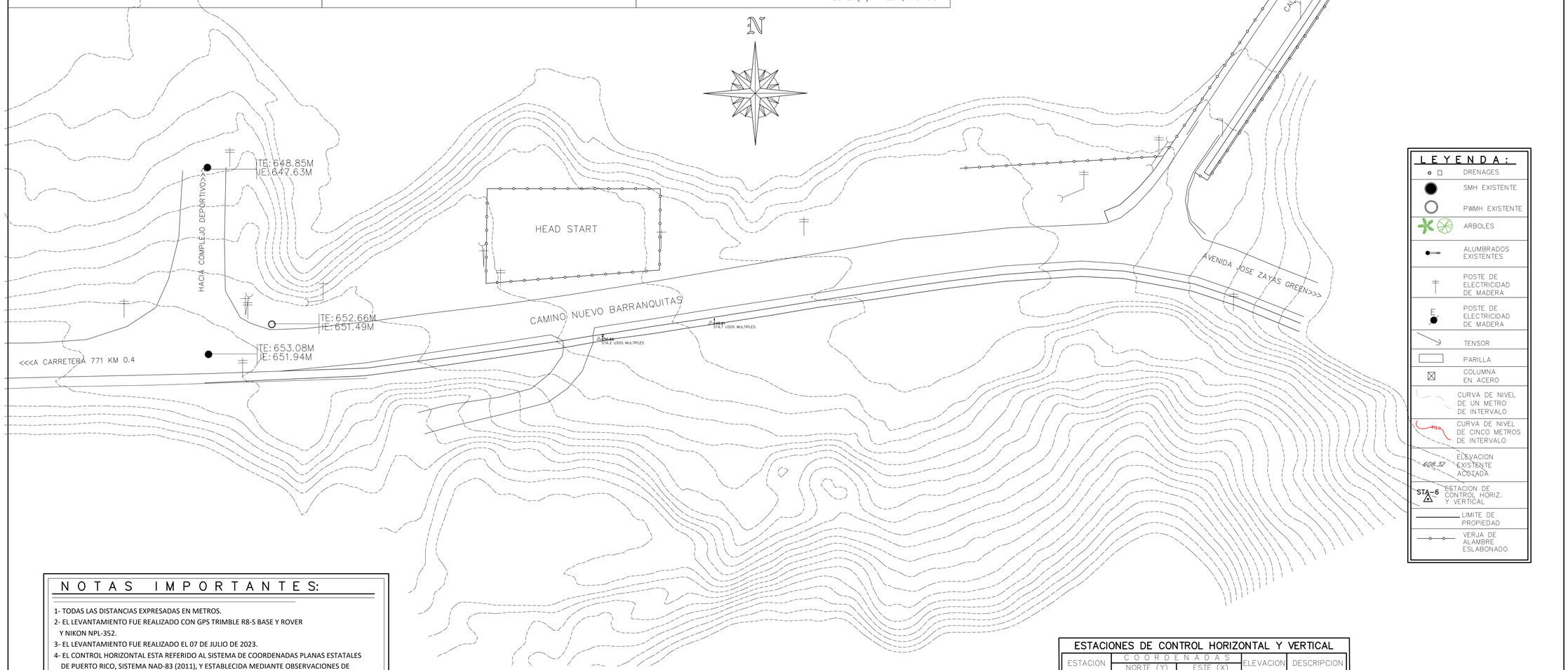
ESCALA: N.T.S.



MAPA DE LOCALIZACION

NORTE (Y) = 239,516.277

ESTE (X) = 239,666.165



LEYENDA:

- DRENAGES
- SMH EXISTENTE
- PWMH EXISTENTE
- ARBOLES
- ALUMBRADOS EXISTENTES
- POSTE DE ELECTRICIDAD DE MADERA
- POSTE DE ELECTRICIDAD DE MADERA
- TENSOR
- PARILLA
- COLUMNA EN ACERO
- CURVA DE NIVEL DE UN METRO DE INTERVALO
- CURVA DE NIVEL DE CINCO METROS DE INTERVALO
- 608.32 ELEVACION EXISTENTE ACOJADA
- STA-6 ESTACION DE CONTROL HORIZ. Y VERTICAL
- LIMITE DE PROPIEDAD
- VERJA DE ALAMBRE ESLABONADO

NOTAS IMPORTANTES:

1- TODAS LAS DISTANCIAS EXPRESADAS EN METROS.

2- EL LEVANTAMIENTO FUE REALIZADO CON GPS TRIMBLE R8-S BASE Y ROVER Y NIKON NPL-352.

3- EL LEVANTAMIENTO FUE REALIZADO EL 07 DE JULIO DE 2023.

4- EL CONTROL HORIZONTAL ESTA REFERIDO AL SISTEMA DE COORDENADAS PLANAS ESTATALES DE PUERTO RICO, SISTEMA NAD-83 (2011), Y ESTABLECIDA MEDIANTE OBSERVACIONES DE GPS (07/JULIO/2023), GEOIDE 2018 Y SE UTILIZO EQUIPO TRIMBLE R8-S.

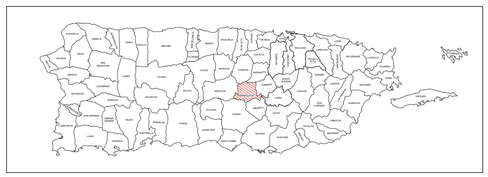
5- LA INFORMACION EN ESTE PLANO REPRESENTA EL RESULTADO DE LOS DATOS OBSERVADOS PARA LA FECHA ANTES INDICADA Y PUEDEN SER CONSIDERADOS COMO LAS CONDICIONES EXISTENTES PARA ESA FECHA.

6- EL NUMERO DE CATASTRO Y LOS NOMBRES DE LOS COLINDANDTES FUERON OBTENIDOS DEL VISUALIZADOR DE PARCELAS DE LA PAGINA WEB DEL CATASTRO DIGITAL DE PUERTO RICO

7- LAS UTILIDADES MOSTRADAS EN ESTE PLANO SON LAS QUE ESTAN VISIBLES SOBRE EL TERRENO.

ESTACIONES DE CONTROL HORIZONTAL Y VERTICAL

ESTACION	COORDENADAS		ELEVACION	DESCRIPCION
	NORTE (Y)	ESTE (X)		
STA.1	239667.767	213480.945	649.607	CLAVO MAG
STA.2	239664.543	213458.303	650.659	CLAVO MAG



YO RAFAEL A. ZAYAS ROLON, 13248, CERTIFICO QUE SOY EL PROFESIONAL QUE DISEÑO ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIEN CERTIFICO QUE ENTIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CODIGOS DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PUBLICAS CON JURISDICCION. RECONOZCO QUE CUALQUIER DECLARACION FALSA O FALSIFICACION DE LOS HECHOS QUE SE HAYA PRODUCIDO SIN CONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MI, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCION JUDICIAL Y DISCIPLINARIA POR LA OGIPe Y OTRAS AUTORIDADES COMPETENTES, INCLUYENDO, PERO SIN LIMITARSE A LA TERMINACION DE LA PARTICIPACION EN LOS PROCEDIMIENTOS DE CERTIFICACION PROFESIONAL EN LA OGIPe.

Rafael Angel Zayas Rolon
Ingeniero
Licenciado
Lic. 13248 PE
Puerto Rico
Fecha de Expiración: 2025-06-23

DATE PLOTED :

COMPUTER PROGRAM :

CENTRAL GROUP

ENGINEERING - ARCHITECTURAL - PLANNING

63 CALLE BARCELO STE. 201 BARRANQUITAS, P.R. 00794

63 CALLE BARCELO STE. 201 BARRANQUITAS, P.R. 00794 TEL. & FAX (787)-857-8021

E-MAIL: centralgroup.pr@gmail.com

REVISIONES

REVISION NUM	FECHA	DESCRIPCION

YO RAFAEL A. ZAYAS ROLON, 13248, CERTIFICO QUE SOY EL PROFESIONAL QUE DISEÑO ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIEN CERTIFICO QUE ENTIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CODIGOS DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PUBLICAS CON JURISDICCION. RECONOZCO QUE CUALQUIER DECLARACION FALSA O FALSIFICACION DE LOS HECHOS QUE SE HAYA PRODUCIDO SIN CONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MI, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCION JUDICIAL Y DISCIPLINARIA POR LA OGIPe Y OTRAS AUTORIDADES COMPETENTES, INCLUYENDO, PERO SIN LIMITARSE A LA TERMINACION DE LA PARTICIPACION EN LOS PROCEDIMIENTOS DE CERTIFICACION PROFESIONAL EN LA OGIPe.

FECHA: JULIO 2023

REVISADO POR: R.A.Z.R.

DIBUJADO POR: VICTOR N. RIVERA

LIC. #: 2946

ESCALA: 1:400

PROYECTO:

PLANO DE TOPOGRAFIA

DESCRIPCION:

DIBUJO NUM: T-1

HOJA NUM: 1 DE 1

COPIA CERTIFICADA

EDITH HERNANDEZ DE RAMIREZ

ABOGADO - NOTARIO

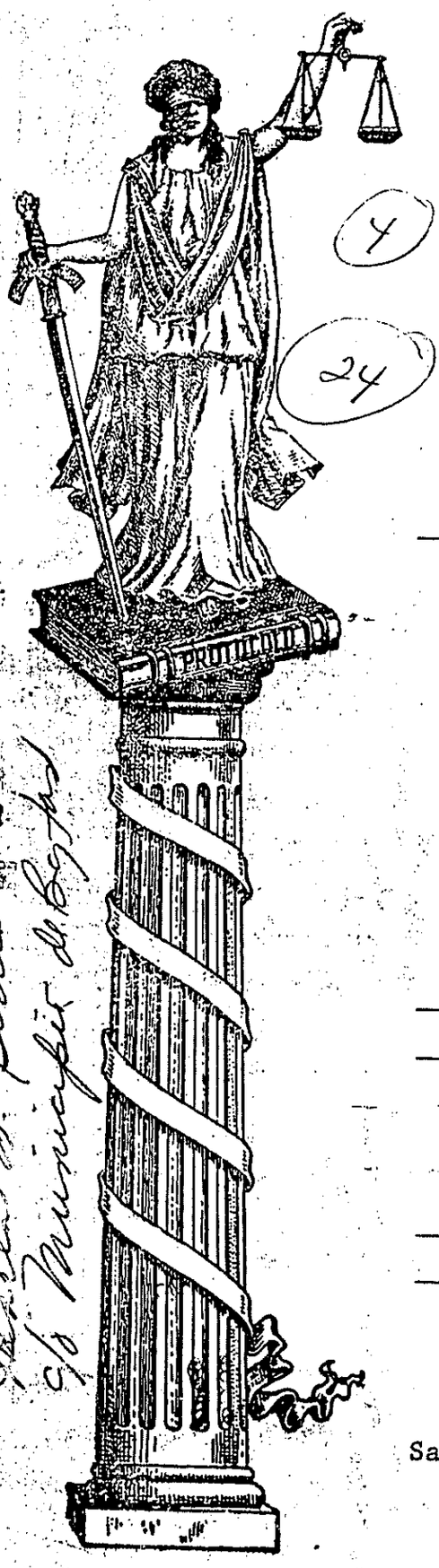
NUMERO

TRES

ESCRITURA

DE

AGRUPACION Y COMPRAVENTA



OTORGADA POR

COMPAÑIA DE FOMENTO INDUSTRIAL DE PUERTO RICO

A FAVOR DE

EL MUNICIPIO DE BARRANQUITAS

San Juan, P. R., a 31 de marzo 19 79

----------NUMERO TRES----------

----------AGRUPACION Y COMPRAVENTA----------

-----En la ciudad de San Juan, Puerto Rico, a-------
treinta y uno de marzo de mil novecientos setenta---
y nueve----------

----------ANTE MI----------

----------EDITH HERNANDEZ DE RAMIREZ----------
Abogada y Notario Público del Estado Libre Asociado-
de Puerto Rico, con residencia y estudio abierto en-
San Juan, Puerto Rico.----------

----------COMPARECEN----------

-----DE UNA PARTE: La COMPAÑIA DE FOMENTO INDUSTRIAL DE PUERTO RICO (en adelante designada la "Compañía"), corporación pública e instrumentalidad gubernamental del Estado Libre Asociado de Puerto Rico, creada---- por la Ley Número Ciento Ochenta y Ocho (188) del--- once de mayo de mil novecientos cuarenta y dos,----- según ha sido subsiguientemente enmendada, repre---- sentada en este acto por su Presidente y Administrador General, Enrique Rodríguez Negrón, mayor de edad, casado, Abogado y vecino de Bayamón, Puerto Rico----

---

cuyo carácter y facultades para este otorgamiento--- acreditará tanta y cuantas veces fuere menester y--- se le requiera para ello.----------

-----DE LA OTRA PARTE: EL MUNICIPIO DE BARRANQUITAS, Puerto Rico (en adelante designado el "Municipio"),- representado en este acto por su Alcalde, Don José-- Tavas Green, mayor de edad, casado y vecino de------ Barranquitas, Puerto Rico----------

quien ha sido debidamente autorizado para este otorgamiento por la Asamblea Municipal de Barranquitas-- mediante la Ordenanza Número Diez, Serie de mil----- novecientos setenta y ocho guión setenta y nueve,--- aprobada en Sesión Ordinaria celebrada el día treinta

EDITH HERNANDEZ DE RAMIREZ ABOGADA NOTARIO PUERTO RICO

Registro de la Propiedad SECCION DE BARRANQUITAS Puerto Rico

y uno de agosto de mil novecientos setenta y ocho---
y aprobada por el Alcalde el día primero de---------
septiembre de mil novecientos setenta y ocho, cuya--
transcripción es la siguiente:----------

---"ESTADO LIBRE ASOCIADO DE PUERTO RICO-MUNICIPIO--
DE BARRANQUITAS-ASAMBLEA MUNICIPAL----------

ORDENANZA NUM. 10----------SERIE 1978-79-

---AUTORIZANDO AL HON. ALCALDE A COMPRAR TERRENOS---
PROPIEDAD FOMENTO INDUSTRIAL DANDO SEGUIMIENTO A LA-
RES. #12-SERIE-77-78.----------

POR CUANTO: La Res. #12-Serie-1977-78 ha autorizado-
al Hon. Alcalde para solicitar y utilizar los fondos
HUD por 3 años y a desarrollar las actividades que--
se aprueben.----------

POR CUANTO: Recibida la aprobación de la Agencia-----
Federal HUD y dando seguimiento a esta propuesta se-
hace imperativo el adquirir los terrenos ya reser---
vados, para el desarrollo de viviendas adecuadas a--
familias de escasos recursos económicos en Nuestro--
Municipio y que pertenecen a la Administración de---
Fomento Industrial.----------

POR TANTO: ORDENASE POR ESTA ASAMBLEA MUNICIPAL DE--
BARRANQUITAS, PUERTO RICO, REUNIDA EN SESION--------
ORDINARIA EL DIA 31 DE AGOSTO DE 1978.----------

SECCION PRIMERA: Autorizar como por la presente se--
autoriza al Hon. Alcalde de Barranquitas a comprar--
los terrenos propiedad de Fomento Industrial, dando-
seguimiento a la Res. #12- Serie 1977-78.----------

SECCION SEGUNDA: Que los terrenos se comprarán a----
valor de tazación siguiendo los requisitos de ley.--

SECCION TERCERA: Que esta Ordenanza, por ser de-----
carácter urgente empezará a regir inmediatamente----
luego de aprobación y firma por el Hon. Alcalde;----
copia certificada de la misma será enviada a la-----
Administración de Servicios Municipales, a la-------
Agencia Federal HUD y a funcionarios estatales y----
municipales que corresponda para acción final.------

---FIRMADO: José Zayas Green----------

---MECANOGRAFIADO: Hon. José Zayas Green, Alcalde---
9-1-78----------

FIRMADO: Carmen Berríos de Colón----------

MECANOGRAFIADO: Hon. Carmen Berríos de Colón--------
Presidenta Asamblea Municipal.----------

---CERTIFICACION: Yo, Marta L. Berríos Figueroa,----
Secretaria Municipal de Barranquitas, Puerto Rico---
CERTIFICO: Que la anterior es una copia fiel y------
exacta de la ORDENANZA NUM. 10-SERIE-3978-79,-------
adoptada por la Hon. Asamblea Municipal en----------
SESION ORDINARIA celebrada el día 31 de agosto de---
1978.----------

EDITH HERNANDEZ DE RAMIREZ
ABOGADA NOTARIO
PUERTO RICO

Registro de la Propiedad
SECCION DE
BARRANQUITAS
Puerto Rico

---CERTIFICO ADEMAS: Que la misma fue aprobada con---
los votos afirmativos de los asambleístas:----------

---HONS. CARMEN BERRIOS DE COLON, BERTA E. ROJAS-----
DE VAZQUEZ, ESTHER GREEN, JUAN I. ORTIZ, ESTEBAN-----
SANTOS RIVERA, CELESTINO MERCADO CARTAGENA, JUAN-----
CRESPO ACEVEDO, LUIS A. LOPEZ, ORESTES ALICEA ORTIZ,-
MANUEL CRUZ MALDONADO, WILFREDO RODRIGUEZ BATISTA----
Y PEDRO PABLO ALICEA MALAVE.----------------------

---Y PARA QUE ASI CONSTE FIRMO Y SELLO LA PRESENTE---
EN BARRANQUITAS, PUERTO RICO A 1 DE SEPTIEMBRE DE----
1978.---

FIRMADO: Marta L. Berríos Figueroa-----------------

MECANOGRAFIADO: Marta L. Berríos Figueroa-----------
Secretaria Municipal.------------------------------

CERTIFICO: Que la Ordenanza que se transcribe--------
anteriormente es una copia fiel y exacta de su-------
original que está debidamente certificada por la-----
Secretaria Municipal, Marta L. Berríos Figueroa,-----
con fecha primero de septiembre de mil novecientos---
setenta y ocho y que tiene estampado el sello del----
Gobierno Municipal de Barranquitas, Puerto Rico.-----

-----DOY FE del conocimiento personal de los compa-- recientes y por sus dichos de sus circunstancias---- personales. Me aseguran tener y a mi juicio tienen- la capacidad legal necesaria para este otorgamiento- y estando en el pleno goce de sus derechos civiles,- libremente,----------

----------EXPONEN----------

-----PRIMERO: Que la Compañía es dueña en pleno---- dominio de las siguientes propiedades:----------

-----"RUSTICA: Predio de terreno conocido con el---- nombre de 'EL CHORRO', compuesto de DOSCIENTAS SEIS- CUERDAS CON SETENTA Y CUATRO CENTIMOS DE OTRA------- CUERDA (206.74 cuerdas), equivalentes a ochenta y--- una hectárea, veinticuatro áreas y ochenta y ocho--- centiáreas, sito en los barrios 'QUEBRADA GRANDE' y- 'QUEBRADILLAS', de Barranquitas, Puerto Rico, en---- lindes por el Norte, con terrenos de Villaronga----- Hermanos y otros de la Sucesión Santiago; por el---- Sur, con el Río 'Piñonas' que lo separa de terrenos- del Municipio de Barranquitas y de otros de -------- Villaronga Hermanos; por el Este, con terrenos------ de Hotel Barranquitas, Inc.; y por el Oeste, con---- terrenos de la Sucesión Santiago, con el antiguo---- camino de 'Barrancas', con los de la Sucesión de---- Bonifacio Colón y con otros de Doña Francisca------- Santini Viuda de Bou".----------

-----Adquirió la Compañía la propiedad antes descri-- ta según consta de la Escritura número cuarenta----- y cinco otorgada el catorce de octubre de mil------- novecientos sesenta ante el Notario Julio Martínez-- Juliá. Inscrita en el Registro de la Propiedad de-- Puerto Rico, Sección de Guayama, al folio doscientos ocho (208) vuelto del tomo cuarenta y seis (46) de-- Barranquitas, finca número trescientos cincuenta y-- seis-cuatro (356^{4}) inscripción décimo sexta.--------

-----De la propiedad antes descrita se segregó y---- vendió a Luis Rodríguez Ramírez un predio de-------- terreno de seis cuerdas novecientas noventa y------- siete diezmilésimas de otra (6.0997 cuerdas) todo--- según consta de la Escritura número dieciseis------- otorgada el veintitres de agosto de mil novecientos- sesenta y seis ante el Notario Julio Martínez Juliá, quedando reducida la cabida de dicha propiedad a----

Lun 16 T. 46 F. 208

EDITH HERNANDEZ DE RAMIREZ ABOGADA NOTARIO PUERTO RICO

Registro de la Propiedad BARRANQUITAS Puerto Rico

doscientas cuerdas seis mil cuatrocientas tres------ diezmilésimas de otra (200.6403 cuerdas) sin que---- conste descrito el remanente.----------

-----"RUSTICA: Parcela de terreno sita en el barrio- Quebradillas del término municipal de Barranquitas,- Puerto Rico. Tiene un área de sesenta y tres mil--- trescientos noventa y seis metros cuadrados con----- setenta y cinco centésimas de otro (63,396.75)------ equivalentes a seis (6) hectáreas, treinta y tres--- (33) áreas y noventa y seis centiáreas con setenta-- y cinco céntesimas de otra (96.75) equivalentes a--- diez y seis cuerdas con trece céntesimas de otra---- (16.13 cuerdas). Está en lindes por el Norte, con-- terrenos del Hotel Barranquitas, al Sur con una----- quebrada que la separa de terrenos pertenecientes al Gobierno Municipal de Barranquitas, al Este con----- terrenos de la Sucn. Vázquez y al Oeste con más----- terrenos del Hotel Barranquitas."----------

-----Adquirió la Compañía la propiedad antes des---- crita mediante la Escritura Número diecinueve (19)-- otorgada el cinco de julio de mil novecientos sesenta y tres ante el Notario Carlos A. Vallecillo.--------- Inscrita en el Registro de la Propiedad de Puerto---- Rico, Sección de Guayama, al folio cincuenta y seis-- (56) vuelto del tomo cincuenta y uno (51) de--------- Barranquitas, finca número dos mil cuatrocientos----- cincuenta y dos (2,452) inscripción cuarta, libre de cargas.----------

-----SEGUNDO: Manifiesta la Compañía que las propie-- dades antes descritas colindan entre sí y se desti--- nan a un uso común, por lo que es su voluntad-------- agruparlas, como por la presente las agrupa para----- formar una sola finca, separada e independiente con-- un nuevo número con la siguiente descripción:--------

-----"RUSTICA: Predio de terreno sito en los barrios 'Quebrada Grande' y 'Quebradillas' del término------ municipal de Barranquitas, Puerto Rico, compuesto---- de DOSCIENTAS DIECISEIS CUERDAS CON SIETE MIL-------- SETECIENTAS TRES DIEZMILESIMAS de cuerda---------- (216.7703 cuerdas) equivalentes a ochocientos-------- cincuenta y un mil novecientos noventa y tres punto-- cero tres (851,993.03) metros cuadrados. Está en---- lindes por el NORTE, con terrenos de la Sucn. Mariano Villaronga y del Hotel Barranquitas; por el SUR, con- el Rio Barranquitas; por el ESTE, con terrenos del--- Hotel Barranquitas y de la Sucn. Vázquez y por el---- OESTE, con terrenos de Luis Rodríguez Ramírez, Sucn.- Bonifacio Colón y Sucn. Santiago."----------

EVELIO HERNANDEZ DE RAMIREZ ABOGADA NOTARIO PUERTO RICO

Registro de la Propiedad SECCION DE BARRANQUITAS

-----Está afecto por una servidumbre de paso de tres (3.0) metros de ancho en su colindancia SUR a favor de la Autoridad de Acueductos y Alcantarillados de Puerto Rico.----------

-----TERCERO: Para los efectos de su inscripción en el Registro de la Propiedad, la finca agrupada y descrita en el párrafo que antecede tiene un valor de DOSCIENTOS CINCUENTA Y DOS MIL DOLARES ($252,000.00).----------

-----CUARTO: Exponen las partes comparecientes que habiendo convenido en cuanto a la compraventa del predio de terreno descrito en el Párrafo SEGUNDO que antecede (en adelante designado la "Propiedad") la llevan a cabo bajo las siguientes condiciones:----

------UNO: La Compañía por la presente vende, cede y traspasa al Municipio, quien la compra, la Propiedad descrita en el Párrafo SEGUNDO de esta escritura con todos sus usos, derechos, servidumbres y cuanto le es anexo, para que la goce y disfrute como legítimo dueño.----------

------DOS: Se verifica esta compraventa por el convenido precio de DOSCIENTOS CINCUENTA Y DOS MIL DOLARES ($252,000.00), el cual es pagado por el Municipio a la Compañía en este acto, en mi presencia, en un cheque a su favor, por cuya suma la Compañía le otorga la más formal y eficaz carta de pago al Municipio.----------

-----El Municipio entra en la posesión de la Propiedad adquirida por el sólo acto de este otorgamiento y sin ulterior requerimiento o formalidad obligándose la Compañía al saneamiento en caso de evicción conforme a derecho.----------

-----QUINTO: El Municipio utilizará los terrenos objeto de esta compraventa para fines agrícolas, con excepción de treinta (30) cuerdas en las cuales la Junta de Planificación aprobó la ubicación de un proyecto residencial.----------

EDITH HERNANDEZ DE RAMIREZ
PUERTO RICO
ABOGADA NOTARIO

Registro de la Propiedad
SECCION DE BARRANQUITAS
Puerto Rico

-----SEXTO: La Junta de Planificación de Puerto-----
Rico aprobó la venta de la Propiedad al Municipio---
mediante la primera extensión al informe número-----
setenta y ocho guión cuarenta y uno guión B dos-----
cientos noventa y cuatro guión JGT (78-41-B294-JGT)-
con fecha del veintiseis de enero de mil novecientos
setenta y nueve.----------

-----SEPTIMO: La Compañía asume el pago de los------
gastos relacionados con el otorgamiento de esta-----
escritura.----------

----------ACEPTACION----------

-----Los comparecientes aceptan esta escritura tal--
cual está redactada por representar fielmente lo----
convenido, y Yo, La Notario, les hice las adverten-
cias legales pertinentes.----------

----------OTORGAMIENTO----------

-----Así lo dicen y otorgan los comparecientes ante
mí, luego de haber renunciado al derecho para------
requerir la presencia de testigos instrumentales---
del que les advertí.----------

----------LECTURA----------

-----Leída esta escritura por los otorgantes, y----
aceptando lo contenido, la ratifican, y habiendo---
puesto sus iniciales al margen de todos los folios-
la firman conmigo en este acto.----------

-----DE TODO LO contenido y de lo demás que asegur
-o refiero en este instrumento público, YO, LA------
NOTARIO, DOY FE.----------

Firmado: Enrique Rodríguez Negrón, José Zayas-----
Green.----------

Firmado, sellado, signado y rubricado:----------
Edith Hernández de Ramírez.----------

EDITH HERNANDEZ DE RAMIREZ
PUERTO RICO
ABOGADA NOTARIO

Registro de la Propiedad
SECCION DE
BARRANQUITAS
Puerto Rico

— Caneelado en el original el Impuesto Notarial.------
Aparecen las iniciales de los otorgantes en todos---
y cada uno de los folios del original de esta------
escritura y está sellada y rubricada en todas sus---
hojas.----------

ES COPIA FIEL Y EXACTA de su original obrante en mi-
protocolo de instrumentos públicos del año en curso-
con el Número TRES.----------

En fe de ello y a requerimiento del Municipio de----
Barranquitas expido la presente primera copia cer---
tificada en San Juan, Puerto Rico, en el mismo día,-
mes y año de su otorgamiento. DOY FE.----------

Edith Hernández de Ramírez
Notario Público

EDITH HERNANDEZ DE RAMIREZ
COLEGIO DE ABOGADOS DE P.R.
IMPUESTO NOTARIAL
UN DOLAR
PUERTO RICO
ABOGADA NOTARIO

EDITH HERNANDEZ DE RAMIREZ
PUERTO RICO
ABOGADA NOTARIO

Inscrita al folio 25
del tomo 115 de Bgtas,
finca 6933 inscripción 1ra.
Derecho afectado por
su procedencia a
servidumbre a favor de
la Autoridad de acueductos
y alcantarillados de P Rico
Barranquitas, a 10 de abril
de 1979

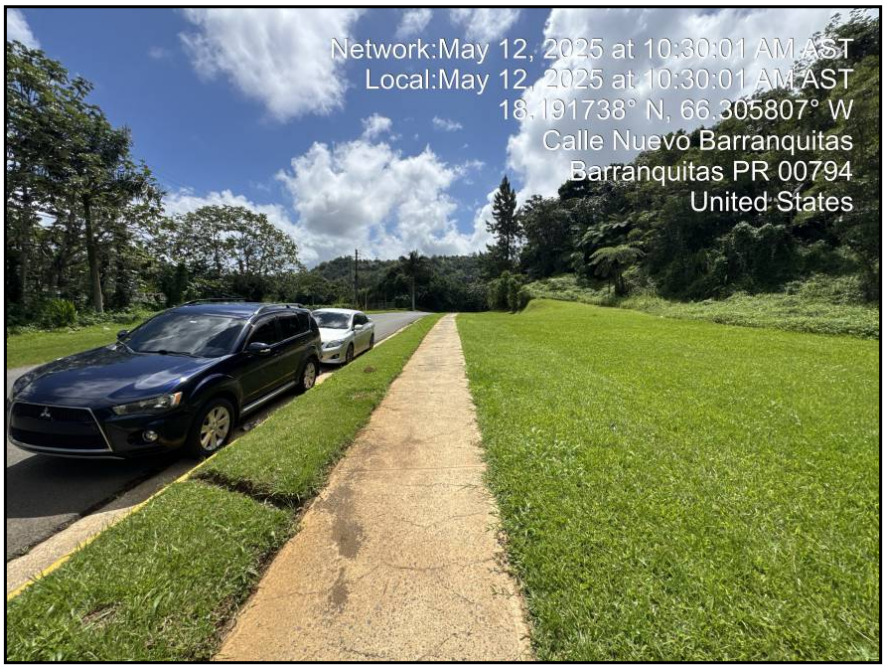
Registradora

Registro de la Propiedad
SECCION DE
BARRANQUITAS
PUERTO RICO

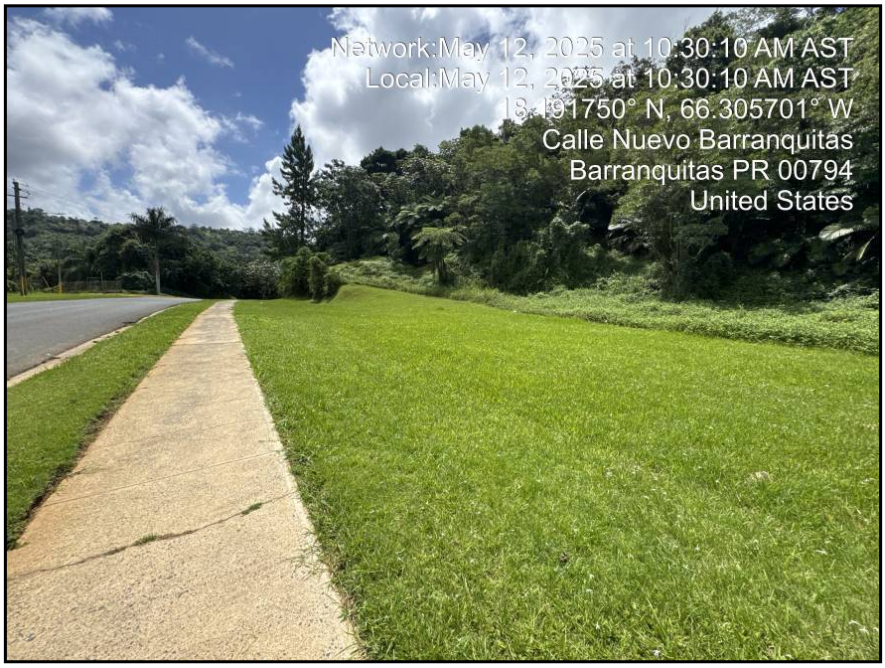
Appendix B:

Photographs

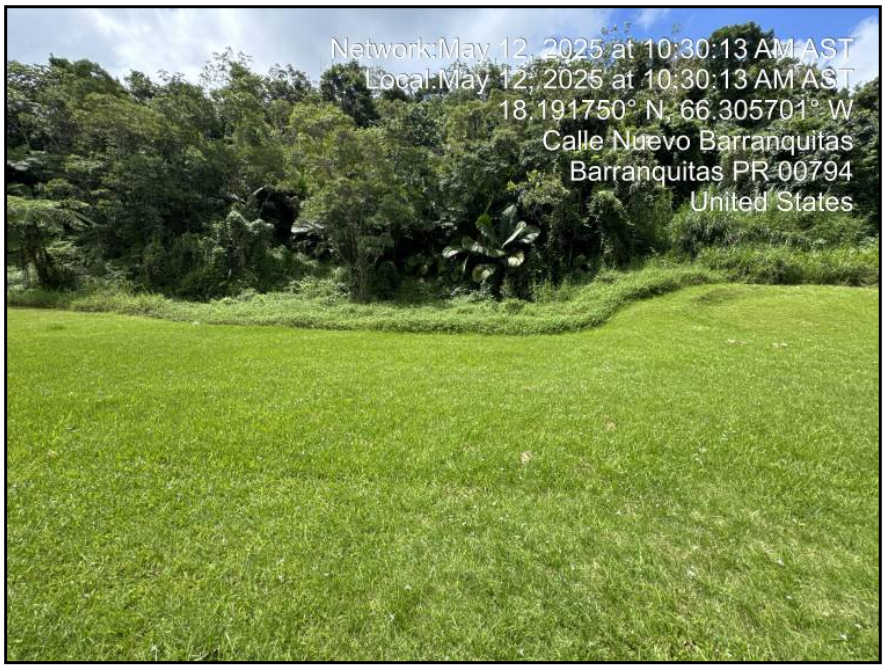
1: View to the West



2: View to the East



3: View to the East

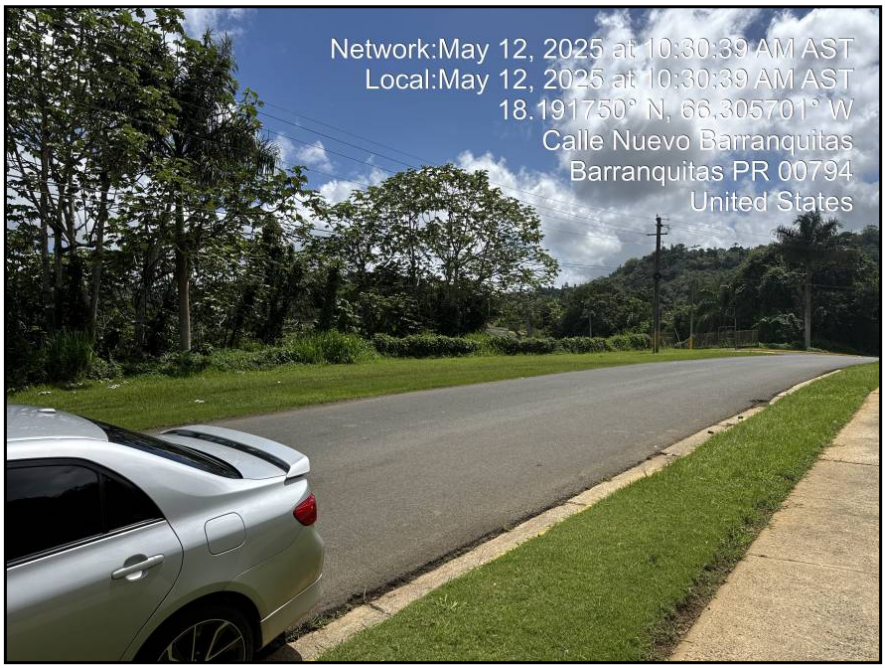


4: View to the South

5: View to the South

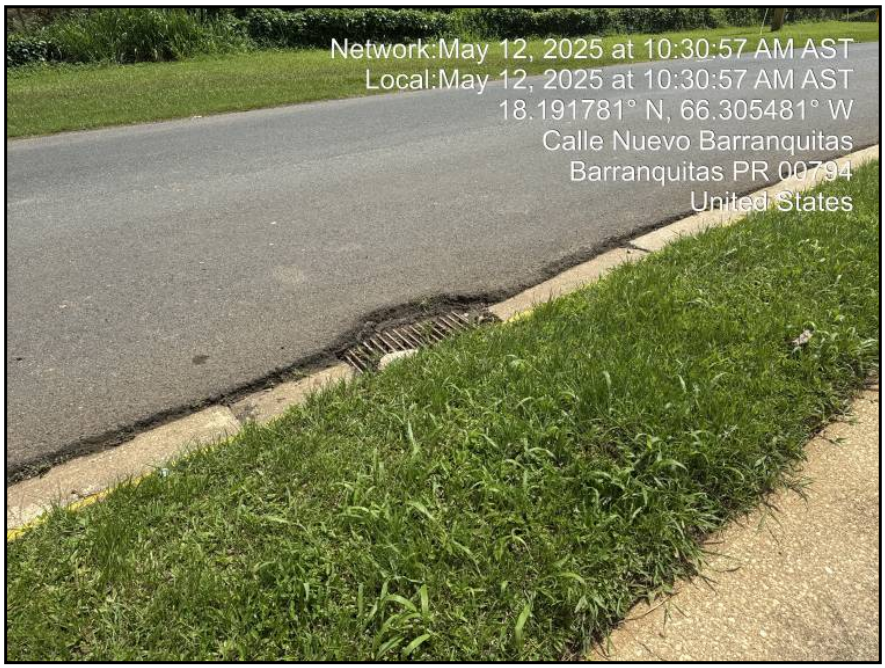
6: View to the South

7: View to the West

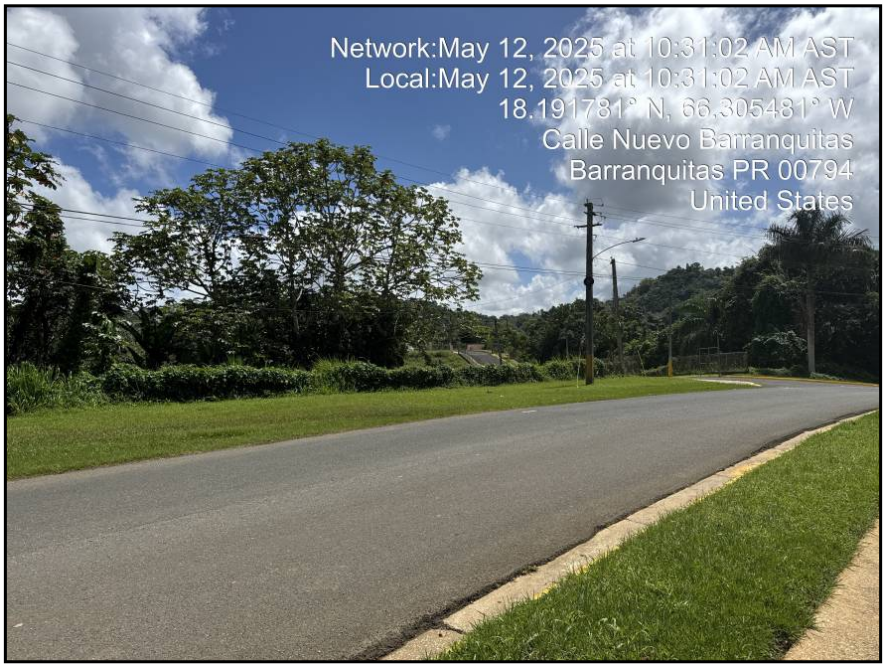


8: View to the North

9: Detail of Storm drain to the North

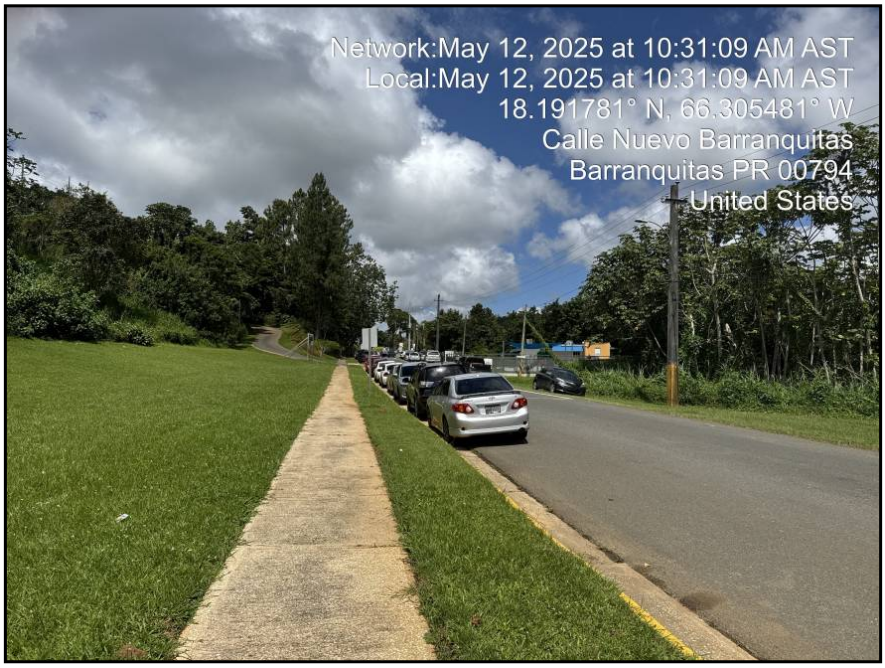


10: View to the North



11: View to the North

12: View to the South



13: View to the West

14: View to the Northwest

Appendix C:

Historical Research

MUNICIPAL PARCEL

Barrancas Ward, Nuevo Barranquitas Sector, Carr. 1

Barranquitas, PR 00794

Inquiry Number: 7986065.3

May 12, 2025

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

05/12/25

Site Name:

MUNICIPAL PARCEL
Barrancas Ward, Nuevo Barrar
Barranquitas, PR 00794
EDR Inquiry # 7986065.3

Client Name:

Diatom Environmental Services, LLC
Calle Francia F7 Garden Court
Guaynabo, PR 00966
Contact: Javier Velez Arocho

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Diatom Environmental Services, LLC were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 4838-4F99-BE0B

PO # Proposal May 2025

Project 2025-04

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 4838-4F99-BE0B

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

Limited Permission To Make Copies

Diatom Environmental Services, LLC (the client) is permitted to make up to FIVE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

MUNICIPAL PARCEL

Barrancas Ward, Nuevo Barranquitas Sector, Carr. 1

Barranquitas, PR 00794

Inquiry Number: 7986065.4

May 12, 2025

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

05/12/25

Site Name:

MUNICIPAL PARCEL
Barrancas Ward, Nuevo Barrar
Barranquitas, PR 00794
EDR Inquiry # 7986065.4

Client Name:

Diatom Environmental Services, LLC
Calle Francia F7 Garden Court
Guaynabo, PR 00966
Contact: Javier Velez Arocho

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Diatom Environmental Services, LLC were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# Proposal May 2025
Project: 2025-04

Coordinates:

Latitude:	18.191701 18° 11' 30" North
Longitude:	-66.305955 -66° 18' 21" West
UTM Zone:	Zone 19 North
UTM X Meters:	784974.03
UTM Y Meters:	2013487.54
Elevation:	2119.30' above sea level

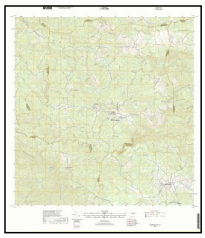
Maps Provided:

2018
2013
1982
1957
1953
1947
1946

Topo Sheet Key

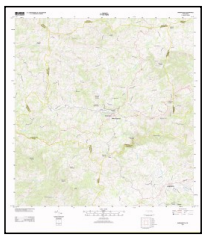
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2018 Source Sheets



Barranquitas
2018
7.5-minute, 24000

2013 Source Sheets



Barranquitas
2013
7.5-minute, 24000

1982 Source Sheets

Barranquitas
1982
7.5-minute, 20000
Aerial Photo Revised 1977

1957 Source Sheets

Barranquitas
1957
7.5-minute, 20000
Aerial Photo Revised 1941

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

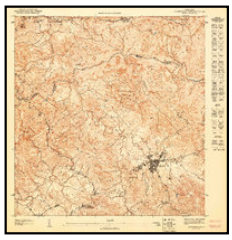
1953 Source Sheets

Barranquitas
1953
7.5-minute, 30000
Aerial Photo Revised 1941

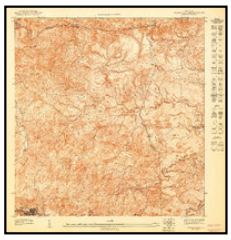
1947 Source Sheets

Barranquitas NO
1947
7.5-minute, 10000

Barranquitas SO
1947
7.5-minute, 10000



Barranquitas SE
1947
7.5-minute, 10000



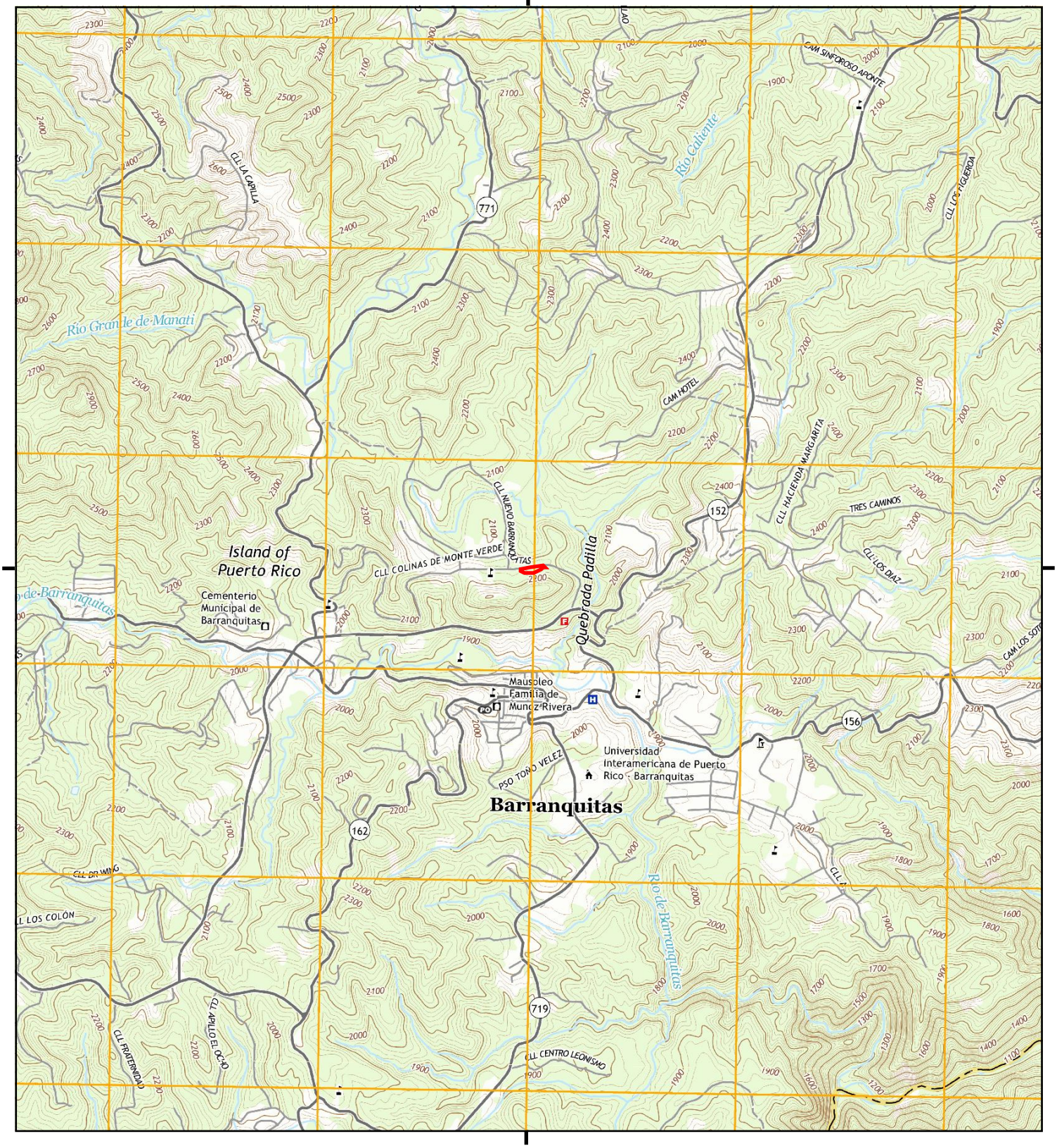
Barranquitas NE
1947
7.5-minute, 10000

1946 Source Sheets

Barranquitas
1946
7.5-minute, 30000

Historical Topo Map

2018



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

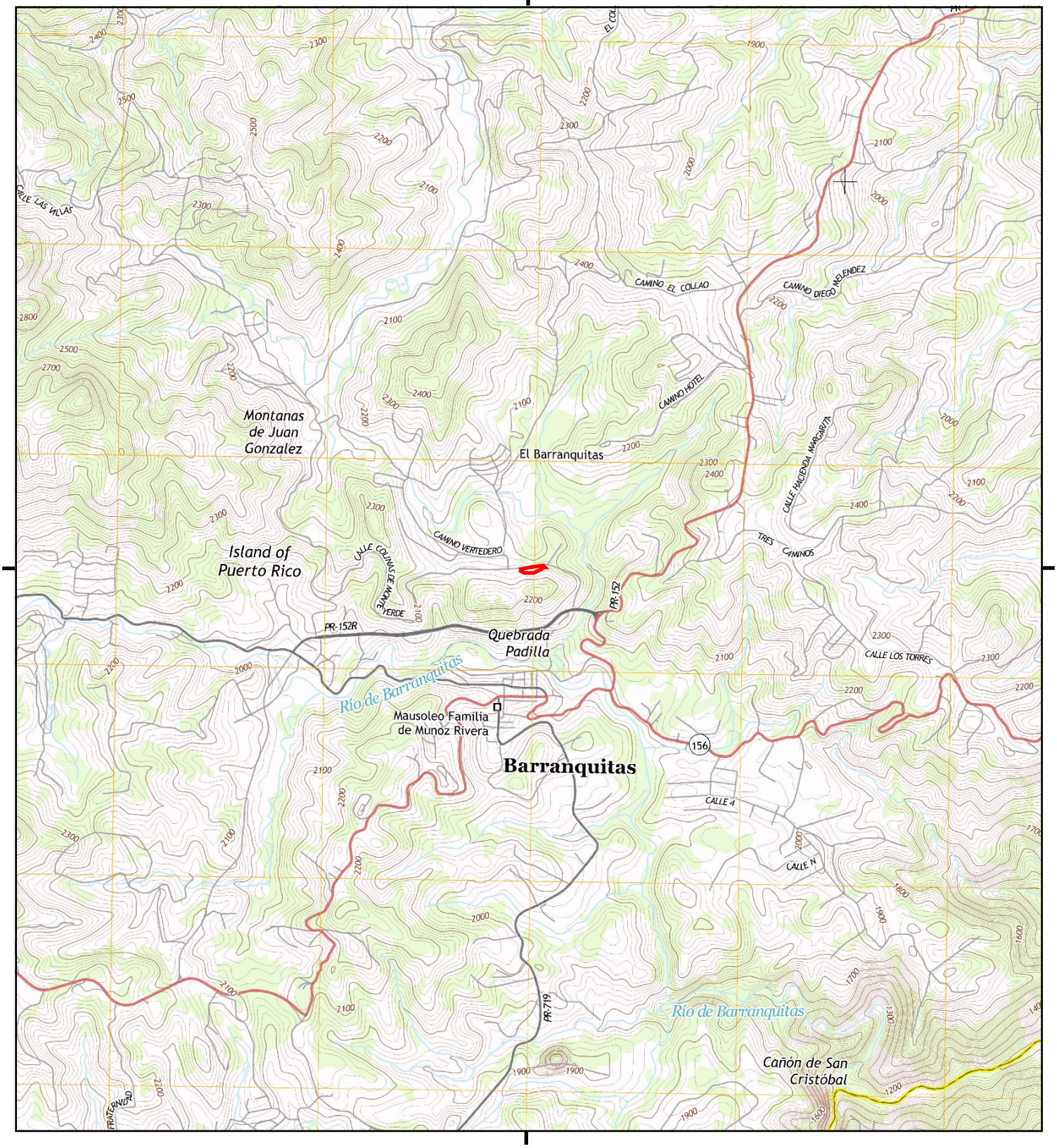
TP, Barranquitas, 2018, 7.5-minute

SITE NAME: MUNICIPAL PARCEL
ADDRESS: Barrancas Ward, Nuevo Barranquitas Se
Barranquitas, PR 00794
CLIENT: Diatom Environmental Services, LLC

N

Historical Topo Map

2013



This report includes information from the following map sheet(s).

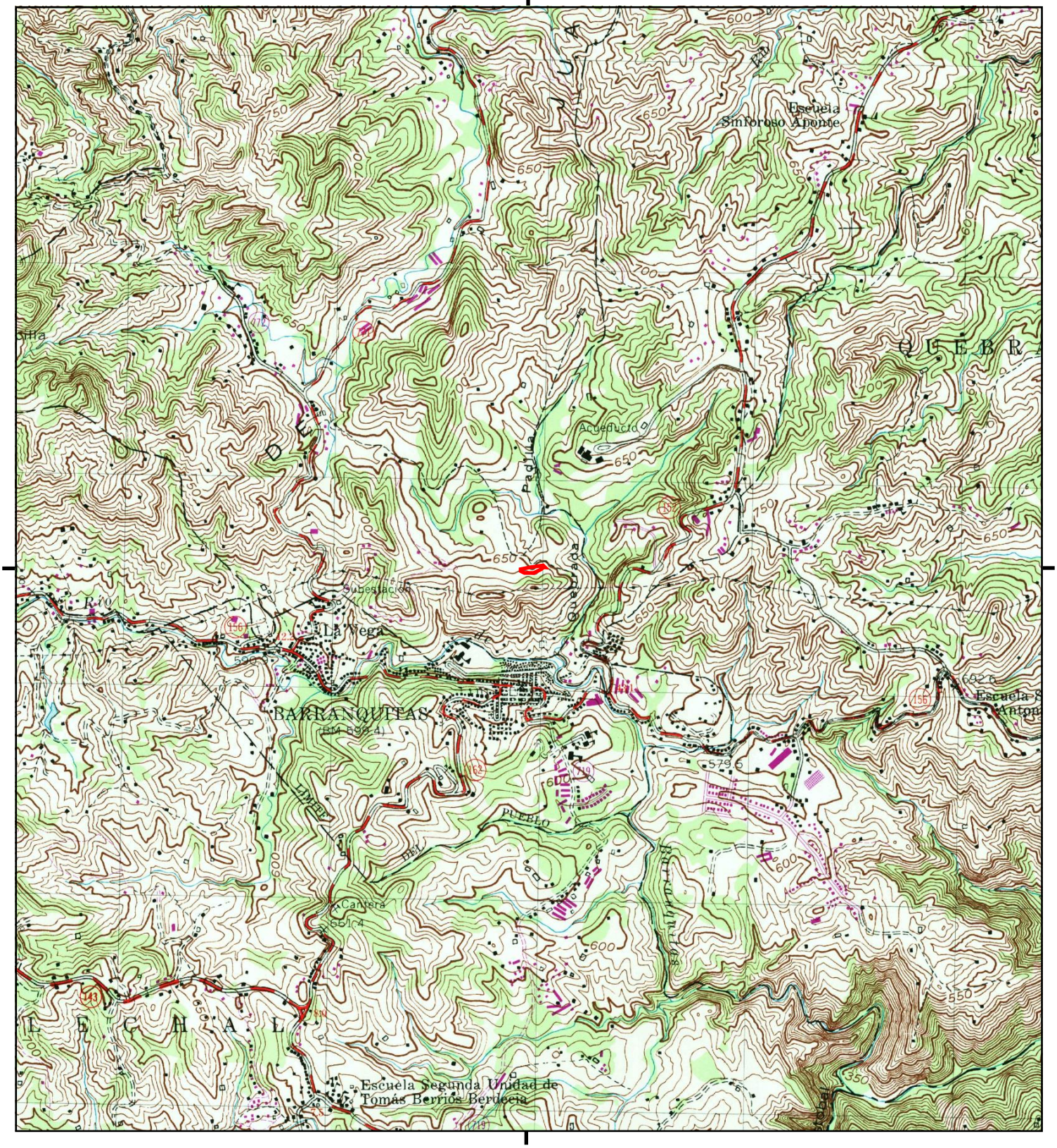
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Barranquitas, 2013, 7.5-minute

SITE NAME: MUNICIPAL PARCEL
ADDRESS: Barrancas Ward, Nuevo Barranquitas Se
Barranquitas, PR 00794
CLIENT: Diatom Environmental Services, LLC

N



This report includes information from the following map sheet(s).

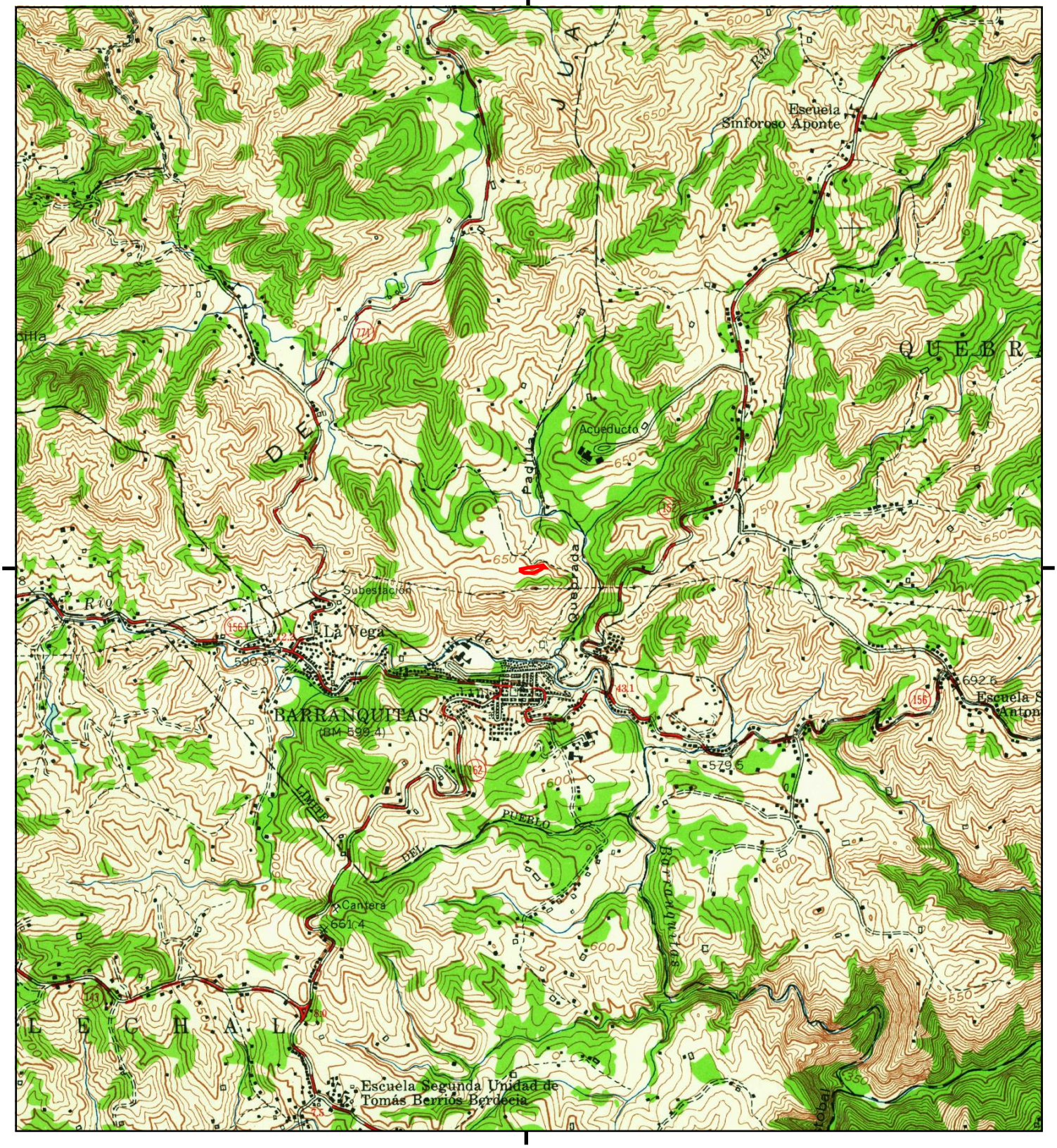
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Barranquitas, 1982, 7.5-minute

SITE NAME: MUNICIPAL PARCEL
ADDRESS: Barrancas Ward, Nuevo Barranquitas Se
Barranquitas, PR 00794
CLIENT: Diatom Environmental Services, LLC

N



This report includes information from the following map sheet(s).

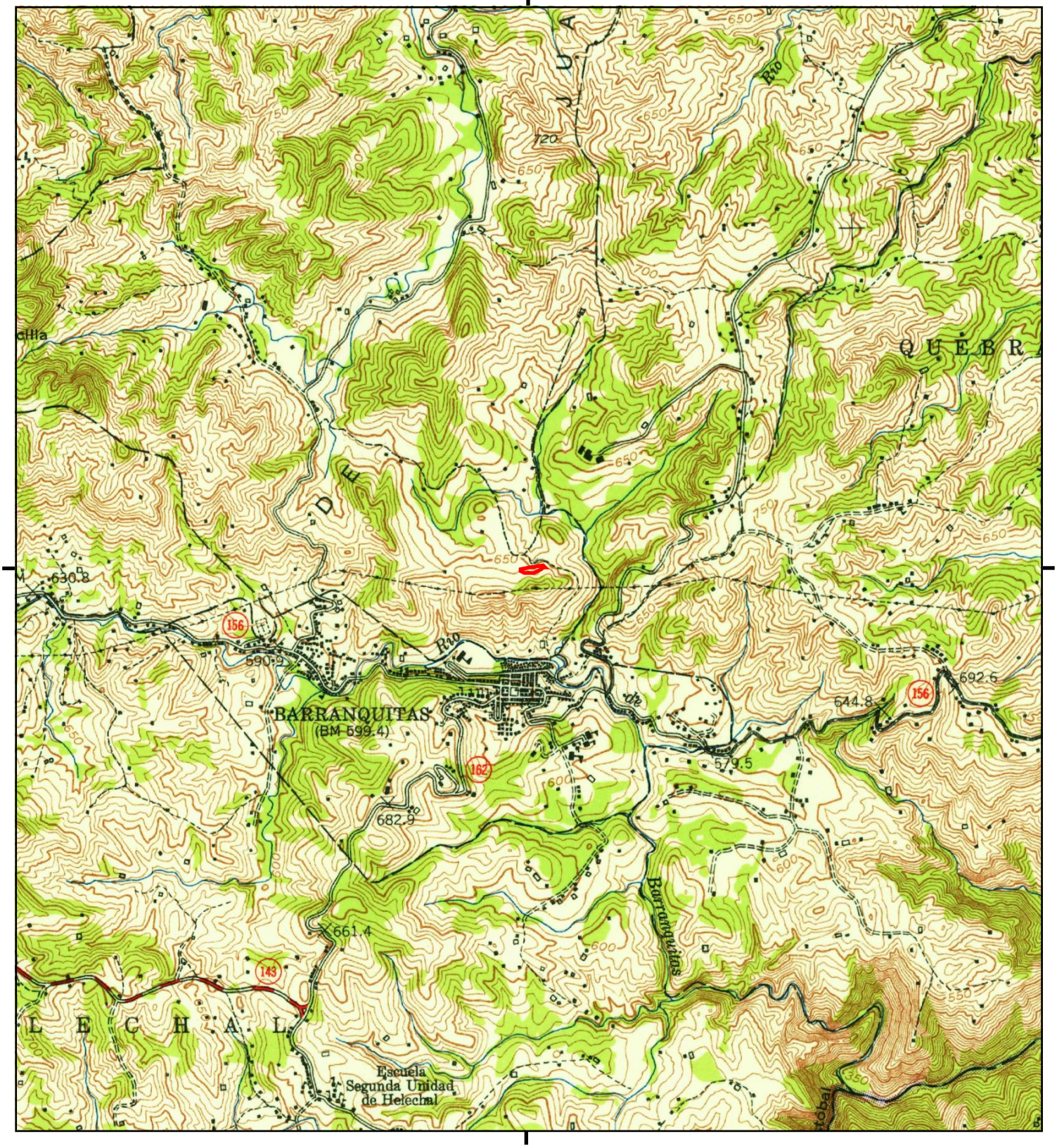
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Barranquitas, 1957, 7.5-minute

SITE NAME: MUNICIPAL PARCEL
ADDRESS: Barrancas Ward, Nuevo Barranquitas Se
Barranquitas, PR 00794
CLIENT: Diatom Environmental Services, LLC

N



This report includes information from the following map sheet(s).

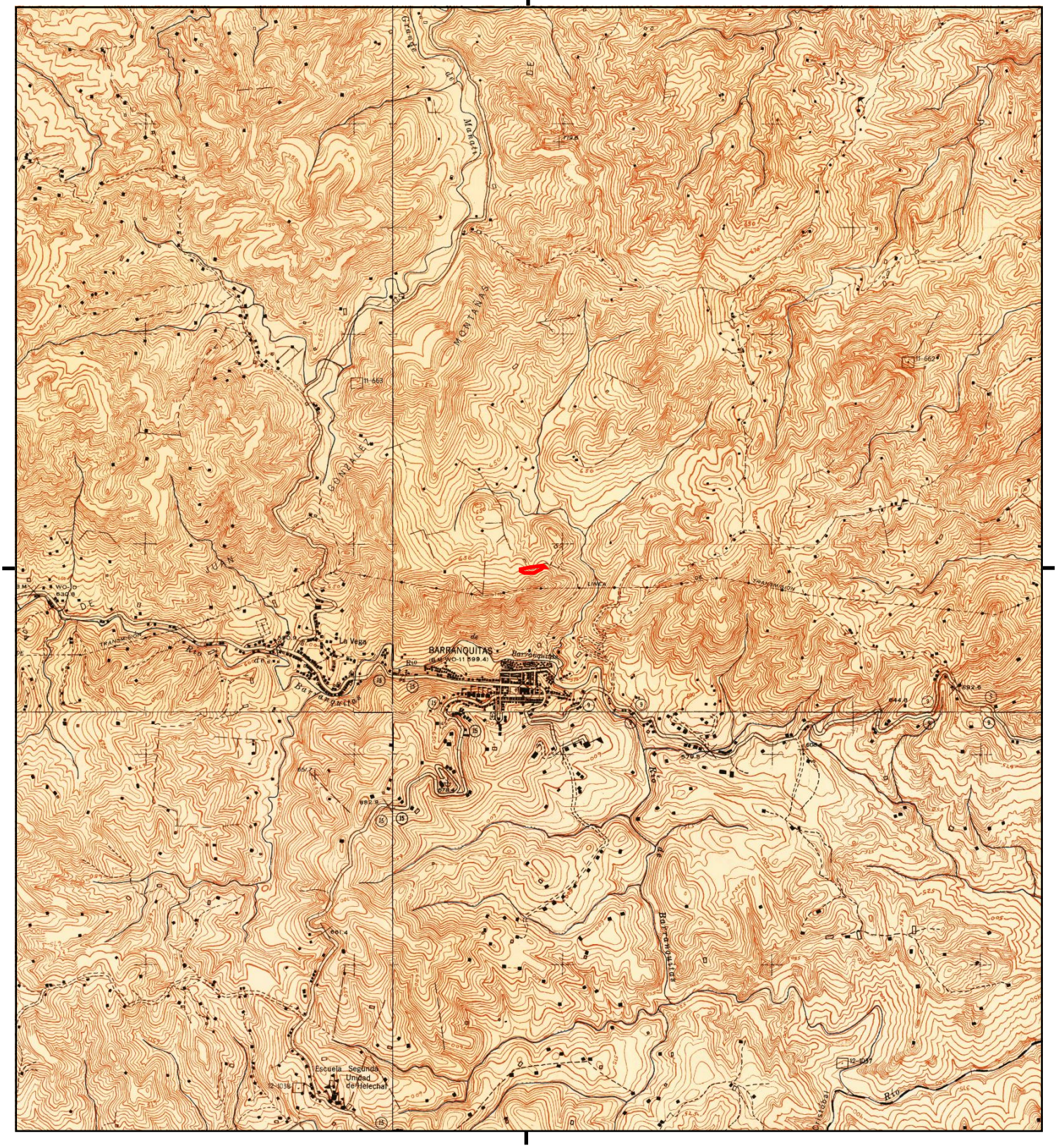
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Barranquitas, 1953, 7.5-minute

SITE NAME: MUNICIPAL PARCEL
ADDRESS: Barrancas Ward, Nuevo Barranquitas Se
Barranquitas, PR 00794
CLIENT: Diatom Environmental Services, LLC

N



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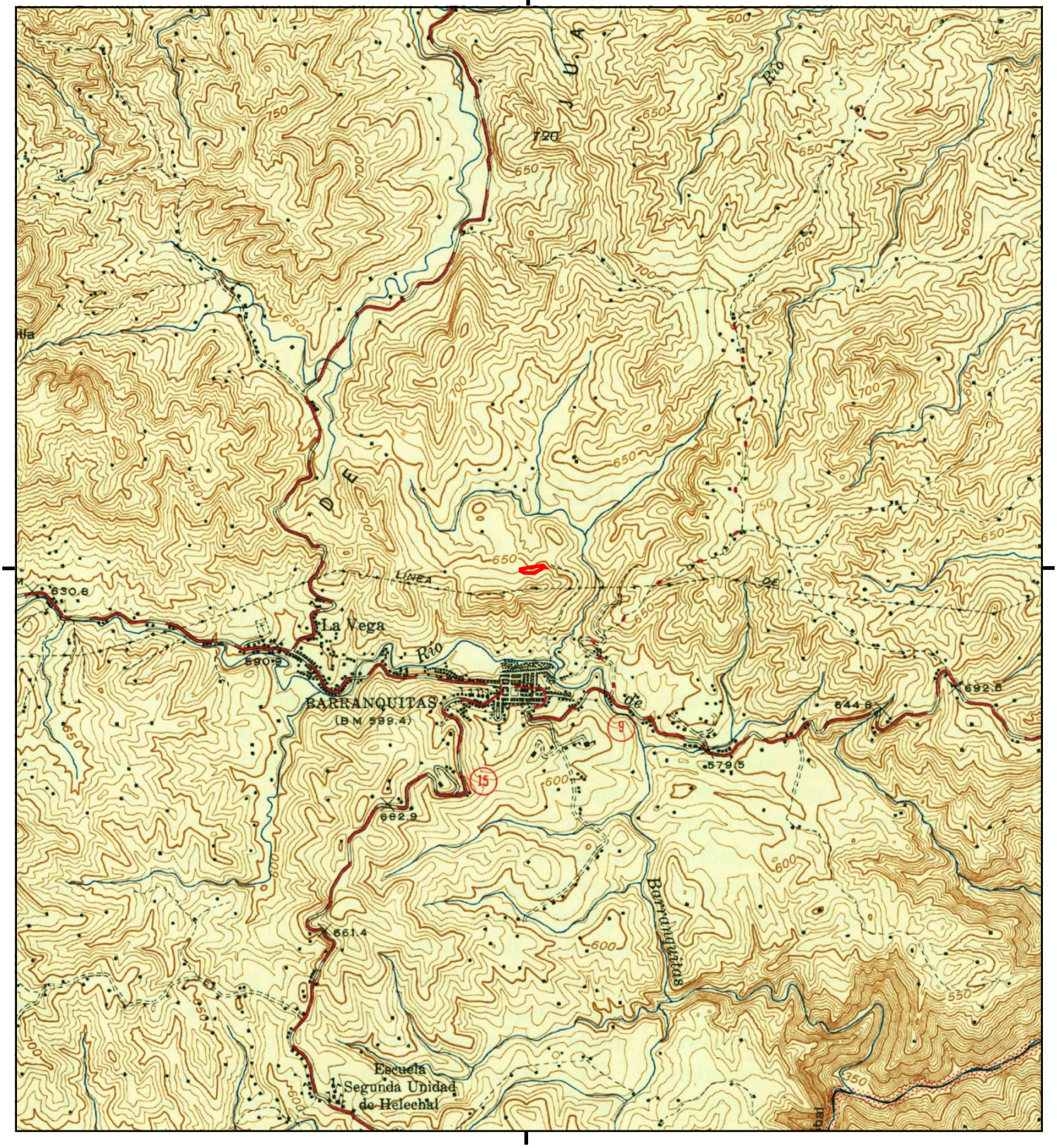
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Barranquitas NE, 1947, 7.5-minute
SE, Barranquitas SE, 1947, 7.5-minute
SW, Barranquitas SO, 1947, 7.5-minute
NW, Barranquitas NO, 1947, 7.5-minute

SITE NAME: MUNICIPAL PARCEL
ADDRESS: Barrancas Ward, Nuevo Barranquitas Se
Barranquitas, PR 00794
CLIENT: Diatom Environmental Services, LLC

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Barranquitas, 1946, 7.5-minute

SITE NAME: MUNICIPAL PARCEL
ADDRESS: Barrancas Ward, Nuevo Barranquitas Se
Barranquitas, PR 00794
CLIENT: Diatom Environmental Services, LLC

N

MUNICIPAL PARCEL
Barrancas Ward, Nuevo Barranquitas Sector, Carr. 1
Barranquitas, PR 00794

Inquiry Number: 7986065.5
May 13, 2025

The EDR-City Directory Abstract

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at approximately five year intervals.

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1992 through current. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 1320 feet of the target property.

Summary information obtained is provided in the text of this report.

RECORD SOURCES

The EDR City Directory Report accesses a variety of business directory sources, including Haines, InfoUSA, Polk, Cole, Bresser, and Stewart. Listings marked as EDR Digital Archive access Cole and InfoUSA records. The various directory sources enhance and complement each other to provide a more thorough and accurate report.

EDR is licensed to reproduce certain City Directory works by the copyright holders of those works. The purchaser of this EDR City Directory Report may include it in report(s) delivered to a customer.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

Year	Source	TP	Adjoining	Text Abstract	Source Image
2020	EDR Digital Archive	-	-	-	-
2017	Cole Information	-	-	-	-
2014	Cole Information	-	-	-	-
2010	Cole Information	-	-	-	-
2005	Cole Information	-	-	-	-
2000	Cole Information	-	-	-	-
1995	Cole Information	-	-	-	-
1992	Cole Information	-	-	-	-

FINDINGS

TARGET PROPERTY INFORMATION

ADDRESS

Barrancas Ward, Nuevo Barranquitas Sector, Carr. 1
Barranquitas, PR 00794

FINDINGS DETAIL

Target Property research detail.

FINDINGS

ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

No Addresses Found

FINDINGS

TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

Address Researched	Address Not Identified in Research Source
Barrancas Ward, Nuevo Barranquitas Sector, Carr. 1	2020, 2017, 2014, 2010, 2005, 2000, 1995, 1992

MUNICIPAL PARCEL

Barrancas Ward

Barranquitas, PR 00794

Inquiry Number: 7986065.8

May 13, 2025

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

05/13/25

Site Name:

MUNICIPAL PARCEL
Barrancas Ward
Barranquitas, PR 00794
EDR Inquiry # 7986065.8

Client Name:

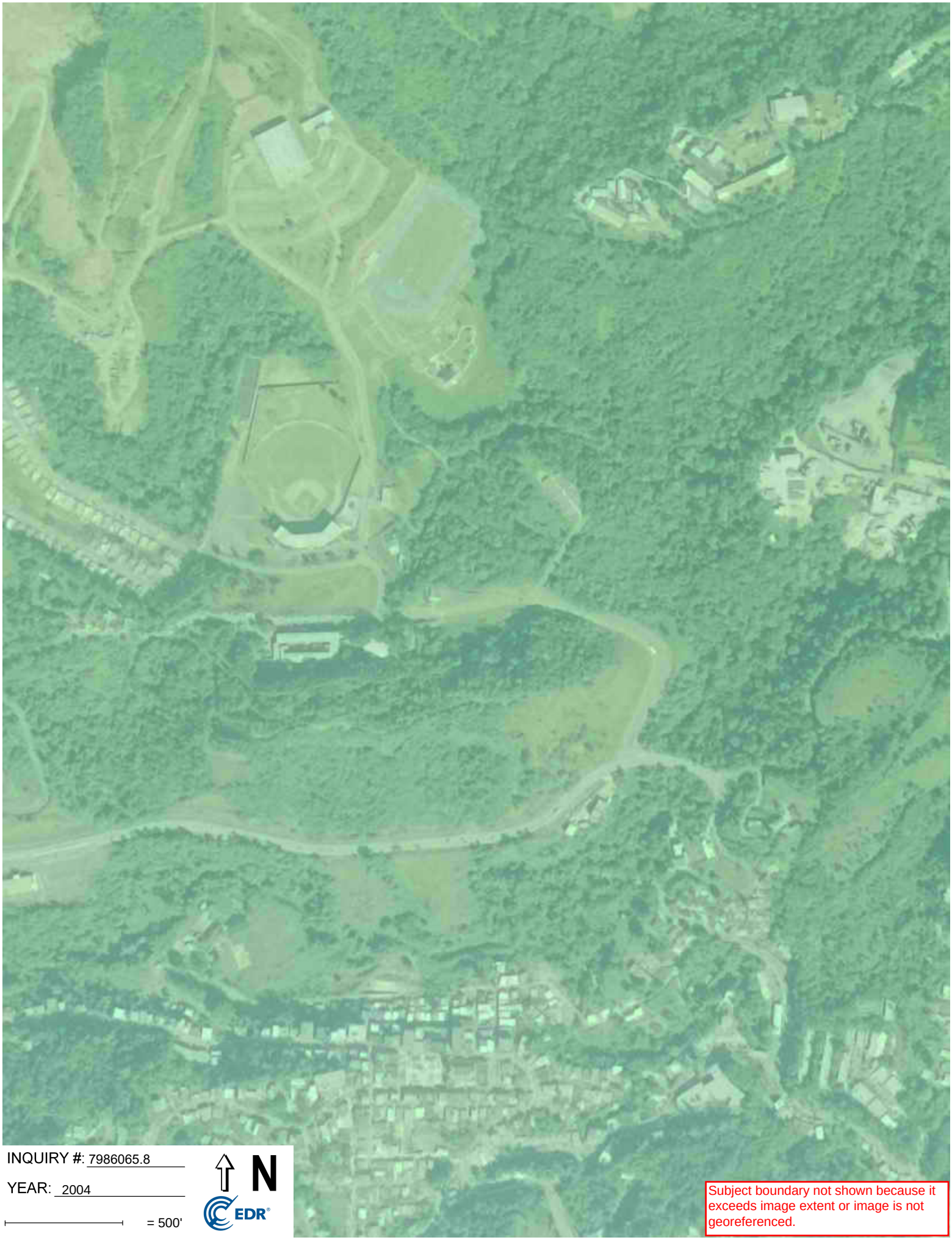
Diatom Environmental Services, LLC
Calle Francia F7 Garden Court
Guaynabo, PR 00966
Contact: Javier Velez Arocho

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	*Scale*	*Details*	*Source*
2004	1"=500'	Flight Date: January 16, 2004	USGS
1994	1"=500'	Acquisition Date: November 24, 1994	USGS/DOQQ
1977	1"=500'	Flight Date: March 28, 1977	USGS

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.



INQUIRY #: 7986065.8

YEAR: 2004

= 500'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.

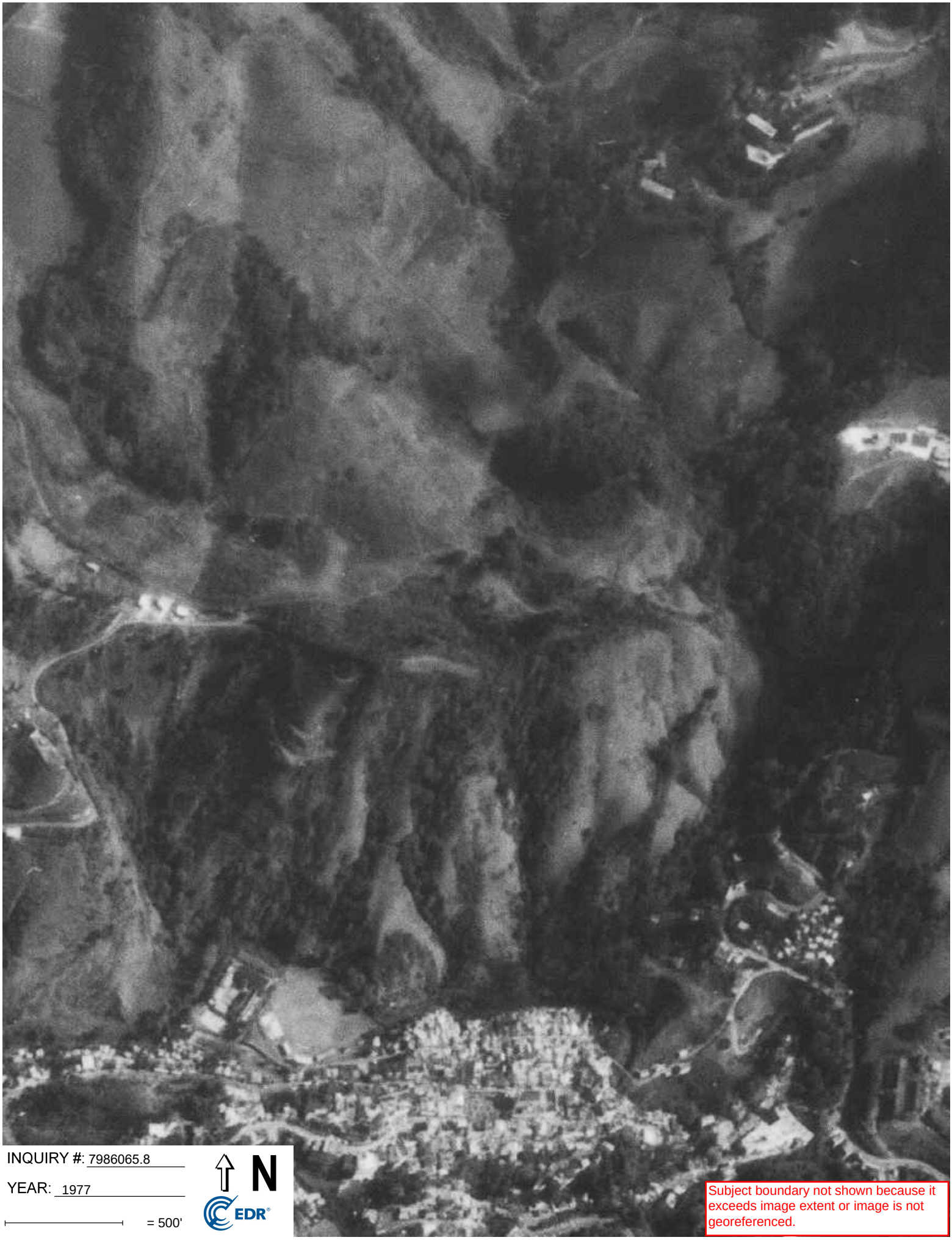
INQUIRY #: 7986065.8

YEAR: 1994

= 500'

N

EDR



INQUIRY #: 7986065.8

YEAR: 1977

= 500'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.

Appendix D:

Regulatory Records

MUNICIPAL PARCEL
Barrancas Ward, Nuevo Barranquitas Sector, Carr. 1
Barranquitas, PR 00794

Inquiry Number: 7986065.2s
May 12, 2025

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527 - 21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E2247 - 16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E1528 - 22) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

BARRANCAS WARD, NUEVO BARRANQUITAS SECTOR, CARR. 1
BARRANQUITAS, PR 00794

COORDINATES

Latitude (North):	18.1917010 - 18° 11' 30.12''
Longitude (West):	66.3059550 - 66° 18' 21.43''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	784978.2
UTM Y (Meters):	2013366.4
Elevation:	2106 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	12367773 BARRANQUITAS, PR
Version Date:	2018

MAPPED SITES SUMMARY

Target Property Address:
BARRANCAS WARD, NUEVO BARRANQUITAS SECTOR, CARR. 1
BARRANQUITAS, PR 00794

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	ULSAR INTERNATIONAL	ST#1, HONDURAS WARD,	SEMS-ARCHIVE	Lower	1392, 0.264, SW

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Lists of Federal Delisted NPL sites

Delisted NPL ---------- National Priority List Deletions

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS ---------- Corrective Action Report

Lists of Federal RCRA TSD facilities

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Lists of Federal RCRA generators

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROLS ---------- Institutional Controls Sites List

Federal ERNS list

ERNS ---------- Emergency Response Notification System

EXECUTIVE SUMMARY

Lists of state- and tribal hazardous waste facilities

SHWS ---- This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

Lists of state and tribal leaking storage tanks

LUST ---- Leaking Underground Storage Tanks
INDIAN LUST ---- Leaking Underground Storage Tanks on Indian Land

Lists of state and tribal registered storage tanks

FEMA UST ---- Underground Storage Tank Listing
UST ---- Underground Storage Tank Facilities
INDIAN UST ---- Underground Storage Tanks on Indian Land

Lists of state and tribal voluntary cleanup sites

INDIAN VCP ---- Voluntary Cleanup Priority Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI ---- Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 ---- Torres Martinez Reservation Illegal Dump Site Locations
ODI ---- Open Dump Inventory
IHS OPEN DUMPS ---- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---- Delisted National Clandestine Laboratory Register
US CDL ---- National Clandestine Laboratory Register

Local Land Records

LIENS 2 ---- CERCLA Lien Information

Records of Emergency Release Reports

HMIRS ---- Hazardous Materials Information Reporting System

Other Ascertainable Records

RCRA NonGen / NLR ---- RCRA - Non Generators / No Longer Regulated
FUDS ---- Formerly Used Defense Sites
DOD ---- Department of Defense Sites
SCRD DRYCLEANERS ---- State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ---- Financial Assurance Information

EXECUTIVE SUMMARY

EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
MINES MRDS	Mineral Resources Data System
FINDS	Facility Index System/Facility Registry System
DOCKET HWC	Hazardous Waste Compliance Docket Listing
ECHO	Enforcement & Compliance History Information
UXO	Unexploded Ordnance Sites
FUELS PROGRAM	EPA Fuels Program Registered Listing
PFAS NPL	Superfund Sites with PFAS Detections Information
PFAS FEDERAL SITES	Federal Sites PFAS Information
PFAS TSCA	PFAS Manufacture and Imports Information
PFAS TRIS	List of PFAS Added to the TRI
PFAS RCRA MANIFEST	PFAS Transfers Identified In the RCRA Database Listing
PFAS ATSDR	PFAS Contamination Site Location Listing
PFAS WQP	Ambient Environmental Sampling for PFAS
PFAS PROJECT	NORTHEASTERN UNIVERSITY PFAS PROJECT
PFAS NPDES	Clean Water Act Discharge Monitoring Information
PFAS ECHO	Facilities in Industries that May Be Handling PFAS Listing
PFAS ECHO FIRE TRAIN	Facilities in Industries that May Be Handling PFAS Listing
PFAS PT 139 AIRPORT	All Certified Part 139 Airports PFAS Information Listing
AQUEOUS FOAM NRC	Aqueous Foam Related Incidents Listing
BIOSOLIDS	ICIS-NPDES Biosolids Facility Data
UST FINDER RELEASE	UST Finder Releases Database
UST FINDER	UST Finder Database
E MANIFEST	Hazardous Waste Electronic Manifest System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants

EXECUTIVE SUMMARY

EDR Hist Auto---------- EDR Exclusive Historical Auto Stations
EDR Hist Cleaner---------- EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LUST---------- Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

A review of the SEMS-ARCHIVE list, as provided by EDR, and dated 03/27/2025 has revealed that there is 1 SEMS-ARCHIVE site within approximately 0.5 miles of the target property.

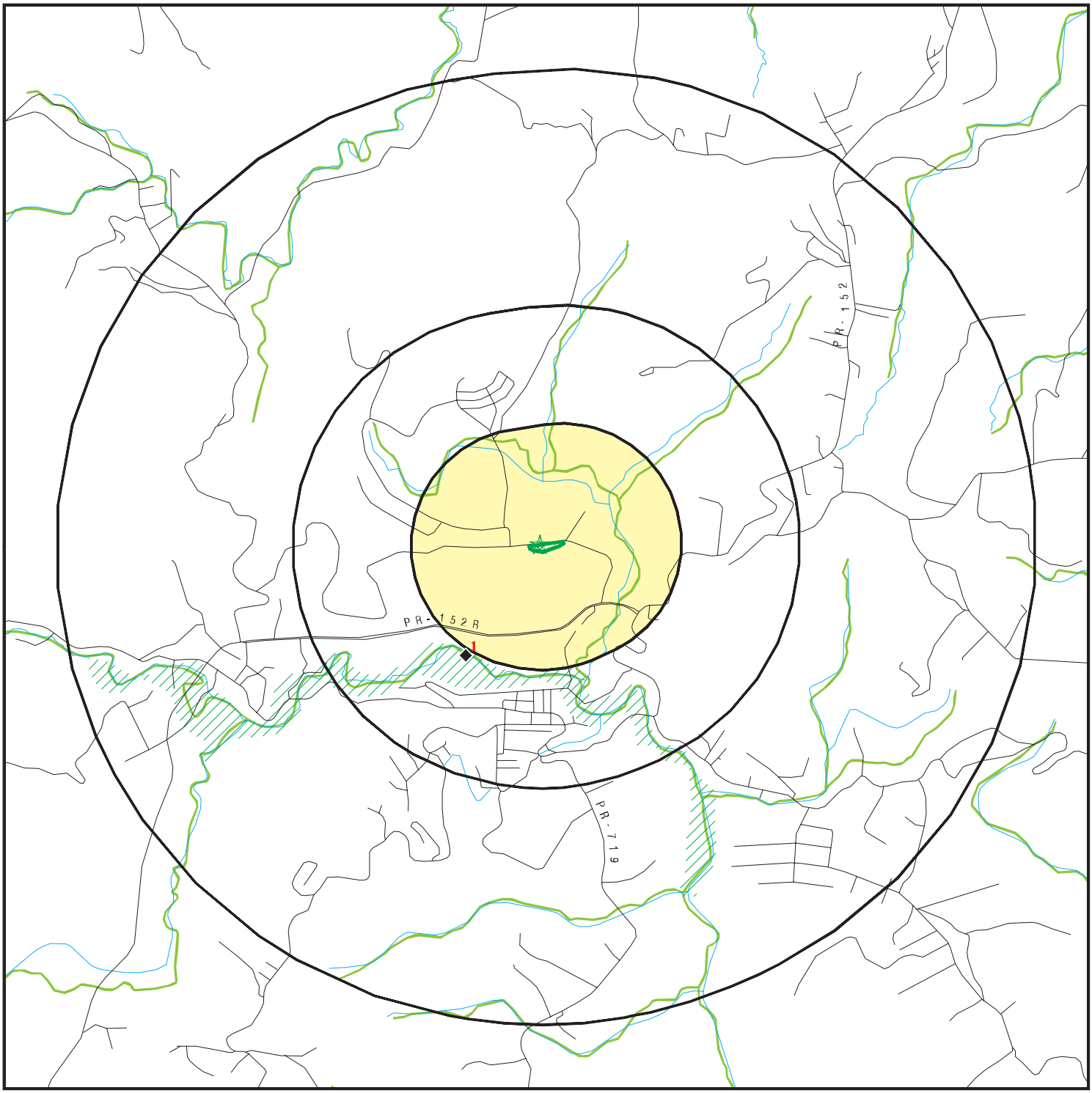
Lower Elevation	Address	Direction / Distance	Map ID	Page
ULSAR INTERNATIONAL Site ID: 0202641 EPA Id: PRD982276404	ST#1, HONDURAS WARD,	SW 1/4 - 1/2 (0.264 mi.)	1	8

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 1 records.

Site Name	Database(s)
PAPIRIN S/S	LUST

OVERVIEW MAP - 7986065.2S



Target Property
Sites at elevations higher than or equal to the target property
Sites at elevations lower than the target property
Manufactured Gas Plants
National Priority List Sites
Dept. Defense Sites

0 1/4 1/2 1 Miles

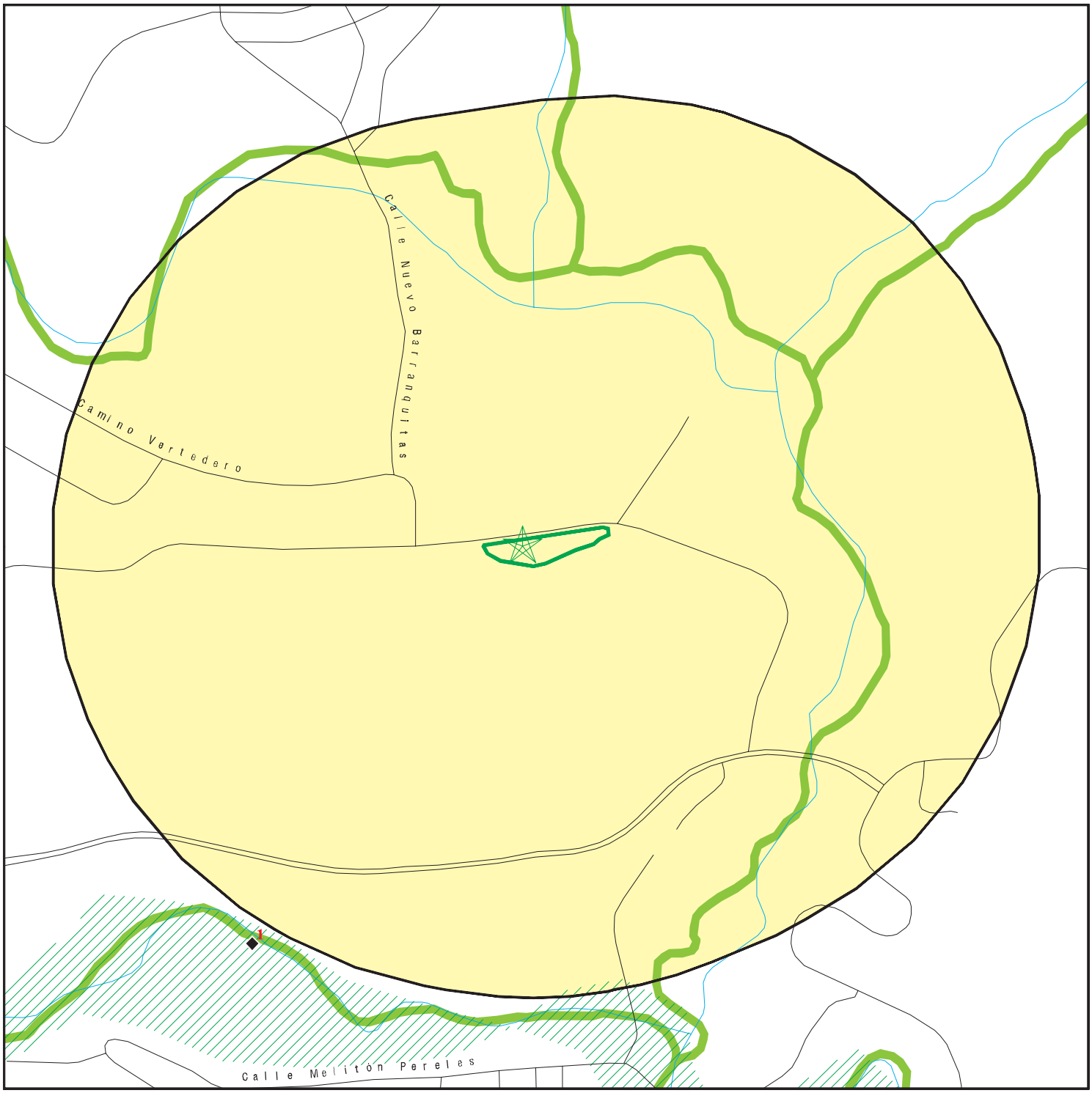
Indian Reservations BIA
Special Flood Hazard Area (1%)
0.2% Annual Chance Flood Hazard
National Wetland Inventory

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	MUNICIPAL PARCEL	CLIENT:	Diatom Environmental Services, LLC
ADDRESS:	Barrancas Ward, Nuevo Barranquitas Sector, Carr. 1 Barranquitas PR 00794	CONTACT:	Javier Velez Arocho
LAT/LONG:	18.191701 / 66.305955	INQUIRY #:	7986065.2s
		DATE:	May 12, 2025 5:02 pm

DETAIL MAP - 7986065.2S



0 1/16 1/8 1/4 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	MUNICIPAL PARCEL	CLIENT:	Diatom Environmental Services, LLC
ADDRESS:	Barrancas Ward, Nuevo Barranquitas Sector, Carr. 1 Barranquitas PR 00794	CONTACT:	Javier Velez Arocho
LAT/LONG:	18.191701 / 66.305955	INQUIRY #:	7986065.2s
		DATE:	May 12, 2025 5:02 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Lists of Federal NPL (Superfund) sites								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Lists of Federal Delisted NPL sites								
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	0.500		0	0	1	NR	NR	1
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.000		0	0	0	0	NR	0
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA generators								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
Lists of state- and tribal hazardous waste facilities								
SHWS	N/A		N/A	N/A	N/A	N/A	N/A	N/A
Lists of state and tribal leaking storage tanks								
LUST	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
Lists of state and tribal registered storage tanks								
FEMA UST	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
UST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
Lists of state and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	0.001		0	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
MINES MRDS	0.250		0	0	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
PFAS NPL	0.250		0	0	NR	NR	NR	0
PFAS FEDERAL SITES	0.250		0	0	NR	NR	NR	0
PFAS TSCA	0.250		0	0	NR	NR	NR	0
PFAS TRIS	0.250		0	0	NR	NR	NR	0
PFAS RCRA MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS ATSDR	0.250		0	0	NR	NR	NR	0
PFAS WQP	0.250		0	0	NR	NR	NR	0
PFAS PROJECT	0.250		0	0	NR	NR	NR	0
PFAS NPDES	0.250		0	0	NR	NR	NR	0
PFAS ECHO	0.250		0	0	NR	NR	NR	0
PFAS ECHO FIRE TRAIN	0.250		0	0	NR	NR	NR	0
PFAS PT 139 AIRPORT	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM NRC	0.250		0	0	NR	NR	NR	0
BIOSOLIDS	0.001		0	NR	NR	NR	NR	0
UST FINDER RELEASE	0.500		0	0	0	NR	NR	0
UST FINDER	0.250		0	0	NR	NR	NR	0
E MANIFEST	0.250		0	0	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	0	0	1	0	0	1

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

N/A = This State does not maintain a SHWS list. See the Federal CERCLIS list.

1
SW
1/4-1/2
0.264 mi.
1392 ft.

ULSAR INTERNATIONAL INC.
ST#1, HONDURAS WARD, EL PORTON SECTOR
BARRANQUITAS, PR 00618

SEMS-ARCHIVE

1003864256
PRD982276404

Relative:
Lower

Actual:
1916 ft.

SEMS Archive:

Site ID:	0202641
EPA ID:	PRD982276404
Name:	ULSAR INTERNATIONAL INC.
Address:	ST#1, HONDURAS WARD, EL PORTON SECTOR
Address 2:	Not reported
City,State,Zip:	BARRANQUITAS, PR 00618
Cong District:	Not reported
FIPS Code:	72019
FF:	N
NPL:	Not on the NPL
Non NPL Status:	NFRAP-Site does not qualify for the NPL based on existing information

SEMS Archive Detail:

Region:	02
Site ID:	0202641
EPA ID:	PRD982276404
Site Name:	ULSAR INTERNATIONAL INC.
NPL:	N
FF:	N
OU:	00
Action Code:	PA
Action Name:	PA
SEQ:	1
Start Date:	1988-03-01 05:00:00
Finish Date:	1988-03-15 05:00:00
Qual:	N
Current Action Lead:	St Perf

Region:	02
Site ID:	0202641
EPA ID:	PRD982276404
Site Name:	ULSAR INTERNATIONAL INC.
NPL:	N
FF:	N
OU:	00
Action Code:	DS
Action Name:	DISCVRY
SEQ:	1
Start Date:	1987-09-18 04:00:00
Finish Date:	1987-09-18 04:00:00
Qual:	Not reported
Current Action Lead:	St Perf

Region:	02
Site ID:	0202641
EPA ID:	PRD982276404
Site Name:	ULSAR INTERNATIONAL INC.
NPL:	N
FF:	N
OU:	00
Action Code:	VS
Action Name:	ARCH SITE
SEQ:	1

ULSAR INTERNATIONAL INC. (Continued) **1003864256**

Start Date:	Not reported
Finish Date:	1988-03-15 05:00:00
Qual:	Not reported
Current Action Lead:	EPA Perf In-Hse

Count: 1 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
BARRANQUITAS	S105421736	PAPIRIN S/S	CARR 771 KM 2.5 BO. BARRANCAS		LUST

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 03/27/2025
Date Data Arrived at EDR: 04/01/2025
Date Made Active in Reports: 04/24/2025
Number of Days to Update: 23

Source: EPA
Telephone: N/A
Last EDR Contact: 05/01/2025
Next Scheduled EDR Contact: 07/07/2025
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 03/27/2025
Date Data Arrived at EDR: 04/01/2025
Date Made Active in Reports: 04/24/2025
Number of Days to Update: 23

Source: EPA
Telephone: N/A
Last EDR Contact: 05/01/2025
Next Scheduled EDR Contact: 07/07/2025
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Lists of Federal Delisted NPL sites

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 03/27/2025
Date Data Arrived at EDR: 04/01/2025
Date Made Active in Reports: 04/24/2025
Number of Days to Update: 23

Source: EPA
Telephone: N/A
Last EDR Contact: 05/01/2025
Next Scheduled EDR Contact: 07/07/2025
Data Release Frequency: Quarterly

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/20/2024
Date Data Arrived at EDR: 12/18/2024
Date Made Active in Reports: 12/20/2024
Number of Days to Update: 2

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 03/27/2025
Next Scheduled EDR Contact: 07/07/2025
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 03/27/2025
Date Data Arrived at EDR: 04/01/2025
Date Made Active in Reports: 04/24/2025
Number of Days to Update: 23

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/01/2025
Next Scheduled EDR Contact: 07/21/2025
Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 03/27/2025
Date Data Arrived at EDR: 04/01/2025
Date Made Active in Reports: 04/24/2025
Number of Days to Update: 23

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/01/2025
Next Scheduled EDR Contact: 07/21/2025
Data Release Frequency: Quarterly

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 02/17/2025
Date Data Arrived at EDR: 02/19/2025
Date Made Active in Reports: 03/06/2025
Number of Days to Update: 15

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/18/2025
Next Scheduled EDR Contact: 06/30/2025
Data Release Frequency: Quarterly

Lists of Federal RCRA TSD facilities

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 02/17/2025
Date Data Arrived at EDR: 02/19/2025
Date Made Active in Reports: 03/06/2025
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 03/18/2025
Next Scheduled EDR Contact: 06/30/2025
Data Release Frequency: Quarterly

Lists of Federal RCRA generators

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/17/2025
Date Data Arrived at EDR: 02/19/2025
Date Made Active in Reports: 03/06/2025
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 03/18/2025
Next Scheduled EDR Contact: 06/30/2025
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 02/17/2025
Date Data Arrived at EDR: 02/19/2025
Date Made Active in Reports: 03/06/2025
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 03/18/2025
Next Scheduled EDR Contact: 06/30/2025
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/17/2025
Date Data Arrived at EDR: 02/19/2025
Date Made Active in Reports: 03/06/2025
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 03/18/2025
Next Scheduled EDR Contact: 06/30/2025
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 11/11/2024
Date Data Arrived at EDR: 11/25/2024
Date Made Active in Reports: 02/18/2025
Number of Days to Update: 85

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 04/30/2025
Next Scheduled EDR Contact: 08/18/2025
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 01/29/2025
Date Data Arrived at EDR: 02/18/2025
Date Made Active in Reports: 04/29/2025
Number of Days to Update: 70

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/18/2025
Next Scheduled EDR Contact: 12/02/2024
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 01/29/2025
Date Data Arrived at EDR: 02/18/2025
Date Made Active in Reports: 04/29/2025
Number of Days to Update: 70

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/18/2025
Next Scheduled EDR Contact: 06/02/2025
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/03/2024
Date Data Arrived at EDR: 12/11/2024
Date Made Active in Reports: 02/18/2025
Number of Days to Update: 69

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/18/2025
Next Scheduled EDR Contact: 06/30/2025
Data Release Frequency: Quarterly

Lists of state- and tribal hazardous waste facilities

SHWS: This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: Environmental Quality Board
Telephone: 787-767-8181
Last EDR Contact: 08/22/2005
Next Scheduled EDR Contact: 11/21/2005
Data Release Frequency: N/A

Lists of state and tribal leaking storage tanks

LUST: Leaking Underground Storage Tanks

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 09/24/2020
Date Data Arrived at EDR: 02/09/2021
Date Made Active in Reports: 05/04/2021
Number of Days to Update: 84

Source: Environmental Quality Board
Telephone: 787-767-8056
Last EDR Contact: 04/29/2025
Next Scheduled EDR Contact: 07/28/2025
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 04/09/2025
Next Scheduled EDR Contact: 07/28/2025
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 01/07/2025
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/09/2025
Next Scheduled EDR Contact: 07/28/2025
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 01/07/2025
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 04/09/2025
Next Scheduled EDR Contact: 07/28/2025
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 04/09/2025
Next Scheduled EDR Contact: 07/28/2025
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 04/09/2025
Next Scheduled EDR Contact: 07/28/2025
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/09/2025
Next Scheduled EDR Contact: 07/28/2025
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/09/2025
Next Scheduled EDR Contact: 07/28/2025
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 01/16/2025
Next Scheduled EDR Contact: 07/28/2025
Data Release Frequency: Varies

Lists of state and tribal registered storage tanks

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 04/08/2025
Date Data Arrived at EDR: 04/23/2025
Date Made Active in Reports: 04/24/2025
Number of Days to Update: 1

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 03/26/2025
Next Scheduled EDR Contact: 07/14/2025
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST: Underground Storage Tank Facilities
Underground storage tank site locations.

Date of Government Version: 01/01/2008
Date Data Arrived at EDR: 03/26/2008
Date Made Active in Reports: 04/23/2008
Number of Days to Update: 28

Source: Environmental Quality Board
Telephone: 787-767-8056
Last EDR Contact: 04/29/2025
Next Scheduled EDR Contact: 07/28/2025
Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 01/07/2025
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/09/2025
Next Scheduled EDR Contact: 07/28/2025
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 04/09/2025
Next Scheduled EDR Contact: 07/28/2025
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/15/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 04/09/2025
Next Scheduled EDR Contact: 07/28/2025
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 11/08/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/09/2025
Next Scheduled EDR Contact: 07/28/2025
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/09/2025
Next Scheduled EDR Contact: 07/28/2025
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/09/2025
Next Scheduled EDR Contact: 07/28/2025
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 04/09/2025
Next Scheduled EDR Contact: 07/28/2025
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/09/2025
Next Scheduled EDR Contact: 07/28/2025
Data Release Frequency: Varies

Lists of state and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 03/12/2025
Next Scheduled EDR Contact: 06/30/2025
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 09/09/2024
Date Data Arrived at EDR: 09/11/2024
Date Made Active in Reports: 12/06/2024
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/12/2025
Next Scheduled EDR Contact: 06/23/2025
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 04/21/2025
Next Scheduled EDR Contact: 08/04/2025
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/09/2025
Next Scheduled EDR Contact: 07/28/2025
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 02/07/2024
Date Data Arrived at EDR: 11/13/2024
Date Made Active in Reports: 11/19/2024
Number of Days to Update: 6

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 04/30/2025
Next Scheduled EDR Contact: 08/04/2025
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 12/31/2024
Date Data Arrived at EDR: 02/20/2025
Date Made Active in Reports: 04/29/2025
Number of Days to Update: 68

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/20/2025
Next Scheduled EDR Contact: 06/02/2025
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 12/31/2024
Date Data Arrived at EDR: 02/20/2025
Date Made Active in Reports: 04/29/2025
Number of Days to Update: 68

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/20/2025
Next Scheduled EDR Contact: 06/02/2025
Data Release Frequency: Quarterly

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 03/27/2025
Date Data Arrived at EDR: 04/01/2025
Date Made Active in Reports: 04/24/2025
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 05/01/2025
Next Scheduled EDR Contact: 07/07/2025
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/10/2024
Date Data Arrived at EDR: 12/11/2024
Date Made Active in Reports: 02/27/2025
Number of Days to Update: 78

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/18/2025
Next Scheduled EDR Contact: 06/30/2025
Data Release Frequency: Quarterly

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 02/17/2025
Date Data Arrived at EDR: 02/19/2025
Date Made Active in Reports: 03/06/2025
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 03/18/2025
Next Scheduled EDR Contact: 06/30/2025
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/30/2025
Date Data Arrived at EDR: 02/11/2025
Date Made Active in Reports: 04/24/2025
Number of Days to Update: 72

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 02/11/2025
Next Scheduled EDR Contact: 05/26/2025
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/08/2025
Next Scheduled EDR Contact: 07/21/2025
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/03/2025
Next Scheduled EDR Contact: 07/14/2025
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 07/30/2021
Date Data Arrived at EDR: 02/03/2023
Date Made Active in Reports: 02/10/2023
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/08/2025
Next Scheduled EDR Contact: 08/18/2025
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 02/17/2025
Date Data Arrived at EDR: 02/19/2025
Date Made Active in Reports: 03/06/2025
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/18/2025
Next Scheduled EDR Contact: 06/30/2025
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA Watch List

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 04/28/2025
Next Scheduled EDR Contact: 08/11/2025
Data Release Frequency: No Update Planned

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 05/01/2025
Next Scheduled EDR Contact: 08/11/2025
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 06/14/2022
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 283

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/10/2025
Next Scheduled EDR Contact: 06/23/2025
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 02/11/2025
Date Made Active in Reports: 02/18/2025
Number of Days to Update: 7

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 02/11/2025
Next Scheduled EDR Contact: 05/26/2025
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 01/13/2025
Date Data Arrived at EDR: 01/15/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 82

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/15/2025
Next Scheduled EDR Contact: 07/28/2025
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 01/29/2025
Date Data Arrived at EDR: 02/03/2025
Date Made Active in Reports: 02/27/2025
Number of Days to Update: 24

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 05/01/2025
Next Scheduled EDR Contact: 06/09/2025
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 01/01/2025
Date Data Arrived at EDR: 01/17/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 80
Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/10/2025
Next Scheduled EDR Contact: 07/28/2025
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35
Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 02/26/2025
Date Data Arrived at EDR: 03/03/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 35
Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 05/01/2025
Next Scheduled EDR Contact: 08/11/2025
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 10/02/2024
Date Made Active in Reports: 01/10/2025
Number of Days to Update: 100
Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/03/2025
Next Scheduled EDR Contact: 07/14/2025
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 03/26/2025
Next Scheduled EDR Contact: 07/14/2025
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/12/2024
Date Data Arrived at EDR: 10/17/2024
Date Made Active in Reports: 11/19/2024
Number of Days to Update: 33
Source: Nuclear Regulatory Commission
Telephone: 301-415-0717
Last EDR Contact: 04/10/2025
Next Scheduled EDR Contact: 07/28/2025
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 10/16/2024
Date Made Active in Reports: 01/14/2025
Number of Days to Update: 90
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 02/24/2025
Next Scheduled EDR Contact: 06/09/2025
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 02/24/2025
Next Scheduled EDR Contact: 06/09/2025
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 05/01/2025
Next Scheduled EDR Contact: 08/11/2025
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 03/20/2025
Next Scheduled EDR Contact: 07/07/2025
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/10/2025
Date Data Arrived at EDR: 01/22/2025
Date Made Active in Reports: 04/21/2025
Number of Days to Update: 89

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 04/22/2025
Next Scheduled EDR Contact: 08/04/2025
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2024
Date Data Arrived at EDR: 01/27/2025
Date Made Active in Reports: 04/21/2025
Number of Days to Update: 84

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 03/26/2025
Next Scheduled EDR Contact: 07/14/2025
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 02/19/2025
Date Made Active in Reports: 03/07/2025
Number of Days to Update: 16

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 03/18/2025
Next Scheduled EDR Contact: 06/30/2025
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/01/2025
Next Scheduled EDR Contact: 07/14/2025
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 03/03/2023
Date Data Arrived at EDR: 03/03/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 98

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 05/01/2025
Next Scheduled EDR Contact: 08/11/2025
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 02/12/2025
Date Data Arrived at EDR: 02/12/2025
Date Made Active in Reports: 02/27/2025
Number of Days to Update: 15

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 02/06/2025
Next Scheduled EDR Contact: 05/26/2025
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 03/27/2025
Date Data Arrived at EDR: 04/01/2025
Date Made Active in Reports: 04/24/2025
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 05/01/2025
Next Scheduled EDR Contact: 07/07/2025
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data
A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File
Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/03/2025
Date Data Arrived at EDR: 02/18/2025
Date Made Active in Reports: 03/20/2025
Number of Days to Update: 30

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 02/18/2025
Next Scheduled EDR Contact: 06/02/2025
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data
Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 02/19/2025
Date Data Arrived at EDR: 02/21/2025
Date Made Active in Reports: 03/20/2025
Number of Days to Update: 27

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 04/02/2025
Next Scheduled EDR Contact: 06/02/2025
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing
This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/02/2024
Date Data Arrived at EDR: 08/20/2024
Date Made Active in Reports: 10/09/2024
Number of Days to Update: 50

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 02/20/2025
Next Scheduled EDR Contact: 06/02/2025
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing
Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 02/20/2025
Next Scheduled EDR Contact: 06/02/2025
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 06/04/2024
Date Data Arrived at EDR: 11/22/2024
Date Made Active in Reports: 02/18/2025
Number of Days to Update: 88

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 02/20/2025
Next Scheduled EDR Contact: 06/02/2025
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 12/10/2024
Date Data Arrived at EDR: 12/11/2024
Date Made Active in Reports: 02/18/2025
Number of Days to Update: 69

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 03/12/2025
Next Scheduled EDR Contact: 06/16/2025
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 11/11/2024
Date Data Arrived at EDR: 11/20/2024
Date Made Active in Reports: 02/18/2025
Number of Days to Update: 90

Source: EPA
Telephone: (212) 637-3000
Last EDR Contact: 05/05/2025
Next Scheduled EDR Contact: 06/09/2025
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 12/21/2024
Date Data Arrived at EDR: 12/27/2024
Date Made Active in Reports: 01/10/2025
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 03/27/2025
Next Scheduled EDR Contact: 07/14/2025
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 02/12/2025
Next Scheduled EDR Contact: 06/02/2025
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/06/2023
Date Data Arrived at EDR: 09/13/2023
Date Made Active in Reports: 12/11/2023
Number of Days to Update: 89

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/03/2025
Next Scheduled EDR Contact: 07/21/2025
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/13/2025
Date Data Arrived at EDR: 02/13/2025
Date Made Active in Reports: 04/29/2025
Number of Days to Update: 75

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 02/13/2025
Next Scheduled EDR Contact: 05/26/2025
Data Release Frequency: Quarterly

PFAS NPL: Superfund Sites with PFAS Detections Information

EPA's Office of Land and Emergency Management and EPA Regional Offices maintain data describing what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment.

Date of Government Version: 03/31/2025
Date Data Arrived at EDR: 04/02/2025
Date Made Active in Reports: 05/05/2025
Number of Days to Update: 33

Source: Environmental Protection Agency
Telephone: 703-603-8895
Last EDR Contact: 04/02/2025
Next Scheduled EDR Contact: 07/14/2025
Data Release Frequency: Varies

PFAS FEDERAL SITES: Federal Sites PFAS Information

Several federal entities, such as the federal Superfund program, Department of Defense, National Aeronautics and Space Administration, Department of Transportation, and Department of Energy provided information for sites with known or suspected detections at federal facilities.

Date of Government Version: 03/31/2025
Date Data Arrived at EDR: 04/02/2025
Date Made Active in Reports: 05/05/2025
Number of Days to Update: 33

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/02/2025
Next Scheduled EDR Contact: 07/14/2025
Data Release Frequency: Varies

PFAS TRIS: List of PFAS Added to the TRI

Section 7321 of the National Defense Authorization Act for Fiscal Year 2020 (NDAA) immediately added certain per- and polyfluoroalkyl substances (PFAS) to the list of chemicals covered by the Toxics Release Inventory (TRI) under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) and provided a framework for additional PFAS to be added to TRI on an annual basis.

Date of Government Version: 03/07/2025
Date Data Arrived at EDR: 04/02/2025
Date Made Active in Reports: 05/05/2025
Number of Days to Update: 33

Source: Environmental Protection Agency
Telephone: 202-566-0250
Last EDR Contact: 04/02/2025
Next Scheduled EDR Contact: 07/14/2025
Data Release Frequency: Varies

PFAS TSCA: PFAS Manufacture and Imports Information

EPA issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. EPA publishes non-confidential business information (non-CBI) and includes descriptive information about each site, corporate parent, production volume, other manufacturing information, and processing and use information.

Date of Government Version: 03/31/2025
Date Data Arrived at EDR: 04/02/2025
Date Made Active in Reports: 05/05/2025
Number of Days to Update: 33

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/02/2025
Next Scheduled EDR Contact: 07/14/2025
Data Release Frequency: Varies

PFAS RCRA MANIFEST: PFAS Transfers Identified In the RCRA Database Listing

To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: PFAS, PFOA, PFOS, PERFL, AFFF, GENX, GEN-X (plus the VT waste codes). These keywords were searched for in the following text fields: Manifest handling instructions (MANIFEST_HANDLING_INSTR), Non-hazardous waste description (NON_HAZ_WASTE_DESCRIPTION), DOT printed information (DOT_PRINTED_INFORMATION), Waste line handling instructions (WASTE_LINE_HANDLING_INSTR), Waste residue comments (WASTE_RESIDUE_COMMENTS).

Date of Government Version: 03/23/2025
Date Data Arrived at EDR: 04/02/2025
Date Made Active in Reports: 05/05/2025
Number of Days to Update: 33

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/02/2025
Next Scheduled EDR Contact: 07/14/2025
Data Release Frequency: Varies

PFAS ATSDR: PFAS Contamination Site Location Listing

PFAS contamination site locations from the Department of Health & Human Services, Center for Disease Control & Prevention. ATSDR is involved at a number of PFAS-related sites, either directly or through assisting state and federal partners. As of now, most sites are related to drinking water contamination connected with PFAS production facilities or fire training areas where aqueous film-forming firefighting foam (AFFF) was regularly used.

Date of Government Version: 06/24/2020
Date Data Arrived at EDR: 03/17/2021
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 601

Source: Department of Health & Human Services
Telephone: 202-741-5770
Last EDR Contact: 04/17/2025
Next Scheduled EDR Contact: 08/04/2025
Data Release Frequency: Varies

PFAS WQP: Ambient Environmental Sampling for PFAS

The Water Quality Portal (WQP) is a part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations and individuals submit project details and sampling results to this public repository. The information is commonly used for research and assessments of environmental quality.

Date of Government Version: 12/13/2024
Date Data Arrived at EDR: 01/02/2025
Date Made Active in Reports: 01/10/2025
Number of Days to Update: 8

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/02/2025
Next Scheduled EDR Contact: 07/14/2025
Data Release Frequency: Varies

PFAS PROJECT: NORTHEASTERN UNIVERSITY PFAS PROJECT

The PFAS Contamination Site Tracker records qualitative and quantitative data from each site in a chart, specifically examining discovery, contamination levels, government response, litigation, health impacts, media coverage, and community characteristics. All data presented in the chart were extracted from government websites, such as state health departments or the Environmental Protection Agency, and news articles.

Date of Government Version: 05/19/2023
Date Data Arrived at EDR: 04/05/2024
Date Made Active in Reports: 06/06/2024
Number of Days to Update: 62

Source: Social Science Environmental Health Research Institute
Telephone: N/A
Last EDR Contact: 03/06/2025
Next Scheduled EDR Contact: 06/16/2025
Data Release Frequency: Varies

PFAS NPDES: Clean Water Act Discharge Monitoring Information

Any discharger of pollutants to waters of the United States from a point source must have a National Pollutant Discharge Elimination System (NPDES) permit. The process for obtaining limits involves the regulated entity (permittee) disclosing releases in a NPDES permit application and the permitting authority (typically the state but sometimes EPA) deciding whether to require monitoring or monitoring with limits. Caveats and Limitations: Less than half of states have required PFAS monitoring for at least one of their permittees and fewer states have established PFAS effluent limits for permittees. New rulemakings have been initiated that may increase the number of facilities monitoring for PFAS in the future.

Date of Government Version: 12/30/2024
Date Data Arrived at EDR: 01/02/2025
Date Made Active in Reports: 01/14/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/02/2025
Next Scheduled EDR Contact: 07/14/2025
Data Release Frequency: Varies

PFAS ECHO: Facilities in Industries that May Be Handling PFAS Listing

Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

Date of Government Version: 12/30/2024
Date Data Arrived at EDR: 01/02/2025
Date Made Active in Reports: 01/10/2025
Number of Days to Update: 8

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/02/2025
Next Scheduled EDR Contact: 07/14/2025
Data Release Frequency: Varies

PFAS ECHO FIRE TRAIN: Facilities in Industries that May Be Handling PFAS Listing

A list of fire training sites was added to the Industry Sectors dataset using a keyword search on the permitted facilitys name to identify sites where fire-fighting foam may have been used in training exercises. Additionally, you may view an example spreadsheet of the subset of fire training facility data, as well as the keywords used in selecting or deselecting a facility for the subset. as well as the keywords used in selecting or deselecting a facility for the subset. These keywords were tested to maximize accuracy in selecting facilities that may use fire-fighting foam in training exercises, however, due to the lack of a required reporting field in the data systems for designating fire training sites, this methodology may not identify all fire training sites or may potentially misidentify them.

Date of Government Version: 12/30/2024
Date Data Arrived at EDR: 01/02/2025
Date Made Active in Reports: 01/10/2025
Number of Days to Update: 8

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/02/2025
Next Scheduled EDR Contact: 07/14/2025
Data Release Frequency: Varies

PFAS PT 139 AIRPORT: All Certified Part 139 Airports PFAS Information Listing

Since July 1, 2006, all certified part 139 airports are required to have fire-fighting foam onsite that meet military specifications (MIL-F-24385) (14 CFR 139.317). To date, these military specification fire-fighting foams are fluorinated and have been historically used for training and extinguishing. The 2018 FAA Reauthorization Act has a provision stating that no later than October 2021, FAA shall not require the use of fluorinated AFFF. This provision does not prohibit the use of fluorinated AFFF at Part 139 civilian airports; it only prohibits FAA from mandating its use. The Federal Aviation Administration?s document AC 150/5210-6D - Aircraft Fire Extinguishing Agents provides guidance on Aircraft Fire Extinguishing Agents, which includes Aqueous Film Forming Foam (AFFF).

Date of Government Version: 12/30/2024
Date Data Arrived at EDR: 01/02/2025
Date Made Active in Reports: 01/10/2025
Number of Days to Update: 8

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/02/2025
Next Scheduled EDR Contact: 07/14/2025
Data Release Frequency: Varies

AQUEOUS FOAM NRC: Aqueous Foam Related Incidents Listing

The National Response Center (NRC) serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. The spreadsheets posted to the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the ?Material Involved? or ?Incident Description? fields.

Date of Government Version: 03/24/2025
Date Data Arrived at EDR: 04/02/2025
Date Made Active in Reports: 04/29/2025
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 202-267-2675
Last EDR Contact: 04/02/2025
Next Scheduled EDR Contact: 07/14/2025
Data Release Frequency: Varies

PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 03/27/2025
Next Scheduled EDR Contact: 07/14/2025
Data Release Frequency: Varies

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 12/16/2016
Date Data Arrived at EDR: 01/06/2017
Date Made Active in Reports: 03/10/2017
Number of Days to Update: 63

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 03/27/2025
Next Scheduled EDR Contact: 07/14/2025
Data Release Frequency: No Update Planned

BIOSOLIDS: ICIS-NPDES Biosolids Facility Data

The data reflects compliance information about facilities in the biosolids program.

Date of Government Version: 01/12/2025
Date Data Arrived at EDR: 01/14/2025
Date Made Active in Reports: 03/20/2025
Number of Days to Update: 65

Source: Environmental Protection Agency
Telephone: 202-564-4700
Last EDR Contact: 04/15/2025
Next Scheduled EDR Contact: 07/28/2025
Data Release Frequency: Varies

UST FINDER RELEASE: UST Finder Releases Database

US EPA's UST Finder data is a national composite of leaking underground storage tanks. This data contains information about, and locations of, leaking underground storage tanks. Data was collected from state sources and standardized into a national profile by EPA's Office of Underground Storage Tanks, Office of Research and Development, and the Association of State and Territorial Solid Waste Management Officials.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 10/31/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 79

Source: Environmental Protecton Agency
Telephone: 202-564-0394
Last EDR Contact: 05/08/2025
Next Scheduled EDR Contact: 08/18/2025
Data Release Frequency: Semi-Annually

UST FINDER: UST Finder Database

EPA developed UST Finder, a web map application containing a comprehensive, state-sourced national map of underground storage tank (UST) and leaking UST (LUST) data. It provides the attributes and locations of active and closed USTs, UST facilities, and LUST sites from states and from Tribal lands and US territories . UST Finder contains information about proximity of UST facilities and LUST sites to: surface and groundwater public drinking water protection areas; estimated number of private domestic wells and number of people living nearby; and flooding and wildfires.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 10/04/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 106

Source: Environmental Protection Agency
Telephone: 202-564-0394
Last EDR Contact: 05/08/2025
Next Scheduled EDR Contact: 08/18/2025
Data Release Frequency: Varies

E MANIFEST: Hazardous Waste Electronic Manifest System

EPA established a national system for tracking hazardous waste shipments electronically. This system, known as ?e-Manifest,? will modernize the nation?s cradle-to-grave hazardous waste tracking process while saving valuable time, resources, and dollars for industry and states.

Date of Government Version: 02/17/2025
Date Data Arrived at EDR: 02/19/2025
Date Made Active in Reports: 03/14/2025
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: 833-501-6826
Last EDR Contact: 03/18/2025
Next Scheduled EDR Contact: 06/30/2025
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Environmental Quality Board in Puerto Rico.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/04/2014
Number of Days to Update: 187

Source: Environmental Quality Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 03/27/2025
Next Scheduled EDR Contact: 07/14/2025
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/18/2022
Number of Days to Update: 80

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/07/2025
Next Scheduled EDR Contact: 08/25/2025
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

MUNICIPAL PARCEL
BARRANCAS WARD, NUEVO BARRANQUITAS SECTOR, CARR. 1
BARRANQUITAS, PR 00794

TARGET PROPERTY COORDINATES

Latitude (North):	18.191701 - 18° 11' 30.12''
Longitude (West):	66.305955 - 66° 18' 21.44''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	784978.2
UTM Y (Meters):	2013366.4
Elevation:	2106 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	12367773 BARRANQUITAS, PR
Version Date:	2018

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

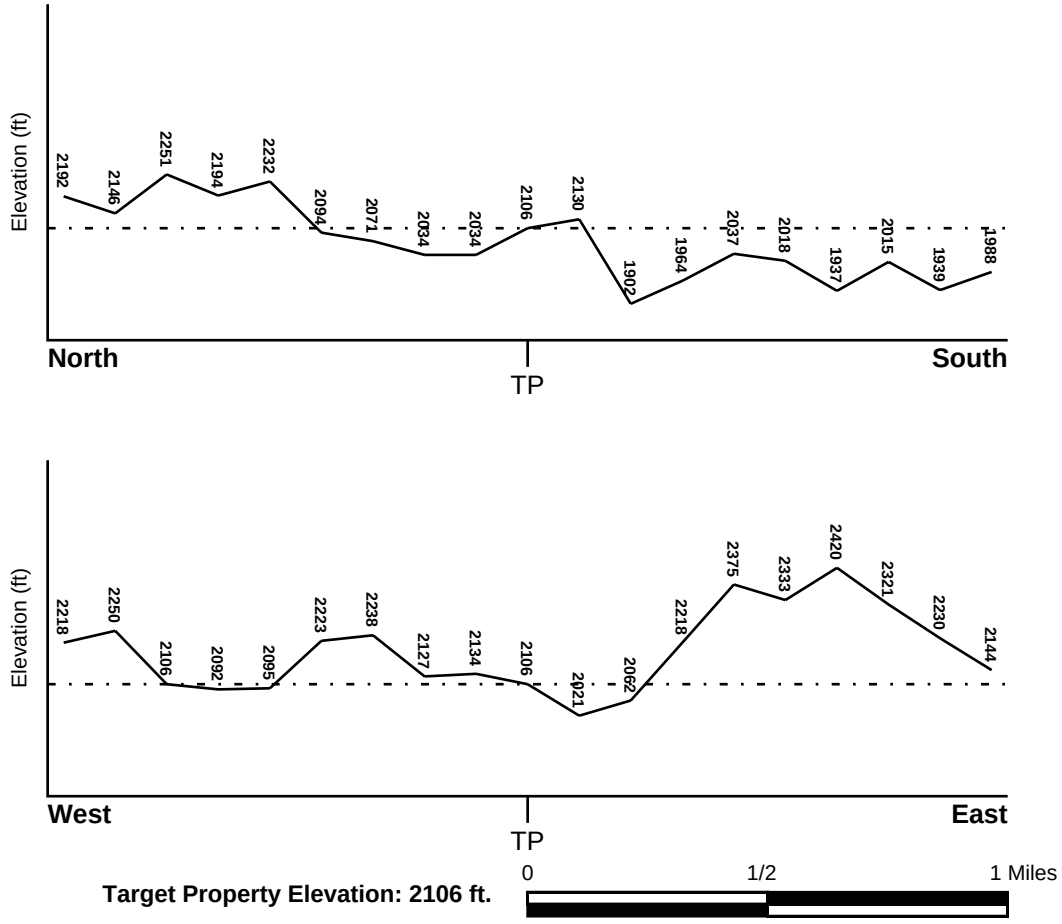
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General South

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Target Property Elevation: 2106 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
7200000170B	FEMA Q3 Flood data

Additional Panels in search area:	FEMA Source Type
7200000169B	FEMA Q3 Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
NOT AVAILABLE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era: -
System: -
Series: -
Code: N/A *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: -

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name: NARANJITO

Soil Surface Texture: silty clay loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: HIGH

Depth to Bedrock Min: > 29 inches

Depth to Bedrock Max: > 45 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	7 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 2.00 Min: 0.60	Max: 5.50 Min: 3.60
2	7 inches	30 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Elastic silt.	Max: 2.00 Min: 0.60	Max: 5.50 Min: 3.60
3	30 inches	38 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 2.00 Min: 0.60	Max: 5.50 Min: 3.60
4	38 inches	42 inches	weathered bedrock	Not reported	Not reported	Max: 0.60 Min: 0.20	Max: 0.00 Min: 0.00

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: clay

Surficial Soil Types: clay

Shallow Soil Types: silty clay

Deeper Soil Types: silty clay loam
clay
unweathered bedrock
fragmental material

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles

FEDERAL USGS WELL INFORMATION

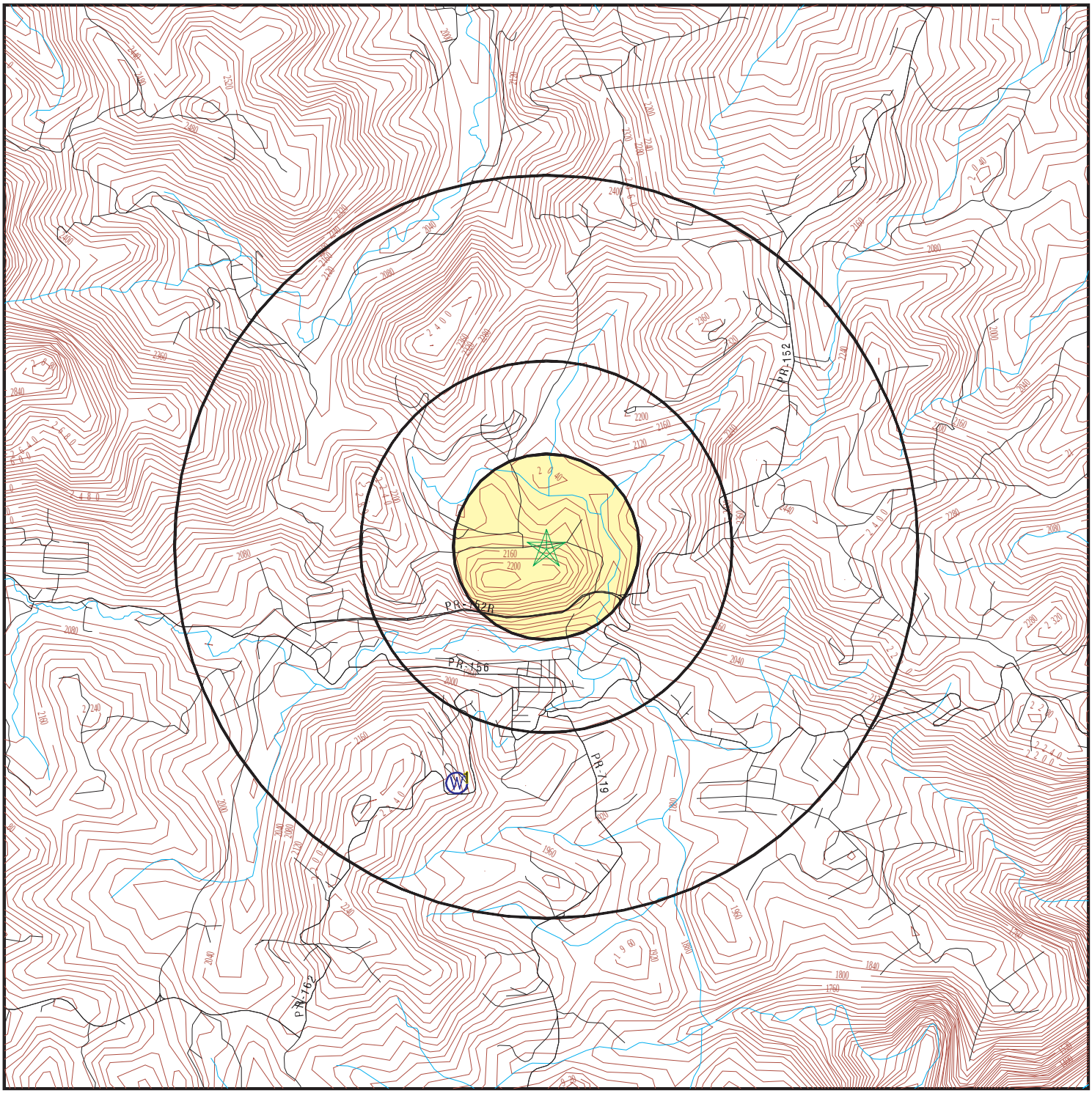
MAP ID	WELL ID	LOCATION FROM TP
1	USGS40001044443	1/2 - 1 Mile SSW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

PHYSICAL SETTING SOURCE MAP - 7986065.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

0 1/4 1/2 1 Miles

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location

N

SITE NAME:	MUNICIPAL PARCEL	CLIENT:	Diatom Environmental Services, LLC
ADDRESS:	Barrancas Ward, Nuevo Barranquitas Sector, Carr. 1 Barranquitas PR 00794	CONTACT:	Javier Velez Arocho
		INQUIRY #:	7986065.2s
LAT/LONG:	18.191701 / 66.305955	DATE:	May 12, 2025 5:02 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
1 **SSW** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40001044443**

Organization ID:	USGS-PR		
Organization Name:	USGS Puerto Rico Water Science Center		
Monitor Location:	CAR WELL, BARRANQUITAS, PR		
Type:	Well	Description:	Not Reported
HUC:	21010005	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Not Reported
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	1939	Well Depth:	88
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

RADON

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

STREET AND ADDRESS INFORMATION

MUNICIPAL PARCEL
Barrancas Ward, Nuevo Barranquitas Sector, Carr. 1
Barranquitas, PR 00794

Inquiry Number: 7986065.2s
May 12, 2025

EDR Summary Radius Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527 - 21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E2247 - 16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E1528 - 22) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

BARRANCAS WARD, NUEVO BARRANQUITAS SECTOR, CARR. 1
BARRANQUITAS, PR 00794

COORDINATES

Latitude (North):	18.1917010 - 18° 11' 30.12''
Longitude (West):	66.3059550 - 66° 18' 21.43''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	784978.2
UTM Y (Meters):	2013366.4
Elevation:	2106 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property:	TP
Source:	U.S. Geological Survey

MAPPED SITES SUMMARY

Target Property Address:
BARRANCAS WARD, NUEVO BARRANQUITAS SECTOR, CARR. 1
BARRANQUITAS, PR 00794

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	ULSAR INTERNATIONAL	ST#1, HONDURAS WARD,	SEMS-ARCHIVE	Lower	1392, 0.264, SW

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

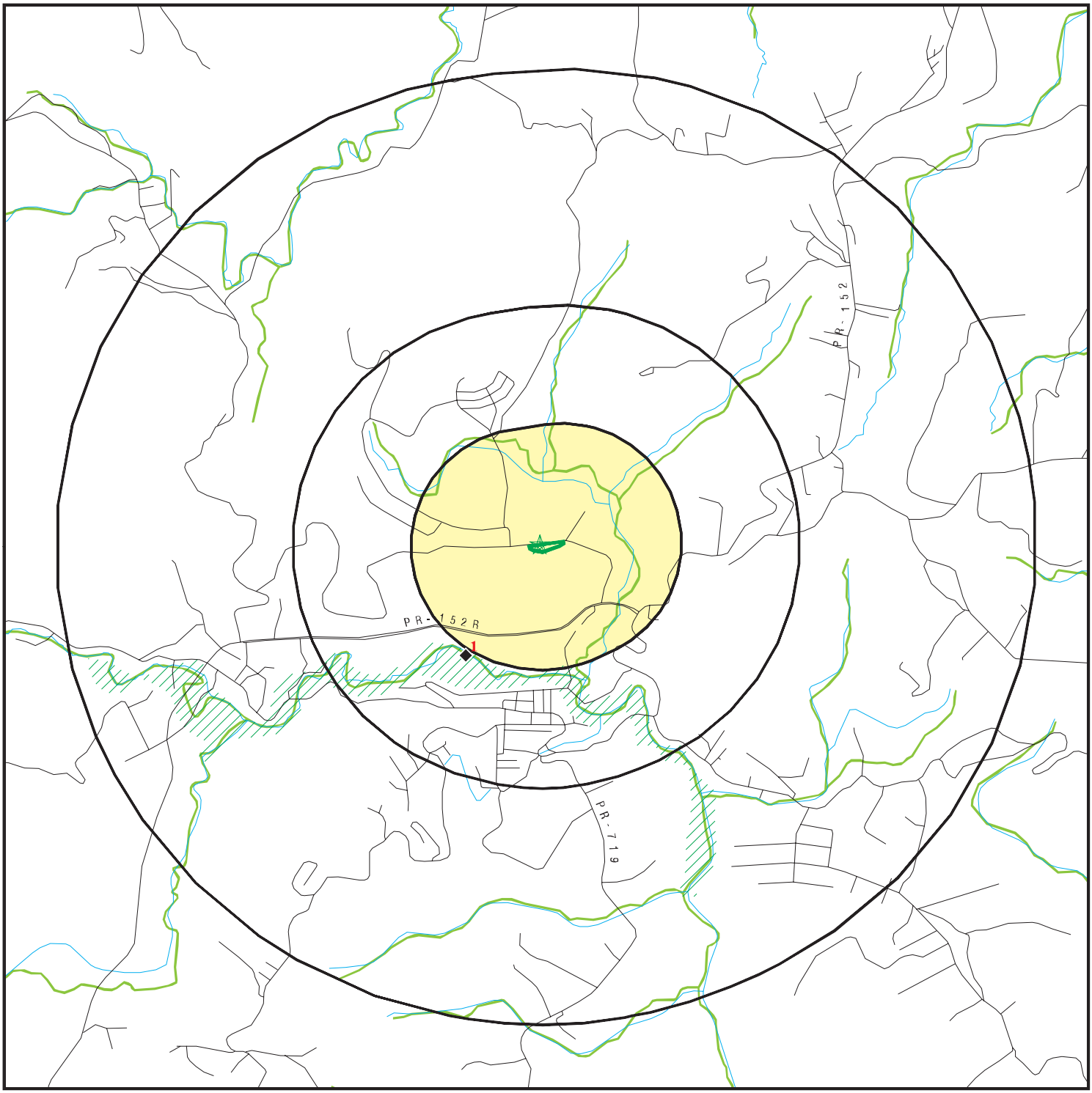
Unmappable (orphan) sites are not considered in the foregoing analysis.
SEMS-ARCHIVE: A review of the SEMS-ARCHIVE list, as provided by EDR, and dated 03/27/2025 has revealed that there is 1 SEMS-ARCHIVE site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
ULSAR INTERNATIONAL Site ID: 0202641 EPA Id: PRD982276404	ST#1, HONDURAS WARD,	SW 1/4 - 1/2 (0.264 mi.)	1	8

Count: 1 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
BARRANQUITAS	S105421736	PAPIRIN S/S	CARR 771 KM 2.5 BO. BARRANCAS		LUST

OVERVIEW MAP - 7986065.2S



Target Property
Sites at elevations higher than or equal to the target property
Sites at elevations lower than the target property
Manufactured Gas Plants
National Priority List Sites
Dept. Defense Sites

0 1/4 1/2 1 Miles

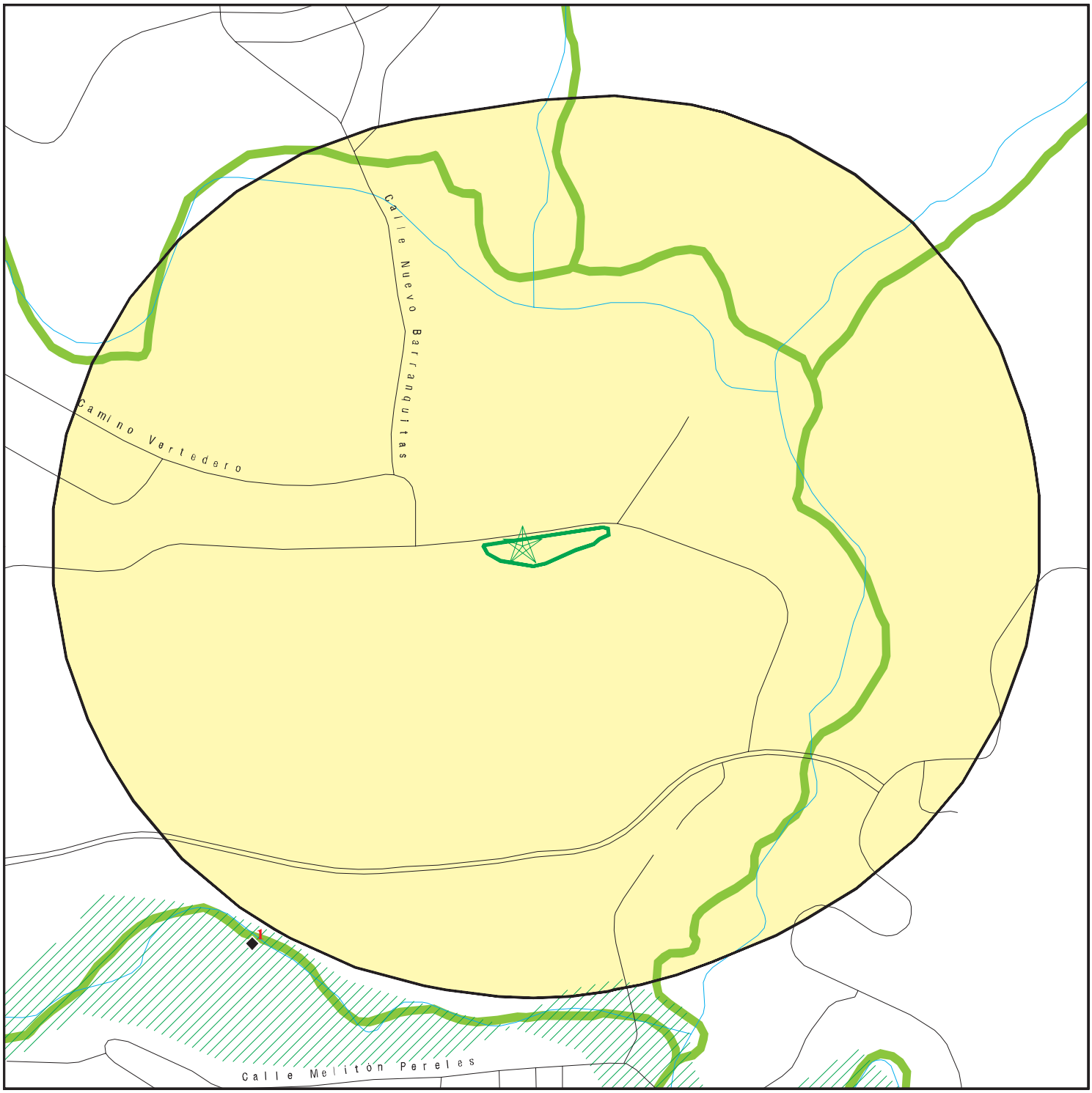
Indian Reservations BIA
Special Flood Hazard Area (1%)
0.2% Annual Chance Flood Hazard
National Wetland Inventory

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	MUNICIPAL PARCEL	CLIENT:	Diatom Environmental Services, LLC
ADDRESS:	Barrancas Ward, Nuevo Barranquitas Sector, Carr. 1 Barranquitas PR 00794	CONTACT:	Javier Velez Arocho
LAT/LONG:	18.191701 / 66.305955	INQUIRY #:	7986065.2s
		DATE:	May 12, 2025 5:02 pm

DETAIL MAP - 7986065.2S



0 1/16 1/8 1/4 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	MUNICIPAL PARCEL	CLIENT:	Diatom Environmental Services, LLC
ADDRESS:	Barrancas Ward, Nuevo Barranquitas Sector, Carr. 1 Barranquitas PR 00794	CONTACT:	Javier Velez Arocho
LAT/LONG:	18.191701 / 66.305955	INQUIRY #:	7986065.2s
		DATE:	May 12, 2025 5:02 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Lists of Federal NPL (Superfund) sites								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Lists of Federal Delisted NPL sites								
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	0.500		0	0	1	NR	NR	1
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.000		0	0	0	0	NR	0
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA generators								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
Lists of state- and tribal hazardous waste facilities								
SHWS	N/A		N/A	N/A	N/A	N/A	N/A	N/A
Lists of state and tribal leaking storage tanks								
LUST	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
Lists of state and tribal registered storage tanks								
FEMA UST	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
UST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
Lists of state and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	0.001		0	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
MINES MRDS	0.250		0	0	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
PFAS NPL	0.250		0	0	NR	NR	NR	0
PFAS FEDERAL SITES	0.250		0	0	NR	NR	NR	0
PFAS TSCA	0.250		0	0	NR	NR	NR	0
PFAS TRIS	0.250		0	0	NR	NR	NR	0
PFAS RCRA MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS ATSDR	0.250		0	0	NR	NR	NR	0
PFAS WQP	0.250		0	0	NR	NR	NR	0
PFAS PROJECT	0.250		0	0	NR	NR	NR	0
PFAS NPDES	0.250		0	0	NR	NR	NR	0
PFAS ECHO	0.250		0	0	NR	NR	NR	0
PFAS ECHO FIRE TRAIN	0.250		0	0	NR	NR	NR	0
PFAS PT 139 AIRPORT	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM NRC	0.250		0	0	NR	NR	NR	0
BIOSOLIDS	0.001		0	NR	NR	NR	NR	0
UST FINDER RELEASE	0.500		0	0	0	NR	NR	0
UST FINDER	0.250		0	0	NR	NR	NR	0
E MANIFEST	0.250		0	0	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	0	0	1	0	0	1

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

N/A = This State does not maintain a SHWS list. See the Federal CERCLIS list.

Map ID / Direction / Distance / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
1 **SW** **1/4-1/2** **0.264 mi.** **1392 ft.** **Relative:** **Lower**	**ULSAR INTERNATIONAL INC.** **ST#1, HONDURAS WARD, EL PORTON SECTOR** **BARRANQUITAS, PR 00618** **Click here for full text details** **SEMS-ARCHIVE** Site ID 0202641 EPA Id PRD982276404	**SEMS-ARCHIVE**	**1003864256** **PRD982276404**

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
PR	LUST	Leaking Underground Storage Tanks	Environmental Quality Board	09/24/2020	02/09/2021	05/04/2021
PR	RGA LUST	Recovered Government Archive Leaking Underground Storage Tan	Environmental Quality Board		07/01/2013	01/04/2014
PR	SHWS	This state does not maintain a SHWS list. See the Federal CE	Environmental Quality Board			
PR	UST	Underground Storage Tank Facilities	Environmental Quality Board	01/01/2008	03/26/2008	04/23/2008
US	2020 COR ACTION	2020 Corrective Action Program List	Environmental Protection Agency	09/30/2017	05/08/2018	07/20/2018
US	ABANDONED MINES	Abandoned Mines	Department of Interior	12/10/2024	12/11/2024	02/18/2025
US	AQUEOUS FOAM NRC	Aqueous Foam Related Incidents Listing	Environmental Protection Agency	03/24/2025	04/02/2025	04/29/2025
US	BIOSOLIDS	ICIS-NPDES Biosolids Facility Data	Environmental Protection Agency	01/12/2025	01/14/2025	03/20/2025
US	BRS	Biennial Reporting System	EPA/NTIS	12/31/2023	02/19/2025	03/07/2025
US	COAL ASH DOE	Steam-Electric Plant Operation Data	Department of Energy	12/31/2023	10/16/2024	01/14/2025
US	COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	Environmental Protection Agency	01/12/2017	03/05/2019	11/11/2019
US	CONSENT	Superfund (CERCLA) Consent Decrees	Department of Justice, Consent Decree Library	12/31/2024	01/27/2025	04/21/2025
US	CORRACTS	Corrective Action Report	EPA	02/17/2025	02/19/2025	03/06/2025
US	DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations	EPA, Region 9	01/12/2009	05/07/2009	09/21/2009
US	DOCKET HWC	Hazardous Waste Compliance Docket Listing	Environmental Protection Agency	05/06/2021	05/21/2021	08/11/2021
US	DOD	Department of Defense Sites	USGS	06/07/2021	07/13/2021	03/09/2022
US	DOT OPS	Incident and Accident Data	Department of Transporation, Office of Pipeli	01/10/2025	01/22/2025	04/21/2025
US	Delisted NPL	National Priority List Deletions	EPA	03/27/2025	04/01/2025	04/24/2025
US	E MANIFEST	Hazardous Waste Electronic Manifest System	Environmental Protection Agency	02/17/2025	02/19/2025	03/14/2025
US	ECHO	Enforcement & Compliance History Information	Environmental Protection Agency	12/21/2024	12/27/2024	01/10/2025
US	EDR Hist Auto	EDR Exclusive Historical Auto Stations	EDR, Inc.			
US	EDR Hist Cleaner	EDR Exclusive Historical Cleaners	EDR, Inc.			
US	EDR MGP	EDR Proprietary Manufactured Gas Plants	EDR, Inc.			
US	EPA WATCH LIST	EPA Watch List	Environmental Protection Agency	08/30/2013	03/21/2014	06/17/2014
US	ERNS	Emergency Response Notification System	National Response Center, United States Coast	12/03/2024	12/11/2024	02/18/2025
US	FEDERAL FACILITY	Federal Facility Site Information listing	Environmental Protection Agency	11/20/2024	12/18/2024	12/20/2024
US	FEDLAND	Federal and Indian Lands	U.S. Geological Survey	04/02/2018	04/11/2018	11/06/2019
US	FEMA UST	Underground Storage Tank Listing	FEMA	04/08/2025	04/23/2025	04/24/2025
US	FINDS	Facility Index System/Facility Registry System	EPA	11/11/2024	11/20/2024	02/18/2025
US	FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA/Office of Prevention, Pesticides and Toxi	04/09/2009	04/16/2009	05/11/2009
US	FTTS INSP	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA	04/09/2009	04/16/2009	05/11/2009
US	FUDS	Formerly Used Defense Sites	U.S. Army Corps of Engineers	01/30/2025	02/11/2025	04/24/2025
US	FUELS PROGRAM	EPA Fuels Program Registered Listing	EPA	02/13/2025	02/13/2025	04/29/2025
US	FUSRAP	Formerly Utilized Sites Remedial Action Program	Department of Energy	03/03/2023	03/03/2023	06/09/2023
US	HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HIST FTTS INSP	FIFRA/TSCA Tracking System Inspection & Enforcement Case Lis	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HMIRS	Hazardous Materials Information Reporting System	U.S. Department of Transportation	12/10/2024	12/11/2024	02/27/2025
US	ICIS	Integrated Compliance Information System	Environmental Protection Agency	11/18/2016	11/23/2016	02/10/2017
US	IHS OPEN DUMPS	Open Dumps on Indian Land	Department of Health & Human Serivces, Indian	02/07/2024	11/13/2024	11/19/2024
US	INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land	EPA Region 1	11/18/2024	01/16/2025	04/07/2025
US	INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land	EPA Region 10	11/18/2024	01/16/2025	04/07/2025
US	INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land	EPA Region 4	11/18/2024	01/16/2025	04/07/2025
US	INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land	EPA, Region 5	11/18/2024	01/16/2025	04/07/2025
US	INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land	EPA Region 6	11/18/2024	01/16/2025	04/07/2025
US	INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land	EPA Region 7	01/07/2025	01/16/2025	04/07/2025
US	INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land	EPA Region 8	11/18/2024	01/16/2025	04/07/2025
US	INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land	Environmental Protection Agency	01/07/2025	01/16/2025	04/07/2025

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	INDIAN ODI	Report on the Status of Open Dumps on Indian Lands	Environmental Protection Agency	12/31/1998	12/03/2007	01/24/2008
US	INDIAN RESERV	Indian Reservations	USGS	12/31/2014	07/14/2015	01/10/2017
US	INDIAN UST R1	Underground Storage Tanks on Indian Land	EPA, Region 1	11/18/2024	01/16/2025	04/07/2025
US	INDIAN UST R10	Underground Storage Tanks on Indian Land	EPA Region 10	11/18/2024	01/16/2025	04/07/2025
US	INDIAN UST R4	Underground Storage Tanks on Indian Land	EPA Region 4	11/08/2024	01/16/2025	04/07/2025
US	INDIAN UST R5	Underground Storage Tanks on Indian Land	EPA Region 5	11/18/2024	01/16/2025	04/07/2025
US	INDIAN UST R6	Underground Storage Tanks on Indian Land	EPA Region 6	11/18/2024	01/16/2025	04/07/2025
US	INDIAN UST R7	Underground Storage Tanks on Indian Land	EPA Region 7	01/07/2025	01/16/2025	04/07/2025
US	INDIAN UST R8	Underground Storage Tanks on Indian Land	EPA Region 8	11/18/2024	01/16/2025	04/07/2025
US	INDIAN UST R9	Underground Storage Tanks on Indian Land	EPA Region 9	10/15/2024	01/16/2025	04/07/2025
US	INDIAN VCP R1	Voluntary Cleanup Priority Listing	EPA, Region 1	07/27/2015	09/29/2015	02/18/2016
US	INDIAN VCP R7	Voluntary Cleanup Priority Lisitng	EPA, Region 7	03/20/2008	04/22/2008	05/19/2008
US	LEAD SMELTER 1	Lead Smelter Sites	Environmental Protection Agency	03/27/2025	04/01/2025	04/24/2025
US	LEAD SMELTER 2	Lead Smelter Sites	American Journal of Public Health	04/05/2001	10/27/2010	12/02/2010
US	LIENS 2	CERCLA Lien Information	Environmental Protection Agency	03/27/2025	04/01/2025	04/24/2025
US	LUCIS	Land Use Control Information System	Department of the Navy	11/11/2024	11/25/2024	02/18/2025
US	MINES MRDS	Mineral Resources Data System	USGS	06/04/2024	11/22/2024	02/18/2025
US	MINES VIOLATIONS	MSHA Violation Assessment Data	DOL, Mine Safety & Health Admi	02/19/2025	02/21/2025	03/20/2025
US	MLTS	Material Licensing Tracking System	Nuclear Regulatory Commission	10/12/2024	10/17/2024	11/19/2024
US	NPL	National Priority List	EPA	03/27/2025	04/01/2025	04/24/2025
US	NPL LIENS	Federal Superfund Liens	EPA	10/15/1991	02/02/1994	03/30/1994
US	ODI	Open Dump Inventory	Environmental Protection Agency	06/30/1985	08/09/2004	09/17/2004
US	PADS	PCB Activity Database System	EPA	07/01/2024	10/02/2024	01/10/2025
US	PCB TRANSFORMER	PCB Transformer Registration Database	Environmental Protection Agency	09/13/2019	11/06/2019	02/10/2020
US	PCS	Permit Compliance System	EPA, Office of Water	12/16/2016	01/06/2017	03/10/2017
US	PCS ENF	Enforcement data	EPA	12/31/2014	02/05/2015	03/06/2015
US	PFAS ATSDR	PFAS Contamination Site Location Listing	Department of Health & Human Services	06/24/2020	03/17/2021	11/08/2022
US	PFAS ECHO	Facilities in Industries that May Be Handling PFAS Listing	Environmental Protection Agency	12/30/2024	01/02/2025	01/10/2025
US	PFAS ECHO FIRE TRAIN	Facilities in Industries that May Be Handling PFAS Listing	Environmental Protection Agency	12/30/2024	01/02/2025	01/10/2025
US	PFAS FEDERAL SITES	Federal Sites PFAS Information	Environmental Protection Agency	03/31/2025	04/02/2025	05/05/2025
US	PFAS NPDES	Clean Water Act Discharge Monitoring Information	Environmental Protection Agency	12/30/2024	01/02/2025	01/14/2025
US	PFAS NPL	Superfund Sites with PFAS Detections Information	Environmental Protection Agency	03/31/2025	04/02/2025	05/05/2025
US	PFAS PROJECT	NORTHEASTERN UNIVERSITY PFAS PROJECT	Social Science Environmental Health Research	05/19/2023	04/05/2024	06/06/2024
US	PFAS PT 139 AIRPORT	All Certified Part 139 Airports PFAS Information Listing	Environmental Protection Agency	12/30/2024	01/02/2025	01/10/2025
US	PFAS RCRA MANIFEST	PFAS Transfers Identified In the RCRA Database Listing	Environmental Protection Agency	03/23/2025	04/02/2025	05/05/2025
US	PFAS TRIS	List of PFAS Added to the TRI	Environmental Protection Agency	03/07/2025	04/02/2025	05/05/2025
US	PFAS TSCA	PFAS Manufacture and Imports Information	Environmental Protection Agency	03/31/2025	04/02/2025	05/05/2025
US	PFAS WQP	Ambient Environmental Sampling for PFAS	Environmental Protection Agency	12/13/2024	01/02/2025	01/10/2025
US	PRP	Potentially Responsible Parties	EPA	02/26/2025	03/03/2025	04/07/2025
US	Proposed NPL	Proposed National Priority List Sites	EPA	03/27/2025	04/01/2025	04/24/2025
US	RAATS	RCRA Administrative Action Tracking System	EPA	04/17/1995	07/03/1995	08/07/1995
US	RADINFO	Radiation Information Database	Environmental Protection Agency	07/01/2019	07/01/2019	09/23/2019
US	RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated	Environmental Protection Agency	02/17/2025	02/19/2025	03/06/2025
US	RCRA-LQG	RCRA - Large Quantity Generators	Environmental Protection Agency	02/17/2025	02/19/2025	03/06/2025
US	RCRA-SQG	RCRA - Small Quantity Generators	Environmental Protection Agency	02/17/2025	02/19/2025	03/06/2025
US	RCRA-TSDF	RCRA - Treatment, Storage and Disposal	Environmental Protection Agency	02/17/2025	02/19/2025	03/06/2025
US	RCRA-VSQG	RCRA - Very Small Quantity Generators (Formerly Conditionall	Environmental Protection Agency	02/17/2025	02/19/2025	03/06/2025

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	RMP	Risk Management Plans	Environmental Protection Agency	01/01/2025	01/17/2025	04/07/2025
US	ROD	Records Of Decision	EPA	01/29/2025	02/03/2025	02/27/2025
US	SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	Environmental Protection Agency	07/30/2021	02/03/2023	02/10/2023
US	SEMS	Superfund Enterprise Management System	EPA	03/27/2025	04/01/2025	04/24/2025
US	SEMS-ARCHIVE	Superfund Enterprise Management System Archive	EPA	03/27/2025	04/01/2025	04/24/2025
US	SSTS	Section 7 Tracking Systems	EPA	01/13/2025	01/15/2025	04/07/2025
US	TRIS	Toxic Chemical Release Inventory System	EPA	12/31/2023	02/11/2025	02/18/2025
US	TSCA	Toxic Substances Control Act	EPA	12/31/2020	06/14/2022	03/24/2023
US	UMTRA	Uranium Mill Tailings Sites	Department of Energy	02/12/2025	02/12/2025	02/27/2025
US	US AIRS (AFS)	Aerometric Information Retrieval System Facility Subsystem (	EPA	10/12/2016	10/26/2016	02/03/2017
US	US AIRS MINOR	Air Facility System Data	EPA	10/12/2016	10/26/2016	02/03/2017
US	US BROWNFIELDS	A Listing of Brownfields Sites	Environmental Protection Agency	09/09/2024	09/11/2024	12/06/2024
US	US CDL	Clandestine Drug Labs	Drug Enforcement Administration	12/31/2024	02/20/2025	04/29/2025
US	US ENG CONTROLS	Engineering Controls Sites List	Environmental Protection Agency	01/29/2025	02/18/2025	04/29/2025
US	US FIN ASSUR	Financial Assurance Information	Environmental Protection Agency	02/17/2025	02/19/2025	03/06/2025
US	US HIST CDL	National Clandestine Laboratory Register	Drug Enforcement Administration	12/31/2024	02/20/2025	04/29/2025
US	US INST CONTROLS	Institutional Controls Sites List	Environmental Protection Agency	01/29/2025	02/18/2025	04/29/2025
US	US MINES	Mines Master Index File	Department of Labor, Mine Safety and Health A	02/03/2025	02/18/2025	03/20/2025
US	US MINES 2	Ferrous and Nonferrous Metal Mines Database Listing	USGS	05/02/2024	08/20/2024	10/09/2024
US	US MINES 3	Active Mines & Mineral Plants Database Listing	USGS	04/14/2011	06/08/2011	09/13/2011
US	UST FINDER	UST Finder Database	Environmental Protection Agency	06/08/2023	10/04/2023	01/18/2024
US	UST FINDER RELEASE	UST Finder Releases Database	Environmental Protecton Agency	06/08/2023	10/31/2023	01/18/2024
US	UXO	Unexploded Ordnance Sites	Department of Defense	09/06/2023	09/13/2023	12/11/2023
NJ	NJ MANIFEST	Manifest Information	Department of Environmental Protection	12/31/2018	04/10/2019	05/16/2019
RI	RI MANIFEST	Manifest information	Department of Environmental Management	12/31/2020	11/30/2021	02/18/2022
US	AHA Hospitals	Sensitive Receptor: AHA Hospitals	American Hospital Association, Inc.			
US	Medical Centers	Sensitive Receptor: Medical Centers	Centers for Medicare & Medicaid Services			
US	Nursing Homes	Sensitive Receptor: Nursing Homes	National Institutes of Health			
US	Public Schools	Sensitive Receptor: Public Schools	National Center for Education Statistics			
US	Private Schools	Sensitive Receptor: Private Schools	National Center for Education Statistics			
US	Flood Zones	100-year and 500-year flood zones	Emergency Management Agency (FEMA)			
US	NWI	National Wetlands Inventory	U.S. Fish and Wildlife Service			
US	Topographic Map		U.S. Geological Survey			
US	Oil/Gas Pipelines		Endeavor Business Media			
US	Electric Power Transmission Line Data		Endeavor Business Media			

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date

STREET AND ADDRESS INFORMATION

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

MUNICIPAL PARCEL
BARRANCAS WARD, NUEVO BARRANQUITAS SECTOR, CARR. 1
BARRANQUITAS, PR 00794

TARGET PROPERTY COORDINATES

Latitude (North):	18.191701 - 18° 11' 30.12''
Longitude (West):	66.305955 - 66° 18' 21.44''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	784978.2
UTM Y (Meters):	2013366.4
Elevation:	2106 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	12367773 BARRANQUITAS, PR
Version Date:	2018

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

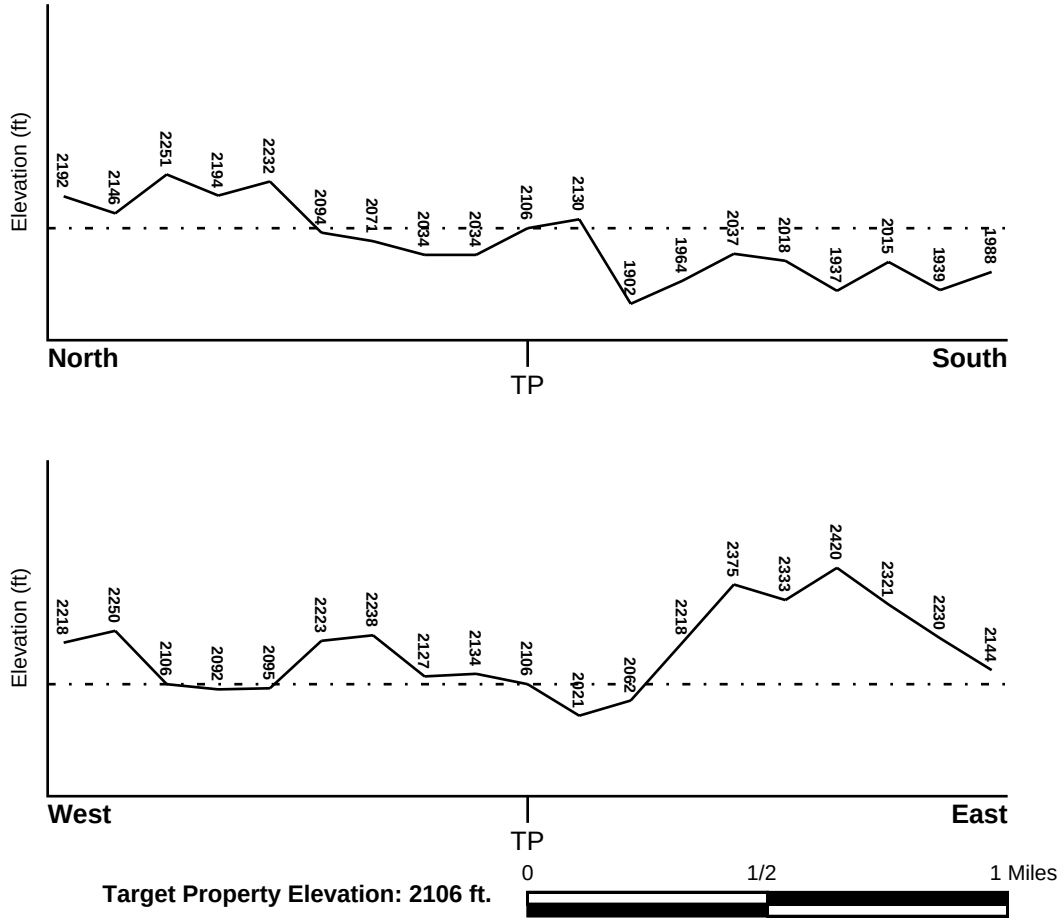
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General South

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Target Property Elevation: 2106 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
7200000170B	FEMA Q3 Flood data

Additional Panels in search area:	FEMA Source Type
7200000169B	FEMA Q3 Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
NOT AVAILABLE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era: -
System: -
Series: -
Code: N/A *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: -

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name: NARANJITO

Soil Surface Texture: silty clay loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: HIGH

Depth to Bedrock Min: > 29 inches

Depth to Bedrock Max: > 45 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	7 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 2.00 Min: 0.60	Max: 5.50 Min: 3.60
2	7 inches	30 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Elastic silt.	Max: 2.00 Min: 0.60	Max: 5.50 Min: 3.60
3	30 inches	38 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 2.00 Min: 0.60	Max: 5.50 Min: 3.60
4	38 inches	42 inches	weathered bedrock	Not reported	Not reported	Max: 0.60 Min: 0.20	Max: 0.00 Min: 0.00

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: clay

Surficial Soil Types: clay

Shallow Soil Types: silty clay

Deeper Soil Types: silty clay loam
clay
unweathered bedrock
fragmental material

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles

FEDERAL USGS WELL INFORMATION

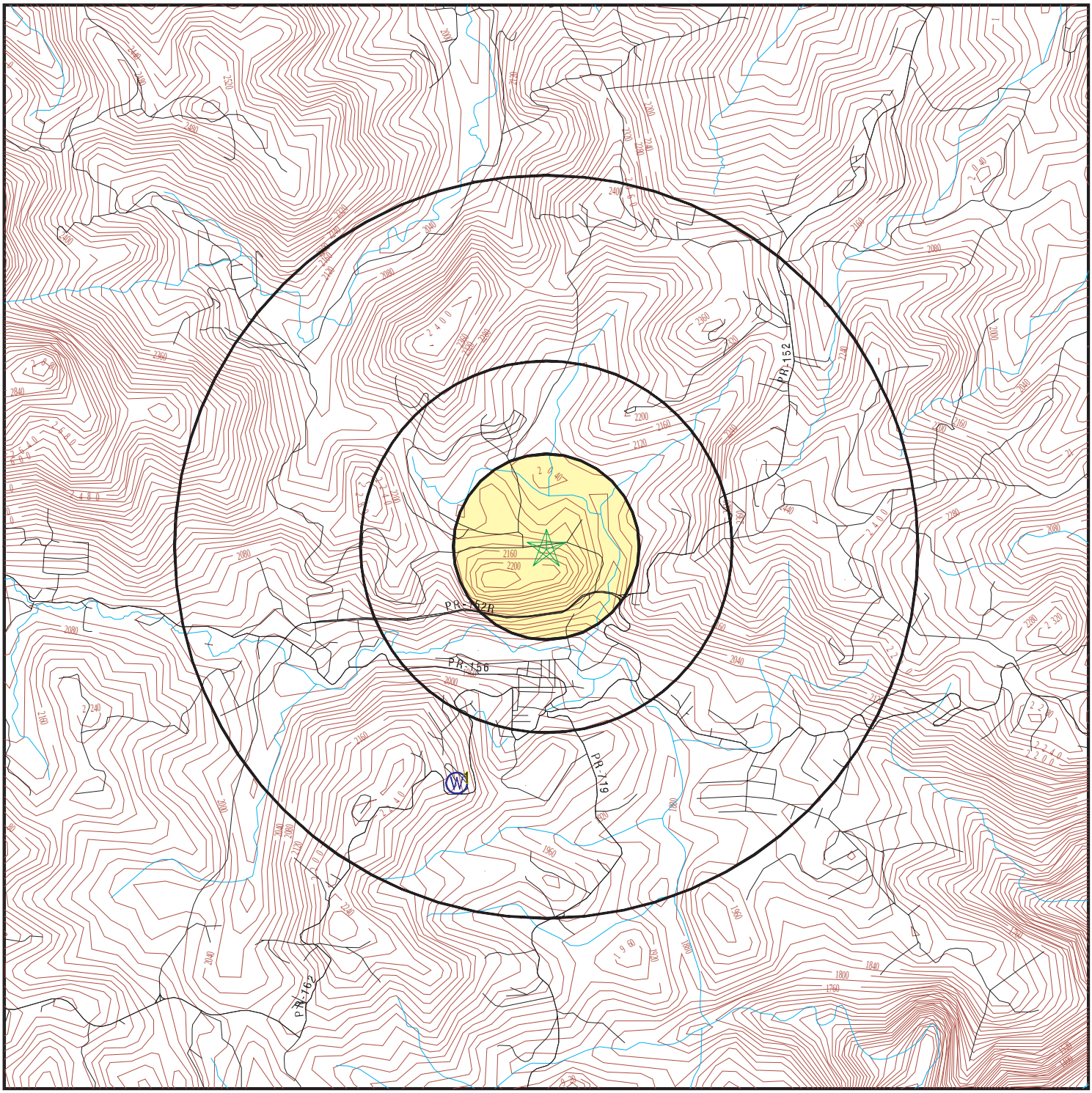
MAP ID	WELL ID	LOCATION FROM TP
1	USGS40001044443	1/2 - 1 Mile SSW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

PHYSICAL SETTING SOURCE MAP - 7986065.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

0 1/4 1/2 1 Miles

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location

N

SITE NAME:	MUNICIPAL PARCEL	CLIENT:	Diatom Environmental Services, LLC
ADDRESS:	Barrancas Ward, Nuevo Barranquitas Sector, Carr. 1 Barranquitas PR 00794	CONTACT:	Javier Velez Arocho
		INQUIRY #:	7986065.2s
LAT/LONG:	18.191701 / 66.305955	DATE:	May 12, 2025 5:02 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
1 SSW 1/2 - 1 Mile Higher	**Click here for full text details**	**FED USGS**	**USGS40001044443**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

RADON

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

STREET AND ADDRESS INFORMATION

Appendix E:

Regulatory File Review

A regulatory agency database search report was obtained from Environmental Data Resources, Inc. (EDR), a third-party environmental database search firm. The Appendix provides a complete copy of the database search report, including the date it was prepared, the date the information was last updated, and the definition of databases searched.

Diatom evaluated the properties listed within the database based on the potential impact of the Subject Property. As part of this process, inferences have been made regarding the likely direction of groundwater flow. Generally, shallow groundwater can be expected to follow the topographical gradient on and around the Subject Property and/or move in the direction of nearby surface water bodies.

ENVIRONMENTAL AGENCY LISTS, SEARCH DISTANCE, LISTINGS

Agency List/Database	Search Radius	Number of Listed Sites
Federal NPL Sites	1.0 mile	0
Federal Delisted NPL Sites	1.0 mile	0
Federal CERCLIS List	0.5 mile	0
Federal CERCLIS NFRAP List	0.5 mile	0
Federal RCRA CORRACTS Facilities	1.0 mile	0
Federal RCRA Non-CORRACTS TSD	0.5 mile	0
Federal RCRA Generators	0.250 mile	0
Federal ERNS	Subject Property	0
State and Tribal - Equivalent NPL	1.0 mile	0
State and Tribal - Equivalent CERCLIS	N/A	N/A
State and Tribal Solid Waste Facilities	0.5 mile	0
State and Tribal Registered Storage Tank Sites	0.250 mile	0
State and Tribal Leaking Storage Tank Sites	0.5 mile	0
State and Tribal registered Storage Tank Sites	0.250	0
State and Tribal Institutional Control/Engineering Control Registries	Subject Property	0
State and Tribal Voluntary Cleanup Sites	0.5 mile	0
State and Tribal Brownfield Sites	0.5 mile	0
EDR High-Risk Historical Records (Hist Auto)	0.125 mile	0

LOCAL/REGIONAL ENVIRONMENTAL RECORDS

Diatom checked the following sources to obtain information about Subject Property's use and/or indicative of RECs in connection with the Subject Property.

Agency Name	Finding
Department of Natural Resources and Environment (DNER)	- None. This include former PR Environmental Quality Board.

SEMS Detail View

Site Information

SITE NAME: ULSAR INTERNATIONAL INC.

Site ID: 0202641

EPA ID: PRD982276404

Site Address Info:

- **STREET ADDRESS**: ST#1, HONDURAS WARD, EL PORTON SECTOR
- **CITY**: BARRANQUITAS
- **STATE**: PR
- **ZIP CODE**: 00618
- **DISTRICT CODE**:
- **COUNTY CODE**: BARRANQUITAS
- **LATITUDE**:
- **LONGITUDE**:
- **FIPS CODE**: 72019
- **REGION CODE**: 02

Additional Info:

- **FEDERAL FACILITY**: N
- **SAA AGREEMENT**: N
- **NPL**
  - **STATUS CODE**: N
  - **STATUS NAME**: Not on the NPL
- **NON-NPL**
  - **STATUS CODE**: NF
  - **STATUS NAME**: NFRAP-Site does not qualify for the NPL based on existing information
  - **DATE**: 1988-03-15 00:00:00
- **ARCHIVED**: Y

Contaminants

No Contaminants Found

Isfpe, psc

Via email: javier@diatomenvironmental.com

August 18, 2025

Javier Vélez Arocho, CESCO
Diatom Environmental Services, LLC
PO Box 2364
Utuado, PR, 00641
Tel. 787.467.8887

Subject: Barranquitas Municipal Solid Waste Landfill – Operational Status and Closure Planning (August 2025)

Dear Javier:

Thank you for your email with questions about the Barranquitas Municipal Solid Waste Landfill in connection with the Phase I Environmental Site Assessment for the proposed Barranquitas Multiuse Center. Below is the requested information regarding the facility.

I. Overview of the Landfill

The Barranquitas Municipal Solid Waste Landfill is an active, municipally owned facility that manages non-hazardous solid waste for the local community. It is operated by the Municipality of Barranquitas under permits issued by the Puerto Rico Department of Natural and Environmental Resources (DNER). For reference, attached are copies of the landfill's permit documents, including a payment receipt for an operating permit renewal.

II. Operations and Compliance

The landfill operates under continuous DNER oversight, and the Municipality is proactively implementing a closure plan. The facility is currently in the final design stage of this plan, with

construction of the closure cap anticipated to begin in the coming years. This project is a major undertaking and is expected to take approximately three (3) to five (5) years to complete, depending on several factors such as continuous funding availability, alignment with central government solid waste management policies, and potential natural events such as hurricanes, earthquakes, or other emergencies that could affect the construction schedule.
It is important to note that the landfill is not under any administrative order from DNER to shut down, cease operations, or restrict waste acceptance. Rather, the Municipality is taking a proactive approach to plan for an orderly closure while continuing to serve the community.

III. Waste Acceptance Guidelines

Waste acceptance at the landfill is strictly limited to **non-hazardous** solid wastes as defined by DNER. The following guidelines apply:

Acceptable Materials

- Non-hazardous solid waste
- Clean, dry soil (free of liquids or contaminants)

Prohibited Materials

- Tires
- Contaminated soils
- Liquids or leaking wastes
- Hazardous or industrial wastes
- Demolition debris with potential asbestos or lead
- Petroleum-contaminated soils
- Gas cylinders or other pressurized containers
- Electronic waste (e-waste)
- Used batteries
- Biological or medical wastes
- Paints and solvents
- Fluorescent lamps and bulbs
- PCB-containing electrical equipment

Contractors or project proponents must coordinate directly with the Municipality's Engineering Office, Office of Finance, Municipal Secretary, or other designated offices to obtain the required paperwork, payment slips, and manifests. These documents provide control of the origin, type, and quantity of waste disposed of at the facility.

IV. Closure Plan Timeline

As noted, the Municipality, with support of several state and federal agencies as well as from engineering consultants and DNER, is finalizing the landfill's closure plan. Construction of the closure cap is expected to start in the coming years and may take three (3) to five (5) years to complete, subject to funding availability, government policy alignment, and unforeseen natural events.

V. Important Note

This letter is provided solely to summarize the landfill's current operations, compliance status, and closure planning as of August 2025. It does not provide conclusions or determinations regarding environmental conditions, such as Recognized Environmental Conditions (RECs) or similar as defined by ASTM.

Please let me know if you need further details or assistance.

Saludos!

Juan Carlos Mercado Torres, PE
Senior Environmental Engineer
ISFPE, PSC

Attachments:

- PGO (2023-476809-PGO-008133-7780699)
- Operación y Radicacion Renovacion IDF-10-0040
- Recibo DRNA

2A Calle Acosta, Caguas, PR, 00725
T: 787.797.8733
info@isfpe.com

Permiso General Para Otras Obras

Forma PGO-014

Sistema de Relleno Sanitario Municipal de Barranquitas

Tipo de Solicitud: Nuevo

Datos Localización

De conformidad con las disposiciones legales y reglamentarias vigentes, se expide el presente Permiso General Para Otras Obras para un predio de terreno ubicado en :

Dirección Física:

Carr. PR-152, Km. 0.68 del Bo. Barrancas Barranquitas, PR , Barranquitas, Puerto Rico, 00794

Número de Catastro:

247-000-006-38

Distrito(s) de Calificación:

DT-G (81%), R-I (7%), C-I (7%), VIAL (3%), CR (1%)

Coordenadas Lambert:

X=213283.64425176 Y=239934.39435400

Dueño(s):

Municipio de Barranquitas
Apartado 250 , Barranquitas, Puerto Rico, , 00794

Contratista:

Braian Ferrer Rodriguez
HC3 BOX 8798 , Barranquitas, Puerto Rico, 00974

Inspector Autorizado:

Juan Mercado Lic. No. 18020
PO BOX 13524 , San Juan, Puerto Rico, 00907

Documento Ambiental:

R-00-18-7

Datos del permiso

Tipo de Proyecto:

Sistema de Relleno Sanitario

Tipo de obra a realizar:

(Otros) - Sistema de Relleno Sanitario

Área Total

Lugar del proyecto:

Componentes de la corteza terrestre

Volumen total a remover: 0.0 metros cúbicos.

Volumen total a rellenar: 0.0 metros cúbicos.

Volumen total a almacenar: 215.0 metros cúbicos.

Volumen total a disponer: 0.0 metros cúbicos.

Volumen total a extraer: 0.0 metros cúbicos.

Desperdicios sólidos

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118933.0 metros cuadrados

Obras a realizarse:

118933.0 metros cuadrados

Fecha estimada

Inicio de obras:

31-12-1976 (dd-mm-yyyy)

Terminación de obras:

29-02-2028 (dd-mm-yyyy)

Volumen total a generar: 0.0 yardas cúbicos.

Demolición

Volumen de material a generar: 0.0 metros

Tipo de material: No Aplica

Instalación de tuberías y/o cables

Distancia lineal: 0.0 pies.

[1] A ser instalados en áreas previamente construidas, fuera de los limites de la propiedad.

Tipo de Permiso Solicitado:

Permiso Para El Control De La Erosión y Prevención De La Sedimentación (CES), Permiso De Construcción De Una Fuente De Emisión De Contaminantes Atmosféricos (PFE) (Polvo Fugitivo)

Cuerpo(s) de agua receptor(es) de la escorrentía:

Cuerpo(s) de agua receptor(es) de la escorrentía

1. Quebradas - Quebrada sin Nombre - Tributaria al Rio Grande de Manati
2. Quebradas - Quebrada sin Nombre - Tributaria al Rio Barranquitas

Condiciones Especiales

PGO para el almacenaje aproximado de 215 metros cúbicos de material de corteza terrestre para la operación del Sistema Relleno Sanitario (cubierta diaria). No hay áreas o permiso de extracción, pues el material se recibe de afuera.

Condiciones Generales

1. Se deberá instalar un rótulo en la entrada del proyecto inmediatamente sea expedido el Permiso General para Otras Obras. Este rótulo deberá ser de un tamaño mínimo de 4 pies por 8 pies que incluya el nombre del proyecto y el número de Permiso General Consolidado emitido por la OGPe. El tamaño mínimo de las letras será de 3 pulgadas.

2. De interesar continuar la actividad para la cual se expidió este Permiso con posterioridad a la fecha de expiración de éste, deberá someter la correspondiente Solicitud de Renovación a tenor con las disposiciones reglamentarias aplicables. Esta solicitud deberá presentarse utilizando la Forma provista por la OGPe para estos fines, por lo menos treinta (30) días antes de la fecha de expiración de este Permiso.

3. Toda información, especificación y documentos sometidos en esta solicitud forma parte de su Permiso General para Otras Obras. Será considerado como modificación cualquier cambio que se realice a la solicitud originalmente presentada.

4. Cualquier modificación realizada al Permiso aprobado originalmente no altera la vigencia del mismo.

5. La JCA, al emitir este Permiso a través de la OGPe, no releva al solicitante de su responsabilidad de obtener permisos o autorizaciones adicionales de la JCA u OGPe, según requerido por ley. La emisión del Permiso no debe considerarse como una autorización para llevar a cabo actividades que no están específicamente cubiertas en el mismo, las cuales pueden causar contaminación del agua, aire o terreno.

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6. La JCA, podrá solicitar al poseedor de este permiso que dentro de un término razonable provea cualquier información para determinar si existe causa para modificar o revocar, o para determinar si se está cumpliendo con sus términos.

7. El poseedor del permiso permitirá a la JCA, o representante autorizado por ésta, la entrada a la instalación para inspeccionar y verificar el cumplimiento con los reglamentos sustantivos y procesales aplicables.

8. La JCA se reserva el derecho de intervenir con este proyecto en otros aspectos no cubiertos en este permiso.

9. Cada condición de este Permiso es considerada independientemente de las demás. Si la aplicación de cualquier condición de este Permiso quedara sin efecto debido a cualquier circunstancia, las restantes condiciones no se verán afectadas.

10. En caso de que la actividad contemplada en el permiso sea una extracción, el Permiso otorgado quedará automáticamente anulado si la agencia con jurisdicción primaría sobre la actividad propuesta no emite los permisos, autorizaciones o endosos necesarios para la realización de la misma.

PERMISO CES

11. El dueño u operador deberá mantener copia de este formulario, el cual constituye su Permiso General para Otras Obras y copia del Plan CES autorizado por este permiso en el lugar del proyecto.

12. El dueño u operador de las obras deberá implantar en todas sus partes el Plan CES autorizado por este Permiso y mantener en buenas condiciones de operación todas las medidas de control de erosión y sedimentación y otras medidas de protección identificadas en el Plano CES.

13. Todas las medidas de control de erosión y sedimentación deberán ser seleccionadas, instaladas y mantenidas de acuerdo al Manual de Puerto Rico para el Control de la Erosión y Sedimentación en Áreas de Desarrollo y a cualquier especificación relevante del manufacturero y las mejores prácticas de la ingeniería.

14. Los sedimentos de las trampas de sedimentos y charcas de sedimentación deberán ser removidos cuando se alcance el 50% de la capacidad de diseño de las mismas.

15. Se deberán instalar medidas de control en aquellas áreas donde se haya cesado temporera o permanentemente las actividades de construcción.

16. De ser necesario realizar una modificación mayor según definida en el Reglamento para el Control de la Erosión y Prevención de la Sedimentación, el dueño, agente o representante autorizado deberá presentar ante a la JCA a través de la OGPe una Solicitud de Modificación de Permiso General para Otras Obras acompañada de todos los documentos correspondientes que reflejen la modificación antes de implantar la misma.

17. El inspector designado deberá ser un ingeniero o arquitecto autorizado a ejercer la profesión en Puerto Rico. Deberá someter informes periódicos sobre la implantación del Plan CES y el desarrollo de sus actividades a la JCA. El primer informe deberá ser sometido no más tarde del quinto (5to) día laborable a partir de la fecha de inicio de las obras. El mismo deberá ser acompañado de la Certificación del Inspector. Los informes subsiguientes deberán someterse mensualmente a partir de la fecha en que sea sometido el 1er informe.

18. Todos los informes sometidos, según requeridos en las condiciones de este Permiso deberán incluir fotografías con un tamaño mínimo de 4 pulgadas por 6 pulgadas a colores que evidencien las medidas de control de erosión provisionales y permanentes implantadas.

19. Una vez finalizadas las actividades autorizadas en este Permiso, deberá someter un informe final que evidencie la culminación de las mismas y la implantación de las medidas de control de erosión permanentes aplicables.

20. El dueño, agente o representante autorizado deberá someter a la OGPe una Solicitud de Modificación al permiso General para Otras Obras si durante la vigencia del mismo, el Permiso para la Extracción de la Corteza Terrestre es renovado por una cantidad mayor a lo autorizado previamente el Permiso General para Otras Obras.

PERMISO DS-3

21. Todo cargamento de desperdicios sólidos no peligrosos producido por una actividad generadora, será

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enviado única y exclusivamente a una instalación de disposición final (Relleno Sanitario) acompañado de un manifiesto. El manifiesto a utilizarse será el formulario oficial provisto por la JCA. Ninguna finca privada deberá ser utilizada para disponer finalmente tales desperdicios.

22. Todo desperdicio generado será transportado para su disposición final por una compañía o empresa debidamente autorizada por la JCA.

23. Deberán mantener en el proyecto un registro de todos los manifiestos (formulario oficial provisto por la JCA) originados y devueltos por la instalación de disposición final.

24. Ninguna persona podrá mantener una propiedad o sitio de construcción en forma talque se exponga a los vehículos a recoger lodo, polvo, sustancias pegajosas, basura, o material viscoso o extraño en las ruedas u otras partes del vehículo, los cuales a su vez puedan ser depositados en las calles, callejones u otro sitio público.

25. De ser necesario modificar el Plan de Operación, el dueño, agente o representante autorizado deberá presentar ante la JCA a través de la OGPe una Solicitud de Modificación de Permiso General para Otras Obras junto al Plan enmendado antes de implantar la modificación.

26. Una vez finalicen las actividades autorizadas en este Permiso, deberá presentar todos los manifiestos (formulario oficial provisto por la JCA) originados y devueltos por la instalación de disposición final.

PERMISO PFE

27. Deberán proveer y utilizar en todo momento un sistema para controlar las emisiones de polvo fugitivo en todo el proyecto para evitar que materia particulada gane acceso al aire más allá de la colindancia de este proyecto.

28. Deberán cubrir con toldos o encerados los camiones de acarreo de material de relleno y escombros durante los viajes de carga y descarga.

29. No se permitirá la quema de arbustos, árboles o la quema de basura en el proceso de limpieza de los predios de la construcción.

30. No se permitirá la emisión visible de contaminación de aire provenientes de vehículos de motor (equipo pesado) impulsados por combustible diesel, estando fijos y estacionados con una opacidad mayor al 20% por más de cinco (5) segundos consecutivos.

Para Plantas Dosificadoras de Hormigón que no conlleven proceso y que no estén o sean localizadas en una instalación afectada por reglamentación federal bajo la Ley Federal de Aire Limpio:

31. Mantendrá un registro diario de la cantidad de hormigón producido en yardas cúbicas por día. Este registro estará disponible para el personal de la JCA cuando lo solicite para evaluación.

32. Los colectores de polvo deberán tener una eficiencia mínima de 95% de remoción de materia particulada.

33. Dará mantenimiento preventivo a los colectores de polvo que le dan servicio a la planta dosificadora. Mantendrá un registro que incluya limpieza, inspecciones diarias y reemplazo de sacos. Además, diariamente deberá revisar el contenedor de polvo y vaciarlos, tal como recomienda el manufacturero.

34. No se permitirá la emisión visible de contaminantes del aire proveniente de los equipos de control con una opacidad mayor al 20 porciento (promedio de 6 minutos).

35. Malfuncionamientos: Deberá notificar a la JCA cualquier mal funcionamiento en la fuente, los quipos de control de contaminación de aire o equipos relacionados como sigue:

(A) En caso que cualquier fuente, equipo de control de contaminación de aire o equipo relacionado, se descomponga, funcione mal, se rompa, permita escapes, o quede parcial o totalmente inoperante, el dueño u operador de tal equipo deberá informar inmediatamente a la Junta de tal falla o incidente y ofrecerá los datos pertinentes, incluyendo el tiempo que se estima durará tal condición. Deberá notificar por escrito a la JCA no más tarde de una semana después del incidente. Este informe incluirá los datos específicos relacionadas con la fuente afectada, equipo de control de contaminación de aire u otro equipo relacionado afectado; fecha y hora del suceso, las causas del incidente y las medidas correctivas tomadas o a ser tomadas. En caso de que el mal funcionamiento hubiese sido corregido dentro de dicho período, la información requerida en el párrafo E también deberá someterse con el informe escrito.

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(B) Si el mal funcionamiento se extiende o pudiera extenderse por más de 24 horas, la instalación o fuente notificará por teléfono y por escrito vía facsímil a la Junta o al Programa de Aire y podrá ser operada solo hasta la conclusión de un ciclo ó 48 horas, lo que ocurra antes, en cuyo momento deberá cesar para ser reparada. No obstante, si el mal funcionamiento causa la emisión de sustancias tóxicas o peligrosas a la atmósfera, la fuente afectada deberá cesar inmediatamente sus operaciones o deberá actuar según se especifique en su Plan de Respuesta a Emergencias en conformidad con la Regla 107 (C) del Reglamento para el Control de la Contaminación Atmosférica (RCCA).

(C) La instalación o fuente no podrá ser operada más allá de las limitaciones de la sección (B) a menos que se le conceda una dispensa de emergencia por parte de la Junta, según la Regla 302 del RCCA.

(D) El acontecimiento de un mal funcionamiento no relevará al dueño u operador de cumplir con cualquier disposición sustantiva de los reglamentos aplicables o las condiciones aquí contenidas.

(E) No más tarde de siete (7) días laborables, luego de que un mal funcionamiento causante de violación haya sido corregido, el dueño u operador deberá presentar otro informe escrito a la JCA que incluya:

(1) Una certificación de que el mal funcionamiento ha sido corregido, especificando el día de corrección y dando prueba de cumplimiento;

(2) Una descripción de las medidas correctivas tomadas para evitar un mal funcionamiento similar en el futuro;

(3) Un estimado de las emisiones totales que fueron generadas durante el mal funcionamiento; y

(4) Fotografías del equipo o sistema de control que falló, si están disponibles.

(F) En caso de que una unidad de emisión esté equipada con más de un equipo de control o pueda utilizar más de un control en una instalación y dichos controles alternos operen de manera independiente cada uno, poseen cada uno la capacidad total y eficiencia de los equipos de control restantes para los contaminantes emitidos, en cumplimiento con los requisitos aplicables y el permiso, la fuente no tendrá que descontinuar la operación de su proceso de ocurrir un mal funcionamiento siempre que se garantice a la JCA que la unidad o medida de control que sea operada durante el mal funcionamiento rinde igual o mayor beneficio ambiental (igual o mejor control de los contaminantes).

36. Equipo de Control:

(A) Todo equipo o medida para el control de contaminación de aire deberá proveer el control necesario para asegurar cumplimiento continuo con las reglas y reglamentaciones aplicables. Dicho equipo o medidas deberán instalarse, conservarse y operarse de acuerdo con las condiciones impuestas por este permiso dentro de los límites operacionales especificados por el fabricante.

(B) El material que se recoja del equipo para el control de la contaminación de aire deberá ser desechado de acuerdo con las reglas y reglamentos aplicables. La remoción, manejo, transportación, almacenaje, tratamiento o disposición se hará de modo que no cause degradación ambiental y en conformidad con las reglas y reglamentos aplicables.

(C) La JCA podrá requerir, cuando lo considere apropiado, para salvaguardar la salud y el bienestar de las personas, la instalación y mantenimiento de un equipo de control de contaminación de aire adicional, completo y separado de una capacidad que pudiera ser hasta igual a la capacidad del equipo de control primario. Más aún, podrá ser requerido que dicho equipo de control de contaminación de aire adicional sea operado continuamente y en serie con el equipo de control de contaminación de aire regularmente requerido.

(D) Todo equipo de control de contaminación de aire deberá ser operado en todo momento en que la fuente de emisión bajo control esté en operación.

(E) En caso de que se descontinúe la operación del equipo para el control de la contaminación de aire para darle mantenimiento programado, la intención de descontinuar la operación de dicho equipo se informará a la JCA, con por lo menos tres (3) días de antelación. Dicha notificación previa deberá incluir, pero no se limitará a lo siguiente:

(1) Identificación de la fuente específica que será sacada de servicio, así como su localización y número de permiso.

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(2) El tiempo que se espera que el equipo para el control de contaminación de aire esté fuera de uso.

(3) La naturaleza y cantidad de contaminantes de aire que probablemente se emitirán durante el período que cese el uso del equipo de control.

(4) Aquellas medidas especiales que se tomarán para acortar el período de desuso del equipo de control, tales como el uso de personal irregular y el uso de equipo adicional.

(5) Las razones por las que sería imposible o no recomendable cesar las operaciones de la instalación de emisión durante el período.

(F) Deberá mantener y operar todo el tiempo, incluyendo los períodos de inicio de operaciones, paro de operaciones y malfuncionamientos, cualesquiera fuente afectada, incluyendo equipos asociados al control de contaminación atmosférica, de forma consistente con las especificaciones de diseño del manufacturero original y en cumplimiento con las reglas y reglamentos.

(G) El tenedor del permiso mantendrá copias de los informes de calibración e inspecciones de los equipos de control tales como colectores de polvo y lavadores de gases. El tenedor del permiso mantendrá en un registro todos los incidentes de apagado del equipo de control si los procesos continúan su operación. Los registros deben estar disponibles en la instalación para el personal.

Apercibimiento

La JCA podrá revocar este Permiso antes de la fecha de vencimiento si se violan las condiciones del mismo o reglamentos sustantivos o procesales aplicables de la JCA; la agencia además podrá emitir una Orden de Cese y Desistimiento y Mostrar Causa.
“Cuando la agencia deniegue la concesión de una licencia, franquicia, permiso, endoso, autorización o gestión similar, o de alguna manera se intente impugnar las condiciones del mismo; la parte adversamente afectada tendrá derecho a impugnar la determinación de la agencia por medio de un procedimiento adjudicativo, según se establezca en el Reglamento de Vistas Administrativas de la Junta de Calidad Ambiental de la JCA y en las secs. 2151 a 2168] de la Ley Núm. 170 del 12 de agosto de 1988, según enmendada, Ley de Procedimiento Administrativo Uniforme”.

Firmas y sellos

Fecha de expedición:

19-07-2023 (dd-mm-yyyy)

Fecha de expiración:

18-07-2028 (dd-mm-yyyy)

GOBIERNO DE PUERTO RICO
Anaïs Rodriguez Vega
Secretaria Interina
Departamento de Recursos Naturales y Ambientales
DRNA
DEPARTAMENTO DE RECURSOS NATURALES Y AMBIENTALES

Anaïs Rodríguez Vega

Secretaria Interina del DRNA

PO Box 41179 San Juan, Puerto Rico 00940-1179 • 787-721-8282

ESTADO LIBRE ASOCIADO DE
PUERTO RICO
JUNTA DE CALIDAD AMBIENTAL

13 de mayo de 2015

Hon. Francisco López López
PO Box 250
Barranquitas, Puerto Rico 00794-0250

RE: Solicitud de Renovación de Permiso de Operación
Instalación de Disposición Final de Desperdicios Sólidos No Peligrosos
Sistema de Relleno Sanitario IDF-10-0040
Carr. 152 Km 0.6 interior
Bo. Barrancas
Barranquitas, Puerto Rico

Estimado alcalde López:

La Junta ha evaluado los documentos sometidos para la renovación del permiso mencionado en el asunto, y concluye que dicha solicitud cumple con las disposiciones de la Regla 642 del Reglamento para el Manejo de los Desperdicios Sólidos No Peligrosos (RMDSNP). La concesión de la renovación de este permiso conlleva la aceptación de los términos y condiciones establecidos por dicho Reglamento, con los cuales estará de acuerdo el solicitante al aceptar el permiso, y que se cumpla con el Plan de Operación aprobado por esta Junta.

Le incluimos el permiso y sus condiciones para operar una instalación de disposición final de desperdicios sólidos no peligrosos (Sistema de Relleno Sanitario) cuya vigencia comienza el 25 de marzo de 2015 hasta el 25 de marzo de 2020.

De tener cualquier duda sobre el particular, puede comunicar a los teléfonos (787) 864-0103, 864-7111 o 866-0200 o escribir a Ave. Los Veteranos #2000, Guayama, Puerto Rico 00784.

Cordialmente;

Sr. Juan M. Burgos Miranda
Director
Oficina Regional de Guayama

ORG/msl

Oficina Regional de Guayama
Carr. PR 3, Km 134.2, Bo. Algarrobos, Guayama, PR 00784
2000 Ave. Los Veteranos, Guayama PR 00784
Tel. 787-864-0103,864-7111,864-0200 Fax 787-866-0200
www.jca.gobierno.pr

JCA
JUNTA DE CALIDAD AMBIENTAL
ESTADO LIBRE ASOCIADO DE PUERTO RICO

ESTADO LIBRE ASOCIADO DE
PUERTO RICO
JUNTA DE CALIDAD AMBIENTAL

PERMISO PARA OPERAR UNA INSTALACIÓN DE DISPOSICIÓN FINAL DE DESPERDICIOS SÓLIDOS NO PELIGROSOS

SECCIÓN I - INFORMACIÓN GENERAL

Nombre de la Instalación	:	Sistema de Relleno Sanitario Municipio de Barranquitas
Dueño	:	Hon. Francisco López López Alcalde
Número de Teléfono	:	787-857-2065
Número de Permiso	:	IDF-10-0040 (Renovación)
Dirección Física	:	Carr. PR-152, Km 0.6 interior Bo. Barrancas Barranquitas, Puerto Rico
Dirección Postal	:	PO Box 250 Barranquitas, PR 00794

SECCIÓN II - TIPO DE INSTALACIÓN Y DESCRIPCIÓN DE LOS DESPERDICIOS INCLUIDOS EN EL PERMISO A SER RECIBIDOS

Instalación de disposición final de desperdicios sólidos no peligrosos (Sistema de Relleno Sanitario). Los desperdicios que aceptará para su disposición serán: Desperdicios Domésticos; Comerciales; Agrícolas; Escombros de construcción y demolición de fácil manejo; Cienos secos. Además, aceptará material vegetativo y paletas de madera para ser procesados, según el Plan de desvío, diseñado para la instalación para este tipo de material. Chatarra para almacenamiento temporero (para su traslado a una facilidad de reciclaje de metales).

SECCIÓN III - CONDICIONES DE PERMISO

1. El poseedor cumplirá con todas las condiciones del permiso y cualquier incumplimiento constituirá una violación al Reglamento para el Manejo de los Desperdicios Sólidos No Peligrosos (RMDSNP) y la Junta de Calidad Ambiental podrá llevar acciones para obligarlo a cumplir.

2. La Junta de Calidad Ambiental podrá modificar o revocar un permiso *motu proprio*, o a solicitud del poseedor del permiso.

3. La Junta de Calidad Ambiental podrá solicitar al poseedor de un permiso que dentro de un término razonable provea cualquier información para determinar si existe causa para modificar o revocar, o para determinar si se está cumpliendo con sus términos.

4. El poseedor del permiso permitirá a la Junta de Calidad Ambiental o a un representante autorizado por ésta, la entrada a la instalación para inspeccionar y verificar el cumplimiento con este Reglamento.

5. El poseedor del permiso notificará a la Junta de Calidad Ambiental, previo al inicio de cualquier cambio físico, alteración o modificación a la operación permitida, esto incluye pero no se limita a: recibir otros desperdicios que no están autorizados en este permiso de operación. La Junta notificará por escrito si decide aceptar el cambio, la alteración o modificación.

6. Si el poseedor del permiso se percata de haber sometido alguna información incorrecta lo notificará inmediatamente a la Junta de Calidad Ambiental, y brindará la información completa y correcta dentro del término de cinco (5) días a partir del hallazgo.

7. El permiso de operación no será transferible, y la solicitud de renovación del mismo debe presentarse, por el dueño o administrador, por lo menos sesenta (60) días antes de la fecha de expiración del permiso otorgado.

8. Si la solicitud de renovación no se realiza durante el período estipulado en el inciso anterior, el permiso quedará sin vigencia a su fecha de expiración. De expirarse el permiso, la instalación no podrá continuar operando hasta tanto obtenga un permiso de operación temporal o la Junta de Calidad Ambiental haya emitido la renovación del permiso.

9. Toda modificación de permiso o información suplementaria requerida por la Junta de Calidad Ambiental deberá ser firmada por el dueño, o en el caso de una corporación, por el presidente, vice-presidente u oficial de más alto rango con oficinas en Puerto Rico, o un representante debidamente autorizado por escrito por uno de los funcionarios antes mencionados. En el caso de municipios u otras entidades no corporativas, por un oficial responsable o equivalente.

10. El poseedor del permiso tomará los pasos necesarios para mitigar cualquier impacto adverso a la salud humana o al ambiente que resulten del incumplimiento con el Reglamento mencionado.

11. El poseedor del permiso operará y mantendrá de forma apropiada, en todo momento, la instalación incluyendo los sistemas de tratamiento y control.

12. El poseedor del permiso informará verbalmente cualquier incidente de incumplimiento con el Reglamento mencionado al momento del hallazgo y entregará un informe escrito detallado en o antes de cinco (5) días a partir de la notificación. Los informes verbales o escritos describirán la naturaleza del incumplimiento, su causa, duración, o duración anticipada si continúa, y todas las medidas que se han tomado para solucionar la situación, mitigar cualquier daño a la salud humana o al ambiente y para evitar que situaciones similares vuelvan a desarrollarse.

13. La Junta tendrá la potestad de imponer las condiciones adicionales necesarias para garantizar que se cumpla con los requisitos aplicables del Reglamento antes mencionado, que incluyen condiciones relacionadas a la duración del permiso y normas específicas.

SECCIÓN IV – CONDICIONES ADICIONALES

1. Deberá mantener copia de este permiso en la instalación en todo momento. La misma deberá estar disponible para ser revisada por el personal técnico de la Junta de Calidad Ambiental (JCA), cuando sea requerido.

2. El horario de operación será:.
   - lunes a viernes de 7:00 AM a 4:00 PM
   - sábado de 7:00 AM a 12:00 PM

   según se establece en el Plan de Operación sometido y aprobado por esta Junta. Previo a realizar cualquier cambio, deberá notificarlo a la Junta.

3. Deberá proveer los sistemas esenciales para una operación controlada y limpia. Deberá operar según las disposiciones y Criterios de Operación para Sistemas de Relleno del Sanitario (SRS) establecidas en el Capítulo IV del Reglamento para el Manejo de los Desperdicios Sólidos no Peligrosos (RMDSNP).

4. Preparara y conservara informes diarios de la operación que por lo menos incluyan:
   a. Total de desperdicios recibidos durante cada turno de operación, con su tipo y peso o volumen;
   b. Equipo usado para la disposición final de los desperdicios;
   c. Espacio del SRS utilizado;
   d. Cantidad de material de cubierta utilizado.

   Preparará y enviará a la Junta un resumen trimestral de esta información.

5. Controlará el acceso del público en todo momento y evitara el transito sin autorización, y el depósito ilegal de desperdicios. Esto se hará mediante barreras naturales o artificiales, apropiadas para proteger la salud humana, la seguridad pública y el ambiente.

6. Proveerá supervisión para controlar el depósito de desperdicios y la entrada y salida de los vehículos.

7. Evitará que la descarga de los camiones o vehículos interfiera con la compactación de los desperdicios.

8. Mantendrá un área de trabajo tan pequeña sea posible para que el equipo pueda operar con eficiencia.

9. Los desperdicios serán esparcidos en capas aproximadamente de dos (2) pies de alto antes de compactarse. El número de capas en una celda dependerá del diseño y configuración del lugar.

10. Deberá aplicar material de relleno intermedio en las capas donde el relleno diario esté expuesto por más de treinta (30) días y el espesor de dicha capa será de por lo menos doce (12) pulgadas de material compactado. Si no se proyecta usar el lugar en un año, será necesario sembrar algún tipo de grama o vegetación para evitar la erosión.

11. Deberá aplicar relleno adicional en aquellas áreas impactadas donde la erosión ha dejado al descubierto los desperdicios que han sido cubiertos anteriormente.

12. Mantendrá un programa de muestreo conforme a los requisitos del Reglamento antes mencionado, obteniendo los resultados de muestras representativas, manteniendo expedientes completos de todo estudio, reteniendo (excepto que otro término específico se establezca en este reglamento) todos los expedientes por un periodo de tres (3) años, y entregando informes, según se requiere en este Reglamento.

13. Los declives de las capas de material de relleno final, llevarán las aguas de lluvia o escorrentías, hacia puntos determinados en el sistema de drenaje, de manera que no haya estancamiento de agua, erosión o infiltración a través del sistema.

14. Todo vehículo que llegue a la instalación con desperdicios sólidos no peligrosos deberá tener un Permiso de Servicio de recolección o Transportación de Desperdicios Sólidos, emitido por la Junta de calidad Ambiental, vigente.

15. Implantará un programa para detectar y prevenir la disposición de desperdicios sólidos peligrosos reglamentados, de desperdicios especiales, de desperdicios de PCB y de líquidos restringidos en su instalación. Este programa deberá incluir como mínimo lo siguiente:

    a. Inspecciones al azar de las cargas que entran. Se mantendrá la información sobre estas inspecciones en el registro de operación por un período mínimo de tres (3) años.
    b. Adiestramientos anuales al personal para reconocer este tipo de desperdicio. Deberá conservar prueba de estos adiestramientos como parte del registro de operación.
    c. En caso de que se determine que alguna carga contiene alguno de estos desperdicios, rechazará la carga a la Junta inmediatamente, y por escrito en un término no mayor de cuarenta y ocho (48) horas. En caso que se encuentre que se ha depositado o dispuesto alguno de estos desperdicios, el dueño u operador deberá acordonar el área y notificar a la Junta inmediatamente, y por escrito en un término no mayor de cuarenta y ocho (48) horas.

SECCION IV – APROBACIÓN Y VIGENCIA DEL PERMISO

Esta Junta de Calidad Ambiental autoriza al Hon. Francisco López López, *dueño* del Sistema de Relleno Sanitario de Barranquitas, a continuar operando la instalación para disposición final de desperdicios sólidos, por un período de cinco (5) años. La vigencia de este permiso (IDF-10-0040) comienza el 25 de marzo de 2015 hasta el 25 de marzo de 2020.

Este permiso está condicionado a que la entidad autorizada demuestre a satisfacción de esta Junta, que la operación de la instalación está y podrá permanecer en cumplimiento con todos los reglamentos aplicables y con el Plan de Operación aprobado por esta Junta, y conlleva la aceptación de las condiciones presentadas en este permiso.

La Junta de Calidad Ambiental podrá suspender o revocar este permiso de construcción si se comprueba que la instalación no está cumpliendo con las condiciones estipuladas en este permiso.

Si el tenedor de este Permiso tiene objeción a los términos y condiciones del mismo podrá solicitar reconsideración dentro del término de 20 días a partir de la fecha en que lo reciba. De no estar satisfecho con la determinación en reconsideración podrá solicitar una vista adjudicativa al amparo de la sección 5.4 de la Ley de Procedimiento Administrativo Uniforme, presentada ante la Secretaría de la Junta de Gobierno dentro del término de 30 días de notificada la determinación sobre la Reconsideración.

La Junta se reserva el derecho de intervenir con la instalación en otros aspectos no cubiertos en la autorización.

Otorgado en San Juan, Puerto Rico el 25 de marzo de 2015

Junta de Calidad Ambiental

Suzette Meléndez Colón
Vice-Presidenta

Rebeca Acosta Pérez
Miembro Asociado

Weldin F. Ortiz Franco
Presidente

00050 - DRNA
Edificio de Agencias Ambientales
Avenida Ponce de León 1308
Carretera Estatal 8838
San Juan, PR 00929

Recibo Oficial

Fecha:	2020-02-07 09.42
Cifra de Depositante	1578
Número de Recibo:	2442
Número de Cliente:	000003914
Recibí de:	MUNICIPIO DE BARRANQUITAS Edificio de Agencias Ambientales Avenida Ponce de León 1308 Carretera Estatal 8838 San Juan, PR 00929
Proposito de Pago:	REN IDF-10-0040
Tipo de Pago:	DS - PERMISOS NO CLASIFICADOS
Importe:	275.00
Cash	275.00
Total Cobrado:	275.00
Cambio a Entregar:	0.00 USD
Oficina Recaudadora:	RN023
Recaudador:	Maria del C. Colón

Oficial Recaudador o Auxiliar

Appendix F:

Vapor Encroachment Evaluation

No documents have been associated with this appendix.

Appendix G:

Qualifications

National Registry of Environmental Professionals

For

Environmental Certifications

This is to Certify that

Javier Vélez-Arocho

having sucessfully demonstrated to the Academic Board of this organization
the required level of knowledge and ability, is here by awarded the distinction of

Certified Environmental and Safety Compliance Officer

together with all rights, benefits and privileges attached thereto and that the name and title of the aforementioned registrant is today placed upon the register of the organization.

Given under our hands on this 15th day of December, 2015.

Executive Director

220503

Registrant Number

JAVIER VELEZ AROCHO
41 Ave. Fernando Ribas
PO Box 2364
Utado, PR 00641
(787) 467-8887
javier@diatomenvironmental.com

STATEMENT OF PROFESSIONAL QUALIFICATIONS

As a Certified Environmental and Safety Compliance Officer by the National Registry of Environmental Professionals, our partner, Javier Vélez Arocho, has vast regulatory experience working with federal and state agencies. He worked with the University of Puerto Rico, the Sea Grant College Program, the United States Environmental Protection Agency, and the Secretary of the Commonwealth of Puerto Rico Department of Natural and Environmental Resources. More information follows:

EDUCATION

Master of Science
University of Puerto Rico, Mayagüez, Puerto Rico - 1992

Bachelor of Science in Biology
Pontifical Catholic University, Ponce, Puerto Rico – 1989

DIATOM ENVIRONMENTAL CERTIFICATIONS

- SAM – Service Award Management
- NREP – CESCO National Registry of Environmental Professionals
- DBE – Disadvantaged Business Enterprise (USDOT)

PROFESSIONAL EXPERIENCE

DIATOM ENVIRONMENTAL SERVICES, LLC / ECOSTAHLIA ENVIRONMENTAL CONSULTANTS
Utuado, PR
Present

Environmental Consultant. Private practice in environmental affairs, including matters on hazard mitigation, construction industry, environmental compliance, and consulting for municipal governments on FEMA, USEPA, USACE, USFWS, and state agencies regulations, renewable energy, and gas industries. Assistance to law offices in environmental matters. Representation of clients before state environmental agencies and courts on environmental litigation. Currently working on EPA NPDES MSGP2021 permits, USEPA Administrative Orders, Storm Water Pollution Prevention Programs for Aerostar Airport Holdings, LLC, and Alimentos Líquidos Industriales. Also providing technical and environmental support to Caribbean Temporary Services, LLC, Helios Alternative Energy, LLC., Interenergy, LLC, Infinigen Renewables, LC, Bright Ravens, DCE, LLC., Kimley-Horn Puerto Rico, Ryan Properties USA, and Costco Wholesale Corporation.

He is an environmental consultant for Aerostar Airport Holdings, LLC, to comply with state and federal water pollution, wetland, and air emissions regulations. Provide consulting services to INFINIGEN Renewables, LLC, and Helios Alternative Energy, LLC, for facilities to produce clean, renewable energy in Puerto Rico.

Led Endangered Species (trees, birds, and reptiles) Identification Survey at the PROTECO Superfund Site in Peñuelas as part of an agreement with the USEPA and the USFWS.

Led multiple City Revitalization Projects under HUD's CRP Program, preparing the environmental documents to comply with NEPA regulations in the municipalities of Comerío, Barranquitas, Barceloneta, Cataño, Sabana Grande San Sebastián and Mayaguez.

Led the tree identification program at the Camuy River Cave Park, the Mayaguez Zoo, and the Maricao State Forest facility as part of an agreement funded by FEMA DR-4339 Hurricane María.

PR DEPARTMENT OF NATURAL AND ENVIRONMENTAL RESOURCES
San Juan, PR
From 2005 until 2008 – Secretary

During his tenure, he brought a strong scientific background and wealth of experience to his role as P.R.'s top environmental official. Provided scientific advice to the Governor and the Executive Branch on water resource management, conservation, wildlife management strategies, and permitting. Lead major conservation initiatives like the acquisition of lands for the Northeast Ecological Corridor, the purchase of more than 5,000 acres of land for conservation, the first release of the Puerto Rican parrot in the karst region, the signing of the Puerto Rico Integrated Water Resources Management Plan, the construction of the Visitors Center at Mona Island, the

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construction of four flood control projects (Guayanilla, Dorado, Fajardo, Ponce) worth $500M, and development of the Study for the Conservation of the Karst Region. Oversee the PRDNER workforce of more than 1,700 employees.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
U.S. Environmental Protection Agency (EPA); Office of Wetlands, Oceans, and Watersheds, Marine Pollution Control Branch. Washington, DC.
From 2002 until 2005 - Environmental Protection Specialist

Wrote, reviewed, analyzed, and modified environmental reports generated in cooperation with states, tribes, and internal EPA, describing the nation's waters' quality, including national and issue- specifics assessments (Brownfields, urban development, Smart Growth). Provided technical support and oversaw all technical guidance on regulation, monitoring, testing, and evaluation programs at all geographic scales. Analyzed ambient water quality data and biological information; reviewed literature for water quality information; and incorporate analyses into national assessments conducted by the Branch. He responded to inquiries from U.S. Congress, the public, and the EPA administration, on water monitoring and water quality.

Liaised with non-government organizations to promote a unified approach to international initiatives on ocean and coastal protection. Provided scientific and policy advice to researchers relating to ocean disposal impacts on the environment, focusing on marine life effects—developed briefing materials and issued summaries for Agency and interagency distribution.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Washington, DC
Detail at EPA's Coastal Management Branch; Washington, DC
From 2001 until May 2002 - Environmental Protection Specialist

Reviewed and evaluated comprehensive conservation management plans under the National Estuary Program, developed educational and outreach materials on Smart Growth and estuaries. Established pilot projects with NOAA/National Sea Grant Program under the Coastal Community Development Program. Translated English materials into Spanish and interpreted for the Division.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
U.S. Environmental Protection Agency (EPA); Office of Ecosystem Protection; Water Quality Unit, Boston, Massachusetts.
From 1998 until 2000 - Environmental Biologist

He designed new methodologies and developed analytical techniques to implement water quality regulations and policies under the Clean Water Act and the Total Maximum Daily Loads Program. Also, led and coordinated activities with the New England States, interstate constituencies, regional and Office of Regional Counsel staff to ensure that most recent TMDL technical and policy issues were appropriately disseminated and explained. He prepared the Water Quality Unit management strategy to increase the efficiency of TMDL's review process. Reviewed and approved TMDLs and 303(d) lists submitted by States following the Clean Water Act; Reviewed and evaluated technical information and data record required for the NPDES compliance related to the TMDL regulations.

UNIVERSITY OF PUERTO RICO: SEA GRANT COLLEGE PROGRAM
Mayagüez, Puerto Rico
From 1991 to 1998

Associate Director/Marine Advisory Services Leader/Water Quality Specialist Supervised the Marine Advisory Services component of Sea Grant. Developed strategies to address non-point sources in ports, marinas, and coastal recreational facilities in the Caribbean Region under the Marine Pollution Control Act, Annex V. Formulated and developed project proposals to establish regional networks in the Caribbean Region. In meetings with international donor entities, he represented the National Oceanic and Atmospheric Administration/National Sea Grant Program. Organized international conferences, workshops, and working groups to address complex environmental and natural resource management issues, including Vital Issues Panel on Water Resource Management in Puerto Rico.

LICENSES AND CERTIFICATIONS

- CESCO – Certified Environmental and Safety Compliance Officer from the National Registry of Environmental Professionals
- Licensed Forestry and Planting Professional - #PSM-420 – Since May 19, 2018

PUBLICATIONS

- Promoting Sustainability thru Brownfields Redevelopment in Caguas, Puerto Rico. WIT Transactions on Ecology and the Environment. Wessex. Vol. 203. Proceedings at the WIT Conference, Valencia, Spain. 2016.
- Using the web-based NPDES-MS4 Permit Manager to Establish Reliable Environmental Data Management in Municipalities around Puerto Rico. Rio Grande Valley Stormwater Management Conference. 2016.
- Reliable Records in Puerto Rico: using web-based tools for efficient permit data management. Stormwater Solutions Magazine. November-December 2016. Pp.36- 37.
- Using web-based tools to achieve environmental compliance in the archipelago of Puerto Rico. Proceedings at the WIT Conference, Naples, Italy 2018.
- Applying the STAPLEE Criteria to Develop Natural Hazards Mitigation Actions: Case Study and Lessons Learned in Northern Puerto Rico. Proceedings at the WIT Conference, Ancona, Italy 2019.
- Case Study: Restoring a Degraded Coastal Wetland in the City of Carolina, Puerto Rico. Proceedings in the WIT Conference, Sevilla, Spain – Online 2020.

TRAINING (Most recent)

- 38-hour USACE Wetland Delineation Training Program – August 2023
- U.S. EPA Webinar - Brownfields, Gentrification, and Environmental Justice Research: Learning from Past ExperiencesEPA's Small Drinking Water Systems Webinar - August 2024
- U.S. EPA Webinar – Wildfire Impacts on Water Infrastructure – September 2024

ENVIRONMENTAL PROJECTS AND CASES (Most recent 2023-2024)

- ALIMENTOS LIQUIDOS INDUSTRIALES – Manage the planning, construction, and operation of a Biodigester and Constructed Wetland Facility to treat industrial waters at their Facility in Cataño.
- ECO-ENERGY PENUELAS – Led the team to prepare all environmental compliance documents for constructing a 50MW – PV plant in southern Puerto Rico.
- CARIBBEAN TEMPORARY SERVICES, LLC - Prepared the environmental documents (EA, REA/DEA, flora and fauna studies) for their new regional office in Barceloneta.
- KIMLEY-HORN PUERTO RICO – Prepare environmental compliance documents for the construction of the Amazon Warehouse in Dorado, Puerto Rico.

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- Sanco Labs – Served as the lead biologist in identifying USFWS-listed species as part of the Guánica Superfund Site Clearing activities.

- KIMLEY-HORN-PUERTO RICO – Prepare the permit applications for the SJU-Luis Muñoz Marín International Airport Runway Object-Free Area under US Army Corps of Engineers Section 404 of the Clean Water Act.

- ABLES SALES COMPANY INCORPORATED - Preparing USEPA Multi-Sector General Permit, SWPPP, SPCC, air emission permits for emergency power generators, and environmental audits for a sugar refinery and liquid food plant in Cataño, Puerto Rico.

- Bright Ravens Palma Nido East – Prepared all the environmental documents (EA, flora and fauna, wetland delineation, habitat certification, and REA/DEA) for a new high-end residential development in Vega Alta, Puerto Rico.

- Interenergy, LLC – Tetris Power, LLC – Prepared all the environmental documents (EA, flora and fauna, wetland delineation, habitat certification, and REA/DEA) for constructing a solar energy project in Arecibo, Puerto Rico.

- Infinigen Renewables, LLC – Prepared all the environmental documents (EA, flora and fauna, wetland delineation, habitat certification, and REA/DEA) for constructing a solar energy project in Yabucoa, Puerto Rico. Also, we implemented the tree mitigation project, planting over 5,000 trees as required by the Office of Permit Management.

- AEROSTAR AIRPORT HOLDINGS, LLC – Led a significant improvement project impacting more than 20.0 acres of forested mangroves. Leading negotiations with federal and state environmental regulators. Air emission permits for their emergency power generators.

- Arch. Pablo Figueroa - Conducting Environmental Review, an 8-step Process for constructing several public infrastructure projects funded by HUD in the municipalities of Barranquitas, Sabana Grande, and Corozal.

- ECO-DESIGN STUDIO, Arch. Edmundo Colón Izquierdo, AIA - Conducting Environmental Review, 8-step Process for the construction of several public infrastructure projects funded by HUD in the municipalities of Ponce, Moca, Toa Baja, and Manatí

- Arch. Eugenio M. Ramírez Ballagas, AIA - Conducting Environmental Review, 8-step Process for the construction of several public infrastructure projects funded by HUD in the municipalities of Arroyo, Barceloneta, Cataño, Comerío, and Cataño. These projects need NEPA compliance as part of the bidding process.

- GEMS PR PLLC - Conducting Environmental Review to construct several public infrastructure projects funded by HUD in San Sebastián, Mayaguez, and Añasco municipalities. These projects need NEPA compliance as part of the bidding process.

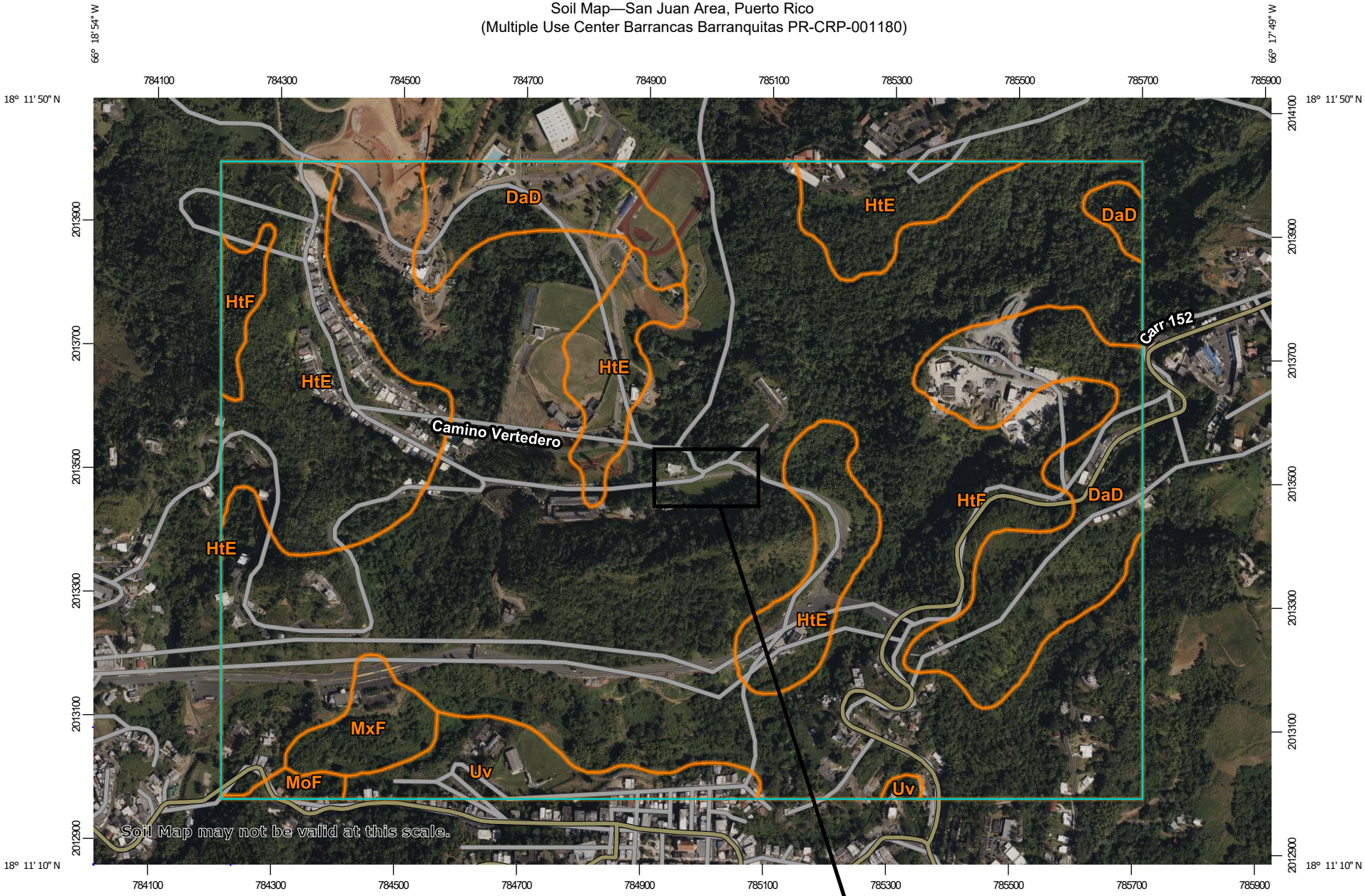
100 Ave. Los Patriotas PO Box 457 Lares, PR 00669 | (787) 467-8887 | www.diatomenvironmental.com

- AMADOR TRANSPORT INCORPORATED - Prepared the SPCC Plan for their Logistic Transportation and Warehouse in Cataño, Puerto Rico.
- TRANSPORTE SONNELL, INC. - Prepared the MSGP Permit, SWPPP, and SPCC for their Transportation Company in Corozal, Puerto Rico.
- HELIOS ALTERNATIVE ENERGY, LLC – Currently conducting Environmental Assessments for a 50 MW solar energy project in Hatillo, Puerto Rico.
- CWL Legal Services, PSC – Provided environmental consulting on stormwater and wastewater discharges under USEPA permits under Administrative Compliance Order CWA.
- Walgreens Corporation – Currently preparing the SPCC for their truck maintenance facility at their warehouse in Cataño, Puerto Rico.

Appendix H:

Additional Documentation

Soil Map—San Juan Area, Puerto Rico
(Multiple Use Center Barrancas Barranquitas PR-CRP-001180)



Map Scale: 1:8,760 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 400 800 1600 2400

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

Coordinates: 18.191561, -66.305798
Address: C. Nuevo Barranquitas,
Aibonito, Barranquitas 00705

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Juan Area, Puerto Rico
Survey Area Data: Version 16, Sep 12, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 23, 2022—Mar 1, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DaD	Daguey clay, 12 to 20 percent slopes	45.7	11.9%
HtE	Humatas clay, 20 to 40 percent slopes	65.9	17.2%
HtF	Humatas clay, 40 to 60 percent slopes	250.1	65.3%
MoF	Maricao clay, 20 to 60 percent slopes	1.5	0.4%
MxF	Mucara clay, 40 to 60 percent slopes	6.7	1.8%
Uv	Urban land-Vega Alta complex, 2 to 12 percent slopes	12.7	3.3%
Totals for Area of Interest		**382.7**	**100.0%**

6.5 Section of USGS Topographic map with natural barriers between landfill and project site

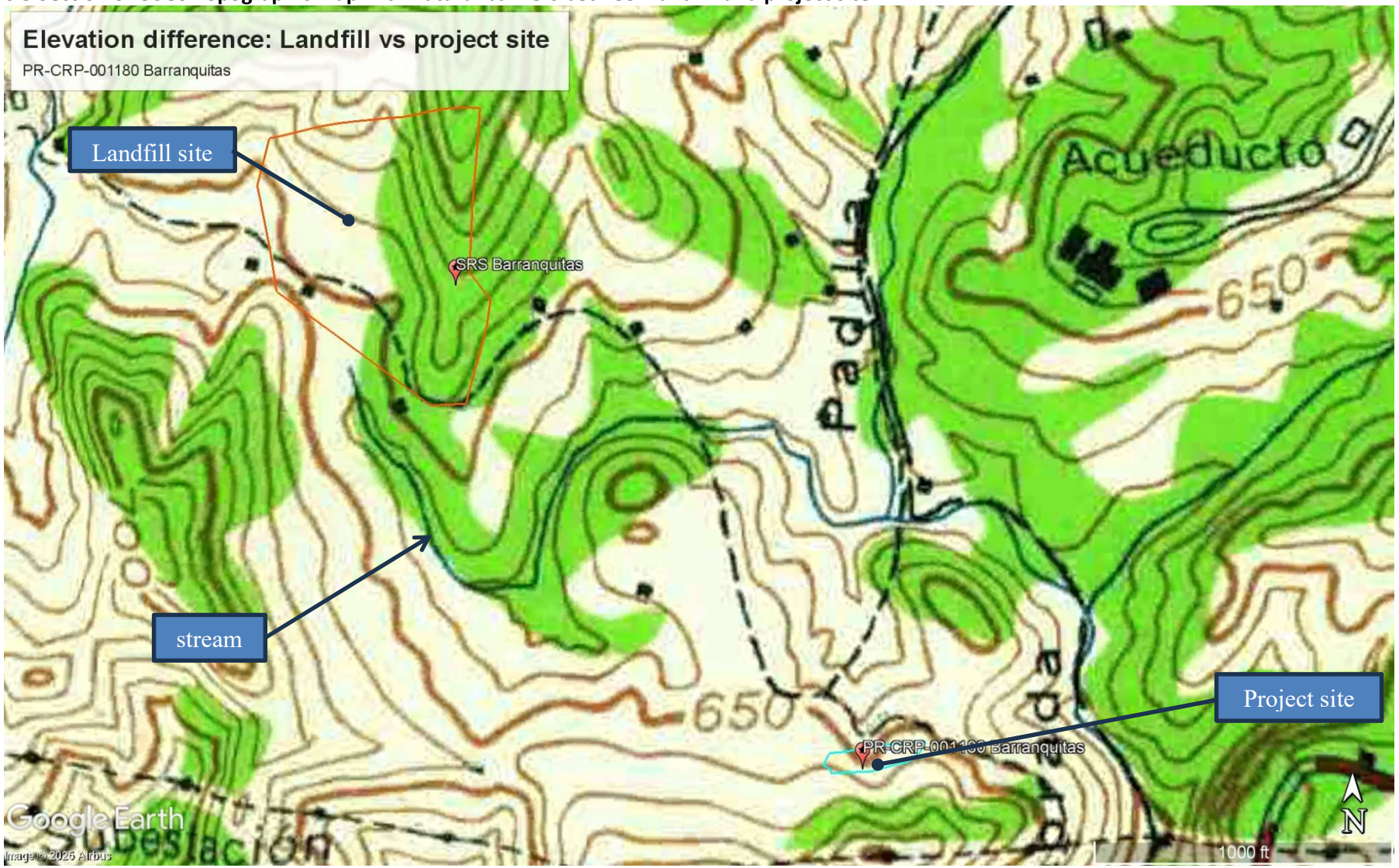
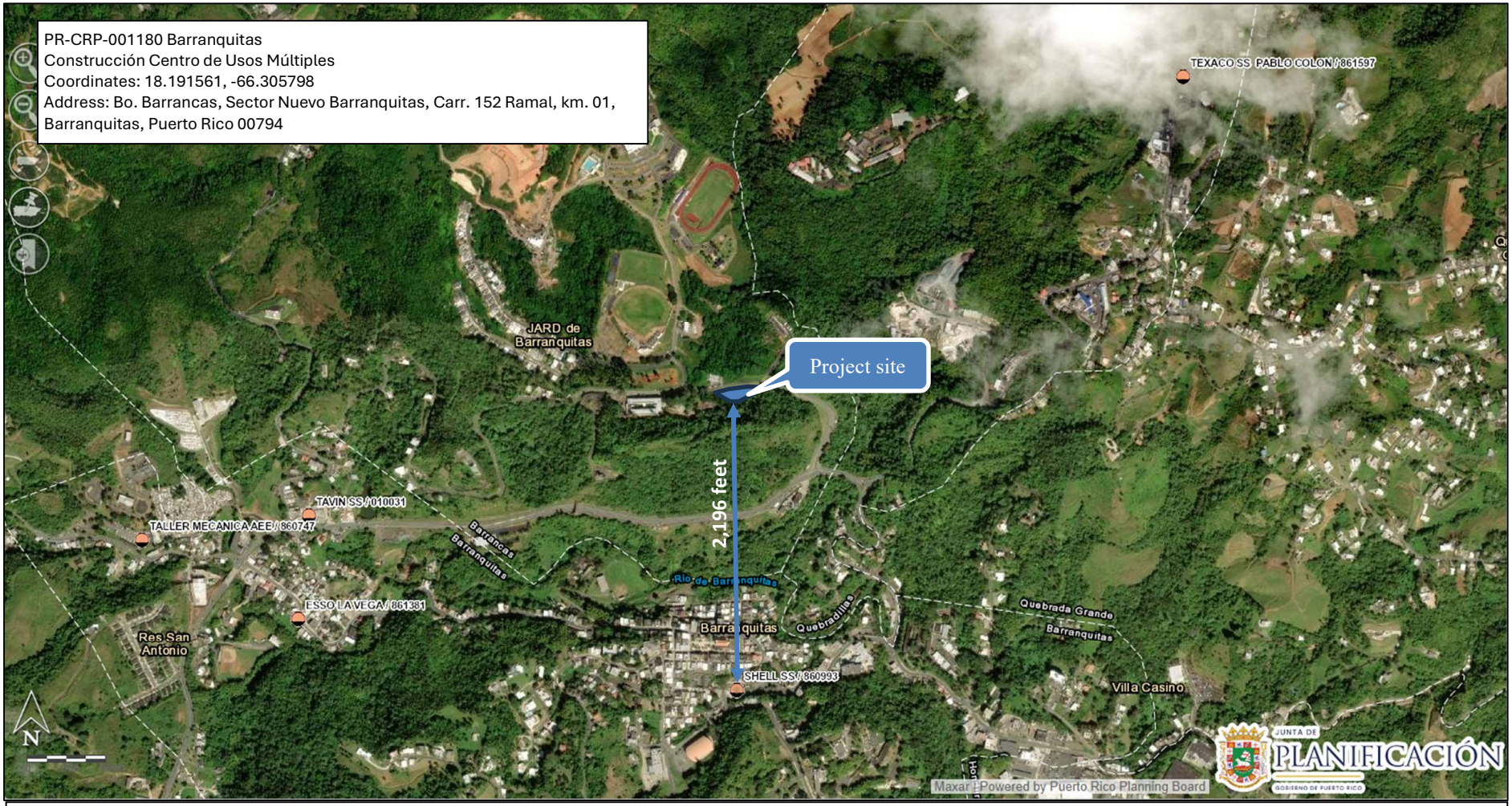


Illustration of 1957 USGS Topographic map with approximate footprint of the Barranquita's Landfill and the relative location from the project site.

6.6 Underground Storage Tanks (UST) map



Source: Puerto Rico Planning Board (PRPB) accessed October 8, 2025 at URL https://gis.jp.pr.gov/mipr/

6.5 Leaking Underground Storage Tanks (LUST) 2024 list (only the pages that have Barranquitas sites have been included)

ACTIVE SITES LUST LIST

2024

	UST ID	NAME	CITY	ADDRESS	OWNER	HOWKNOWN	DTKNOWN
93	86-0318	Gulf #119	San Juan	Ave. Central 1039 Puerto Nuevo	Caribbean Petroleum Corp.	High Concentrations	11-Apr-98
94	86-0319	Gulf #120	Arecibo	Carr #10 km 85.9	Caribbean Petroleum `Corp	UST Removal	31-Jan-05
95	86-0321	Gulf #122	Dorado	Carr # 699 & Carr 854	Caribbean Petroleum Corp	Product in Well	12-Mar-99
96	86-0323	Gulf #126	Juana Díaz	Carr. 14 Km. 11.3 Bo. Jacaguas	Caribbean Petroleum	UST Removal	25-May-00
97	86-0326	Gulf 129	Arecibo	Carr 129 km 39.4	Caribbean Petroleum Corp.	UST Removal	27-Oct-04
98	86-0327	Gulf #131	Yauco	Carr. 371 Km. 2.3 Bo. Almacigo	Caribbean Petroleum Corp.	UST Removal	16-Mar-99
99	86-0328	Gulf #132	Fajardo	Carr. 987 Km. 0.2	Caribbean Petroleum	Spill Notification	18-Nov-99
100	86-0331	Gulf #135	Guaynabo	Carr 838 Calle Main	Caribbean Petroleum Corp.	Product in Well	3-Apr-00
101	86-0332	Gulf #136	Mayaguez	Bo. Maní	Caribbean Petroleum Corp	Product in Well	6-Jun-02
102	86-0334	Gulf #139	Bayamón	Carr 2 km 8.3	Caribbean Petroleum Corp.	Product in well	15-Jan-01
103	86-0336	Gulf # 304	San Juan	Carr 2 Km 5.0 Bo. Pueblo Viejo	Arturo R.Umpierre Norat	Investigation Plan	15-Nov-24
104	86-0346	Gulf #328	Gurabo	Carr. 181 Km. 23.1	Caribbean Petroluem Corp.	UST Removal	16-Sep-96
105	86-0350	Gulf 345	Guayanilla	Carr. 132 Km. 3.7	Caribbean Petroleum Corp	High Concentration	24-Mar-97
106	86-0352	Santana S/S	Humacao	Carr. 3 Km. 83.5	Caribbean Petroleum Corp	UST Removal	16-Mar-99
107	86-0353	Doraville S/S	Dorado	Carr. 695 km. 1.5 Bo. Higuillar	American Petroleum Corp.	UST Removal	14-Jul-00
108	86-0355	Gulf S/S #353	Adjuntas	Carr. 135 km. 81.0	Caribbean Petroleum Corp.	UST Removal	24-Aug-99
109	86-0356	Gulf #356	Cayey	Carr. 184 Km. 27.6	Gulf-Chevron	High Concentration	16-Dec-93
110	86-0358	Gulf #362	Barranquitas	Carr. 719 Km. 2.6 Bo. Helechal	Caribbean Petroleum Corp.	High Concentration	22-May-92
111	86-0359	Shell #3840	Cayey	Carr 1 km 52.4 Beatriz	Shell Company (P.R.) Limited	UST Removal	6-Nov-96
112	86-0363	Gulf #371	Hatillo	Carr. 493 & Carr. 853 Bo. Corcobado	Caribbean Petroleum Corp.	Monitoring Results	29-Mar-99
113	86-0371	Torrado Gas Service Station	Hatillo	Carr 130 km 6.0	Hector Torrado	UST Removal	4/1/2005
114	86-0372	Gulf 386	Trujillo Alto	Round Hills Commercial Center	Caribbean Petroleum Corp	UST Removal	1-Oct-97
115	86-0373	Servicentro Rodríguez	Cayey	Calle 1 Esq 7 Ur Aponte	Jorge Rodríguez	Spill	18-Jan-99

ACTIVE SITES LUST LIST

2024

	UST ID	NAME	CITY	ADDRESS	OWNER	HOWKNOWN	DTKNOWN
277	86-1359	Ex Esso (Garaje Muñoz)	Yauco	Calle 25 de julio # 19	Esso	UST Removal	19-Jan-99
278	86-1367	Esso CO-266	Yabucoa	Calle Cristobal Colón 65	Esso Standard Oil Co.	UST Removal	27-May-91
279	86-1369	Ex Esso 3P-259	Humacao	Carr 33 km 83.4 Bo Cataño	Esso	Soil Contamination	15-Jul-05
280	86-1373	Anibal Dávila S/S	Maunabo	Calle Muñoz Rivera Esq. Barceló	Esso Standard Oil Co.	UST Removal	23-Apr-98
281	86-1376	Esso	Cidra	Cidra	Esso Standard Oil Co.	Spill	6-Nov-98
282	86-1380	Ex ESSO 3P-436	Aibonito	Carr 14 km 80.0	Esso Standard Oil Co.	UST Removal	Unknown
283	86-1381	Carlos Rodríguez	Barranquitas	Carr 156 km 14.7 Bo. La Vega	Esso Standard Oil Co.	Spill	10-May-99
284	86-1395	Hormigonera Mayaguezana	Mayaguez	PR-114 Km. 147.7 Bo. Guanajibo Castillo	Esso Standard Oil Co.	Film in MW	17-Jun-03
285	86-1427	Hospital del Maestro	San Juan	Ave. Domenech	Esso Standard Oil Co.	Unknown	21-Apr-99
286	86-1437	Caribe Hilton	San Juan	San Geronimo, Grond 6	Esso Standard Oil Co.	High Concentration	21-Nov-00
287	86-1455	Asociacion Pescadores	Culebra	Playa Sardinas 2	Aso. De Pescadores	Closure (High Values)	8-Aug-95
288	86-1456	Cayo Isleta Marina	Fajardo	Puerto Real	Inversiones Isleta Marina	UST Removal	19-Nov-01
289	86-1462	Papirin S/S	Barranquitas	Carr 771 km 2.5 Bo. Barrancas	Sr. Octavio Santini	UST Removal	24-Sep-01
290	86-1465	Pfizer	Barceloneta	Carr 2 km 58.2	Pfizer Pharmaceuticals	UST Removal	19-Mar-02
291	86-1469	Garaje La Hamaca	Lares	Carr #124 km 5.3	Lumen Cruz	UST Removal	18-Apr-01
292	86-1509	Gulf #013	Toa Baja	Carr #167 Ave. Comerio Norte #600 Km 10.7	Oil Investment Consolidated, Inc.	Characterization Rep	Unknown
293	86-1510	Urbano Torres s/s	Río Piedras	Carr 1 km 18.8 Bo. Tortugo	U.S Marshall Service	UST Removal	Unknown
294	86-1515	U.S Naval Comp. & Telec. Sta	Isabela	Carr 2 km 116.2	U.S Navy	UST Removal	2-Mar-01
295	86-1520	U.S. Naval Security Group Activity	Toa Baja	Barrio Sabana Seca	U.S Navy	Closure (High Values)	13-May-99
296	86-1533	Aeropuerto Internacional Luis Muñoz Mar	Carolina	Ave Los Gobernadores	Porths Authority	UST Removal	20-Sep-96
297	86-1555	Zulu Gas Station	San Juan	Ave. Fernández Juncos	Zulu Gas Station	Soil Contamination	15-Apr-08
298	86-1565	Rolón s/s	Morovis	Carr 155 km 48.8	Morovis S/S	Spill	6-Nov-97
299	86-1567	Pueblo s/s 554	Lares	Carr 111 km 33.4	Texaco	UST Removal	16-Dec-97

7. Endangered Species Act: No Effect Memorandum

Note:
A *No Effect* Memorandum does not need to be submitted to USFWS. The Responsible Entity's Certifying Officer (CO) revised and agreed with the content of the memorandum on 6/12/2024. The image below serves to capture the approval.

9	User Note	06/12/2024 04:32:28 PM	Landon West	@Santa D. Ramirez Lebron @Mildred Guzman @Andrea Curbelo-Marty (Reporting Specialist) @Hargedis Roman-Delgado Thank you!
10	User Note	06/12/2024 04:28:23 PM	Santa D. Ramirez Lebron	@Landon West @Kelly Castro the NE memo was reviewed, and I have no comments. PM can proceed with the course of the case.

See next pages for USFWS NE memorandum

Date: 6/10/2024

Applicant ID: PR-CRP-001180
Street Address: Bo. Barrancas, Sector Nuevo Barranquitas, Carr. 152 Ramal, km. 01
Municipality: Barranquitas, Puerto Rico 00794

RE: No Effect Determination for PR-CRP-001180

EXECUTIVE SUMMARY

Section 7 of the Endangered Species Act (ESA) mandates that federal agencies ensure the actions that they authorize, fund, or carry out shall not jeopardize the continued existence of federally listed plants and animals or result in the adverse modification or destruction of designated critical habitat. Where their actions may affect resources protected by the ESA, agencies must consult with the Fish and Wildlife Service and/or the National Marine Fisheries Service ("FWS" and "NMFS" or "the Services").

This memo serves to document that the proposed project, PR-CRP-001180, located at Bo. Barrancas, Sector Nuevo Barranquitas, Carr. 152 Ramal, km. 01, Barranquitas, Puerto Rico 00794 (Parcel ID# 247-000-006-38-000) was reviewed in accordance with Section 7 of the Endangered Species Act of 1973 (16 USC 1536) as well as the Fish and Wildlife Coordination Act (47 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*) by a qualified Biologist, resulting in a 'No Effect' determination.

The goal of the City Revitalization Program is to help shape and implement the future vision of communities that were affected by Hurricanes Irma and María and will support the municipal governments and other eligible organizations to undertake a variety of recovery activities aimed at reinvigorating downtown areas, urban centers, and key community corridors.

Project Description

The property is a cleared, undeveloped lot located very close to the municipality's urban center, making it easily accessible to the entire population (see photo log in Appendix C). The project scope includes the construction of a multiple-use center with a capacity for approximately 200 people. The facilities include an activity area, kitchen, bathrooms, showers and lockers, offices, service area, storage, and parking with a footprint of approximately 16,000 square feet and an estimated investment of $2,865,645.94. The project's objective is to create a space that supports the facilities that the municipality has and that are more to meet the needs of our people. With this project, the Municipality of Barranquitas seeks a new option to carry out multiple activities that will significantly benefit our people. As part of the activities and services intended to be offered within this new facility, there are community talks, mass vaccination areas, community training, health stations, graduations, social gatherings, school activities, government meetings, and government activities, among others. In addition, this project aims to offer a safe place in case of an emergency to assist citizens in the event of a catastrophe such as Hurricane María. The New Multiple Use Center will serve as a support center where it can also be used to distribute emergency supplies to the population and become a resilient shelter center that includes showers, cisterns, a kitchen, and power sources. The project will be built at approximately 18.191561°, -66.305798° (see Site map at Appendix A, Figure 1).

As indicated by the Official Species List obtained from the Information for Planning and Consultation (IPaC) system and USFWS Critical Habitat data (Appendix B), the proposed project lies within the ranges of the following federally listed species and critical habitats:

Species	Status
Puerto Rican Boa (*Chilabothrus inornatus*)	Endangered

Critical Habitat
None.

Existing Conditions:

The project area where activities will be taking place consists of approximately 16,000 sq. ft. (0.37 acres) of land located at Bo. Barrancas, Sector Nuevo Barranquitas, Carr. 152 Ramal, km. 01, Barranquitas, Puerto Rico 00794. According to historic imagery on Google Earth, the parcel has consisted of vacant land since at least 1994. A topographic map is included (see Appendix A, Figure 2). The project is located in Zone X on the FEMA Flood map and ABFE map, panel number 72000C1160H dated 4/19/2005 (see Flood Map Appendix A, Figure 3 and ABFE map Appendix A, Figure 4). A Preliminary FIRM has not been developed for this area. There is a mapped NWI riverine wetland approximately 600 feet to the east of the proposed project location. The project activities will not occur within a natural or manmade wetlands and no direct or indirect impacts are anticipated as a result of the project activities (see wetlands map Appendix A, Figure 5).

Effect Determination:

Having carefully analyzed the project site and the information available, including the IPaC species list and available Dkey(s), critical habitat data (Appendix A, Figure 6), nature of the project, previous site disturbance, and scope of project activities, the following effect determinations have been made:

Species	Effect Determination	Conservation Measures to be Implemented (if needed)
Puerto Rican Boa (*Chilabothrus inornatus*)	No Effect	None required

SPECIES ANALYSIS

Puerto Rican Boa *(Chilabothrus inornatus)*

Considered to be a habitat generalist, the Puerto Rican Boa tolerates a wide variety of

terrestrial and arboreal habitats, including rocky areas, haystack hill, trees and branches, rotting stumps, caves, plantations, various types of forested areas such as karst and mangrove forests, forested urban and rural areas, and along streams and road edges. The IPaC Determination Key (Dkey) for the Puerto Rican Boa was used to evaluate the potential impacts to federally listed species from this project. Based on the Dkey responses, it was determined that the proposed project will have 'No Effect' on the Puerto Rican Boa (Appendix B).

If a Puerto Rican Boa is found in the project activity site, work shall cease until the Boa moves off on its own. If the Boa does not move off, the Construction Manager shall contact the Puerto Rico Department of Natural and Environmental Resources and ask for them to relocate the Boa.

6/10/2024

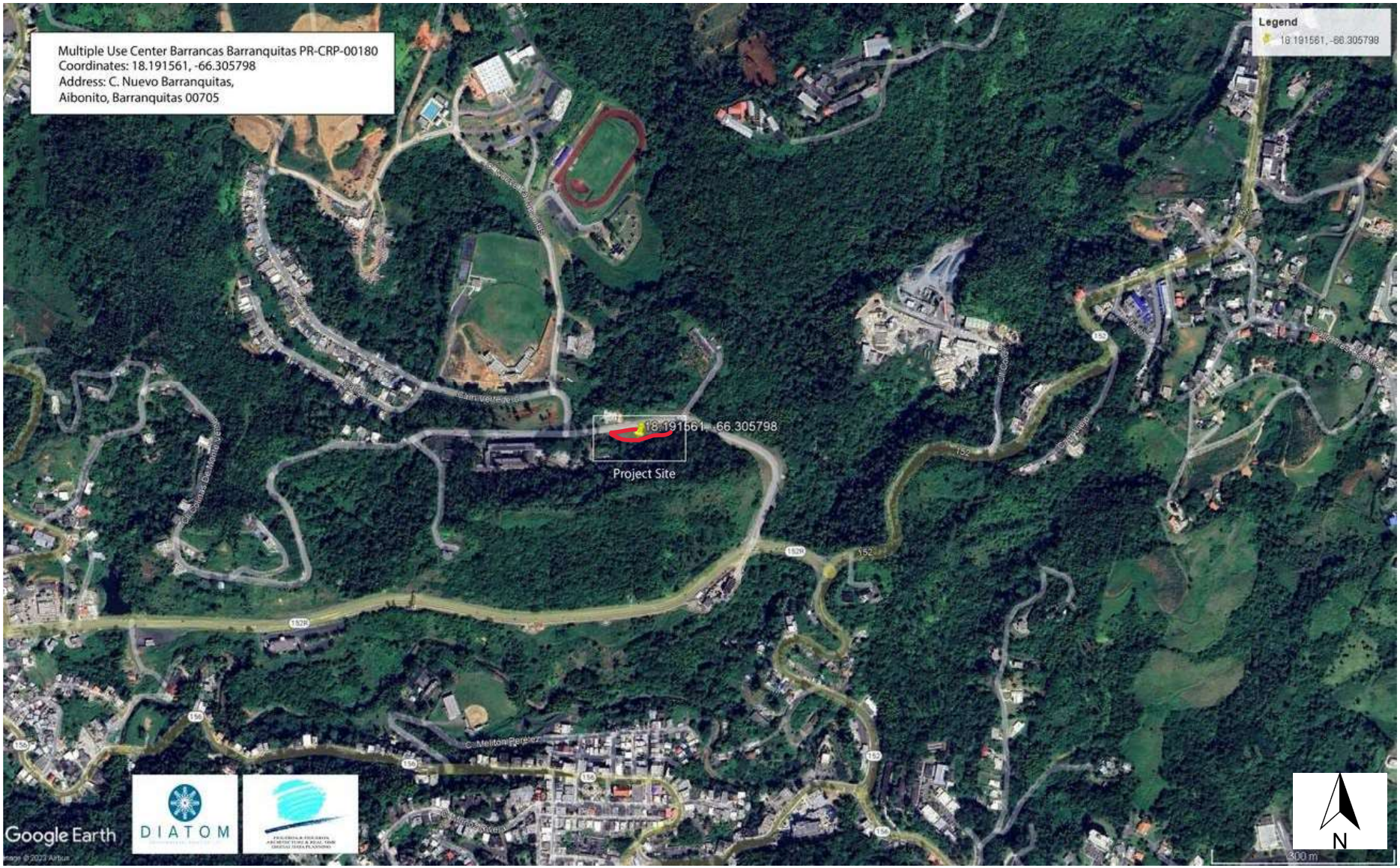
Date

Javier Velez Arocho
Senior Biologist
Diatom Environmental Services, LLC

Appendix A:
Site Maps

PR-CRP-001180 Project Location Map

Address: Bo. Barrancas, Sector Nuevo Barranquitas, Carr. 152 Ramal, km. 01, Barranquitas, Puerto Rico 00794
Coordinates: 18.191561°, -66.305798°



PR-CRP-001180 Topographic Map

Address: Bo. Barrancas, Sector Nuevo Barranquitas, Carr. 152 Ramal, km. 01, Barranquitas, Puerto Rico 00794
Coordinates: 18.191561°, -66.305798°

SCALE 1:20 000

0.5 0 KILOMETERS 1
1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 500 0 1000 2000 3000 4000 5000 6000 7000 8000
FEET

USGS science for a changing world

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

CONTOUR INTERVAL 20 FEET
DATUM IS LOCAL MEAN SEA LEVEL

Retrieved from https://ngmdb.usgs.gov/topoview/viewer/#15/18.1889/-66.3238, 6/10/2024

PR-CRP-001180 NFHL FIRMette

FEMA

Address: Bo. Barrancas, Sector Nuevo Barranquitas, Carr. 152 Ramal, km. 01, Barranquitas, Puerto Rico 00794
Coordinates: 18.191561°, -66.305798°

0 250 500 1,000 1,500 2,000 Feet

1:6,000

66°18'2"W 18°11'13"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/10/2024 at 1:29 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

PR-CRP-001180 ABFE Map

Address: Bo. Barrancas, Sector Nuevo Barranquitas, Carr. 152 Ramal, km. 01, Barranquitas, Puerto Rico 00794
Coordinates: 18.191561°, -66.305798°

6/10/2024, 1:39:46 PM

1:4,514

0 0.04 0.07 0.14 mi

0 0.05 0.1 0.2 km

Flood Hazard Area (zoom in to make visible)
- A
- 0.2% Annual Chance Flood Zone
- Zone/BFE Boundary

Flood Hazard Extent
- 1% Annual Chance Flood
- 0.2% Annual Chance Flood
- Advisory Base Flood Elevation (zoom in to make visible)
- Streamline (zoom in to make visible)

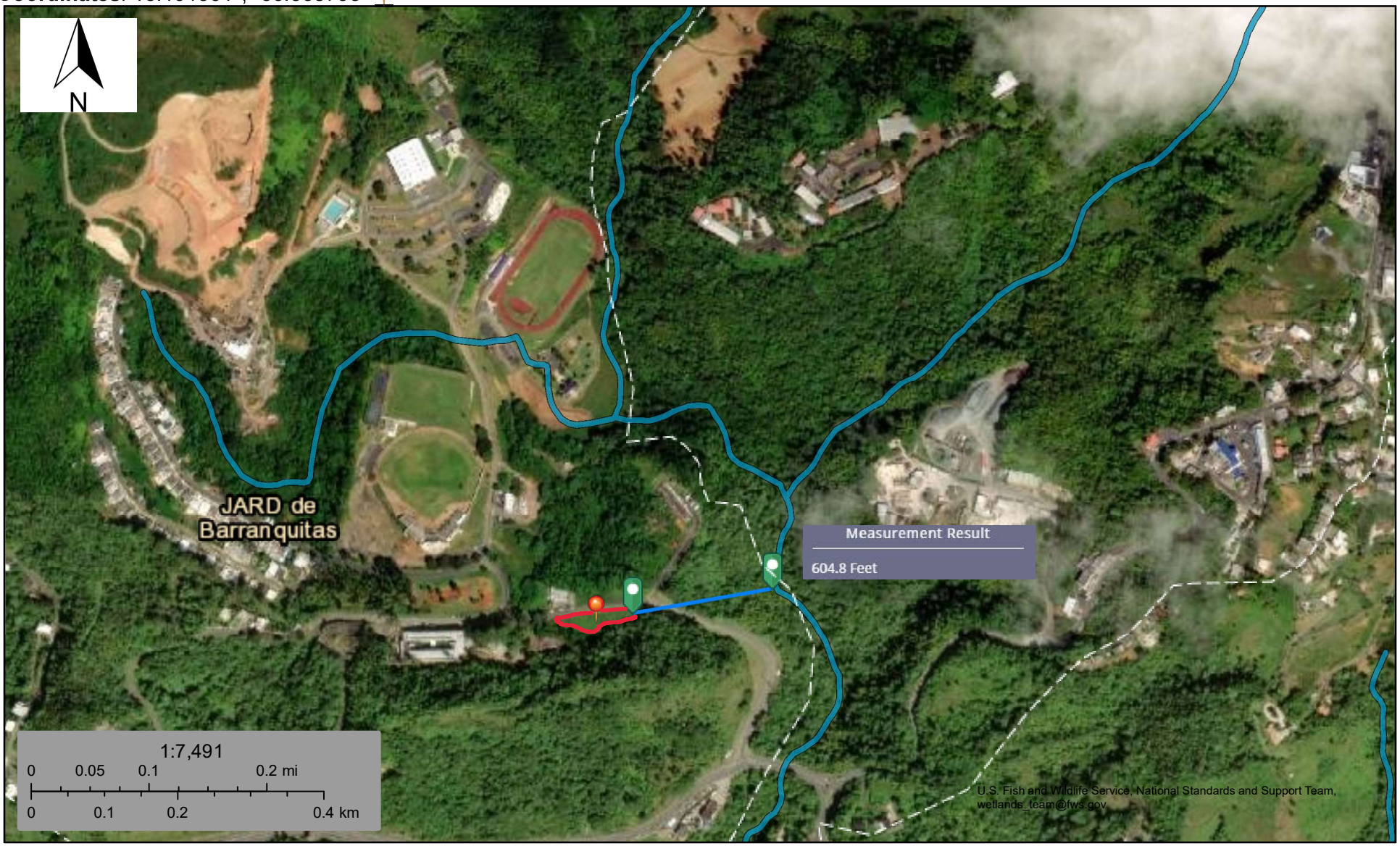
FEMA, Maxar, Esri Community Maps Contributors, Esri, TomTom, Garmin, Foursquare, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, NPS,

ArcGIS Web AppBuilder

PR-CRP-001180 Wetland Map

Address: Bo. Barrancas, Sector Nuevo Barranquitas, Carr. 152 Ramal, km. 01, Barranquitas, Puerto Rico 00794
Coordinates: 18.191561°, -66.305798°

U.S. Fish and Wildlife Service
National Wetlands Inventory



June 10, 2024

Wetlands

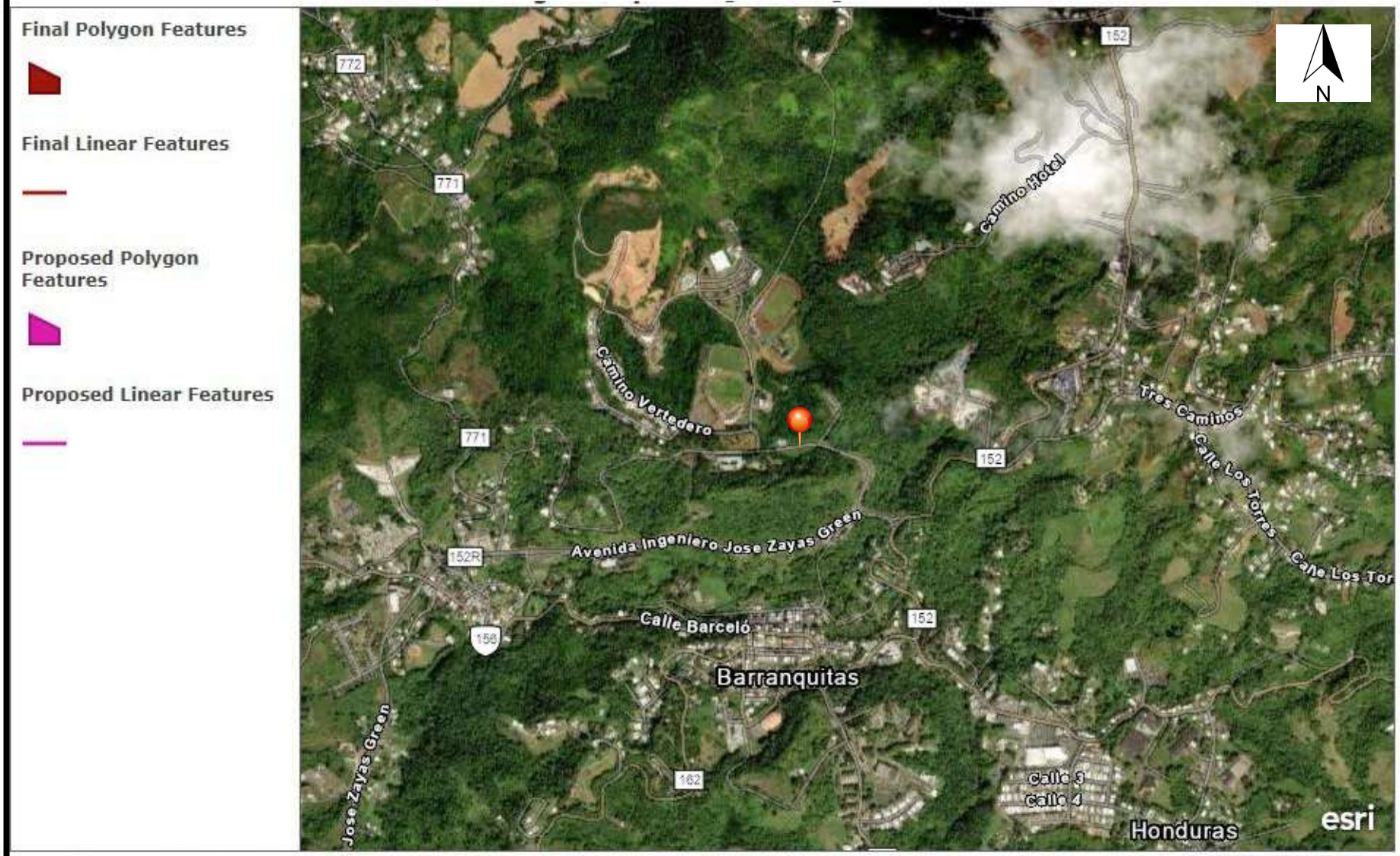
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

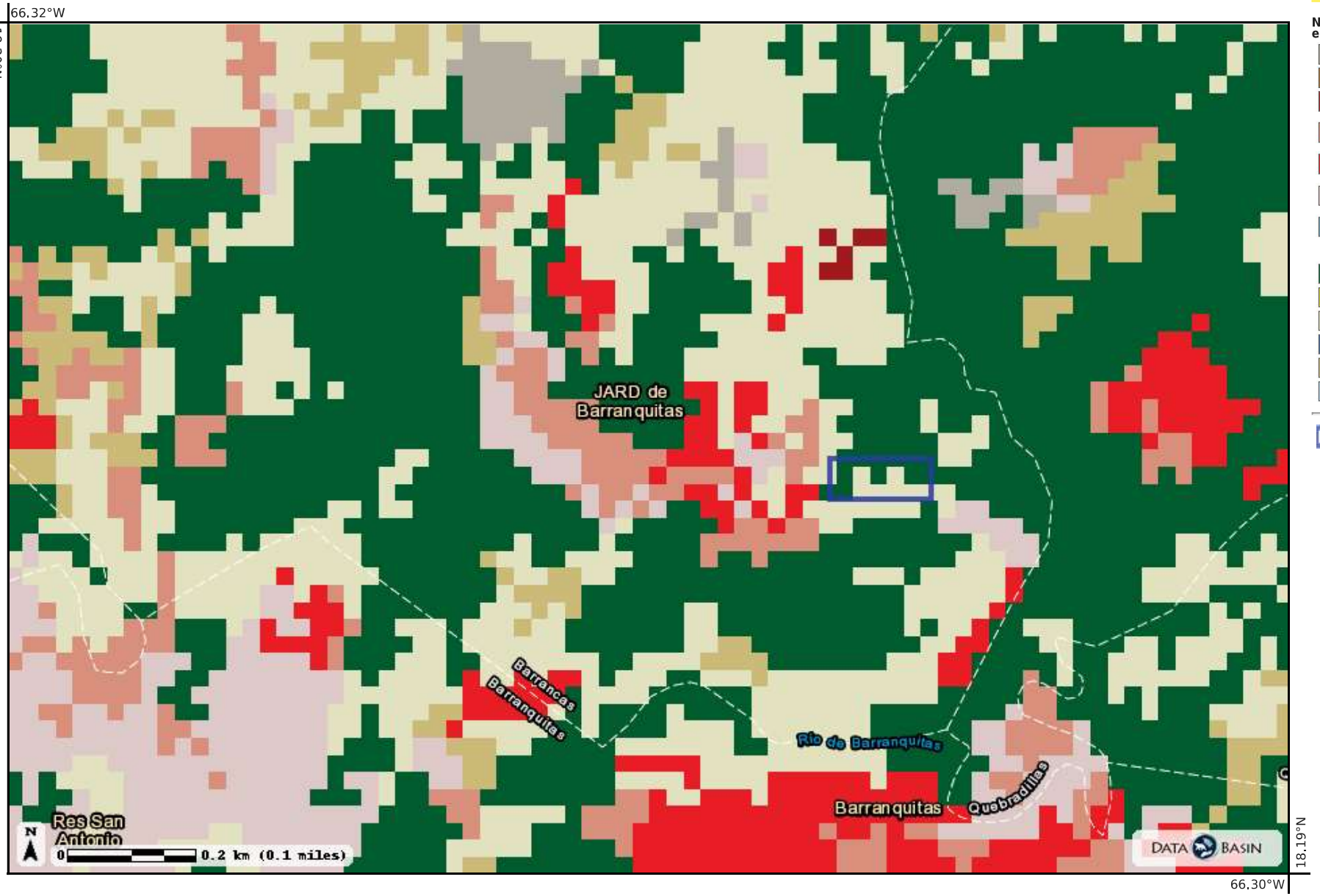
National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

PR-CRP-001180 Critical Habitat Map

Address: Bo. Barrancas, Sector Nuevo Barranquitas, Carr. 152 Ramal, km. 01, Barranquitas, Puerto Rico 00794
Coordinates: 18.191561°, -66.305798°



A specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection.



Legend

National Land Cover Database, land cover - Puerto Rico

- Barren Land
- Cultivated Crops
- Developed, High Intensity
- Developed, Low Intensity
- Developed, Medium Intensity
- Developed, Open Space
- Emergent Herbaceuous Wetlands
- Evergreen Forest
- Hay/Pasture
- Herbaceuous
- Open Water
- Shrub/Scrub
- Woody Wetlands

Project Site

PR-CRP-001180 NLCD Land Cover Map

Address: Bo. Barrancas, Sector Nuevo Barranquitas, Carr. 152 Ramal, km. 01, Barranquitas, Puerto Rico 00794

Coordinates: 18.191561°, -66.305798°

National Land Cover Database, land cover - Puerto Rico

https://databasin.org/datasets/e95aa06e05624f3087559eca884db034/

Credits: USGS National Land Cover Database 2001

Layers:
- layer1

Appendix B:
IPaC

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Barranquitas County, Puerto Rico

Local office

Caribbean Ecological Services Field Office

(939) 320-3135
(787) 851-7440
CARIBBEAN_ES@FWS.GOV

MAILING ADDRESS
Post Office Box 491
Boqueron, PR 00622-0491

PHYSICAL ADDRESS
Office Park I
State Road #2 Km 156.5, Suite 303}
Mayaguez, PR 00680

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Reptiles

NAME	STATUS
Puerto Rican Boa Chilabothrus inornatus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6628	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

There are no documented cases of eagles being present at this location. However, if you believe eagles may be using your site, please reach out to the local Fish and Wildlife Service office.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.

2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
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The data in this location indicates there are no migratory birds of conservation concern expected to occur in this area.

There may be migratory birds in your project area, but we don't have any survey data available to provide further direction. For additional information, please refer to the links above for recommendations to minimize impacts to migratory birds or contact your local FWS office.

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

This location did not intersect any wetlands mapped by NWI.

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Caribbean Ecological Services Field Office
Post Office Box 491
Boqueron, PR 00622-0491
Phone: (787) 834-1600 Fax: (787) 851-7440
Email Address: CARIBBEAN_ES@FWS.GOV

In Reply Refer To: May 17, 2023
Project Code: 2023-0082574
Project Name: Barrancas Ward Multi Use Center, PR#152 Km 0.1 Barranquitas Puerto Rico

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

THE FOLLOWING SPECIES LIST IS NOT A SECTION 7 CONSULTATION. PLEASE CONTACT OUR OFFICE TO COMPLETE THE CONSULTATION PROCESS

The purpose of the Endangered Species Act (Act) is to provide a means whereby threatened, and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect those species and/or their designated critical habitat.

Federal agencies are required to "request of the Secretary of Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action". The enclosed species list provides information to assist with the U.S. Fish and Wildlife Service (Service) consultation process under section 7 of the Act. However, **the enclosed species list does not complete the required consultation process.** The species list identifies threatened, endangered, proposed and candidate species, as well as proposed and designated critical habitats, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. A discussion between the Federal agency and the Service should include what types of listed species may occur in the proposed action area and what effect the proposed action may have on those species. This process initiates informal consultation.

Once a species list is obtained for the proposed project, an effect determination for endangered and threatened species should be made. The applicant could make an effect determination by using available keys on IPaC for specific species. For species with no determination keys, the applicant should request concurrence from the Service by sending a project package

to caribbean_es@fws.gov. To obtain guidance for completing this process and the minimum requirements for project packages, please visit:

https://www.fws.gov/southeast/pdf/letter/consultation-under-section-7-of-the-endangered-species-act-with-the-caribbean-ecological%20Services-field-office-template-letter.pdf

When a federal agency, after discussions with the Service, determines that the proposed action is not likely to adversely affect any listed species, or adversely modify any designated critical habitat, and the Service concurs, the informal consultation is complete, and the proposed project moves ahead. If the proposed action is suspected to affect a listed species or modify designated critical habitat, the Federal agency may then prepare a Biological Assessment (B.A.) to assist in its determination of the project's effects on species and their habitat. However, a B.A. is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a B.A. where the agency provides the Service with an evaluation on the likely effects of the action to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a B.A. are described at 50 CFR 402.12.

If a federal agency determines, based on its B.A. or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to further consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species, and proposed critical habitat be addressed within the consultation process. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species.

This list is provided pursuant to Section 7 of the Endangered Species Act and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action". Please use this list to determine whether your project requires consultation and to make your effects determination. For more guidance, use the Guideline for Consultation under Section 7 of the Endangered Species Act with the Caribbean Ecological Services Field Office by clicking here.

This species list is provided by:

Caribbean Ecological Services Field Office
caribbean_es@fws.gov

Post Office Box 491
Boqueron, PR 00622-0491
(786) 244-0081

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Caribbean Ecological Services Field Office
Post Office Box 491
Boqueron, PR 00622-0491
(787) 834-1600

PROJECT SUMMARY

Project Code: 2023-0082574

Project Name: Barrancas Ward Multi Use Center, PR#152 Km 0.1 Barranquitas Puerto Rico

Project Type: Federal Grant / Loan Related

Project Description: The project consists of the construction of a new Multiple Use Center with a capacity for approximately 200 people. The facilities include activities, a kitchen, bathrooms, showers and lockers, service offices, storage, and parking for about 9,000 square feet of the building footprint. Stormwater management and lighting will also be part of this project. The center of the project is located at the following coordinates, 18.191561 / -66.305798. The total area to be disturbed by the proposed improvements will be approximately 1,271 square meters.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@18.19165825,-66.30582785083061,14z

Counties: Barranquitas County, Puerto Rico

ENDANGERED SPECIES ACT SPECIES

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

REPTILES

NAME	STATUS
Puerto Rican Boa *Chilabothrus inornatus*	Endangered

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/6628
General project design guidelines:
https://ipac.ecosphere.fws.gov/project/4HVXAGT3ORH5RBYYBP2XATYQKU/documents/generated/6941.pdf

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

THERE ARE NO FWS MIGRATORY BIRDS OF CONCERN WITHIN THE VICINITY OF YOUR PROJECT AREA.

MIGRATORY BIRDS FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list

of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical

Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Javier Velez-Arocho
Address: 100 Ave Los Patriotas Unit 457
Address Line 2: Garden Court
City: Lares
State: PR
Zip: 00669-2634
Email javier@diatomenvironmental.com
Phone: 7874678887

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Department of Housing and Urban Development

Appendix C:
Site Photo Log

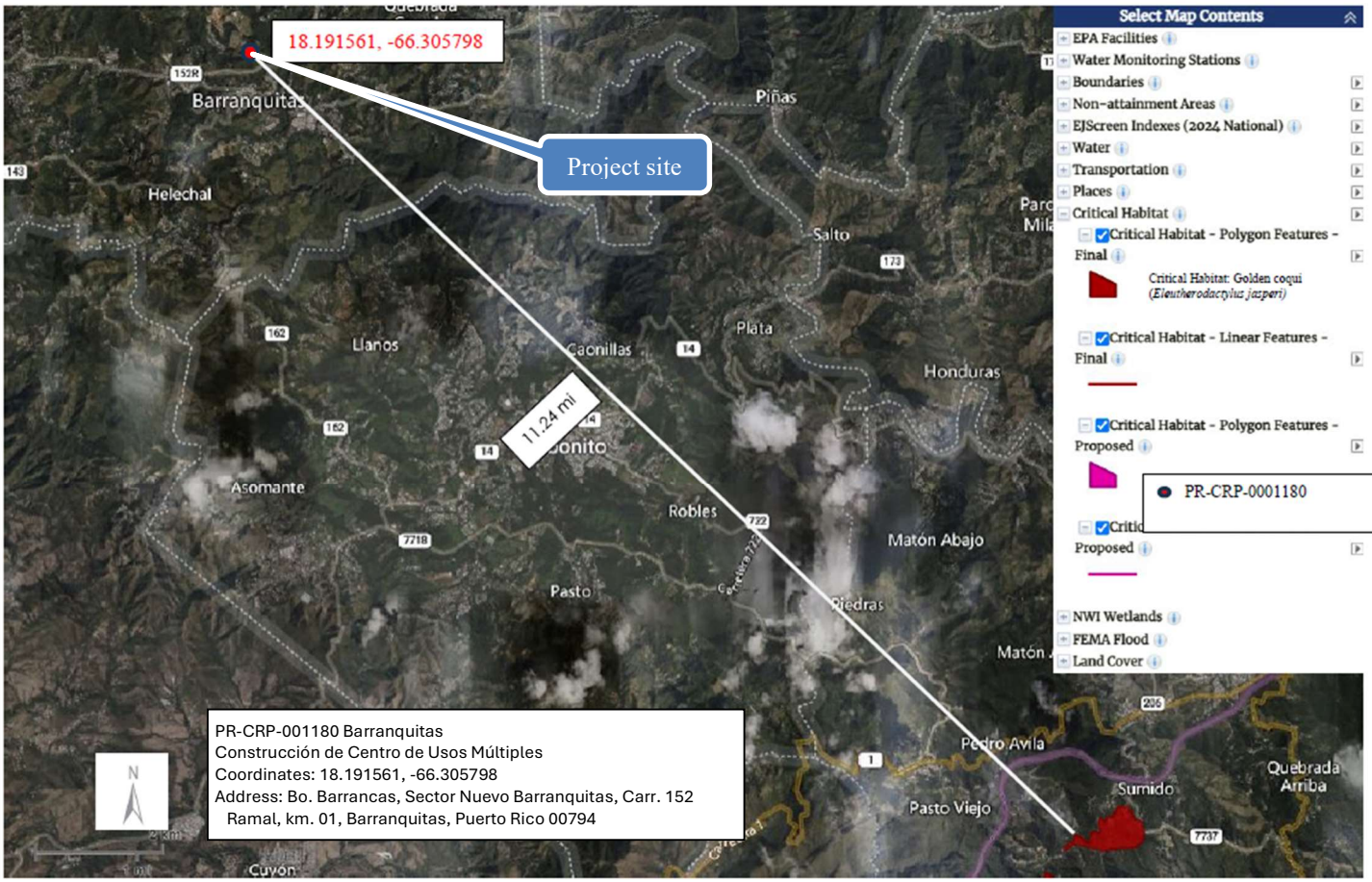
Construcción de Centro de Usos Multiples
PR-CRP-001180
Municipality of Barranquitas, Puerto Rico 00794
Bo. Barrancas, Sector Nuevo Barranquitas, Carr. 152 Ramal, km. 01
18.191561°, -66.305798°

Site Pictures

Construcción de Centro de Usos Multiples
PR-CRP-001180
Municipality of Barranquitas, Puerto Rico 00794
Bo. Barrancas, Sector Nuevo Barranquitas, Carr. 152 Ramal, km. 01
18.191561°, -66.305798°

Construcción de Centro de Usos Multiples
PR-CRP-001180
Municipality of Barranquitas, Puerto Rico 00794
Bo. Barrancas, Sector Nuevo Barranquitas, Carr. 152 Ramal, km. 01
18.191561°, -66.305798°

Critical Habitat Map



Source: EPA NEPAssist (Spatial Reference: GRS80) at URL https://nepassisttool.epa.gov/nepassist/nepamap.aspx

Prepared by ICF

8. Explosives and Flammable Hazards

8.1 Field Visit Checklist & Site Evaluation

Field Visit Checklist & Site Evaluation							
Project Name:	CRP-0001080 Multi-Use Center			Latitude:		18.191561	
First Name:	Arq. Pablo	Last Name:	Figueroa	Longitude:		-66.305798	
Street Address:	Bo. Barrancas, Sector Nuevo Barranquitas, Carr. 152 Ramal, km. 01, Barranquitas, Puerto Rico 00794			Apt/Suite:			
City:	San Juan			State:	PR	Zip:	00926
Date of Visit:	Sept 7, 2023		Field Visit Conducted By:		Javier Vélez Arocho		

EXISTING ENVIRONMENTAL CONDITIONS ON & AROUND SITE Levee/Flood Control Structures (Levees, T-walls, pumping stations, etc.)		
	Site Specific	Area
Observations	There are no flood control structures on site	N/A

Toxic Chemicals & Radioactive Materials		
Petroleum or Chemical Storage		
	Site Specific	Area
Is there any evidence or indication of an underground storage tank (UST) may be located on site?	No	No
If yes, are they in use?	N/A	No
Are there any out-of-service underground fuel tanks?	N/A	No
Is there any evidence that any AST on the property are leaking?	N/A	No
Polychlorinated Biphenyls (PCB):		
	Site Specific	Area
Is there any evidence or indication of leaking electrical equipment (transformer - ground or pole mounted, capacitor, or hydraulic equipment) present on site?	No	No

Hazardous Operations		
	Site Specific	Area
Is there any evidence of manufacturing operations utilizing or producing hazardous substances at or in close proximity to the site?	No	Yes, more than 5,000 ft
Is there any evidence or indication that past operations located on or in close proximity to the property used hazardous substances or radiological materials that may have been released into the environment?	No	No

Notes/Observations:

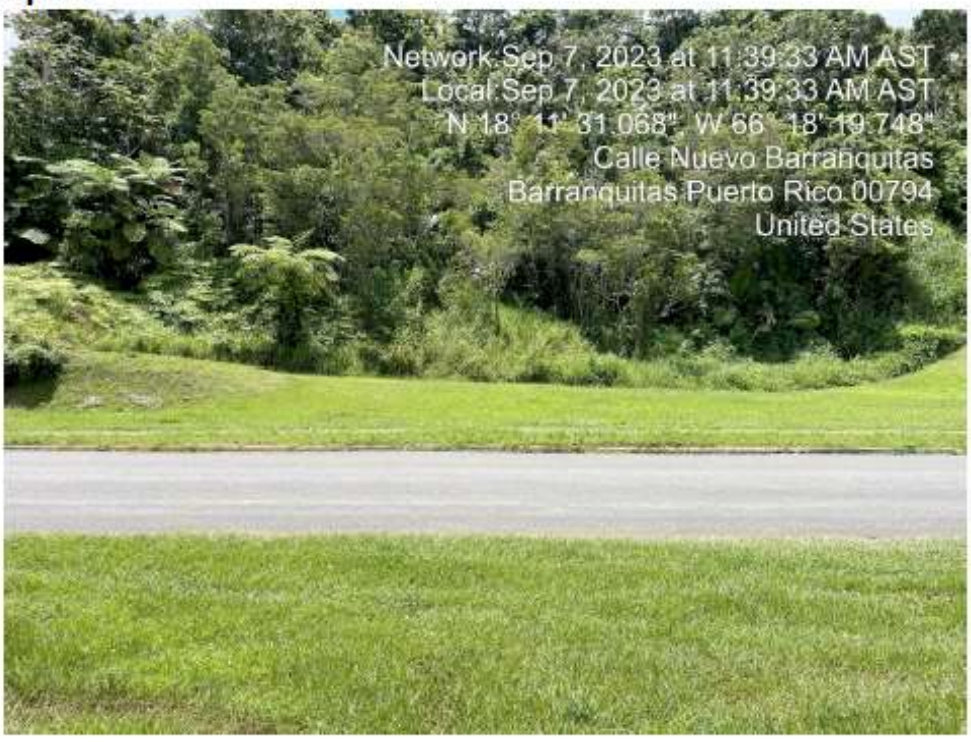
The Surroundings of the proposed site are clean. There is no evidence of hazardous conditions or materials used or stored near the premises. The weather conditions on site were very humid, with temperatures exceeding 88F. Rivers, streams, and greenfield surround the area. There is adjacent high school located 100 feet from the property. There is no presence of critical natural resources on site. No gas lines were visible in or around the proposed site. The Río Barranquitas is located 500 ft to the south of the site. There are small carshops operations more than a mile from the site. The area has bakeries, food trucks, and food markets with diesel generators.

Photograph 1

Photograph 2

Photograph 3

Photograph 4



Photograph 5

8.2 Acceptable Separation Distance (ASD) analysis

SEE NEXT PAGES

Acceptable Separation Distance (ASD) analysis
PR-CRP-001180 Barranquitas

This document discusses the Acceptable Separation Distance (ASD) requirements for a proposed above-ground diesel fuel tank for an emergency power generator unit (EGU) on a HUD-assisted project site. This document was prepared to support the Environmental Review compliance determination.

51.204 HUD-assisted hazardous facilities:

> *In reviewing applications for proposed HUD-assisted projects involving the installation of hazardous facilities, the Department shall ensure that such hazardous facilities are located at an acceptable separation distance from residences and from any other facility or area where people may congregate or be present. The mitigating measures listed in § 51.205 may be taken into account in determining compliance with this section.*

While the proposed facility is not considered a "hazardous facility", this analysis was performed to address HUD's ASD due to the location within the property of an above-ground diesel fuel tank for an emergency -power generator unit (EGU). No. 2 Diesel Fuel is considered a **Hazardous Liquid** per Appendix I to Subpart C of Part 51. The proposed unit is expected to have an integrated sub-base, doble wall (for spill prevention), non-pressurized, 600-gal fuel storage tank. It will be equipped with outdoor housing to protect the motor and other parts from the elements and include noise attenuation. This EGU will be located in the exterior or the proposed building. Per 24 CFR 51C, Appendix II (c), "Conventional petroleum fuel products stored in unpressurized tanks do not emit blast overpressure of dangerous levels when ignited." Thus, by HUD standards, diesel fuel will not be subject to explosion considerations, but by thermal considerations due to fire.

Figure 1 below shows an image with the projected construction area and two circles. The red circle shows the radius of *ASD for Thermal Radiation for Buildings*, as obtained from HUD's *Acceptable Separation Distance Assessment Tool*[1], and determined to be 39.70 feet. The yellow circle shows the radius of *ASD for Thermal Radiation for People*, which resulted in 223.55 feet. Since the proposed new building will be located within 42 feet of the proposed tank, thus the ASD for buildings will be met. The image also illustrates that there are no established areas where people would gather outside within the 223.55 feet radius, since the facilities are designed to host people indoors. However, thermal Radiation for people needs to be addressed to meet ASD requirements in the areas adjacent to the building.

The design will incorporate a "Fire wall" that will be placed between the EGU and the building, the Structural Engineer certified the design as follows:

> *I am a licensed engineer in Puerto Rico (#12577PE) and a structural engineering consultant. I certify that the concrete wall between the emergency power generator and the main building complies with the Puerto Rico building code and also mitigates the spread of fire in the event of an explosion of the emergency diesel generator designed for the Barranquitas Multipurpose Center.*

[1] https://www.hudexchange.info/programs/environmental-review/asd-calculator/

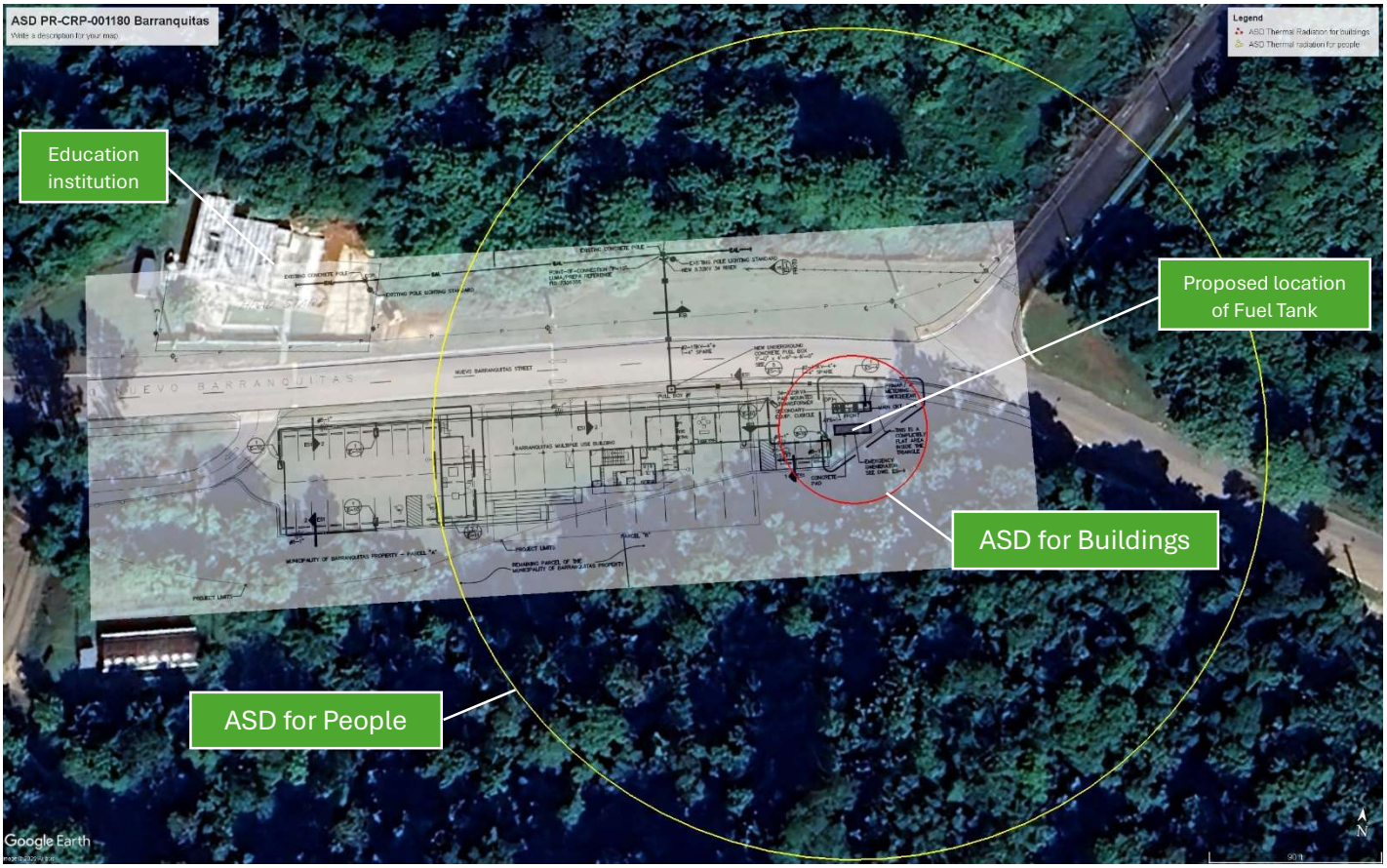


Figure 1 Acceptable Separation Distance image

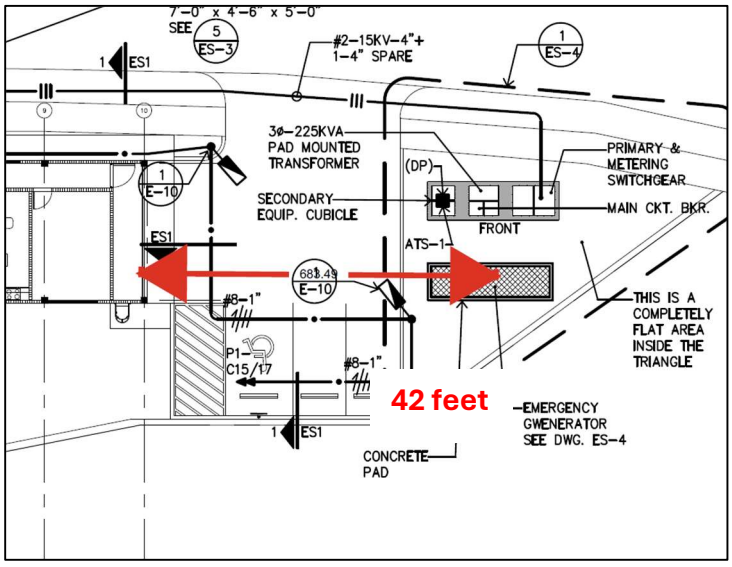


Figure 2 Distance from proposed tank centerline to the nearest exterior wall of the proposed building (information provided by project designer).

Annex A - Result from ASD Tool

Acceptable Separation Distance (ASD) Electronic Assessment Tool

The Environmental Planning Division (EPD) has developed an electronic-based assessment tool that calculates the Acceptable Separation Distance (ASD) from stationary hazards. The ASD is the distance from above ground stationary containerized hazards of an explosive or fire prone nature, to where a HUD assisted project can be located. The ASD is consistent with the Department's standards of blast overpressure (0.5 psi-buildings) and thermal radiation (450 BTU/ft^2 - hr - people and 10,000 BTU/ft^2 - hr - buildings). Calculation of the ASD is the first step to assess site suitability for proposed HUD-assisted projects near stationary hazards. Additional guidance on ASDs is available in the Department's guidebook "Siting of HUD- Assisted Projects Near Hazardous Facilities" and the regulation 24 CFR Part 51, Subpart C, Sitting of HUD-Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature.

Note: Tool tips, containing field specific information, have been added in this tool and may be accessed by hovering over the ASD result fields with the mouse.

Acceptable Separation Distance Assessment Tool

Is the container above ground?	**Yes:** ☑ **No:** ☐
Is the container under pressure?	**Yes:** ☐ **No:** ☑
Does the container hold a cryogenic liquified gas?	**Yes:** ☐ **No:** ☐
Is the container diked?	**Yes:** ☐ **No:** ☑
What is the volume (gal) of the container?	600
What is the Diked Area Length (ft)?	
What is the Diked Area Width (ft)?	
Calculate Acceptable Separation Distance	
Diked Area (sqft)	
ASD for Blast Over Pressure (ASDBOP)	
ASD for Thermal Radiation for People (ASDPPU)	223.55
ASD for Thermal Radiation for Buildings (ASDBPU)	39.70
ASD for Thermal Radiation for People (ASDPNPD)	
ASD for Thermal Radiation for Buildings (ASDBNPD)	

For mitigation options, please click on the following link: Mitigation Options (/resource/3846/acceptable-separation-distance-asd-hazard-mitigation-options/)

Providing Feedback & Corrections

After using the ASD Assessment Tool following the directions in this User Guide, users are encouraged to provide feedback on how the ASD Assessment Tool may be improved. Users are also encouraged to send comments or corrections for the improvement of the tool.

Please send comments or other input using the **Contact Us (https://www.hudexchange.info/contact-us/)** form.

Related Information

- ASD User Guide (/resource/3839/acceptable-separation-distance-asd-assessment-tool-user-guide/)
- ASD Flow Chart (/resource/3840/acceptable-separation-distance-asd-flowchart/)

Annex B - Structural Engineer certification and fire wall drawings

HECTOR A. GONZALEZ QUIÑONES
STRUCTURAL ENGINEER CONSULTANT

8 de septiembre de 2025

A quien pueda interesar:

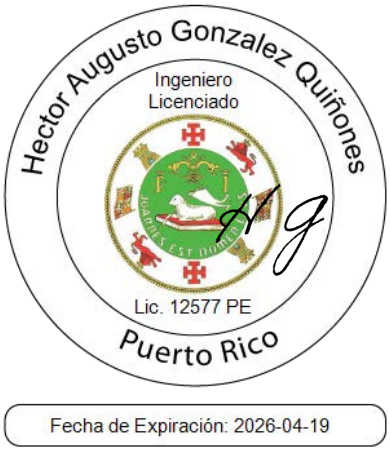
Re: Certificación estructural de mitigación de fuegos:

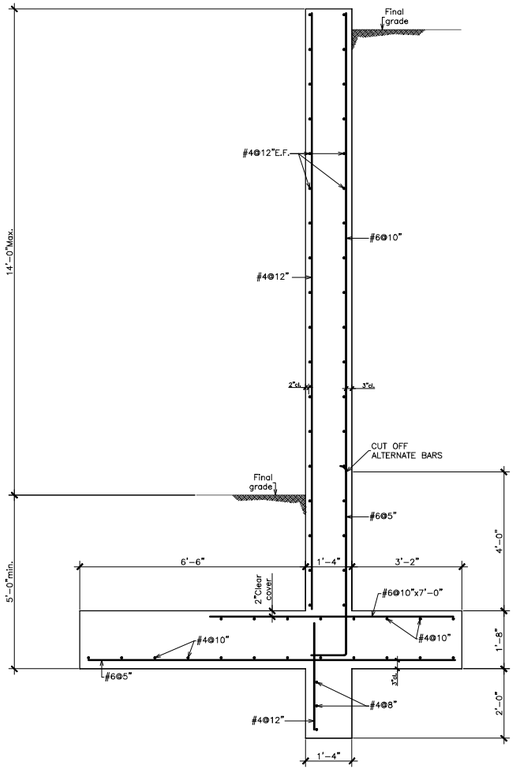
Señores:

Soy ingeniero licenciado en Puerto Rico (#12577PE) y consultor en ingeniería Estructural. Certifico que la pared de concreto entre el generador eléctrico de emergencia y el edificio principal cumple con el código de edificación de Puerto Rico además de subsanar y mitigar la propagación de fuego en el evento de una explosión del generador de emergencias (Diesel) diseñado para el Centro de usos Múltiples de Barranquitas.

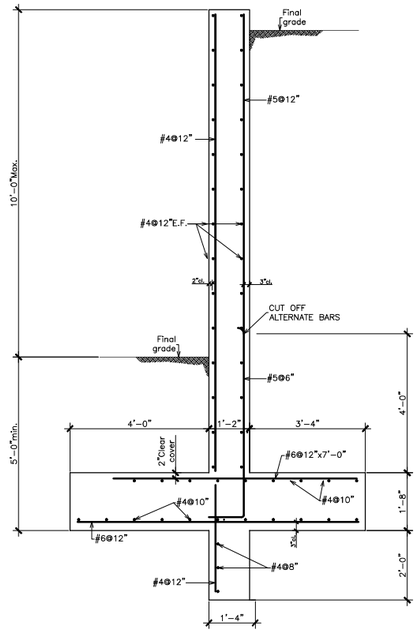
Certifico Correcto,

Hector A. Gonzalez
Héctor A. González Quiñones PE





14'-0" MAXIMUN HEIGHT RETAINING WALL TYPICAL SECTION
(SCALE: 3/4"=1'-0")



10'-0" MAXIMUN HEIGHT RETAINING WALL TYPICAL SECTION
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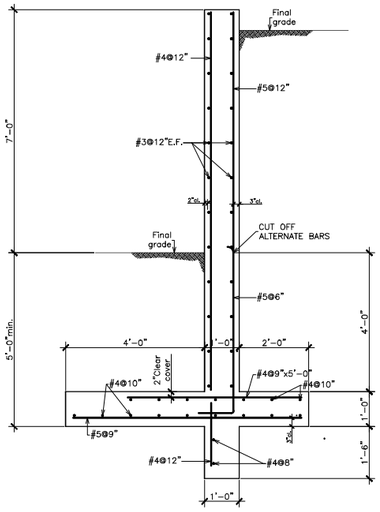

7'-0" MAXIMUN HEIGHT RETAINING WALL TYPICAL SECTION
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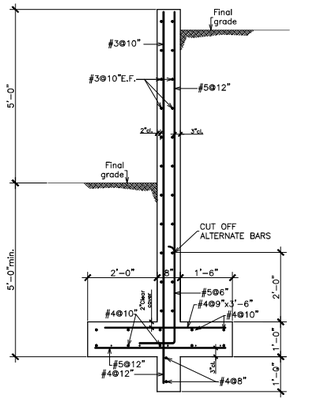

5'-0" MAXIMUN HEIGHT RETAINING WALL TYPICAL SECTION
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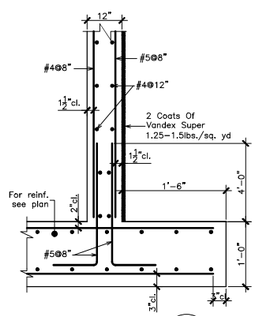
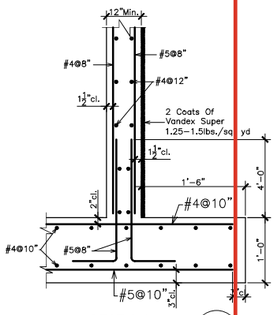


SECTION (1 / S-1B)
(SCALE: 3/4"=1'-0")



SECTION (3 / S-1B)
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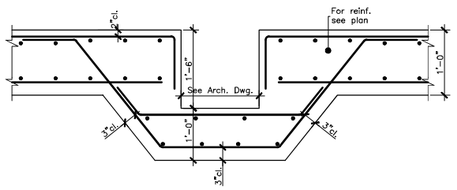

SECTION (2 / S-1B)
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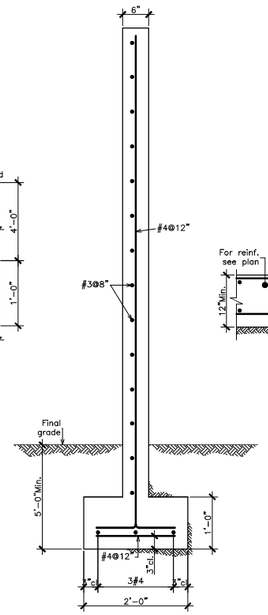

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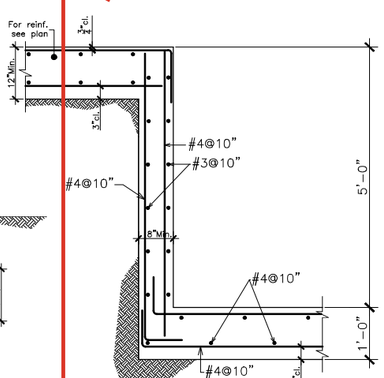

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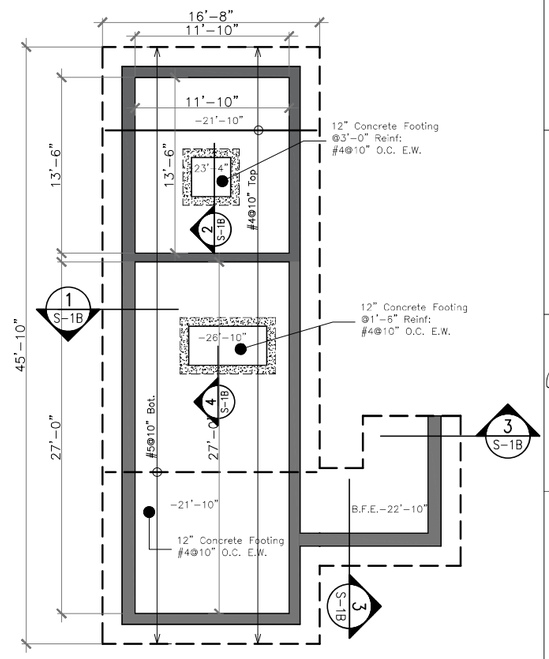
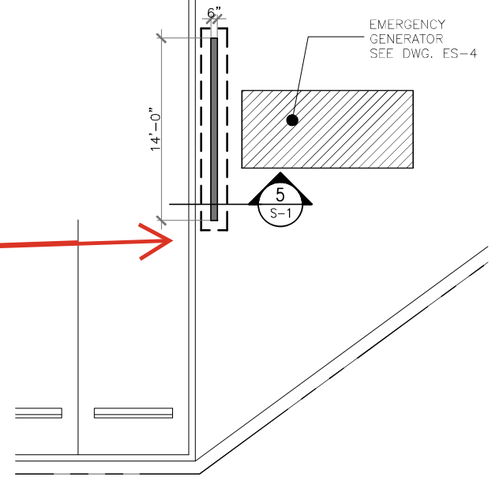


CISTERN FOUNDATIONS PLAN
(SCALE: 3/16"=1'-0")



EMERGENCY GENERATOR PLAN
(SCALE: 3/16"=1'-0")

NOTES:
1) CONTRACTOR SHALL VERIFY ALL DIMENSIONS WITH MANUFACTURER DRAWINGS. ANY SUBSTANTIAL DIFFERENCE SHALL BE NOTIFY TO STRUCTURAL ENGINEER (H.A.G.E.) PRIOR TO ANY CONSTRUCTION.

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA
ARCHITECTS AND
ENGINEERS

CONSULTANT

HECTOR A. GONZALEZ QUIÑONES
STRUCTURAL ENGINEER CONSULTANT
P.O. BOX 192344, San Juan
Puerto Rico 00919-2344
Tel. (787) 379-7132
hagepsc@aol.com

SEAL

Hector Augusto Gonzalez Quiñones
Ingeniero Licenciado
Hector A. Gonzalez
Lic. 12577 PE
Puerto Rico

Fecha de Expiración: 2026-04-19

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	7/16/25
REVIEWED BY:	HAG
DRAWN BY:	HAG
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

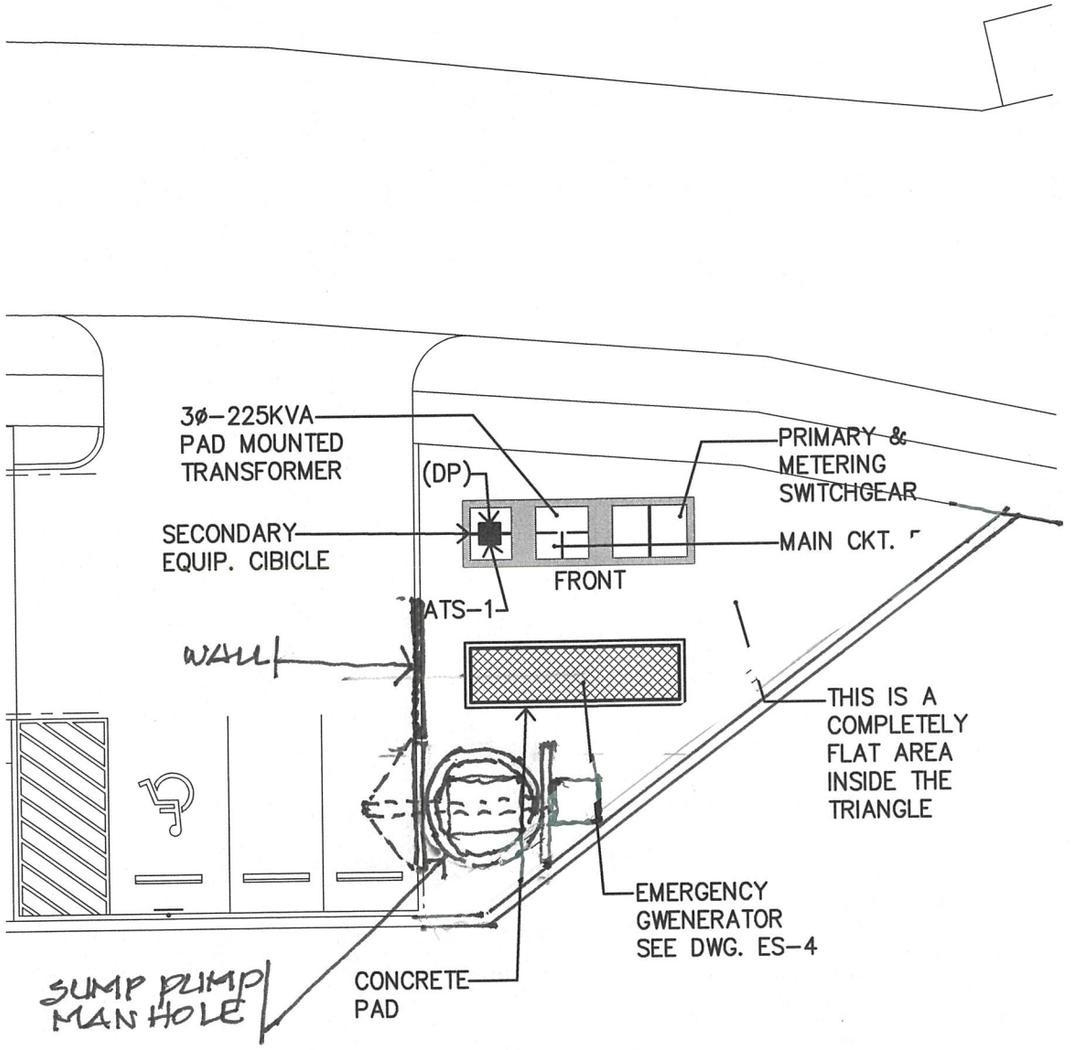
GROUND FLOOR AND FOUNDATION PLAN, SECTIONS AND DETAILS.

SHEET ID

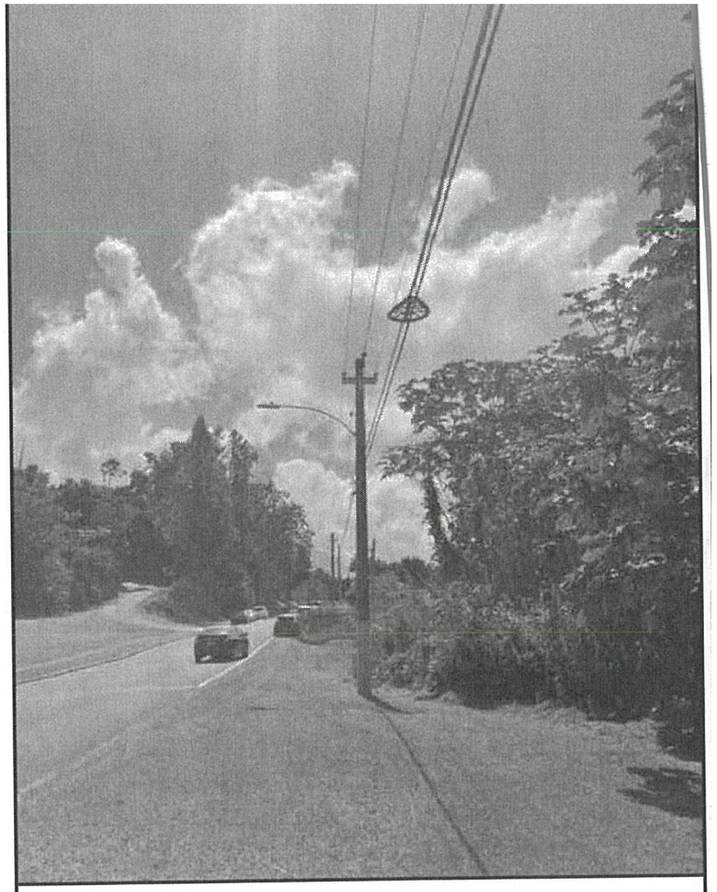
3/16"=1'-0"

SHEET

S-1B

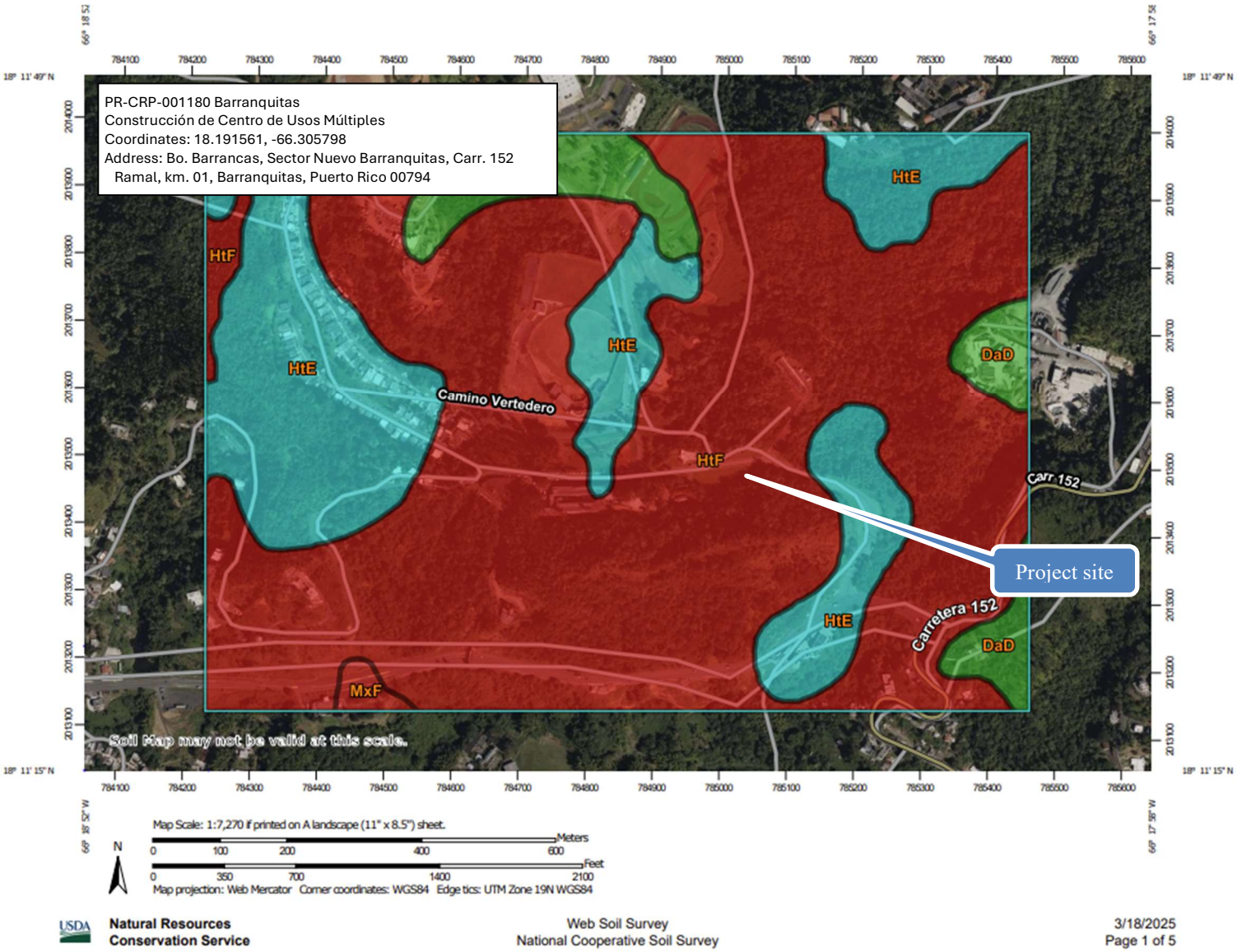


SITE PLAN CLARIFICATION.
SC: 1/16"=1'-0"



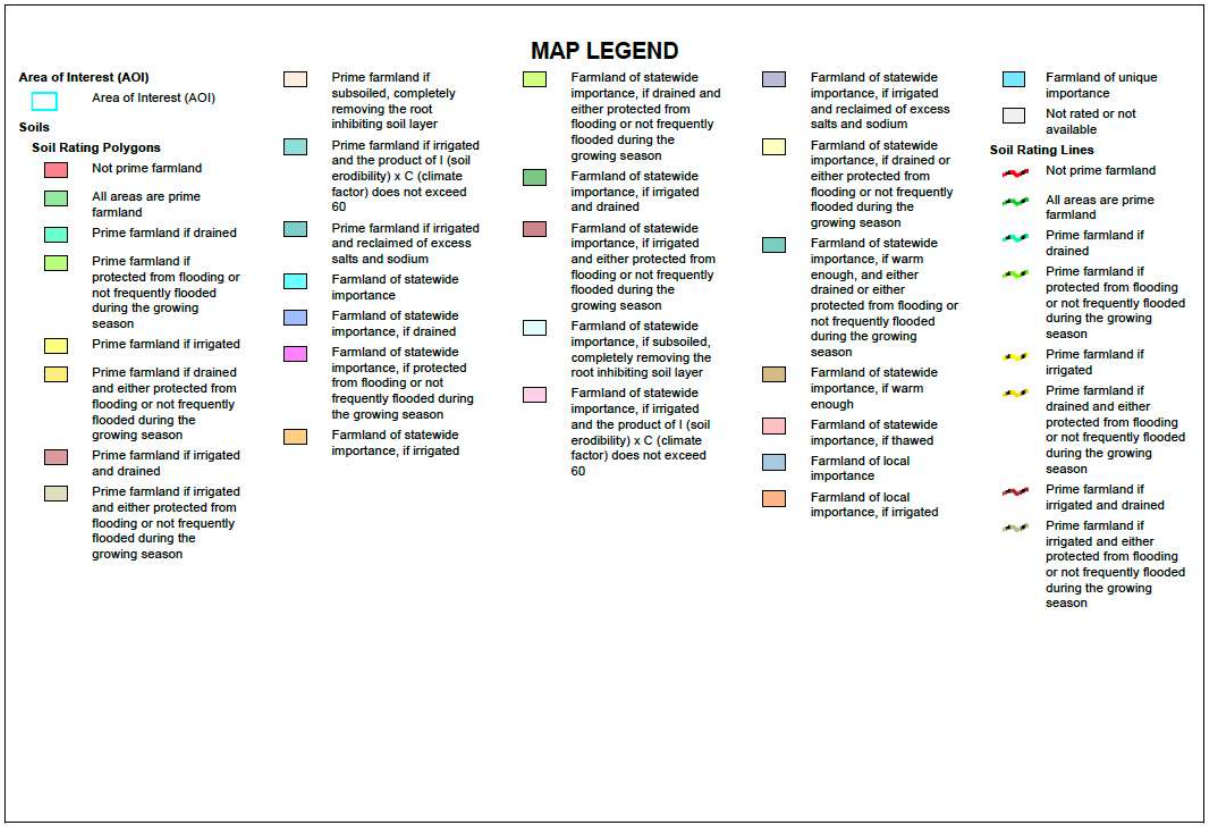
1 ET-1 PHOTO #1
TELECOMMUNICATIONS POINT-OF-CONNECTION

9. Farmland Classification

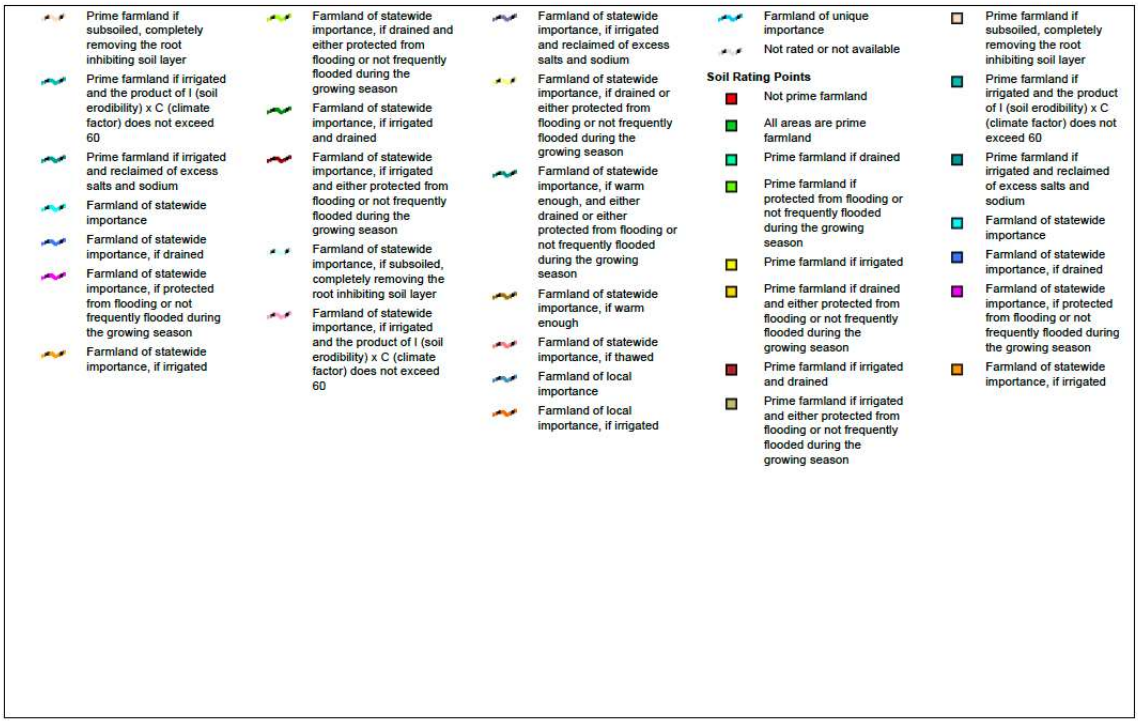


Source: U.S. Department of Agriculture (USDA) Web Soil Survey (Spatial Reference: WGS84), URL https://websoilsurvey.nrcs.usda.gov/

Farmland Classification—San Juan Area, Puerto Rico
(Multiple Use Center Barrancas Barranquitas)



Farmland Classification—San Juan Area, Puerto Rico
(Multiple Use Center Barrancas Barranquitas)



- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

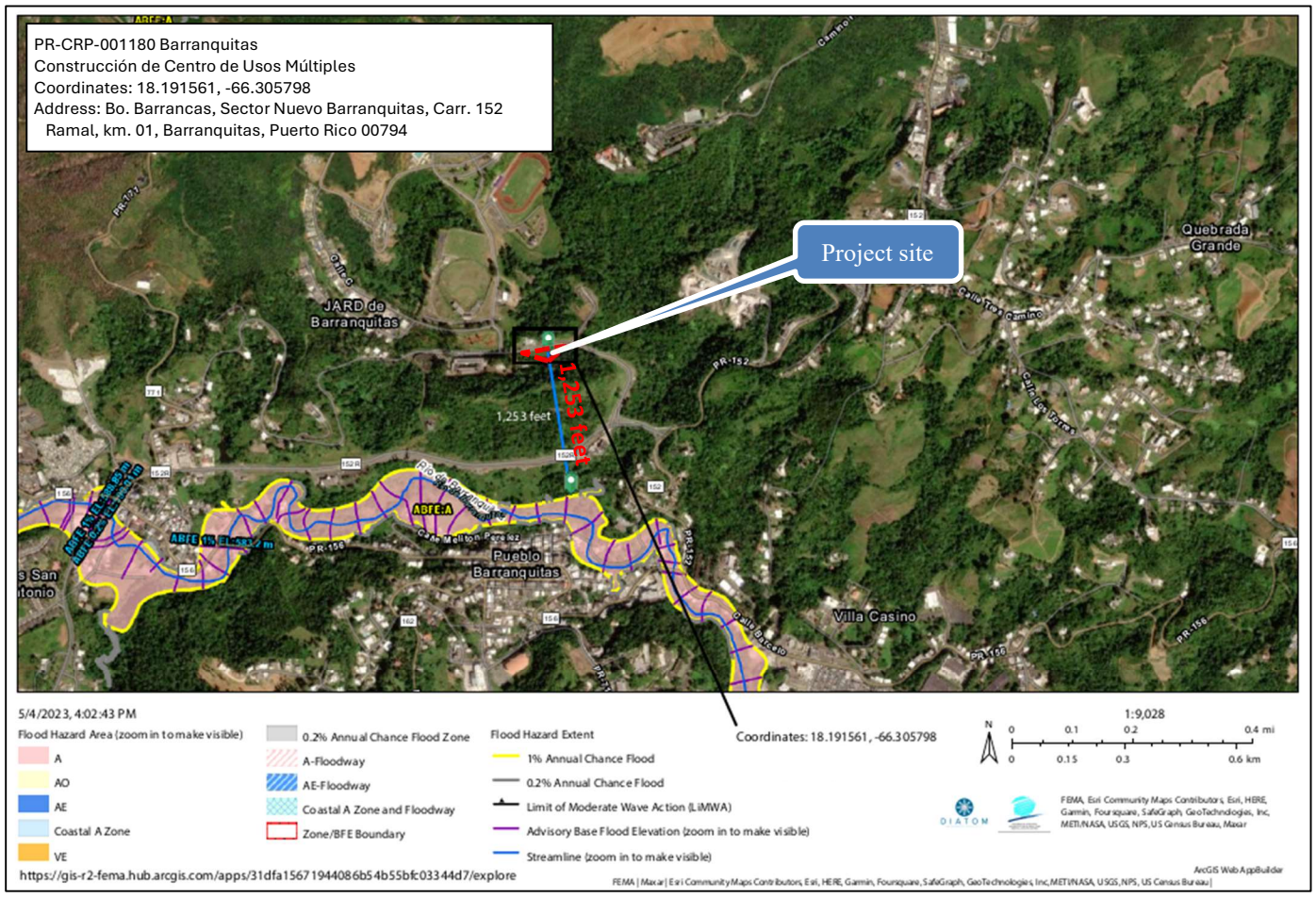
Soil Survey Area: San Juan Area, Puerto Rico
Survey Area Data: Version 16, Sep 12, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 23, 2022—Mar 1, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

10. Floodplain Management: Advisory Base Flood Elevation (ABFE) Map



11. Historic Preservation

See attached SHPO consultation package in the next pages.

GOVERNMENT OF PUERTO RICO
STATE HISTORIC PRESERVATION OFFICE
Executive Director | Carlos A. Rubio Cancela | carubio@prshpo.pr.gov

Saturday, November 9, 2024

Lauren B Poche

269 Avenida Ponce de León, San Juan, PR, 00917

SHPO-CF-10-25-24-03 PR-CRP-001180 (Barranquitas), Construccion de Centro de Usos Multiples

Dear Ms. Poche,
Our Office has received and reviewed the above referenced project in accordance with 54 USC 306108 (commonly known as Section 106 of the National Historic Preservation Act, as amended) and 36 CFR Part 800: Protection of Historic Properties from the Advisory Council on Historic Preservation. The State Historic Preservation Officer (SHPO) is to advise and assist federal agencies and other responsible entities when identifying historic properties, assessing effects upon them, and considering alternatives to avoid or reduce the project's effects.
Our records support your finding of no historic properties affected within the project's area of potential effects.
Please note that should the Agency discover other historic properties at any point during project implementation, you should notify the SHPO immediately. If you have any questions concerning our comments, do not hesitate to contact our Office.

Sincerely,

Carlos A. Rubio Cancela
State Historic Preservation Officer
CARC/GMO/ OJR

GOVERNMENT OF PUERTO RICO
DEPARTMENT OF HOUSING

April 30, 2024

Arch. Carlos A. Rubio Cancela
Executive Director
Puerto Rico State Historic Preservation Office
Cuartel de Ballajá, Third Floor
San Juan, Puerto Rico 00901

Re: Authorization to Submit Documents for Consultation

Dear Arch. Rubio Cancela,

The U.S. Department of Housing (HUD) approved the allocations of Community Development Block Grant (CDBG-DR) funds on February 9, 2018. It also approved the allocation of Community Development Block Grant Mitigation (CDBG-MIT) funds on January 27, 2020. The purpose of these allocations is to address unsatisfied needs as a result of Hurricanes Irma and Maria in September 2017; and to carry out strategic and high-impact activities to mitigate disaster risks and reduce future losses.

To comply with the environmental requirements established by HUD, the Department of Housing of Puerto Rico (PRDOH) contracted Horne Federal LLC to provide environmental review services, among others, that will support the objectives of the agenda for both CDBG-DR and CDBG -MIT Programs.

To expedite the processes, Horne Federal LLC, is authorized to submit to the State Historic Preservation Officer, documentation of projects related to both the CDBG-DR and CDBG-MIT on behalf of PRDOH.

Cordially,

Aldo A. Rivera Vázquez, PE
Director
Division of Environmental Permitting and Compliance
Office of Disaster Recovery

10/25/2024

Carlos A. Rubio Cancela
State Historic Preservation Officer
Puerto Rico State Historic Preservation Office
Cuartel de Ballajá (Tercer Piso)
San Juan, PR 00902-3935

Puerto Rico Disaster Recovery, CDBG-DR City Revitalization (City-Rev) Program

Section 106 NHPA Effect Determination Submittal for PR-CRP-001180, Construccion de Centro de Usos Multiples, Barranquitas, Puerto Rico – *No Historic Properties Affected*

Dear Architect Rubio Cancela,

On February 9, 2018, an allocation of Community Development Block Grant - Disaster Recovery (CDBG-DR) funds was approved by the United States Department of Housing and Urban Development (HUD) under the Federal Register Volume 83, No. 28, 83 FR 5844, to assist the Commonwealth of Puerto Rico in meeting unmet needs in the wake of Hurricanes Irma and Maria. On August 14, 2018, an additional $8.22 billion recovery allocation was allocated to Puerto Rico under the Federal Register Volume 83, No. 157, 83 FR 40314. With these funding allocations, the Puerto Rico Department of Housing (PRDOH) aims to lead a comprehensive and transparent recovery for the benefit of Puerto Rico residents. To faithfully comply with HUD's environmental requirements, PRDOH contracted Horne Federal, LLC (HORNE) to provide environmental records review services that will support their objectives for the CDBG-DR funds.

On behalf of PRDOH, HORNE is submitting documentation for the proposed Construccion de Centro de Usos Multiples. The Municipality of Barranquitas proposes constructing a concrete building to serve as a multipurpose center for the community. The construction will include the installation of electrical pipes, water and sanitary lines, telecom lines, and storm drains. The project also includes the construction of a parking area and the installation of a cistern, a photovoltaic system with batteries, a backup generator, and landscaping. The full scope of the project is described in the submitted documentation, which includes mapping, photographs, and the 30% design development plans.

Based on the documentation provided, the Program requests a concurrence with a determination that **no historic properties affected** is appropriate for this undertaking. If you have any questions or concerns, please contact me by email at lauren.poche@horne.com or phone at 225-405-7676.

Kindest regards,

Lauren Bair Poche. M.A.
Architectural Historian, EHP Senior Manager
LBP/KPS

Attachments

PR-CRP-001180

Construccion de Centro de Usos Multiples

Barranquitas, Puerto Rico

Section 106 Effect Determination Form

PUERTO RICO 2017 DISASTER RECOVERY, CDBG-DR PROGRAM CITY REVITALIZATION PROGRAM (CITY-REV) **Section 106 NHPA Effect Determination**	
Subrecipient: Autonomous Municipality of Barranquitas	
Project Name: Centro de Usos Múltiples de Barranquitas	
Project Number: PR-CRP-001180	

Project Location: Bo. Barrancas, Sector Nuevo Barranquitas, Carr. 152 ramal, km. 01, Municipality of Barranquitas, Puerto Rico.	
Project Coordinates: 18.191561 -66.305798	
TPID (Número de Catastro)**:** 247-000-006-38-000	
Type of Undertaking: ☐ Substantial Repair ☒New Construction	
Construction Date: N/A	**Property Size** (acres)**:** 0.37 acres.

SOI-Qualified Architect/Architectural Historian: Cristina Montenegro Torres
Date Reviewed: 12/01/2023
SOI-Qualified Archaeologist: Federico L. Freytes Rodríguez with collaboration of SOI architectural historian Heidi Dilan and SOI historian Richard Smith Rodríguez
Date Reviewed: 12/13/2023

In compliance with Section 106 of the National Historic Preservation Act (NHPA), the Program is responsible for identifying historic properties listed in the NRHP and any properties not listed that would be considered eligible for listing that are located within the geographic area of potential effects (APE) of the proposed project and assessing the potential effects of its undertakings on these historic properties.

Project Description (Undertaking)

The project aims to develop a multipurpose center named Centro de Usos Múltiples de Barranquitas. The project consists in the construction of a concrete building which will provide a space for thecommunity to carry out multiple uses. These uses include, but are not limited to community talks, mass vaccination area, community training, health station, graduations, social gatherings, school activities, government meetings and government activities. The project will also serve as refuge during catastrophes like hurricanes and will be used as a support center when dealing with such emergencies. The multiple use center will include showers, cisterns, a kitchen and renewable power sources. The center is located near the Barranquitas urban center, making it accessible to the local population.

The lot owned by the municipality where the Multiple Use Center will be built measures approximately 16,000square feet (According to Pablo Figueroa in an email directed at our work team, dated November 29th, 2023, the APE has not been segregated yet from the 200 "cuerdas" parcel owned by the municipality). The total area to be disturbed by the proposed improvements will be approximately 0.37 acres.

The scope of work for this project encompasses the following:

1. **Construction of concrete building:** The two-story structure will measure 145 feet in length (from east to west), 62 feet in width (from north to south), and 35 feet tall (from ground level to top of the parapet). The construction will include the installation of electrical pipes, water and sanitary lines, telecom lines, and storm drains. A depth of 5 feet is expected in the ground disturbance associated with the construction of this building, except for the area where the cistern will be located (14 feet in depth). Fill will be added in the east section of the site (0-20 feet in depth), while the western portion will retain the original surface. The area of the lot where the Multi-Use Building will be built can be observed in Figures 5, 8, and 12. The concrete structure will be divided into the following areas:
    a. Activities area
    b. Kitchen
    c. Bathrooms with showers
    d. Service office
    e. Storage room

2. **Parking area:** Construction will include the installation of storm drain pipes and 6 concrete posts for LED lighting. Fill will be used in the entirety of the area and will vary in depth between 0-13 feet. The installation of the concrete light posts will entail ground disturbance down to a depth of 2 feet, 6 inches.

3. **Elements of resilience**
    a. A concrete cistern with a 15,000-gallon capacity will be constructed underground to a depth of 14 feet. It will be located in the southwest section of the main structure.
    b. A photovoltaic system with batteries will be installed on a metal and concrete structure to provide solar energy to the multi-purpose center.
    c. A Backup generator will be installed on a concrete surface inside a room located in the southwest section of the main structure, to the west of the cistern.
    d. A waterproof roofing system, plus doors and windows with storm shutters will provide extra protection to the building and its contents.

4. **Landscaping:** Vegetation for the new multi-use center consists of trees and lawn. A total of 6 trees are to be planted in the parking area. Each tree will require a pit be dug with a depth of 2 feet.

Area of Potential Effects

As defined in 36 CFR §800.16(d), the area of potential effects (APE) is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties if any such properties exist. Based on this definition and the nature and scope of the Undertaking, the Program has determined that the direct APE for this project is approximately 16,000 square feet (0.37 acres) situated north of the Barranquitas urban Center, approximately 0.36 miles north-northeast of the public plaza/town square (pictures 1-13). The Direct APE includes the construction site and the staging area which will be located inside of the 0.37-acre parcel (Figure 1). It measures approximately 93 feet in width (north to south) by 0.10 miles in length (west to east). The visual APE is the viewshed of the proposed project, which includes Calle Nuevo Barranquitas adjacent to the north of the lot (heading west to east) and a single school structure on the opposite side of the road and northwest of the lot (Figure 2). Areas covered in vegetation belonging to the same lot are located west, south and east of the project site. The visual APE measures 297 feet wide outwards from the Direct APE and has a length of 0.20 miles.

Figure 1. Project (Parcel) Location – APE aerial photo. Source: Google Earth Pro.

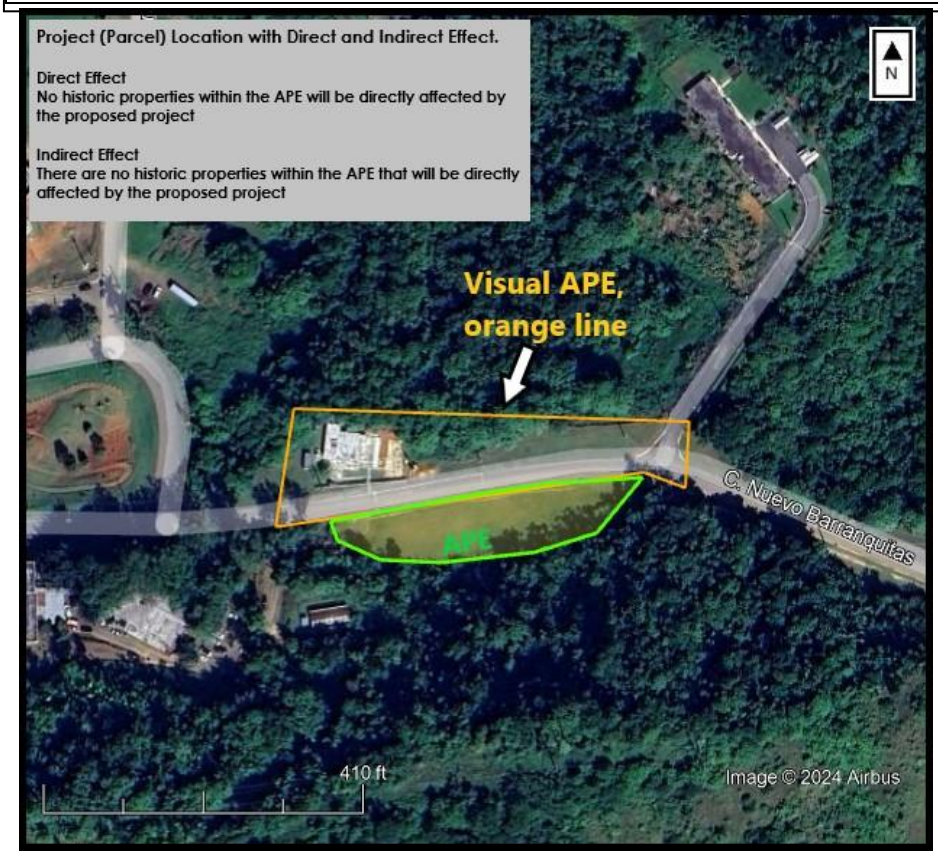


Figure 2. Project (Parcel) Location with Direct and Indirect Effect.

Identification of Historic Properties - Archaeology

Existing information on previously identified historic properties has been reviewed to determine if any such properties are located within the APE of this undertaking. The review of this existing information, by a Program contracted Historic Preservation Specialist meeting the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61), shows that the municipality has a long history traced from prehistoryand throughout colonial times. A brief history overview of the municipality is addressed, followed by a discussion of the existing sources on both SHPO and ICP archives regarding the parcel area, up to a radius of ¼ mile radius around it and the results from data gathered on a site visit.

Pre-Columbian Context

The territory that comprises the municipality of Barranquitas was originally inhabited by Taíno communities before the arrival of Spanish colonists. It is known that there are prehistoric settlements on the wider general area. However, on the ¼ mile radius of the investigation there are no known prehistoric cultural resources. Therefore, there is not enough information to provide any background of possible prehistoric uses of the specific

project area. However, a moderately steep topography and the lack of immediate access to freshwater sources limits the possible human used during prehistory.

Historic Context

During the XVIII century some colonists made their homes in the region where the road connected Coamo to San Juan. All the territory that comprises the municipality of Barranquitas was originally part of the municipality of Coamo, with origins tracing back to the 16th Century. Don Antonio Aponte Ramos directed the segregation of the territory where the Town of Barranquitas was founded in 1803. The catholic church was inaugurated in 1809. During this period the territory that would laterbecome the town of Orocovis was included in the new municipality of Barranquitas (Sugrañes 1995: 59-60).

By 1830 Barranquitas was divided into the barrios of Pueblo, Helechal, Palo Hincado, Barrancas, Quebradillas, Quebrada Grande, Honduras, Río Hondo y Cañabón. There were 3,585 inhabitants. The town had 93 homes and 5 bohíos, while the countryside had 248 houses and 220 bohíos. By this year the main economic crop consisted of coffee, like many other towns of the central mountainous region. Staple crops for local consumption included plantains, rice, corn and citric fruit (Sugrañes 1995: 59-60).

By 1853 Barranquitas had the following infrastructure according to Tomás Colón y Crisanto Tapia: 55 wood houses, 18 bohíos, 1 wooden town hall, 1 wood church, 1 wood parish. 1 wooden cemetery, 1 wood slaughterhouse/butcher. The urban center consists of 5 streets named Comercio, del Cementerio, de la Carnicería, del Matadero and de los Jornaleros. While the first road circles the main plaza in the center oftown, the other roads lead towards the places their names mention (Anibal Sepúlveda 2004, Vol 2; 59). Manuel Ubeda y Delgado, in his work titled Isla de Puerto Rico*, Estudio histórico, geográfico y estadístico de la misma* from 1878 describes the town of Barranquitas in the following way (translated from Spanish by the authors):

> *"It has 6,355 souls… the agricultural richness is calculated at 50,355 pesos, in 3,640 the urban, and livestock in 4,396… There is a school completely for males, and another for girlsin the population… The state of the number of houses, bohíos, families and commercial establishments of each barrio: Town: 65 houses, 30 bohíos, 113 families, 8 mixed stores, 8 grocer's shops… Total: 294 houses, 659 bohíos, 1,128 families, 9 mixed stores, 11 grocer's shops, 7 market stalls. Ther is also a drugstore in the town. The town: has a Plaza, 5 streets and 6 alleys, the main ones being Comercio and Real. Count the following public buildings: awood church with galvanized metal roof in good condition; a masonry cemetery; a town hall, made of wood and two stories high, was constructed in 1843 and is occupied by offices, jail and public order quarters, property of the State; one story wood parish, owned by the town hall, wooden butcher shop; a Civil Guard quarters, on calle Real (Royal Street), house of particular owner. A local road for carts communicates this town with Coamo* (Sepúlveda 2004, Vol 3: 101).

A news report from newspaper *La Correspondencia de Puerto Rico* dated July 2nd, 1895, reports a telegram message from Aibonito that informed of a fire which caused serious damage in the town of Barranquitas in 1895. 34 houses were destroyed in the town center. The mayor was reportedly not present in the town the day of the fire. A brigade composed of volunteers, led by three captains arrived from Aibonito to help extinguish the flames. Additional help was sent from the towns of Coamo, Comerío and Barros. The damage was estimated to be 300,000 pesos (La Correspondencia de Puerto Rico, July 2, 1985: 2). Toro Sugrañes also mentions that by 1899 the population of the town had risen to 8,103 inhabitants. In 1902 the municipality was annexed for three years to Barros due to the economic situation the town experienced. In 1905 it became a municipality again with the same land extension that it had prior to its annexation. A hospital was built in 1922. The San Felipe Hurricane (of 1928) caused much destruction in Barranquitas, destroying its church parish and city hall. In 1940 the population was 17,096. Another hospital was built in 1967, and later remodeled in 1978. According to the 1990 census, the population of Barranquitas was 76,452 inhabitants. (Sugrañes 1995: 60).

The area where the project site is located forms part of Barrio Barrancas, a community North of the urban center. The area appears sparsely populated in both the historical maps and photographs presented in this report dating before 1989. By 1994 we can observe the area Northwest of the project site being impacted for development. The photo also shows the Pablo Marrero Baseball Park (0.09 miles Northwest), the Coliseo Juan C. Berríos which appears to be under construction (0.37 miles North-northwest), and the Escuela Especializada en Deportes, Bellas Artes y Comercio Superior Luis Muños Marín (0.07 miles West). This area continues to be developed by the municipality, specializing in sports facilities and with some buildings dedicated to other services. The facilities include: Pista Atlética de Barranquitas, Barranquitas Skate Park, Municipal Swimming Pool, Obras Públicas Municipal de Barranquitas, and the Barranquitas Recycling Center. Residential structures were also built along the local roads that traverse this area.

We include the following maps in order to present a visual representation of the historical development of Barranquitas, dealing in particular with the project area. A map from 1850 shows the location of Barranquitas inside yellow circle, being one of the oldest known maps depicting the town (figure 3). Map shows topography, rivers and the location of the towns, including Barros (Orocovis), Sabana del Palmar (Comerío), Coamo, Cidra and Cayey. A second map from 1886 shows the Barranquitas urban center, depicting the location of the Catholic Church and other unidentified urban structures. Roads leaving the town show the names of the places they connect from. No road or path is shown heading North towards the site location. The "Río de Piñones o de Barranquitas" river and tributary streams are depicted (figure 4, the project site general area is located North of the urban center and shown in yellow circle).

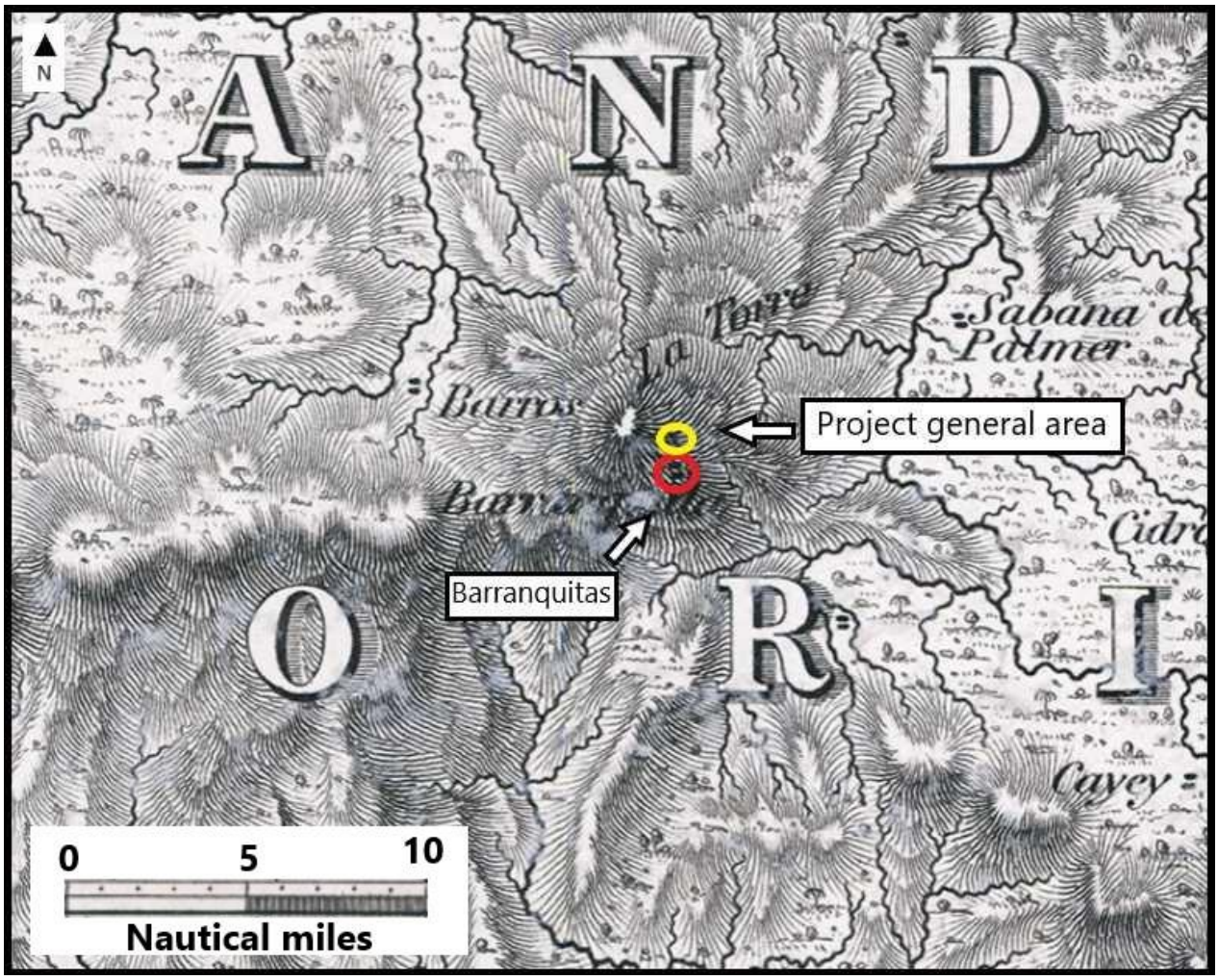


Figure 3. Map of 1850 showing Barranquitas and project site general area. Taken from https://www.geoisla.com/2020/06/a-chart-of-porto- rico-and-the-virgin-islands-1850/#. Historic map, scale only available in nautical miles.

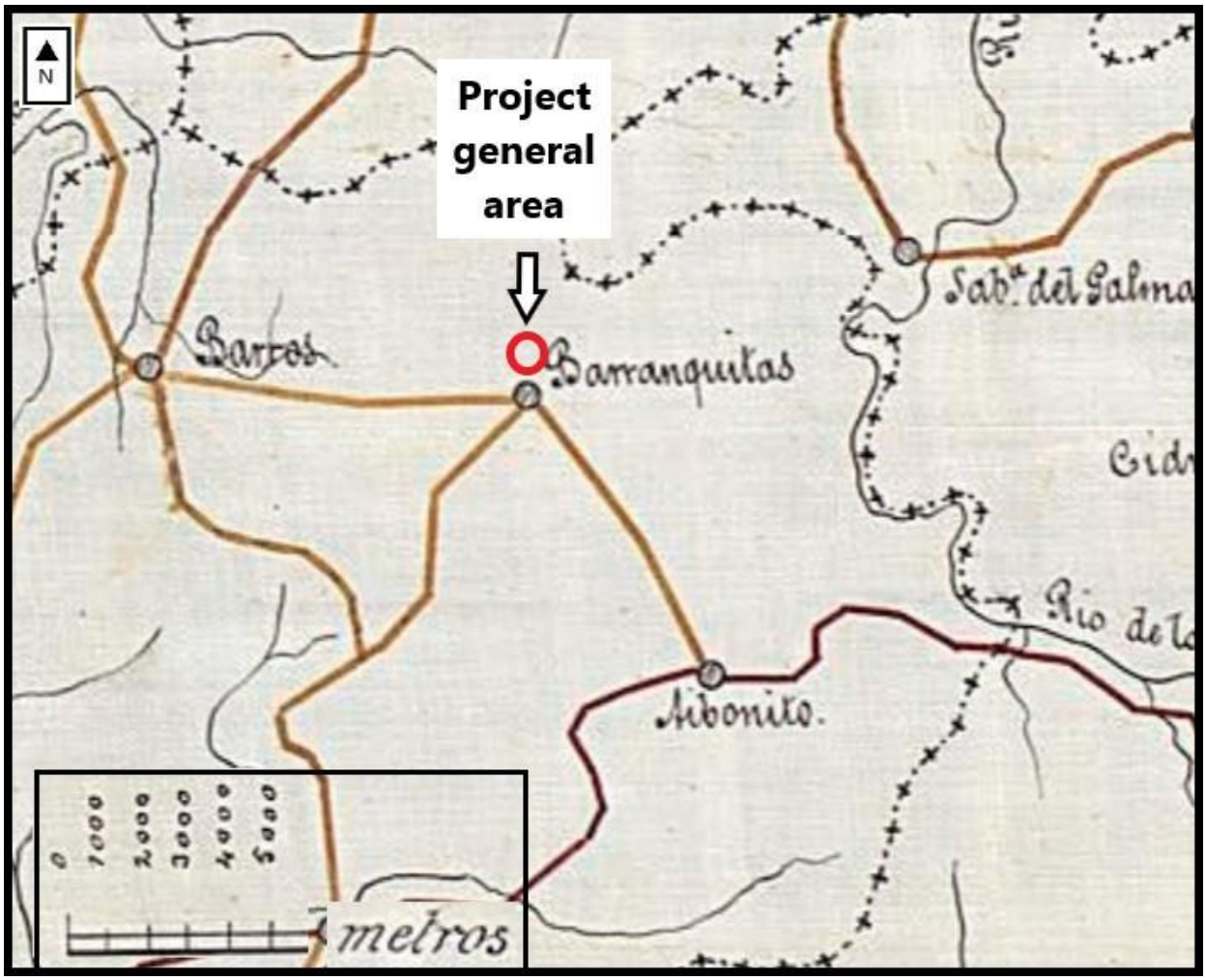


Figure 4. Sketch of the island of Puerto Rico (1883) by Enrique Gadea showing Barranquitas Urban Center and approximate general location of project area Source: https://www.geoisla.com/2019/05/croquis-de-la-isla-de-puerto-rico-1883/). Historic map, available scale in meters, 1 meter equivalent to 3.28 feet.

Concerning the location where the Multiple Use Center will be constructed, we include the following map by José Elola y Gutiérrez (Cuerpo de Ingenieros Militares), titled *Croquis de progresos del mapa militar de esta isla*, from 1895 (figure 5). The map shows the town of Barranquitas, rivers, roads, neighborhoods and the project general location is shown in red circle.

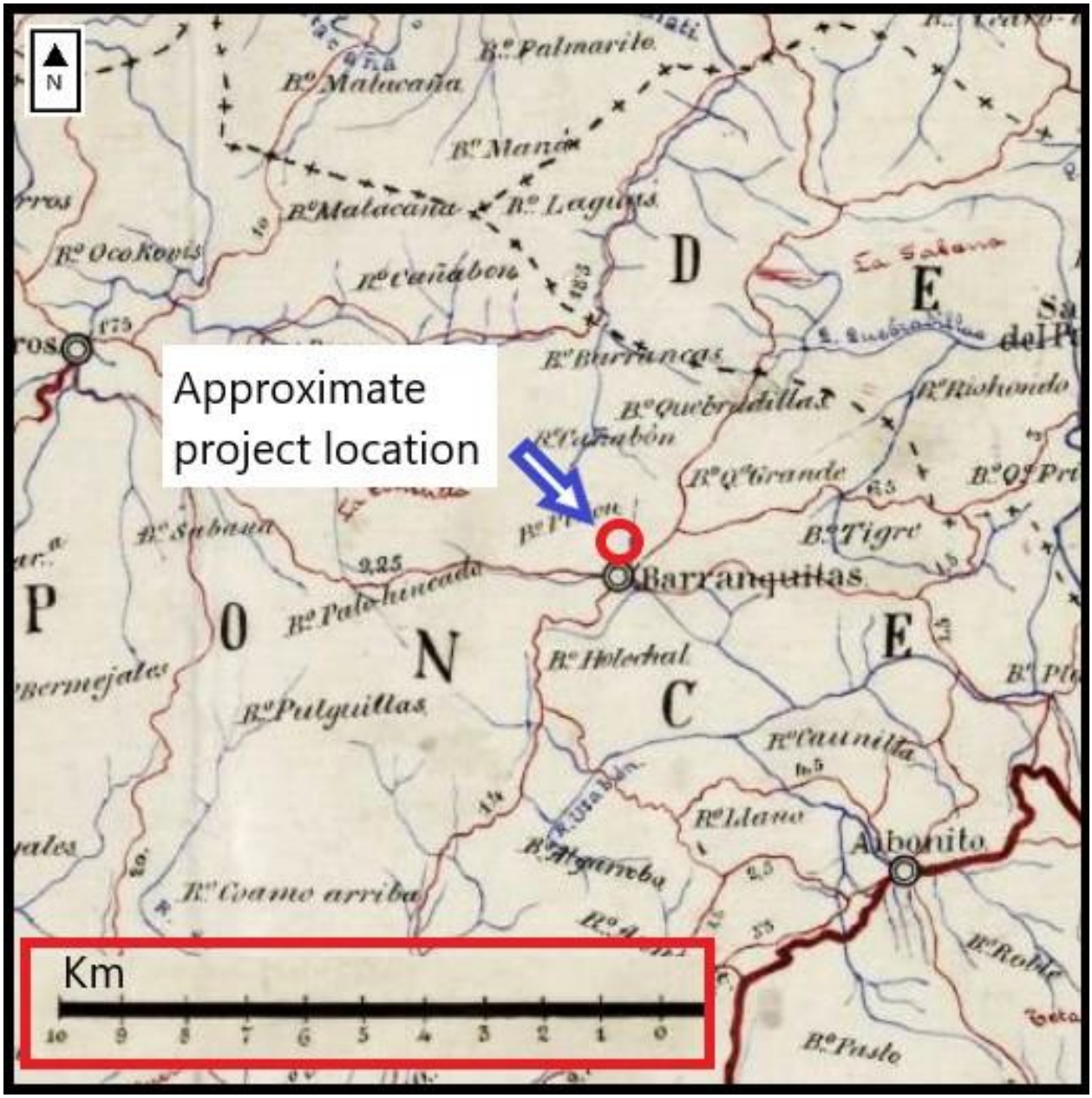


Figure 5. Map by José de Elola from 1895 showing Barranquitas. Project location general area in red circle. Taken from: https://www.geoisla.com/2019/05/croquis-de-progresos-del-mapa-militar-de-puerto- rico-1895. Historic map, scale available in kilometers, 1 kilometer equivalent to 0.621 miles.

The earliest USGS map available is from 1946 (figure 6). It depicts Barranquitas town general area and the project location. A local dirt road (path) connecting the Barranquitas urban center to near the project's general area can be observed towards the town's northeastern limit. This dirt road ends almost at the eastern parcel boundary. No structures can be observed within the project area nor its immediate vicinity.

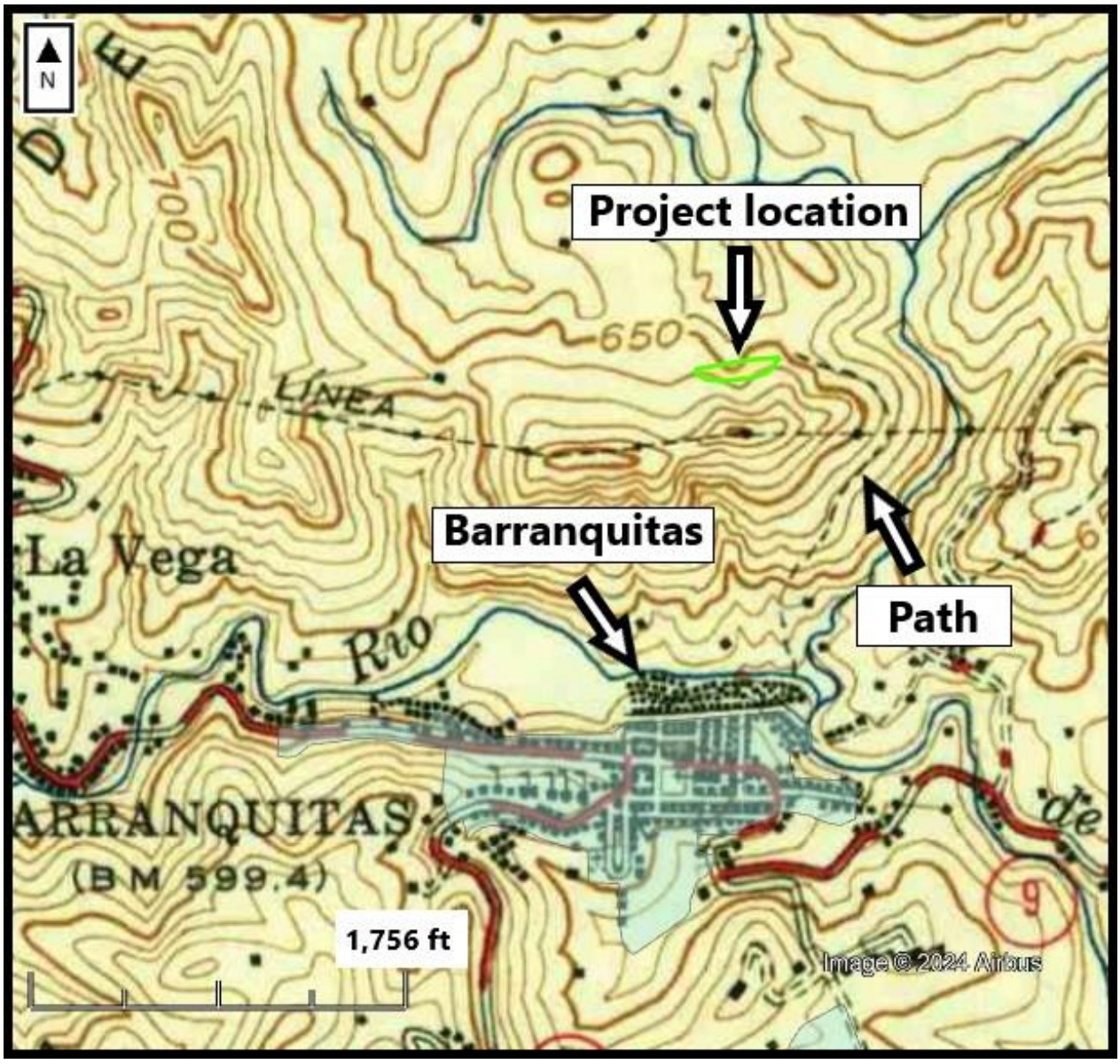


Figure 6. 1946 USGS map showing Barranquitas, project location and local dirt road (path) from Barranquitas urban center and ending near the project's general area.

By year 1954 it can be observed that the dirt road to the east of the parcel had been extended towards the north and west of the project area (figure 7). It is also evident that some urban development had occurred mostly around the urban center to the south.

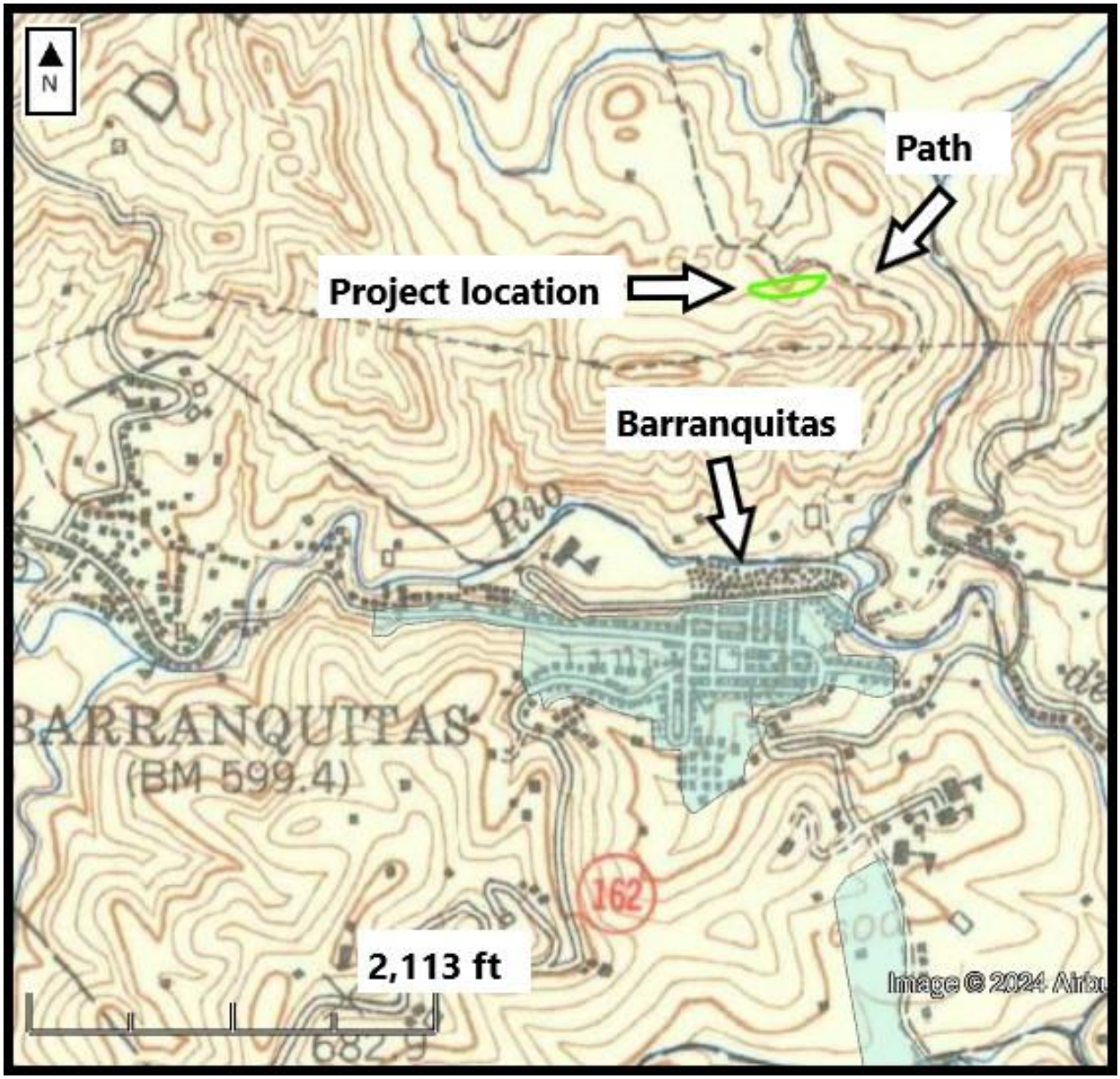


Figure 7. 1954 USGS map showing Barranquitas, project location and local dirt road (path) from Barranquitas and extended towards north and west of the project area.

It is noticeable that by the year 1989 the local road passing east and north of the project area was still a dirt road (figure 8). It is also noticeable that there was no much urban development from 1954 and 1989 other than a few structures (red building symbology northeast and east if the town center) and some road development. No structures can be seen near the project area.

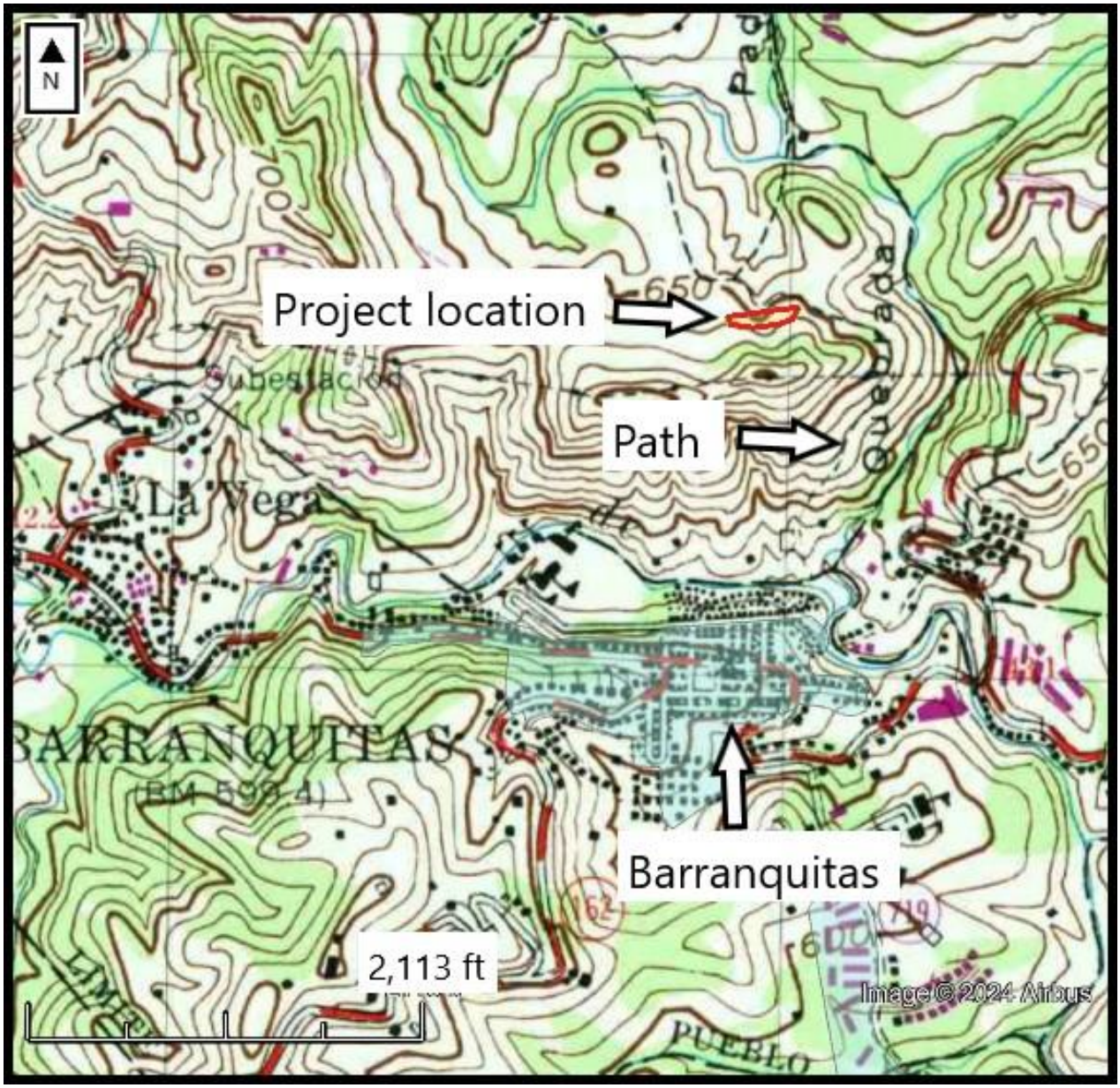


Figure 8. 1989 USGS map showing Barranquitas, project location and local dirt road (path) from Barranquitasand extended towards north and west of the project area.

Finally, by year 2013 the local dirt road is depicted as a paved road, so this paving occurred between 1989 and 2013 (figure 9). Since 2000's USGS maps didn't depict houses and structures, it has to be deducted that any urban development within the general zone around the project area did happened post 1989.

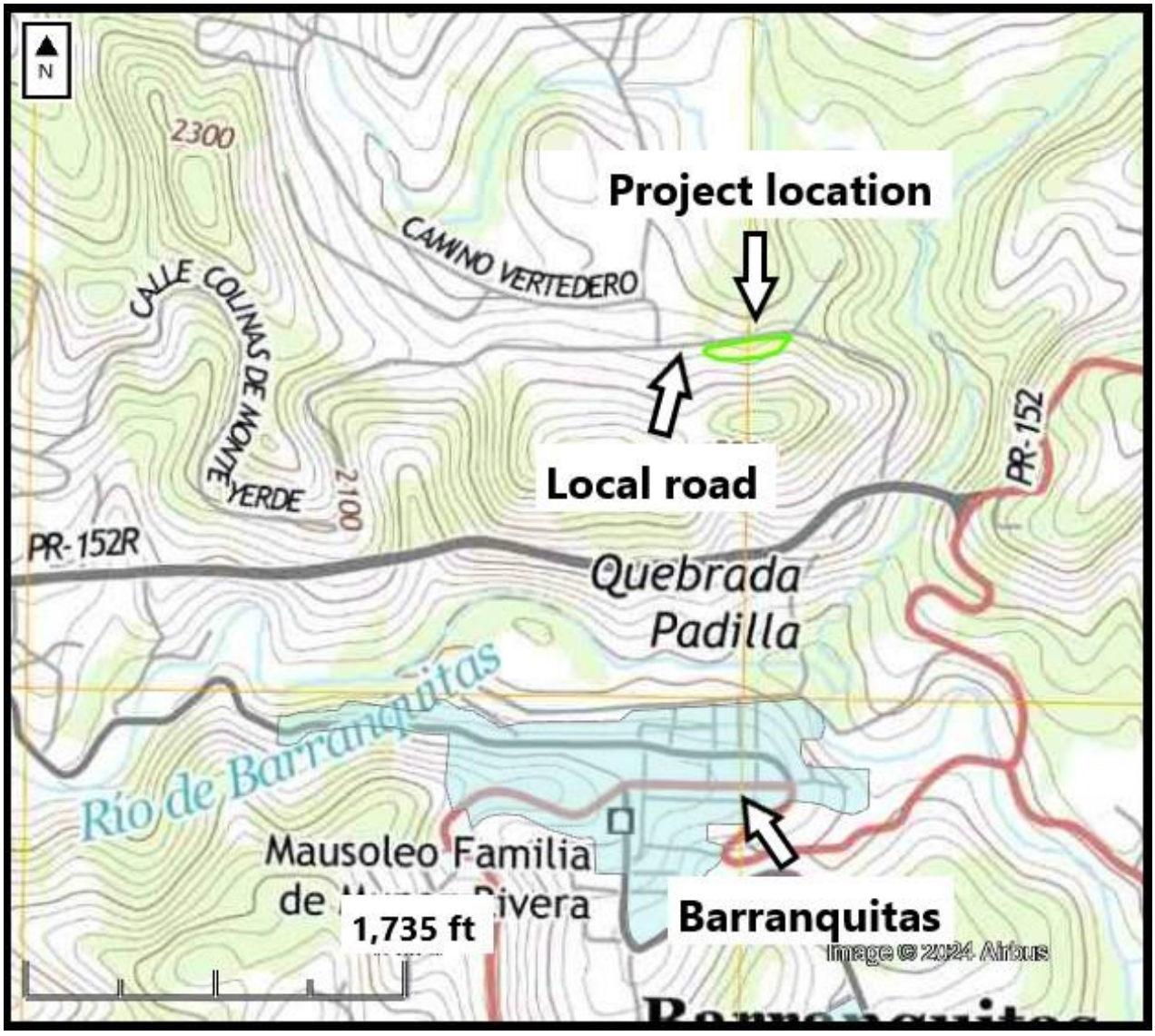


Figure 9. 2013 USGS map showing Barranquitas, project location and the old local dirt road converted into a paved local road.

Regarding historical pictures analysis, an aerial photograph from 1937 (figure 10) shows the approximate location of the APE in red line. A dirt road is shown that connects the site location with the town of Barranquitas towards the south. A structure is shown at considerable distance northeast of the parcel. It is noticeable that the dirt road was extended towards the north and west of the parcel (thus been a discrepancy with the USGS 1946 topographic map). It is also noticeable that the road seems to be a wide path. The parcel area seems to be uncultivated and covered with vegetation.

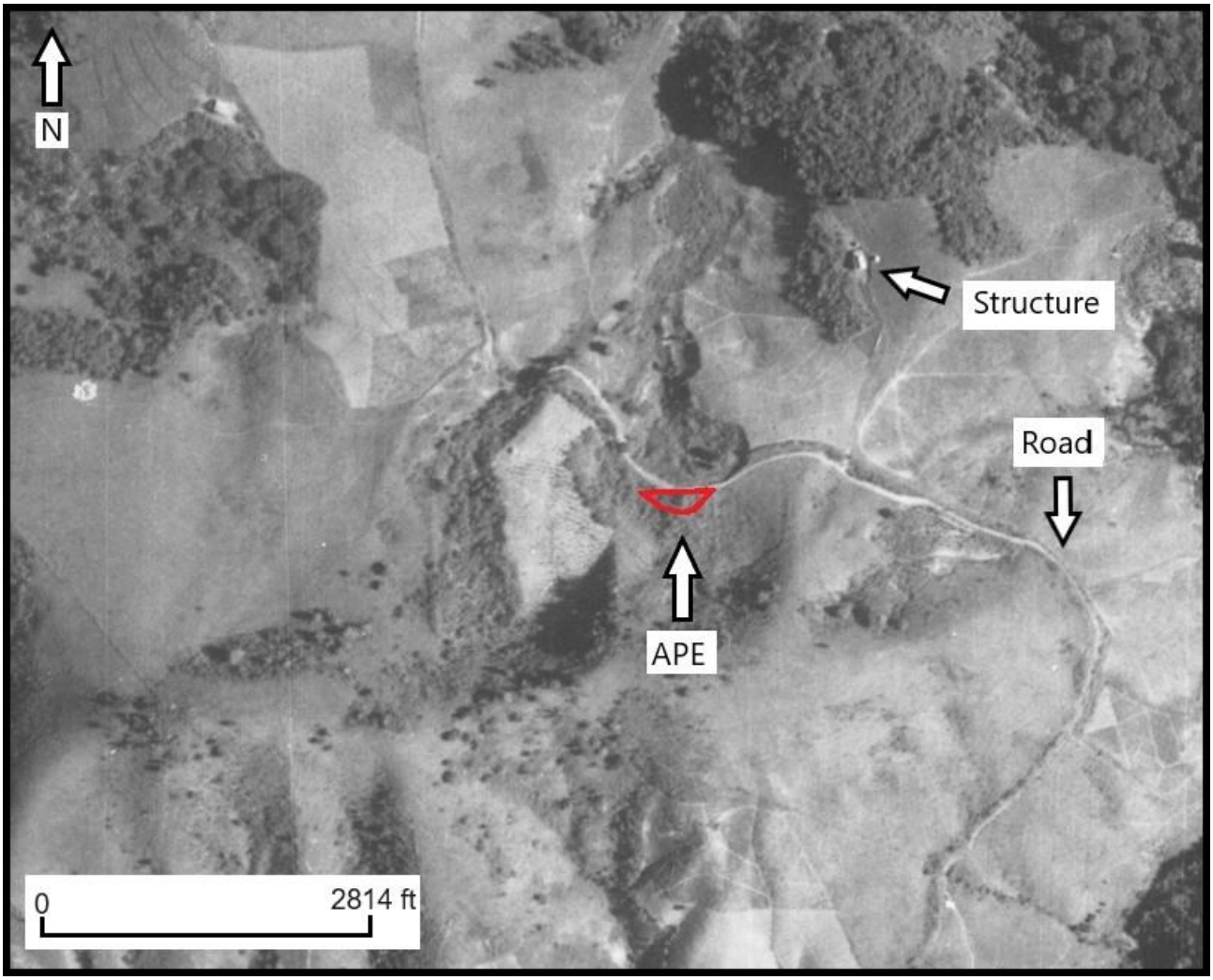


Figure 10. 1937 aerial picture from the Autoridad de Carreteras de PR archives showing the APE. Historic aerial photography graphic scale not available, scale taken from a geographic information system.

Figure 11 shows the parcel area in red in the 1951 aerial picture. It can be observed that the forest within the area around the parcel had been cut down, seemingly for agricultural purposes, and only a few standing trees remain precisely within the project area. Figure 12 is from 1964, and it shows that some of the forest had grown back within the parcel and the general area. It can also be observed that more areas within the general zone are in agricultural uses.

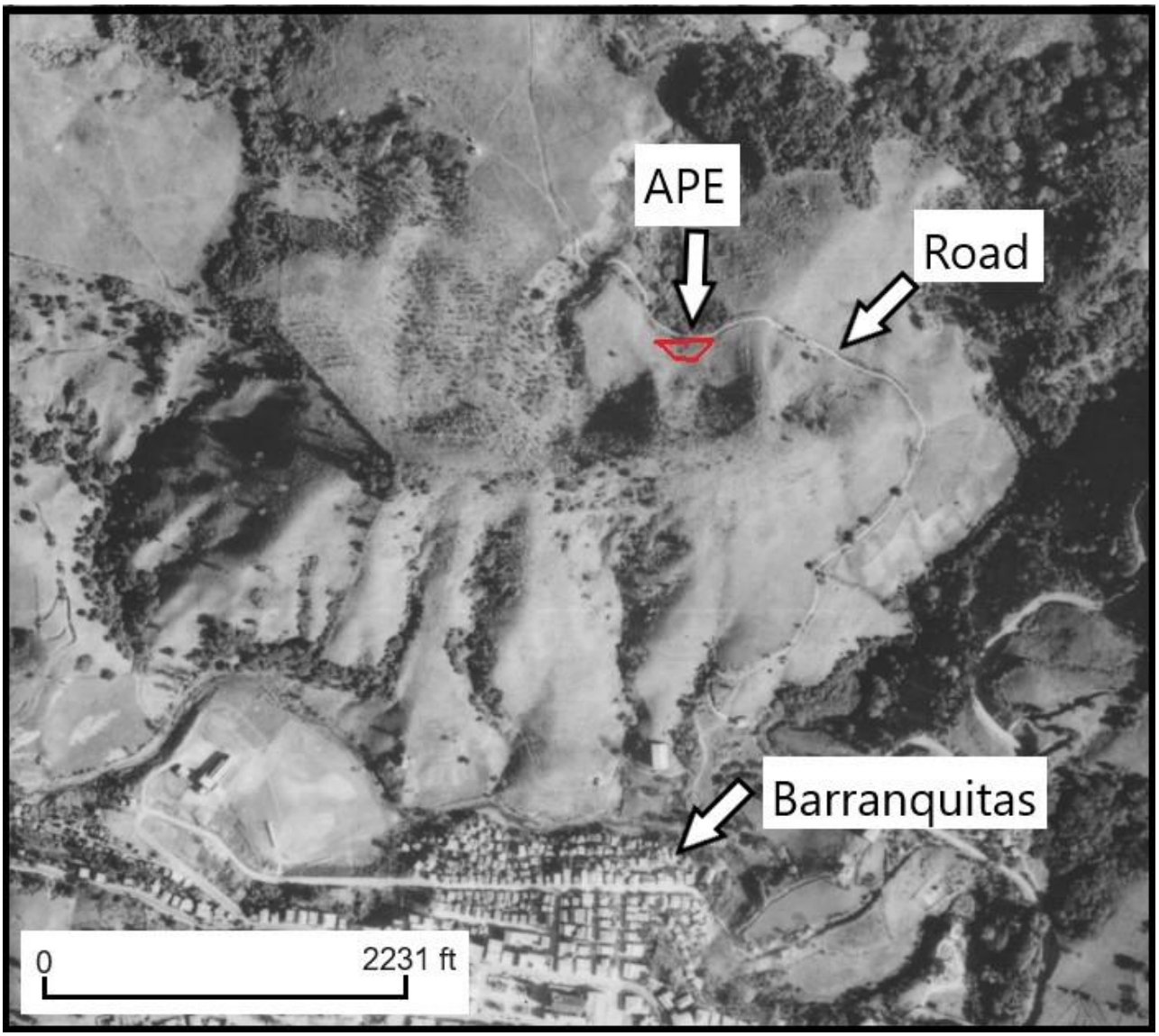


Figure 11. 1951 aerial picture from the Autoridad de Carreteras de PR archives showing the APE (red polygon), scale taken from a geographic information system.

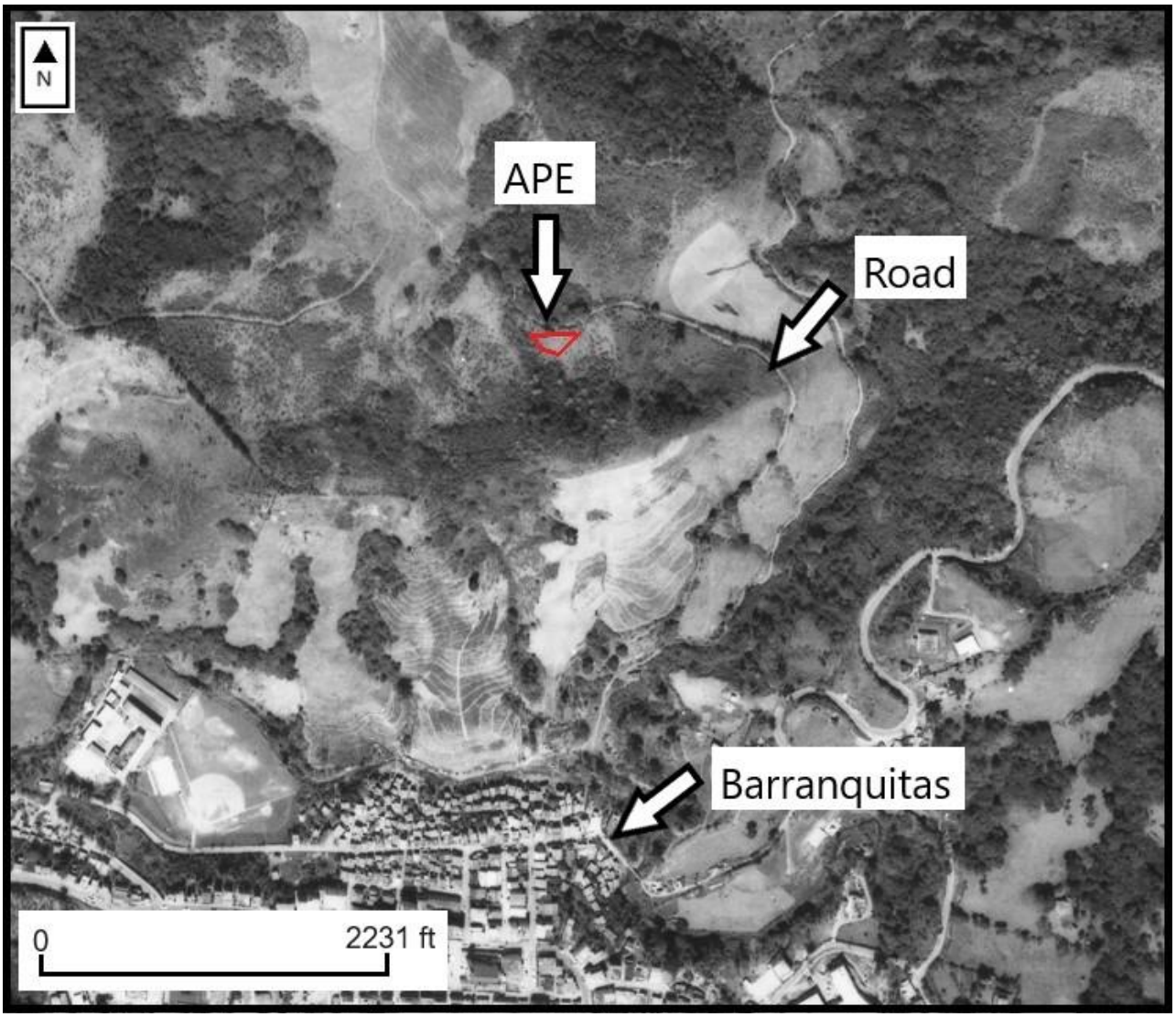


Figure 12. 1964 aerial picture from the Autoridad de Carreteras de PR archives showing the APE (red polygon), scale taken from a geographic information system.

Figures 13 (1994) and 14 (2024) are included in order to show the development of the area located northwest of the project site, which was undeveloped up until the decade of 1980. The development on the area is dedicated in its majority to the construction of sports facilities and government services buildings. The Multi-Use Center could be considered an addition to the municipal services provided in this area.

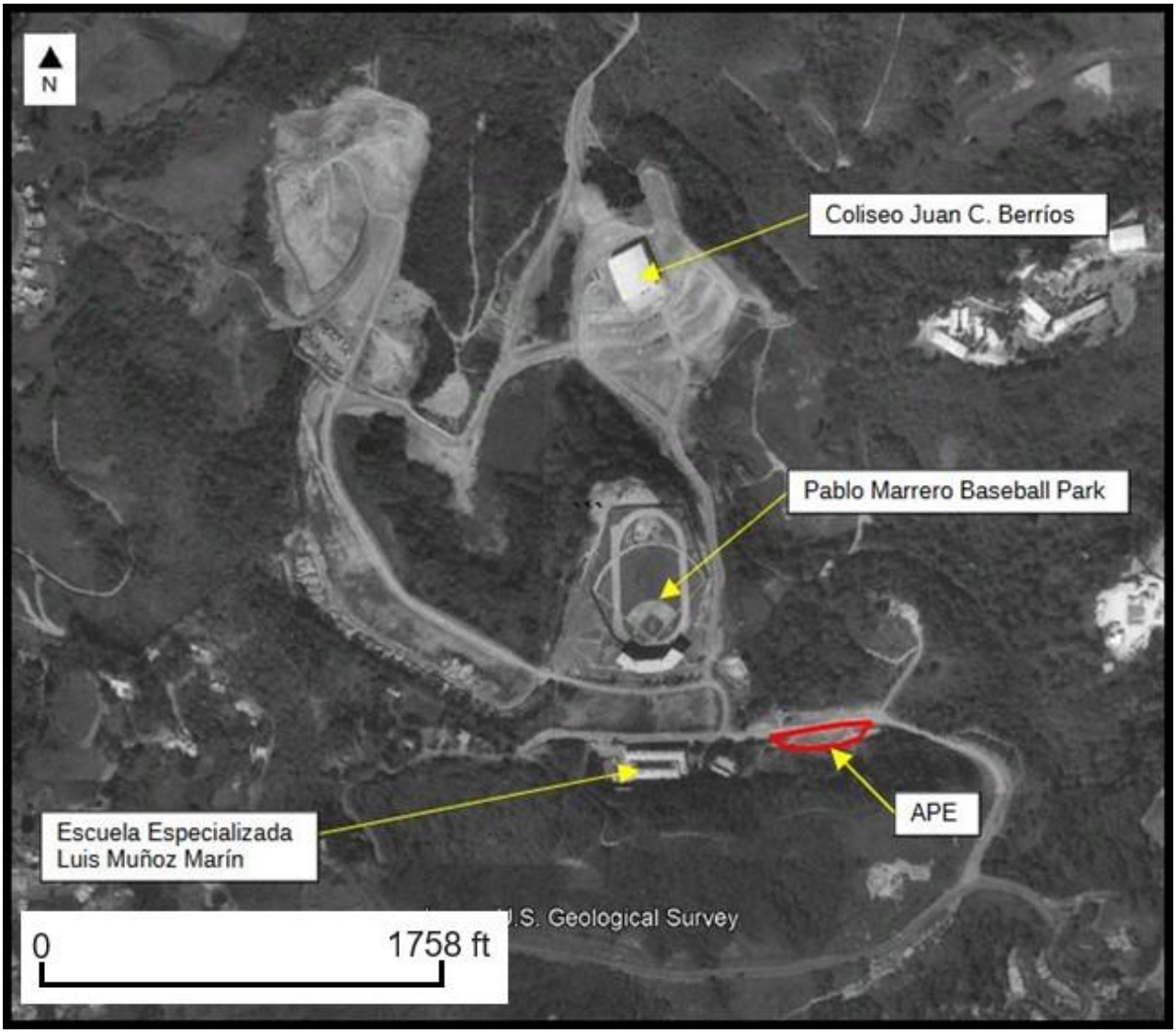


Figure 13. 1994 USGS aerial picture showing the APE (red polygon). The photo also shows the development of the surrounding community northwest of the APE. The aera appears impacted and infrastructure dedicated sporting activities and services can be observed. The APE also shows evidence of being impacted; scale taken from a geographic information system.

Figure 14. 2024 USGS aerial picture showing the APE (red polygon). The photo also shows the development of the surrounding community northwest of the APE. The area includes infrastructure dedicated to sporting activities and government services.

Background Research

The following archaeological resources were identified within a ¼ mile radius around the projectcoordinates. None of the resources included are located inside the APE. (Figures 15 and 16).

ICP sites

No sites were identified in the ICP archives within the ¼ mile radius of the project area. As mentioned, the territory that comprises the municipality of Barranquitas was originally inhabited by Taíno communities before the arrival of Spanish colonists. It is known that there are prehistoric settlements on the wider general area.

ICP surveys

A) **ICP/CAT-BR-91-01-06.** Phase IA-IB archaeological survey, *New Barranquitas Elderly Center,*
prepared by Juan González Colón in 1991. Negative results. Located 0.07 m north.

B) **ICP/CAT-BR-98-02-07.** Phase IA-IB archaeological survey, *Mejoras al sistema de acueductos para los barrios Quebrada Grande, Quebradillas y Honduras*, prepared by Jaqueline López Meléndez in 1998. Positive results. Comments: "*All ceramic fragments are highly eroded*" (P. 28). Recommendations: "*We recommend that a Phase II archaeological evaluation be carried out in the area where we found the Aboriginal ceramics...for the rest of the area we do not recommend additional studies*" (p. 43, citations translated by the investigator). Located 0.22 m southeast (large area study, section with positive results discussed in study identified as "Area 3" is located outside of the ¼ mile radius around project area, not shown in maps).

C) **ICP/CAT-BR-86-01-01.** Phase IA-IB archaeological survey, *Barranquitas Sewer Treatment Plant*, prepared by Miguel Rodríguez López in 1986. Negative results. Located 0.18 m south-southwest.

D) **ICP/CAT-BR-91-01-05.** Phase IA-IB archaeological survey, *New Barranquitas Gardens I Development*, prepared by Juan González Colón in 1991. Negative results. Located 0.22 m west-northwest.

The cultural resources investigation in the ICP archives shows 4 surveys inside the ¼ mile radius for the project site. 3 of these surveys had negative results. The survey with positive results (ICP/CAT-BR-98-02-07) is a Large Area Project which evaluated the aqueduct system for the communities of Quebrada Grande, Quebradillas, and Honduras in Barranquitas that was scheduled for upgrade. The study's author, Jaqueline López Meléndez, mentions finding highly eroded pre-Columbian ceramic fragments and recommended a Phase II Study for the area of the findings. She also states that all other areas of the study may proceed with the proposed work. Upon our examination of the study, we found that these ceramic fragments were located

outside of the area pertaining to our study. In conclusion, the ¼ mile radius pertaining to our investigation does not contain recorded ICP sites or surveys.

SHPO Sites and Surveys

No sites or surveys were identified in the SHPO archives within the ¼ mile radius of the project area.

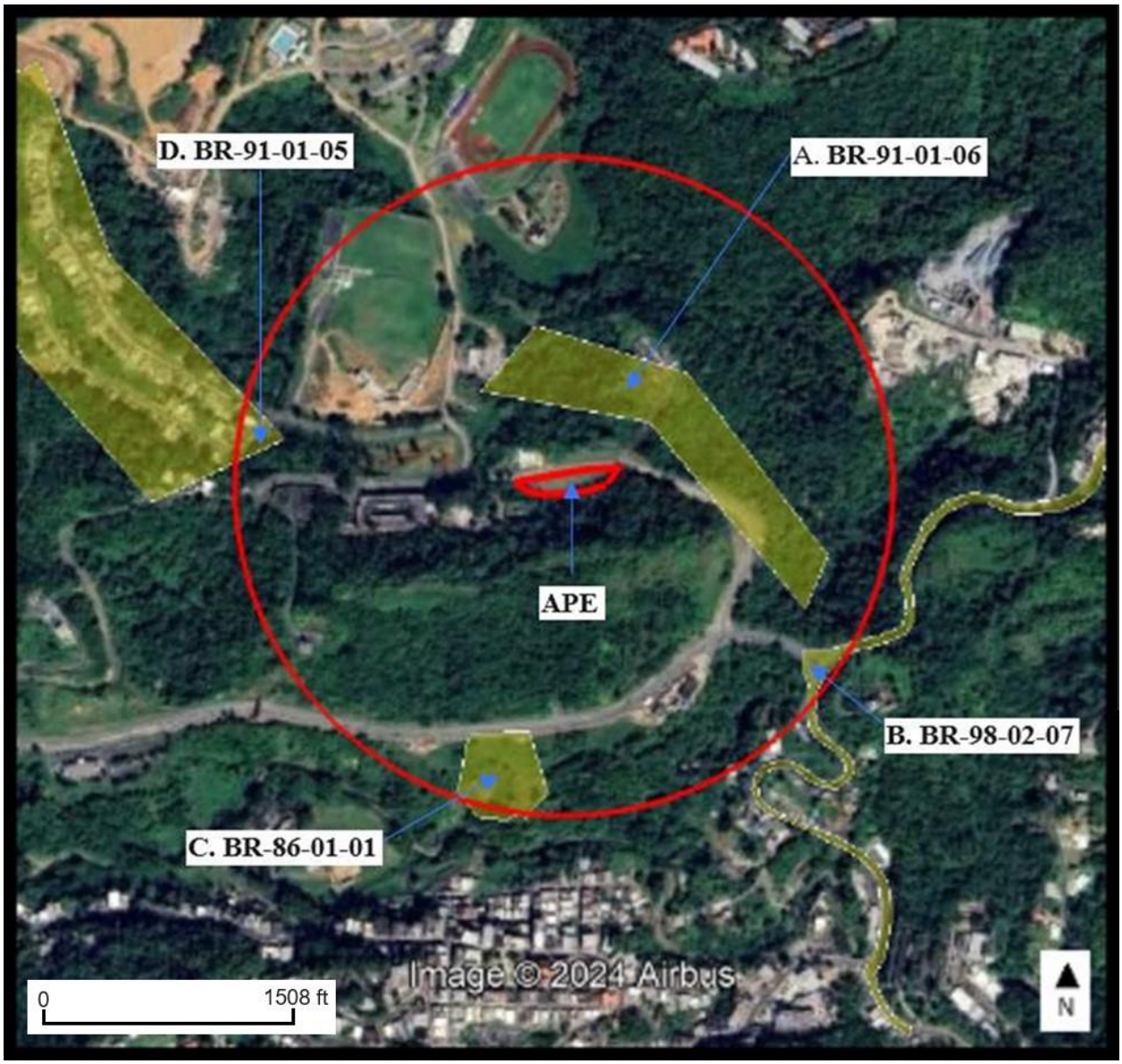


Figure 15. Project (Parcel) Location with Previously Recorded Cultural Resources Surveys and sites (no sites, archaeological archives)- Aerial Map.

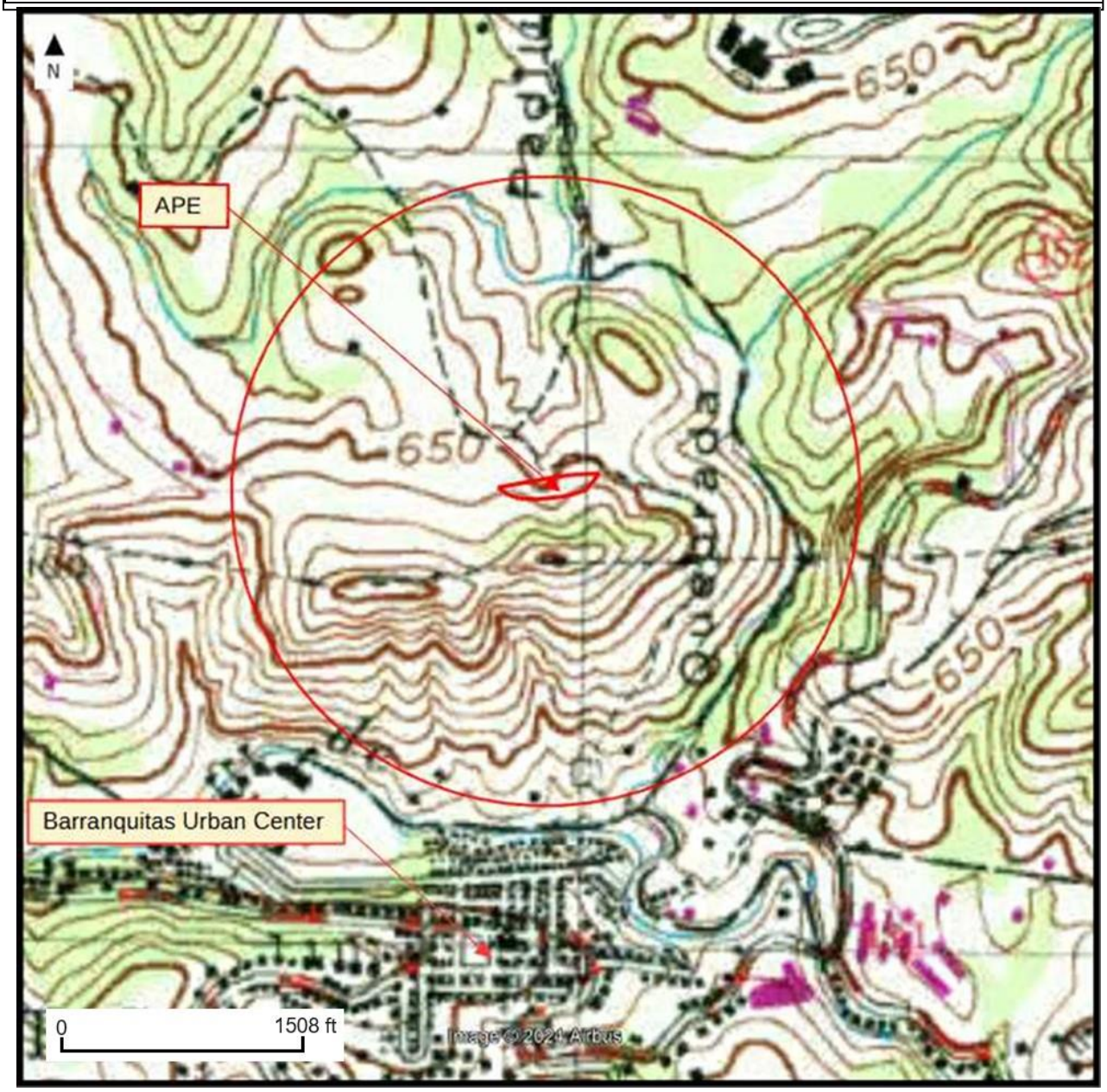


Figure 16. Project (Parcel) Location with Previously Recorded Cultural Resources (archaeological archives) USGS Topographic Map

Site visit and surface reconnaissance

The lot consists of an irregular oval shaped section of a larger parcel located approximately 470 meters north of the traditional urban center (photos 1-13). The lot has a length of approximately 110m from east to west, and maximum width of 33m from north to south.

The terrain is mostly flat with a slight inclination downward from west to east. Towards the south, the terrain rises abruptly forming the north face of a hill. The only infrastructure visible on the surface is a 1m wide concrete sidewalk and a concrete gutter which border the northern edge of the lot. There's also a road locatedimmediately to the north. The road did cause an impact to the original soil integrity, as well as the sidewall and concrete gutter (Photos 1-3). There are visible mounds and cuts throughout the terrain, seemingly evidence of previous impacts caused by heavy machinery (photos 1-11).

Soil is consistent throughout the lot and consists of a pale brown plastic clay with a Munsell color of 10YR 6/3, covered (picture 4). The vegetation that is present consists mostly of a grass ground cover on the flat sections of the lot. Where the terrain rises, the vegetation consists of dense rainforest cover, which include fern trees, Yagrumo trees, palm trees and other plants common to the central mountain range habitats (photos 12-13). The surrounding area is very hilly and there are various waterways which border the larger parcel includingthe Barranquitas River to the south and the Padilla Creek towards the east. A single structure presently used as a Head Start center is situated northwest of the project area, on the opposite side of the Calle Nuevo Barranquitas (Photo 14).

No historical or archaeological features were identified on the surface within the parcel, or in the immediate surrounding area.

Photo 1. View of Multiple Use Center lot and road PR-152R, facing south, note undulations suggesting ground disturbance.

Photo 2. Surface cover of Multiple Use Center lot, sidewalk and road PR-152R facing west.

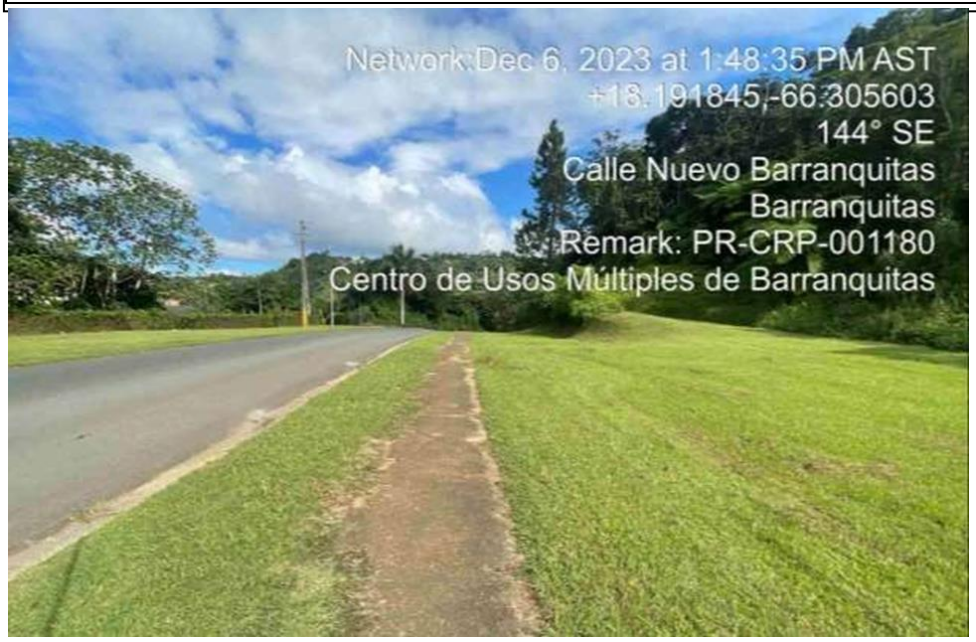


Photo 3. Surface cover of Multiple Use Center lot, sidewalk and road PR-152R facing east. See cuts suggesting impact with heavy equipment.

Photo 4. Close up of surface cover of Multiple Use Center lot, facing southeast.

Photo 5. Surface cover of Multiple Use Center lot, forested area (southern section of the lot) and road PR-152R facing west.

Photo 6. Surface cover of Multiple Use Center lot, forested area (southern section of the lot), section of local road crossing western portion of the lot, and road PR-152R, facing southeast. Note undulations suggesting ground disturbance.

Photo 8. Surface cover of Multiple Use Center lot, forested area (southern section of the lot) and road PR-152R facing west. See undulations suggesting ground disturbance.

Photo 9. Forested area South of Multiple Use Center lot, facing southeast.

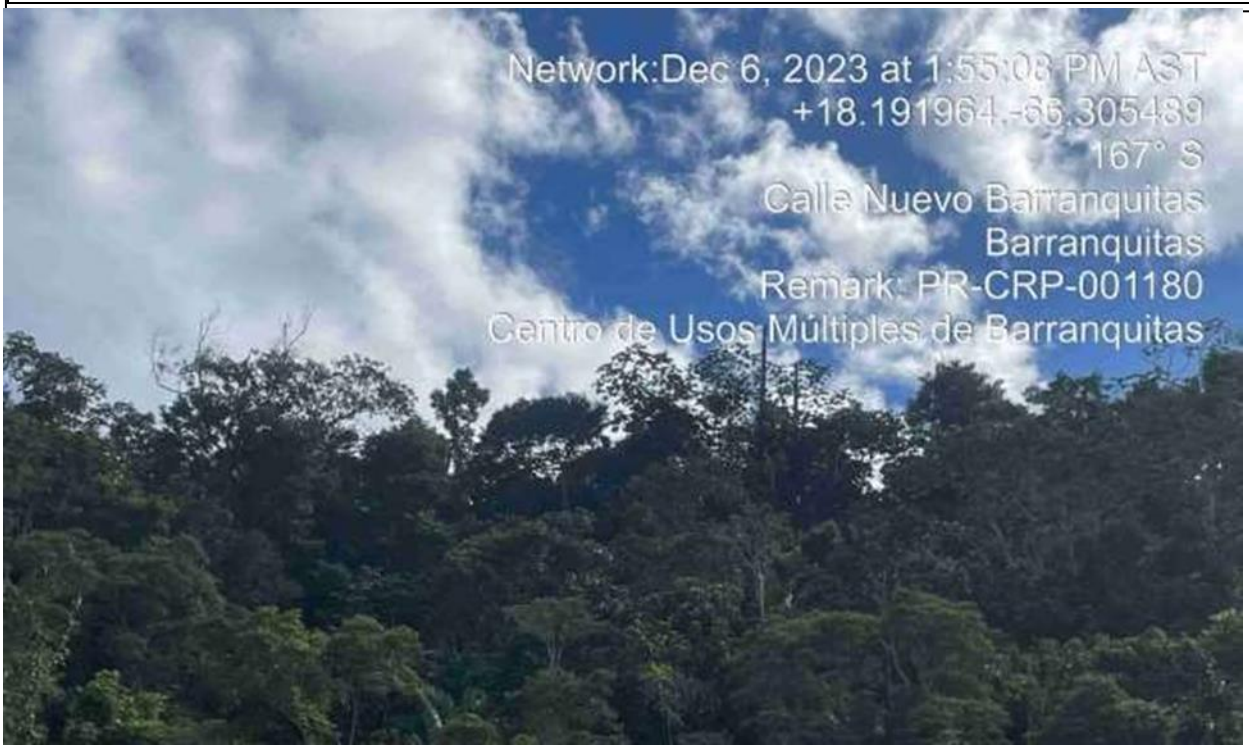


Photo 10. Forested area South of Multiple Use Center lot, facing south.

Photo 11. View of road PR-152R, surface cover of Multiple Use Center lot, forested area, facing southwest.

Photo 12. View of road PR-152R, surface cover of Multiple Use Center lot, forested area, facing south.

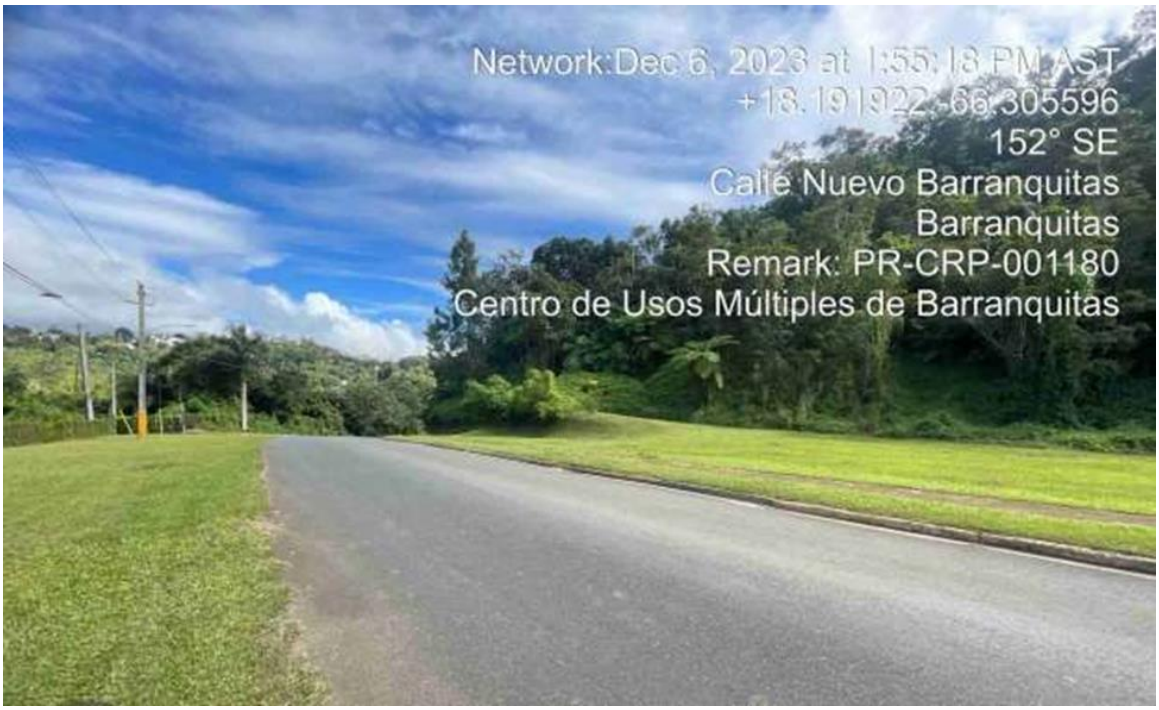


Photo 13. View of road PR-152R, surface cover of Multiple Use Center lot, forested area, facing southeast.

Photo 14. View of school structure situated Northwest of the project area. Facing northwest.

Identification of Historic Properties - Architecture

Existing information on previously identified historic properties has been reviewed to determine if any such properties are located within the APE of this undertaking. The review of this existing information, by a Program contracted Historic Preservation Specialist meeting the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61), shows that the project area is not within or adjacent to the National Register of Historic Places (NRHP) Eligible Barranquitas Traditional Urban Center. Additionally, no NRHP-listed, NRHP-eligible, or locally registered historic properties were identified within ¼ mile of the APE (Figures 17 and 18).

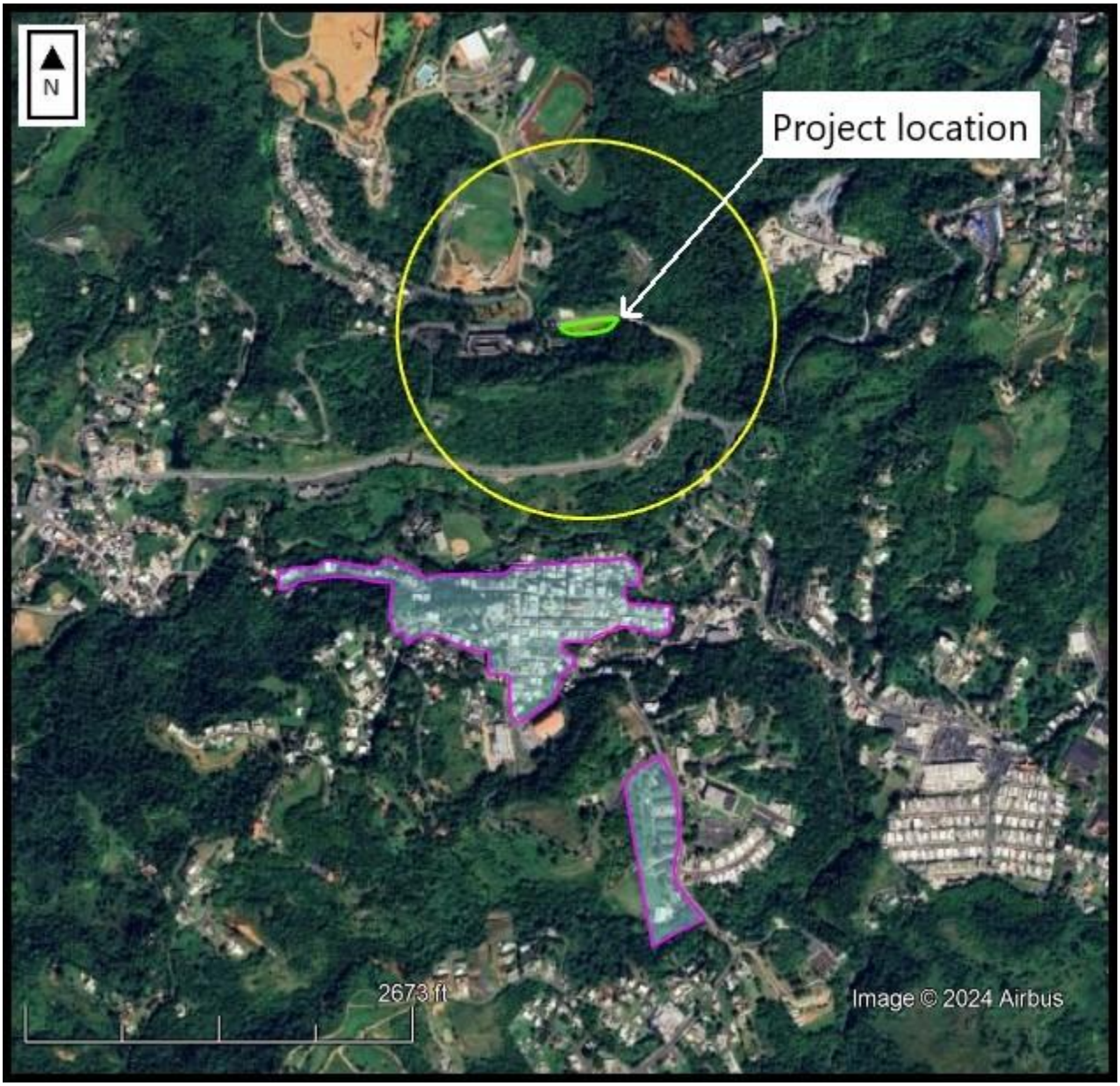


Figure 17. Project (Parcel) with Identified Historic Resources – Aerial Base.

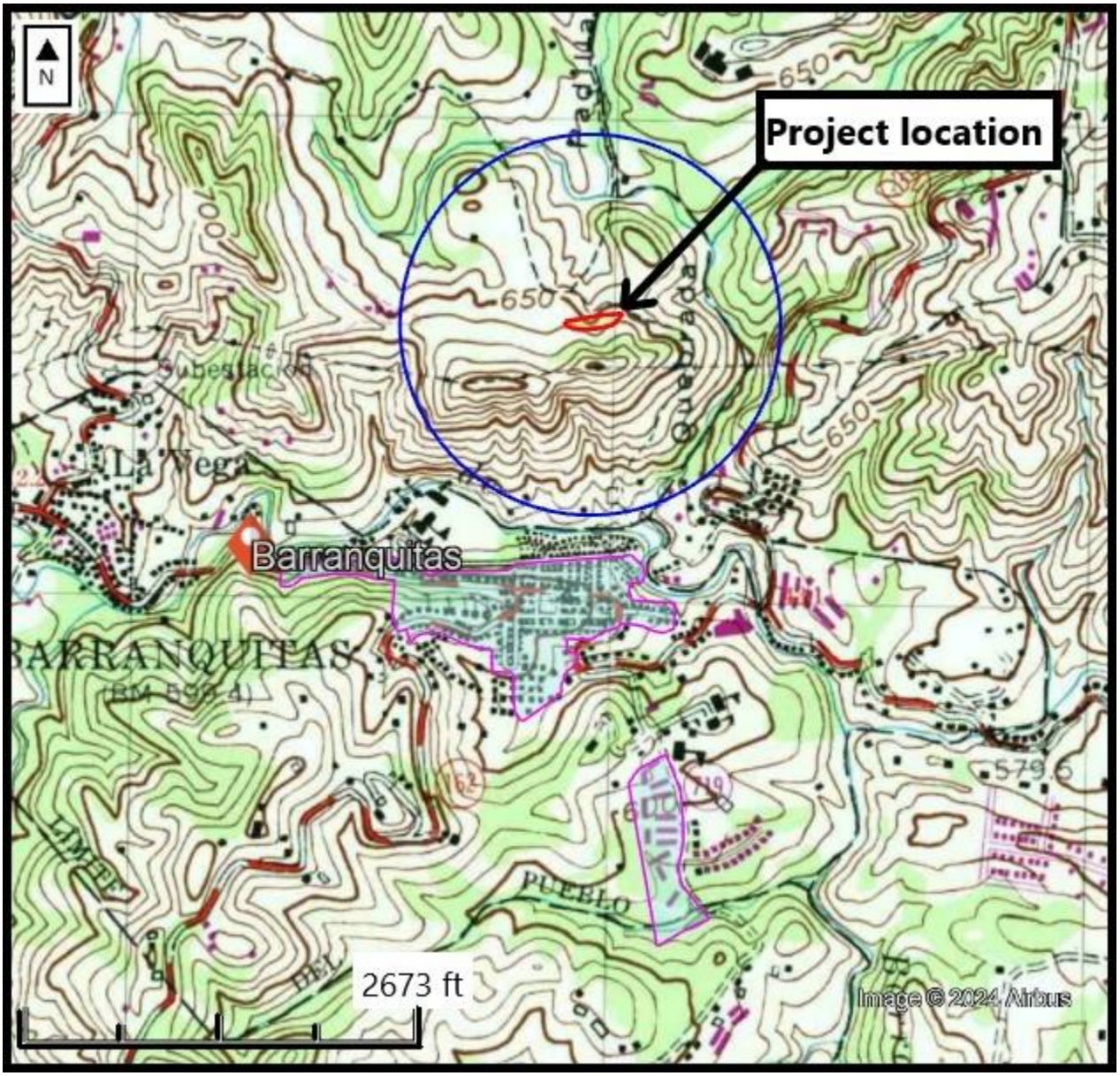


Figure 18. Project (Parcel) with Identified Historic Resources – USGS Topographic Base.

Historic Evolution of the APE:

The cultural landscape of Puerto Rico has been shaped by colonial and Anglo-Saxon influences, particularly evident in the traditional urban centers scattered across the island. These urban areas serve as the urban counterpart to the rural imagery that has been a prominent feature in representations of Puerto Rican identity since the 1700s (Montenegro

2023).

In the context of this cultural tapestry, Barranquitas, situated in the mountainous interior region known as La Cordillera Central, stands as a testament to the historical evolution of Puerto Rican communities. Today, Barranquitas is a small mountain town and municipality strategically positioned to the south of Corozal and Naranjito, north of Coamo and Aibonito, west of Comerío and Cidra, and east of Orocovis. This geographical location places Barranquitas at the heart of the island's central region (Montenegro 2023).

The roots of Barranquitas trace back to the early 19th century, when the absence of a defined geographical position prompted 30 residents to establish a town in what is now Barranquitas. These lands originally belonged to the distant town of Coamo, leading the local population to seek separation to form their town and parish. The motivation behind this desire for autonomy stemmed from the challenges residents faced inmaking arduous journeys to neighboring churches for Catholic services. Barranquitas, at that time, only had a chapel that operated sporadically, providing worship solely on special occasions. Hence, the founding of Barranquitas, like many other municipalities, initially found its roots in religious motivations (Montenegro 2023).

The municipal evolution of Barranquitas saw a significant development in 1902 when, by decree of the Lawfor the consolidation of certain municipal terms from the Legislative Assembly of Puerto Rico, Barranquitas was consolidated with the municipality of Barros (Orocovis). However, just two years later, through another legislative act, Barranquitas successfully regained its independent municipal status. This historical trajectory reflects the dynamic interplay of cultural, geographical, and administrative factors that have shaped Barranquitas into the vibrant mountain town it is today (Montenegro 2023).

In the expansive vicinity of the proposed project, the landscape bears the indelible marks of three decades of development, a canvas on which the evolution of time is etched in architectural lines and infrastructural growth. Strikingly, the proposed project stands poised to be the inaugural structure within this vast expanse, a testament to its potential impact on the unfolding narrative of the area. The prevailing Visual Area of Potential Effect (APE) bears witness to a predominantly municipal and civic presence dating back to the 1980s, with minimal subsequent development within its bounds (Montenegro 2023).

Determination

As mentioned before, the project is situated over a ¼ mile north of the boundaries of the National Register of Historic Places (NRHP)-eligible Barranquitas Traditional Urban Center and as such is not located within an eligible or listed historic district.

The historic properties in the ¼ mile radius area of potential effect are not considered part of the proposed project and will not be affected during the construction and demolition to accomplish the proposed scope of work. No Cultural resources were identified within the ¼ mile radius of the project area. Founded on the results of the historic property identification efforts, the Program has determined that a finding of no historic properties affected is appropriate for this undertaking.

- Direct Effect:
  - No historic properties within the APE or visual APE will be directly affected by the proposed project.
  - From an archaeological standpoint, the area has a low sensitivity to the possible presence of cultural resources, and presents an impacted general profile. There's no direct effect to any cultural resources and the possibility of the project to cause an impact on any cultural resource is minimal.
- Indirect Effect:
  - No historic properties are within the direct or indirect/visual APE.

Recommendation

The Puerto Rico Department of Housing requests that the Puerto Rico SHPO concur that the followingdetermination is appropriate for the undertaking (Choose One):

☒ No Historic Properties Affected

☐ No Adverse Effect

Condition (if applicable):

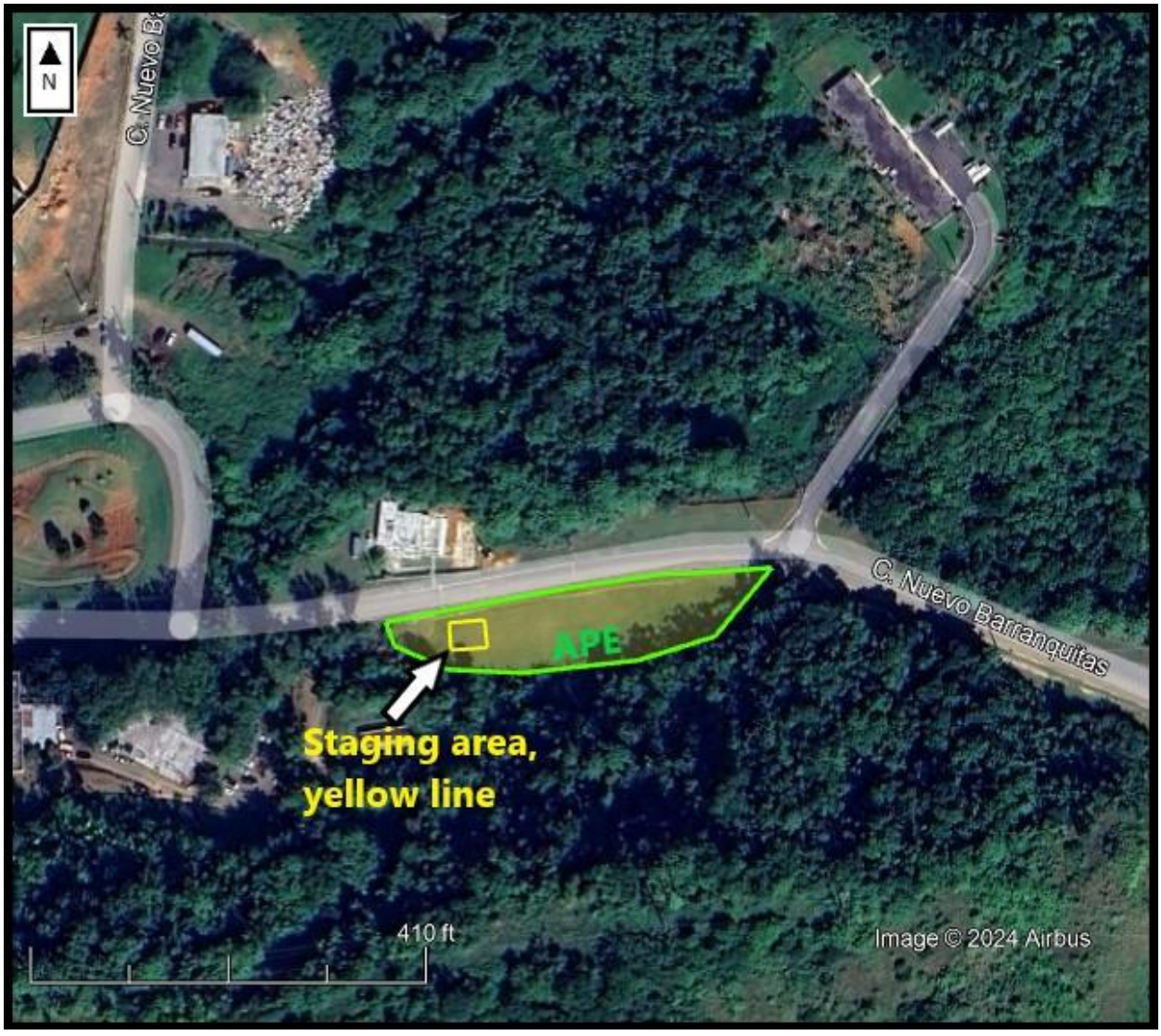
☐ Adverse Effect

Proposed Resolution (if applicable)

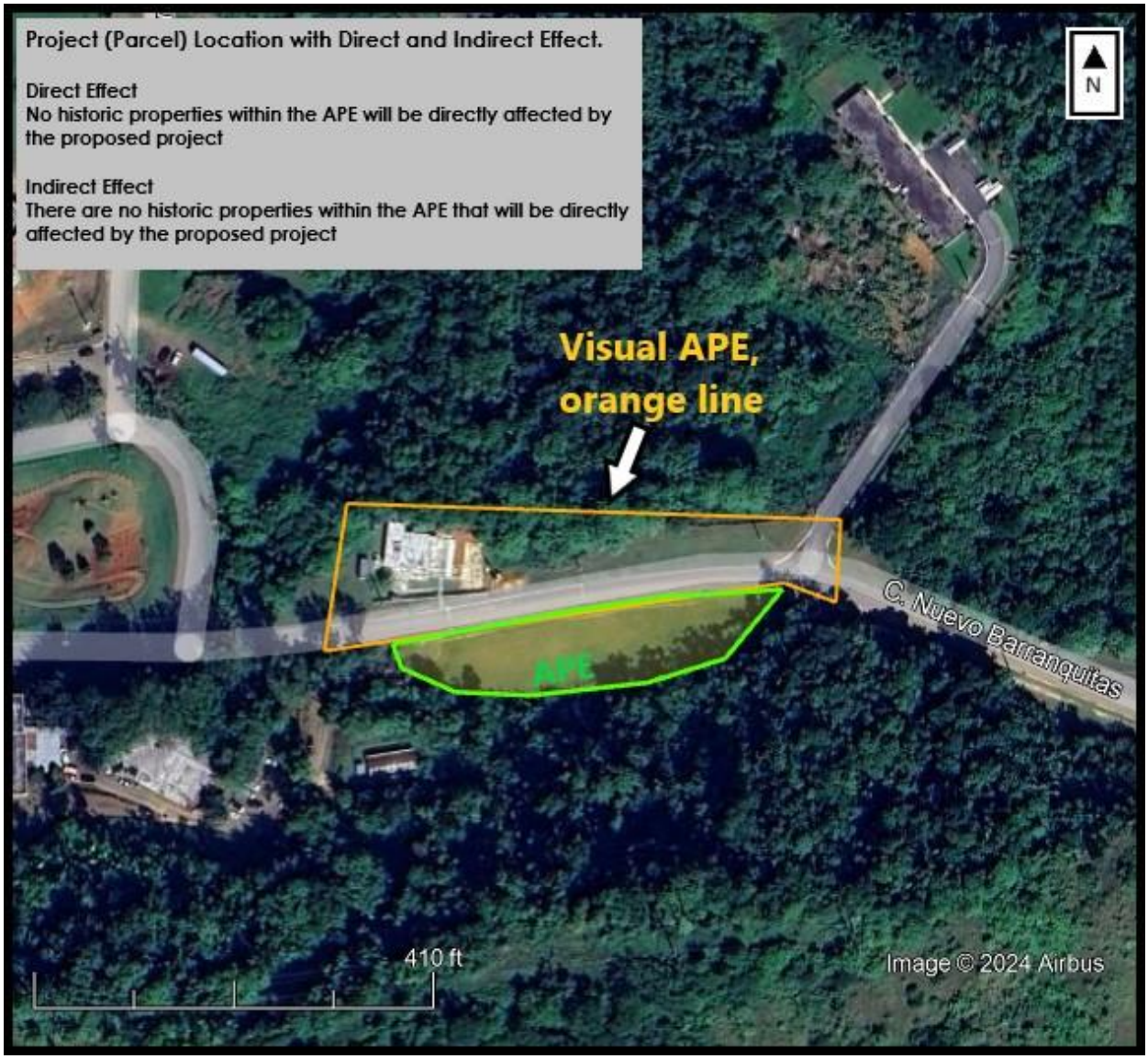
This Section is to be Completed by SHPO Staff Only

The Puerto Rico State Historic Preservation Office has reviewed the above information and: ☐ **Concurs** with the information provided. ☐ **Does not concur** with the information provided.	
Comments:	
Carlos Rubio-Cancela State Historic Preservation Officer	Date:

Project (Parcel) Location – Area of Potential Effect Map (Aerial)



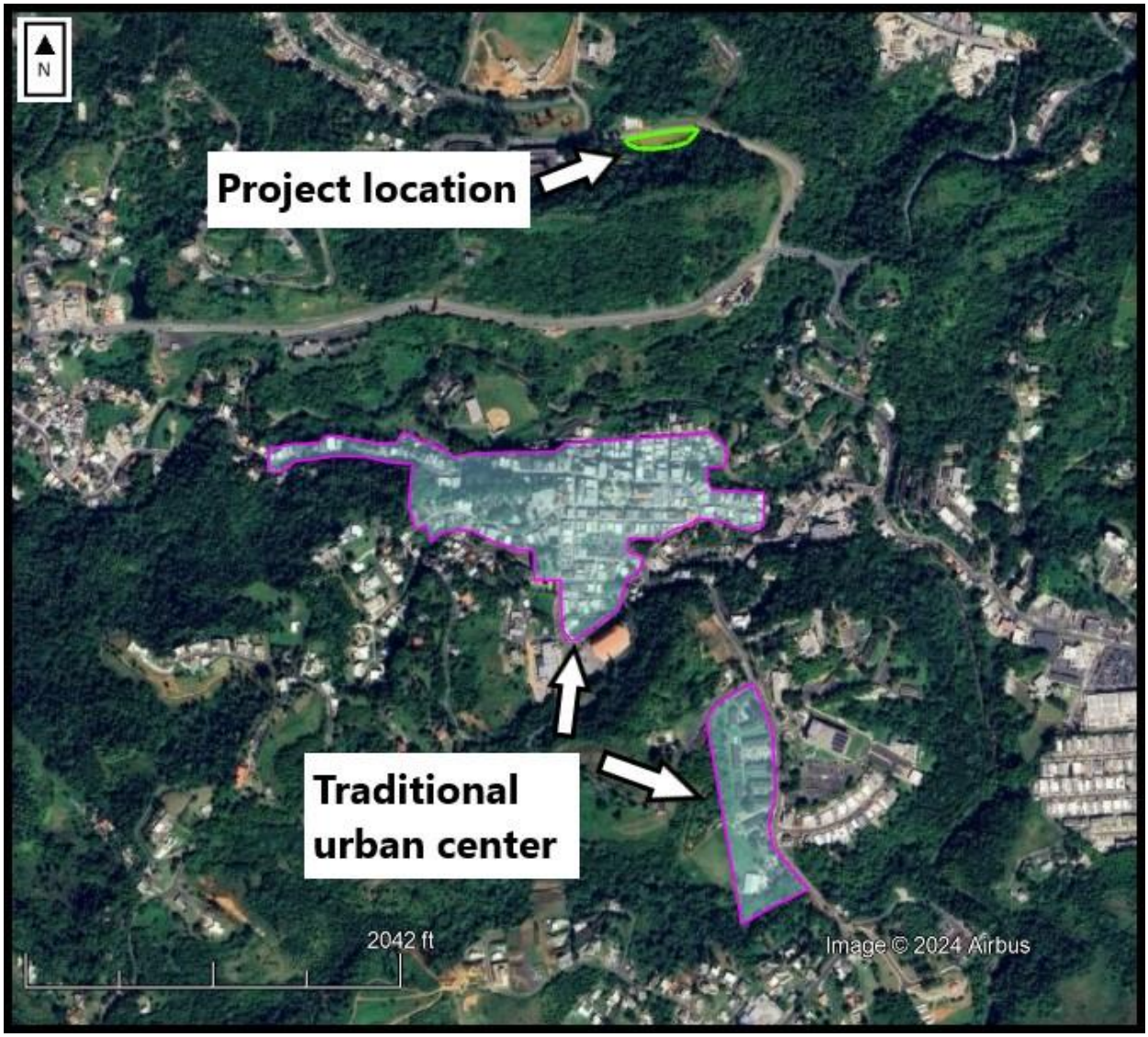
Project (Parcel) Location with Direct and Indirect Effect



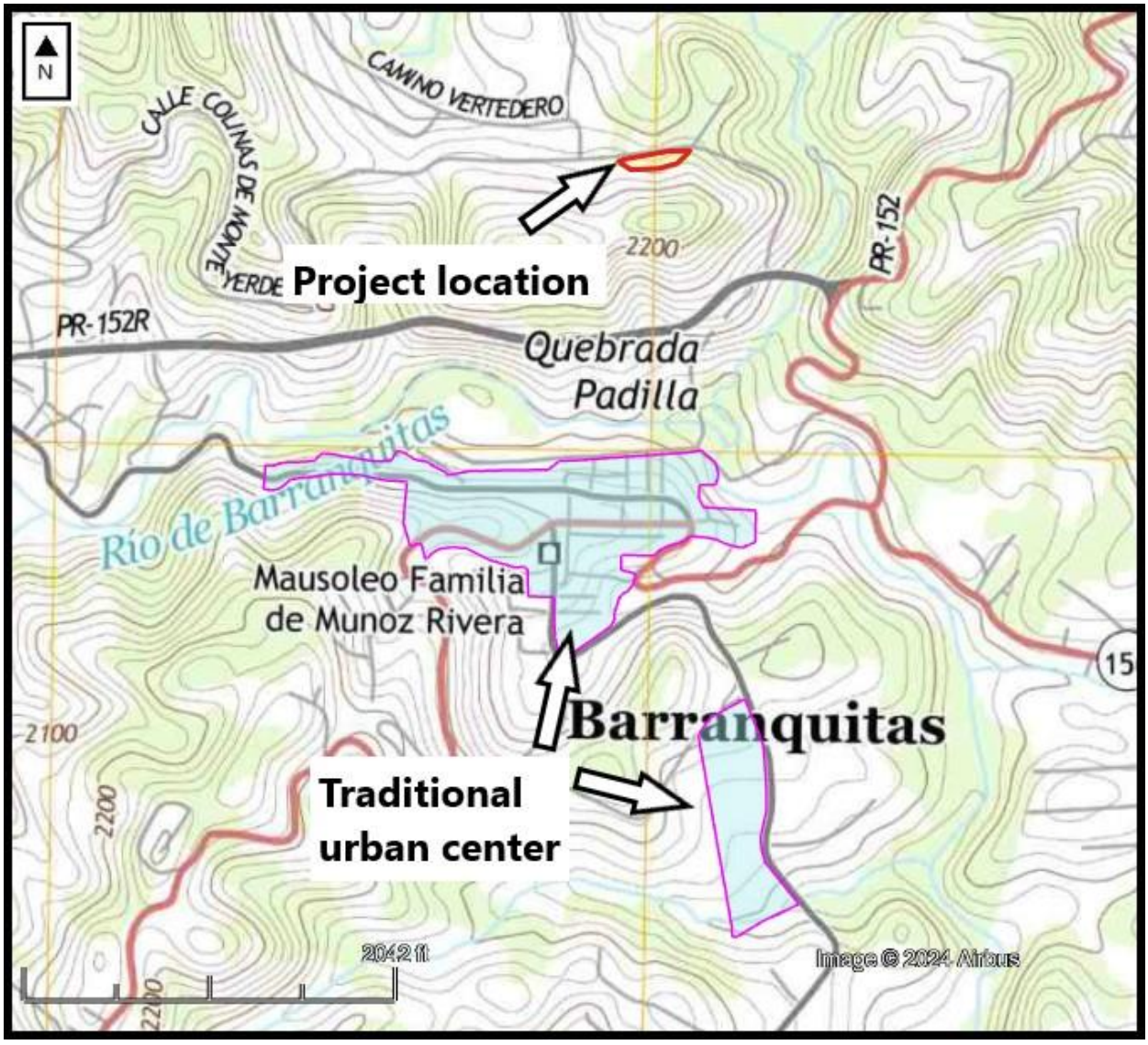
Direct effect: Green line.

Indirect effect: Orange line.

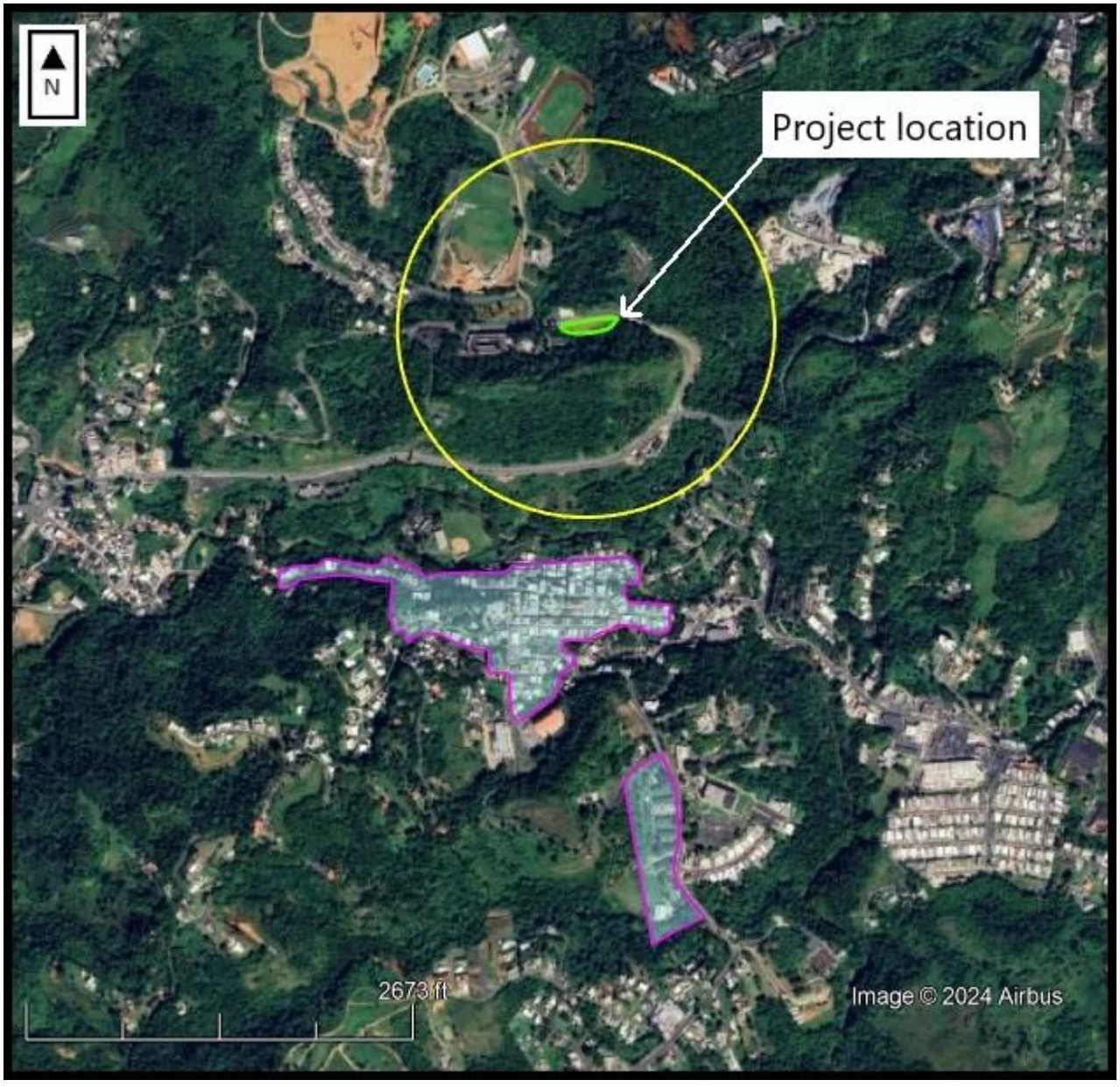
Project (Parcel) Location - Aerial Map



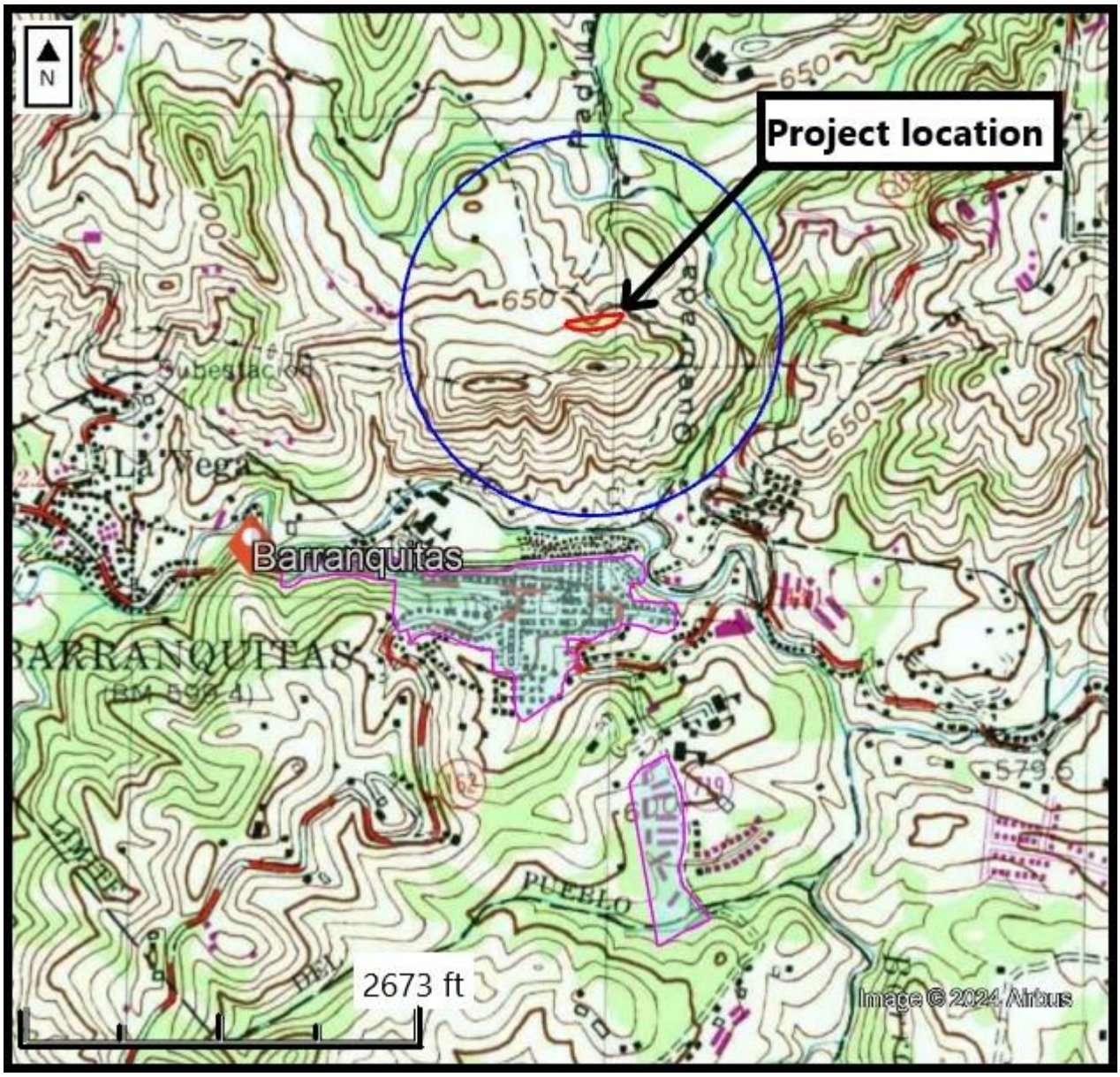
Project (Parcel) Location - USGS Topographic Map



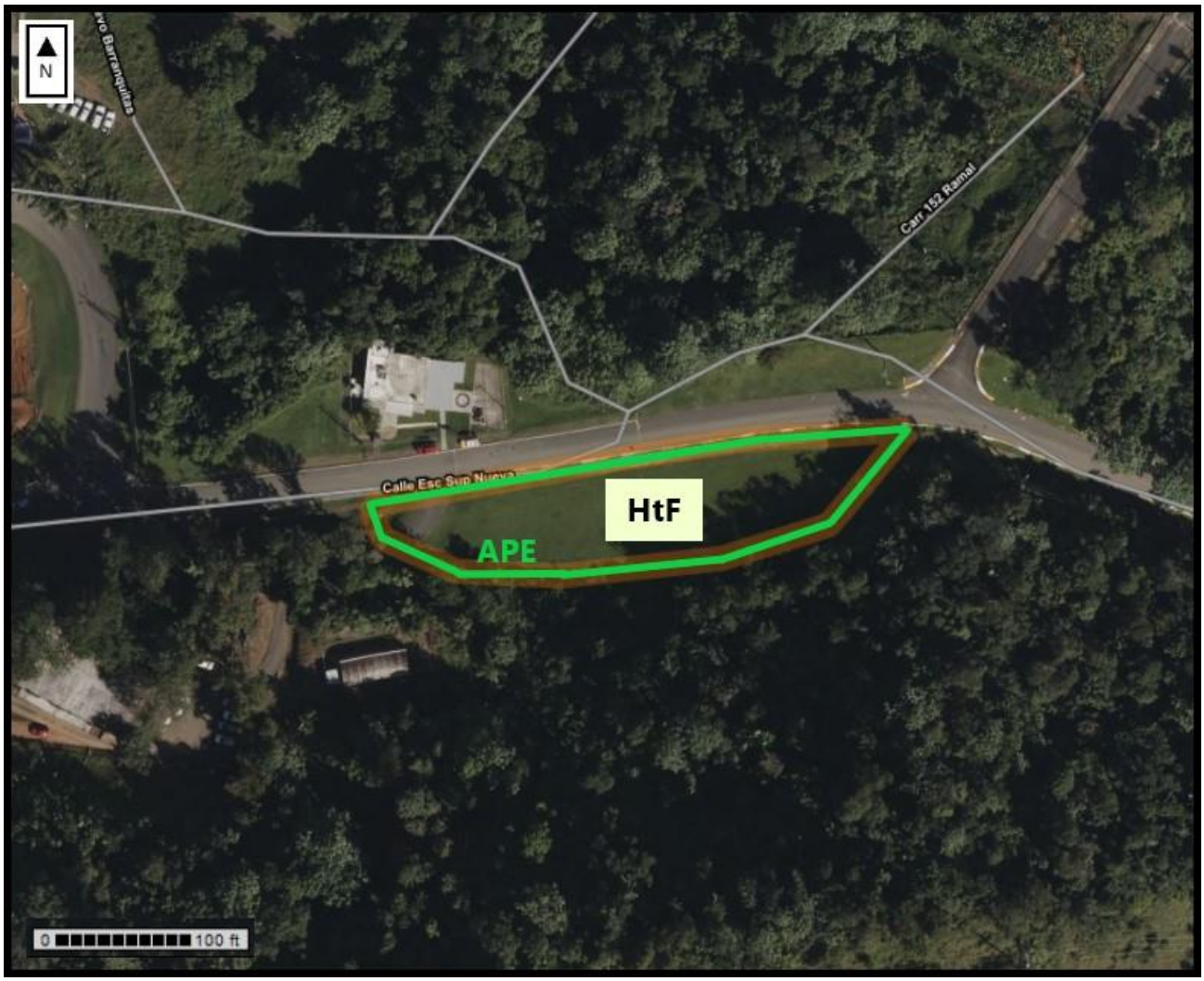
Project (Parcel) with Identified Historic Resources – Aerial Base



Project (Parcel) Location with Identified Historic Resources – USGS Topographic Base



Project (Parcel) Location – Soils Map

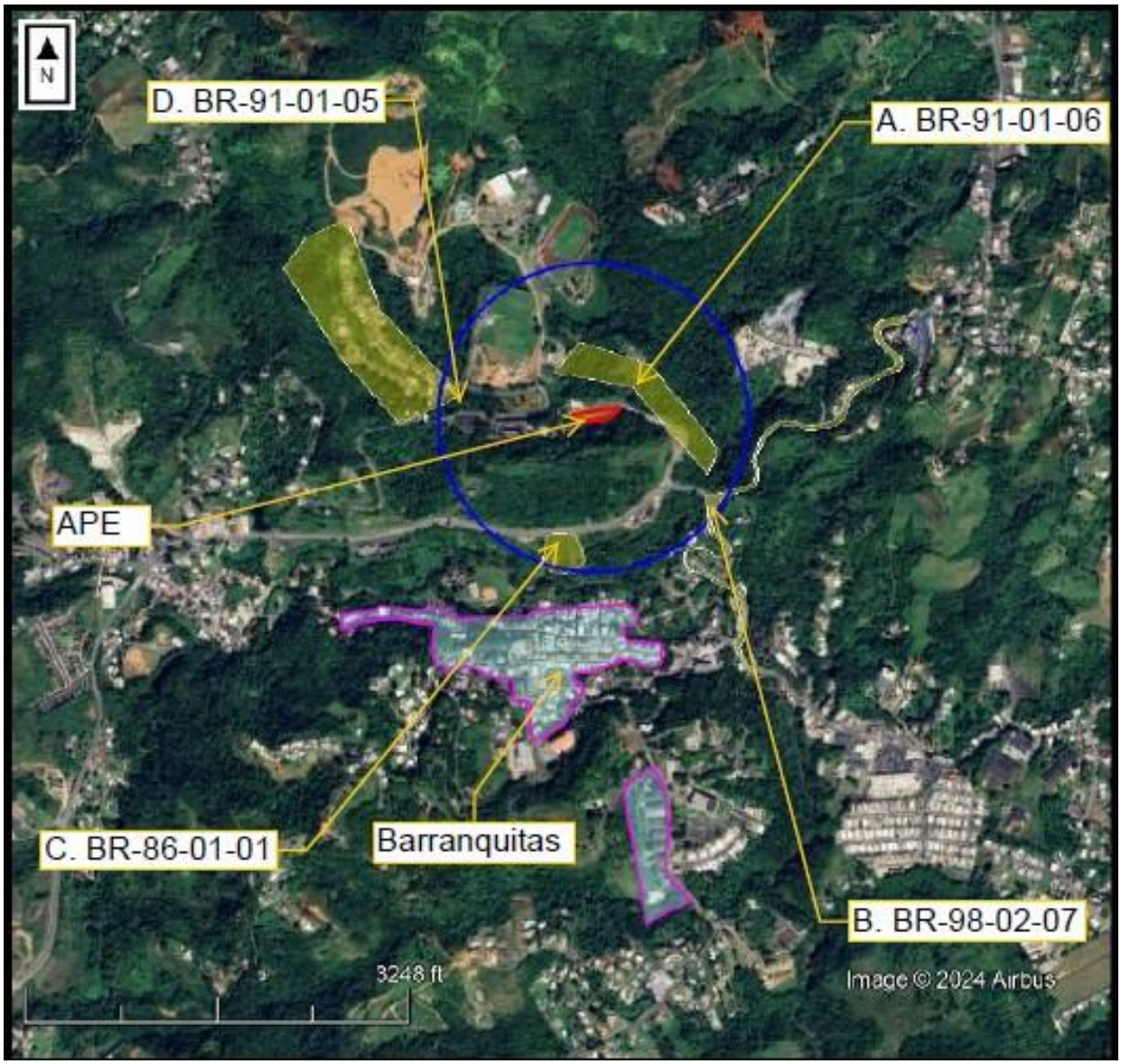


Soil type description:

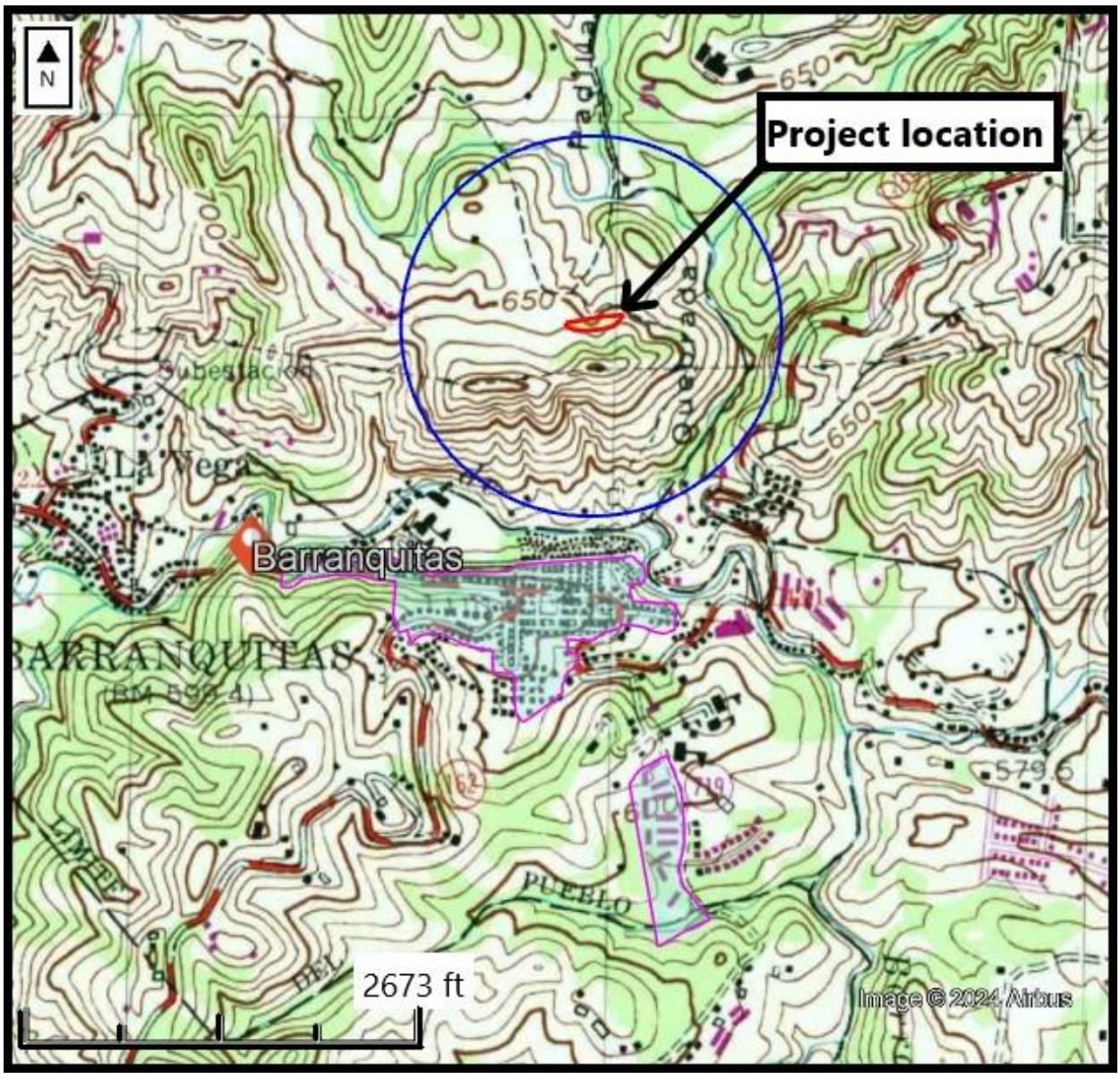
HtF: Humatas clay, 40 to 60 percent slopes.

Source: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

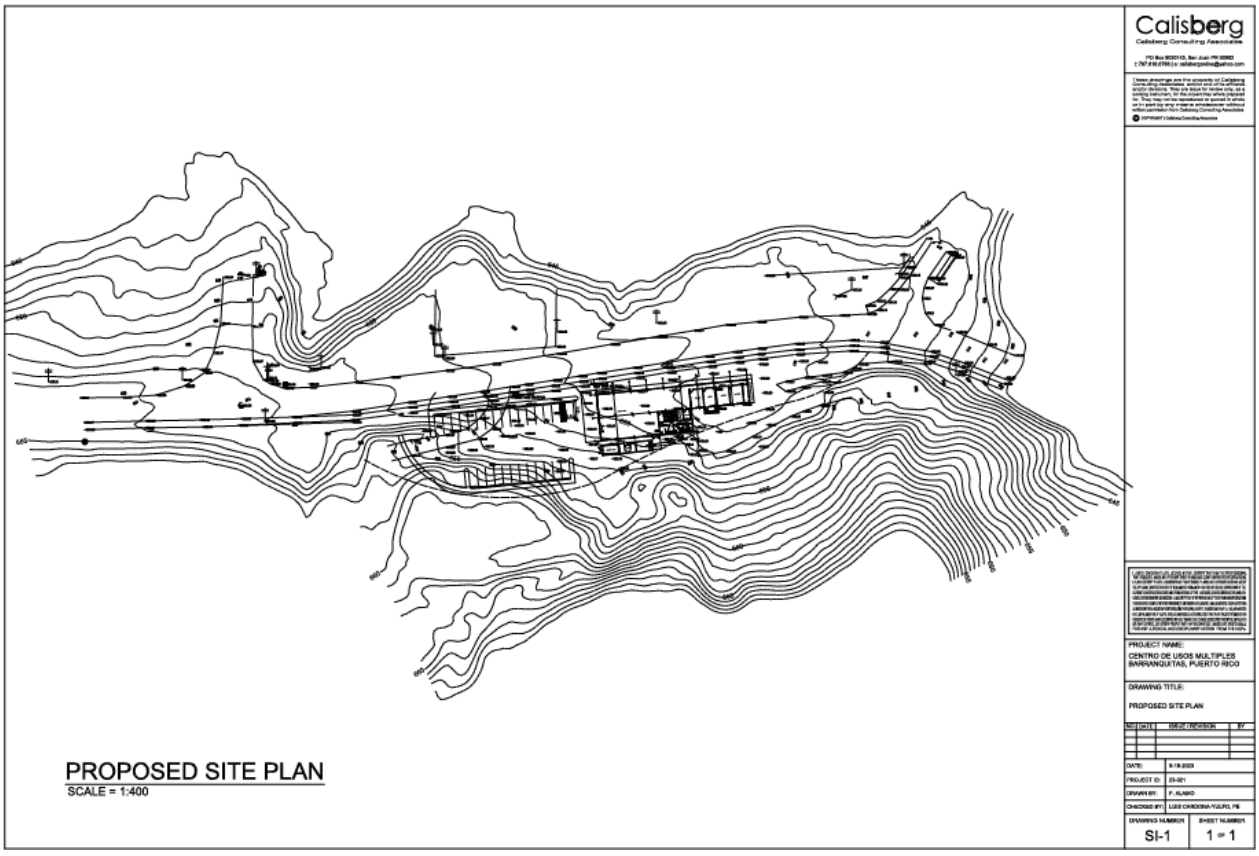
Project (Parcel) Location with Previously Recorded Cultural Resources Surveys and sites (no sites, archaeological archives)- Aerial Map



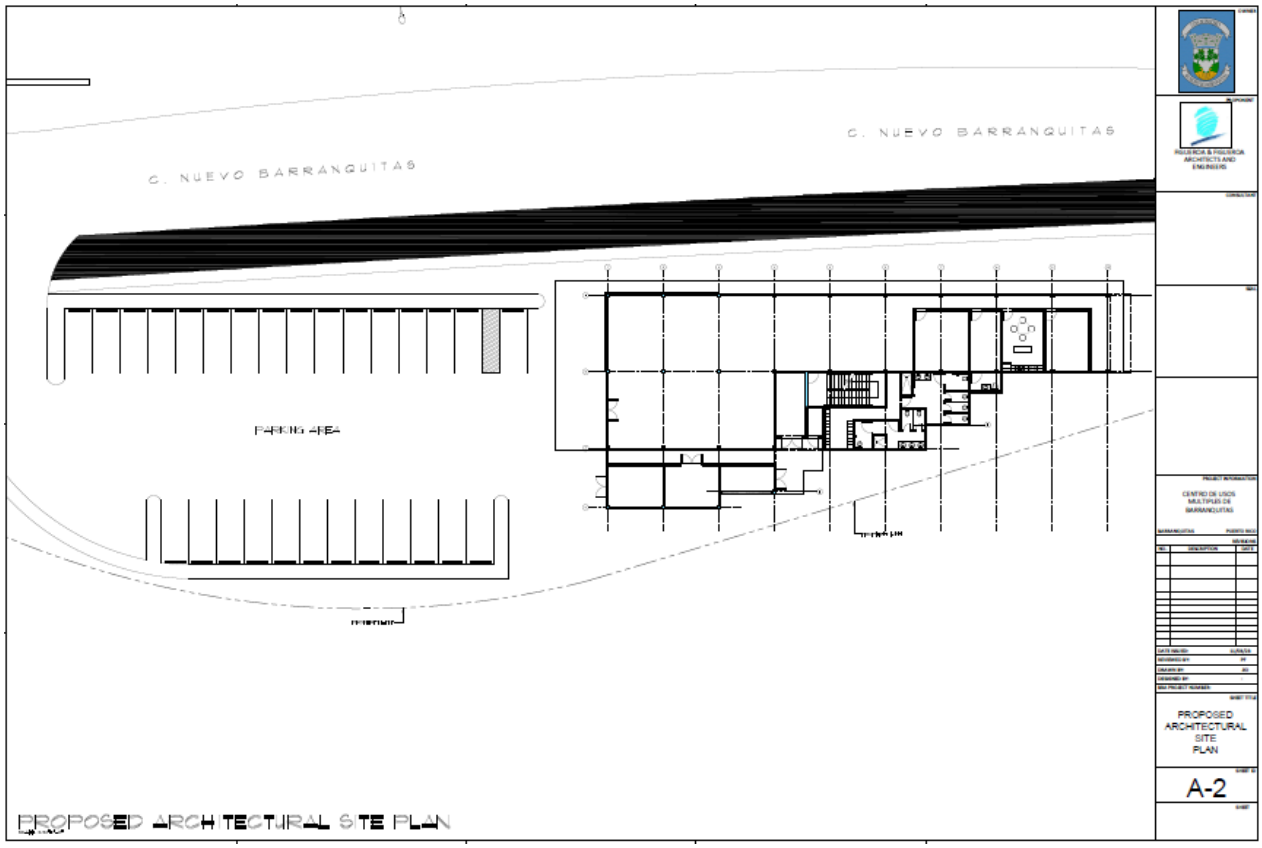
Project (Parcel) Location with Previously
Recorded Cultural Resources (archaeological archives) USGS Topographic Map



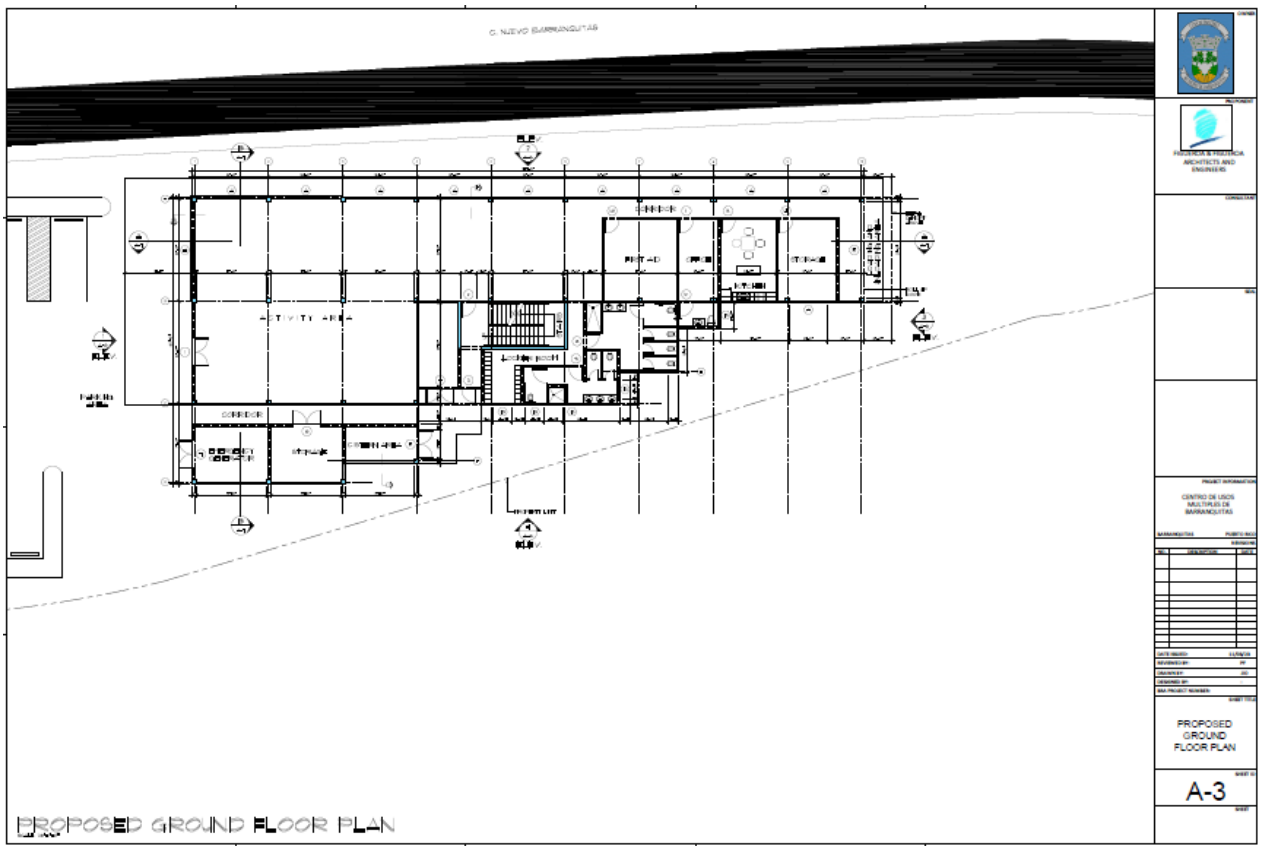
Proposed site plan



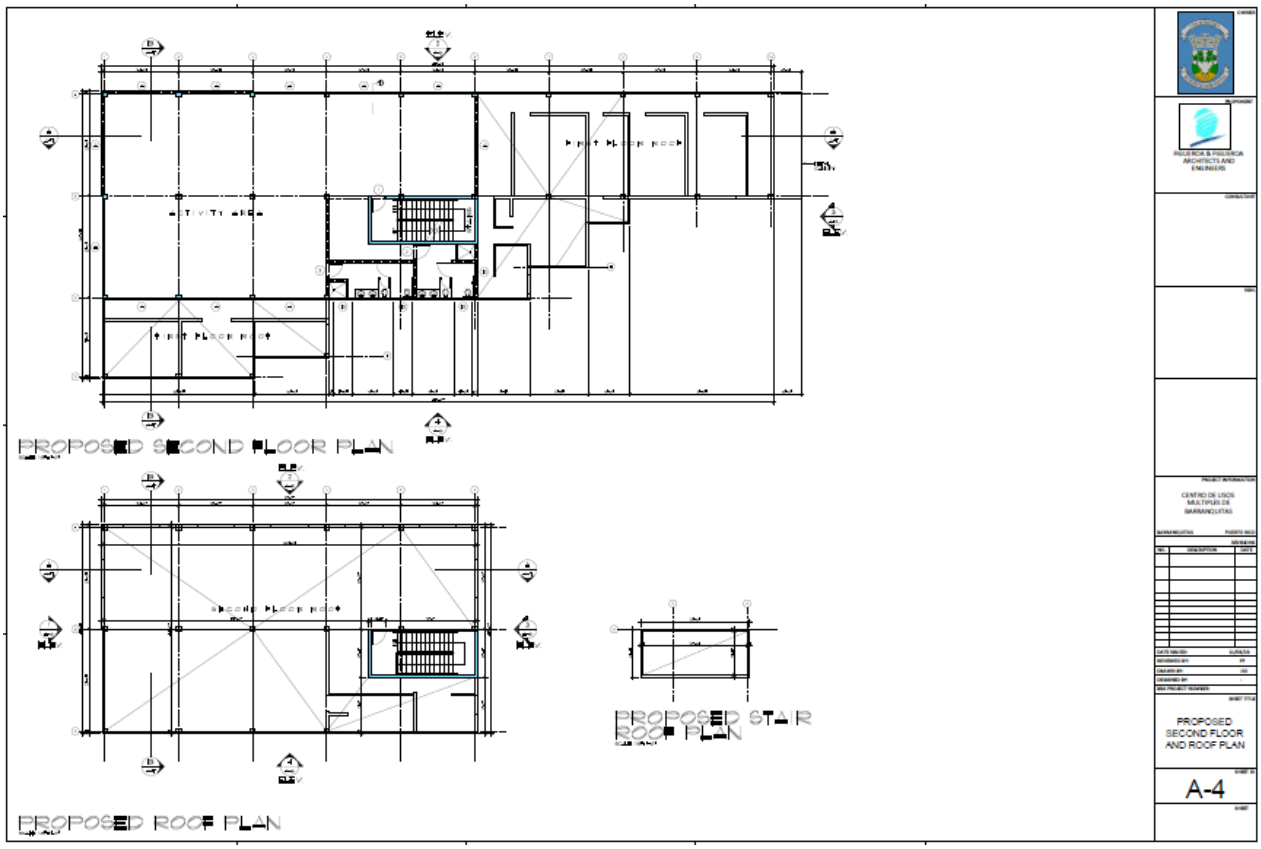
Proposed architectural site plan.



Proposed ground floor plan.



Proposed second floor plan.



Proposed elevations.

Photo Key

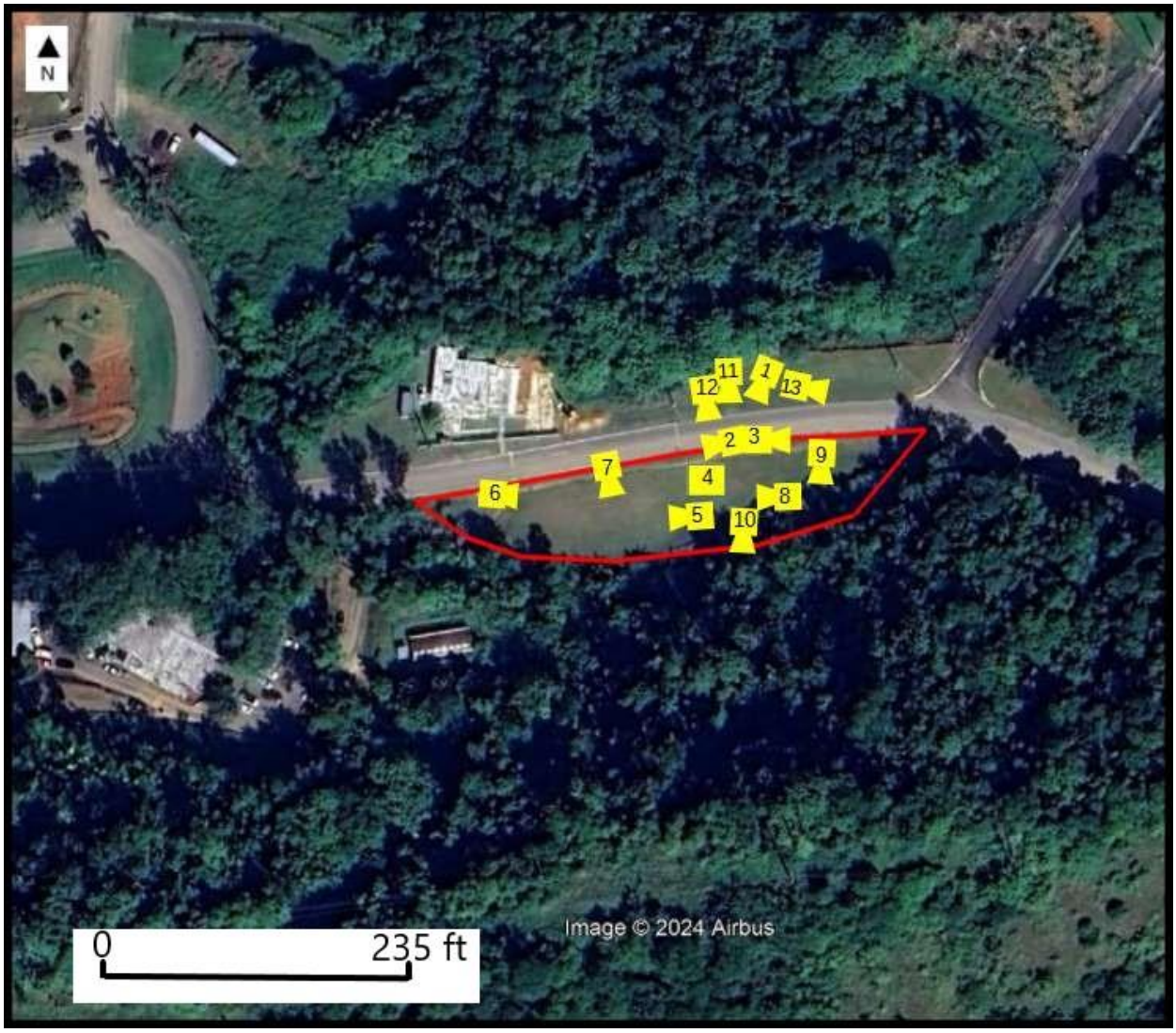


Photo # 1	**Description (include direction):** View of Multiple Use Center lot and road PR-152R, facing south, note undulations suggesting ground disturbance.
Date: 12/06/2023	

Photo # 2	**Description (include direction):** Surface cover of Multiple Use Center lot,sidewalk and road PR-152R facing west.
Date: 12/06/2023	

Photo # 3	**Description (include direction):** Surface cover of Multiple Use Center lot, sidewalk and road PR-152R facing east. See cuts suggesting impact with heavyequipment.
Date: 12/06/2023	

Photo # 4	**Description (include direction):** Close up of surface cover of Multiple Use Center lot, facing southeast.
Date: 12/06/2023	

Photo # 5	**Description (include direction):** Surface cover of Multiple Use Center lot, forested area (southern section of the lot) and road PR-152R facing west.
Date: 12/06/2023	

Photo # 6 **Date: 12/06/2023**	**Description (include direction):** Surface cover of Multiple Use Center lot, forested area (southern section of the lot), section of local road crossing westernportion of the lot, and road PR-152R, facing southeast. Note undulations suggesting ground disturbance.

Photo # 7	**Description (include direction):** Surface cover of Multiple Use Center lot and forested area, facing south. See cuts suggesting ground disturbance.
Date: 12/06/2023	

Photo # 8	**Description (include direction):** Surface cover of Multiple Use Center lot, forested area (southern section of the lot) and road PR-152R facing west. See undulations suggesting ground disturbance.
Date: 12/06/2023	

Photo # 9	**Description (include direction):** Forested area South of Multiple Use Center lot, facing southeast.
Date: 12/06/2023	

Photo # 10	**Description (include direction):** Forested area South of Multiple Use Center lot, facing south.
Date: 12/06/2023	

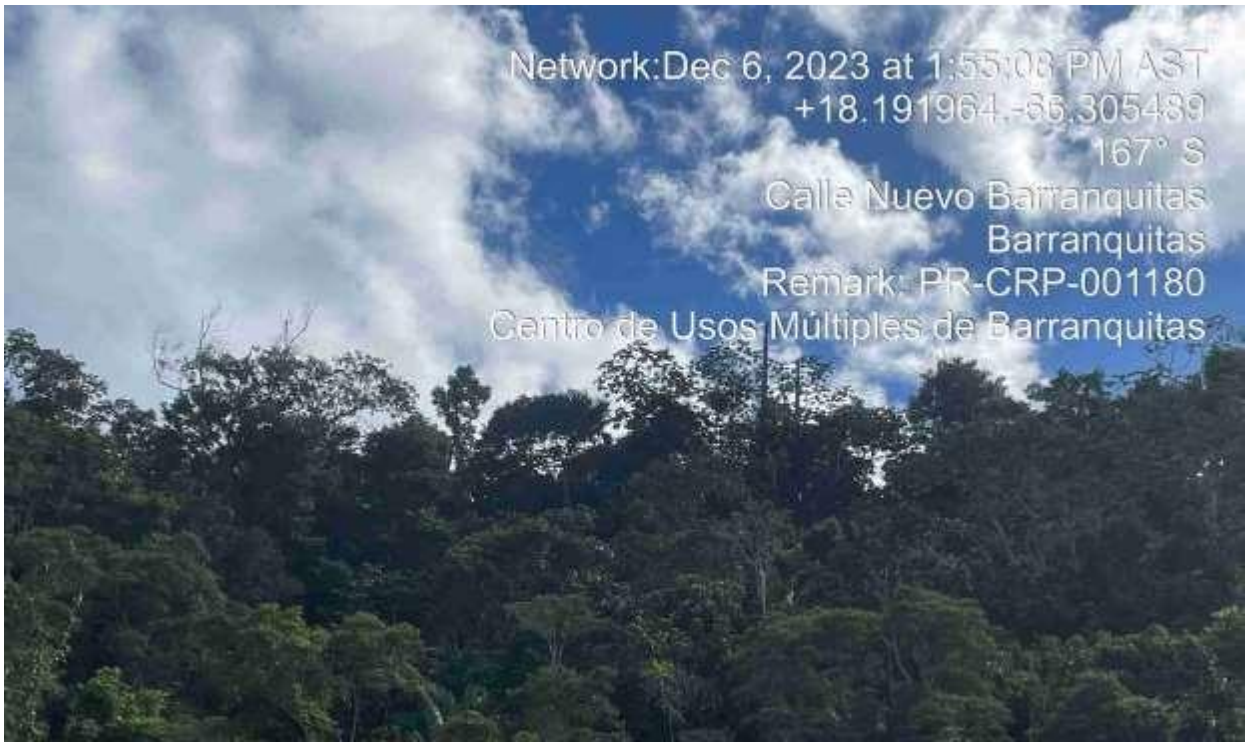
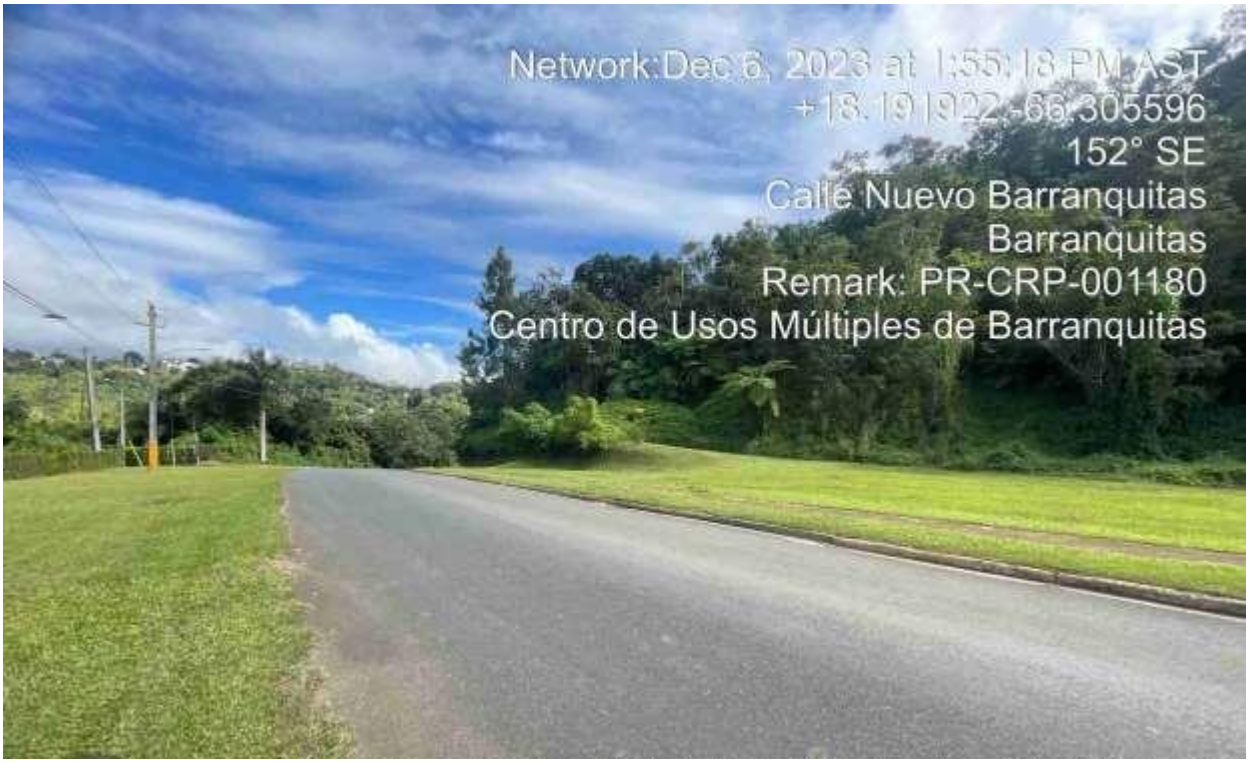


Photo # 11	**Description (include direction):** View of road PR-152R, surface cover of Multiple Use Center lot, forested area, facing southwest.
Date: 12/06/2023	

Photo # 12	**Description (include direction):** View of road PR-152R, surface cover of Multiple Use Center lot, forested area, facing south.
Date: 12/06/2023	

Photo # 13	**Description (include direction):** View of road PR-152R, surface cover of Multiple Use Center lot, forested area, facing southeast.
Date: 12/06/2023	



Minimal Bibliography

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Sepúlveda Rivera Aníbal, Puerto Rico Urbano, atlas histórico de la ciudad puertorriqueña. 4 volúmenes, San Juan, Puerto Rico, Centro de Investigaciones Carimar, Departamento de Transportación y Obras Públicas, 2004.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at the following link: http://websoilsurvey.sc.egov.usda.gov/. Accessed [2/1/2024].

Toro Sugrañes, Carlos, Historia de los Pueblos de Puerto Rico. Río Piedras, Puerto Rico, Editorial Edil, segunda edición 1998.

USGS Topoview: USGS Topographic maps from 1946 – 2013.
Source: https://ngmdb.usgs.gov/topoview/viewer/#15/18.4521/-66.6627

Satellite imagery obtained through Google Earth Pro software.

PR-CRP-001180

Construccion de Centro de Usos Multiples

Barranquitas, Puerto Rico

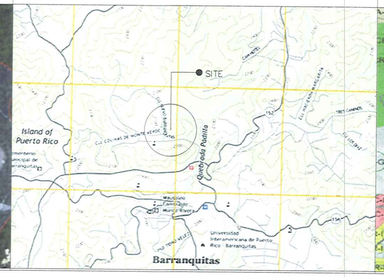
90% Design Drawings

DRAWING LIST

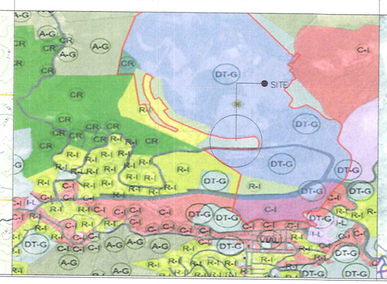
NO.	DRAWING NAME
A-1	TITLE SHEET, INDEX, LOCATION, TOPOGRAPHIC & ZONING MAPS
A-2	PROPOSED ARCHITECTURAL SITE PLAN
A-3	PROPOSED GROUND FLOOR PLAN
A-4	PROPOSED SECOND FLOOR AND ROOF PLAN
A-5	PROPOSED GROUND AND SECOND FLOOR FEFLECTED CEILING PLAN
A-6	PROPOSED ELEVATIONS
A-7	PROPOSED SECTIONS
A-8	PARTIAL SECTIONS
A-9	PARTIAL SECTIONS
A-10	DOORS AND WINDOWS SCHEDULES, TYPICAL DETAILS AND NOTES

LOCATION MAP

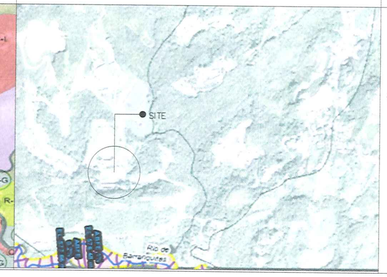
TOPOGRAPHIC MAP



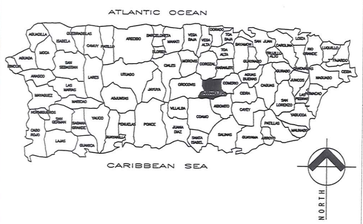
ZONING MAP



FLOOD MAP



PUERTO RICO MAP



CENTRO DE USOS MULTIPLES DE BARRANQUITAS

C. NUEVO BARRANQUITAS
BARRANCAS WARD
BARRANQUITAS, PUERTO RICO 00794

PLANS 90% COMPLETED

PROJECT INFORMATION

CADASTRE:	247-000-006-38
MUNICIPALITY:	BARRANQUITAS
SECTOR:	–
APROX. AREA:	781719.8097
COORD. X:	2132833.6443
COORD. Y:	239934.3944
FLOOD ZONE:	X (98.4%) , A (1.6%)
FLOOD PANEL:	72000C1160H
CLASSIFICATION:	DT-G
QUALIFICATION:	–

ENVIRONMENTAL DOCUMENT	CONSOLIDATED CONSTRUCTION PERMIT	OTHERS
–	–	–

OWNER

PROPONENT

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

SEAL

PEDRO LUIS FIGUEROA SANCHEZ
ARQUITECTO LICENCIADO
LIC. #9736
EXP. 15/DIC./2025
PUERTO RICO

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	12/29/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

TITLE SHEET, INDEX, LOCATION, TOPOGRAPHIC & ZONING MAPS

SHEET ID

A-1

SHEET

CALLE NUEVO BARRANQUITAS

CALLE NUEVO BARRANQUITAS

PARKING AREA

PARKING AREA

PROPERTY LIMIT

PROPERTY LIMIT

PROPOSED ARCHITECTURAL SITE PLAN

SCALE: 3/32"=1'-0"

PROJECT NO. PR-CRP-001180

NORTH

OWNER

PROPONENT

FIGUEROA & FIGUEROA
ARCHITECTS AND
ENGINEERS

CONSULTANT

SEAL

PABLO LUIS FIGUEROA SANCHEZ
ARQUITECTO
LICENCIADO
LIC. #9730
EXP. 15/DIC./2025
PUERTO RICO

PROJECT INFORMATION

CENTRO DE USOS
MULTIPLES DE
BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	3/15/24
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

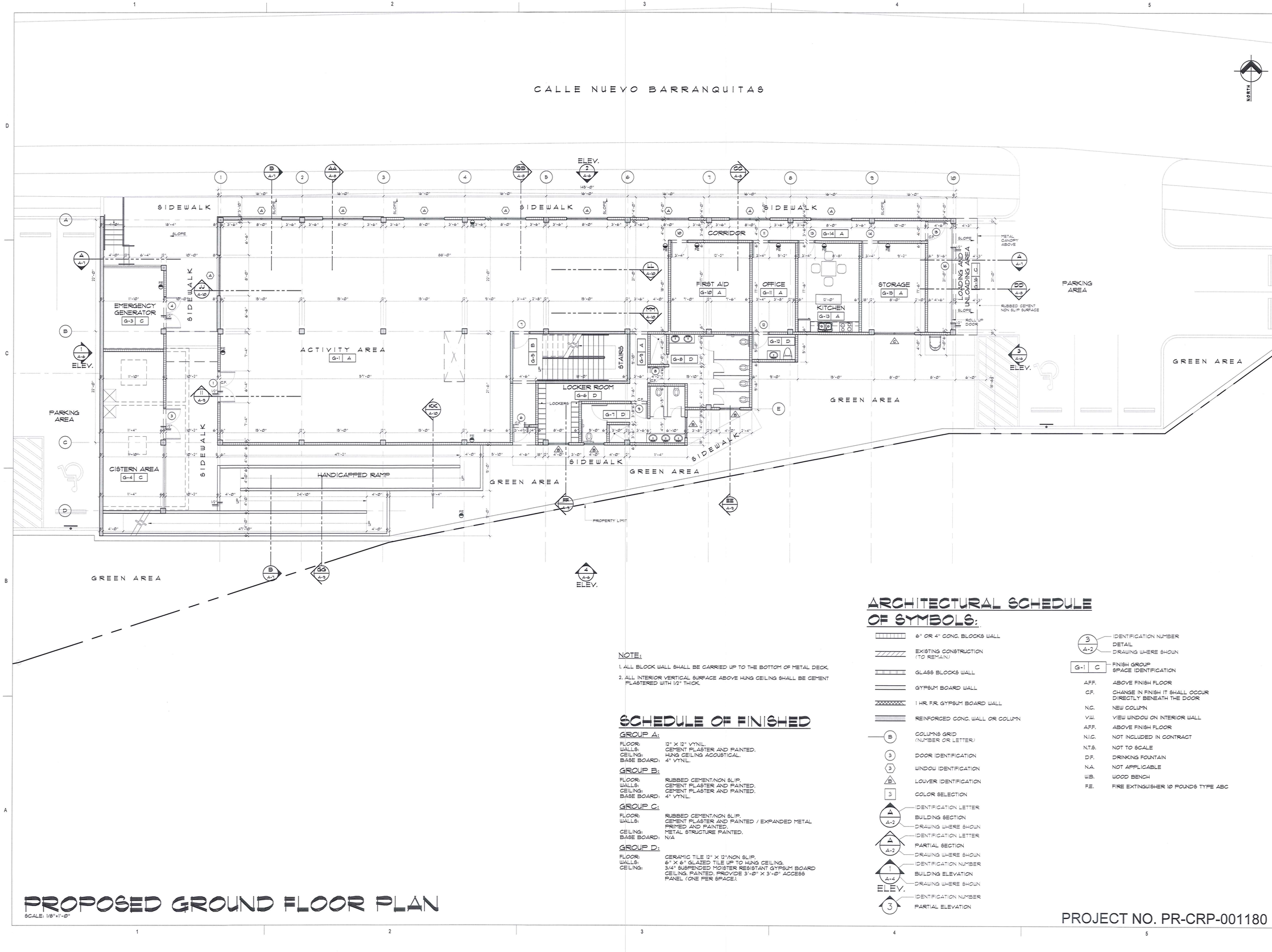
SHEET TITLE

PROPOSED
ARCHITECTURAL
SITE
PLAN

SHEET ID

A-2

SHEET



NOTE:

1. ALL BLOCK WALL SHALL BE CARRIED UP TO THE BOTTOM OF METAL DECK.
2. ALL INTERIOR VERTICAL SURFACE ABOVE HUNG CEILING SHALL BE CEMENT PLASTERED WITH 1/2" THICK.

SCHEDULE OF FINISHED

GROUP A:

FLOOR:	12" X 12" VYNIL.
WALLS:	CEMENT PLASTER AND PAINTED.
CEILING:	HUNG CEILING ACOUSTICAL.
BASE BOARD:	4" VYNIL.

GROUP B:

FLOOR:	RUBBED CEMENT/NON SLIP.
WALLS:	CEMENT PLASTER AND PAINTED.
CEILING:	CEMENT PLASTER AND PAINTED.
BASE BOARD:	4" VYNIL.

GROUP C:

FLOOR:	RUBBED CEMENT/NON SLIP.
WALLS:	CEMENT PLASTER AND PAINTED / EXPANDED METAL PRIMED AND PAINTED.
CEILING:	METAL STRUCTURE PAINTED.
BASE BOARD:	N/A

GROUP D:

FLOOR:	CERAMIC TILE 12" X 12"/NON SLIP.
WALLS:	6" X 6" GLAZED TILE UP TO HUNG CEILING.
CEILING:	3/4" SUSPENDED MOISTER RESISTANT GYPSUM BOARD CEILING, PAINTED, PROVIDE 3'-0" X 3'-0" ACCESS PANEL (ONE PER SPACE).

ARCHITECTURAL SCHEDULE OF SYMBOLS:

- 6" OR 4" CONC. BLOCKS WALL
- EXISTING CONSTRUCTION (TO REMAIN)
- GLASS BLOCKS WALL
- GYPSUM BOARD WALL
- 1 HR. F.R. GYPSUM BOARD WALL
- REINFORCED CONC. WALL OR COLUMN
- B — COLUMNS GRID (NUMBER OR LETTER)
- 3 — DOOR IDENTIFICATION
- 3 — WINDOW IDENTIFICATION
- B — LOUVER IDENTIFICATION
- 3 — COLOR SELECTION
- A / A-2 — IDENTIFICATION LETTER, BUILDING SECTION, DRAWING WHERE SHOWN
- A / A-2 — IDENTIFICATION LETTER, PARTIAL SECTION, DRAWING WHERE SHOWN
- 1 / A-4 — IDENTIFICATION NUMBER, BUILDING ELEVATION, DRAWING WHERE SHOWN
- ELEV. 3 — IDENTIFICATION NUMBER, PARTIAL ELEVATION
- 3 / A-2 — IDENTIFICATION NUMBER, DETAIL, DRAWING WHERE SHOWN
- G-1 | C — FINISH GROUP, SPACE IDENTIFICATION

A.F.F.	ABOVE FINISH FLOOR
C.F.	CHANGE IN FINISH IT SHALL OCCUR DIRECTLY BENEATH THE DOOR
N.C.	NEW COLUMN
V.W.	VIEW WINDOW ON INTERIOR WALL
A.F.F.	ABOVE FINISH FLOOR
N.I.C.	NOT INCLUDED IN CONTRACT
N.T.S.	NOT TO SCALE
D.F.	DRINKING FOUNTAIN
N.A.	NOT APPLICABLE
W.B.	WOOD BENCH
F.E.	FIRE EXTINGUISHER 10 POUNDS TYPE ABC

PROPOSED GROUND FLOOR PLAN

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

PROJECT NO. PR-CRP-001180

OWNER

MUNICIPIO DE BARRANQUITAS

PROPONENT

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

SEAL

PABLO LUIS FIGUEROA SANCHEZ
ARQUITECTO LICENCIADO
LIC. #9730
EXP. 15/DIC./2025
PUERTO RICO

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	3/15/24
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

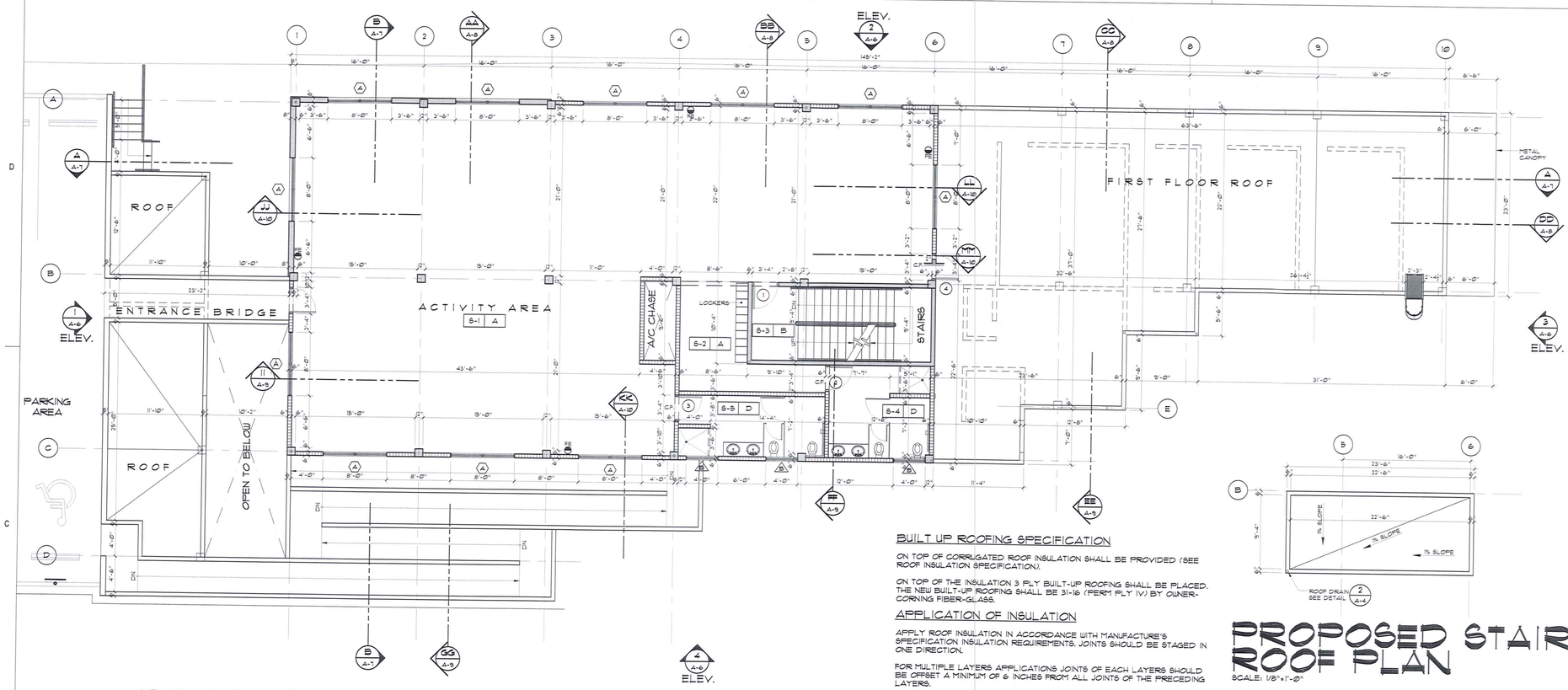
SHEET TITLE

PROPOSED GROUND FLOOR PLAN

SHEET ID

A-3

SHEET



PROPOSED SECOND FLOOR PLAN

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

BUILT UP ROOFING SPECIFICATION

ON TOP OF CORRUGATED ROOF INSULATION SHALL BE PROVIDED (SEE ROOF INSULATION SPECIFICATION).

ON TOP OF THE INSULATION 3 PLY BUILT-UP ROOFING SHALL BE PLACED. THE NEW BUILT-UP ROOFING SHALL BE 31-16 (PERM PLY IV) BY OWENS-CORNING FIBER-GLASS.

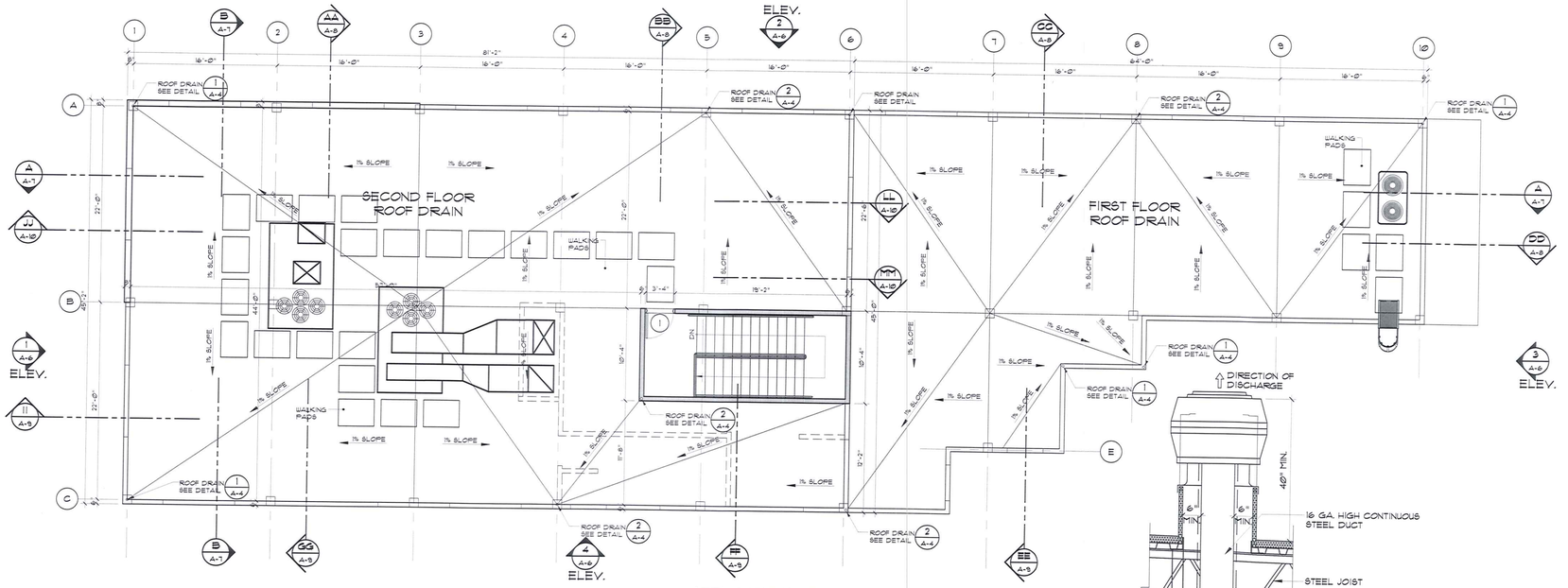
APPLICATION OF INSULATION

APPLY ROOF INSULATION IN ACCORDANCE WITH MANUFACTURE'S SPECIFICATION INSULATION REQUIREMENTS. JOINTS SHOULD BE STAGED IN ONE DIRECTION.

FOR MULTIPLE LAYERS APPLICATIONS JOINTS OF EACH LAYERS SHOULD BE OFFSET A MINIMUM OF 6 INCHES FROM ALL JOINTS OF THE PRECEDING LAYERS.

PROPOSED STAIR ROOF PLAN

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



PROPOSED ROOF PLAN

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

APPLICATIONS OF PLYS.

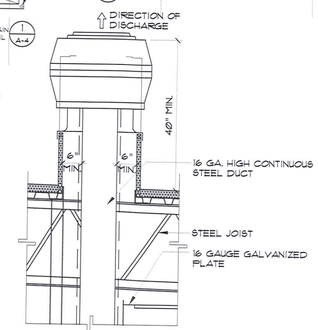
EMBEDED THREE PLYS OF PERMA-PLY IN SINGLE FASHION (STARTER SHEETS REQUIRED.) LAPPING 24 6/3 INCHES INTO UNIFORM MOPPING OF HOT ASPHALT, USING NOMINAL 25LB/100 SQ FEET FER PLY.

APPLCATION MINERAL SURFACE

EMBEDED 12'-0" LONGHTS OF PERMA-CAP (18FT IN AREA III) WITH 2 INCHES SIDE AND END LAP INTO UNIFORM SOLID MOPPING OF HOT STEEP ASPHALT. SURFACE SHALL BE WHITE.

ROOF INSULATION SPECIFICATION

NORMAL THICKNESS: 1.5 INCHES
PRODUCT CODE: 16672
R VALUE: 10.0
C.VALUE:1.0
DESIGNATION:THERMAXHYTEC-2 BY CELOTEX



EXHAUST FAN DETAIL

SCALE: 1"=1'-0"

5 A-4

PROJECT NO. PR-CRP-001180

PR
FIGUEROA & FIGUER
ARCHITECTS AND
ENGINEERS
CON
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ARQUITECTO
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LIC. #9730
EXP. 15/DIC./2025
PUERTO RICO

PROJECT INFORM

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERT

REV

NO.	DESCRIPTION

DATE ISSUED:	3/15/
REVIEWED BY:	
DRAWN BY:	
DESIGNED BY:	
BRA PROJECT NUMBER:	

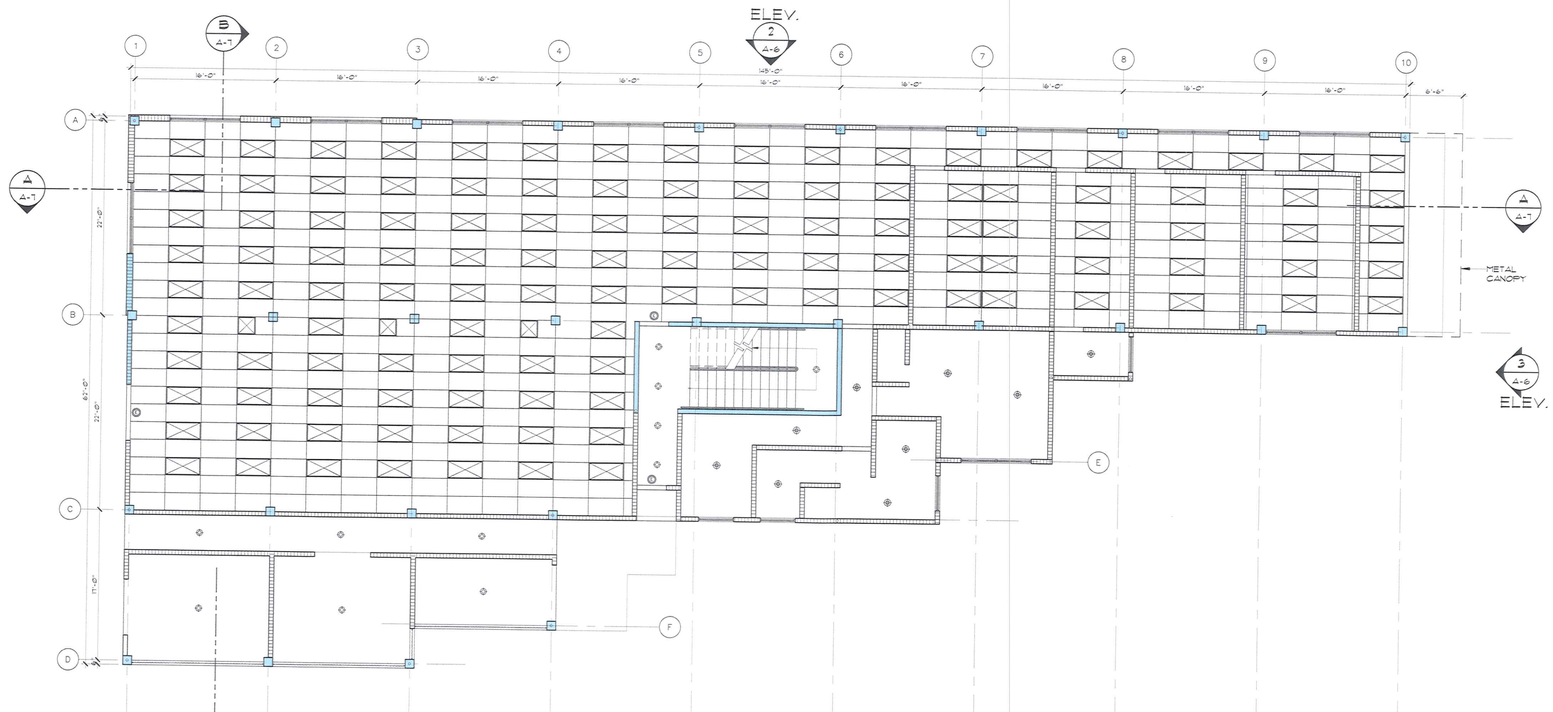
SHEE

PROPOSED SECOND FLOOR AND ROOF PLAN

SHE

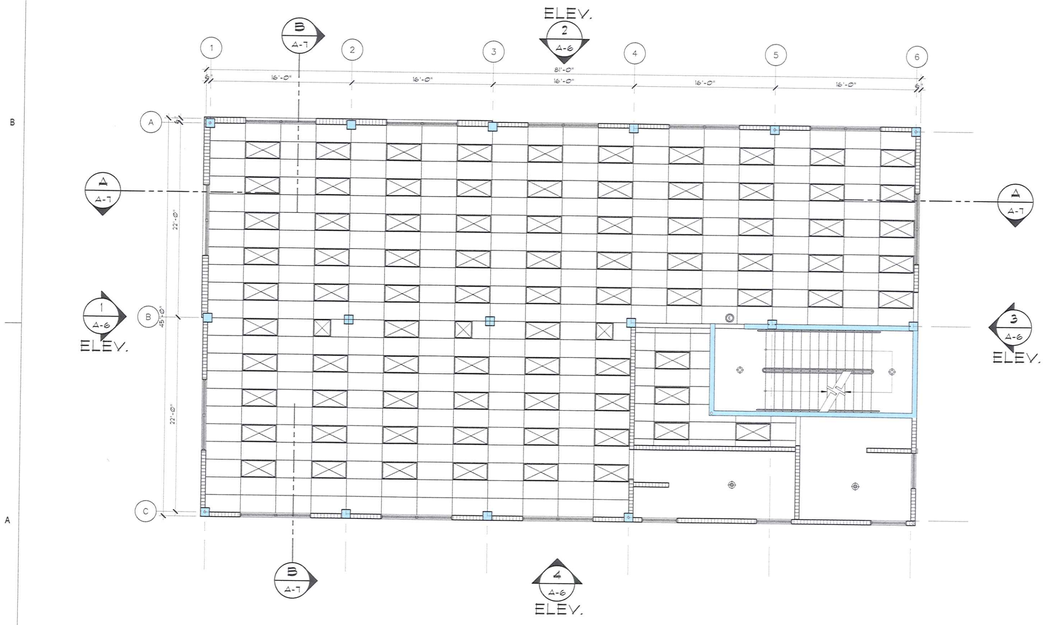
A-4

SHE



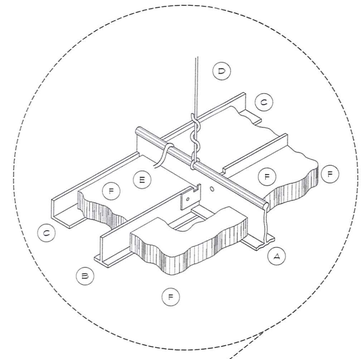
PROPOSED GROUND FLOOR REFLECTED CEILING PLAN

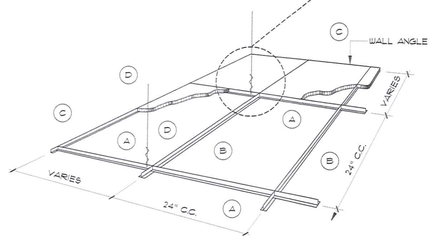
SCALE: 1/8"=1'-0"



PROPOSED SECOND FLOOR REFLECTED CEILING PLAN

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





ISOMETRIC VIEW

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

FIRE STOPPING NOTES

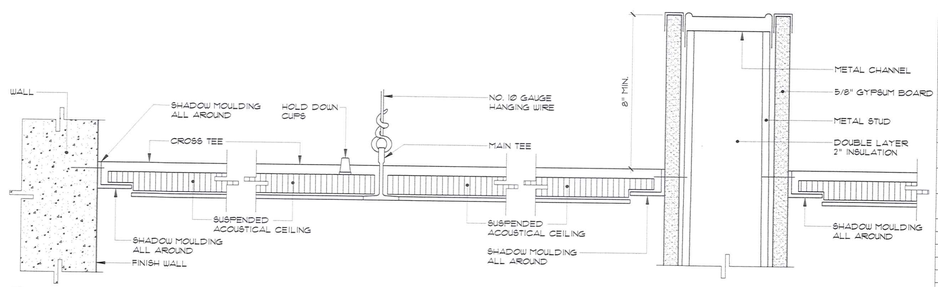
A. FIRE STOPPING: TO FORM AN EFFECTIVE BARRIER AGAINST THE SPREAD OF FIRE WHILE MAINTAINING THE INTEGRITY OF FIRE RATED CONSTRUCTION. SEAL AROUND NEW AND EXISTING PENETRATIONS, OPENING AND VOIDS IN OR AT PERIPHERY OF FIRE RATED ASSEMBLIES OR CONSTRUCTION.

B. COMPATIBILITY: COMPATIBLE WITH ONE ANOTHER AND WITH SUBSTRATES UNDER CONDITION OF APPLICATION AND SERVICE. ALL FIRE STOP AND FIRE RATED SYSTEMS APPLIED TO CONSTRUCTION JOINTS AND IN VOIDS SUBJECT TO MOVEMENT SHALL MEET THE REQUIREMENTS OF ASTM C 719-86 AND ASTM C 920-86.

C. USE FIRE STOP SYSTEMS MEETING THE REQUIREMENTS OF ASTM E 814-83.

D. ALL FIRE STOP SYSTEMS SHALL COMPLY WITH THE INTERIOR FINISH FLAME SPREAD AND SMOKE DEVELOPED REQUIREMENTS FOR THE AREA IN WHICH THEY ARE INSTALLED. FIRE STOP MATERIALS SHALL NOT EXCEED A FLAME SPREAD OF 15 AND A SMOKE DEVELOPED OF 0.

E. MANUFACTURERS SUBJECT TO MEETING ALL FIRE STOP SYSTEM REQUIREMENT OF THIS SPECIFICATION, ARE:
1. DOW CORNING CORPORATION, MIDLAND, MI. PHONE (517) 496-6000.
2. 3M CONTRACTOR PRODUCTS, ST. PAUL, MINNESOTA. PHONE (612) 733-1140.
3. UNITED STATES GYPSUM COMPANY. PHONE (800) 364-4874.
4. CAFCO. TIPS FIRE STOP PRODUCTS, STAN HOPE, NJ. PHONE (201) 347-1200.
5. HILTI FIRE STOP SYSTEM, PHONE (800) 879-8000.



AT CORNER WALL — TYPICAL CONDITION FOR MAIN TEE LOCATIONS — AT DRYWALL

SUSPENDED CEILING INTALLATION DETAILS

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

REFLECTED CEILING LEGEND:

- 2'-0" X 4'-0" ACOUSTICAL CEILING PANELS
- 2'-0" X 4'-0" LIGHT FIXTURE
- 2'-0" X 2'-0" LIGHT FIXTURE
- 2'-0" X 2'-0" A/C DIFFUSER
- 2'-0" X 2'-0" A/C RETURN
- EXHAUST FAN
- SPEAKER
- LIGHT FIXTURE
- EXIT SIGN
- EMERGENCY LIGHT

REFLECTED CEILING NOTES:

- (A) HUNG CEILING 8'-0" ABOVE FINISH FLOOR.
- (B) HUNG CEILING 10'-0" ABOVE FINISH FLOOR.
- (C) SUSPENDED 5/8" TYPE X GYPSUM BOARD CEILING @ 10'-0" ABOVE FINISH FLOOR. 5/8" THICK FIRE RESISTANT TYPE X.
- (D) SUSPENDED 5/8" MOISTURE RESISTANT GYPSUM BOARD CEILING @ 8'-0" ABOVE FINISH FLOOR.
- (E) GALVANIZED METAL LATH & CEMENT PLASTER @ 8'-0" ABOVE FINISH FLOOR.
- (F) HUNG CEILING 8'-0" ABOVE FINISH FLOOR.
- (G) SUSPENDED GYPSUM BOARD CEILING @ 8'-0" ABOVE FINISH FLOOR TYPE X FIRE RESISTANT.
- (H) GALVANIZED METAL LATH & CEMENT PLASTER PAINTED @ '- " ABOVE FINISH FLOOR.
- (I) GALVANIZED METAL LATH & CEMENT PLASTER PAINTED @ '- " ABOVE FINISH FLOOR.

OWNER

PROPONENT

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

SEAL

PABLO LUIS FIGUEROA SANCHEZ ARQUITECTO LICENCIADO LIC. # 9730 EXP. 15/DIC./2025 PUERTO RICO

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	12/29/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

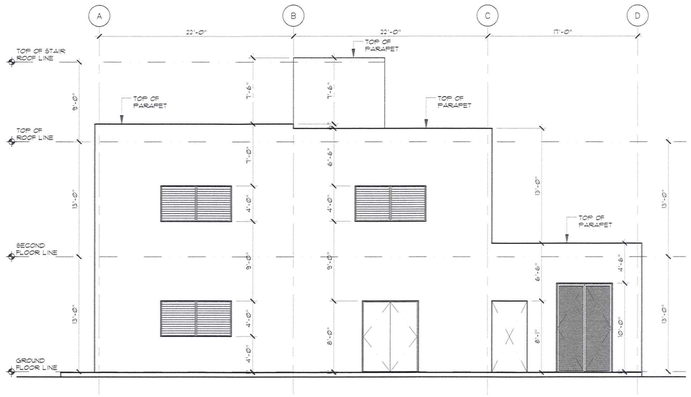
SHEET TITLE

PROPOSED GROUND AND SECOND FLOOR REFLECTED CEILING PLAN

SHEET ID

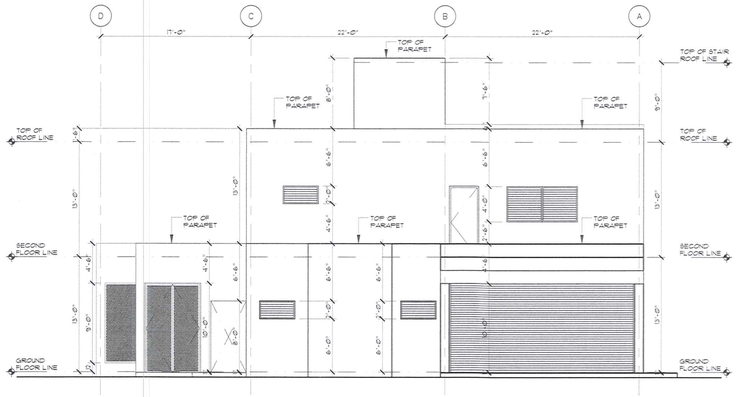
A-5

SHEET



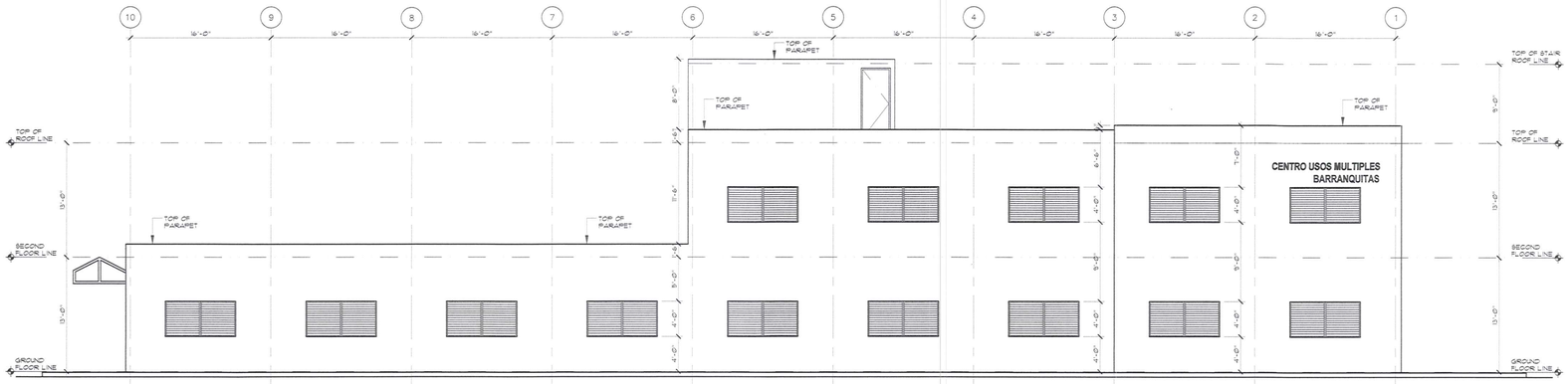
PROPOSED FRONT ELEVATION 1

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



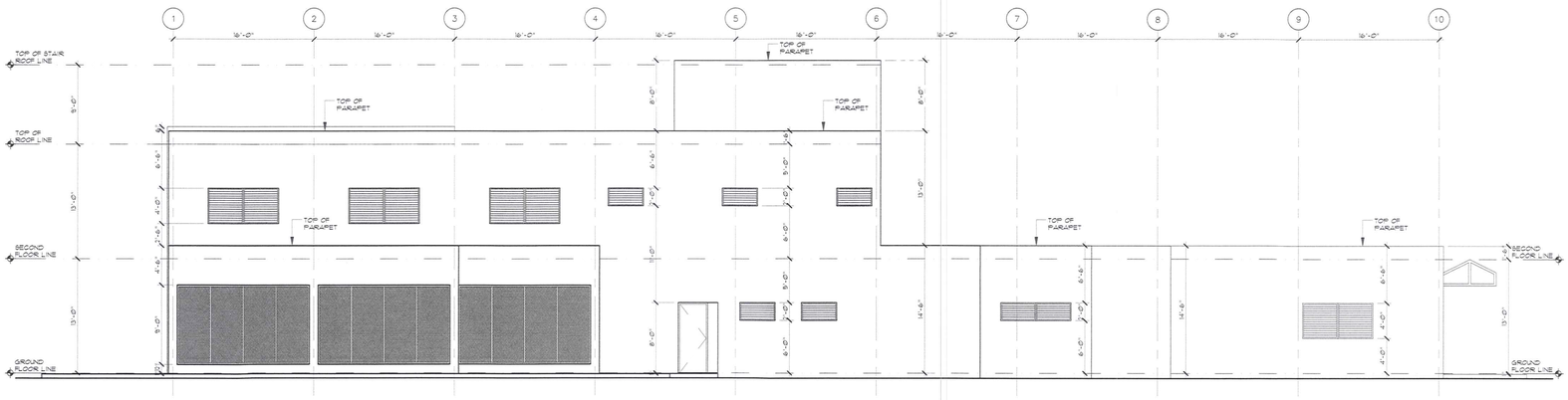
PROPOSED REAR ELEVATION 3

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



PROPOSED LEFT ELEVATION 2

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



PROPOSED RIGTH ELEVATION 4

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

OWNER

PROPONENT

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ARCHITECTS AND
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PUERTO RICO

PROJECT INFORMATION

CENTRO DE USOS
MULTIPLES DE
BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	12/29/23
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DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

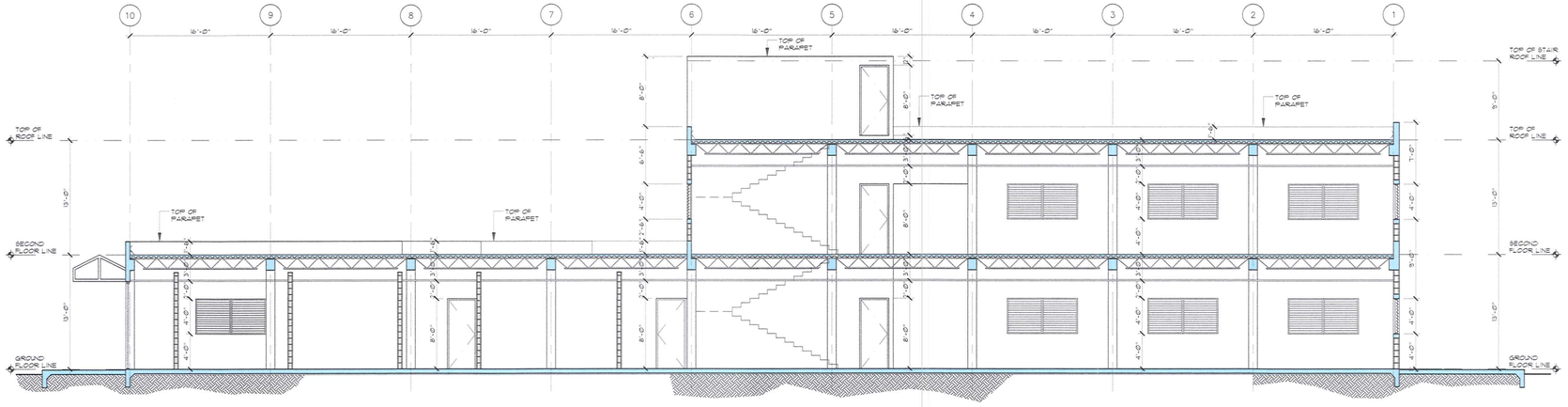
SHEET TITLE

PROPOSED
ELEVATIONS

SHEET ID

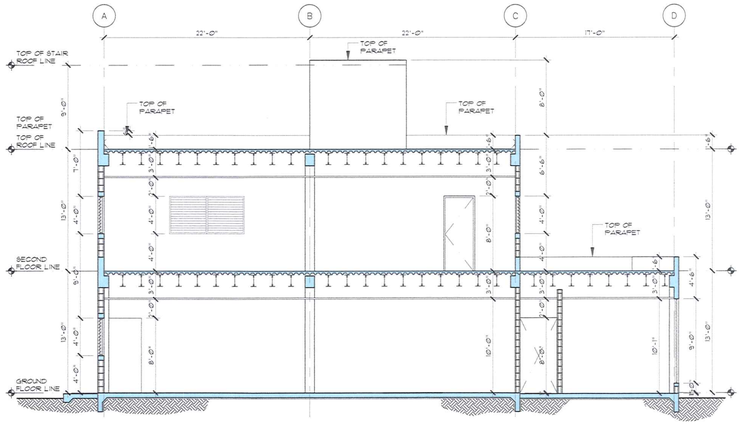
A-6

SHEET



PROPOSED SECTION A

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



PROPOSED SECTION B

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

CENTRO DE SERVICIOS MUNICIPIO DE BARRANQUITAS

PROPOSED

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANTS

PABLO LUIS FIGUEROA SANCHEZ
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LIC. #9730
EXP. 15/DIC./2025
PUERTO RICO

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO

REVISIONS

NO.	DESCRIPTION	DATE

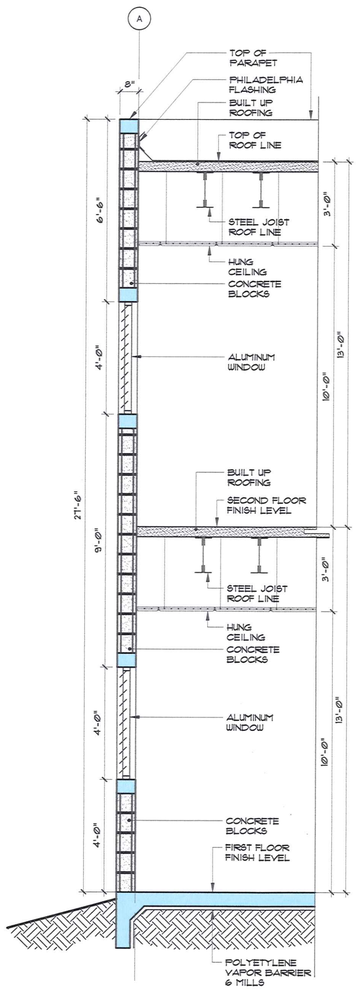
DATE ISSUED:	12/29/
REVIEWED BY:	P
DRAWN BY:	J
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET

PROPOSED SECTIONS

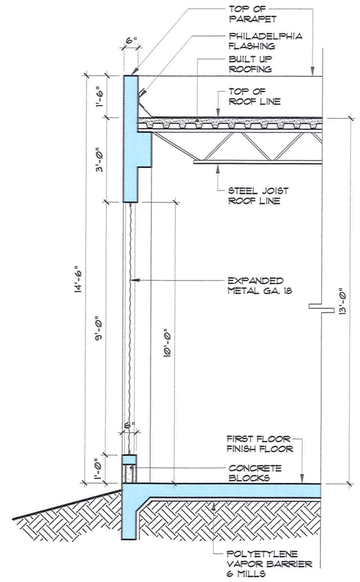
SHEET

A-7



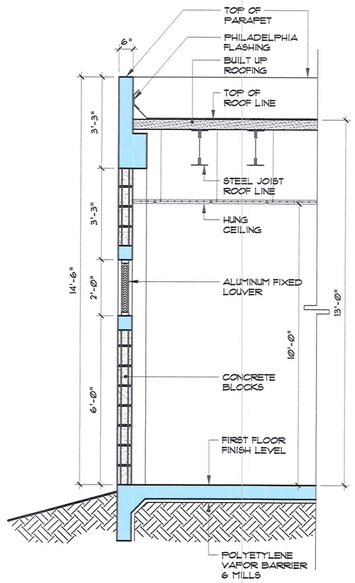
SECTION AA

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



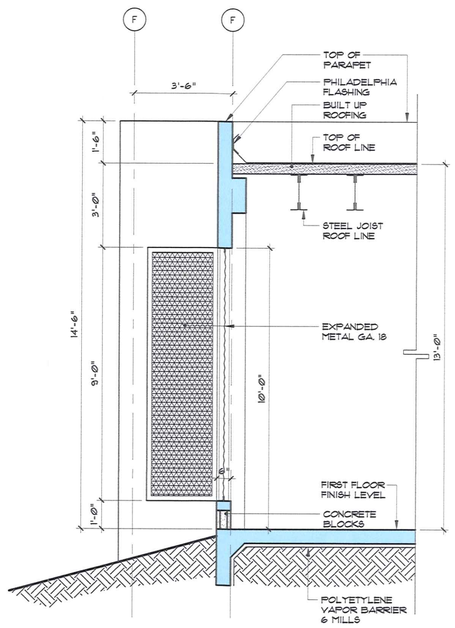
SECTION BB

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



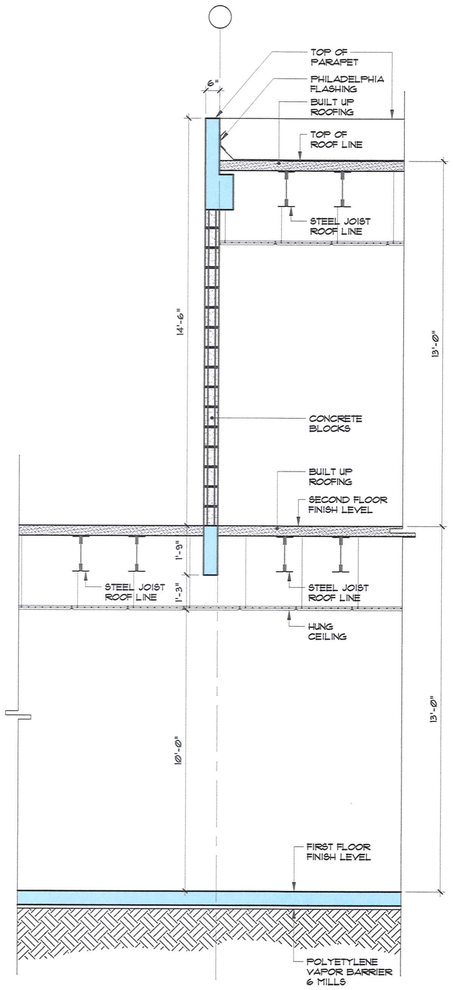
SECTION CC

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



SECTION DD

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



SECTION EE

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

CUNA DE PROCERES
MUNICIPIO DE BARRANQUITAS

PROPO

FIGUEROA & FIGUEROA
ARCHITECTS AND
ENGINEERS

CONSU

PABLO LUIS FIGUEROA SANCHEZ
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LIC. #9730
EXP. 15/DIC./2025
PUERTO RICO

PROJECT INFORMA

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO

REVIS

NO.	DESCRIPTION	D

DATE ISSUED:	12/29/
REVIEWED BY:	P
DRAWN BY:	J
DESIGNED BY:	-
BRA PROJECT NUMBER:	

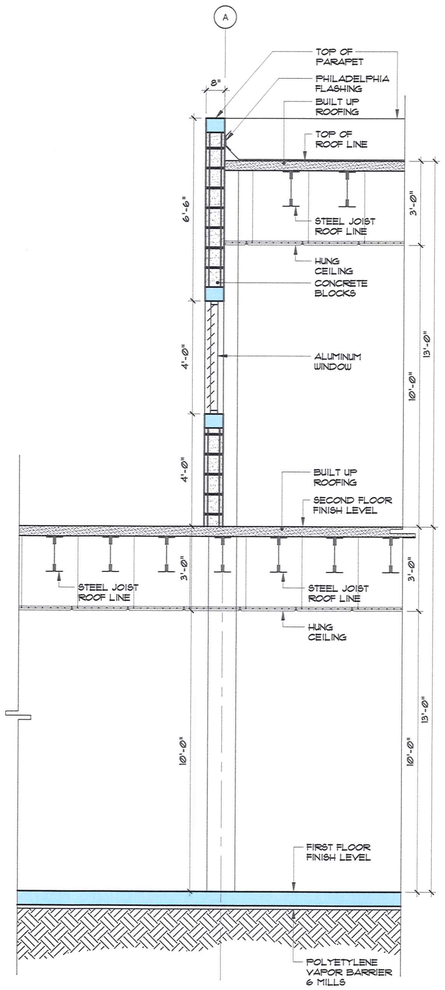
SHEET

PARTIAL SECTIONS

SHE

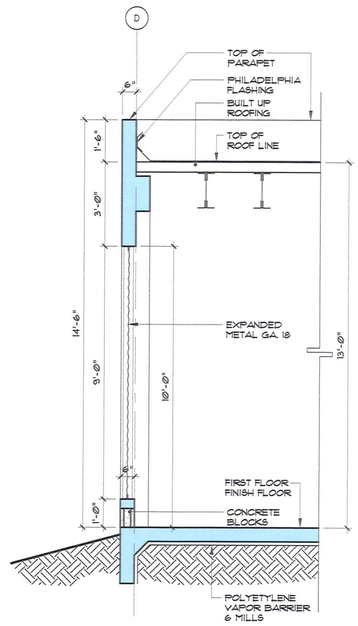
A-8

SHE



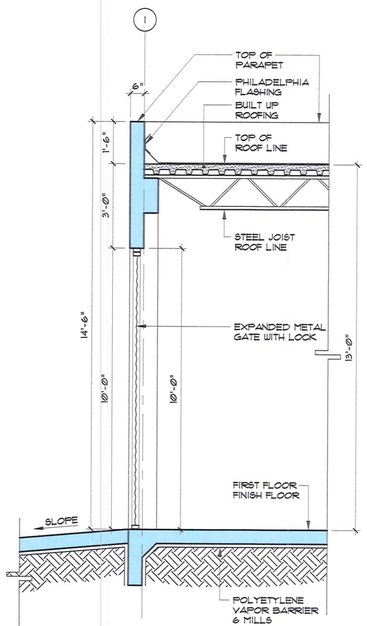
SECTION FF

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



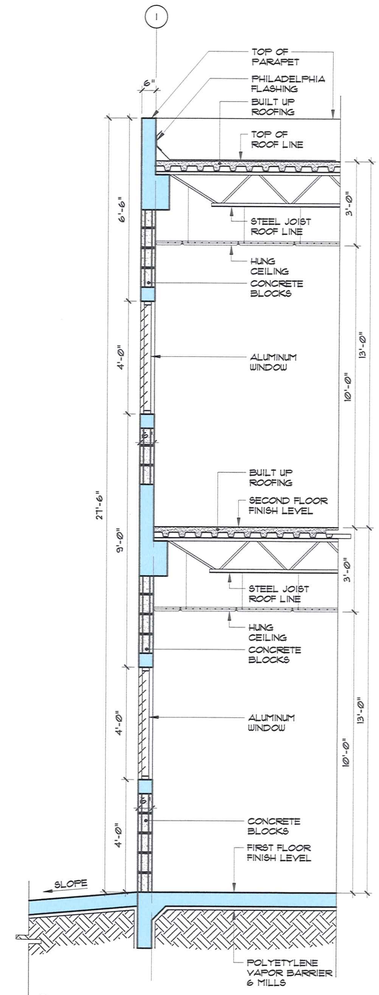
SECTION GG

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



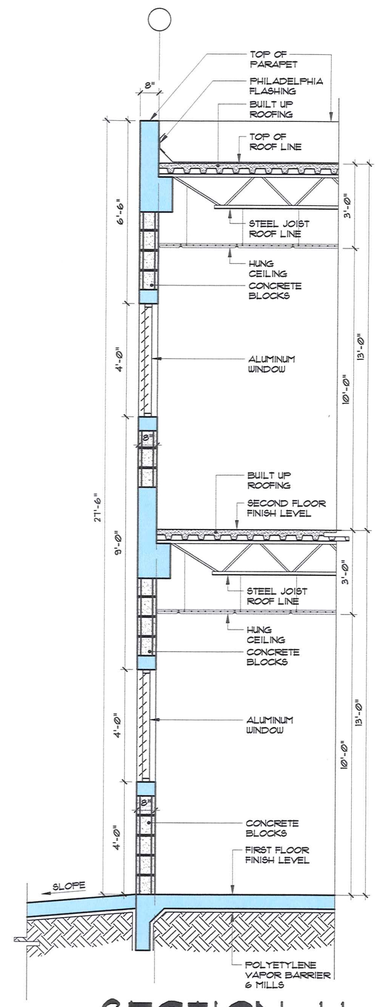
SECTION HH

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



SECTION II

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



SECTION JJ

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

CAJA DE PROGRESO
MUNICIPIO DE BARRANQUITAS

PRO

FIGUEROA & FIGUER
ARCHITECTS AND
ENGINEERS

CONS

PEDRO LUIS FIGUEROA SANCHEZ
ARQUITECTO
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LIC. #9730
EXP. 15/DIC./2025
PUERTO RICO

PROJECT INFORM

CENTRO DE USOS
MULTIPLES DE
BARRANQUITAS

BARRANQUITAS PUER

REV

NO.	DESCRIPTION

DATE ISSUED: 12/2

REVIEWED BY:

DRAWN BY:

DESIGNED BY:

BRA PROJECT NUMBER:

SHEE

PARTIAL SECTIONS

SH

A-9

SH

GROUND FLOOR DOORS SCHEDULE

DOOR NO.	DOOR SIZE WIDTH	HEIGHT	THICKNESS	TYPE	REMARKS
1	6'-4"	8'-Ø"	1 3/4"	A	ENTRANCE
2	3'-4"	8'-Ø"	1 3/4"	B	STAIRS
3	3'-4"	8'-Ø"	1 3/4"	B	EXIT
4	6'-4"	10'-1"	---	C	CISTERN AREA
5	6'-4"	10'-1"	---	C	STORAGE
6	6'-4"	10'-1"	---	C	EMERGENCY GENERATOR
7	3'-4"	8'-Ø"	1 3/4"	B	MEN BATHROOM
8	3'-4"	8'-Ø"	1 3/4"	B	WOMEN BATHROOM
9	3'-4"	8'-Ø"	1 3/4"	B	FIRST AID
10	3'-4"	8'-Ø"	1 3/4"	B	OFFICE
11	3'-4"	8'-Ø"	1 3/4"	B	BATH
12	3'-4"	8'-Ø"	1 3/4"	B	KITCHEN
13	3'-4"	8'-Ø"	1 3/4"	B	STORAGE
14	21'-Ø"	10'-Ø"	---	D	LOADING AREA

SECOND FLOOR DOORS SCHEDULE

DOOR NO.	DOOR SIZE WIDTH	HEIGHT	THICKNESS	TYPE	REMARKS
1	3'-4"	8'-Ø"	1 3/4"	B	STAIRS
2	3'-4"	8'-Ø"	1 3/4"	B	WOMEN BATHROOM
3	3'-4"	8'-Ø"	1 3/4"	B	MEN BATHROOM
4	3'-4"	8'-Ø"	1 3/4"	B	EXIT TO ROOF

ROOF FLOOR DOORS SCHEDULE

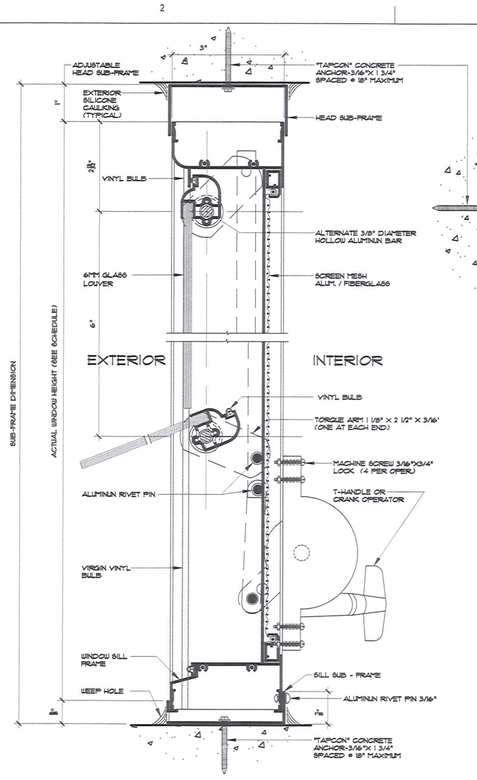
DOOR NO.	DOOR SIZE WIDTH	HEIGHT	THICKNESS	TYPE	REMARKS
1	3'-4"	8'-Ø"	1 3/4"	B	STAIRS

GROUND FLOOR WINDOW SCHEDULE

MKD.	MASONRY OPNG. W	H	WINDOW DIM. W	H	REMARKS NO. OF PANELS
A	8'-Ø 1/2"	4'-Ø 1/2"	4'-Ø"	4'-Ø"	22
B	4'-Ø 1/2"	2'-Ø 1/2"	4'-Ø"	2'-Ø"	4

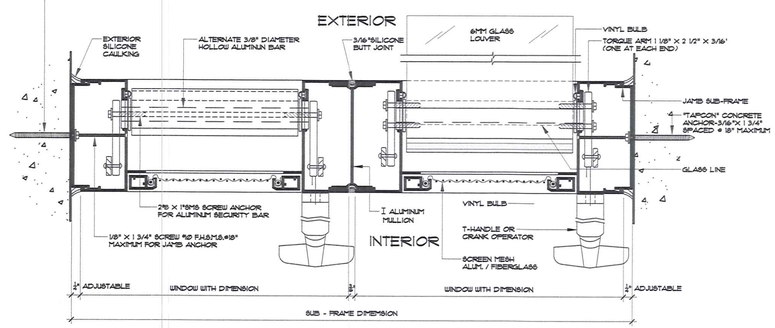
SECOND FLOOR WINDOW SCHEDULE

MKD.	MASONRY OPNG. W	H	WINDOW DIM. W	H	REMARKS NO. OF PANELS
A	8'-Ø 1/2"	4'-Ø 1/2"	4'-Ø"	4'-Ø"	22
B	4'-Ø 1/2"	2'-Ø 1/2"	4'-Ø"	2'-Ø"	4



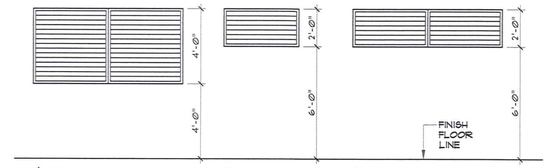
VERTICAL SECTION WINDOW DETAIL

SCALE: 6"=1'-Ø"



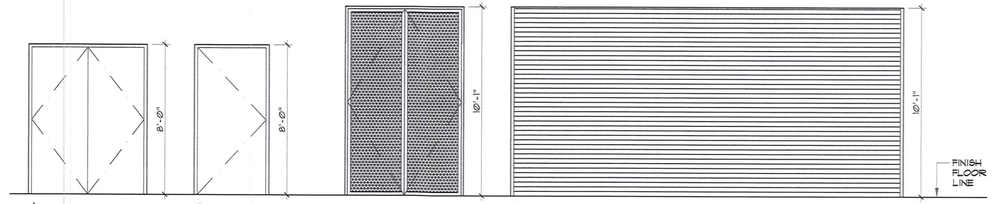
HORIZONTAL SECTION WINDOW DETAIL

SCALE: 6"=1'-Ø"



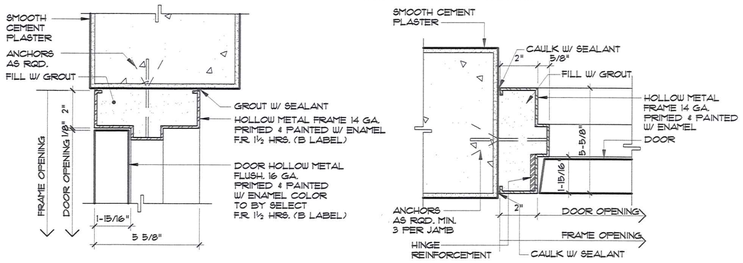
WINDOWS TYPES:

SCALE: 1/4"=1'-Ø"



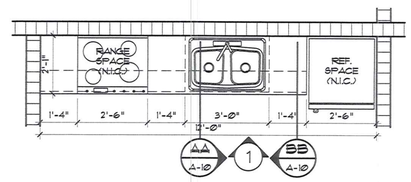
DOORS TYPES:

SCALE: 1/4"=1'-Ø"



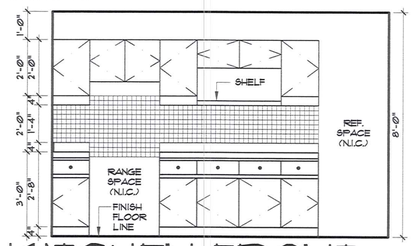
FLUSH HOLLOW METAL DOOR FRAME DETAIL

SCALE: 3"=1'-Ø"



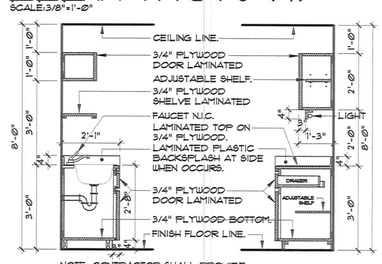
KITCHEN FLOOR PLAN

SCALE:3/8"=1'-Ø"



KITCHEN FRONT ELEVATION (1)

SCALE:3/8"=1'-Ø"



NOTE: CONTRACTOR SHALL PROVIDE SHOP DRAWINGS. ALL INTERIOR FACES PAINTED WITH "LACA".

SECTION AA & BB

SCALE:3/8"=1'-Ø"

IMPORTANT CEILING NOTE:

ALL ACOUSTICAL PANELS SHALL HAVE HOLD DOWN CLIPS.

PAINT SPECIFICATION:

1- EXTERIOR PAINT:GLIDDEN ULTRA SATIN LATEX 67.

2- INTERIOR PAINT: GLIDDEN ULTRA EGG SHELL FINISH 41.

3- INTERIOR PRIMER: GLIDDEN ZINSSER 73904.

4- ALL METALS PAINTED WITH PRIMER AND GLIDDEN GLID-GUARD.

5- METALS DOORS WILL BE SPRAY PAINTED.

6- COLORS WILL BE CHOSEN BY THE ARCHITECT. THE CONTRACTOR WILL CARRY OUT COLOR TEST WITH SEVEN DIFFERENT COLORS PRIOR TO THE FINAL SELECTION.

LOCKER SPECIFICATION AT SPACE

DOUBLE TIER LOCKERS SHALL BE 57-048 AA 12" X 18" X 36" ALL SHALL HAVE CONTINUOUS SLOPE TOPS AND CLOSED BASE (6") BRAND SHALL BE LYON, SUPPLIER CH DISTRIBUTORS INC. TEL. 414-271-2250, FAX 414-271-9850. CONTRACTORS SHALL SUBMIT SHOP DRAWINGS FOR OWNER'S APPROVAL PRIOR TO PLACING ORDER.

NOTES:

1- DOOR & FRAME SHALL BE REINFORCED AS PER MANUFACTURER STANDARDS AND HARDWARE TEMPLATES.

2- BUILDER'S HARDWARE SHALL BE SECURELY ANCHORED WITH APPROPRIATED FASTENING DEVICES, AND ALL FASTENERS SHALL BE FINISHED TO HARMONIZE WITH THE HARDWARE.

3- HEIGHTS OF ITEMS NOT SHOWN ON DRAWINGS SHALL BE IN ACCORDANCE WITH RECOMMENDATIONS OF BUILDERS HARDWARE ASSOCIATION, SUBJECT TO APPROVAL BY ARCHITECT.

4- GLASS SHALL CONFORM WITH APPLICABLE ASTM C1036 STANDARD SPECIFICATION FOR FLAT GLASS, AND 16 CFR 1201 SAFETY STANDARDS FOR ARCHITECTURAL GLAZING MATERIALS FOR CONSUMER PRODUCT SAFETY COMMISSION.

ARCHITECTURAL SCHEDULE OF SYMBOLS:

- 6" OR 4" CONC. BLOCKS WALL
- EXISTING CONSTRUCTION (TO REMAIN)
- GLASS BLOCKS WALL
- GYPSUM BOARD WALL
- 1 HR. F.R. GYPSUM BOARD WALL
- REINFORCED CONC. WALL OR COLUMN
- (B) COLUMNS GRID (NUMBER OR LETTER)
- (3) DOOR IDENTIFICATION
- (3) WINDOW IDENTIFICATION
- [3] COLOR SELECTION
- (A) / A-2 IDENTIFICATION LETTER, BUILDING SECTION, DRAWING WHERE SHOWN
- (A) / A-2 IDENTIFICATION LETTER, PARTIAL SECTION, DRAWING WHERE SHOWN
- (1) / A-4 IDENTIFICATION NUMBER, BUILDING ELEVATION, DRAWING WHERE SHOWN
- ELEV. (3) IDENTIFICATION NUMBER, PARTIAL ELEVATION
- (3) / A-2 IDENTIFICATION NUMBER, DETAIL, DRAWING WHERE SHOWN
- [12] SPACE IDENTIFICATION

A.F.F.	ABOVE FINISH FLOOR
C.F.	CHANGE IN FINISH IT SHALL OCCUR DIRECTLY BENEATH THE DOOR
N.C.	NEW COLUMN
V.W.	VIEW WINDOW ON INTERIOR WALL
A.F.F.	ABOVE FINISH FLOOR
N.I.C.	NOT INCLUDED IN CONTRACT
N.T.S.	NOT TO SCALE
D.F.	DRINKING FOUNTAIN
N.A.	NOT APPLICABLE
W.B.	WOOD BENCH
D.F.	ABOVE FINISH FLOOR

OWNER

PROPONENT

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANTS

PABLO LUIS FIGUEROA SANCHEZ ARQUITECTO LICENCIADO LIC. #9730 EXP. 15/DIC./2025 PUERTO RICO

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO

REVISIONS

NO.	DESCRIPTION	D

DATE ISSUED: 12/29/

REVIEWED BY: PF

DRAWN BY: JI

DESIGNED BY: -

BRA PROJECT NUMBER:

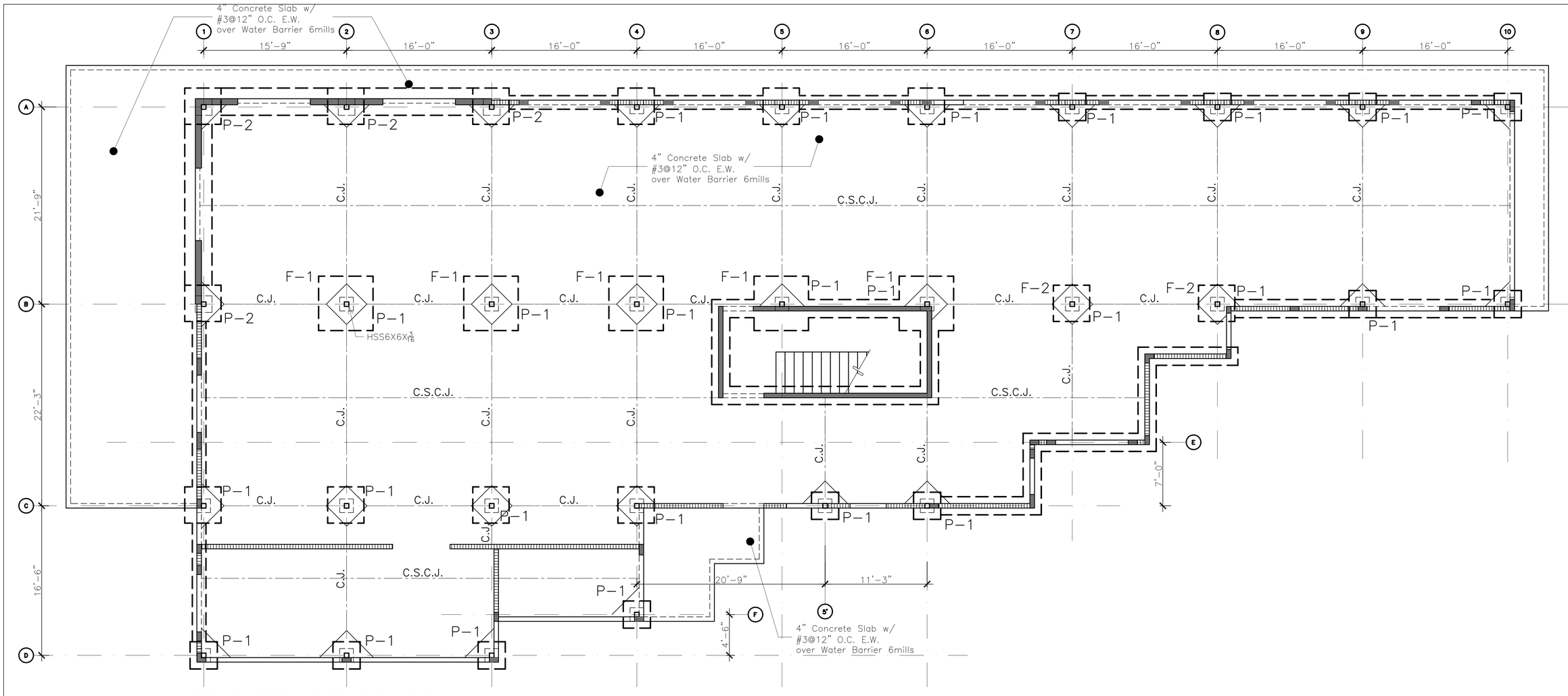
SHEET

DOORS AND WINDOWS SCHEDULES, TYPICAL DETAILS AND NOTES

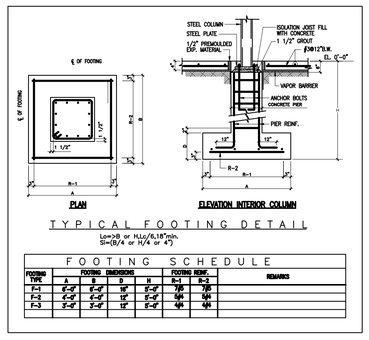
SHEE

A-10

SHEE



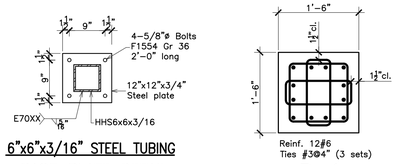
GROUND FLOOR AND FOUNDATIONS PLAN
(SCALE: 3/16"=1'-0")



TYPICAL FOOTING DETAIL

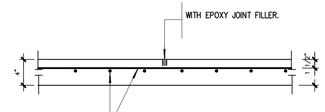
Lo=>8 or H,Lc/6,18"min.
SI=(B/4 or H/4 or 4")

FOOTING SCHEDULE							
FOOTING TYPE	FOOTING DIMENSIONS A	B	D	H	FOOTING REINF. R-1	R-2	REMARKS
F-1	6'-0"	6'-0"	18"	5'-0"	7#5	7#5	
F-2	6'-0"	6'-0"	12"	5'-0"	6#4	6#4	
F-3	3'-0"	3'-0"	12"	5'-0"	4#4	4#4	

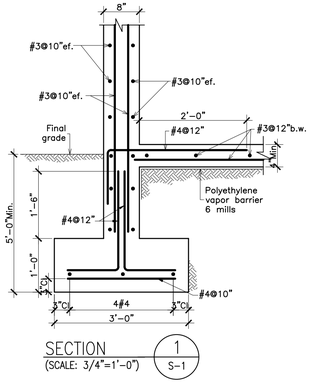


6"x6"x3/16" STEEL TUBING
BASE PLATE DETAIL
(SCALE: 3/4"=1'-0")

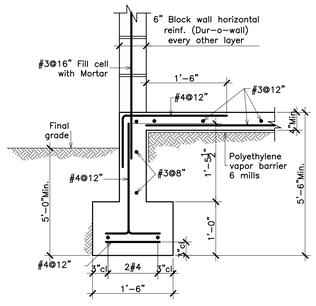
P-1



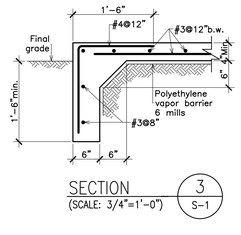
NOTE :
JOINT SHALL BE SAWED AS SOON AS THE CONCRETE IS HARD ENOUGH NOT TO BE TORN OR DAMAGE BY THE BLADE BUT BEFORE RANDOM CRACKS CAN FORM IN THE CONCRETE SLAB.



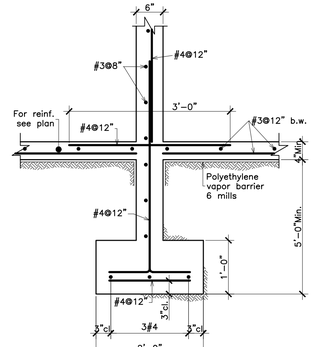
SECTION 1 (S-1)
(SCALE: 3/4"=1'-0")



SECTION 2 (S-1)
(SCALE: 3/4"=1'-0")

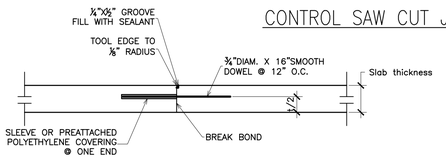


SECTION 3 (S-1)
(SCALE: 3/4"=1'-0")

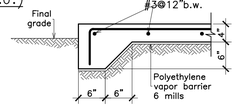


SECTION 4 (S-1)
(SCALE: 3/4"=1'-0")

CONTROL SAW CUT JOINT FOR SLAB OR TOPPING (C.S.C.J.)



TYPICAL CONTROL JOINT IN SLAB (C.J.)



SECTION 5 (S-1)
(SCALE: 3/4"=1'-0")

NOTES:
1) CONTRACTOR SHALL VERIFY ALL DIMENSIONS WITH MANUFACTURER DRAWINGS, ANY SUBSTANTIAL DIFFERENCE SHALL BE NOTIFY TO STRUCTURAL ENGINEER (H.A.G.E.) PRIOR TO ANY CONSTRUCTION.

OWNER

PROPONENT

\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

HECTOR A. GONZALEZ QUIÑONES
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P.O. BOX 192344, San Juan
Puerto Rico 00919-2344
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Hector Augusto Gonzalez Quiñones
Ingeniero Licenciado
Hector A. Gonzalez
Lic. 12577 PE
Puerto Rico

Fecha de Expiración: 2026-04-19

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	2/6/24
REVIEWED BY:	HAG
DRAWN BY:	HAG
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

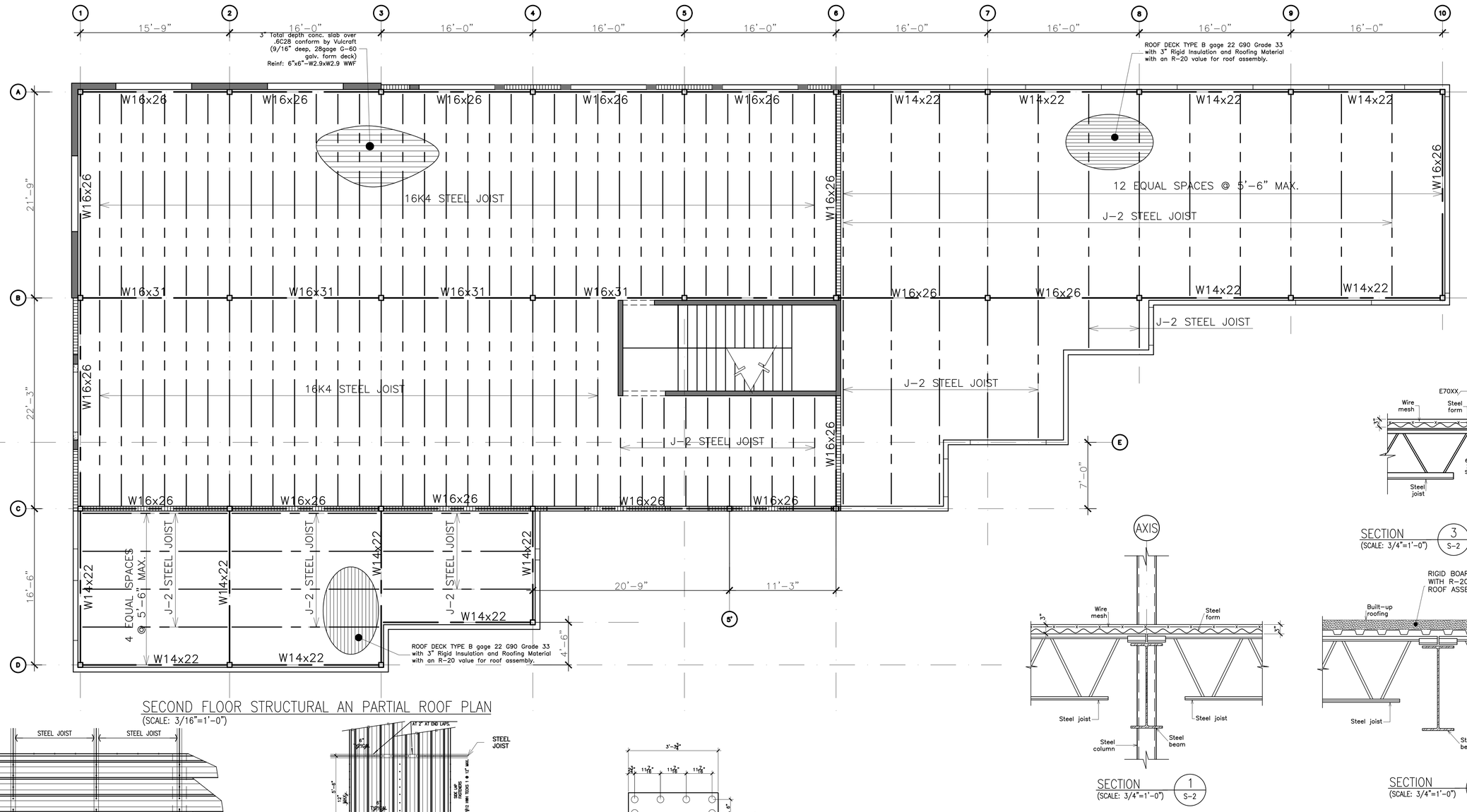
GROUND FLOOR AND FOUNDATION PLAN, SECTIONS AND DETAILS.

SHEET ID

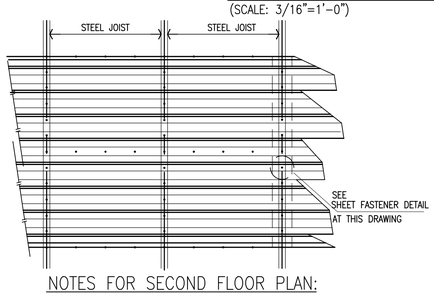
3/16"=1'-0"

SHEET

S-1



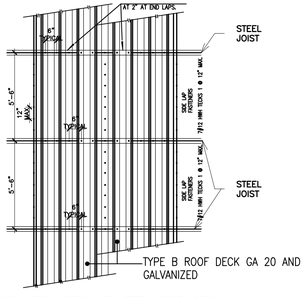
SECOND FLOOR STRUCTURAL AN PARTIAL ROOF PLAN
(SCALE: 3/16"=1'-0")



NOTES FOR SECOND FLOOR PLAN:

1- ALL CONCRETE OVER JOIST, BEAMS, ETC. SHALL BE PLACED ON GALVANIZED STEEL FORM.
2- GALVANIZED STEEL FORM SHEETS ARE 31"WIDE AND LAP 1" ON SIDE FOR A COVER WITH OF 30" CORRUGATION PITCH AS 2 1/2" AND DEPHT 9/16".
3- TENSILFORM SHALL BE PLACED WITH EDGES UP AND FLUTES AT RIGHT ANGLES TO SUPPORTS.
4- SHEETS SHOULD BE PLACED END TO END ALONG ON SIDE OF THE BUILDING.
5- END LAPS SHALL ALWAYS OCCUR OVER SUPPORTING MEMBERS AND SHOULD BE CENTERED OVER THE SUPPORT.
6- MINIMUM END LAPS IS 2" FOR WELDED ATTACHMENT AND IS EQUAL TO TOP CHORD OF SUPPORT FOR CLIP ATTACHMENT. ALL SHEETS SHALL BE LAPPED ONE LAP FLUTE AT SIDE LAPS.
7- SHEETS SHALL BE ATTACHED TO TOP CHORD OF SUPPORTS BY PLUG WELDING THROUGH SPECIAL WASHER OR BY SELF DRILLING OR SELF TAPPING SCREWS.
8- TO PREVENT CONCRETE LEAKAGE AT SIDE LAPS, CONCRETE SHOULD BE PLACED IN THE OPPOSITE DIRECTION TO WHICH SHEETS WERE ERECTED SO THAT TOP SHEET AT LAP RECEIVES PLACEMENT OF CONCRETE FIRST.

INSTALLATION DETAIL OF STEEL DECK AT FLOOR
(NOT TO SCALE)

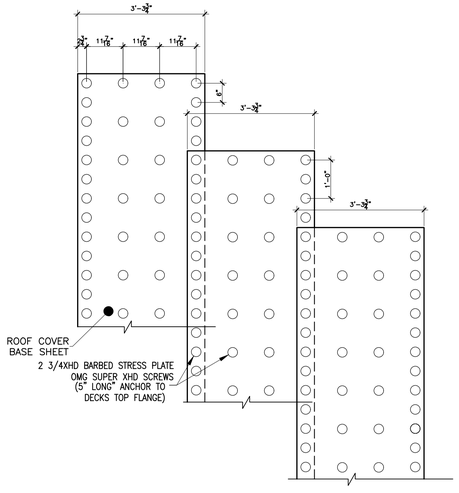


INSTALLATION DETAIL OF STEEL ROOF DECK
(NOT TO SCALE)

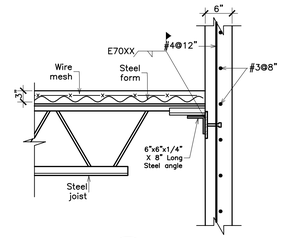
INSTALLATION INSTRUCTIONS

1- STEEL DECK PLATES SHALL SPAN AT LEAST 3 JOIST.
2- DECK SHEETS SHOULD BE PLACED IN ACCORDANCE WITH APPROVED ERECTION LAYOUT DRAWINGS SUPPLIED BY THE DECK MANUFACTURE'S STANDARS AND SHALL BE ERECTED BEGINING AT THE LOW SIDE TO INSURE THAT END LAPS ARE SHINGLE FASHION.
3- END LAPS SHALL BE 2" MINIMUM AND SHOULD OCCURS OVER SUPPORT.
4- ALL LAPS SHALL BE CENTER DIRECTLY OVER JOIST
5- ALL FASTENERS SHALL BE IN ACCORDANCE WITH MANUFACTURE'S SPECIFICATION AND ERECTION LAYOUTS.
6- SUPPORT FASTENERS 36 / 7#12 S-MD 12-24 x 1 5/8 M HWH5 BY HILTI @ 6" c.-c. (24/5 PATTERN FOR 24" WIDE PANELS).

NOTES :
DECK SHALL BE FASTENED TO JOIST TO RESIST AN UPLIFT PRESSURE OF 133PSF THE FIRST 13'-0" FROM EDGES 98PSF ACTING ELSEWHERE.

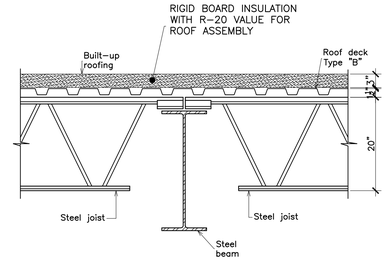


FASTENERS LAYOUT FOR BASE SHEET



SECTION 3 / S-2
(SCALE: 3/4"=1'-0")

SECTION 1 / S-2
(SCALE: 3/4"=1'-0")



SECTION 2 / S-2
(SCALE: 3/4"=1'-0")

ROOF ASSEMBLY

1-ROOF AND FLASHING SHALL COMPLY WITH THIS ASSEMBLY AS NOTED.
CAP PLY: ESTERDAM RM-5 POLYETHYLENE FILM.
SECUREMENT (SHEET LAP) TORCHED
SECUREMENT FROM 1. CAP PLY TO 3. BASE PLY TORCHED
BASE PLY: GLASDAN R36 POLYETHYLENE FILM.
SECUREMENT (SHEET LAP) TORCHED
BASE SHEET: ESTERDAM R36 POLYETHYLENE FILM.
SECUREMENT (SHEET LAP) FASTENED (SEE DETAIL)
SECUREMENT (BASE SHEEET) FROM BASE SHEET TO (DECK) STEEL
2 3/4XHD BARBED STRESS PLATE
OMG SUPER XHD SCREWS @ 12" BOTH WAYS STAGERED AT GA 22
INSULATION (BOARD STOCK) HUNTER PANEL H-SHIELD
STEEL DECK GA 22
STEEL DECK LAP SCREWS #12 HWH TEKS 1 @ 12" C.-C.
SECUREMENT DECK TO STEEL STRUCTURE #12HWH TEKS 5 W/ 3/4IN WASHERS @ 6" C.-C.

NOTES:
1) CONTRACTOR SHALL VERIFY ALL DIMENSIONS WITH MANUFACTURER DRAWINGS. ANY SUBSTANTIAL DIFFERENCE SHALL BE NOTIFY TO STRUCTURAL ENGINEER (H.A.G.E.) PRIOR TO ANY CONSTRUCTION.

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

HECTOR A. GONZALEZ QUIÑONES
STRUCTURAL ENGINEER CONSULTANT
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hagepsc@aol.com

SEAL

Hector Augusto Gonzalez Quiñones
Ingeniero Licenciado
Hector A. Gonzalez
Lic. 12577 PE
Puerto Rico
Fecha de Expiración: 2026-04-19

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	2/6/24
REVIEWED BY:	HAG
DRAWN BY:	HAG
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

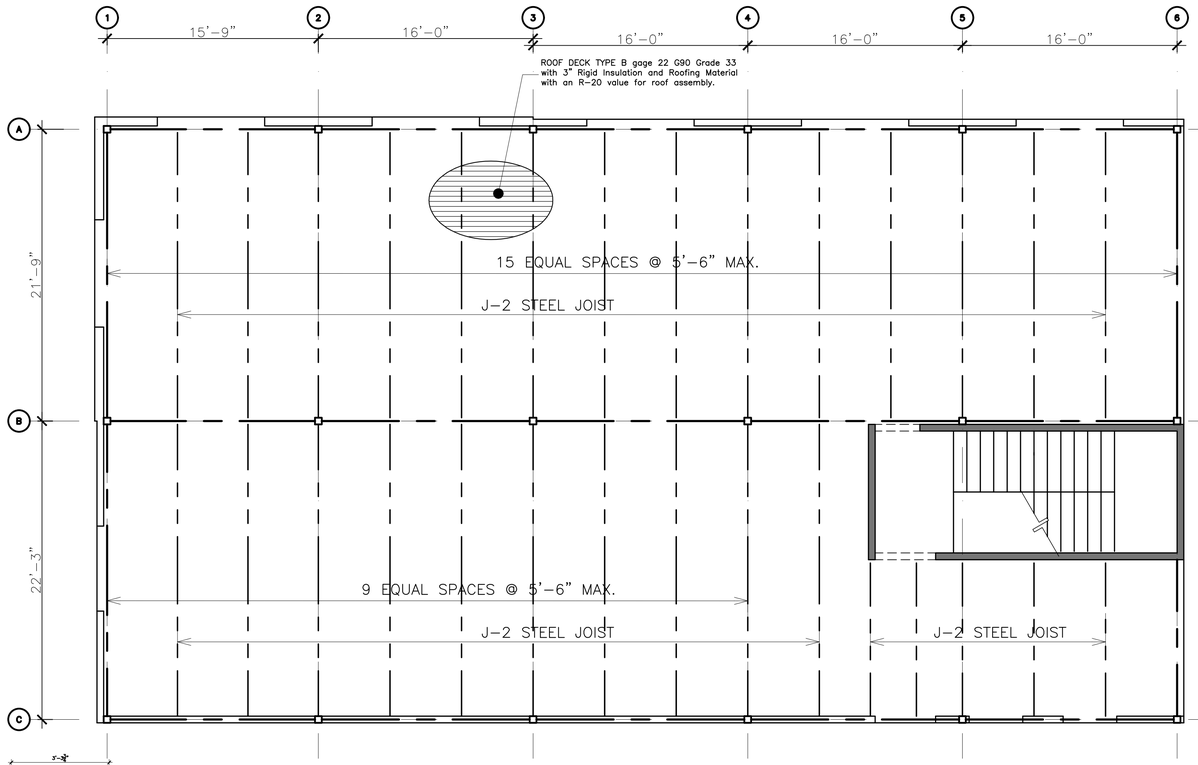
SECOND FLOOR STRUCTURAL AND PARTIAL ROOF PLAN AND DETAILS.

SHEET ID

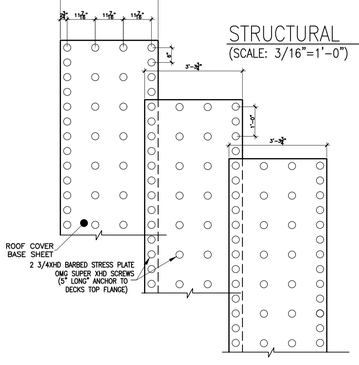
3/16"=1'-0"

SHEET

S-2



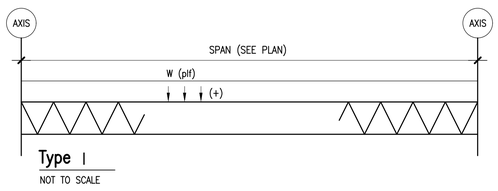
STRUCTURAL ROOF PLAN
(SCALE: 3/16"=1'-0")



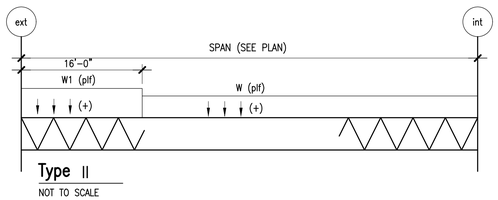
ROOF ASSEMBLY

1-ROOF AND FLASHING SHALL COMPLY WITH THIS ASSEMBLY AS NOTED.
- CAP PLY: ESTERDAM RM-5 POLYETHYLENE FILM.
- SECUREMENT (SHEET LAP) TORCHED
- SECUREMENT FROM 1. CAP PLY TO 3. BASE PLY TORCHED
- BASE PLY: GLASDAN R36 POLYETHYLENE FILM.
- SECUREMENT (SHEET LAP) TORCHED
- BASE SHEET: ESTERDAM R36 POLYETHYLENE FILM.
- SECUREMENT (SHEET LAP) FASTENED (SEE DETAIL)
- SECUREMENT (BASE SHEEET) FROM BASE SHEET TO (DECK) STEEL
  - 2 3/4XHD BARBED STRESS PLATE
  - OMG SUPER XHD SCREWS @ 12" BOTH WAYS STAGERED AT GA 22
- INSULATION (BOARD STOCK) HUNTER PANEL H-SHIELD
- STEEL DECK GA 22
- STEEL DECK LAP SCREWS #12 HWH TEKS 1 @ 12" C.-C.
- SECUREMENT DECK TO STEEL STRUCTURE #12HWH TEKS 5 W/ 3/4IN WASHERS @ 6" C.-C.

FASTENERS LAYOUT FOR BASE SHEET



Type I
NOT TO SCALE



Type II
NOT TO SCALE

STEEL JOIST TABLE

MK'D	D	TYPE	DL+LL (PLF)		LL (PLF)		WL-DL (PLF)		WL+DL (PLF)		WEIGHT
			W	W1	W	W1	W	W1	W	W1	plf
J-1	20"	I	330	N/A	220	N/A	-145	N/A	170	N/A	7
J-2	20"	II	330	330	220	220	-150	-215	225	225	8
J-3	20"	I	330	N/A	220	N/A	-215	N/A	225	N/A	7
J-4	20"	I	330	N/A	220	N/A	-250	N/A	265	N/A	7

LEGEND:

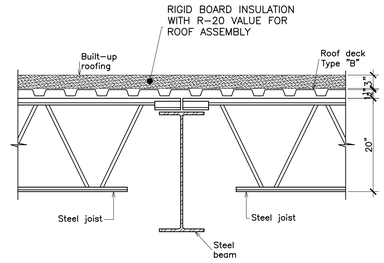
DL = DENOTES DEAD LOAD (STEEL JOIST SELF WEIGHT NOT INCLUDED), DOWN FORCE

LL = DENOTES LIVE OR ACCIDENTAL LOAD, DOWN FORCE

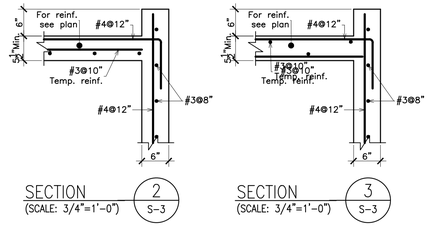
WL-D = DENOTES NET UPLIFT FORCE

WL+D = DENOTES NET DOWN FORCE

NOTES :
ROOF MEMBRANE INSTALLED FOR IMPERMEABILIZATION AND CLIMATE CONTROL PURPOSE SHALL BE ANCHORAGE TO RESIST A NORMAL TO SURFACE LOAD OF 110 PSF ACTING INWARD OR OUTWARD.
WALL COMPONENTS AND THEIR CONNECTIONS, BLOCK WALLS, DOORS, WINDOWS, PERMANENT TERRACE COVERS, NON-RETACTABLE SHADES CURTAINS AND ALL ARCHITECTURAL COMPONENTS SHALL RESIST A NORMAL TO SURFACE LOAD OF 90 PSF (INWARD OR OUTWARD) AT EDGES AND 65 PSF (INWARD OR OUTWARD) ELSEWHERE.

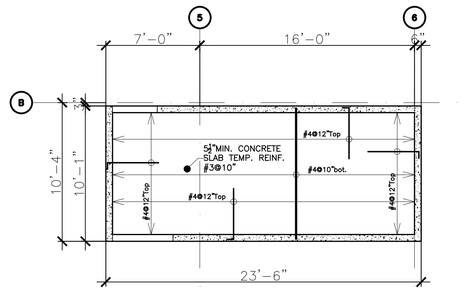


SECTION 1 (S-3)
(SCALE: 3/4"=1'-0")



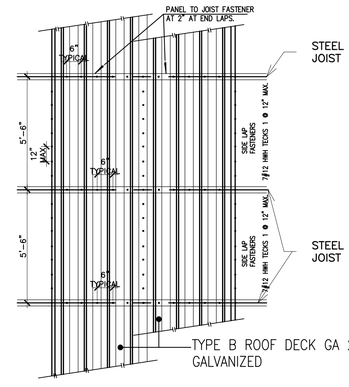
SECTION 2 (S-3)
(SCALE: 3/4"=1'-0")

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



STRUCTURAL ROOF PLAN
(SCALE: 3/16"=1'-0")

DETAIL



INSTALLATION DETAIL OF STEEL ROOF DECK
(NOT TO SCALE)

INSTALLATION INSTRUCTIONS

1- STEEL DECK PLATES SHALL SPAN AT LEAST 3 JOIST.
2- DECK SHEETS SHOULD BE PLACED IN ACCORDANCE WITH APPROVED ERECTION LAYOUT DRAWINGS SUPPLIED BY THE DECK MANUFACTURE'S STANDARS AND SHALL BE ERECTED BEGINING AT THE LOW SIDE TO INSURE THAT END LAPS ARE SHINGLE FASHION.
3- END LAPS SHALL BE 2" MINIMUM AND SHOULD OCCURS OVER SUPPORT.
4- ALL LAPS SHALL BE CENTER DIRECTLY OVER JOIST
5- ALL FASTENERS SHALL BE IN ACCORDANCE WITH MANUFACTURE'S SPECIFICATION AND ERECTION LAYOUTS.
6- SUPPORT FASTENERS 36 / 7#12 S-MD 12-24 x 1 5/8 M HWH5 BY HILTI @ 6" c.-c. (24/5 PATTERN FOR 24" WIDE PANELS).

NOTES :
DECK SHALL BE FASTENED TO JOIST TO RESIST AN UPLIFT PRESSURE OF 133PSF THE FIRST 13'-0" FROM EDGES 98PSF ACTING ELSEWHERE.

NOTE:

1-JOIST SELF WEIGHT SHALL NOT BE GREATER THAN AS SHOWN ON TABLE AN INCREASED OF STRESS DUE TO WIND LOAD IS ALLOWED AS PERMITED BY CODES AND STANDARDS. AN MAXIMUM CONSTRUCTION LOAD OF 30 P.S.F. SHALL BE APPLIED IN DESIGN.

2-THE DESIGN, MANUFACTURE. AND USE OF OPEN WEB STEEL JOIST, NUMBER OF ROWS, BRIDGING TYPES AND LOCATION AND JOIST GIRDERS, SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATION FOR STEEL JOIST 1994,PUBLISHED BY JOIST INSTITUTE.

3-A NET UPLIFT FORCE AS SHOWN ON TABLE SHALL BE CONSIDERED IN THE DESIGN OF JOIST AND BRACING.

4-CONTRACTOR SHALL COORDINATE WITH STEEL JOIST DESIGNER FOR ADDITIONAL DEAD LOAD DUE TO MECHANICAL ,ELECTRICAL AND ARCHITECTURAL APPLIANCES (FANS, A/C UNITS, ETC.) SHOWNS AND NOT SHOWN ON STRUCTURAL PLANS.

5-A BRIDGING MUST BE PROVIDED NEAR THE FIRST BOTTOM CHORD PANEL POINT.

6-CONTRACTOR SHALL PROVIDE FRAME AND CURB TO SUPPORT FANS AND A/C UNITS AT ROOF.

7-ALL BRIDGING ANCHOR SHALL BE COMPLETELY INSTALLED BEFORE CONSTRUCTION LOAD ARE PLACED ON THE JOIST. ALL JOIST BRIDGING AND BRIDGING ACCESORIES SHALL BE SPECIFIED AND PROVIDED BY THE JOIST FABRICATOR.

8-ADD 700# (2.5KIPS UPLIFT) AT PIPE LOCATION (SEE PLAN) ON JOITS GIRDERS DESIGN.

NOTES:

1) CONTRACTOR SHALL VERIFY ALL DIMENSIONS WITH MANUFACTURER DRAWINGS, ANY SUBSTANTIAL DIFFERENCE SHALL BE NOTIFY TO STRUCTURAL ENGINEER (H.A.G.E.) PRIOR TO ANY CONSTRUCTION.

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

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Fecha de Expiración: 2026-04-19

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	2/6/24
REVIEWED BY:	HAG
DRAWN BY:	HAG
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

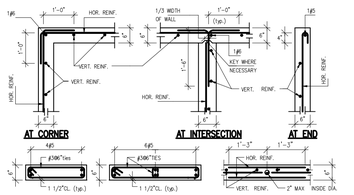
STRUCTURAL ROOF PLAN, SECTIONS AND DETAILS.

SHEET ID

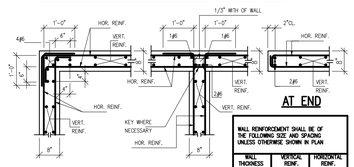
3/16"=1'-0"

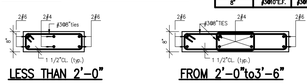
SHEET

S-3

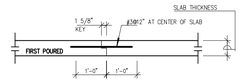


TYP.6" CONCRETE WALL DETAILS





TYP.8" CONCRETE WALL DETAILS

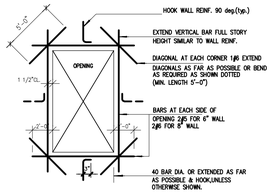


TYPICAL CONSTRUCTION JOINT IN SLAB

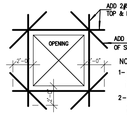
NOTES:

1- PRIOR TO POURING CONCRETE AGAINTS THE HARDENED CONCRETE, THE SURFACE SHALL BE CLEAN, FREE OF LOOSE MATERIAL & INTENTIONALLY ROUGHENED TO A FULL AMPLITUDE OF 1/4" APPROX.

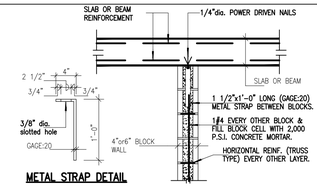
2- CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS IN ORDER TO COMPLETELY FILL THE CONSTRUCTION KEY AT BEAM.



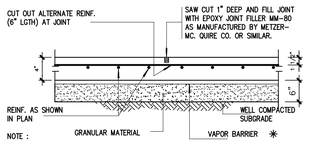
REINF AT WALL OPENING



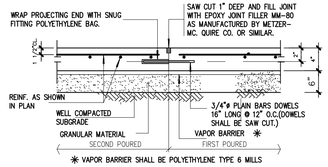
REINF AT SLAB OPENING



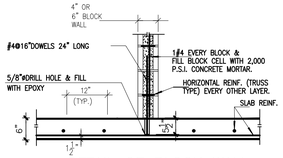
DETAIL OF BLOCK WALL ANCHORAGE AT TOP



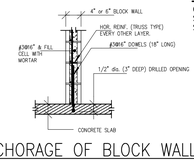
CONTROL SAW CUT JOINT FOR SLAB OR TOPPING



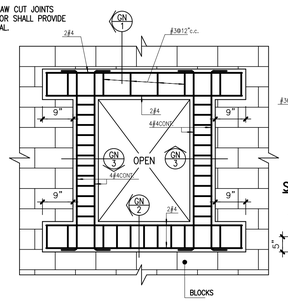
CONSTRUCTION JOINT FOR SLAB ON GRADE



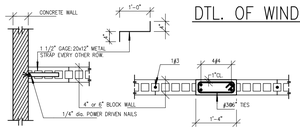
DETAIL OF BLOCK WALL ANCHORAGE TO SLAB



ANCHORAGE OF BLOCK WALL PARTITIONS TO FLOOR SLAB

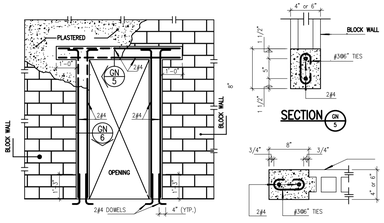


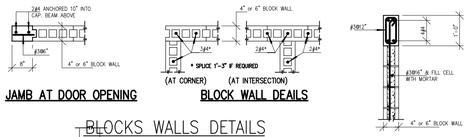
DETAIL OF WINDOW OPENING ON BLOCK WALL



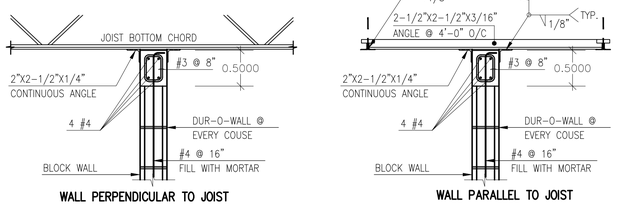
ANCHORAGE OF BLOCK WALL PARTITIONS TO CONC. WALLS

CONCRETE COLUMN DETAIL
(SPACED NO MORE THAN 12'-0")

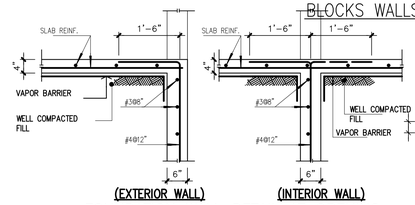




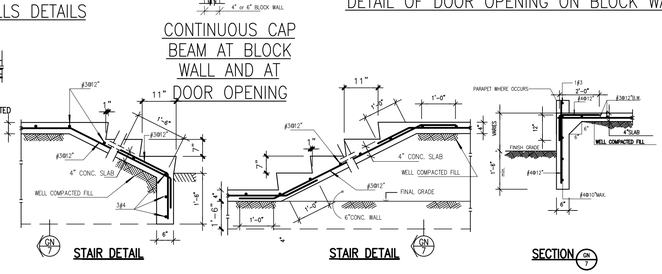
DETAIL OF DOOR OPENING ON BLOCK WALL



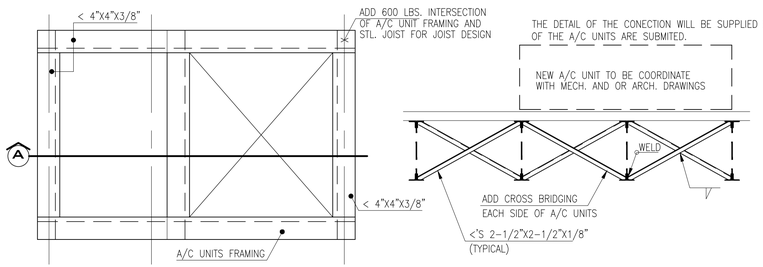
TYPICAL WALL ANCHORAGE DETAILS TO JOIST



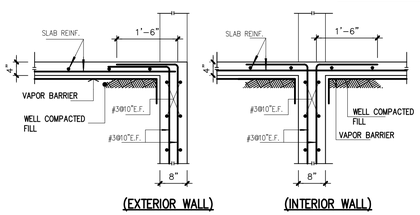
CONTINUOUS CAP BEAM AT BLOCK WALL AND AT DOOR OPENING



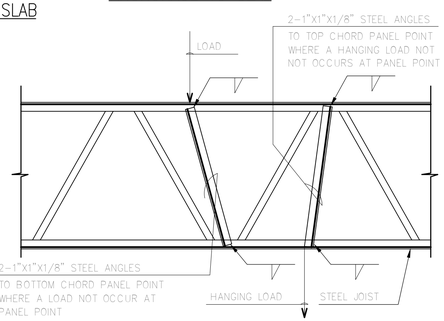
TYPICAL DETAILS FOR STAIRS ON GROUND



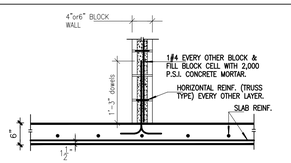
TYP. A/C UNITS FRAMING



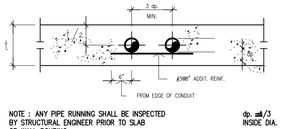
HORIZONTAL BRIDGING DETAIL



TYPICAL DETAIL FOR ROOF POINT LOAD OR HANGING LOAD ON JOIST



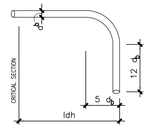
DETAIL OF BLOCK WALL ANCHORAGE TO SLAB



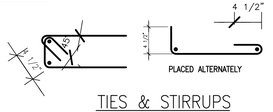
NOTE : ANY PIPE RUNNING SHALL BE INSPECTED BY STRUCTURAL ENGINEER PRIOR TO SLAB OR WALL POURING.

dp. =d/3
INSIDE DIA.

DETAIL FOR CONDUIT AND PIPES EMBEDDED IN CONCRETE



STANDARD HOOK



TIES & STIRRUPS BENDING DTL.

ANCHORAGE LENGTH(ldh)		
BAR SIZE	LENGTH-IN f'c 4,000	LENGTH-IN f'c 5,000
3	12	12
4	12	12
5	12	12
6	15	13
7	18	15
8	20	18
9	22	20
10	24	22
11	26	24

* ldh CAN BE REDUCED 30% IF SIDE COVER OF HOOKED BAR IS NOT LESS THAN 2.5" VERTICAL EXTENSION OF HOOK SHALL BE A MINIMUM OF 12 BAR DIAMETER AS SHOWN BELOW EVEN IF ANCHORAGE LENGTH HAVE BEEN SATISFIED.

GENERAL NOTES :

1) THE NOTES ON THESE DRAWINGS ARE NOT INTENDED TO REPLACE THE SPECIFICATIONS, SEE SPECIFICATIONS FOR REQUIREMENTS IN ADDITION TO THE GENERAL NOTES. INCONSISTENCIES BETWEEN THE DRAWINGS AND THE SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH THE AFFECTED PORTION OF THE WORKS.

2) STRUCTURAL DRAWINGS SHALL BE USED IN CONJUCTION WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL AND SITE DRAWINGS. C.C. SHALL COORDINATE LOCATION AND DIMENSIONS OF OPENINGS, CHASES, INSERTS, REGLETS, SLEEVES, DEPRESSIONS, ETC.

3) ALL DIMENSIONS AND COORDINATES SHALL BE VERIFIED. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH AFFECTED PORTION OF THE WORK.

4) THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETED. IT IS THE CONTRACTOR SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO ENSURE THE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS, OR TIEDOWNS. SUCH MATERIAL SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.

5) SECTIONS AND DETAILS SHOWN ON ANY STRUCTURAL DRAWING SHALL BE CONSIDERED TYPICAL FOR SIMILAR CONDITIONS.

6) THE CONTRACTOR SHALL PERFORM ALL WORKS IN CONFORMANCE WITH ALL APPLICABLE FEDERAL, STATE AND MUNICIPAL REGULATIONS.

7) ALL OPEN FOUNDATION EXCAVATIONS MUST BE INSPECTED AND APPROVED BY A LICENSED GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF CONCRETE

DESIGN NOTES :

1) THIS BUILDING IS DESIGNED TO COMPLY WITH THE INTERNATIONAL BUILDING CODE 2018 (IBC) AND ASCE7-16

2) LIVE LOADS:
ROOF = 40 PSF

3) WIND LOAD:
ASCE 7-16 CODE
A. BASIC WIND SPEED = 174 MPH
B. WIND EXPOSURE = EXPOSURE C
C. RISK CATEGOTY III

4) EARTHQUAKE LOAD: IN ACCORDANCE WITH ASCE 7-16
A. RISK CATEGORY = II
B. I = 1.0
C. SITE CLASS = D
D. Ss = .95, S1=.362

FOUNDATION NOTES:

1) FOOTING ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 2,500 psf WITH A BOTTOM FOOTING ELEVATION AT MINIMUM DEPTH OF 5'-0" BELOW THE FINAL GRADE.
2) TEMPORARY EXCAVATION FOR THE INSTALLATION OF FOOTINGS, PIPES OR OTHER PURPOSES SHALL BE SLOPED OR BRACED IN ACCORDANCE WITH "OSHA" REQUIREMENT AND ANY ADDITIONAL RECOMENDATION OF THE STRUCTURAL OR GEOTECHNICAL ENGINEERS.
3) THE TOP SOIL SUPPORTING ANY EXISTING VEGETATION OF SHRUBS AND GRASSES SHALL BE REMOVED PRIOR TO START ANY FILLING OPERATION.
4) FOUNDATION WERE DESIGNED FOLLOWING THE SUBSOIL EXPLORATION AND GEOTECHNICAL REPORT PREPARED BY ENG. ARIEL GRILLASCA OF GEOTECHNICAL ENGINEERS DATED AUG 24, 2023 FOR THIS PROJECT. CONTRACTOR SHALL FALLOW ALL THE RECOMMENDATIONS IN THAT REPORT.
5) THE CONSTRUCTION AREA SHALL BE STRIPPED 30" MINIMUM. AREA SHALL BE COVERED BY MIRAFI HP370 OR STRONGER AND FILLED WITH A-2-6 OR BETTER MATERIAL.

CONCRETE NOTES:

1) ALL CONCRETE WORKS SHALL CONFORM TO THE REQUIREMENTS OF ACI 318-14 AND 301-16.
2) UNLESS OTHERWISE SPECIFIED, ALL CONCRETE SHALL DEVELOP THE FOLLOWING COMPRESSIVE STRENGTH AT 28 DAYS.
FOOTINGS AND SLAB ON GROUND ——— 3,000 P.S.I.
WALLS, COLUMNS, SLABS AND BEAMS ——— 4,000 P.S.I.
3) CONCRETE SHALL NOT BE PLACED IN WATER.
4) REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60 DEFORMED BARS AND SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH AC1 315.
5) SPLICES OF REINFORCING BARS SHALL BE IN ACCORDANCE WITH ACI 318 UNLESS OTHERWISE NOTED ON THE DRAWINGS.
6) ANCHOR BOLTS SHALL CONFORM TO ASTM F1554 GR. 36 UNLESS OTHERWISE NOTED ON DRAWINGS.

STRUCTURAL STEEL NOTES:

1) STRUCTURAL STEEL FABRICATION, ERECTION AND CONNECTION DESIGN SHALL CONFORM TO AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL". THIRTEENTH EDITION.
2) STRUCTURAL STEEL WIDE FLANGE SHAPES SHALL CONFORM ASTM A572, GRADE 50 OR ASTM A992 STEEL WITH A YIELD STRENTH OF 50 KSI, STEEL FOR PLATES, ANGLES, AND CHANNELS SHALL CONFORM TO ASTM A36 WITH A YIELD STRENGTH OF 36 KSI. HOLLOW STRUCTURAL SECTIONS SHALL CONFORM TO ASTM A500 GRADE B WITH A MINIMUM YIELD STRENGTH OF 46 KSI
3) FIELD CONNECTIONS SHALL BE BOLTED USING 3/4" DIAMETER A325N HIGH STRENGTH BOLTS EXCEPT WERE FIELD WELDING IS INDICATED ON THE DRAWING OR WHERE OTHERWISE REQUIRED TO SUPPORT A DESIGN LOADS.
4) ALL WELDING SHALL CONFORM TO AWS D1.1-LATEST EDITION. ELECTRODES SHALL BE E70XX.

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

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SEAL

Hector Augusto Gonzalez Quiñones
Ingeniero Licenciado
Hector A. Gonzalez
Lic. 12577 PE
Puerto Rico

Fecha de Expiración: 2026-04-19

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	2/6/24
REVIEWED BY:	HAG
DRAWN BY:	HAG
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

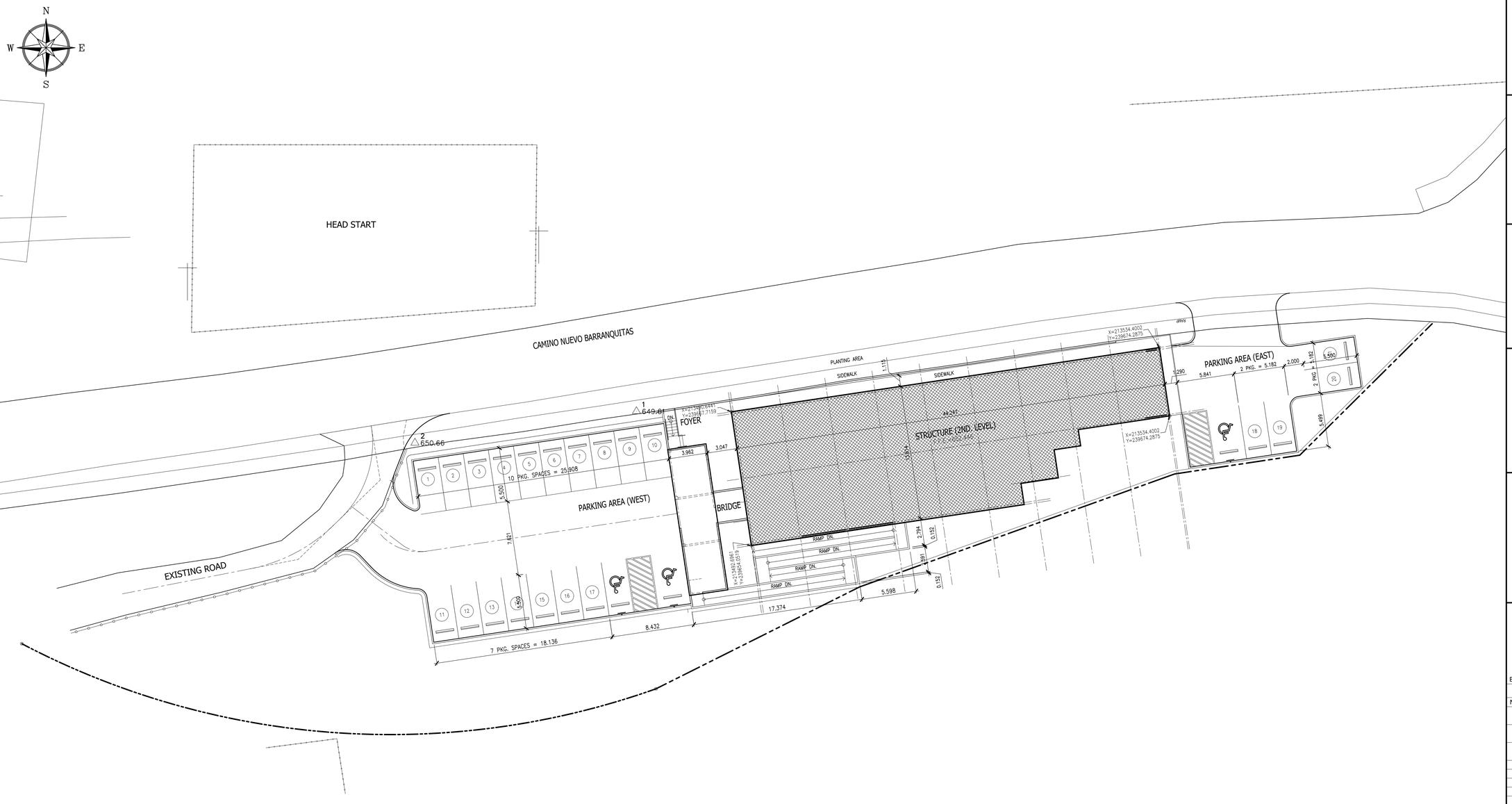
GENERAL NOTES AND TYPICAL DETAILS.

SHEET ID

N.T.S.

SHEET

S-4



NOT FOR CONSTRUCTION: FOR PERMIT CONSULTATION PURPOSES

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

EHA ENGINEERING, PSC

SEAL

Edgardo Hernandez Alvarado
Lic. 13630 PE RPA
Puerto Rico
Fecha de Expiración: 2024-09-25

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	4/15/24
REVIEWED BY:	EHA
DRAWN BY:	SBT
DESIGNED BY:	
BRA PROJECT NUMBER:	

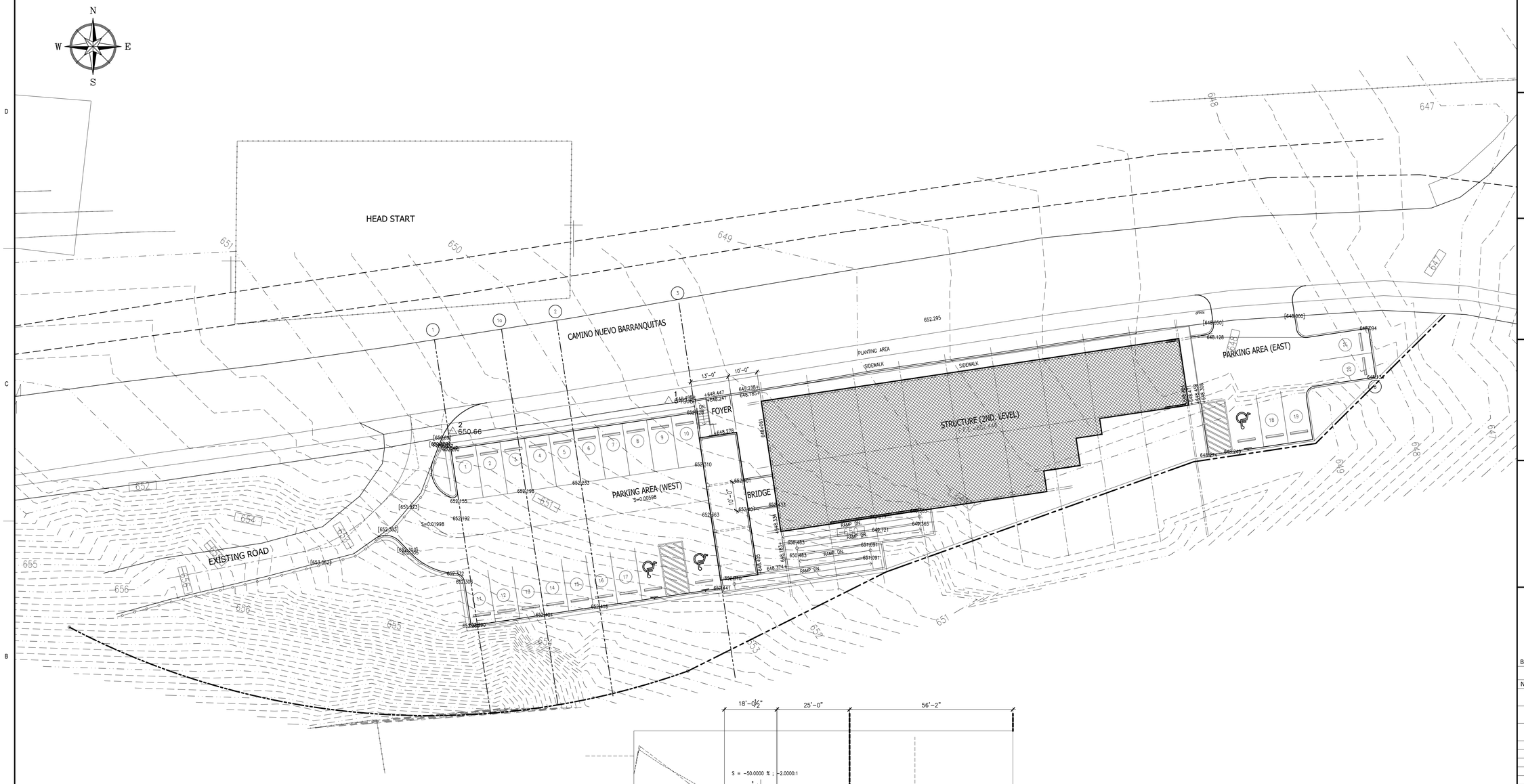
SHEET TITLE

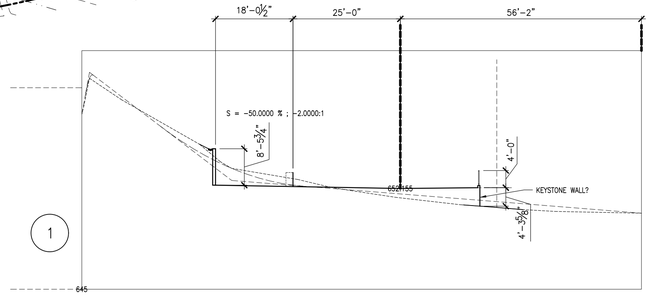
PROPOSED LAYOUT PLAN

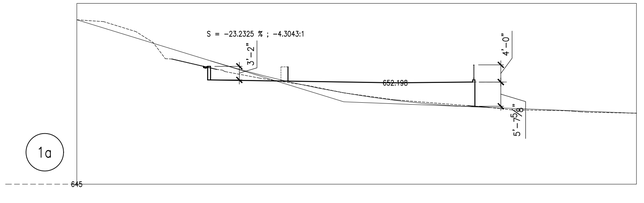
SHEET ID

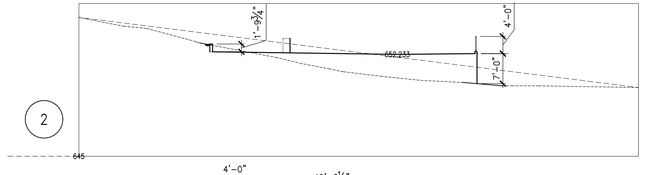
SI-4.0

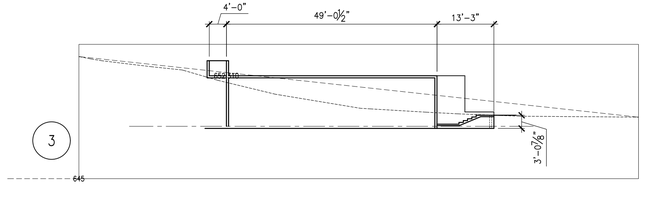
SHEET











NOT FOR CONSTRUCTION: FOR PERMIT CONSULTATION PURPOSES

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

EHA ENGINEERING, PSC

SEAL

Edgardo Hernandez Alvarado
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Puerto Rico
Fecha de Expiración: 2024-09-25

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	4/15/24
REVIEWED BY:	EHA
DRAWN BY:	SBT
DESIGNED BY:	
BRA PROJECT NUMBER:	

SHEET TITLE

PROPOSED GRADING PLAN

SHEET ID

SI-5.0

SHEET

NOT FOR CONSTRUCTION: FOR PERMIT CONSULTATION PURPOSES

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

EHA ENGINEERING, PSC

SEAL

Edgardo Hernandez Alvarado
Lic. 13630 PE RP.A
Puerto Rico
Fecha de Expiración: 2024-09-25

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

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DESIGNED BY:	
BRA PROJECT NUMBER:	

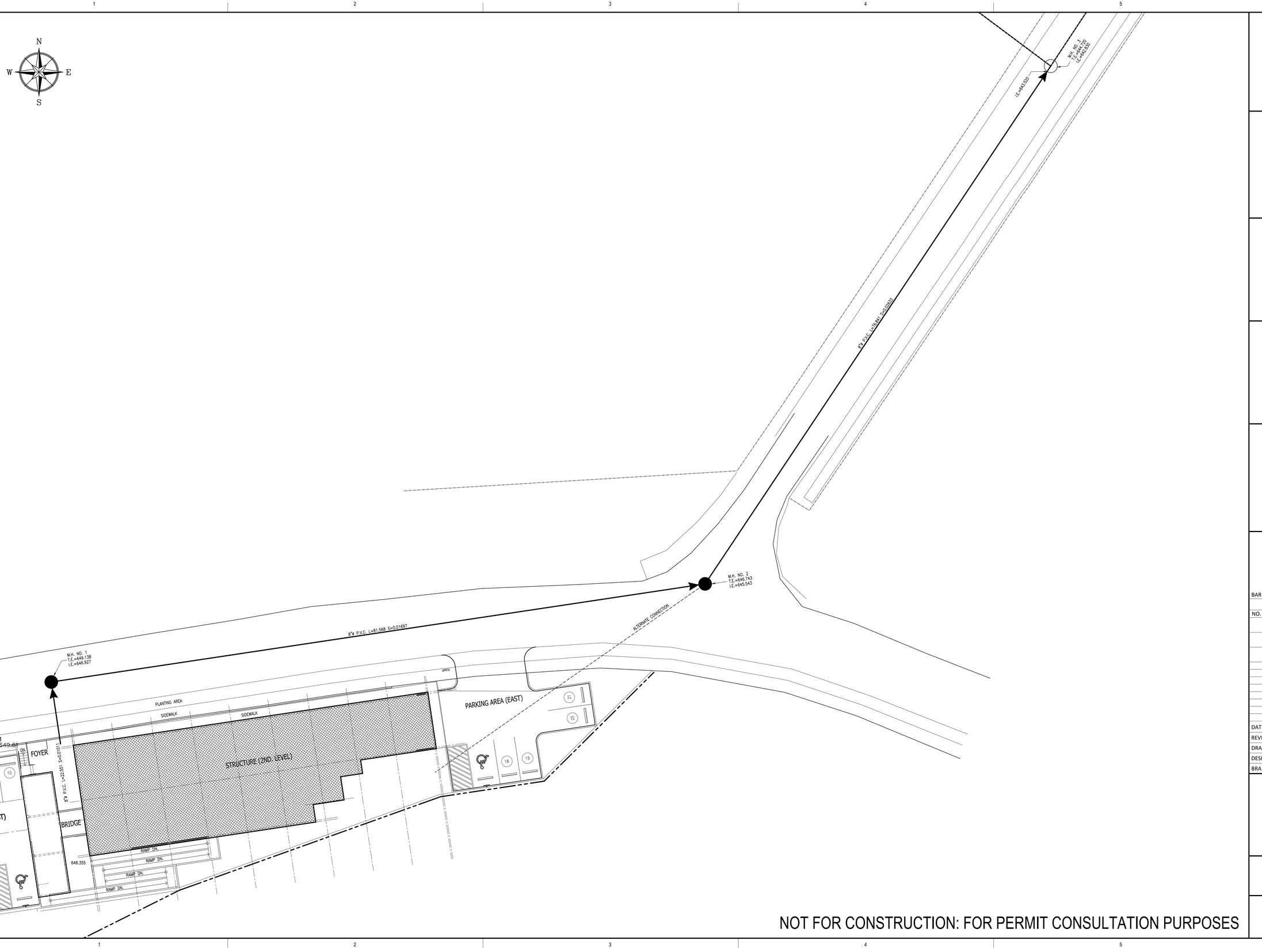
SHEET TITLE

PROPOSED WATER DISTRIBUTION PLAN

SHEET ID

SI-6.0

SHEET



NOT FOR CONSTRUCTION: FOR PERMIT CONSULTATION PURPOSES

OWNER

PROPONENT

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FIGUEROA & FIGUEROA
ARCHITECTS AND
ENGINEERS

CONSULTANT

EHA
ENGINEERING, PSC

SEAL

Edgardo Hernandez Alvarado
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Puerto Rico
Fecha de Expiración: 2024-09-25

PROJECT INFORMATION

CENTRO DE USOS
MULTIPLES DE
BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	4/15/24
REVIEWED BY:	EHA
DRAWN BY:	SBT
DESIGNED BY:	
BRA PROJECT NUMBER:	

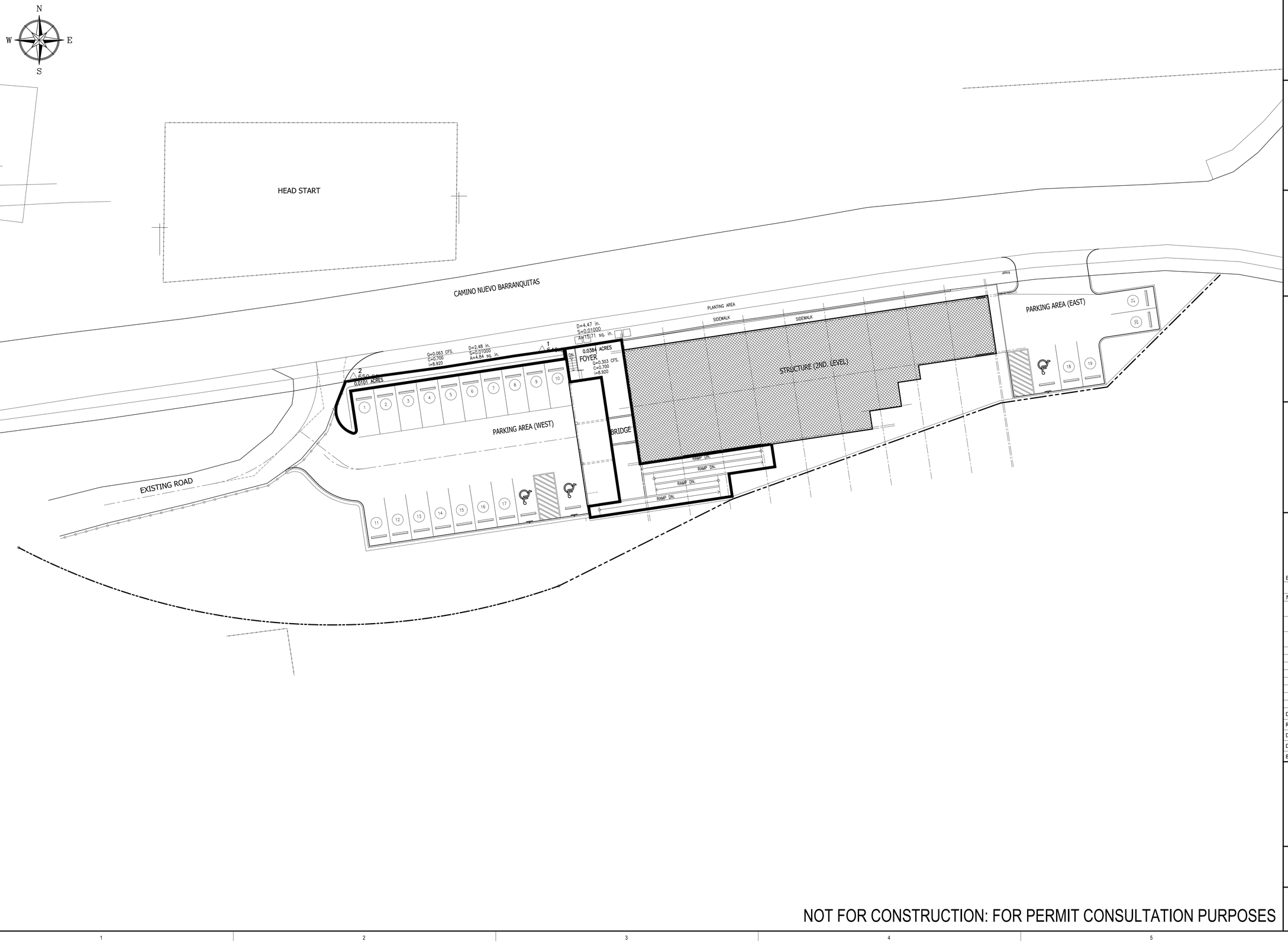
SHEET TITLE

PROPOSED
SANIARY SEWER
PLAN

SHEET ID

SI-7.0

SHEET



NOT FOR CONSTRUCTION: FOR PERMIT CONSULTATION PURPOSES

OWNER

PROPONENT

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CONSULTANT

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PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

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DATE ISSUED:	4/15/24
REVIEWED BY:	EHA
DRAWN BY:	SBT
DESIGNED BY:	
BRA PROJECT NUMBER:	

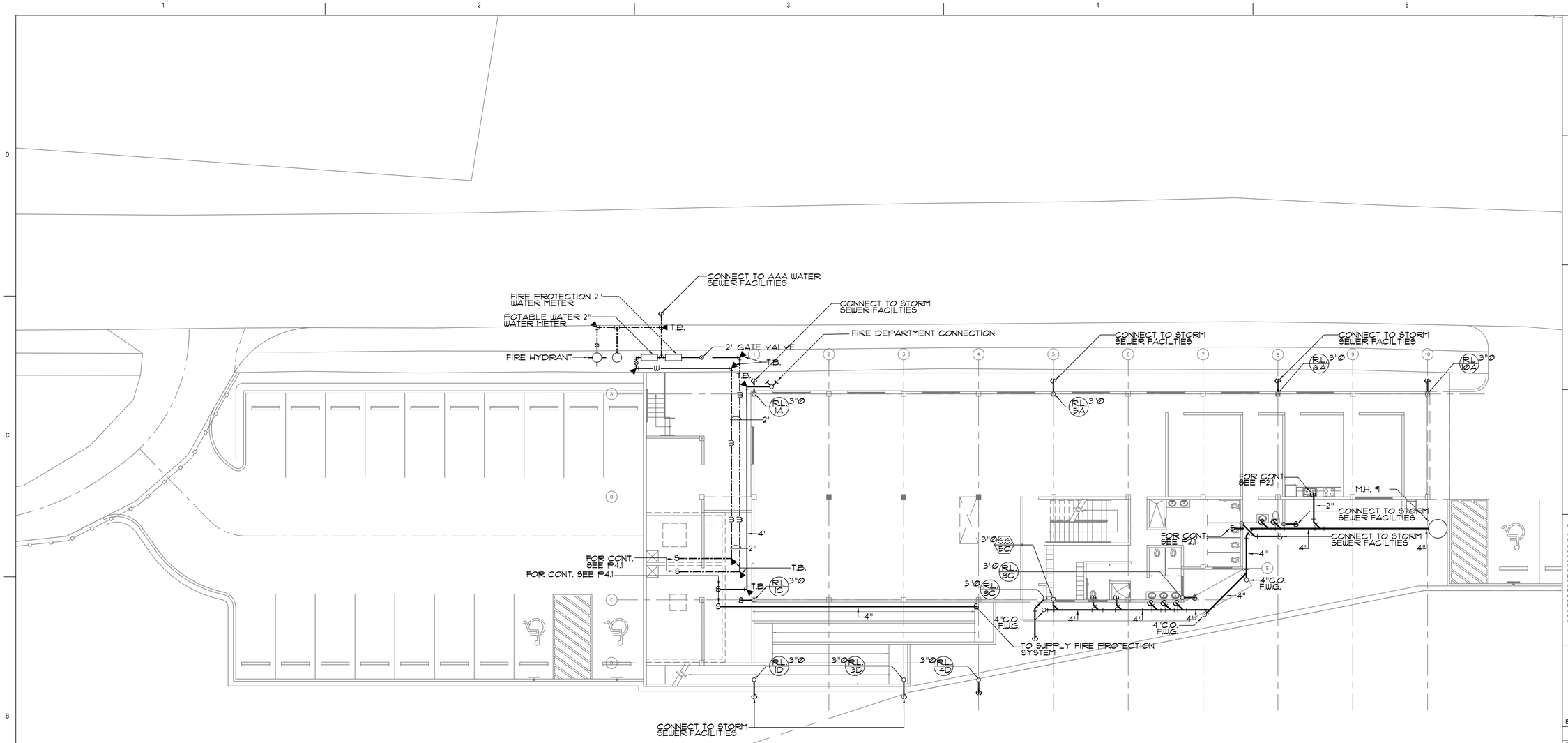
SHEET TITLE

PROPOSED STORM SEWER ANALISYS

SHEET ID

SI-8.0

SHEET



PLUMBING LAYOUT AT SITE PLAN

SCALE: 3/32"=1'-0"

LEGEND:

- C.O. FRASA
- MAN HOLE
- SANITARY LINE PVC SCH40 (ASTM 3034)
- C.O. FINISH
- TRUST BLOCK
- 2" WATER METER
- TAPPING SLEEVE AND VALVE
- FIRE HYDRANT
- COPPER TYPE K LINE
- PVC
- VENT

FILE NAME	23-078-SP1.1
PLOT DATE	05/09/24
DWG. #	SP1.1
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	D.P.D.
ARCHIVO #:	23-078

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

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JORGE TORRES LOPEZ
MECHANICAL ENGINEER, LIC. 4951

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Fecha de Expiración: 2024-11-19

NOTA IMPORTANTE:

Yo, JORGE A. TORRES SCANDALI, INGENIERO MECANICO, LICENCIA 10306, certifico que soy el profesional que diseñó la MECANICA, en estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estos planos y especificaciones se ha cumplido cabalmente con lo dispuesto en la Ley 14-2004, según enmendada, conocida como la Ley para la Inversión por la Industria Puertorriqueña y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada; según aplique. Reconozco que cualquier declaración falsa o falsificación de los hechos que se haya producido por desconocimiento o por negligencia ya sea por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGPe.

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

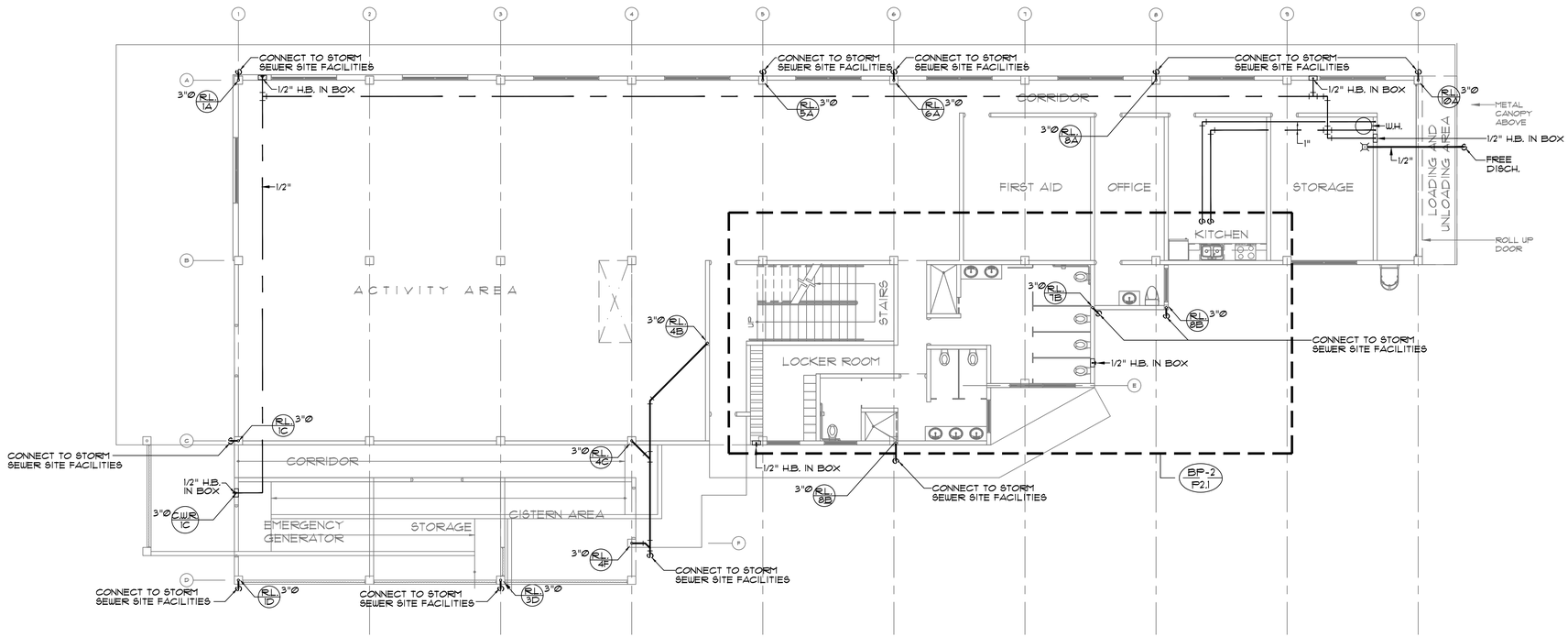
SHEET TITLE

PLUMBING LAYOUT AT SITE PLAN

SHEET ID

SP1.1

SHEET



PLUMBING LAYOUT AT GROUND FLOOR PLAN

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

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

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Fecha de Expiración: 2024-11-15

NOTA IMPORTANTE:

Yo, JORGE A. TORRES SCANDALI, INGENIERO MECANICO, LICENCIA 10906, certifico que soy el profesional que diseñó la MECANICA, en estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estos planos y especificaciones se ha cumplido cabalmente con lo dispuesto en la Ley 14-2004, según enmendada, conocida como la " Ley para la Inversión por la Industria Puertorriqueña" y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada; según aplique. Reconozco que cualquier declaración falsa o falsificación de los hechos que se haya producido por desconocimiento o por negligencia ya sea por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGPe.

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS — PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

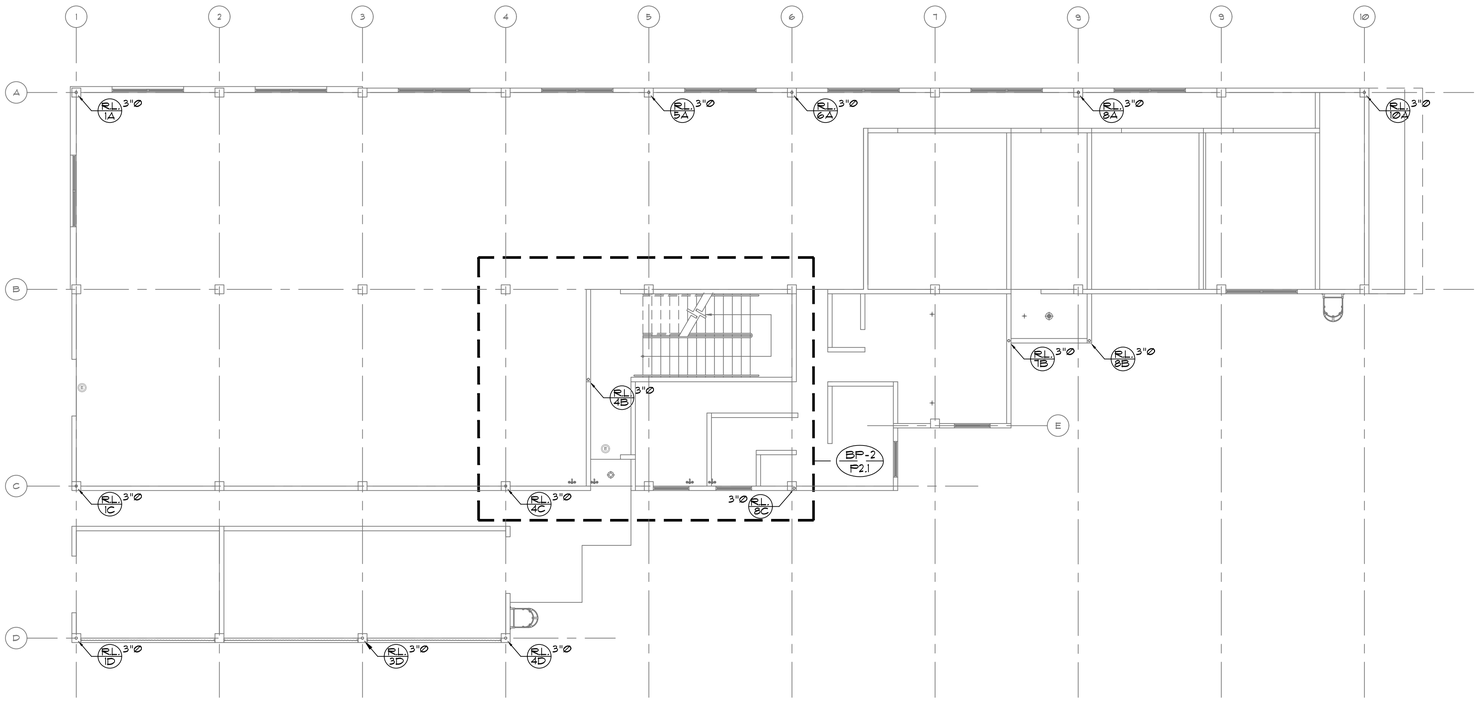
PLUMBING LAYOUT AT GROUND FLOOR PLAN

SHEET ID

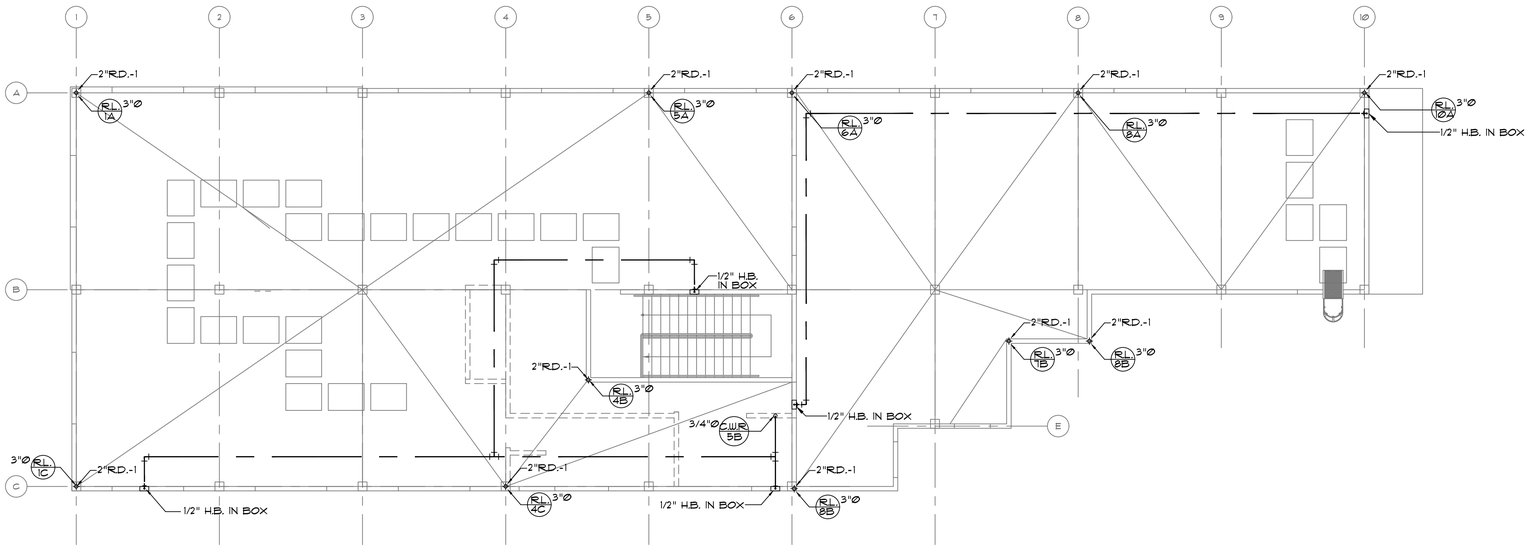
P1.1

SHEET

FILE NAME	23-078-P1.1
PLOT DATE	04/30/24
DWG. #	P1.2
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	D.P.D.
ARCHIVO #:	23-078

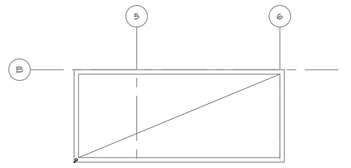


PLUMBING LAYOUT AT SECOND FLOOR PLAN



ROOF DRAINAGE PLAN

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



FILE NAME	23-078-P1.2
PLOT DATE	04/30/24
DWG. #	P1.2
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	D.P.D.
ARCHIVO #:	23-078

OWNER

PROPONENT

\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA
ARCHITECTS AND
ENGINEERS

CONSULTANT

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Fecha de Expiración 2024-11-19

NOTA IMPORTANTE:

Yo, JORGE A. TORRES SCANDALI, INGENIERO MECANICO, LICENCIA 10906, certifico que soy el profesional que diseñó la MECANICA, en estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentaras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estas planos y especificaciones se ha cumplido cabalmente con lo dispuesto en la Ley 14-2004, según enmendada, conocida como la Ley para la Inversión por la Industria Puertorriqueña" y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada; según aplique. Reconozco que cualquier declaración falsa o falsificación de los hechos que se hayo producido por desconocimiento o por negligencia yo sea por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGPe.

PROJECT INFORMATION

CENTRO DE USOS
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BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
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DESIGNED BY:	-
BRA PROJECT NUMBER:	

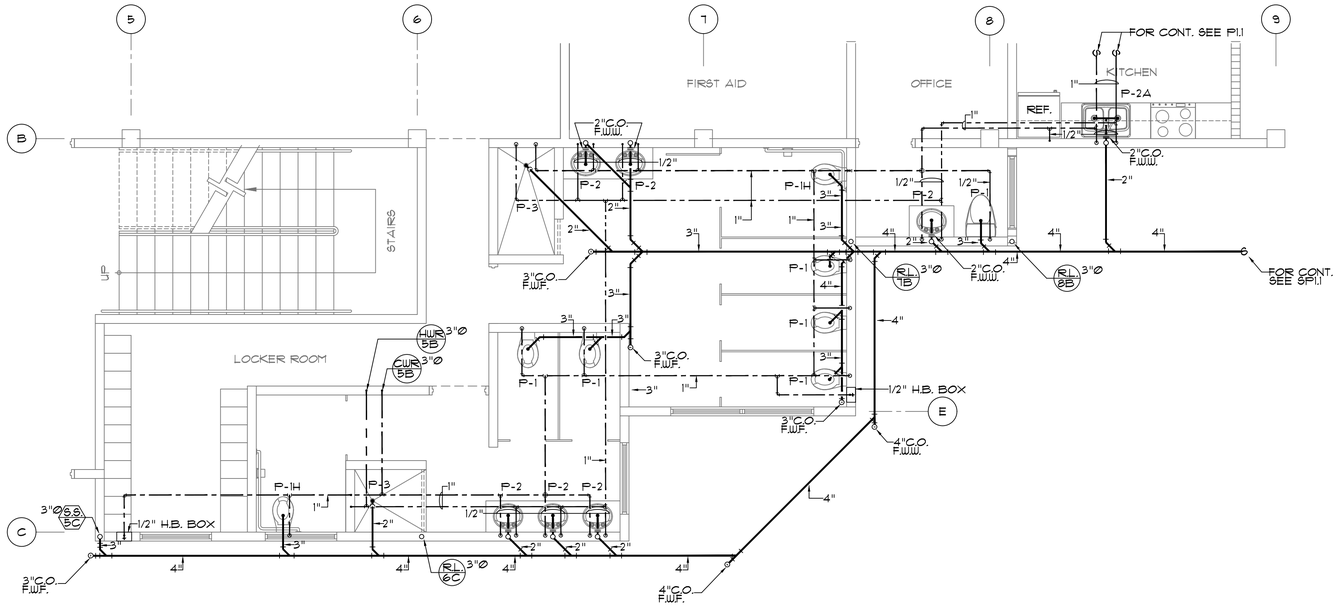
SHEET TITLE

PROPOSED
SECOND FLOOR
AND ROOF PLAN

SHEET ID

P1.2

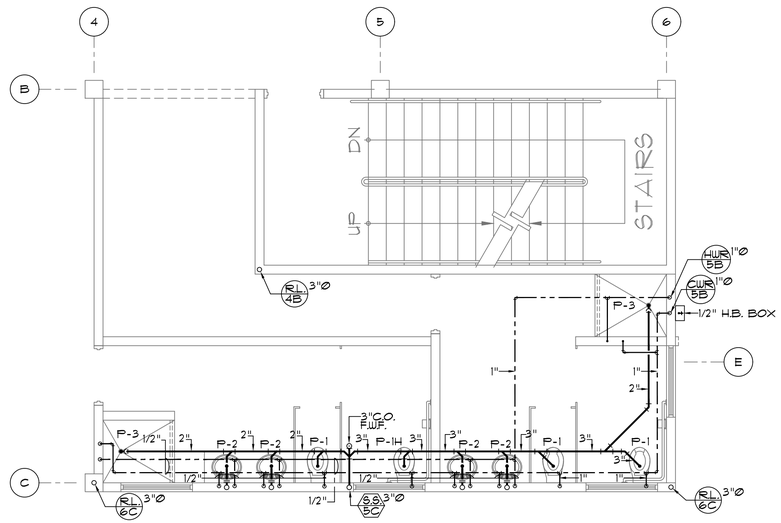
SHEET



BP-1
P1.1

PLUMBING LAYOUT AT ENLARGE GROUND FLOOR PLAN

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



BP-2
P1.2

PLUMBING LAYOUT AT ENLARGE SECOND FLOOR PLAN

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

FILE NAME	23-078-P2.1
PLOT DATE	05/09/24
DWG. #	P2.1
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	D.P.D.
ARCHIVO #:	23-078

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

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PROJECT INFORMATION

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BARRANQUITAS — PUERTO RICO

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DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

PLUMBING LAYOUT AT ENLARGE GROUND & SECOND FLOOR PLAN

SHEET ID

P2.1

SHEET

GENERAL NOTES

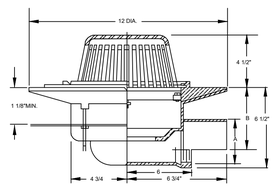
1. ALL PLUMBING WORK SHALL BE IN ACCORDANCE WITH THE BUILDING CODE, P.R. BUILDING CODE 2019, AND THE INTERNATIONAL PLUMBING CODE LATEST EDITION.
2. ALL PLUMBING MATERIAL SHALL BE AS INDICATED IN THE SPECIFICATIONS ISSUED FOR THIS PROJECT, EXCEPT AS OTHERWISE NOTED OR CALLED FOR ON THE DRAWINGS.
3. ALL VALVES SHALL BE PROVIDED WITH ACCESS IN THE WALL OR FLOOR FOR OPERATION AND MAINTENANCE ACCESS DOORS SHALL BE AS SPECIFIED OR REQUIRED BY THE ARCHITECT.
4. LONG SWEEP BENDS OR LONG SWEEP FITTINGS SHALL BE PROVIDED AT THE BASE OF ALL STACKS, CLEANOUTS SHALL BE INSTALLED AT THE BASE FALL STACK AND LEADERS.
5. ALL HORIZONTAL PORTIONS OF SOIL & WASTE STACKS & BRANCHES, SHALL SLOPE 1/4" PER FT., EXCEPT AS OTHERWISE SHOWN.
6. ALL PIPES SHALL BE ADEQUATELY SUPPORTED ON HANGERS OR CARRIERS AS REQUIRED. HANGERS SHALL BE PLACED 4 FT. APART EACH LENGTH VERTICAL RISERS AND STACKS SHALL BE SUPPORTED 10FT. WITH RISER CLAMPS, EXCEPT AS OTHERWISE SHOWN, FOR SIZES 2"Ø OR SMALLER A MIDSTORY GUIDE IS REQUIRED.
7. THE SIZES GIVEN IN FIXTURE SCHEDULE ARE MINIMUM AND SHALL BE USED EXCEPT THAT IN SOME CASES THEY SHALL BE INCREASED AS SHOWN ON ISOMETRICS OR AS REQUIRED BY THE INTERNATIONAL PLUMBING CODE.
8. THE PLUMBING CONTRACTOR SHALL PROVIDE PLUMBING FIXTURES AND INSTALL ALL PLUMBING FIXTURES, AND /OR EQUIPMENT AND ROUGHING-IN.
9. CLEANOUTS SHALL BE NOT MORE THAN 50 FEET APART IN HORIZONTAL DRAINAGE LINES OF 4 - INCH NOMINAL DIAMETER OR LESS AND NOT MORE THAN 100 FEET APART FOR LARGER PIPES.
10. TUBING SHALL BE PEX NO JOINTS SHALL BE MADE IN FLOOR SLAB WALLS.
11. PIPES PASSING THROUGH CONCRETE OR CINDER WALLS AND FLOORS OR OTHER CORROSIVE MATERIAL SHALL BE PROTECTED AGAINST EXTERNAL CORROSION BY A PROTECTIVE SHEATHING OR WRAPPING OR OTHER MEANS THAT WILL WITHSTAND ANY REACTION FROM THE LIME AND ACID OF CONCRETE, CINDER OR OTHER CORROSIVE MATERIAL. SHEATHING OR WRAPPING SHALL ALLOW FOR EXPANSION AND CONTRACTION OF PIPING TO PREVENT ANY RUBBING ACTION. MINIMUM WALL THICKNESS OF MATERIAL SHALL BE Ø.025 INCH (Ø.64 mm).

LEGEND

- WASTE OR SOIL PIPING
- S.D. STORM DRAINAGE PIPING
- COLD WATER PIPING
- HOT WATER PIPING
- VENT PIPING
- C.O.F.W.W. CLEAN OUT FLUSH W/WALL
- C.O.F.W.F. CLEAN OUT FLUSH W/FLOOR OR FIN. GRADE
- C.O.P. CLEAN OUT PLUG
- R.D. ROOF DRAIN
- F.D. FLOOR DRAIN
- 2"Ø W.S. WASTE STACK (NO. AT SIDE INDICATES DIA. OF PIPE)
- 3"Ø S.S. SOIL STACK (NO. AT SIDE INDICATES DIA. OF PIPE)
- 2"Ø V.S. VENT STACK (NO. AT SIDE INDICATES DIA. OF PIPE)
- 2"Ø S.V. STACK VENT (NO. AT SIDE INDICATES DIA. OF PIPE)
- 3"Ø R.L. RAIN LEADER (NO. AT SIDE INDICATES DIA OF PIPE)

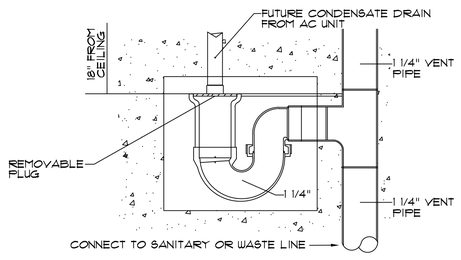
01 GENERAL NOTES AND LEGEND

N.T.S.



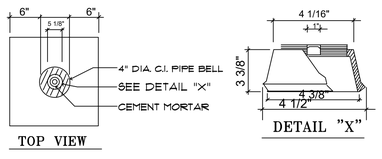
02 ROOF DRAIN DETAIL

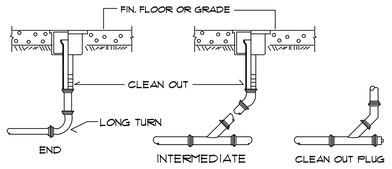
N.T.S.



03 AIR CONDITIONING CONDENSATE DRAIN

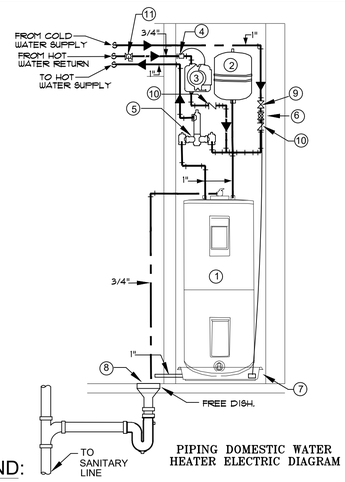
N.T.S.





04 CLEANOUT FLOOR DETAIL

N.T.S.



PIPING DOMESTIC WATER HEATER ELECTRIC DIAGRAM

LEGEND:

1. BRADFORD WHITE WATER HEATER
2. EXPANSION TANK (WATER WORK MODEL G12 4.4 GAL. TANK (0081159001144)
3. RECIRCULATION PUMP (TACO MODEL 006e3)
4. AQUASTAT (TACO MODEL 563-2)
5. MIXING VALVE (TACO MODEL 5004 1"Ø)
6. LEAK DETECTOR 9 TACO FLOOD BREAKER MODEL FB 100)
7. PLASTIC WATER HEATER PAN (OATEY MODEL 34165)
8. FLOOR DRAIN (JOSAM 40300 CAST STAINLESS STEEL 1/2 GRADE) (WITH BACKFLOW PREVENTER)
9. BALL VALVE 1"Ø
10. CHECK VALVE 1"Ø
11. BALANCING VALVE 1"Ø

NOTE:

1. ALL VALVES AND FITTINGS TO BE SAME SIZE AS PIPE UNLES NOTED OTHERWISE

WATER HEATER SCHEDULE							
ID	MODEL	CAP. GAL.	DIA.	HEIGHT	WATT UPPER	LOWER	SERVICE AREA
WH-1	LOCHINVAR H15-082	80	26"	60 1/4"	5000	5000	BUILDING

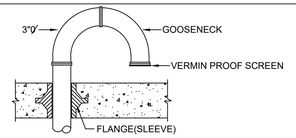
05 WATER HEATER DETAIL

N.T.S.

FLOOR & ROOF DRAIN SCHEDULE			
DRAIN NO.	CATALOG	MANUFACTURER	REMARKS
FD-1	Fig. 2005-U	JAY R. SMITH	WHERE OCCURS
RD-1	Fig. 1010	JAY R. SMITH	ROOF

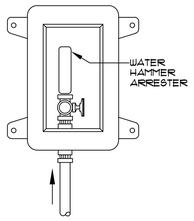
06 FLOOR DRAIN SCHEDULE

N.T.S.



07 VENTILATION DETAIL AT ROOF

N.T.S.

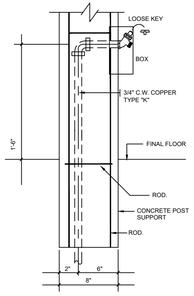


WATER SUPPLY BOX

MODEL-696-1010UF FOR NON FIRE RATED WALLS
MODEL-696-RG-2313XF FOR FIRE RATED WALLS

08 ICE MAKER BOX DETAIL

N.T.S.

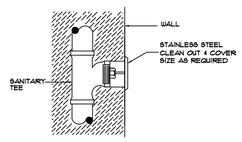


NOTE:

CENTRAL BRASS FIG. # 575-3/4"
LAWN FAUCET WITH HEAVY PATTERN
CAST BRASS BODY WITH FLANGE HOSE
END 3/4"-14 NPS FEMALE

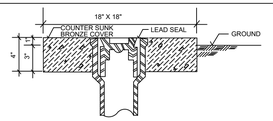
09 HOSE BIBB IN BOX DETAIL

N.T.S.



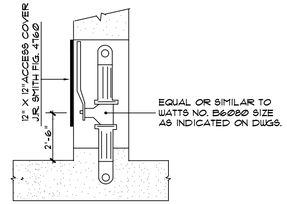
10 CLEANOUT FLUSH W/ WALL

N.T.S.



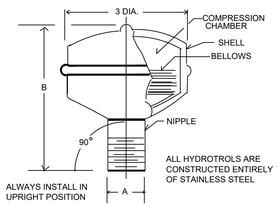
11 CLEANOUT FLUSH W/ GROUND

N.T.S.



12 BALL VALVE IN WALL DETAIL

N.T.S.



NO.	P.D.I. SYMBOL	FIXTURE UNIT RAITING	A SIZE	B	ACCESS COVER MANUFACTURE	ACCESS COVER SIZE
FIG. 5585	A	1-11	3/4	4	J.R. SMITH FIG. 4735-NB-U	8"X8"
5010	B	12-32	1	5	FIG. 4735-NB-U	10"X10"
5020	C	33-60	1	6	FIG. 4735-NB-U	12"X12"
50-30	D	61-13	1	7	FIG. 4735-NB-U	15"X15"
5040	E	114-154	1	8	FIG. 4735-NB-U	15"X15"
5050	F	155-330	1	9	FIG. 4735-NB-U	15"X15"

NOTE.....

ALL WATER HAMMER ARRESTER SHOWN ON WATER ISOMETRICS SHALL BE PRVIDED WITH AN ACCESS COVER. SIZE OF COVER AS SHOWN ON TABLE ABOVE WITH VANDAL PROOF SCREENS NICKLE BRONZE FRAME OR STAINLESS STEEL COVER. (NOT REQUIRED WHEN W.H.A. SHOWN AT CLNG. AND THE SAME IS REMOVABLE)

13 WATER HAMMER DETAIL

N.T.S.

DESCRIPTION	SYMBOL	UNIT WASTE OR SOIL	UNIT VENT	WATER SUPPLY		REMARKS
				COLD	HOT	
WATER CLOSET	P-1	3"	2"	1"	——	
LAVATORY	P-2	1 1/4"	1 1/4"	3/8"	3/8"	
SHOWER	P-3	1 1/2"	1 1/4"	1/2"	1/2"	
KITCHEN SINK	P-5	2"	1 1/2"	1/2"	1/2"	
LAUNDRY SINK	P-6	2"	1 1/2"	1/2"	1/2"	
WASHING MACHINE	P-7	3"	2"	1/2"	1/2"	

14 PLUMBING FIXTURE SCHEDULE

N.T.S.

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

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JORGE TORRES LOPEZ
MECHANICAL ENGINEER, LIC. 4951

SEAL

NOTA IMPORTANTE:

Yo, JORGE A. TORRES SCANDALI, INGENIERO MECANICO, LICENCIA 10906, certifico que soy el profesional que diseñó la MECANICA, en estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estos planos y especificaciones se ha cumplido cabalmente con lo dispuesto en la Ley 14-2004, según enmendada, conocida como la Ley para la Inversión por la Industria Puertorriqueña y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada; según aplique. Reconozco que cualquier declaración falsa o falsificación de los hechos que se hayo producido por desconocimiento o por negligencia ya sea por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGPe.

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

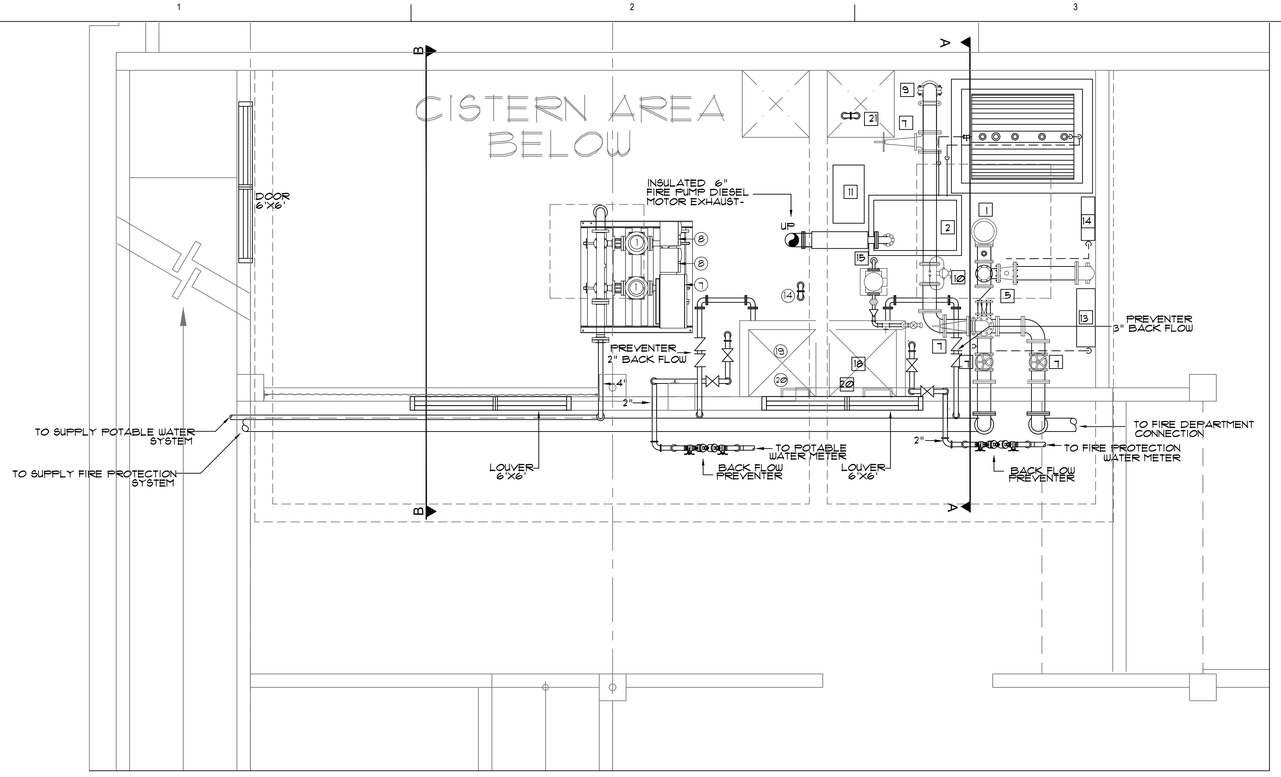
PLUMBING LAYOUT AT ENLARGE GROUND & SECOND FLOOR PLAN

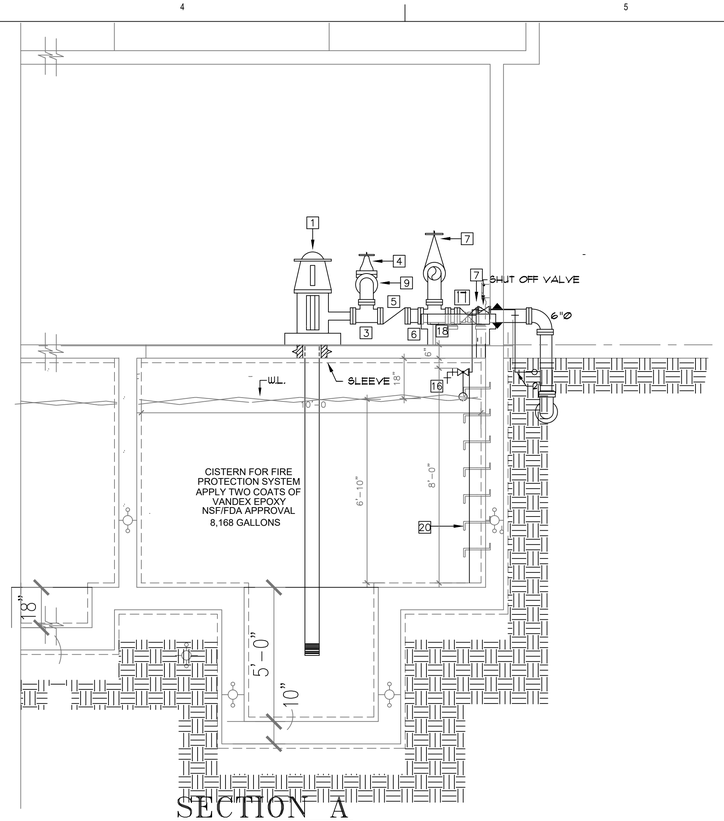
SHEET ID

P3.1

SHEET

FILE NAME	23-078-P3.1
PLOT DATE	01/25/24
DWG. #	P3.1
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	E.C.R.
ARCHIVO #:	23-078





SECTION A

SCALE:3/8"=1'-Ø"

FIRE PROTECTION CISTERN CALCULATION:

(Q = (.10)(1,500)(+100)
DURATION = 30 MINUTES
REQUIRED VOLUME = (30 MIN.)(280 GPM)
= 8,400 GALLONS

DIMENSIONS:
L=10'-0"
W=16'-0"
WATER DEPTH = 6'-10"
AIR GAP = 1'-6"
VOLUME PROVIDED= (10'-0")(16'-0")(6'-10")(7.48)
≅8,168GALLONS

LEGEND: (FIRE PROTECTION)

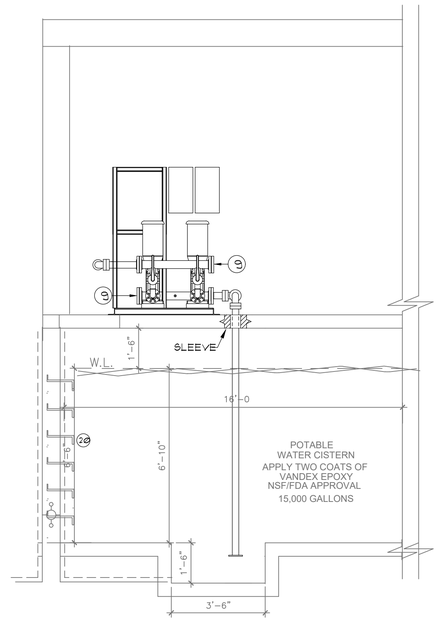
1. FIRE PUMP – 500 GPM @ 100 PSI
2. DIESEL ENGINE DRIVE
3. 6"X4"X6" DISCHARGE TEE
4. 4" MAIN RELIEF VALVE
5. 6" FLANGE CHECK VALVE
6. 6"X6"X6" TEE
7. 6" BUTTERFLY VALVE
8. 6" ELBOW
9. 6" 90 ELBOW
10. FLOW METER
11. DIESEL FUEL TANK–120 GALLONS
12. BATTERIES RACK
13. CONTROL PANEL (ENGINE)
14. CONTROL PANEL (JOCKEY PUMP)
15. JOCKEY PUMP 1 1/2" HP
16. GATE VALVE W/ALARM GONG
17. 4" GATE VALVE
18. MANHOLE(ACCESS HATCHE 30"X30")
19. OVER FLOW 4"
20. LADDER RUNGS (PLASTIC)
21. 4"VENT

LEGEND: POTABLE WATER

1. VMS PUMP MODEL S4V W/MOTOR–(SEE SPECIFICATION)SHP–60 GPM TDH– 5HP
2. CHECK VALVE WAFER STYLE 2"
3. BUTERFLY VALVE 150# LUG 2"
4. SYSTEM PIPING 2"
5. SUCTION HEADER 3"
6. DISCHARGE HEADER 3"
7. SYSTEM POWER AND CONTROL PANEL
8. VARIABLE FREQUENCY DRIVE
9. BLIND FLANGE CLASS 150 3"
10. SYSTEM SKID
11. CHECK VALVE
12. FLEXIBLE CONNECTION
13. DISCHARGE GATE VALVE 2"
14. VENT 4"
15. FLOAT VALVE
16. 2"GATE VALVE
17. PRESSURE RED. VALVE 2"
18. OVER FLOW 4"
19. MANHOLE(ACCESS HATCHE 30"X30")
20. LADDER RUNGS (PLASTIC)

CISTERN PUMP ROOM

SCALE:3/8"=1'-Ø"



SECTION B

SCALE:3/8"=1'-Ø"

FILE NAME	23-078-P4.1
PLOT DATE	05/09/24
DWG. #	P1.2
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	D.P.D.
ARCHIVO #:	23-078

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

SEAL

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CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

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REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

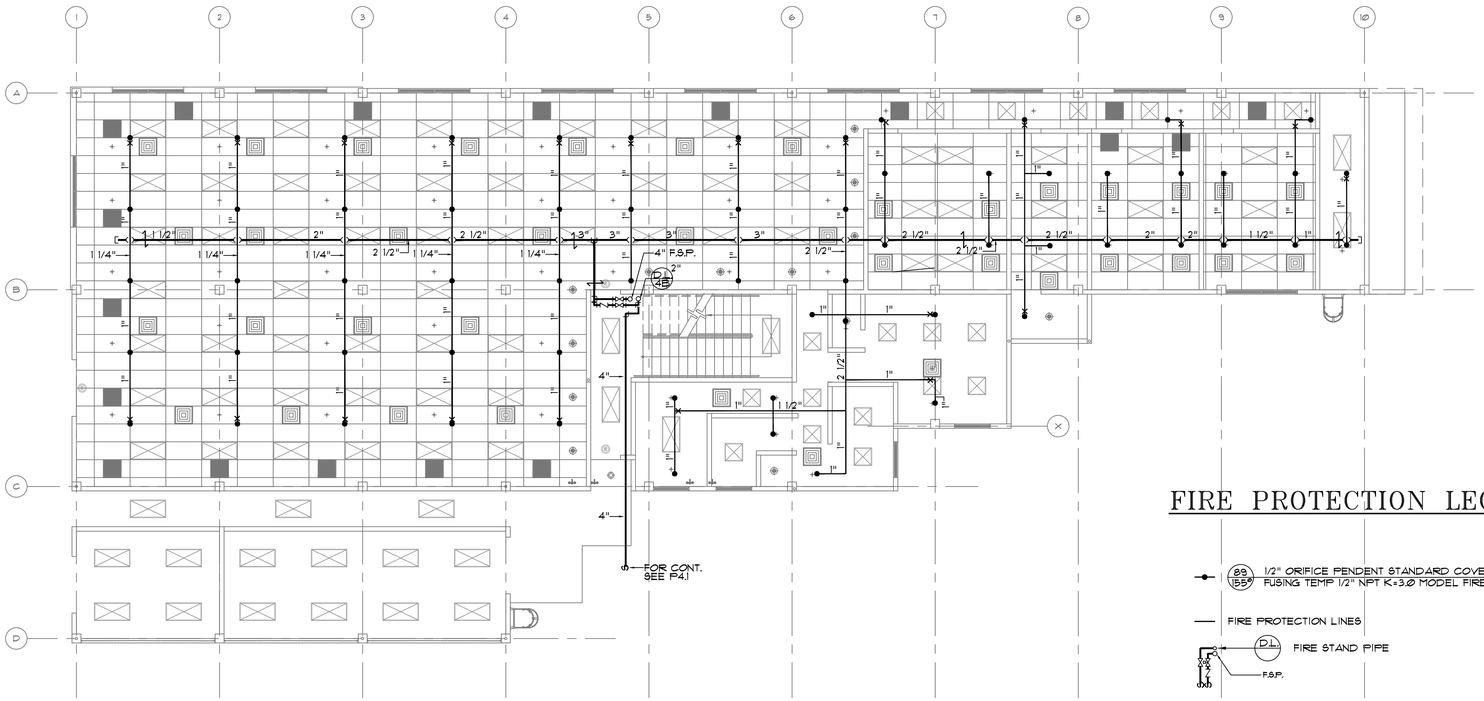
SHEET TITLE

PLUMBING LAYOUT AT SECOND FLOOR PLAN

SHEET ID

P4.1

SHEET

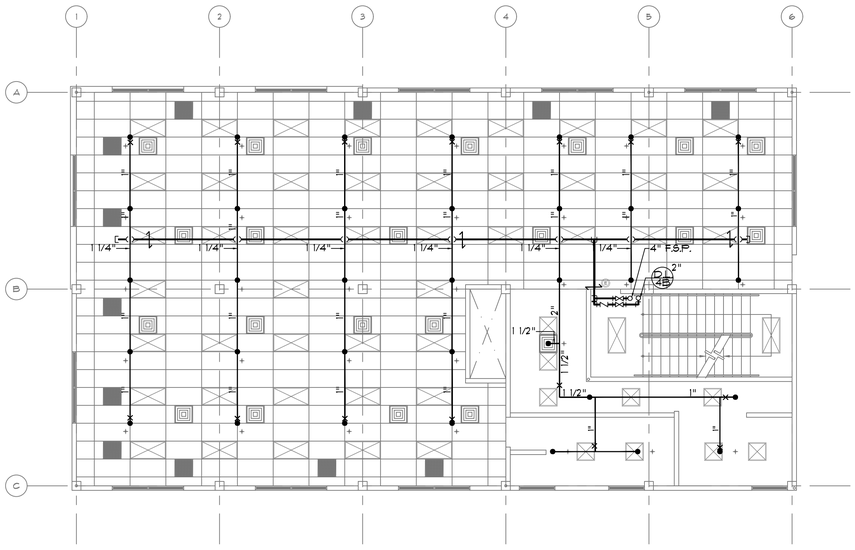


FIRE PROTECTION LAYOUT AT GROUND FLOOR PLAN

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

FIRE PROTECTION LEGEND

- 1/2" ORIFICE PENDENT STANDARD COVERAGE FUSING TEMP 1/2" NPT K=3.0 MODEL FIRES SERIES
- FIRE PROTECTION LINES
- D1 FIRE STAND PIPE
- F.S.P.
- PIPE HANGER
- EARTHQUAKE HANGER



FIRE PROTECTION LAYOUT AT SECOND FLOOR PLAN

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

OWNER

PROPONENT

.\LOGO FIGUEROA.png

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SEAL

Jorge Antonio Torres Scandali
Ingeniero
Mecánico
Lic. 10906-19
Puerto Rico
Fecha de Expiración: 2024-11-19

NOTA IMPORTANTE:

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BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

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REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

FIRE PROTECTION LAYOUT AT GROUND AND SECOND LEVEL

SHEET ID

FP1.1

SHEET

FILE NAME	23-078-FP1.1
PLOT DATE	04/30/24
DWG. #	FP1.1
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	D.P.D.
ARCHIVO #:	23-078

01. THIS DRAWINGS SHOW THE CONCEPT AND INTENT OF THE DESIGN AND GENERAL ARRANGEMENT TO FULLFILL THE REQUIREMENTS OF THE UNDERWRITER AND CODE. IT IS NOT THE INTENTION TO SUBSTITUTE AND/OR WAIVE THE REQUIREMENTS OF SHOP/FABRICATION AND INSTALLATION DRAWINGS TO BE SUBMITTED BY THE FIRE PROTECTION CONTRACTOR FOR FINAL APPROVAL BY UNDERWRITER. THEREFORE, THESE DRAWINGS DOES NOTE SHOW ALL DETAILS OF CONSTRUCTION WHICH ARE THE RESPONSIBILITY OF THE FIRE PROTECTION CONTRACTOR TO FULLY COMPLY WITH CODES AND UNDERWRITER REQUIREMENTS.

02. DESIGN (SHOP DRAWING AND HYDRAULIC CALCULATIONS), FABRICATION, INSTALLATION AND TESTING SHALL CONFORM WITH NFPA #13, #14, #20, #24 LATEST EDITION LOCAL BUILDING CODE, FIRE DEPARTMENT OF PUERTO RICO PREVENTION CODE AND INSURANCE COMPANY REQUIREMENTS.

03. SHOP DRAWINGS AND HYDRAULIC CALCULATIONS SHALL BE STAMPED AND SIGNED BY PROFESSIONAL ENGINEER REGISTERED IN PUERTO RICO.

04. IT IS REQUIRED THAT HYDRAULIC CALCULATIONS TO BE SUBMITTED BY SPRINKLER CONTRACTOR SHALL DEMONSTRATE A PERFORMANCE (TOTAL SYSTEM FLOW AND PRESSURE) AT BASE OF RISER EQUAL OR BETTER THAN THE EXPECTED FOR THE SPRINKLER SYSTEM SHOWN IN THESE DRAWINGS.

05. ALL PIPING 1" @ 2" DIAMETER SHALL BE BLACK CARBON STEEL ASTM A-53, SCH. 40, WITH 175 PSI WORKING PRESSURE SCREWED CAST OR MALLEABLE FITTINGS.

06. PIPING 2-1/2" AND LARGER SHALL BE BLACK CARBON STEEL ASTM A-135, SCH. 10, WITH WELDED OUTLET AND GROOVE END FITTINGS.

07. FIRE PUMP INSTALLATION SHALL CONFORM NFPA #20 LATEST EDITION.

08. UNDERGROUND PIPING INSTALLATION SHALL CONFORM NFPA #24 LATEST EDITION.

09. ALL MATERIAL AND DEVICES SHALL BE U.L. LISTED AND F.M. APPROVED.

10. ALL EXPOSED PIPES SHALL BE STAINLESS STEEL. FITTING SHALL BE VIEGA-MEGA PRESS

11. DESIGN CRITERIA:

(A) AREAS: RESIDENTIAL (LIGHT HAZARD)

- DENSITY :0.10 GPM /SQFT
- DESIGN AREA: 1500 SQFT
- HOSE ALLOWANCE:100 GPM

12. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND HYDRAULIC CALCULATIONS OF THE COMPLETE SPRINKLER SYSTEM TO THE APPROVING AUTHORITY BEFORE INSTALLATION. NO INSTALLATION SHALL PROCEED WITHOUT THE ENGINEERS WRITTEN APPROVAL.

13. NO CHANGES TO THE QUANTITY OF SPRINKLERS, DIAMETERS OF PIPING OR CONCEPT OF THE PROJECT WILL BE ALLOW UNTIL WRITTEN APPROVAL.

14. CONTRACTOR SHALL COORDINATE THE FINAL LOCATION OF SPRINKLER HEADS IN ORDER TO AVOID OBSTRUCTIONS WITH DUCT WORK, A.C. UNITS, PIPES, LIGHTING FIXTURES AND SO ON, IN ACCORDANCE WITH NFPA #13, LATEST EDITION.

15. IT WILL BE SPRINKLER CONTRACTOR RESPONSIBILITY TO LAYOUT THE LOCATION FOR EARTHQUAKE BRACINGS, PERFORM DESIGN LOADS CALCULATIONS;PREPARE INSTALLATION DETAILS AND SIZE THE BRACING COMPONENTS FOR THE DESIGN LOADS. THIS CONTRACTOR SHALL SUBMIT EVIDENCE THAT SUCH COMPONENTS ARE ADEQUATE FOR THE EXPECTED LOADS,THIS CONTRACTOR SHALL FOLLOW THE RECOMMENDATIONS OUTLINED IN THE FACTORY MUTUAL DATA SHEET 2-8 "EARTHQUAKE PROTECTION FOR WATER -BASED FIRE PROTECTION SYSTEMS".

16. ALL CONTROL VALVES SHALL BE SUPERVISED.

17. ALL SUPERVISORY AND FLOW SWITCHES SHALL BE CONNECTED TO THE FIRE ALARM PANEL.

18. AUDIBLE AND VISIBLE ALARMS POWERED BY A SOURCE OTHER THE ENGINE STARTING BATTERIES AND NOT EXCEEDING 125 VOLTS SHALL BE PROVIDED AT THE FIRE ALARM PANEL ON GUARD HOUSE FOR ALL FIRE PUMP EQUIPMENT ALARMS AND SIGNALS

19. EL CONTRATISTA Y SUB-CONTRATISTA DEBERAN REFERIRSE A LOS PLANOS DE PLAFONES REFLEJADOS ARQUITECTONICOS PARA LA COORDINACION Y LOCALIZACION DE LAS INSTALACIONES MECANICAS, ELECTRICAS Y SISTEMAS DE PROTECCION CONTRA INCENDIOS, LOS CUALES INCLUYEN: LAMPARAS, ROCIADORES, UNIDADES DE AIRE ACONDICIONADO, PARRILLAS DE EXTRACCION, PUERTAS DE ACCESO, ETC.

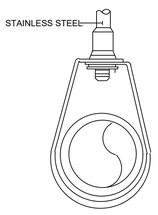
EN CASO DE QUE SE ESPECIFIQUEN EN LAS HOJAS ARQUITECTONICAS EQUIPOS DE ESTA DISCIPLINA PREVALECERA LA CONDICION MAS RESTRICTIVA.

20. FIRE PUMP CONTROL PANEL AND FIRE PUMP STATUS SHALL BE SUPERVISED BAY MAIN FIRE ALARM CONTROL PANEL.

21. PROVIDE DIESEL TANK LOW FUEL LEVEL ALARM CONNECT TO MAIN FIRE ALARM PANEL.

01 GENERAL NOTES AND DESIGN CRITERIA FOR FIRE PROTECTION

N.T.S.



NOTES: (EXPOSED COMPONENTS SHALL BE STAINLESS STEEL)

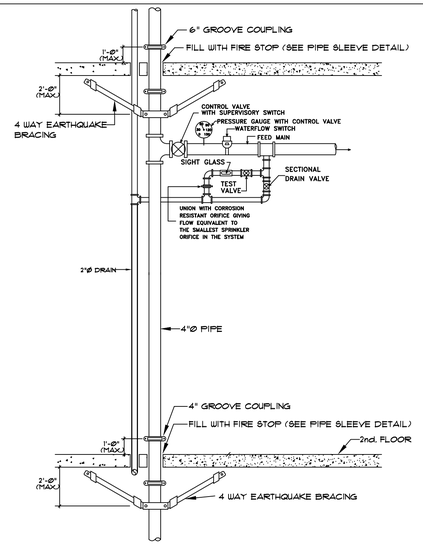
1 .ROD SIZE
3/8" FOR 1/2" TO 2" PIPE
1/2" FOR 1/2" TO 3 1/2" PIPE
5/8" FOR 4" AND 5" PIPE
3/4" FOR 6" PIPE
7/8" FOR 8" PIPE

2 .FINISH
ZINC COATED FOR STEEL PIPE AND CASTIRON PIPE
COPPER PLATED FOR COPPER PIPE

3 .FOR INSULATED LINE RING SHALL BE SELECTED FOR TOTAL OUTSIDE DIAMETER INSULATION SHALL BE PROTECTED BY SHIELD # 18 GA. GALVANIZED STEEL,ROLLED TO FIT THE OUTSIDE DIAMETER AND NOT LESS THAN 12" LONG.

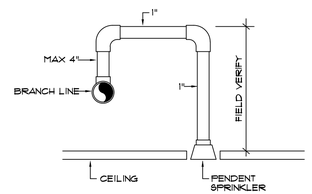
02 HANGER RING DETAIL

N.T.S.



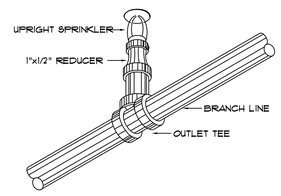
03 HOSE VALVE AND ZONE CONTROL VALVE PIPING AT STAIRS LOCATION

N.T.S.



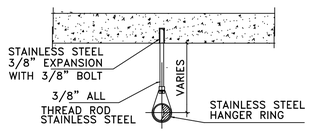
04 BELOW CEILING SPRINKLER (TYPICAL DETAIL)

N.T.S.



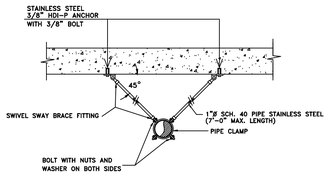
05 TYPICAL UPRIGHT SPRINKLER DETAIL

N.T.S.



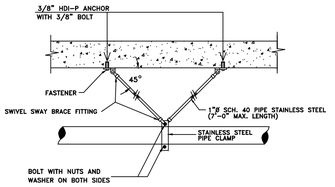
06 HANGER FOR CONCRETE SLAB

N.T.S.



07 LATERAL EARTHQUAKE BRACING

N.T.S. MAX SPACING: 40'-0"



08 LATERAL EARTHQUAKE BRACING

N.T.S. MAX SPACING: 80'-0"

OWNER

PROPONENT

\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

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SEAL

Jorge Antonio Torres Scandali
Ingeniero
Mecánico
LIC. 10906-15
Puerto Rico
Fecha de Expiración: 2024.11.19

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BARRANQUITAS PUERTO RICO

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BRA PROJECT NUMBER:	

SHEET TITLE

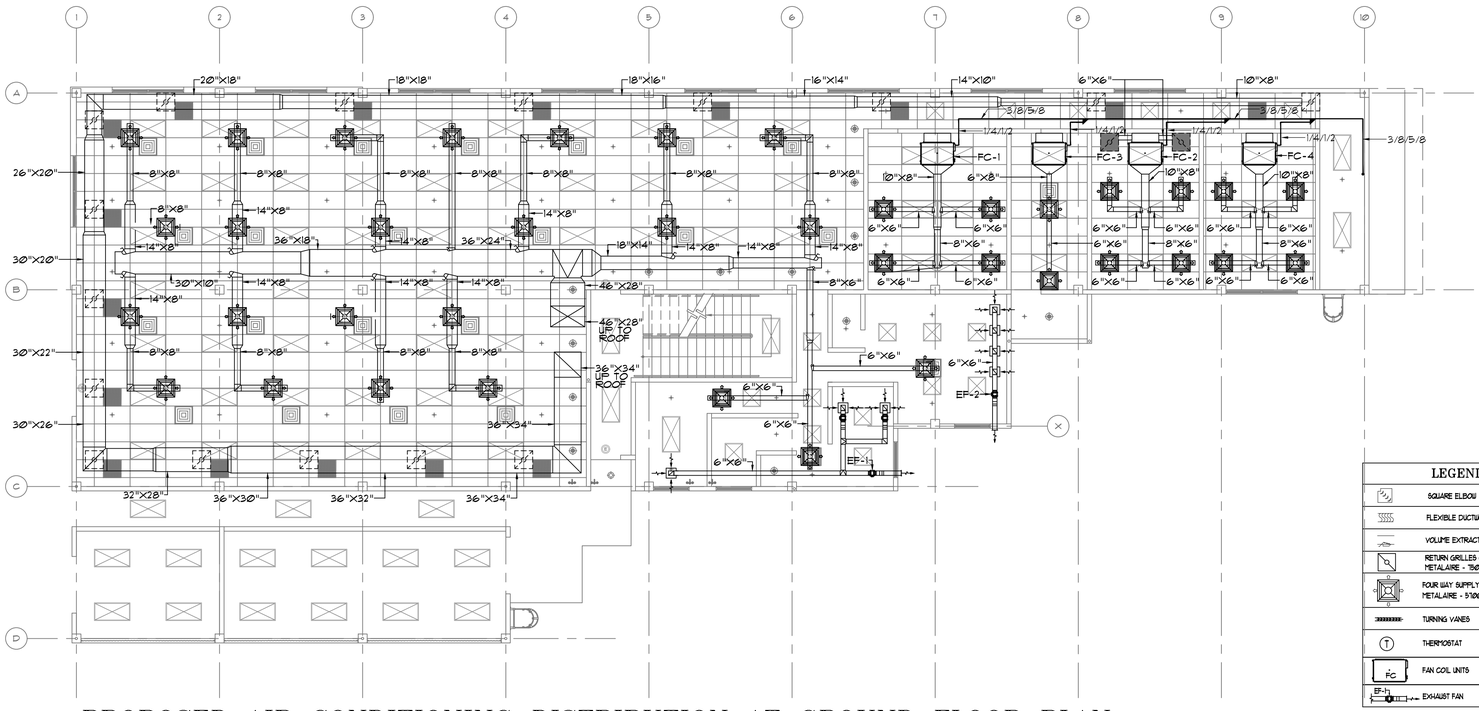
FIRE PROTECTION NOTES AND DETAILS

SHEET ID

FP2.0

SHEET

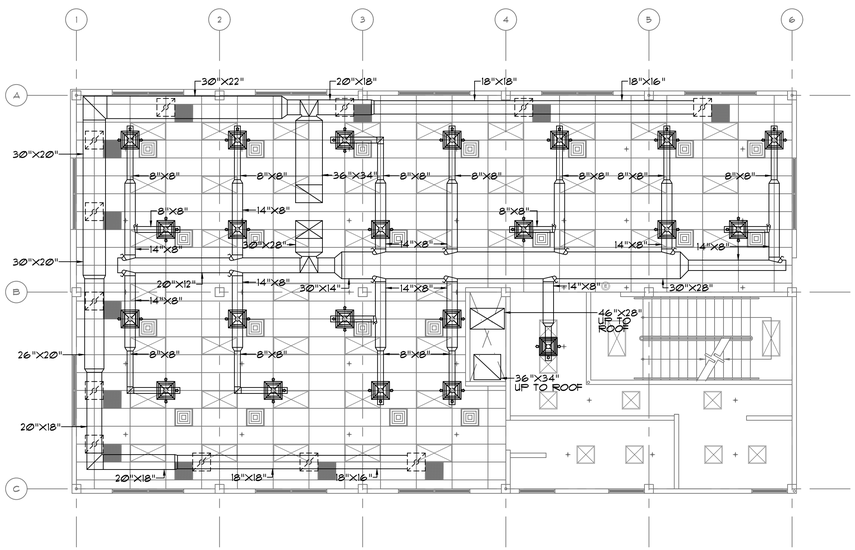
FILE NAME	23-078-FP2.0
PLOT DATE	01/12/24
DWG. #	FP2.0
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	-
ARCHIVO #:	23-078



PROPOSED AIR CONDITIONING DISTRIBUTION AT GROUND FLOOR PLAN

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

LEGEND	
	SQUARE ELBOW
	FLEXIBLE DUCTWORK
	VOLUME EXTRACTOR
	RETURN GRILLES OR REGISTERS METALAIRE - 150DR-AL-24" X 24"
	FOUR WAY SUPPLY DIFFUSER METALAIRE - 5100-T-24" X 24"
	TURNING VANES
T	THERMOSTAT
FC	FAN COIL UNITS
EF-1	EXHAUST FAN



PROPOSED AIR CONDITIONING DISTRIBUTION AT SECOND FLOOR PLAN

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

OWNER

PROPONENT

\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

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MECHANICAL ENGINEER, LIC. 4951

SEAL

Jorge Antonio Torres Scandali
Ingeniero
Licenciado
Lic. 10906 PE
Puerto Rico
Fecha de Expiración: 2024-11-19

NOTA IMPORTANTE:

Yo, JORGE A. TORRES SCANDALI, INGENIERO MECANICO, LICENCIA 10906, certifico que soy el profesional que diseñó la MECANICA, en estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estos planos y especificaciones se ha cumplido cabalmente con lo dispuesto en la Ley 14-2004, según enmendada, conocida como la Ley para la Inversión por la Industria Puertorriqueña y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada; según aplique. Reconozco que cualquier declaración falsa o falsificación de los hechos que se haya producido por desconocimiento o por negligencia ya sea por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGPe.

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

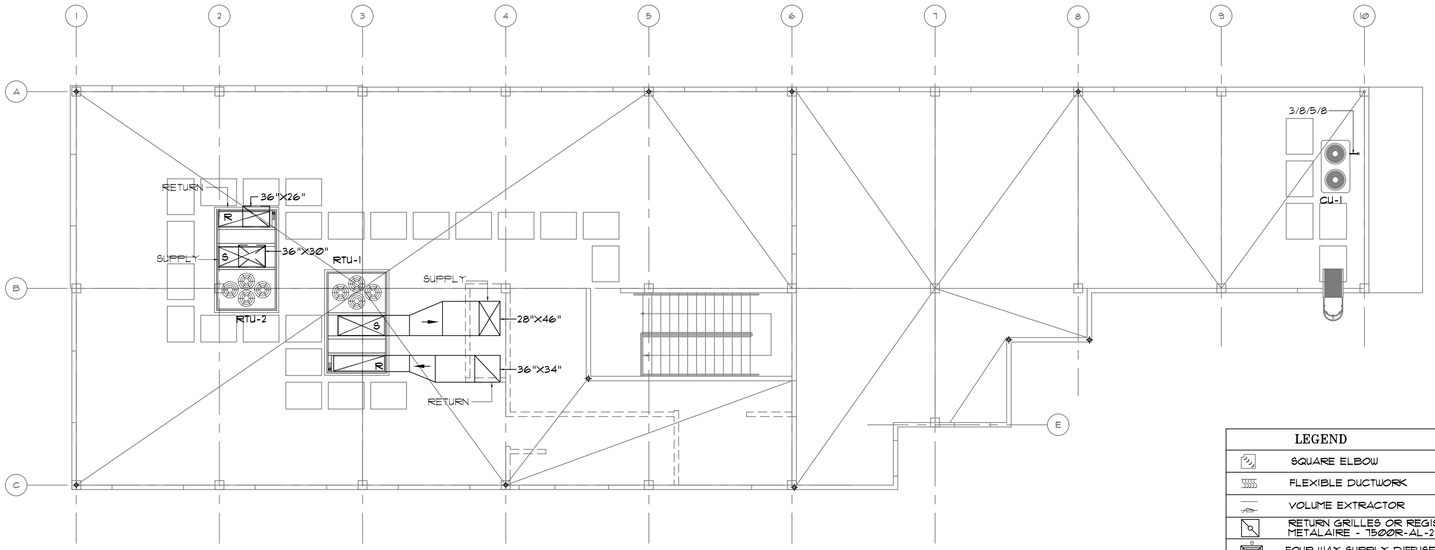
PROPOSED GROUND AND SECOND FLOOR A/C DISTRIBUTION PLAN

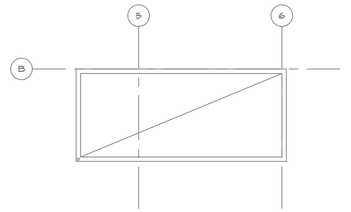
SHEET ID

AC1.1

SHEET

FILE NAME:	23-078-AC1.1
PLOT DATE:	04/30/24
DWG. #:	AC1.1
DESIGNER:	J.T.S.
APPROVING:	J.T.S.
DRAFTSMAN:	D.P.D.
ARCHIVO #:	23-078





AIR CONDITIONING AT ROOF LEVEL

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

LEGEND	
	SQUARE ELBOW
	FLEXIBLE DUCTWORK
	VOLUME EXTRACTOR
R	RETURN GRILLES OR REGISTERS METALAIRE - 7500-AL-24" X 24"
S	FOUR WAY SUPPLY DIFFUSER METALAIRE - 5700-7-24" X 24"
	TURNING VANES
T	THERMOSTAT
FC	FAN COIL UNITS
EF-1	EXHAUST FAN
RTU-	ROOF TOP UNIT
	CU- CONDENSING UNIT

FILE NAME	23-078-AC1.2
PLOT DATE	04/30/24
DWG. #	AC1.2
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	D.P.D.
ARCHIVO #:	23-078

OWNER

PROPONENT

\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

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PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

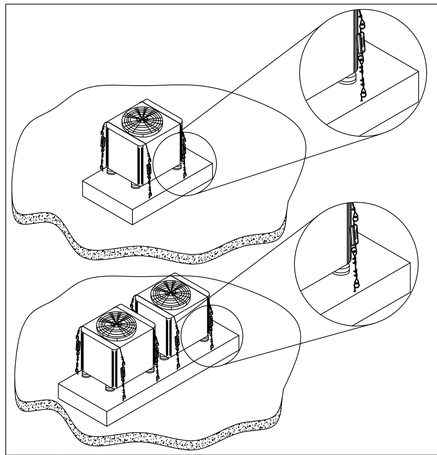
SHEET TITLE

AIR CONDITIONING DISTRIBUTION AT ROOF LEVEL

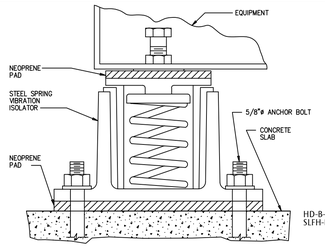
SHEET ID

AC1.2

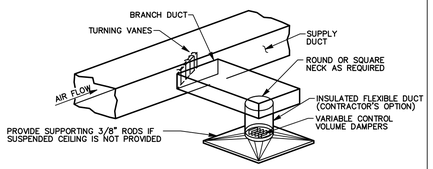
SHEET



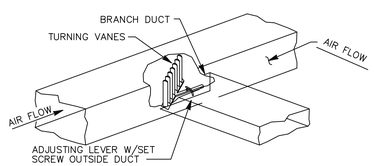
01 CONDENSING UNIT ANCHORAGE DETAIL
N.T.S.



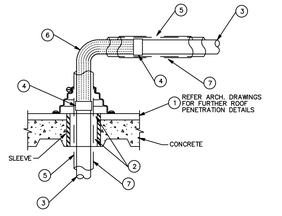
02 VIBRATION ISOLATOR DETAIL FOR CONDENSING UNITS
N.T.S.



03 TYPICAL CEILING DIFFUSER DETAIL
N.T.S.

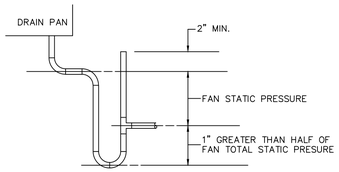


04 TYPICAL BRANCH TAKE-OFF DETAIL
N.T.S.



1. INSULATION AND BUILT UP ROOFING.
2. SEAL PENETRATION GAS-TIGHT WITH INSULATION AND FLEXIBLE SEALANT COMPATIBLE WITH PIPE MATERIAL.
3. STANDARD PIPE MATERIAL FOR REFRIGERANT LINES, SUPPORT PIPE AWAY FROM BUILDING.
4. SUITABLE ADAPTING COUPLING TO CONNECT COPPER REFRIGERANT LINE TO HOSE SECTION.
5. PIPE INSULATION SHALL BE CONTINUOUS THRU BOUNDARY SURFACE(ROOF) AND BEYOND.
6. NON-METAL HIGH PRESSURE HOSE SECTION, HOSE SECTION AND ABOVE ROOF PIPING SHALL BE COVERED W/INSULATION AND BANDED ALUMINUM PIPE JACKET.
7. PIPE SUPPORT POINT. ENSURE HOSE DOES NOT CARRY ANY PIPE LOAD FROM REFRIGERANT LINES, SEE NOTE 3.

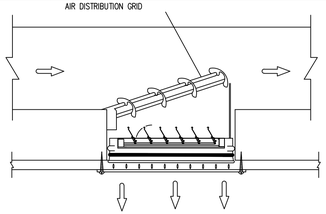
05 REFRIGERANT LINE PENETRATION
N.T.S.



NOTE:

1. DRAIN LINE SHALL BE INSULATED.
2. DRAIN LINE SHALL PENETRATE THE ROOF LINE WITHIN THE CONFINEMENT OF THE HVAC EQUIPMENT CURB.

06 CONDENSATE DRAIN TRAP DETAIL
N.T.S.



1 – CONNECT AIR DISTRIBUTING GRID TO EXTENSION DUCT COLLAR.

2 – FASTEN EXTENSION DUCT COLLAR AND DISTRIBUTING GRID ASSEMBLY TO DUCT WORK WITH SHEET METAL SCREWS

3 – AFTER CEILING OR WALL IS INSTALLED, INSTALL REGISTER WITH SHEET METAL SCREWS.

4 – CHECK TO SEE IF SPONGE RUBBER GASKET IS DRAWN UP AGAINST WALL OR CEILING FORMING AN AIR TIGHT SEAL, IF NOT READJUSTABLE AND RECHECK.

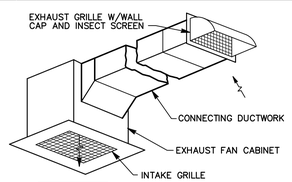
5 – SET FACE BARS AND REAR BARS FOR BEST ROOM DISTRIBUTION.

6 – BALANCE AND ADJUST AIR FLOW QUANTITIES SHOWN ON PLANS.

7 – CLEAN CONSTRUCTION DIRT FROM REGISTER.

8 – REMOVE DAMPER OPERATOR KNOB FROM REGISTER AND TURN OVER TO OWNER'S REPRESENTATIVE.

07 LINEAR DIFFUSER INSTALLATION DETAIL
N.T.S.

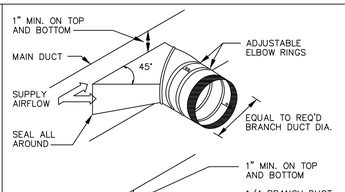


08 CEILING EXHAUST FAN DETAIL
N.T.S.

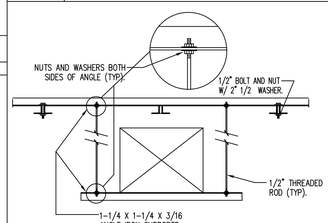
FAN NO.	SONES	CAPACITY C.F.M.	TOTAL STA. PRESS IN H²O	SPEED MAX. R.P.M.	MOTOR H.P.	REMARKS	LOCATION	FAN SELECTED
SF-1								
*EF-1		200	.25	2289	65 WATTS		BATHROOM	SOLER&PALAU TD-150

*CONSTANT OPERATION

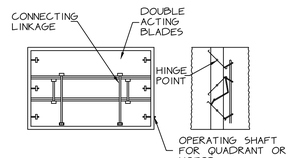
04 SUPPLY & EXHAUST FANS SCEDULE
N.T.S.



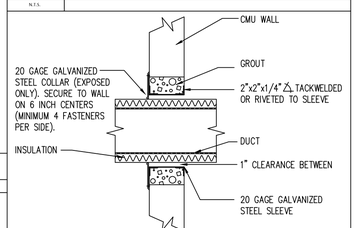
09 TYPICAL BRANCH TAKE-OFF FITTING
N.T.S.



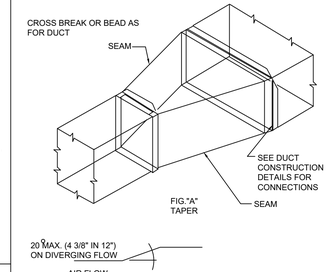
10 DUCT HANGER DETAIL
N.T.S.



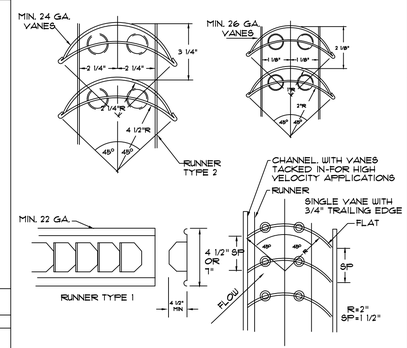
11 TYPICAL VOLUME DAMPER
N.T.S.



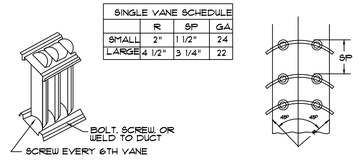
12 DUCT PENETRATION THROUGH WALL
N.T.S.



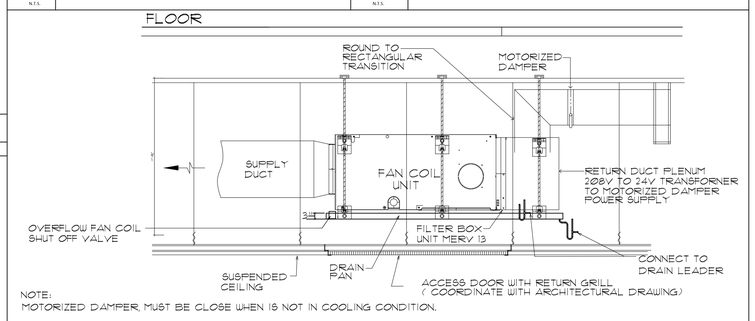
14 TRANSITION & SUPPORT DUCT
N.T.S.



SINGLE VANE SCHEDULE			
	R	SP	GA.
SMALL	2"	1 1/2"	24
LARGE	4 1/2"	3 1/4"	22



15 VANES RUNNERS
N.T.S.



NOTE:
MOTORIZED DAMPER MUST BE CLOSE WHEN IS NOT IN COOLING CONDITION.

13 FAN COIL UNITS INSTALLATION DETAIL
N.T.S.

NO.	MANUFACTURER	MODEL	SIZE	C.F.M.	VOLUME CONTROL TYPE	LOCATION	QTY
1	TUTTLE & BAILEY	1200	24"X24"		OPPOSED BLADE DAMPER	ACTIVITY AREA	
1AR	TUTTLE & BAILEY	APR	24"X24"		OPPOSED BLADE DAMPER	ACTIVITY AREA	
1B	TUTTLE & BAILEY	1200	24"X24"		OPPOSED BLADE DAMPER	FIRST AID	
1BR	TUTTLE & BAILEY	APR	24"X24"		OPPOSED BLADE DAMPER	FIRST AID	
2	TUTTLE & BAILEY	1200	24"X24"		OPPOSED BLADE DAMPER	KITCHEN	
2R	TUTTLE & BAILEY	APR	24"X24"		OPPOSED BLADE DAMPER	KITCHEN	
3	TUTTLE & BAILEY	1200	24"X24"		OPPOSED BLADE DAMPER	OFFICE	
3R	TUTTLE & BAILEY	APR	24"X24"		OPPOSED BLADE DAMPER	OFFICE	
4	TUTTLE & BAILEY	1200	24"X24"		OPPOSED BLADE DAMPER	STORAGE	
4R	TUTTLE & BAILEY	APR	24"X24"		OPPOSED BLADE DAMPER	STORAGE	

16 SUPPLY & EXHAUST GRILLE SCHEDULE
N.T.S.

17 EXHAUST FAN DETAIL
N.T.S.

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

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BARRANQUITAS PUERTO RICO

REVISIONS

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DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

AIR CONDITIONING NOTES AND DETAILS

SHEET ID

AC2.0

SHEET

FILE NAME	23-078-AC2.0
PLOT DATE	01/12/24
DWG. #	FP2.0
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	-
ARCHIVO #:	23-078

MITSUBISHI ELECTRIC TRANE HVAC US: CITY MULTI VRF INDOOR UNIT SCHEDULE

System Tag		CU-01	CU-01	CU-01	CU-01
Tag Reference		FC-01	FC-02	FC-03	FC-04
Nominal Data	Room Name	FIRST AID	KITCHEN	OFFICE	STORAGE
	M-NET Address	1	2	3	4
	Model	TPEFYP008MA144A	TPEFYP012MA143A	TPEFYP008MA144A	TPEFYP006MA143A
	Type	Ceiling-Concealed (Ducted	Ceiling-Concealed (Ducted	Ceiling-Concealed (Ducted	Ceiling-Concealed (Ducted)
	Nominal Cooling Capacity (BTU/h)	8,000	12,000	8,000	6,000
	Nominal Heating Capacity (BTU/h)	9,000	13,500	9,000	6,700
Design Conditions	Cooling Design Entering Temp DB/WB (°F)	73.7/63.0	73.7/63.0	73.7/63.0	73.7/63.0
	Cooling Diversity Full/Partial (See Note 5, 6)	FULL DEMAND	FULL DEMAND	FULL DEMAND	FULL DEMAND
	Refrig Pipe Dim Liquid/Suction (inch)	1/4 / 1/2	1/4 / 1/2	1/4 / 1/2	1/4 / 1/2
Performance Data	Cooling Total Capacity (BTU/h)	7,027.2	10,540.8	7,027.2	5,270.4
	Cooling Sensible Capacity (BTU/h)	5,658.3	7,424.9	5,658.3	5,024.4
	Estimated Cooling Coil LAT (°F) / [LWT]	56.1	55.0	56.1	58.1
Fan / Water Flow Data	Fan Speed Setting	HIGH	HIGH	HIGH	HIGH
	Peak Fan Airflow (cfm)	300	371	300	300
	Max Fan ESP Setting 208V/230V (IN WG)	0.6/0.6	0.6/0.6	0.6/0.6	0.6/0.6
	nd Pressure Per Fan Speed 208V/230V (dBA)	24-28-30	28-30-34	24-28-30	26-28-29
Electrical Data	Voltage / Phase	208/230V/1-phase	208/230V/1-phase	208/230V/1-phase	208/230V/1-phase
	Power Cooling 208V/230V (kW)	0.042	0.090	0.042	0.060
	Electrical MCA/MFS				
	Condensate Removal Rate (gal/hr)	1.75/15	1.20(208V)/1.20(230V)/15	1.75/15	1.05(208V)/1.05(230V)/15
	Actual Port Assignments	0.28	0.45	0.28	0.02
Notes / Options	Applicable System Notes - See Notes Below				
		1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4

Notes & Options:
1 Nominal cooling capacities are based on indoor coil EAT of 80/67°F (DB/WB), outdoor of 95°F (DB)
2 Nominal heating capacities are based on indoor coil EAT of 70°F (DB), outdoor of 43°F (WB)
3 See outdoor unit schedule for outdoor ambient conditions, connected capacity, and other factors associated with corrected capacities
4 See schematic piping/control diagram for indication of required indoor unit remote controllers, system controllers, and integration devices.
5 Full demand corrected capacity includes de-rate associated with indoor vs. outdoor connected capacity indicated on outdoor unit schedule for associated
6 It is recommended to always base heating corrected capacity on full demand.

MITSUBISHI ELECTRIC TRANE HVAC US: CITY MULTI VRF OUTDOOR UNIT

System Tag		CU-01
Tag Reference		CU-01
Nominal Data	M-NET Address	51
	Model Number	TUMYP0361AK42NA
	Modules	P36
	Nominal Cooling Capacity (BTU/h)	36,000
	Nominal Heating Capacity (BTU/h)	42,000
	Cooling Efficiency (I)EER [SEER]	0 / 13.8 [20.3]
	EER2 [SEER2]	0 [0]
	Nom System Connected Capacity (% of NOM)	94.4 %
Design Conditions	Design Cooling Outdoor Temp DB (°F)	92.0
	Max Pipe Length from BC or 1st Joint (feet)	42.0
	ig Pipe Dim High/Low Pressure (inch) (See Note 4)	3/8 / 5/8
Performance Data	Corrected Cooling Total Capacity (BTU/h)	35,770.7
	Sound Pressure (dBA)	49/53
Compressor Data	Compressor Type	SCROLL
	Compressor Quantity	1
	Preliminary Added Field Charge (See Note 5)	7.8
Electrical Data	Voltage / Phase	208/230V / 1-phase
	MCA 208/230 or [460V]	29
	Recommended Fuse Size (RFS)	30
	MOCP	44
Notes / Options	Applicable System Notes - See Notes Below	, 2, 3, 4, 5, 6, 7, 8, 9, 10

Notes & Options:
1 Nominal cooling capacities are based on indoor coil EAT of 80/67°F (DB/WB), outdoor of 95°F (DB)
2 Nominal heating capacities are based on indoor coil EAT of 70°F (DB), outdoor of 43°F (WB)
3 Efficiency values for EER, IEER, COP are based on AHRI 1230 test method for mixture of ducted & non-ducted indoor units.
4 For systems with multiple modules, refrigerant pipe dimensions indicate total system combined piping downstream of module
5 Added field charge listed is in addition to factory charge, this must be updated based upon final as-built piping layout.
6 Corrected capacities shown are based on highest guaranteed outdoor temperature, temperatures above this are not guaranteed.
7 Factory representatives shall review the project prior to and throughout the installation of CITY MULTI equipment
8 Factory representatives shall startup and commission CITY MULTI equipment upon completion of equipment installations
9 Factory representatives shall provide on-site assistance for the BMS integration of the CITY MULTI equipment
10 Factory representatives shall provide end-user training on the CITY MULTI equipment upon completion of the installation of

01 FAN COIL SCHEDULE

N.T.S.

02 CONDENSING UNITS SCHEDULE

N.T.S.

Rooftop Unit Schedule		
Unit Configuration Data		
Tag Name	RTU-01	RTU-02
Unit Model	50FC-M28A2A5-0A0A0	50FC-M24A2A5-0A0A0
Unit Size	28 (25.0 Tons)	24 (20.0 Tons)
Unit Quantity	1	1
Volts-Phase-Hertz	208-3-60	208-3-60
Duct Configuration	Vertical Supply / Vertical Return	Vertical Supply / Vertical Return
Base Unit Length (in)	141.5	141.5
Base Unit Width (in)	86.4	86.4
Base Unit Height (in)	47.8	47.8
Base Unit Weight (lb)	2047	1873
Total Oper. Weight (lb)	0.0	0.0
Part Number	50FC-M28A2A5-0A0A0	50FC-M24A2A5-0A0A0
Unit Ratings		
ARI EER	10.00	10.20
Cooling Performance		
Actual Airflow (CFM)	6250	5200
Condenser Entering Air DB (F)	95.0	95.0
Evaporator Entering Air DB (F)	78.9	78.5
Evaporator Entering Air WB (F)	67.6	67.2
Evaporator Leaving Air DB (F)	54.2	53.7
Evaporator Leaving Air WB (F)	53.3	52.3
Gross Cooling Capacity (MBH)	275.11	235.33
Gross Sensible Cooling Capacity (MBH)	167.03	139.05
Compressor Power Input (kW)	23.37	20.19
Supply Fan		
External Static Pressure (in wg)	1.00	1.00
Total Static Pressure (in wg)	1.00	1.00
Supply Fan RPM	1422	1434
Supply Fan Power (BHP)	2.77	2.21
Maximum Continuous bHP	10	10
Electrical Data		
Rooftop MCA	129.2	95.3
Rooftop MOCP	175	125
Outside Air(cfm)	1300	1300
Accs:		
Hurricane Rated Curbs		
Manual OA Damper		

03 ROOF TOP UNITS SCHEDULE

N.T.S.

OWNER

PROPONENT

:\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

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Jorge Antonio Torres Scandali
Ingeniero
Licenciado
Lic. 10906 PE
Puerto Rico
Fecha de Expiración: 2024-11-19

NOTA IMPORTANTE:

Yo, JORGE A. TORRES SCANDALI, INGENIERO MECANICO, LICENCIA 10906, certifico que soy el profesional que diseñó la MECANICA, en estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estos planos y especificaciones se ha cumplido cabalmente con la disputesto en la Ley 14-2004, según enmendada, conocida como la Ley para la Inversión por la Industria Puertorriqueña y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada; según aplique. Reconozco que cualquier declaración falsa o falsificación de los hechos que se hayan producido por desconocimiento o por negligencia ya sea por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGPe.

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

AIR CONDITIONING SCHEDULE

SHEET ID

AC2.1

SHEET

FILE NAME	23-078-AC2.1
PLOT DATE	01/23/24
DWG. #	FP2.1
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	-
ARCHIVO #:	23-078

DIAGRAM SYMBOL LEGEND	
DISPLAY	DESCRIPTION
——///——	POWER WIRE
————	CONTROL WIRE
————	REF. PIPE

CONT.No		PAGE	

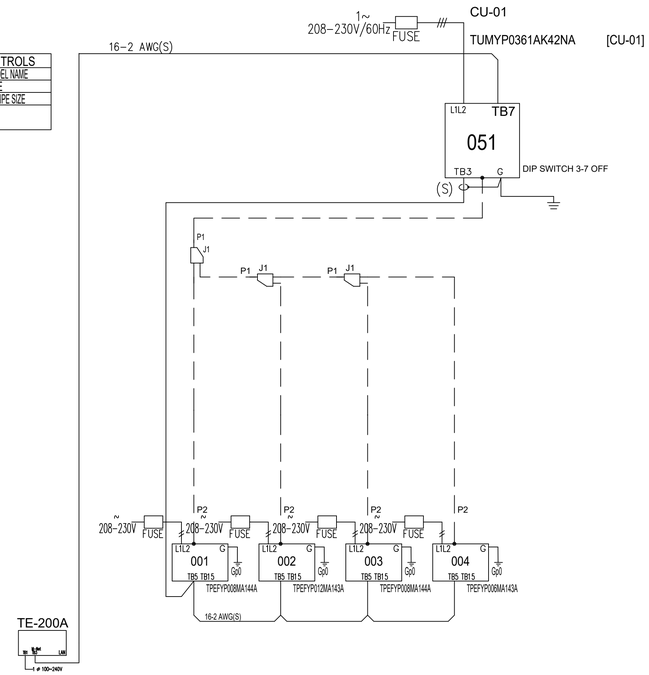
CITY MULTI
SYSTEM SCHEMATIC DWG.

This drawing is schematic in nature. Final routing of piping & wiring shall be determined by the installing contractor and/or designer of record

Additional refrigerant charge is needed depending on the size and length of extended piping. Please refer the amount of pre-charge and the formula of calculation which is mentioned on the data book.

1.25mm²(16 AWG) : 1.25mm²(16 AWG) or more. 0.75mm²(20 AWG) : between 0.5mm²(24 AWG) and 0.75mm²(20 AWG).

PIPING AND CONTROLS	
SYMBOL	BRANCH PIPE MODEL NAME
J1	CMY-Y62-G-E
SYMBOL	LIQUID PIPE/GAS PIPE SIZE
P1	3/8 " / 5/8 "
P2	1/4 " / 1/2 "



FIRST AID , KITCHEN , OFFICE , STORAGE ,
FC-01 , FC-02 , FC-03 , FC-04 ,

01	AIR CONDITIONING SYSTEM DIAGRAM
N.T.S.	

FILE NAME	23–078–AC2.2
PLOT DATE	01/23/24
DWG. #	FP2.2
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	–
ARCHIVO #:	23–078

OWNER

PROPONENT

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BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

AIR CONDITIONING SYSTEM SCHEMATIC

SHEET ID

AC2.2

SHEET

AIR CONDITIONING AND VENTILATION SPECIFICATIONS

1. SCOPE

THE WORK UNDER THIS SECTION INCLUDES THE FURNISHING OF ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY FOR PROVIDING, INSTALLING AND PUTTING INTO OPERATION THE VENTILATION AND AIR CONDITIONING WORK AS SHOWN ON DRAWINGS AND SPECIFIED HEREIN.

2. GENERAL

ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE ACCOMPLISHED BY EXPERIENCED PERSONNEL IN ACCORDANCE WITH THE RECOMMENDED PRACTICE OF THE ASHRAE AND THOSE OF THE MANUFACTURER OF THE EQUIPMENT AND MATERIALS INVOLVED. THERE SHALL BE STRICK ADHERANCE TO THE CODE REQUIREMENTS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS. ALL WORK SHALL BE DONE IN A NEAT AND WORKMAN LIKE MANNER AND THE PREMISES SHALL BE LEFT CLEAN AND FREE FROM DEBRIS.

3. GENERAL CONDITIONS

THE GENERAL CONDITIONS OF THE ARCHITECT ARE HERBY MADE PART OF THESE SPECIFICATIONS AND THE CONTRACTOR SHALL ASSUME ALL OBLIGATION CONTAINED THEREIN WHICH ARE APPLICABLE TO HIS WORK. IN THESE SPECIFICATIONS THE WORD "CONTRACTOR" SHALL MEAN THE AIR CONDITIONING CONTRACTOR.

4. PERMITS AND FEES

THE CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS OR LICENSES TO CARRY OUT THIS WORK, AND HE SHALL PAY ALL LAWFUL FEES, TAXES, ETC., IN CONNECTION WITH THE WORK. HE SHALL ARANGE FOR ALL TESTS AND INSPECTIONS ON ANY OR ALL PARTS OF THE WORK REQUIRED BY THE AUTHORITIES AND ORGANIZATIONS HAVING JURISDICTION, AND HE SHALL PAY ALL CHARGES FOR SAME.

5. LAWS AND ORDINANCES

WORK TO BE PERFORMED UNDER THIS CONTRACT SHALL BE IN FULL ACCORDANCE WITH THE LAWS AND ORDINANCES PERTINENT TO SUCH WORK. IN CASE OF ANY CONFLICT WHERE IN THE METHODS OR STANDARDS OF INSTALLATION OR THE MATERIALS SPECIFIED DO NOT EQUAL OR EXCEED THE REQUIREMENTS OF THE LAWS OR ORDINANCES, THE THE LAWS OR ORDINANCES SHALL GOVERN. ANY ITEMS RQUIRED BY THE LAWS OR ORDINANCES BUT NOT SPECIFIED OR SHOWN ON THE DRAWINGS SHALL BE FURNISHED WITHOUT EXTRA CHARGE AS IF SHOWN OR SPECIFIED. THE WORDS "LAWS AND ORDINANCES" AS USED HEREIN SHALL MEAN ALL LOCAL CODES, ORDINANCES, STANDARDS, RULES, OR REGULATIONS OF ANY NATURE WHICH ARE IN ANY WAY PERTINENT TO, OR REGULATORY OVER THE WORK COVERED BY THIS SECTION OF THE SPECIFICATIONS.

6. EXAMINATION OF EXISTING CONDITIONS

A. BIDDERS, BEFORE SUBMITTING PROPOSALS, SHALL VISIT THE SITE AND CAREFULLY EXAMINE THOSE PORTIONS OF THE SITE AFFECTED BY THIS WORK SO AS TO FAMILIARIZE THEMSELVES WITH EXISTING CONDTIONS AND DIFFICULTIES THAT WILL AFFECT THE EXECUTION OF THE WORK.

B. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCES THAT SUCH EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD SUCH EXAMINATION BEEN MADE, WILL NOT BE RECOGNIZED.

7. APPROVALS

A. THE MATERIALS, WORKMANSHIP, DESIGN AND ARRANGEMENT OF ALL WORK INSTALLED UNDER THIS CONTRACT SHALL BE SUBJECTED TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE.

B. IF MATERIAL OR EQUIPMENT IS INSTALLED BEFORE IT IS APPROVED, THE CONTRACTOR SHALL BE LIABLE FOR ITS REMOVAL AND REPLACEMENT AT NO EXTRA CHARGE TO THE OWNER, IF IN THE OPINION OF THE OWNER'S REPRESENTATIVE, THE MATERIAL OR EQUIPMENT DOES NOT MEET THE INTENT OF THE DRAWINGS AND SPECIFICATIONS.

8. SHOP DRAWINGS

A. AFTER RECEIVING APPROVAL OF EQUIPMENT MANUFACTURERS, AND PRIOR TO THE DELIVERY OF ANY MATERIAL TO THE SITE, AND SUFFICIENTLY IN ADVANCE OF REQUIREMENT, TO ALLOW THE OWNER'S REPRESENTATIVE AMPLE TIME FOR CHECKING, SUBMIT FOR APPROVAL (5) COPIES OF DETAILED, DIMENSIONED SHOP OR ERECTION DRAWINGS OR CUTS, SHOWING CONSTRUCTION, SIZE ARRANGEMENT, OPERATING CLERANCES, PERFORMANCE CHARACTERISTICS AND CAPACITY OF MATERIALS AND EQUIPMENT TO BE FURNISHED. NO WORK SHALL BE INSTALLED WITHOUT THE WRITTEN APPROVAL OF SHOP DRAWINGS OR DATA.

B. SAMPLES, DRAWINGS, SPECIFICATIONS CATALOG, ETC., SUBMITTED FOR APPROVAL SHALL BE PROPERLY LABELED INDICATING SPECIFIC SERVICE OF WHICH MATERIAL OR EQUIPMENT IS TO BE USED. SECTION AND ARTICLE NUMBER OF SPECIFICATION GOVERNING, CONTRACTOR'S NAME AND NAME OF JOB.

C. CATALOG, PAMPHLETS OR OTHER DOCUMENTS SUBMITTED TO DESCRIBE ITEMS ON WHICH APPROVAL IS BEING REQUESTED, SHALL BE SPECIFIC AND IDENTIFICATION IN CATALOG, ETC., OF THOSE SUBMITTED SHALL BE CLEARLY MADE IN INK, DATA OF GENERAL NATURE WILL NOT BE ALLOWED.

D. FAILURE BY THE CONTRACTOR TO SUBMIT SHOP DRAWINGS IN AMPLE TIME FOR CHECKING SHALL NOT ENTITLE HIM TO AN EXTENSION OF CONTRACT TIME AND NO CLAIM FOR EXTENSION OF SUCH DEFAULT WILL BE ALLOWED.

E. SHOP DRAWINGS FOR SHEET METAL CONSTRUCTION (WHERE APPLICABLE) SHOULD BE MADE IN AT LEAST 1/4"=1'-0" SCALE WITH SECTION AND DETAILS IN 3/8"=1'-0" SCALE AND THESE DRAWINGS SHOULD BE SUBMITTED FOR APPROVAL BEFORE CONSTRUCTION OF DUCTS INSTALLED WITHOUT APPROVAL SHALL BE MADE ON THE AIR CONDTIONING CONTRACTOR'S BEHALF.

9. DISCREPANCIES

A. WHERE ANY DISCREPANCIES EXIST BETWEEN THE DRAWINGS AND THE SPECIFICATIONS OR WITHIN THE SPECIFICATIONS OR ON THE DRAWINGS, THEY SHALL BE REFERRED TO THE OWNER'S REPRESENTATIVE, FOR DECISION AS TO THE INTENTION, AND IN EACH CASEHIS DECISION SHALL BE FINAL.

B. THE CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AT THE BUILDING. NO EXTRA CHARGES WILL BE GRANTED BECAUSE OF DIFFERENCES BETWEEN ACTUAL JOB DIMENSIONS AND MEASUREMENTS INDICATED ON THE DRAWINGS. ANY DIFFERENCES WHICH MAY BE ENCOUNTERED SHALL BE SUBMITTED WITH THE WORK.

10. TESTS

A. THE CONTRACTOR SHALL CONDUCT SUCH TEST AND ADJUSTMENTS OF EQUIPMENT AS SPECIFIED OR NECESSARY TO VERIFY THE PERFORMANCE REQUIREMNTS AND DEMONSTRATE TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE THAT THE EQUIPMENT IS MECHANICALLY SOUND, THAT THE SYSTEM DELIVERS RATED OUTPUT WITHOUT OBJECTIONABLE NOISE DISTRESS OR VIBRATION AND THAT THE AUTOMATIC TEMPERATURE CONTROLS ARE FUNCTIONING PROPERLY.

B. ALL TEST SHALL BE MADE AT A TIME ACCEPTABLE TO THE OWNER'S REPRESENTATIVE AND IN HIS PRESENCE AND AS REQUIRED BY THE GOVERMENT REGULATIONS. THE CONTRACTOR SHALL SUBMIT DATA TAKEN DURING SUCH TESTS TO THE OWNER'S REPRESENTATIVE.

C. EQUIPMENT, INSTRUMENTS AND SERVICES REQUIRED TO PERFORM TESTING SHALL BE FURNISHED BY THE CONTRACTOR AND HE SHALL PAY ALL PROFESSIONAL ENGINEERING FEES INVOLVED IN REQUIRED TESTING OF EQUIPMENT.

11. GUARANTEE

A. THE CONTRACTOR GURANTEES BY HIS ACCEPTANCE OF THE CONTRACT THAT ALL WORK INSTALLED WILL BE FREE FROM ANY AND ALL DEFECTS IN WORKMANSHIP AND MATERIALS AND THAT ALL APPARATUS WILL DEVELOP CAPACITIES AND CHARACTERISTICS SPECIFIED.

B. PRIOR TO FINAL ACCEPTANCE THE CONTRACTOR SHALL FURNISH THE OWNER A WRITTEN GURANTEE THAT HE WILL MAKE GOOD AT HIS OWN EXPENSE ALL DEFECTS IN MATERIALS, WORKMANSHIP OR PERFORMANCE FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE. IN DEFAULT THEREOF, THEOWNER'S REPRESENTATIVE MAY HAVE SUCH WORK DONE AND CHARGE COST TO THE CONTRACTOR.

C. THE CONTRACTOR SHALL ALSO FURNISH THE OWNER A WRITTEN CERTIFICATE THAT HE WILL FURNISH FREE INSPECTION, ADJUSTMENT AND REPAIR SERVICE FOR A PERIOD OF 90 DAYS FROM DATE OF ACCEPTANCE.

12. CUTTING AND PATCHING

A. THE CONTRACTOR SHALL FURNISH, LOCATE AND INSTALL ALL SLEEVES AND INSERTS REQUIRED BEFORE THE FLOORS AND WALLS ARE BUILT AND SHALL BE RESPONSIBLE FOR THE COST OF PATCHING REQUIRED FOR PIPES OR DUCTS WHERE SLEEVES AND INSERTS ARE NOT INSTALLED, OR WHERE INCORRECTLY LOCATED. THE CONTRACTOR SHALL DO ALL DRILLING REQUIRED FOR THE INSTALLATION OF HANGERS SLEEVES, PIPES AND DUCTS.

B. WHERE REQUIRED, THE CONTRACTOR SHALL MAKE ANY NECESSARY HOLES IN THE ROOF, FLOORS AND WALLS FOR PASSING OF PIPE AND DUCTWORK. THIS CUTTING SHALL BE MADE WITH EXTREME CAUTION SO AS TO REDUCE DAMAGE TO A MINIMUM. ALL HOLES SHALL BE SUITABLY PATCHED AFTER INSTALLAION OF EQUIPMENT TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE. ANY PERFORATION IN THE ROOF SHALL BE WEATHER PROOFED AND WATER TIGHT.

C. ALL HOLES OUT THROUGH CONCRETE SLABS OR ARCHES SHALL BE PUNCHED OR DRILLED FROM THE UNDERSIDE. NO STRUCTURAL MEMBERS SHALL BE CUT WITHOUT THE APPROVAL OF THE OWNER'S REPRESENTATIVE AND ALL SUCH CUTTING SHALL BE DONE IN A MANNER DIRECTED BY HIM.

13. CLEANING

ALL DIRT, RUBBISH, GREASE, OR STAIN DUE TO THE OPERATION OF THE CONTRACTOR SHALL BE REMOVED FROM ALL FLOORS, WALLS, FIXTURES, EQUIPMENT, ETC., BY HIM AND THE PREMISES LEFT IN PERFECT CONDTION AS FAR AS HIS WORK IS CONCERNED. UNLES OTHERWISE SPECIFIED, ALL MECHANICAL EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL SET AND CONNECTED, READY FOR OPERATION, AND SUCH EQUIPMENT SHALL BE CLEANED, LEAVING THE BUILDING READY FOR OCCUPANCY. ANY EQUIPMENT THAT CANNOT BE RESTORED TO ITS ORIGINL APPERANCE BY CLEANING, SHALL BE PAINTED AT THE EXPENSE OF THE CONTRACTOR.

14. ELECTRICAL WIRING AND MOTORS

A. CONTROL WIRING AND CONDUIT SHALL BE INCLUDED AS A PART OF THIS CONTRACT EXCEPT THAT WHICH IS PART OF THE INTERNAL WIRING OF THE MOTOR CONTROL CENTERS.

B. THE ELECTRICAL CONTRACTOR SHALL TERMINATE HIS WORK AT THE POINT INDICATED IN THE PLANS AND SHALL SUPPLY AND INSTALL ONLY THOSE ITEMS INDICATED ON THE ELECTRICAL DRAWINGS. THE AIR CONDITIONING CONTRACTOR SHALL SUPPLY AND INSTALL THOSE PARTS OF THE ELECTRICAL WIRING INDICATED IN THE AIR CONDITIONING PLANS AND SPECIFICATIONS.

C. THE AIR CONDITIONING CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINAL CONNECTION OF ALL MECHANICAL EQUIPMENT TO THE POWER SOURCE SUPPLIED BY THE ELECTRICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL BRING POWER WIRING ORIGINATING AT THE DISCONNECT SWITCHES OR JUNCTION BOXES SHOWN ON THE ELECTRICAL DRAWINGS AND RUNNING TO THE EQUIPMENT.

D. THE AIR CONDITONING CONTRACTOR CAN REQUEST FROM THE ELECTRICAL CONTRACTOR THE CONNECTION OF THE EQUIPMENT AND CONTROL WIRING AND CONDUIT AND SHALL SUPERVISE THEM. THE START UP OF ANY MECHANICAL EQUIPMENT SHALL BE RESPONSABILITY OF THE AIR CONDITIONING CONTRACTOR AND SHALL ALWAYS BE DONE BY HIM.

E. CONNECT MOTORIZED DAMPER TO A/C UNIT ELECTRICAL POWER.

15. FILTERS

A. ALL FILTERS SHALL HAVE A U.L. RATING OF CLASS II.

B. DO NOT OPERATE ANY AIR HANDLING SYSTEM WITHOUT FILTERS IN PLACE DURING THE CONSTRUCTION PERIOD. ON SYSTEM WITH HI-EFFICIENCY FILTERS, PRE-FILTERS DURING CONSTRUCTION.

C. REMOVE ALL FILTERS USED DURING THE CONSTRUCTION PERIOD AND REPLACE WITH NEW FILTERS PRIOR TO FINAL ACCEPTANCE BY THE OWNER.

16. BALANCING OF AIR SYSTEM

A. THE AIR CONDITIONING CONTRACTOR SHALL PROVIDE AIR AND SYSTEM BALANCING TWO COPIES OF THE CERTIFIED BALANCING REPORT SHALL BE PREPARED AND SUBMITTED TO THE ENGINEER AND OWNER.THE BALANCING SHALL INCLUDE:

1. MAKE ANY CHANGES REQUIRED IN THE PULLEYS OR BELTS TO OBTAIN CFM.

2. RECORD MOTOR FULL LOAD AMPS.

3. MAKE PITOT TUBE TRANSVERSE OF MAIN SUPPLY DUCT AND OBTAIN DESIGN CFM AT FAN.

4. RECORD SYSTEM STATIC PRESSURE, SUCTION AND DISCHARGE.

17. SCOPE OF WORK – AIR CONDITIONING INSTALLATION

A. THE WORK TO BE PERFORMED INCLUDES. ALTHOUGHT IT IS NOT LIMITED TO THE FOLLOWING:

1. INSTALL THE NEW AIR DITRIBUTION DUCTS AND ACCESSORIES SHOWN ON THIS DRAWINGS.

2. INSTALL THE UNIT'S THERMOSTAT.

3. BALANCE THE AIR AS PER THE DESIGN CONDTIONS.

18. DUCTWORK (SUPPLY AND RETURN)

A. ALL DUCTWORK SHALL BE MADE OF GALVANIZED SHEET METAL, BUILT AND INSTALLED AS PER THE LATEST EDITION OF SMACNA'S "LOW PRESSURE DUCT CONSTRUCTION STANDARD".

B. RECTANGULAR ELBOWS SHALL HAVE DOUBLE THICKNESS VANES.

C. ROUND ELBOWS AND OFF-SETS SHALL HAVE AN INSIDE RADIUS OF CURVATURE EQUAL TO THE DUCT WIDTH.

D. DUCT HANGERS CAN BE ON TRAPEZE OR STRP TYPE. WIRE HANGER WILL NOT BE ACCEPTED.

E. ACCESS DOORS – INSTALLED AT ALL DUCT MOUNTED INSTRUMENTATION, SPLITTER DAMPERS AND OPPOSED BLADE DAMPERS (O.B.D.). THEY SHALL BE INSULATED AND EQUAL TO "VENTLOCK ACCESS DOORS".

F. FLEXIBLE CONNECTIONS – INSTALL AT INLET AND DISCHARGE OF FANS WHERE THEY CONNECT TO THE DUCTWORK.

G. SPLITTER DAMPERS – INSTALL AT ALL SUPPLY DUCT SPLITS. THEY SHALL BE MADE OF GALVANIZED STEEL NO LIGHTER THAN 18GA. DAMPERS SHALL BE SECURELY HINGED AND CONSTRUCTED WITH 3/8" STEEL TIE RODS. SPLITTER LENGTHS SHALL NOT BE LESS THAN 1.5 TIMES THE WIDTH OF THE SMALLER DUCT SERVED.

H. DUCT SEALING – ALL DUCTWORK EXPOSED TO THE WEATHER (WHETHER INSULATED OR NOT) SHALL BE THOROUGHLY SELAED DURING FABRICATION WITH "EPOLUX MFG. CO. CADASEAL 700" HIGH VELOCITY DUCT SEALER, OR EQUAL. AFTER ERECTION, APPLY SEALANT TO ALL LONGITUDINAL AND CIRCUMFERENTIAL DUCT JOINTS. WAIT UNTIL DUCT SEALANT HAS COMPLETELY DRIED BEFORE INSTALLING INSULATION WHERE REQUIRED.

I. OPPOSED BLADE DAMPERS – USED FOR BALANCING SHALL BE OF GALVANIZED SHEET METAL CONSTRUCTION WITH BLADE LINKAGE MOUNTED EXTERNAL TO THE AIR STREAM.

19. NEW DUCTWORK INSULATION (SUPPLY AND RETURN)

A. DUCTWORK ROUTED INSIDE THE BUILDING – JOHN-MANSVILLE "MICROLITE" 2 INCH THINK WRAP AROUND INSULATION WITH FSK MOISTURE BARRIER.

B. DUCTWORK ROUTED OUTDOORS – PITTSBURG/CORNING FOAM GLASS, 2 INCHES THICK, OR EQUAL.

C. WEATHER PROOFING:

1. FOR MECHANICAL FASTENERS USE NYLON TUFF-WELD STICK CLIPS ADHERED WITH TUFF-BOND QUICK SET ADHESIVE, OR EQUAL.

2. FOR SEALANT USE SIKA PROOF.

3. FOR REINFORCING CLOTH USE 10 X 10 MESH GLASS FABRIC; BENJAMIN FOSTER MAST-A-FAB, OR APPROVED EQUAL.

4. FOR MASTIC USE RUST OLEUM LEAK SEAL WHITE SPRAY OR APPROVED EQUAL.

20. AIR DEVICES (SUPPLY AND RETURN)

A. AIR DISTRIBUTION DEVICES SHALL BE EQUAL TO ALL ALUMINIUM CONSTRUCTION. MODEL NUMBERS AS NOTED BELOW:

1. OPPOSED BLADE DAMPER (O.B.D.): SHALL BE EQUAL TO TUTTLE & BAILEY, MODEL OBD-D WITH SIZE AS SHOWN ON DRAWINGS.
2. VOLUME DAMPER (VD): SHALL BE EQUAL OR SIMILAR TO NCA PBD
3. FIRE DAMPER (FD): SHALL BE EQUAL TO NCA CURTAIN TYPE MODEL FD-A
4. DUCT ACCESS DOOR (AD): SHALL BE EQUAL TO NCA. ADH
5. SUPPLY VAV DIFUSSER: SHALL BE EQUAL TO ACCUTHERM-T.H.C. 24 X 24" -8" NECK-MIB
6. RETURN AIR GRILLE: SHALL BE EQUAL TO TUTTLE & BAILEY MODEL. CRE-LT-24" X 24" L-QT-02-MP

NECK SIZE	RANGE
	CFM
6"	100-160
8"	160-260
10"	260-450

7. DOOR GRILLE (DG): SHALL BE EQUAL TO TUTTLE & BAILEY ADXFR
8. OUTSIDE AIR INTAKE LOUVER (OAI): SHALL BE EQUAL TO NCA MODEL XAD-GMD

FILE NAME	23-078-AC2.3
PLOT DATE	01/26/24
DWG. #	FP2.3
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	–
ARCHIVO #:	23-078

OWNER

PROPONENT

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FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

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JORGE TORRES LOPEZ
MECHANICAL ENGINEER, LIC. 4951

SEAL

Jorge Antonio Torres Scandali
Ingeniero Licenciado
Lic. 10906 PE
Puerto Rico
Fecha de Expiración: 2024-11-19

NOTA IMPORTANTE:

Yo, JORGE A. TORRES SCANDALI, INGENIERO MECANICO, LICENCIA 10906, certifico que soy el profesional que diseñó la MECANICA, en estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estos planos y especificaciones se ha cumplido cabalmente con lo dispuesto en la Ley 14-2004, según enmendada, conocida como la Ley para la Inversión por la Industria Puertorriqueña y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada; según aplique. Reconozco que cualquier declaración falsa o falsificación de los hechos que se haya producido por desconocimiento o por negligencia ya sea por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGPe.

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

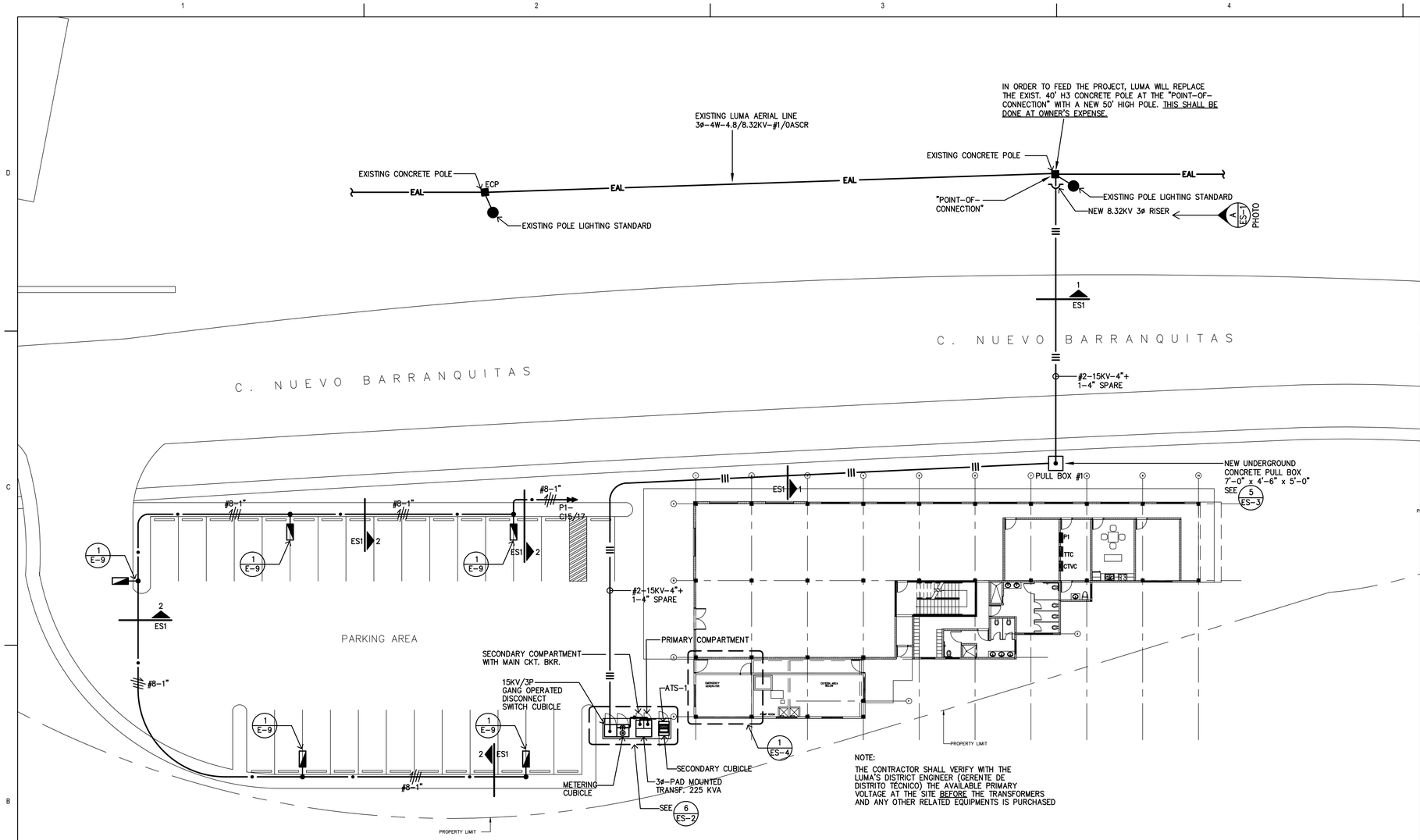
SHEET TITLE

AIR CONDITIONING SPECIFICATION

SHEET ID

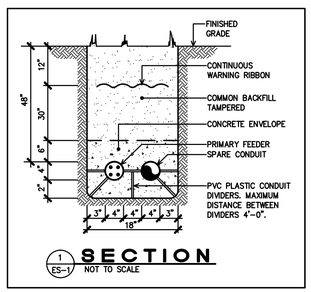
AC2.3

SHEET

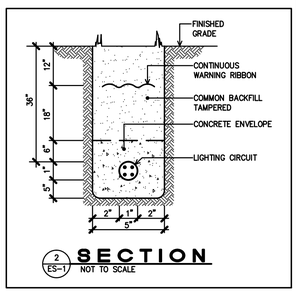


ELECTRICAL SITE PLAN

SCALE: 1/16=1'-0"



1 ES-1 SECTION NOT TO SCALE



2 ES-1 SECTION NOT TO SCALE

A ES-1 PHOTO #A POINT-OF-CONNECTION

LJV DRAWING HISTORY		LJV-DSB	DESIGN STAGE	
PROJECT NO:	23-045		SCHEMATIC DWGS: (SD)	
DRAWING NO:	ES-1		PRELIMINARY DWGS: (PD)	
CAD FILE:	23-045/		DESIGN DEVELOPMENT DWGS: (DD)	
CAD SUBFILE:	23-045-ES01	R00- BD	ADVANCED DWGS: (AD)	
PLOT DATE:	01.15.24		BID DWGS: (BD)	●
PLOT SCALE:	1:1		CONTRACT DWGS: (CD)	
ISSUE DATE:	01.15.24		RECORD DWGS: (RD)	
REMARKS:	NOT FOR CONSTRUCTION		-	%
RELATED PROJECTS:	----------			

OGPe: 2023-497963-SRI-073862

CERTIFICACIÓN DEL DISEÑADOR / DESIGNER'S CERTIFICATION

1. Certifico que soy ingeniero, agrimensor o arquitecto, licenciado y cumplo/es en cumplimiento con la Ley 173 de 1968, según enmendada, y estoy autorizado por el dueño del proyecto a presentar estos planos de construcción ante LUMA Energy como operador y administrador del Sistema de Transmisión y Distribución de la AEE. // I certify that I am a licensed and registered engineer, surveyor, or architect (in compliance with Act 173 of 1968, as amended) and authorized by the project or land owner to submit these construction plans to LUMA Energy as operator and administrator of the Transmission and Distributes System of the Puerto Rico Electric Power Authority.
2. En armonía con las disposiciones de la Ley Núm. 130 de 15 de junio de 1967, según enmendada, conocida como Ley de Certificación de Planos o Proyectos, certifico que preparé el diseño eléctrico de este proyecto en conformidad con los códigos, palcones, normas y reglamentos aprobados por la AEE, la Junta de Planificación y la Oficina de Gerencia de Permisos. Luma Energy y el Manual de Prácticos Profesional del CAPR. // In compliance with Act No.130 of July 15, 1967, as amended known as the "Construction Plans or Projects Certification Act", I certify that I prepared the electric design for this project in accordance with the codes, Standards, rules, and regulations approved by LUMA, Puerto Rico Planning Board and Permits Management Office and the CAPR Professional Practice Manual.

FIRMA DEL DISEÑADOR / DESIGNER'S SIGNATURE

LUMA — ENDOSO / ENDORSEMENT

Nombre del Proyecto / Project Name: EDIFICIO USOS MULTIPLES, BARRAQNQUITAS
Número de Proyecto / Project Number: 23-2-0772
Carga / Load: (kVA): 225 Revisión / Revision: _____

ENDOSADO POR / ENDORSED BY

1. LUMA endosa el diseño eléctrico mostrado en estos planos de construcción basándose en la certificación sometida por el diseñador en cumplimiento con la Ley Núm. 130 del 15 de julio de 1967, según enmendada. // LUMA endorses the electric design shown in these construction plans based on the certification submitted by the designer in accordance with Act No. 130 of July 15, 1967, as amended.
2. LUMA no asume responsabilidad activa el diseño certificado. El endoso por parte de la LUMA no relieva al diseñador de la responsabilidad profesional que asume al certificar estos planos. Este endoso no relieva al constructor ni al inspector de obra privado de cumplir con las disposiones del Código Eléctrico Nacional, Código Eléctrico de Seguridad, códigos, palcones, normas y reglamentos vigentes de LUMA y de otras agencias de gobierno, así como leyes federales y estatales, vigentes al inicio de las obras. // LUMA does no assume responsibility for the certified design. The endorsement by LUMA does not relieve the professional engineer of professional responsibility with the certification of these project's plans. This endorsement relieves neither the builder nor private inspector from compliance with standing dispositions form: National Electric Code, National Electric Safety Code; constructions standards, norms, and regulations from LUMA and other government agencies as well as federal and state laws ruling by the time construction begins.
3. El presente endoso tiene vigencia de un (1) año. De iniciar las obras eléctricas dentro de este término, mediando notificación previa a LUMA, el endoso continuará en vigor hasta la terminación de las obras. De no iniciarse las obras eléctricas dentro de dicho término, este endoso perderá su vigencia. Este endoso no es cesible/transferible ni para concesión previos de Gravámenes, Traspasos y Garantía del equipo. Para esto es necesario cumplir con todo lo dispuesto en el Reglamento de Servidumbres Para la Autoridad de Energía Eléctrica (TOSI de 2007 // This endorsement is valid for one (1) year. If electrical works have begun during this year, with prior notification to LUMA, the endorsement will still be valid until work's completion. In case there is no certified electrical work during this period, this endorsement will lose its validity. This endorsement is not to constitute an easement or to conclude the Assignment, Transfer and Guarantee process of the equipment. For this, it is necessary to comply with all the provisions of the Easements Regulation for the Electric Power Authority (TOSI of 2007).

LOCATION MAP
1:20,000

X = 213498.05
Y = 239690.72

① LUMA/P.R.E.P.A. NOTES:

NOTAS GENERALES

1. ESTOS PLANOS COINCIDEN CON LOS PLANOS DE INSCRIPCION RADICADOS EN LA OFICINA GUBERNAMENTAL DE PERMISOLOGIA (O.G.P.e.)
2. EL DUEÑO DEL PROYECTO ES RESPONSABLE DE GESTIONAR Y OBTENER, ANTES DE LA FECHA DE COMIENZO DE LA OBRA, TODOS LOS ENDOSOS, PERMISOS Y SERVIDUMBRES REQUERIDAS POR ENTIDADES GUBERNAMENTALES, ESTATALES, MUNICIPALES, FEDERALES Y PRIVADAS CONCERNIENTES AL DESARROLLO DEL TIPO DE PROYECTO PROPUESTO.
3. EL DUEÑO DE ESTA OBRA TIENE QUE CONTRATAR LOS SERVICIOS DE UN INGENIERO LICENCIADO QUE INSPECCIONE LA CONSTRUCCION DE LAS OBRAS ELECTRICAS DE ACUERDO CON LA LEY Num.7 DEL 19 DE JULIO DE 1985, SEGUN ENMENDADA, Y CON EL REGLAMENTO DE CERTIFICACION DE PLANOS DE PROYECTOS DE CONSTRUCCION ELECTRICA DE LA LUMA/A.E.E. VIGENTE. EL DUEÑO TENDRA QUE NOTIFICAR A LA LUMA/A.E.E. LA DESIGNACION DE ESTE INSPECTOR PRIVADO ANTES DEL COMIENZO DEL PROYECTO.
4. LA EJECUCION DE LAS OBRAS ELECTRICAS, SEGUN DISEÑADAS EN ESTOS PLANOS, DEBERA OBSERVAR LA MEJOR PRACTICA DE LA INDUSTRIA ELECTRICA Y CONSTRUCCION DE ACUERDO CON LAS NORMAS Y REGLAMENTACION ADOPTADAS POR LA LUMA/A.E.E. Y AGENCIAS CONCERNIENTES, AL IGUAL QUE CON LOS CODIGOS, NEC Y NESC, DEMAS ESTANDARES DE IEEE, NPA, NEMA Y ANSI ADOPTADOS.
5. EL CONTRATISTA NO ESTA AUTORIZADO A HACER VARIACIONES A ESTE DISEÑO. ES RESPONSABILIDAD DEL CONTRATISTA CONSULTAR CON EL DISEÑADOR O INSPECTOR DESIGNADO PARA ESTA OBRA CUALQUIER DUDA DUDA QUE SURJA DE LA INTERPRETACION DE LOS PLANOS, DE LA EJECUCION DE LAS OBRAS PROPUESTAS, PROPUESTAS, ESPECIFICACIONES TECNICAS O DISCREPANCIAS ENTRE LAS CONDICIONES EXISTENTES EN EL CAMPO Y AQUELLAS UTILIZADAS PARA PROPOSITO DE DISEÑO.
6. EL DUEÑO O CONTRATISTA ELECTRICO NOTIFICARA A LA LUMA/A.E.E. EL COMIENZO DE ESTAS OBRAS, MEDIANTE LA ENTREGA DEL DOCUMENTO NOTIFICACION DE COMIENZO DE PROYECTO EN EL DEPARTAMENTO DE INGENIERIA DE DISTRIBUCION DE LA REGION CORRESPONDIENTE, CON POR LO MENOS QUINCE DIAS DE ANTICIPACION A LA FECHA PROPUESTA.
7. EL INSPECTOR PRIVADO Y EL CONTRATISTA ELECTRICO SON RESPONSABLES DE ASISTIR A UNA REUNION DE PRECONSTRUCCION A COORDINARSE CON EL DEPARTAMENTO DE INGENIERIA DE DISTRIBUCION DE LA REGION CORRESPONDIENTE.
8. TODO TRABAJO A REALIZARSE EN LINEAS ENERGIZADAS, INCLUYENDO LA CONEXION DE ESTA OBRA, TIENE QUE SER REALIZADO POR LA LUMA/A.E.E. EL PROPONENTE TIENE QUE ASUMIR TODOS LOS COSTOS DE EQUIPO, MATERIALES Y LABOR. EL PROPONENTE TIENE QUE SOLICITAR A LA LUMA/A.E.E. UN ESTIMADO PARA ESTOS TRABAJOS, EL CUAL CUAL TENDRA UNA VIGENCIA DE TRES MESES DESDE SU EXPEDICION.
9. SE PROHIBE LA REALIZACION DE CUALQUIER TIPO DE TRABAJO EN LAS FRANJAS DE SERVIDUMBRE ELECTRICA SIN LA AUTORIZACION POR ESCRITO DE LA LUMA/A.E.E.
10. LA LUMA/A.E.E. NO APROBARA LA CONEXION DE PROYECTOS CON CONDICIONES DE INVASION DE SERVIDUMBRE O QUE NO CUMPLAN CON LOS DESPEJOS DE SEGURIDAD REQUERIDOS.

NOTAS ESPECIALES

11. EL DUEÑO DEL PROYECTO APORTARA A LA LUMA/A.E.E.:
    - ■ LA CANTIDAD DE $_____ PARA MEJORAS AL SISTEMA ELECTRICO EXISTENTE.
    - ☐ LAS OBRAS REQUERIDAS EN LA EVALUACION PARA ESTE PROYECTO DEL __ DE _____ DE ____.

    ESTA APORTACION SE REALIZARA SEGUN LA CARGA PROPUESTA DE ACUERDO CON EL REGLAMENTO PARA DETERMINAR Y COBRAR LAS APORTACIONES DE PERSONAS O INSTITUCIONES EN PROYECTOS DE DESARROLLO VIGENTE. LA CANTIDAD SERA CARGADA A LA CUENTA 419.06-OIG.
12. LA LUMA/A.E.E. NO CONECTARA EL PROYECTO A SU SISTEMA ELECTRICO HASTA TANTO EL DUEÑO CONSTITUYA LAS SERVIDUMBRES REQUERIDAS DE ACUERDO CON EL REGLAMENTO DE SERVIDUMBRE REQUERIDA, YA SEA DENTRO COMO FUERA DE LOS LIMITES DE PROYECTO.
13. LA INSTALACION DE SISTEMAS DE MEDICION TIENE QUE COORDINARSE CON LA OFICINA DE MEDICION DE LA REGION CORRESPONDIENTE. EL DISEÑADOR O EL CONTRATISTA ELECTRICO TIENE QUE ASEGURARSE DE CONSULTAR CON ESTA OFICINA SOBRE LOS EQUIPOS Y MATERIALES A UTILIZARSE ADEMAS DE LA UBICACION DEL EQUIPO.
14. LA INSTALACION DE SUBESTACIONES, TRANSFORMADORES U OTRO EQUIPO ELECTRICO SOBRE SISTEMAS DE ALCANTARILLADO, LINEAS DE AGUA U OTRAS UTILIDADES ESTA PROHIBIDA.

NOTAS ESPECIALES

15. TODOS LOS EQUIPOS A UTILIZARSE EN LA CONSTRUCCION TIENEN QUE CUMPLIR CON LOS ESTANDARES DE IEEE, ANSI, NEMA Y ASTM.
16. EL CONTRATISTA ES RESPONSABLE DE VERIFICAR CON LA LUMA/A.E.E. QUE TODO MATERIAL O EQUIPO A UTILIZARSE ESTE APROBADO POR LA LUMA/A.E.E. PREVIO A SU INSTALACION. LA LUMA/A.E.E. SE RESERVA EL DERECHO DE ACEPTAR CUALQUIER EQUIPO QUE SE LE VAYA A TRANSFERIR.
17. TODO EQUIPO Y MATERIAL (INCLUYENDO TRANSFORMADORES Y GABINETES DE SUBESTACIONES) A SER INSTALADOS A UNA MILLA O MENOS DE DISTANCIA DE CUERPOS DE AGUA SALADA TIENE QUE SER CONSTRUIDO EN ACERO INOXIDABLE, CON EXCEPCION DE LAS BASES DE MEDIDORES.
18. EN LOS SISTEMAS SOTERRADOS, TIENEN QUE UTILIZARSE CABLES PRIMARIOS CON TERMINACIONES DE 15KV PARA VOLTAJES DE DISTRIBUCION Y DE 46KV PARA LINEAS DE 38KV.
19. EN LOS SISTEMAS AEREOS, TIENEN QUE UTILIZARSE AISLADORES DE POLIMETRO DE 15KV PARA VOLTAJES DE DISTRIBUCION Y DE 46KV PARA LINEAS DE 38KV.
20. EL CONTRATISTA SERA RESPONSABLE DE ROTULAR TODO TRANSFORMADOR A SER TRANSFERIDO A LA LUMA/A.E.E. CON UN NUMERO DE PROPIEDAD PROVISTO POR EL DEPARTAMENTO DE INGENIERIA DE DISTRIBUCION CORRESPONDIENTE.

SISTEMAS

21. EL DUEÑO DEL PROYECTO ES RESPONSABLE DE REALIZAR LAS PRUEBAS DE LOS CABLES PRIMARIOS Y SECUNDARIOS CON SUS TERMINACIONES. LOS RESULTADOS DE ESTAS PRUEBAS TIENEN QUE ESTAR DE ACUERDO CON LOS PARAMETROS ESTABLECIDOS POR LA LUMA/A.E.E. PARA LAS MISMAS. ESTAS PRUEBAS TIENEN QUE REALIZARSE EN COORDINACION CON UN REPRESENTANTE DE LA OFICINA DE INSPECCIONES DEL DEPARTAMENTO DE INGENIERIA DE DISTRIBUCION CORRESPONDIENTE.
22. DURANTE LA INSTALACION DEL CABLE, ESTE DEBE ESTAR PROTEGIDO DE LA HUMEDAD Y ABRASIONES. EL CONTRATISTA ES RESPONSABLE DE INSTALAR EL CABLE MEDIANTE LAS PRACTICAS RECOMENDADAS DE HALADO PARA NO EXCEDER LA TENSION ESPECIFICADA PARA EL CABLE.
23. LAS TAPAS DE REGISTRO (MANHOLES) A SER INSTALADOS EN EL AREA DE SIEMBRA TIENEN QUE ESTAR PROTEGIDAS MEDIANTE UNA LOZA DE HORMIGON REFORZADO, SEGUN ESPECIFICADO EN EL PATRON URD-52.
24. EN AQUELLOS CASOS DONDE EL PROYECTO ESTE LOCALIZADO A MENOS DE UNA MILLA DE CUERPOS DE AGUA SALADA, LOS CONDUCTOS ASCENDENTES TIENEN QUE SER DE PVC SCHEDULE 80 O DE FIBERGLASS, SEGUN APROBADO POR LA LUMA/A.E.E.
25. LAS BANCADAS DEL SISTEMA SOTERRADO SERAN INSPECCIONADAS POR LA LUMA/A.E.E. ANTES DE SER CUBIERTAS Y COMPACTADAS.
26. TODA BANCADA EXPUESTA A TRAFICO VEHICULAR TENDRA QUE SER PROTEGIDA CON HORMIGON. AQUELLAS QUE SE ENCUENTREN CERCA DE INSTALACIONES DE OTRAS UTILIDADES TENDRAN UN DESPEJO MINIMO DE 13 PULGADAS DE ESTAS.
27. LA CANTIDAD DE FUSIBLES DE REMPLAZO QUE PROVEERA EL CONTRATISTA SERA LA MISMA CANTIDAD DE LOS INSTALADOS EN CADA SUBESTACION.
28. LOS CONECTORES QUE SE UTILIZARAN PARA LA CONEXION A TIERRA DE ANTENAS Y SUBESTACIONES SERAN DE SOLDADURA EXOTERMICA (THERMO-WELD) O DE COMPRESION.
29. EL CONTRATISTA PROVEERA CABLE HALADO (FISHWIRE) EN CADA CONDUCTO DE RESGUARDO.
30. TODO SISTEMA DE DISTRIBUCION TENDRA UNA RESISTENCIA MAXIMA A TIERRA DE 10 OHMIOS. SE INSTALARA UNA VARILLA PARA CONECTAR A TIERRA EL NEUTRAL EN CADA CUATRO POSTES O CADA 1,000 PIES Y EN TODOS LOS TRANSFORMADORES.
31. CADA BASE DE HORMIGON PARA POSTE TIENE QUE INCLUIR DOS CONDUCTOS DE RESGUARDO PARA USO FUTURO, SEGUN REQUERIDO POR LA LUMA/A.E.E.
32. LAS BASES PARA POSTES TIENEN QUE SER INSPECCIONADOS POR LA LUMA/A.E.E. EN SU ETAPA DE CONSTRUCCION.

OWNER

LOGOSbarranquitas_municipio_oca_m2009.gif

PROPONENT

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

The Office of LEONARDO J. VIDAL Consulting Engineers
P.O. Box 363744, San Juan, P.R. 00936-3744
Tel.: (787) 793-5631 Fax: (787) 793-7399
Email: ljvidal.cl@gmail.com

SEAL

YO, LEONARDO J. VIDAL, LIC. 6092, CERTIFICO QUE SOY EL PROFESIONAL QUE CONFECCIONÓ Y/O DISEÑÓ Y/O PREPARÓ ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIÉN CERTIFICO QUE ENTIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CÓDIGOS DE CONSTRUCCIÓN VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PÚBLICAS CON JURISDICCIÓN. CERTIFICO, ADEMÁS, QUE EN LA PREPARACIÓN DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY NÚM. 14 DEL 8 DE ENERO DE 2004, SEGÚN ENMENDADA, CONOCIDA COMO LEY PARA LA INVERCIÓN POR LA INDUSTRIA PUERTORRIQUEÑA Y CON LA (LEY NÚM. 319 DEL 15 MAYO DE 1938 , SEGÚN ENMENDADA; LEY NÚM. 96 DEL 6 DE JULIO DE 1978, SEGÚN ENMENDADA; SEGÚN APLIQUE). RECONOZCO QUE CUALQUIER DECLARACIÓN FALSA O FALSIFICACIONES DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MÍ, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCIÓN JUDICIAL Y DISCIPLINARIA POR LA OGPE.

PROJECT INFORMATION

EDIFICIO USOS MULTIPLES BARRANQUITAS,PR

PUEBLO PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	01.15.24
REVIEWED BY:	L.V.-P.E.
DRAWN BY:	F.R.
DESIGNED BY:	L.J.V.-P.E.
BRA PROJECT NUMBER:	

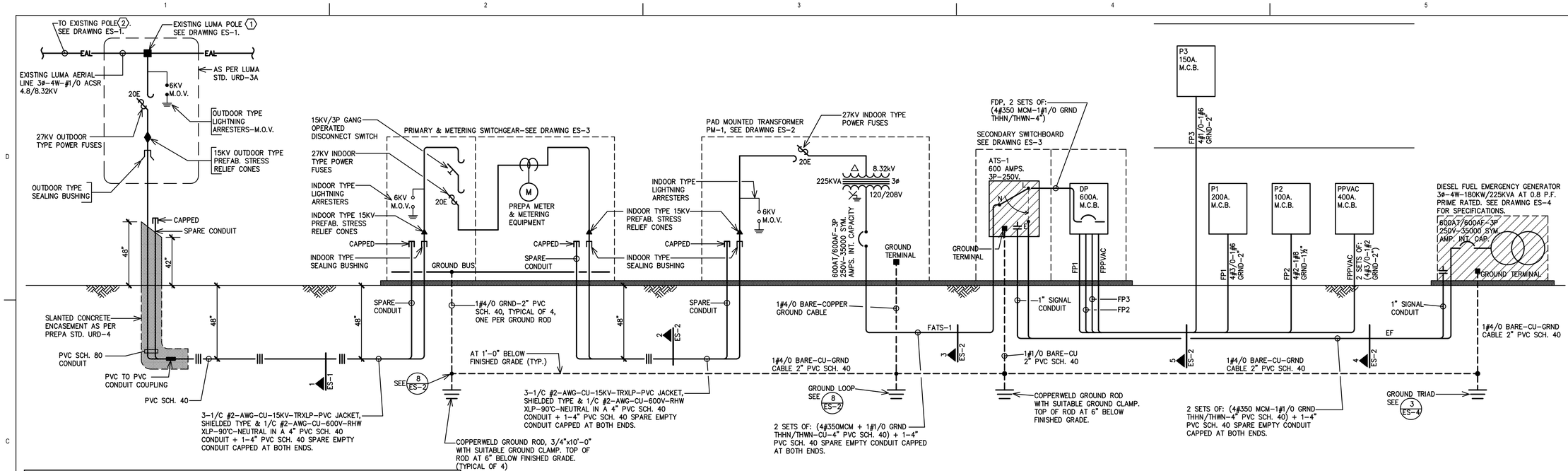
SHEET TITLE

ELECTRICAL SITE PLAN

SHEET ID

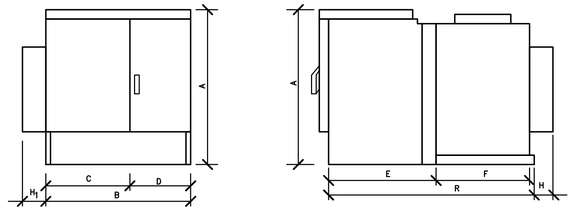
ES-1

SHEET



1 ES-2 ONE LINE DIAGRAM
NOT TO SCALE

NOTE:
1- CONCRETE FLOOR PADS FOR TRANSFORMERS SHALL BE 6" HIGH AND 6" ALL AROUND THE TRANSFORMER.
2- TRANSFORMER DIMENSIONS ARE APPROXIMATE. VERIFY WITH TRANSF. MANUFACTURER THE EXACT DIMENSIONS.



TRANSF. NO.	TRANSF. KVA	WEIGHT POUNDS	TRANSFORMER DIMENSIONS (IN.) A	B	C	D	E	F	R	H	H1	SOUND DB	%Z	OIL (GAL.)
PM-1	225	3500	50	50	30	20	19	21	40	14	--	55	4.0	110
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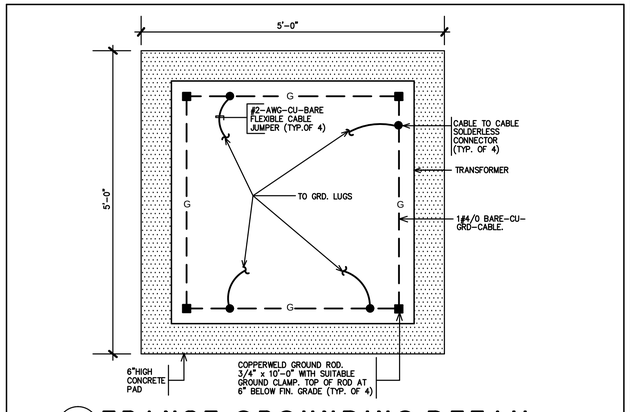
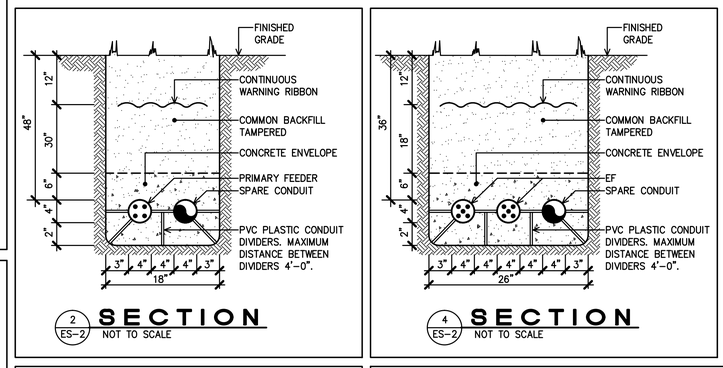
NOTE:
1- PAD MOUNTED TRANSFORMER-3ø-60 HZ, KVA SIZE AS INDICIATED AT LEFT.DUAL OPERATION PRIMARY VOLTAGE 8.32 KVΔ TO 120/208V.Y 6-2 1/2% TAPS(2 ABOVE & 4 BELOW RATED VOLTAGE), OIL INMERSED, SELF-COOLED, NON-PCB, STAINLESS STEEL OUTDOOR CONSTRUCTION COMPLETE WITH PRIMARY SWITCHES FOR RADIAL FEED, PRIMARY FUSES & MAIN SECONDARY CKT. BKR. AS INDICATED IN THE ONE LINE DIAGRAM. APPROVED EQUAL TO SQUARE D CLASS 7230. DEAD FRONT METAL ENCLOSED, SELF STANDING.

7 ES-2 TRANSFORMER SIZE DETAIL
NOT TO SCALE



8 ES-2 TRANSF. GROUNDING DETAIL
NOT TO SCALE



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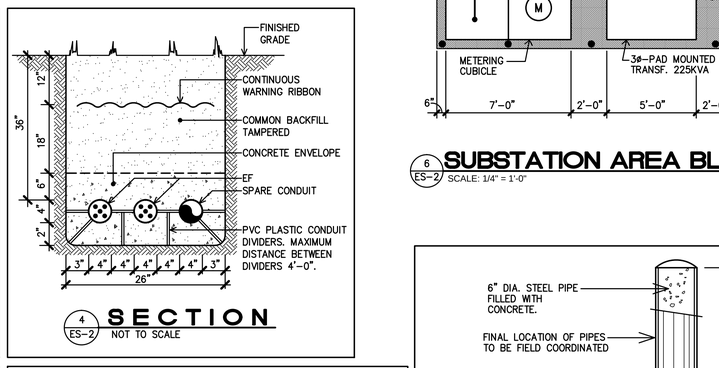

4 ES-2 SECTION
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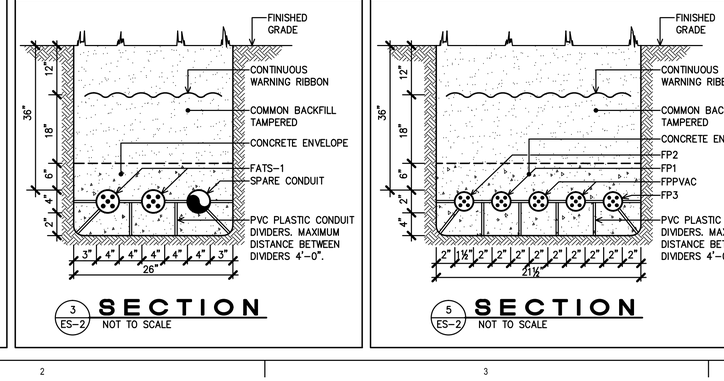
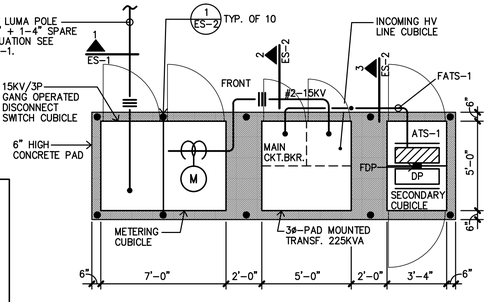
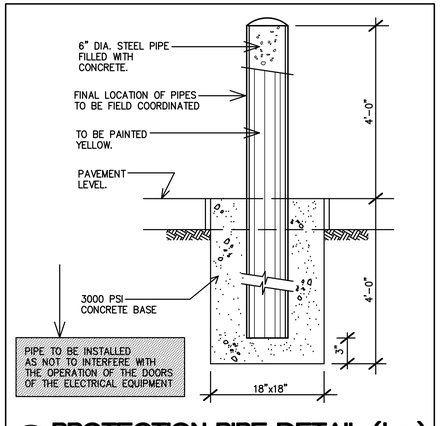


3 ES-2 SECTION
NOT TO SCALE

5 ES-2 SECTION
NOT TO SCALE

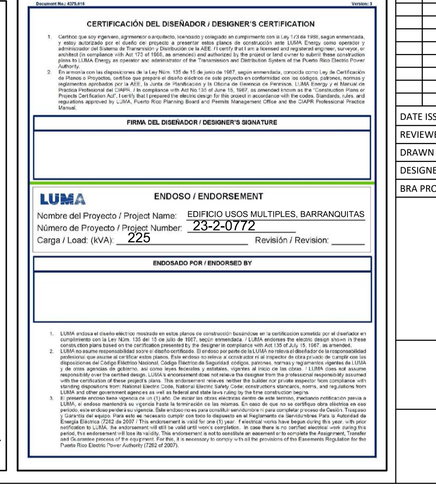


6 ES-2 SUBSTATION AREA BLOW-UP
SCALE: 1/4" = 1'-0"



1 ES-2 PROTECTION PIPE DETAIL (typ)
NOT TO SCALE

OGPe: 2023-497963-SRI-073862


Document No.: 4379,618 Version: 7

CERTIFICACIÓN DEL DISEÑADOR / DESIGNER'S CERTIFICATION

1. Certifico que soy ingeniero, agrimensor o arquitecto, licenciado y colegiado en cumplimiento con la Ley 173 de 1988, según enmendada, y autorizado por la parte dueña de la propiedad a someter diseños eléctricos para ser revisados por LUMA. Certifico además que el diseño sometido por mi persona y/o Electricista de la AEE, el cual(es) fue(ron) preparado(s) bajo mi supervisión, supervisor o arquitecto (en cumplimiento con Act 173 of 1988, as amended) and authorized by the propiest or land owner to submit these construction plans to LUMA Energy, as operator/ and administrator of the Transmission and Distribution System of the Puerto Rico Electric Power Authority.
2. En armonía con las disposiciones de la Ley Núm. 135 de 15 de junio de 1967, según enmendada, conocida como Ley de Certificación de Planos o Proyectos, certifico que preparé el diseño eléctrico de este proyecto en conformidad con los códigos, patrones, normas y regulaciones aplicables. / I, the undersigned, certify that I prepared the electric design for this project in accordance with the Colegio de Ingenieros y Agrimensores de Puerto Rico Electrical Practice Professional del CIAPR, / In compliance with Act No. 135 of June 15, 1967, as amended known as the "Construction Plans or Projects Certification Act", I certify that I prepared the electric design for this project in accordance with the codes, Standards, rules, and regulations approved by LUMA, Puerto Rico Planning Board and Permits Management Office and the CIAPR Professional Practice Manual.

FIRMA DEL DISEÑADOR / DESIGNER'S SIGNATURE

LUMA ENDOSO / ENDORSEMENT

Nombre del Proyecto / Project Name: EDIFICIO USOS MULTIPLES, BARRANQUITAS
Número de Proyecto / Project Number: 23-2-0772
Carga / Load: (kVA): 225 Revisión / Revision: ____

ENDOSADO POR / ENDORSED BY

1. LUMA endosa el diseño eléctrico mostrado en estos planos de construcción basándose en la certificación sometida por el diseñador en cumplimiento con la Ley Núm. 135 de 15 de junio de 1967, según enmendada. / LUMA endorses the electric design shown in these construction plans based on the certificates presented by the designer in compliance with Act 135 of July 15, 1967, as amended.
2. LUMA no asume responsabilidad sobre el diseño certificado. El endoso por parte de la LUMA no reduce al diseñador de su responsabilidad profesional que ancore en los sellos antes citados. Este endoso no exime a ningún otro de sus deberes de cumplir con los códigos, patrones, normas y regulaciones aplicables. / LUMA does not assume responsibility over the certified design. LUMA's endorsement does not relieve the designer from the professional responsibility assumed with the certification of these project's plans. This endorsement does not relieve any other person of their obligations to comply with the codes, standards, rules and regulations applicable. / LUMA's endorsement does not relieve the designer from the professional responsibility assumed with the certification of these project's plans. This endorsement relieves neither the builder nor private inspector from compliance with standing dispositions from: National Electric Code, National Electric Safety Code, construction's standards, norms, and regulations from the Puerto Rico Electric Power Authority and the Puerto Rico Planning Board and Permits Management Office.
3. El presente endoso tiene vigencia de un (1) año. De existir las obras electricas dentro de este termino, mediante notificacion previa a LUMA, el endoso mantendrá su vigencia hasta la terminación de las mismas. En caso de que no se certifique obra eléctrica en ese periodo, este endoso perderá su vigencia. Debe endosarse para consultar servicio/orden o para completar proceso de Gestión Trabajo y Garantía del equipo. Para esto se necesario cumplir con todo lo dispuesto en el Reglamento de Servidumbres Para la Autoridad de Energía Eléctrica (7282 de 2007. / This endorsement is valid for one (1) year. If electrical works have begun during this year, with prior notification to LUMA, the endorsement will still be valid until work's completion. In case there is no certified electrical work during this period, this endorsement will lose its validity. This endorsement is necessary to consult a service/order or to complete the Work Management and Guarantee process of the equipment. For that, it is necessary to comply with all the provisions of the Easements Regulation for the Puerto Rico Electric Power Authority (7282 of 2007).

LJV DRAWING HISTORY		LJV-DSB	DESIGN STAGE	
PROJECT NO:	23-045		SCHEMATIC DWGS: (SD)	
DRAWING NO:	ES-2		PRELIMINARY DWGS: (PD)	
CAD FILE:	23-045/		DESIGN DEVELOPMENT DWGS: (DD)	
CAD SUBFILE:	23-045-ES02	R00 BD	ADVANCED DWGS: (AD)	
PLOT DATE:	01.15.24		BID DWGS: (BD)	●
PLOT SCALE:	1:1		CONTRACT DWGS: (CD)	
ISSUE DATE:	01.15.24		RECORD DWGS: (RD)	
REMARKS:	NOT FOR CONSTRUCTION		-	%
RELATED PROJECTS:	----------			

OWNER

LOGO3lawrenceplan_municipio_usa_m2000.gif

PROPONENT

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

The Office of LEONARDO J. VIDAL
Engineering Consultant
P.O. Box 2837/54, San Sebastián, P.R. 00685 Cel. (787) 502-2821
Fax. (787) 760-3651 Ext. 2004
E-Mail: lvidalpe@gmail.com

SEAL

YO, LEONARDO J. VIDAL, LIC. 6092, CERTIFICO QUE SOY EL PROFESIONAL QUE CONFECCIONÓ Y/O DISEÑÓ Y/O PREPARÓ ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIÉN CERTIFICO QUE ENTIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CÓDIGOS DE CONSTRUCCIÓN VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PÚBLICAS CON JURISDICCIÓN. CERTIFICO, ADEMÁS, QUE EN LA PREPARACIÓN DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY NÚM. 14 DEL 8 DE ENERO DE 2004, SEGÚN ENMENDADA, CONOCIDA COMO LEY PARA LA INVERCIÓN POR LA INDUSTRIA PUERTORRIQUEÑA Y CON LA (LEY NÚM. 319 DEL 15 MAYO DE 1938 , SEGÚN ENMENDADA; LEY NÚM. 96 DEL 6 DE JULIO DE 1978, SEGÚN ENMENDADA; SEGÚN APLIQUE). RECONOZCO QUE CUALQUIER DECLARACIÓN FALSA O FALSIFICACIONES DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MÍ, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCIÓN JUDICIAL Y DISCIPLINARIA POR LA OGPE.

PROJECT INFORMATION

EDIFICIO USOS MULTIPLES BARRANQUITAS,PR

PUEBLO PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	01.15.24
REVIEWED BY:	L.V.-P.E.
DRAWN BY:	F.R.
DESIGNED BY:	L.J.V.-P.E.
BRA PROJECT NUMBER:	

SHEET TITLE

ONE LINE DIAGRAM

SHEET ID

ES-2

SHEET

1 15KV SWITCHGEAR DESCRIPTION

1. DISCONNECT SWITCH SECTION.
2. NON-FUSIBLE DISCONNECT SWITCH, 15KV/3P-GANG OPERATED AIR LOAD BREAK, 600 AMPS. CONTINUOUS DUTY, 40,000 AMP. SYM. INT. CAPACITY, 95KV BIL, NOT INVERTED MOUNTED TO ACT AS LOCAL DISCONNECT.
3. WARNING SIGN "DANGER-PELIGRO & HIGH VOLTAGE-ALTO VOLTAJE".
4. 1#4/0 AWG-CU-BARE GROUND CABLE-2" PVC SCH. 40.
5. TRANSPARENT GLASSTICK SAFETY BARRIERS.
6. SECTION DOOR.
7. CONTINUOUS COPPER GROUND BUS.
8. SOLDERLESS TAP FROM #4/0-AWG-BARE COPPER CABLE TO #4/0 AWG-BARE-COPPER GROUND CABLE OR GROUND BUS.
9. SOLDERLESS LUG FOR #4/0-AWG-BARE COPPER GROUND CABLE TO FLAT SURFACE.
10. CONCRETE PAD, 6" HIGH AND 6" ALL AROUND THE SUBSTATION.
11. VENTILATION OPENINGS.
12. COPPERWELD GROUND ROD - 3/4"x10'-0" WITH SUITABLE GROUND CLAMP. TOP OF ROD AT 6" BELOW FINISHED GRADE, TYPICAL OF 6.
13. FLEXIBLE GROUND CABLE CONNECTOR.
14. LUMA METERING SECTION.
15. LUMA METERING EQUIPMENT.
16. 6" WIDE X 2 1/2" HIGH WINDOW PROTECTED WITH A LEXAN PANEL FOR METER READING.
17. GROUNDED HANDLE OF 15KV GANG OPERATED DISCONNECT SWITCH.

2 15KV SWITCHGEAR NOTES:

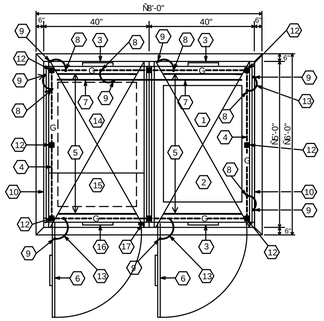
1-SWITCHGEAR DIMENSIONS SHALL BE THOSE APPROVED BY LUMA DUE TO CODE REQUIRED CLEARANCES.

2-IT SHALL BE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY WITH LUMA THE AVAILABILTY OF THE METERING EQUIPMENT TO BE INSTALLED IN THIS PROJECT.

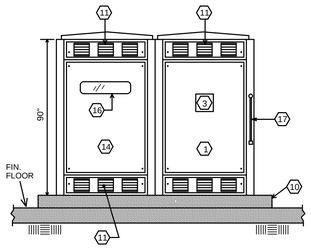
3-THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANCHORING THE SWITCHGEAR TO THE CONCRETE BASE IN AN APPROVED MANNER AS PER A/E FIELD SUPERVISOR INSTRUCTIONS.

3 15KV SWITCHGEAR SPECIFICATIONS

1. SWITCHGEAR SHALL BE TAMPER-PROOF WITH PADLOCK PROVISION ON ALL DOORS.
2. SWITCHGEAR SHALL BE FORMED BY STEEL SECTIONS GANGED TOGETHER WITH THE SECTIONS HAVING FORMED EDGES TO PROVIDE RIGIDITY. THE UNIT SHALL BE FABRICATED FROM GALVANIZED STEEL SECTIONS.
3. SHEET METAL EDGES SHALL BE EXPOSED TO THE WEATHER AT A MINIMUN ANGLE.
4. PRIMARY AND SECONDARY REMOVABLE DOORS SHALL BE PROVIDED WITH SEPARATE LOCKS.
5. THE UNIT SHALL BE FREE-STANDING AND RIGID WHEN ALL DOORS ARE REMOVED.
6. THE EFFECTIVE VENTILATION OPENINGS SHALL MEET THE NATIONAL ELECTRICAL CODE (N.E.C.) REGULATIONS GIVEN IN SECTION 450-45 (B) AND (C).
7. THE VENTILATION OPENINGS SHALL BE COVERED WITH STANDARD EXPANDABLE WIRE MESH OF A SUFFICIENT NUMBER AND TYPE OF INSTALLATION AS TO PROVIDE TAMPER-PROOF VENTILATION FACILITIES OF ADEQUATE CAPACITY TO COOL THE SWITCHGEAR AND ELECTRICAL EQUIPMENT INSIDE THE SWITCHGEAR.
8. THE ROOF SHALL BE DESIGNED IN A 4-WAY PITCH TO PROVIDE GOOD WATER DRAINAGE.
9. ALL RUST SCALES, WELD METAL FLUXS AND/OR WELD SPLATTERS SHALL BE REMOVED FROM ALL SURFACES PRIOR TO PAINTING. THE PRIMER COAT SHALL BE A.R.C. WICH IS A COLD GALVANIZED PROCESS. THE FINISH PAINT SHALL BE LUMA STANDARD GRAY.
10. A MINIMUM OF 8 GROUNDING LUGS SHALL BE PROVIDED. #4/0-AWG BARE COPPER CABLE SHALL BE USED TO GROUND ALL METAL FRAMES. IN LIEU OF THE THE GROUNDING LUGS A CONTINUOS COPPER GROUND BUS OF ADEQUATE CAPACITY CAN ALSO BE USED IN ORDER TO GROUND ALL METAL FRAMES AS PER N.E.C. AND LUMA STANDARDS.
11. SWITCHGEAR SHALL BE LUMA APPROVED TYPE SUITABLE FOR OUTDOOR INSTALLATION.
12. SWITCHGEAR SHALL BE PROVIDED WITH GLASSTICK SAFETY BARRIERS IN ALL DOORS AND ACCESS TO LIVE PARTS AS PER LUMA REQUIREMENTS. THE GLASSTICK BARRIERS SHALL BE SO INSTALLED AS TO PROVIDE CLEAR VIEW OF ALL THE EQUIPMENT COMPONENTS INSIDE THE CUBICLE.



TOP VIEW

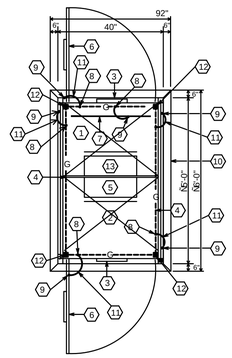


FRONT VIEW

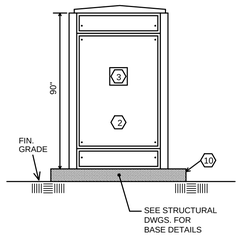
NOTES:

1- SEE STRUCTURAL DWGS. BELOW FOR BASE DETAILS.

1 ES-3 **15KV SWITCHGEAR DETAIL**
NOT TO SCALE



TOP VIEW

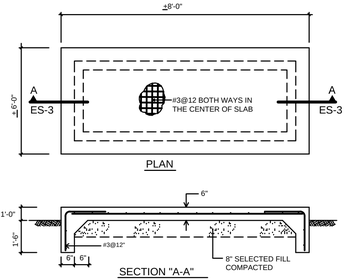


FRONT VIEW

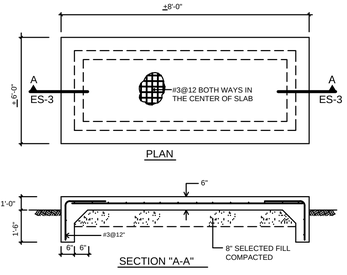
NOTES:

1- SEE STRUCTURAL DWGS. BELOW FOR BASE DETAILS.

3 ES-3 **SECONDARY SWITCHBOARD DETAIL**
NOT TO SCALE



2 ES-3 **SWITCHGEAR CONCRETE PAD DETAIL**
NOT TO SCALE



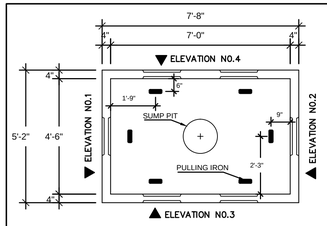
4 ES-3 **SWITCHBOARD CONCRETE PAD DETAIL**
NOT TO SCALE

4 SWITCHBOARD SPECIFICATIONS

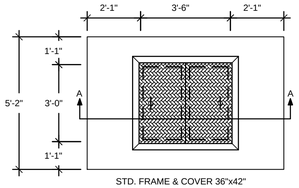
1. SWITCHBOARD SHALL BE TAMPER-PROOF WITH PADLOCK PROVISION ON ALL DOORS.
2. SWITCHBOARD SHALL BE FORMED BY STEEL SECTIONS GANGED TOGETHER WITH THE SECTIONS HAVING FORMED EDGES TO PROVIDE RIGIDITY. THE UNIT SHALL BE FABRICATED FROM GALVANIZED STEEL. IT SHALL BE SUITABLE FOR OUTDOOR INSTALLATION.
3. SHEET METAL EDGES SHALL BE EXPOSED TO THE WEATHER AT A MINIMUN ANGLE.
4. ALL CUBICLES REMOVABLE DOORS SHALL BE PROVIDED WITH SEPARATE LOCKS.
5. THE UNIT SHALL BE FREE-STANDING AND RIGID WHEN ALL DOORS ARE REMOVED.
6. THE ROOF SHALL BE DESIGNED IN A 4-WAY PITCH TO PROVIDE GOOD WATER DRAINAGE.
7. ALL RUST SCALES, WELD METAL FLUXS AND/OR WELD SPLATTERS SHALL BE REMOVED FROM ALL SURFACES PRIOR TO PAINTING. THE PRIMER COAT SHALL BE A.R.C. WICH IS A COLD GALVANIZED PROCESS. THE FINISH PAINT SHALL BE LUMA STANDARD GRAY.
8. A MINIMUM OF 8 GROUNDING LUGS SHALL BE PROVIDED. #4/0-AWG BARE COPPER CABLE SHALL BE USED TO GROUND ALL METAL FRAMES. IN LIEU OF THE THE GROUNDING LUGS A CONTINUOS COPPER GROUND BUS OF ADEQUATE CAPACITY CAN ALSO BE USED IN ORDER TO GROUND ALL METAL FRAMES AS PER N.E.C. AND LUMA STANDARDS.

5 SECONDARY SWITCHBOARD DESCRIPTION

1. – ATS CUBICLE.
2. – SECONDARY CUBICLE.
3. – WARNING SIGN "DANGER-PELIGRO & HIGH VOLTAGE-ALTO VOLTAJE".
4. – 1#4/0 AWG-CU-BARE GROUND CABLE-2" PVC SCH. 40.
5. – DISTRIBUTION PANEL "DP", SEE DRAWING E-9.
6. – SECTION DOOR.
7. – CONTINUOUS COPPER GROUND BUS.
8. – SOLDERLESS TAP FROM #4/0-AWG-BARE COPPER CABLE TO #4/0 AWG-BARE-COPPER GROUND CABLE OR GROUND BUS.
9. – SOLDERLESS LUG FOR #4/0-AWG-BARE COPPER GROUND CABLE TO FLAT SURFACE.
10. – CONCRETE PAD, 6" HIGH AND 6" ALL AROUND THE SWITCHBOARD.
11. – FLEXIBLE GROUND CABLE CONNECTOR.
12. – COPPERWELD GROUND ROD – 3/4"x10'-0" WITH SUITABLE GROUND CLAMP. TOP OF ROD AT 6" BELOW FINISHED GRADE.
13. – AUTOMATIC TRANSFER SWITCH, 600AMPS/3P-250V-35,000 SYM. AMPS. INTERRUPTING CAPACITY-NEMA 1.

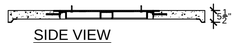


TOP VIEW



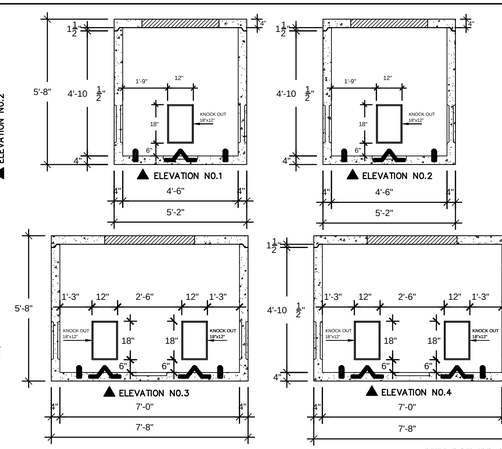
STD. FRAME & COVER 36"x42"
(COV-030 & FRA-030)

PRECAST COVER
TOP VIEW



SIDE VIEW
SECTION A-A

_____Aproved
_____Aproved as Note
_____Not Aproved
_____Resubmit
Remark : _____



SIDE VIEW

5 ES-3 **PULL BOX DETAIL**
NOT TO SCALE

PULL BOX (PB-00)
4'-6" x 7'-0" x 5'-0"
AREA VERDE
TAPA RECTANGULAR
URD-30B
(SPACING BETWEEN BELLS 3")

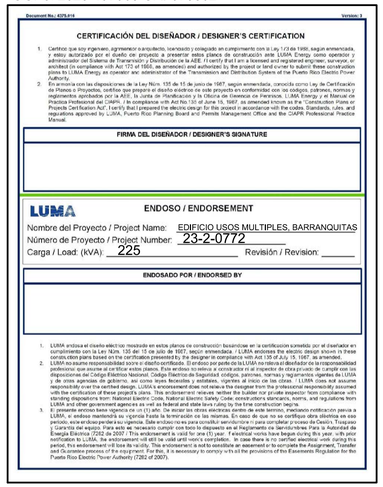
APPROXIMATE WEIGHT:
A) COVER: 1600 LBS.
B) BOX: 8065 LBS.
TOTAL: 9665 LBS.

POWER POLES Inc. A COMPANY WITH 35 YEARS OF EXPERIENCE	COMPANY NAME:	FILE NAME: NEW EXAMPLE\(7x4-6x5)\	EMAIL: egaud@powerpolespr.com
		PRODUCT: 4'-6" x 7'-0" x 5'-0" URD-30B	PHONE: (787) 887-2005
	PROJECT NAME:	DRAWN BY: ELIAM I. GAUD	FAX: (787) 887-1870 / 888-0350
		REVISED BY:	DATE: 00-00-2005
		APPROVED BY:	NOTES: AREA VERDE / TAPA RECTANGULAR

ITEM NO. PB-002
PRODUCT ID. PB-00
PAGE: 1 OF 1

LJV DRAWING HISTORY		LJV-DSB	DESIGN STAGE	
PROJECT NO:	23-045		SCHEMATIC DWGS: (SD)	
DRAWING NO:	ES-3		PRELIMINARY DWGS: (PD)	
CAD FILE:	23-045/		DESIGN DEVELOPMENT DWGS: (DD)	
CAD SUBFILE:	23-045-ES03	– R00 – BD	ADVANCED DWGS: (AD)	
PLOT DATE:	01.15.24		BID DWGS: (BD)	●
PLOT SCALE:	1:1		CONTRACT DWGS: (CD)	
ISSUE DATE:	01.15.24		RECORD DWGS: (RD)	
REMARKS:	NOT FOR CONSTRUCTION		-	%
RELATED PROJECTS:	----------			

OGPe: 2023-497963-SRI-073862



Document No.: 4375.010 Version: 3

CERTIFICACIÓN DEL DISEÑADOR / DESIGNER'S CERTIFICATION

1. Certifico que soy ingeniero, agrimensor o arquitecto, licenciado y colegiado de componente con la Ley 173 de 1968, según enmendada, y estoy autorizado por el dueño de la obra a preparar el diseño eléctrico de este proyecto. Además, soy ingeniero supervisor y administrador del Sistema de Transmisión y Distribución de la AEE. I certify that I am a licensed and registered engineer, surveyor, or architect (in compliance with Act 173 of 1968, as amended) and authorized by the project or land owner to submit these construction plans to LUMA Energy, as operator and administrator of the Transmission and Distribution System of the Puerto Rico Electric Power Authority.
2. Fui preparado con las disposiciones de la Ley Núm. 135 de 15 de junio de 1967, según enmendada, conocida como Ley de Certificación de Planos y Proyectos, cotéjelo que preparó el diseño eléctrico de este proyecto en conformidad con los códigos, patrones, normas y requerimientos aprobados por la AEE, la Junta de Planificación y la Oficina de Gerencia de Permisos. I, LUMA Energy y el Manual de Practica Profesional del CAPR. I, in compliance with Act No.135 of June 15, 1967, as amended known as the "Construction Plans or Projects Certification Act", I certify that I prepared the electric design for this project in accordance with the codes, Standards, rules, and regulations approved by LUMA, Puerto Rico Planning Board and Permits Management Office and the CAPR Professional Practice Manual.

FIRMA DEL DISEÑADOR / DESIGNER'S SIGNATURE

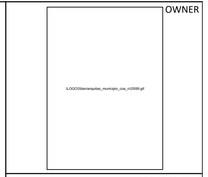
LUMA **ENDOSO / ENDORSEMENT**

Nombre del Proyecto / Project Name: EDIFICIO USOS MULTIPLES, BARRANQUITAS
Número de Proyecto / Project Number: 23-2-0772
Carga / Load: (kVA): 225 Revisión / Revision: _____

ENDOSADO POR / ENDORSED BY

1. LUMA endosa el diseño eléctrico mostrado en estos planos de construcción basándose en la certificación sometida por el diseñador en cumplimiento con la Ley Núm. 135 de 15 de julio de 1967, según enmendada. / LUMA endorses the electric design shown in these construction plans based on the certification presented by the designer in compliance with Act 135 of JULy 15, 1967, as amended.
2. LUMA no asume responsabilidad sobre el diseño eléctrico certificado. La responsabilidad profesional asumida por el diseñador preferencia que asume el certificar estos planos. Este endoso no exime a ninguna persona o corporación de cumplir con las disposiciones del Código Eléctrico Nacional, Código Eléctrico de Seguridad, códigos, patrones, normas y reglamentos vigentes de LUMA y de otras agencias de gobierno, así como leyes federales y estatales, vigentes al inicio de las obras. / LUMA does not assume responsibility over the certified design. LUMA's endorsement does not relieve the designer from the professional responsibility assumed with the certification of these project's plans. This endorsement relieves neither the builder nor private inspector from compliance with standing dispositions from: National Electric Code, National Electric Safety Code, construction's standards, norms, and regulations from LUMA and other government agencies, as well as federal and state laws in force at the beginning of the works.
3. El presente endoso tiene vigencia de un (1) año. De existir las otras vigencias dentro de este término, mediante notificación previa a LUMA, el endoso mantendrá su vigencia hasta la terminación de las mismas. En caso de que no se certifique obra eléctrica en ese periodo, este endoso perderá su vigencia. Este endoso no es para consultar servidumbre ni para completar proceso de Desvío, Traspaso y Garantía del equipo. Para esto se necesario cumplir con todo lo dispuesto en el Reglamento de Servidumbres Para la Autoridad de Energía Eléctrica de Puerto Rico. / This endorsement is valid for one (1) year. If there are other validities within this term, through previous notification to LUMA, the endorsement will last the valid until new's completion. In case there is no certified electrical work during this period, this endorsement will lose its validity. This endorsement is not to constitute an easement or to complete the Assignment, Transfer and Guarantee process of the equipment. For this, it is necessary to comply with all the provisions of the Easements Regulation for the Puerto Rico Electric Power Authority (7282 of 2007).

OWNER



PROPONENT

FIGUEROA & FIGUEROA
ARCHITECTS AND
ENGINEERS

CONSULTANT

The Office of LEONARDO J. VIDAL
Electrical Engineering Consultants
P.O. Box 2621704 San Juan, PR 00926-1704
Tel.: (787) 765-2621 Fax: (787) 765-7588
Email: ljvidalpe@gmail.com

SEAL

YO, LEONARDO J. VIDAL, LIC. 6092, CERTIFICO QUE SOY EL PROFESIONAL QUE CONFECCIONÓ Y/O DISEÑÓ Y/O PREPARÓ ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIÉN CERTIFICO QUE ENTIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CÓDIGOS DE CONSTRUCCIÓN VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PÚBLICAS CON JURISDICCIÓN. CERTIFICO, ADEMÁS, QUE EN LA PREPARACIÓN DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY NÚM. 14 DEL 8 DE ENERO DE 2004, SEGÚN ENMENDADA, CONOCIDA COMO LEY PARA LA INVERCIÓN POR LA INDUSTRIA PUERTORRIQUEÑA Y CON LA (LEY NÚM. 319 DEL 15 MAYO DE 1938 , SEGÚN ENMENDADA; (LEY NÚM. 96 DEL 6 DE JULIO DE 1978, SEGÚN ENMENDADA; SEGÚN APLIQUE). RECONOZCO QUE CUALQUIER DECLARACIÓN FALSA O FALSIFICACIONES DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MÍ, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCIÓN JUDICIAL Y DISCIPLINARIA POR LA OGPE.

PROJECT INFORMATION

EDIFICIO USOS MULTIPLES
BARRANQUITAS,PR

PUEBLO PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	01.15.24
REVIEWED BY:	L.V.-P.E.
DRAWN BY:	F.R.
DESIGNED BY:	L.J.V.-P.E.
BRA PROJECT NUMBER:	

SHEET TITLE

ELECTRICAL
EQUIPMENT
SPECIFICATIONS

SHEET ID

ES-3

SHEET

LVAEGS1

1 EMERGENCY GENERATOR(S) AND TRANSFER SWITCH(ES) SPECIFICATIONS

1– THE EMERGENCY GENERATOR(S) SHALL BE FURNISHED COMPLETE WITH A FUEL (DIESEL) TANK, AUTOMATIC TRANSFER SWITCH(ES), BATTERY, AUTOMATIC BATTERY CHARGER, AND ALL THE REQUIRED ACCESORIES FOR NORMAL OPERATION.

2– THE EMERGENCY GENERATOR SHALL BE RATED AS FOLLOWS:

KW	=	180
KVA	=	225
PHASES	=	3
WIRES	=	4
VOLTS	=	120/208
HERTZ	=	60
R.P.M.	=	1800

AT 0.8 POWER FACTOR PRIME RATED

THE EMERGENCY GENERATOR SHALL BE EQUAL TO:
ONAN CAT. NO. C200D6D
THE UNIT SHALL BE SKID MOUNTED AND PROVIDED WITH A LEVEL II SOUND ATTENUATED, WEATHERPROOF ENCLOSURE WITH KEYLOCKS IN ALL DOORS.

3– THE UNIT SHALL IS TO INCLUDE THE FOLLOWING EQUIPMENT AND ACCESORIES:

A.– WATER COOLED RADIATOR.

B.– ONE(1) SUB–BASE 600 GALLONS DUAL WALL DIESEL FUEL TANK WITH A 520 GALLONS USABLE VOLUME CAPACITY & PROVIDED WITH ALL FUEL SUPPLY, RETURN AND VENTILATION LINES AND EQUIPMENT.

C.– ONE 24 VOLTS, HEAVY DUTY BATTERY WITH RACK AND CABLES.

D.– EXHAUST CRITICAL TYPE MUFFLER WITH STEEL CONNECTIONS AND FITTINGS, INCLUDING FLEXIBLE FLEXIBLE SECTION AND RAIN CAP FOR EXHAUST.

E.– VIBRATION ISOLATORS OF THE SIZE, NUMBER AND TYPE REQUIRED BY THE PLANT MANUFACTURER.

F.– SCREEN, BAFFLED, LOUVERED AIR INTAKE.

G.– DUCTED, BAFFLED, LOUVERED AND SCREENED HOT AIR DISCHARGE.

H.– PUMPS AND FILTERS AS REQUIRED.

I.– RELAYS AND CONTACTORS AS REQUIRED FOR REMOTE CONTROL FROM TRANSFER SWITCH.

J.– INSTRUMENTS AND CONTROL PANEL INCLUDING THE FOLLOWING:

a.– VOLTMETER AND SELECTOR SWITCH.
b.– AMMETER AND SELECTOR SWITCH.
c.– WATTMETER AND SELECTOR SWITCH.
d.– FREQUENCY METER AND SELECTOR SWITCH.
e.– RUNNING TIME METER.
f.– FIELD CIRCUIT BREAKER(S).
g.– VOLTAGE REGULATOR WITH A TWO (2) POSITION (OFF AND AUTOMATIC) SWITCH.
h.– WATER TEMPERATURE GAUGE.
i.– OIL PRESURE GAUGE.
j.– AUTOMATIC SHUTDOWN DEVICE WITH INDICATOR LIGHTS FOR:
(1)– OVER CRANKING PROTECTION.
(2)– HIGH WATER TEMPERATURE.
(3)– LOW OIL PRESSURE.
k.– START/STOP SWITCH.
l.– REMOTE START/ STOP TERMINALS.

K.– AUTOMATIC TRANSFER SWITCH(ES) RATED AS FOLLOWS:

DESIGNATION:	ATS–1	–
AMPS:	600	–
VOLTS:	250	–
PHASES:	3	–
POLES:	3	–
NEMA TYPE:	1 (LOCATED INSIDE OUTDOOR SECONDARY SWITCHBOARD)	–

THE TRANSFER SWITCH(ES) SHALL BE FOR OPERATION AT 60 HERTZ AND SHALL BE PROVIDED WITH THE REQUIRED PILOT LIGHTS ON THE DOOR AND WITH THE FOLLOWING ACCESORIES:

a.– SELECTOR SWITCH WITH OFF–AUTOMATIC CHECK POSITIONS
b.– TIME DELAY IN TRANSFER TO EMERGENCY ENGINE START, ADJUSTABLE FROM 1/16 TO 180 SECONDS.
c.– TIME DELAY ON RESTORATION TO NORMAL POWER, ADJUSTABLE FROM 30 SECOND AND 10 MINUTES.
d.– CLOCK EXERCISER TO START GENERATOR SET AUTOMATICALLY. IT SHALL OPERATE EVERY WEEK AND RUN THE GENERATOR SET FOR ONE (1) HOUR AND THEN, STOP THE GENERATOR SET AUTOMATICALLY.
e.– ALL OTHER ACCESORIES REQUIRED FOR NORMAL OPERATION. TIME DELAY RELAYS AND
f.– CONTACTORS (IF SO REQUIRED) TO ACHIEVE THE FOLLOWING STARTING SEQUENCE TO OPERATE UNDER EMERGENCY CONDITIONS:

1 – DP

4– REMARKS:

A.– ALL ELBOWS SHALL BE OF THE LONG RADIUS TYPE.

B.– THE DIAMETER OF THE EXHAUST PIPE MUST BE INCREASED 1" FOR EACH 10 FEET OF VERTICAL RUN AFTER THE FIRST 10 FEET.

C.– THE CONTRACTOR SHALL LEAVE THE TANK(S) FULL OF DIESEL FUEL OF THE TYPE REQUIRED FOR THE OPERATION OF THE EMERGENCY GENERATOR.

D.– THE CONTRACTOR SHALL MAKE SURE THAT THE CONNECTIONS AT THE DIESEL FUEL TANK(S) ARE TIGHT BEFORE PROCEEDING WITH THE FINAL INSTALLATION OF THE TANK(S).

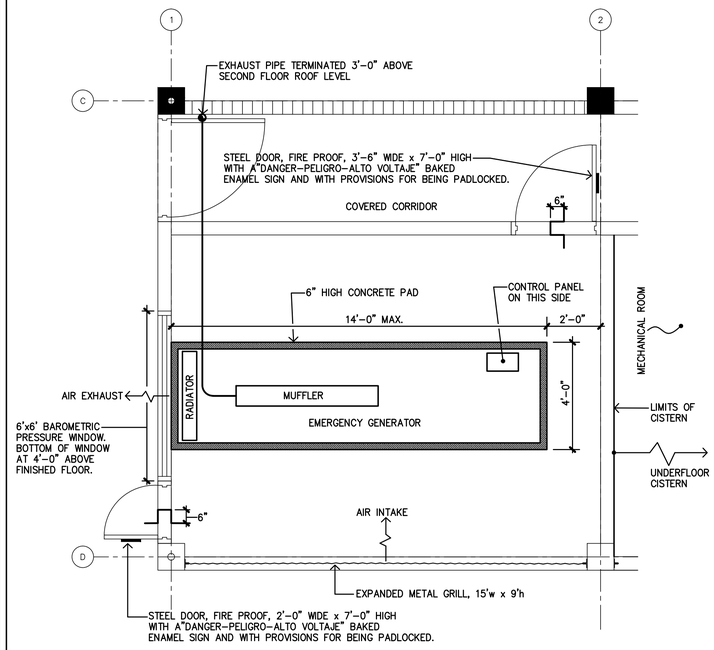
E.– THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE COMPLETE INSTALLATION OF THE EMERGENCY GENERATOR WITH ALL ITS NECESSARY FITTINGS AND APPURTENANCES. THIS SHALL BE DONE ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR LEAVING THE EMERGENCY POWER POWER GENERATING SYSTEM IN PERFECT OPERATING CONDITIONS.

F.– THE STRUCTURAL DETAILS SHOWN IN THE ELECTRICAL DRAWINGS FOR THE SUPPORT OF THE DIESEL FUEL TANK ARE OF A GENERAL NATURE. IT CORRESPONDS TO THE CONTRACTOR TO PROVIDE THE CORRECT TYPE AND SIZE OF STRUCTURAL SUPPORTS ACCORDING TO THE ACTUAL DIMENSIONS AND CHARACTERISTICS OF THE TANK PURCHASED.

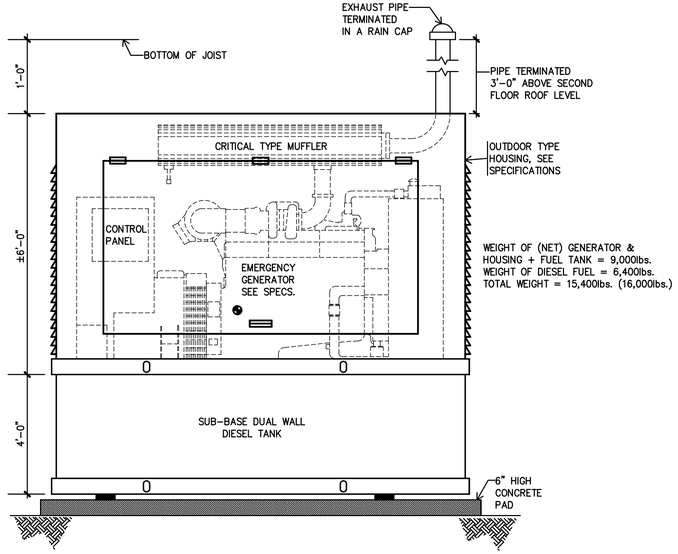
G.– THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE CONSTRUCTION AND OPERATION PERMITS FOR THE GENERATOR FROM THE ENVIRONMENTAL QUALITY BOARD (JUNTA DE CALIDAD AMBIENTAL).

H.– THE CONCRETE PAD INDICATED IS TO BE USED ONLY FOR DIMENTIONING PURPOSES REGARDING ITS LENGTH & WIDTH. THE PAD SHALL BE 6" HIGH ABOVE GROUND. IT CORRESPONDS TO THE CONTRACTOR TO PROVIDE (FURNISH AND INSTALL) THE CONCRETE PAD AS WELL AS THE STRUCTURAL DETAILS FOR THE PAD AS PER A LICENSED STRUCTURAL ENGINEER CERTIFIED DRAWINGS AND SPECIFICATIONS.

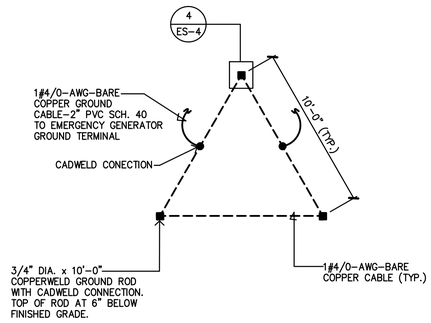
I.– THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A CERTIFICATION BY AN INDEPENDENT TESTING COMPANY THAT THE COMBINATION EMERGENCY GENERATOR AND ENCLOSURE MEET THE REQUIRED NOISE ATTENUATION DESIGN PARAMETER LEVELS WITHOUT REDUCING THE VENTILATION REQUIRED FOR THE CORRECT OPERATION OF THE GENERATOR.



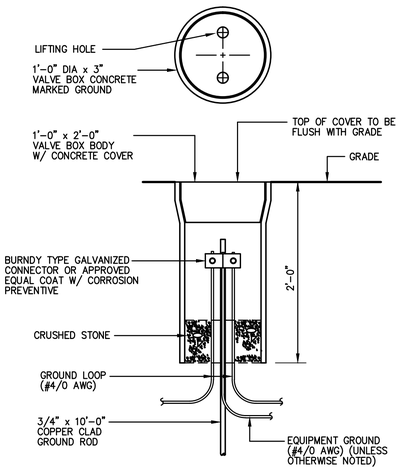
1 EMERGENCY GENERATOR ROOM BLOW–UP
ES–4 SCALE: 3/8" = 1'–0"



2 EMERGENCY GENERATOR SIDE VIEW
ES–4 NOT TO SCALE



3 GROUND MAT INSTALLATION DETAIL
ES–4 NOT TO SCALE



4 GROUND WELL DETAIL AND GROUND ROD CONNECTION
ES–4 NOT TO SCALE

LJV DRAWING HISTORY		LJV-DSB	DESIGN STAGE	
PROJECT NO:	23-045		SCHEMATIC DWGS: (SD)	
DRAWING NO:	ES-4		PRELIMINARY DWGS: (PD)	
CAD FILE:	23-045/		DESIGN DEVELOPMENT DWGS: (DD)	
CAD SUBFILE:	23-045-ES04	R00 – BD	ADVANCED DWGS: (AD)	
PLOT DATE:	01.15.24		BID DWGS: (BD)	●
PLOT SCALE:	1:1		CONTRACT DWGS: (CD)	
ISSUE DATE:	01.15.24		RECORD DWGS: (RD)	
REMARKS:	NOT FOR CONSTRUCTION		-	%
RELATED PROJECTS:	----------			

OGPe: 2023-497963-SRI-073862

Document No.: 427541 Version: 2

CERTIFICACIÓN DEL DISEÑADOR / DESIGNER'S CERTIFICATION

1. Certifico que soy ingeniero/a, agrimensor/a arquitecto/a, licenciado/a colegiado/a en cumplimiento con la Ley 173 de 1988, según enmendada, y estoy autorizado/a por el dueño de proyecto a presentar estos planos de construcción ante LUMA Energy como operador y administrador del Sistema de Transmisión y Distribución de la AEE. I/I certify that I am a licensed and registered engineer, surveyor, or architect (in compliance with Act 173 of 1988, as amended) and authorized by the project or land owner to submit these construction plans to LUMA Energy, as operator and administrator of the Transmission and Distribution System of the Puerto Rico Electric Power Authority.
2. Conforme con las disposiciones de la Ley Núm. 135 de 15 de junio de 1967, según enmendada, conocida como Ley de Certificación de Planos o Proyectos, certifico que preparé el diseño eléctrico de este proyecto en conformidad con los códigos, patrones, normas y reglamentos aprobados por la AEE, la Junta de Planificación y la Oficina de Gerencia de Permisos. / LIMA Energy y el Manual de Práctica Profesional del OAPPI. / In compliance with Act No.135 of June 15, 1967, as amended known as the "Construction Plans or Projects Certification Act", I certify that I prepared the electric design for this project in accordance with the codes, Standards, rules, and regulations approved by LUMA, Puerto Rico Planning Board and Permits Management Office and the OAPPI Professional Practice Manual.

FIRMA DEL DISEÑADOR / DESIGNER'S SIGNATURE

LUMA ENDOSO / ENDORSEMENT

Nombre del Proyecto / Project Name: _____
Número de Proyecto / Project Number: 23-2-0772
Carga / Load: (kVA): 225 Revisión / Revision: _____

ENDOSADO POR / ENDORSED BY

1. LUMA endosa el diseño eléctrico mostrado en estos planos de construcción basándose en la certificación sometida por el diseñador en cumplimiento con la Ley Núm. 135 del 15 de julio de 1967, según enmendada. / LUMA endorses the electric design shown in these construction plans based on the certification submitted by the designer in accordance with Act No. 135 of July 15, 1967, as amended.
2. LUMA no asume responsabilidad sobre el diseño certificado. Si endosa por parte de la LUMA no retira el diseñador de la responsabilidad profesional que asume al certificar estos planos. Este endoso no relieva al constructor ni al inspector de obra privada de cumplir con las disposiciones del Código Eléctrico Nacional, Código Eléctrico de Seguridad, códigos, patrones, normas y reglamentos vigentes de LUMA y de otras agencias de gobierno, así como leyes federales y estatales, vigentes al inicio de las obras. / LUMA does not assume responsibility over the certified design. LUMA's endorsement does not relieve the designer from the professional responsibility assumed with the certification of these project's plans. This endorsement relieves neither the builder nor private inspector from compliance with the provisions of the National Electrical Code, Electrical Safety Code, patterns, standards, regulations and rules of LUMA and other government agencies as well as federal and state laws ruling by the time construction begins.
3. El presente endoso tiene vigencia de un (1) año. De existir las obras electricas dentro de este termino, mediando notificacion previa a LUMA, el endoso mantendrá su vigencia hasta la terminación de las mismas. En caso de que no se certifique obra eléctrica en ese periodo, este endoso perderá su vigencia. Este endoso no es para constituir servidumbre ni para completar proceso de Desde/A Traspaso de Facilidades. Para esto, el dueño de proyecto debe someter el Endoso para Servidumbre de Paso y Traspaso de Facilidades de Energía Eléctrica (CEQ de 2007 / This endorsement is valid for one (1) year. If electrical works have begun during this year with prior notification to LUMA, the endorsement will still be valid until work's completion. In case there is no certified electrical work during this period, this endorsement will lose its validity. This endorsement is not to constitute an easement or to complete the Assignment, Transfer and Acceptance process of the equipment. For that, it is necessary to comply with all the provisions of the Easements Regulation for the Puerto Rico Electric Power Authority (CEQ of 2007).

OWNER

LOGO3barranquitas_municipio_rico_m2008.gif

PROPONENT

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

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SEAL

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PROJECT INFORMATION

EDIFICIO USOS MULTIPLES
BARRANQUITAS,PR

PUEBLO PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	01.15.24
REVIEWED BY:	L.V.-P.E.
DRAWN BY:	F.R.
DESIGNED BY:	L.J.V.-P.E.
BRA PROJECT NUMBER:	

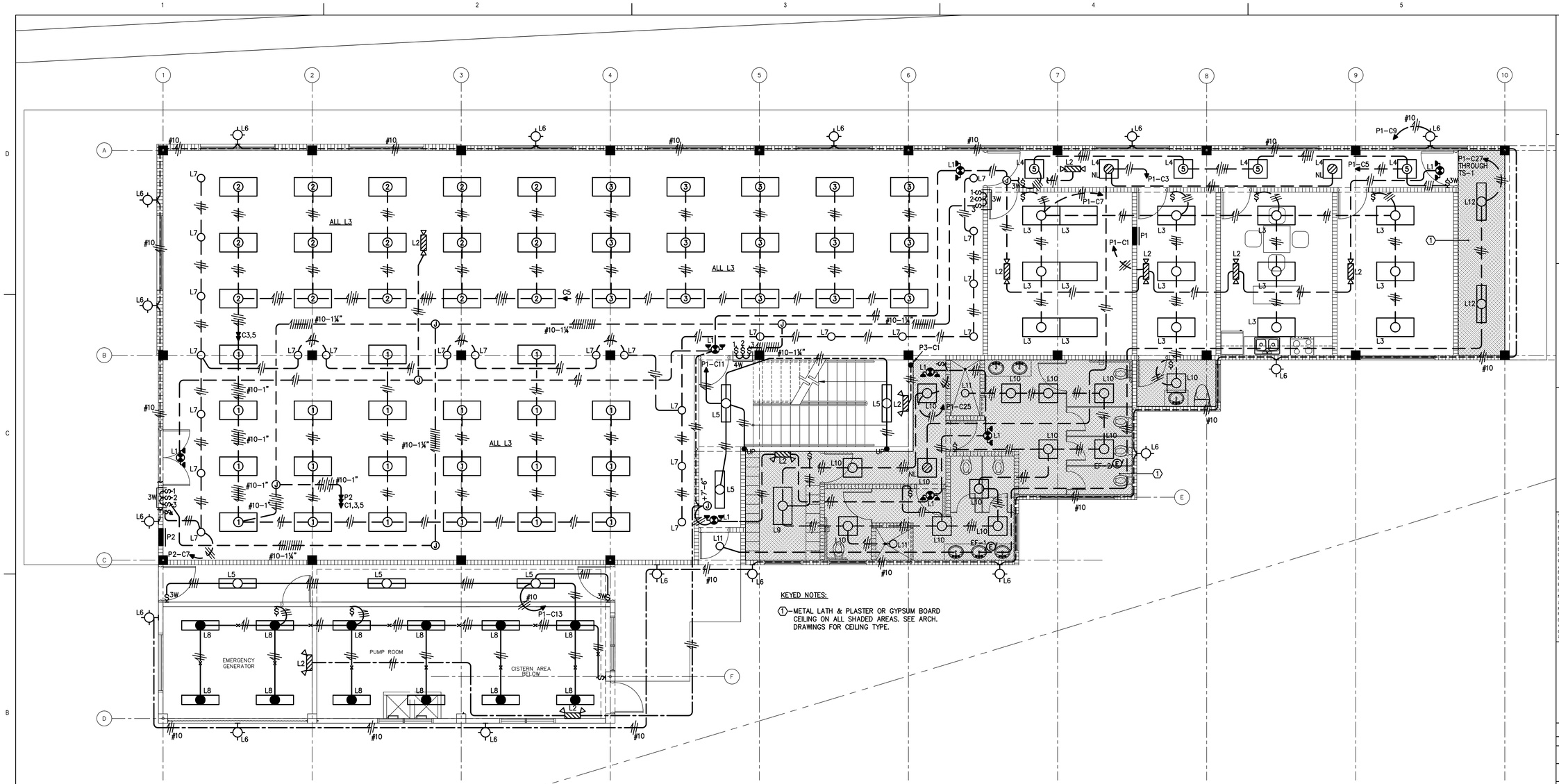
SHEET TITLE

EMERGENCY GENERATOR SPECIFICATIONS

SHEET ID

ES-4

SHEET



FIRST FLOOR PLAN-LIGHTING

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

LJV DRAWING HISTORY		LJV-DSB	DESIGN STAGE	
PROJECT NO:	23-045		SCHEMATIC DWGS: (SD)	
DRAWING NO:	E-1		PRELIMINARY DWGS: (PD)	
CAD FILE:	23-045/		DESIGN DEVELOPMENT DWGS: (DD)	
CAD SUBFILE:	23-045-E001	R00 BD	ADVANCED DWGS: (AD)	
PLOT DATE:	01.15.24		BID DWGS: (BD)	●
PLOT SCALE:	1:1		CONTRACT DWGS: (CD)	
ISSUE DATE:	01.15.24		RECORD DWGS: (RD)	
REMARKS:	NOT FOR CONSTRUCTION		-	%
RELATED PROJECTS:	----------			

OWNER

LOGO3barranquitas_municipio_oca_m2008.gif

PROPONENT

FIGUEROA & FIGUEROA
ARCHITECTS AND
ENGINEERS

CONSULTANT

The Office of LEONARDO J. VIDAL
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SEAL

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BRA PROJECT NUMBER:	

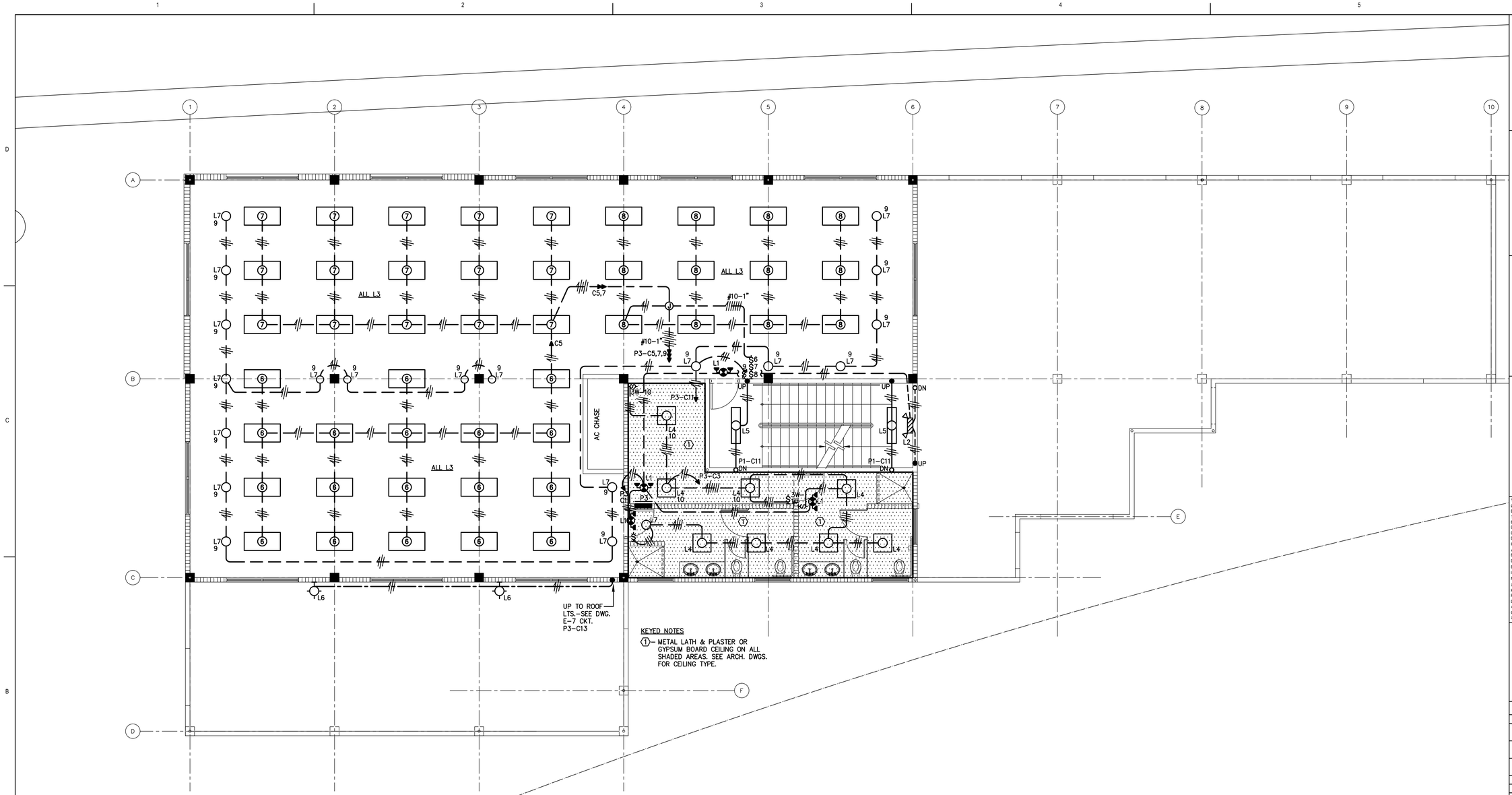
SHEET TITLE

FIRST FLOOR
PLAN
LIGHTING

SHEET ID

E-1

SHEET



SECOND FLOOR PLAN - LIGHTING

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

LJV DRAWING HISTORY		LJV-DSB	DESIGN STAGE	
PROJECT NO:	23-045		SCHEMATIC DWGS: (SD)	
DRAWING NO:	E-2		PRELIMINARY DWGS: (PD)	
CAD FILE:	23-045/		DESIGN DEVELOPMENT DWGS: (DD)	
CAD SUBFILE:	23-045-E002	R00 BD	ADVANCED DWGS: (AD)	
PLOT DATE:	01.15.24		BID DWGS: (BD)	●
PLOT SCALE:	1:1		CONTRACT DWGS: (CD)	
ISSUE DATE:	01.15.24		RECORD DWGS: (RD)	
REMARKS:	NOT FOR CONSTRUCTION		-	%
RELATED PROJECTS:	----------			

OWNER

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PROPONENT

FIGUEROA & FIGUEROA
ARCHITECTS AND
ENGINEERS

CONSULTANT

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SEAL

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PROJECT INFORMATION

EDIFICIO USOS MULTIPLES
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BRA PROJECT NUMBER:	

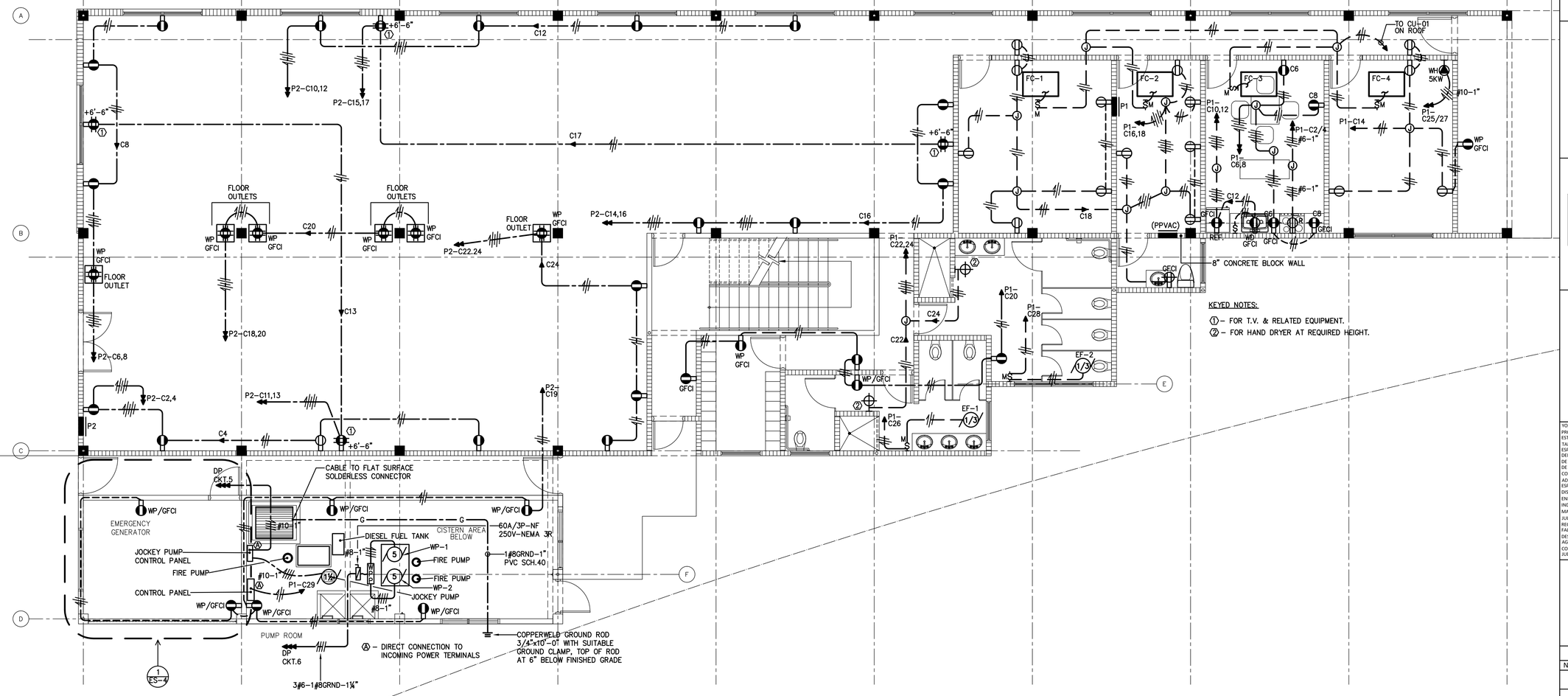
SHEET TITLE

SECOND FLOOR
PLAN
LIGHTING

SHEET ID

E-2

SHEET



FIRST FLOOR PLAN-POWER

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

LJV DRAWING HISTORY		LJV-DSB	DESIGN STAGE	
PROJECT NO:	23-045		SCHEMATIC DWGS: (SD)	
DRAWING NO:	E-3		PRELIMINARY DWGS: (PD)	
CAD FILE:	23-045/		DESIGN DEVELOPMENT DWGS: (DD)	
CAD SUBFILE:	23-045-E003	– R00 – BD	ADVANCED DWGS: (AD)	
PLOT DATE:	01.15.24		BID DWGS: (BD)	●
PLOT SCALE:	1:1		CONTRACT DWGS: (CD)	
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REMARKS:	NOT FOR CONSTRUCTION		-	%
RELATED PROJECTS:	----------			

OWNER

LOGO3Stamnaplas_municipio_rico_m2000.gif

PROPONENT

FIGUEROA & FIGUEROA
ARCHITECTS AND
ENGINEERS

CONSULTANT

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P.O. Box 3837414, San Juan, P.R. 00936-3744
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SEAL

YO, LEONARDO J. VIDAL, LIC. 6092, CERTIFICO QUE SOY EL PROFESIONAL QUE CONFECCIONÓ Y/O DISEÑÓ Y/O PREPARÓ ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIÉN CERTIFICO QUE ENTIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CÓDIGOS DE CONSTRUCCIÓN VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PÚBLICAS CON JURISDICCIÓN. CERTIFICO, ADEMÁS, QUE EN LA PREPARACIÓN DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY NÚM. 14 DEL 8 DE ENERO DE 2004, SEGÚN ENMENDADA, CONOCIDA COMO LEY PARA LA INVERCIÓN POR LA INDUSTRIA PUERTORRIQUEÑA Y CON LA (LEY NÚM. 319 DEL 15 MAYO DE 1938 , SEGÚN ENMENDADA; LEY NÚM. 96 DEL 6 DE JULIO DE 1978, SEGÚN ENMENDADA; SEGÚN APLIQUE). RECONOZCO QUE CUALQUIER DECLARACIÓN FALSA O FALSIFICACIONES DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MI, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCIÓN JUDICIAL Y DISCIPLINARIA POR LA OGPE.

PROJECT INFORMATION

EDIFICIO USOS MULTIPLES
BARRANQUITAS,PR

PUEBLO PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	01.15.24
REVIEWED BY:	L.V.-P.E.
DRAWN BY:	F.R.
DESIGNED BY:	L.J.V.-P.E.
BRA PROJECT NUMBER:	

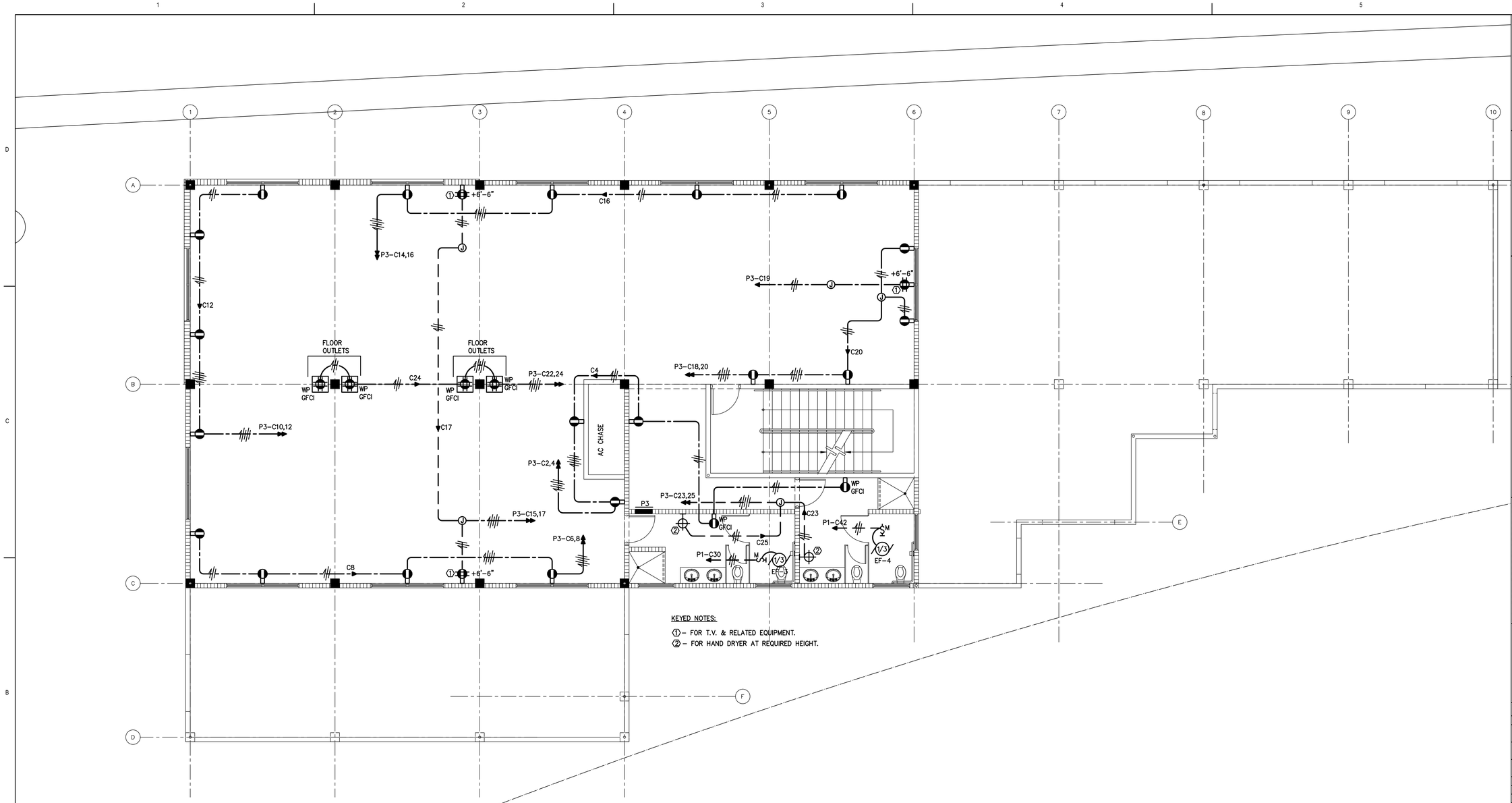
SHEET TITLE

FIRST FLOOR
PLAN
POWER

SHEET ID

E-3

SHEET



SECOND FLOOR PLAN - POWER

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

LJV DRAWING HISTORY		LJV-DSB	DESIGN STAGE	
PROJECT NO:	23-045		SCHEMATIC DWGS: (SD)	
DRAWING NO:	E-4		PRELIMINARY DWGS: (PD)	
CAD FILE:	23-045/		DESIGN DEVELOPMENT DWGS: (DD)	
CAD SUBFILE:	23-045-E004	R00 – BD	ADVANCED DWGS: (AD)	
PLOT DATE:	01.15.24		BID DWGS: (BD)	●
PLOT SCALE:	1:1		CONTRACT DWGS: (CD)	
ISSUE DATE:	01.15.24		RECORD DWGS: (RD)	
REMARKS:	NOT FOR CONSTRUCTION		-	%
RELATED PROJECTS:	----------			

OWNER

LOGO3barranquitas_municipio_oca_m20908.gif

PROPONENT

FIGUEROA & FIGUEROA
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SEAL

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PROJECT INFORMATION

EDIFICIO USOS MULTIPLES
BARRANQUITAS,PR

PUEBLO PUERTO RICO

REVISIONS

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BRA PROJECT NUMBER:	

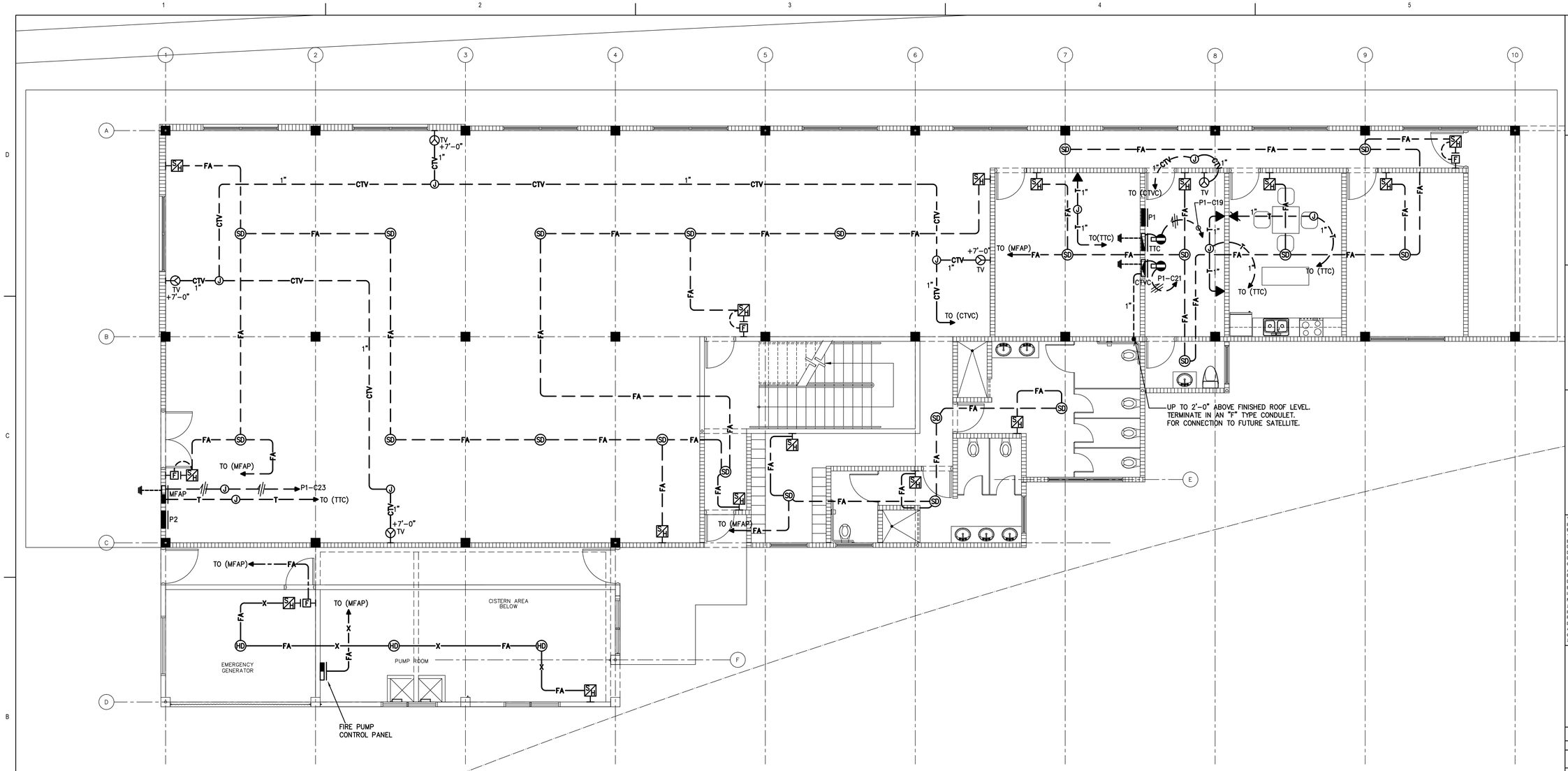
SHEET TITLE

SECOND FLOOR
PLAN
POWER

SHEET ID

E-4

SHEET



FIRST FLOOR PLAN-TELECOMMUNICATIONS

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

LJV DRAWING HISTORY		LJV-DSB	DESIGN STAGE	
PROJECT NO:	23-045		SCHEMATIC DWGS: (SD)	
DRAWING NO:	E-5		PRELIMINARY DWGS: (PD)	
CAD FILE:	23-045/		DESIGN DEVELOPMENT DWGS: (DD)	
CAD SUBFILE:	23-045-E005	R00 BD	ADVANCED DWGS: (AD)	
PLOT DATE:	01.15.24		BID DWGS: (BD)	●
PLOT SCALE:	1:1		CONTRACT DWGS: (CD)	
ISSUE DATE:	01.15.24		RECORD DWGS: (RD)	
REMARKS:	NOT FOR CONSTRUCTION		-	%
RELATED PROJECTS:	----------			

OWNER

LOGO3barranquitas_municipio_oca_m2008.gif

PROPONENT

FIGUEROA & FIGUEROA
ARCHITECTS AND
ENGINEERS

CONSULTANT

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LIC. no. 6092

SEAL

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PROJECT INFORMATION

EDIFICIO USOS MULTIPLES
BARRANQUITAS,PR

PUEBLO PUERTO RICO

REVISIONS

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BRA PROJECT NUMBER:	

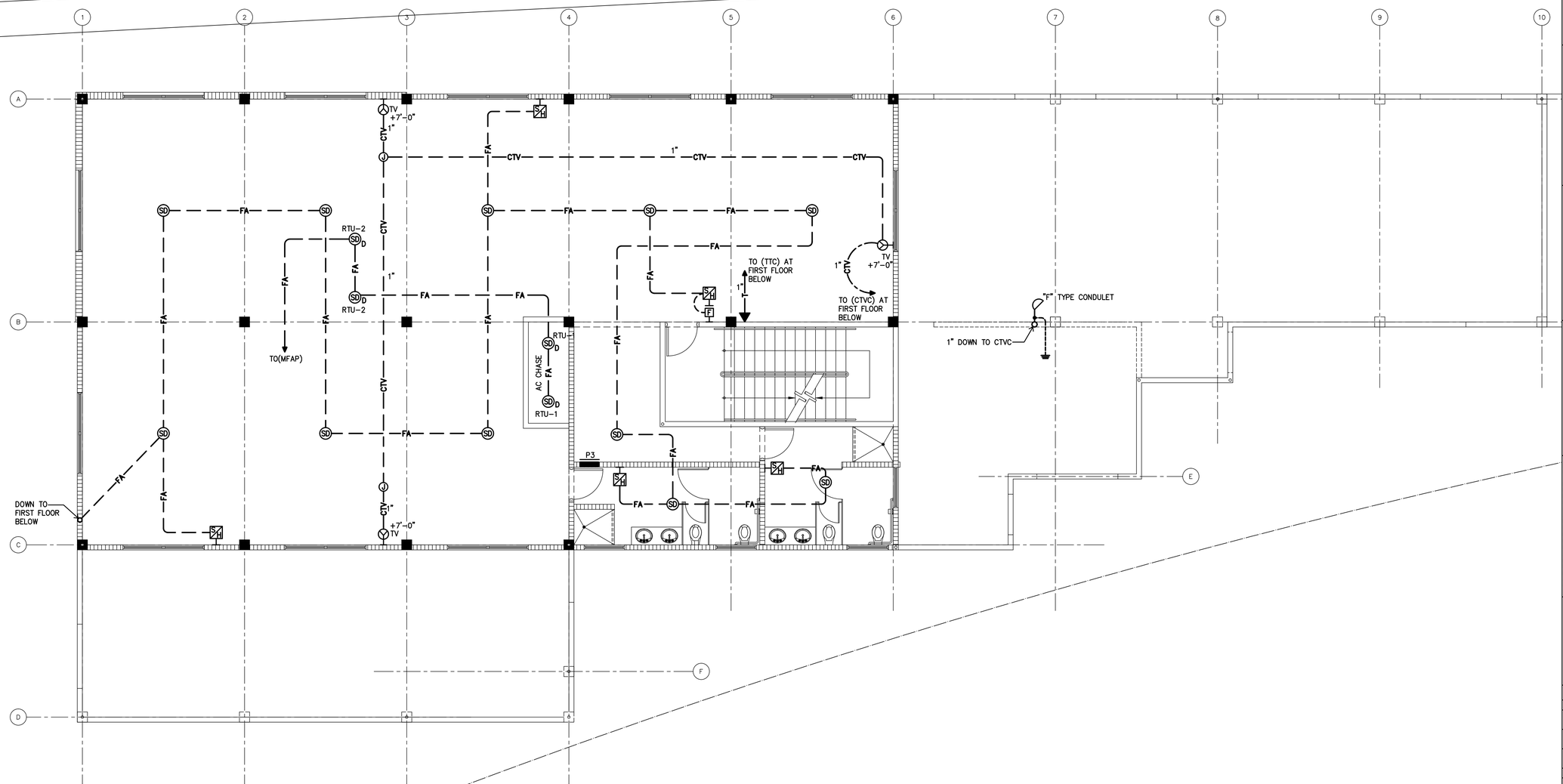
SHEET TITLE

FIRST FLOOR
PLAN
TELECOMS.

SHEET ID

E-5

SHEET



SECOND FLOOR PLAN - TELECOMMUNICATIONS

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

LJV DRAWING HISTORY		LJV-DSB DESIGN STAGE	
PROJECT NO:	23-045	SCHEMATIC DWGS: (SD)	
DRAWING NO:	E-6	PRELIMINARY DWGS: (PD)	
CAD FILE:	23-045/	DESIGN DEVELOPMENT DWGS: (DD)	
CAD SUBFILE:	23-045-E006 – R00 – BD	ADVANCED DWGS: (AD)	
PLOT DATE:	01.15.24	BID DWGS: (BD)	●
PLOT SCALE:	1:1	CONTRACT DWGS: (CD)	
ISSUE DATE:	01.15.24	RECORD DWGS: (RD)	
REMARKS:	NOT FOR CONSTRUCTION	-	%
RELATED PROJECTS:	----------		

OWNER

LOGO3barranquitas_municipio_osa_n120508.gif

PROPONENT

FIGUEROA & FIGUEROA
ARCHITECTS AND
ENGINEERS

CONSULTANT

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SEAL

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EDIFICIO USOS MULTIPLES
BARRANQUITAS,PR

PUEBLO PUERTO RICO

REVISIONS

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DRAWN BY:	F.R.
DESIGNED BY:	L.J.V.-P.E.
BRA PROJECT NUMBER:	

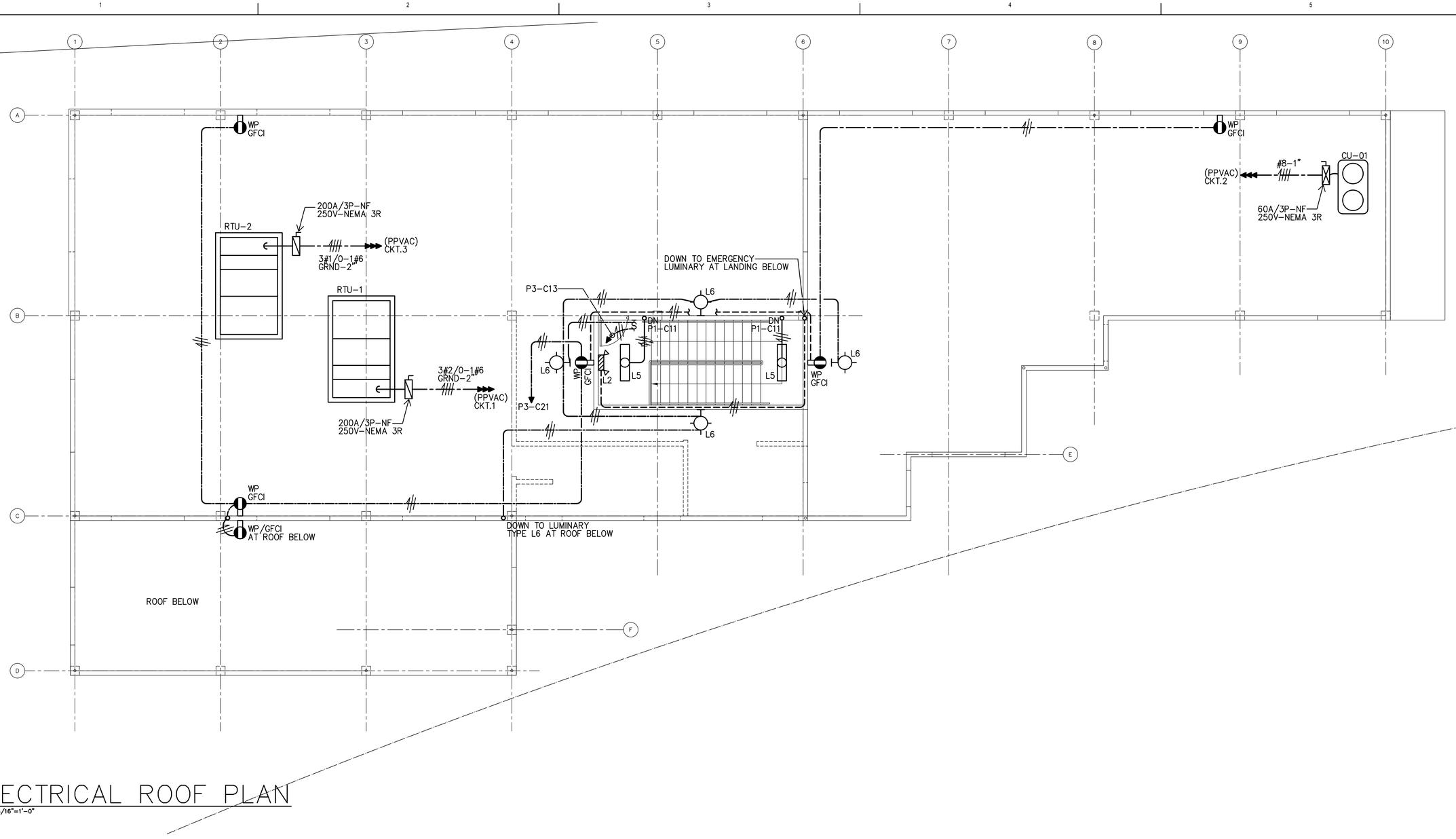
SHEET TITLE

SECOND FLOOR
PLAN
TELECOMS.

SHEET ID

E-6

SHEET



ELECTRICAL ROOF PLAN

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

OWNER

LOGO3barranquitas_municipio_oca_m2008.gif

PROPONENT

FIGUEROA & FIGUEROA
ARCHITECTS AND
ENGINEERS

CONSULTANT

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SEAL

YO, LEONARDO J. VIDAL, LIC. 6092, CERTIFICO QUE SOY EL PROFESIONAL QUE CONFECCIONÓ Y/O DISEÑÓ Y/O PREPARÓ ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIÉN CERTIFICO QUE ENTIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CÓDIGOS DE CONSTRUCCIÓN VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PÚBLICAS CON JURISDICCIÓN. CERTIFICO, ADEMÁS, QUE EN LA PREPARACIÓN DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY NÚM. 14 DEL 8 DE ENERO DE 2004, SEGÚN ENMENDADA, CONOCIDA COMO LEY PARA LA INVERCIÓN POR LA INDUSTRIA PUERTORRIQUEÑA Y CON LA (LEY NÚM. 319 DEL 15 MAYO DE 1938 , SEGÚN ENMENDADA; LEY NÚM. 96 DEL 6 DE JULIO DE 1978, SEGÚN ENMENDADA; SEGÚN APLIQUE). RECONOZCO QUE CUALQUIER DECLARACIÓN FALSA O FALSIFICACIONES DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MÍ, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCIÓN JUDICIAL Y DISCIPLINARIA POR LA OGPE.

PROJECT INFORMATION

EDIFICIO USOS MULTIPLES
BARRANQUITAS,PR

PUEBLO PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	01.15.24
REVIEWED BY:	L.V.-P.E.
DRAWN BY:	F.R.
DESIGNED BY:	L.J.V.-P.E.
BRA PROJECT NUMBER:	

SHEET TITLE

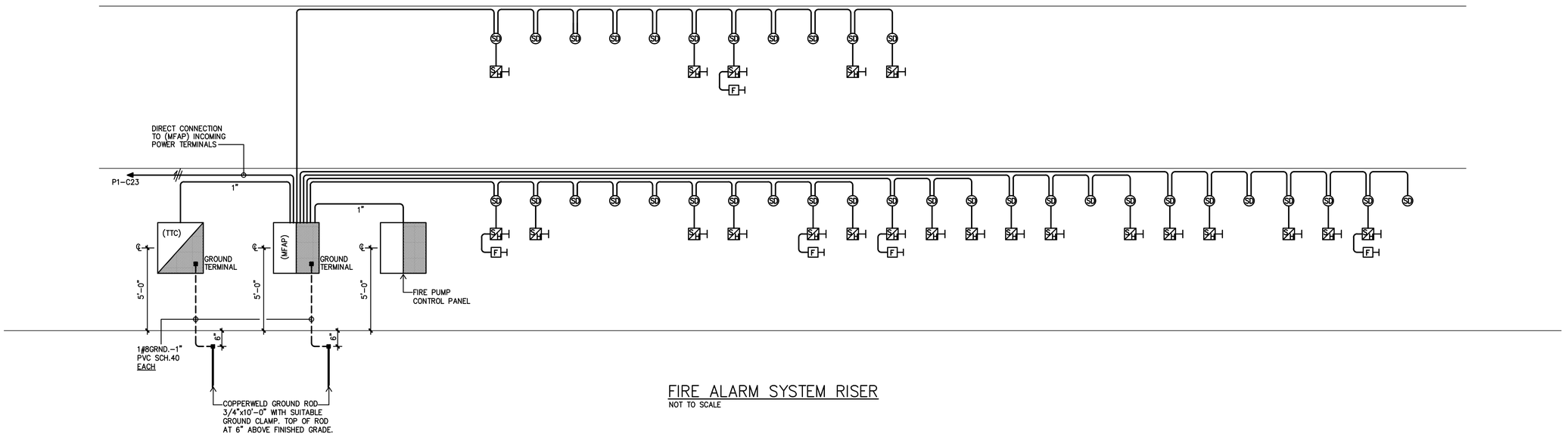
ELECTRICAL
ROOF PLAN

SHEET ID

E-7

SHEET

LJV DRAWING HISTORY		LJV-DSB	DESIGN STAGE	
PROJECT NO:	23-045		SCHEMATIC DWGS: (SD)	
DRAWING NO:	E-7		PRELIMINARY DWGS: (PD)	
CAD FILE:	23-045/		DESIGN DEVELOPMENT DWGS: (DD)	
CAD SUBFILE:	23-045-E007	R00 BD	ADVANCED DWGS: (AD)	
PLOT DATE:	01.15.24		BID DWGS: (BD)	●
PLOT SCALE:	1:1		CONTRACT DWGS: (CD)	
ISSUE DATE:	01.15.24		RECORD DWGS: (RD)	
REMARKS:	NOT FOR CONSTRUCTION		-	%
RELATED PROJECTS:	----------			



FIRE ALARM SYSTEM RISER

NOT TO SCALE

OWNER

LOGO3barranquitas_municipio_osa_m2000.gif

PROPONENT

FIGUEROA & FIGUEROA
ARCHITECTS AND
ENGINEERS

CONSULTANT

SEAL

YO, LEONARDO J. VIDAL, LIC. 6092, CERTIFICO QUE SOY EL PROFESIONAL QUE CONFECCIONÓ Y/O DISEÑÓ Y/O PREPARÓ ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIÉN CERTIFICO QUE ENTIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CÓDIGOS DE CONSTRUCCIÓN VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PÚBLICAS CON JURISDICCIÓN. CERTIFICO, ADEMÁS, QUE EN LA PREPARACIÓN DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY NÚM. 14 DEL 8 DE ENERO DE 2004, SEGÚN ENMENDADA, CONOCIDA COMO LEY PARA LA INVERCIÓN POR LA INDUSTRIA PUERTORRIQUEÑA Y CON LA (LEY NÚM. 319 DEL 15 MAYO DE 1938 , SEGÚN ENMENDADA; LEY NÚM. 96 DEL 6 DE JULIO DE 1978, SEGÚN ENMENDADA; SEGÚN APLIQUE). RECONOZCO QUE CUALQUIER DECLARACIÓN FALSA O FALSIFICACIONES DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MÍ, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCIÓN JUDICIAL Y DISCIPLINARIA POR LA OGPE.

PROJECT INFORMATION

EDIFICIO USOS MULTIPLES
BARRANQUITAS,PR

PUEBLO PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	01.15.24
REVIEWED BY:	L.V.-P.E.
DRAWN BY:	F.R.
DESIGNED BY:	L.J.V.-P.E.
BRA PROJECT NUMBER:	

SHEET TITLE

FIRE ALARM
SYSTEM RISER

SHEET ID

E-8

SHEET

① LUMINARY SCHEDULE

DESIGNATION	LIGHT SOURCE TYPE	DESCRIPTION	MOUNTING	VOLTS	DRIVER	LED					TOTAL WATTS	MANUFACTURER	CATALOG NO.	REMARKS NO.
						CRI	°K	WATTS	LUMENS	EFFICIENCY				
L1	LED	COMBINATION EXIT EMERGENCY	SURFACE	120/277	ELEC	---	---	1	---	---	1	EELP	XE-2-R-W-EM-USA	
L2	LED	EMERGENCY	WALL OR CEILING	120/277	ELEC	---	---	1.2	---	---	1.2	EELP	EM-1-USA	
L3	LED	2' x 4' TROFFER	RECESSED	120/277	ELEC	85	4000	32	4213	131	32	ORACLE	24-FLP1-LED-4000LM-DIM10-MVOLT-40K-85-USA	1
L4	LED	2' x 2' TROFFER	RECESSED	120/277	ELEC	85	4000	32	4213	131	33.5	ORACLE	22-FLP1-LED-4000LM-DIM10-MVOLT-40K-85-USA	1
L5	LED	WRAPAROUND	SURFACE	120/277	ELEC	80	4000	43.8	4424	101	43.8	EATON / METALUX	4WSNLED-LD4-40SL-F-UNV-L840-CD1-U	.
L6	LED	WALL PACK	WALL	120/277	ELEC	80	4000	88	12277	139	88	LITHONIA	WDGE3-LED-P4-40K-80CRI-RFT-MV-SRM-DDBXD	2,3,4,5
L7	LED	DOWNLIGHT	RECESSED	120/277	ELEC	90	4000	8.2	690	84	8.2	HALO	BLD4-08-9S-WH-120V	7
L8	LED	INDUSTRIAL	SURFACE	120/277	ELEC	80	4000	30.6	4214	138	30.6	EATON / METALUX	4SNLED-LD5-42SL-RM-UNV-L840-CD1-U	.
L9	LED	2' x 4' TROFFER	RECESSED	120/277	ELEC	85	4000	32	4213	131	32	ORACLE	24-FLP1-LED-4000LM-DIM10-MVOLT-40K-85-USA	6
L10	LED	2' x 2' TROFFER	RECESSED	120/277	ELEC	85	4000	32	4213	131	33.5	ORACLE	22-FLP1-LED-4000LM-DIM10-MVOLT-40K-85-USA	6
L11	LED	DOWNLIGHT	RECESSED	120/277	ELEC	80	4000	41.6	3000	96	41.6	FAIL SAFE	BAA-FLD6BX-30-UNV-D010-FEU6B-315-8040-F6LBXV-M-1-LI-BL84	7,8
L12	LED	VANDAL RESISTANT	SURFACE	120/277	ELEC	80	4000	44.2	4255	96	44.2	FAIL SAFE	HVSL4-LD4-I-40-UNV-0-EDC1-VRSD	4
.	.				.									
.	.				.									
.	.				.									

② LUMINARY SCHEDULE REMARKS

VALS-1

NO.	REMARKS DESCRIPTION
1	SUITABLE FOR MOUNTING ON A 2' x 4' OR 2' x 2' HUNG CEILING.
2	PROVIDE 120 VOLTS BUTTON TYPE PHOTOCELL.
3	SUITABLE FOR OUTDOOR LOCATION.
4	PROVIDE HEXAGONAL STAINLESS STEEL CENTER PIN REJECT SCREWS & SCREWDRIVER.
5	DARK BRONZE FINISH, TYPE 3 WIDE DISTRIBUTION.
6	PROVIDE MOUNTING FRAME SUITABLE FOR INSTALLATION ON A GYPSUM BOARD HUNG CEILING.
7	WET & DAMP LOCATION LISTED.
8	BOTTOM LENS.
.	

③ PANELBOARD SCHEDULE

PANELBOARD DESIGNATION : DP

120/208 VOLTS 3 PH. 4 WIRES ● SOLID NEUTRAL 600 AMPERES BUS BARS 35000 AMPS. SYM. INT. CAP.
MAINS: --- AMPS. MAIN LUGS, 600 AMPS. MAIN CIRCUIT BREAKER 3 POLES 250 VOLTS, GRND. BAR ●
MOUNTING: -- FLUSH ● SURFACE, FED FROM: -- TOP ● BOTTOM, LOCATION: OUTDOOR SECONDARY CUBICLE
NEMA TYPE: 1 MANUFACTURER: SQUARE D – HCM

CKT NO.	DESCRIPTION	AMPS	A	B	C	AMPS	DESCRIPTION	CKT NO.
			200A			100A		
1	P1	128	178			62	P2	2
		135		186		63		
		91			135	60		
			150A			400A		
3	P3	70	324			254	PVAC	4
		69		323		254		
		80			334	254		
			30A			40A		
5	JOCKEY PUMP (1½HP)	7	25			18	WPP 2–5HP (ONLY ONE PUMP WORKS AT A TIME)	6
		7		25		18		
		7			25	18		
7	SPACE	.	.			.	SPACE	8
		.		.		.		
		.			.	.		

527 | 534 | 494 AMPS. SUB TOTALS

NOTES:
1–ALL BREAKERS TO BE 20A, UNLESS OTHERWISE NOTED.
2–PROVIDE WITH HINGED DOOR & DOOR LOCK WITH KEY.
3–

STD. NO. : LJVPS–1

SPECIAL FEATURES:
___ COLUMN WIDTH TYPE PANEL
___ TWO SECTIONS PANEL
___ FEED–THRU TYPE PANEL
___ LIGHTING CONTACTOR PANEL
● MONOFLAT FRONT
___ EXTRA WIDE GUTTERS
___ SPLIT BUS
● COPPER BUS BARS

SPECIAL FEATURES:
___ ISOLATED GROUND BAR
___ LOCK–ON DEVICE
___ GROUND FAULT TYPE BREAKER
● "BOLT–ON" TYPE BREAKERS
___ OUTDOOR CONSTRUCTION
___ STAINLESS STEEL CONSTRUCTION
● DOOR–IN–DOOR FRONT
___

④ PANELBOARD SCHEDULE

PANELBOARD DESIGNATION : P1

120/208 VOLTS 3 PH. 4 WIRES ● SOLID NEUTRAL 225 AMPERES BUS BARS 22000 AMPS. SYM. INT. CAP.
MAINS: --- AMPS. MAIN LUGS, 200 AMPS. MAIN CIRCUIT BREAKER 3 POLES 250 VOLTS, GRND. BAR ●
MOUNTING: ● FLUSH -- SURFACE, FED FROM: -- TOP ● BOTTOM, LOCATION: OFFICE
NEMA TYPE: 1 MANUFACTURER: SQUARE D – NQ

CKT NO.	DESCRIPTION	AMPS	*	A	B	C	*	AMPS	DESCRIPTION	CKT NO.
1	EXIT/EMERGENCY LIGHTS	2	*	40			50A	38	RANGE	2
3	NIGHT LIGHTS	3	*		41			38		4
5	CORRIDOR LIGHTS	4				17		13	APPLIANCES	6
7	GENERAL LIGHTS	6		19				13	APPLIANCES	8
9	OUTDOOR LIGHTS	11			18			7	REFRIGERATOR	10
11	STAIR LIGHTS	3				13		10	WASTE DISPOSER	12
13	MECH/ELEC ROOM LIGHTS	6		12				6	STORAGE RECEPTACLES	14
15	POLE LIGHTS	6	20A		15			9	OFFICE RECEPTACLES	16
17		6				15		9	FIRST AID RECEPTACLES	18
19	TTC	5	*	11				6	RESTROOM RECEPT.	20
21	CTVC	5			15			10	HAND DRYER	22
23	MFAP	5	*		15			10	HAND DRYER	24
25	WATER HEATER 5KW	24	30A	34				10	EF–1	26
27		24			34			10	EF–2	28
29	FIRE PUMP PANEL	5	*			15		10	EF–3	30
31	SPARE	6		6				.	SPACE	32
33	SPARE	6			6			.	SPACE	34
35	SPARE	6				6		.	SPACE	36
37	SPARE	6		6				.	SPACE	38
39	SPARE	6			6			.	SPACE	40
41	SPARE	6				16		10	EF–4	42

128 | 135 | 91 AMPS. SUB TOTALS

NOTES:
1–ALL BREAKERS TO BE 20A, UNLESS OTHERWISE NOTED.
2–PROVIDE WITH HINGED DOOR & DOOR LOCK WITH KEY.
3–

STD. NO. : LJVPS–1

SPECIAL FEATURES:
___ COLUMN WIDTH TYPE PANEL
___ TWO SECTIONS PANEL
___ FEED–THRU TYPE PANEL
___ LIGHTING CONTACTOR PANEL
● MONOFLAT FRONT
___ EXTRA WIDE GUTTERS
___ SPLIT BUS
● COPPER BUS BARS

SPECIAL FEATURES:
___ ISOLATED GROUND BAR
* LOCK–ON DEVICE
___ GROUND FAULT TYPE BREAKER
● "BOLT–ON" TYPE BREAKERS
___ OUTDOOR CONSTRUCTION
___ STAINLESS STEEL CONSTRUCTION
● DOOR–IN–DOOR FRONT
___

⑤ PANELBOARD SCHEDULE

PANELBOARD DESIGNATION : P2

120/208 VOLTS 3 PH. 4 WIRES ● SOLID NEUTRAL 100 AMPERES BUS BARS 22000 AMPS. SYM. INT. CAP.
MAINS: --- AMPS. MAIN LUGS, 100 AMPS. MAIN CIRCUIT BREAKER 3 POLES 250 VOLTS, GRND. BAR ●
MOUNTING: ● FLUSH -- SURFACE, FED FROM: -- TOP ● BOTTOM, LOCATION: ACTIVITY AREA 1ST. FLOOR
NEMA TYPE: 1 MANUFACTURER: SQUARE D – NQ

CKT NO.	DESCRIPTION	AMPS	A	B	C	AMPS	DESCRIPTION	CKT NO.
1	ACTIVITY AREA LIGHTS	10	16			6	RECEPTACLES	2
3	ACTIVITY AREA LIGHTS	8		14		6	RECEPTACLES	4
5	ACTIVITY AREA LIGHTS	8			14	6	RECEPTACLES	6
7	DOWNLIGHTS	6	12			6	RECEPTACLES	8
9	RECEPTACLES	9		15		6	RECEPTACLES	10
11	T.V. POWER	6			12	6	RECEPTACLES	12
13	T.V. POWER	6	12			6	RECEPTACLES	14
15	T.V. POWER	6		12		6	RECEPTACLES	16
17	T.V. POWER	6			12	6	FLOOR OUTLETS	18
19	MECH./ELEC. RM. REC	8	14			6	FLOOR OUTLETS	20
21	SPARE	8		14		6	FLOOR OUTLETS	22
23	SPARE	8			14	6	RECEPTACLES	24
25	SPARE	8	8			.	SPACE	26
27	SPARE	8		8		.	SPACE	28
29	SPARE	8			8	.	SPACE	30
31	SPACE	.	.			.	SPACE	32
33	SPACE	.		.		.	SPACE	34
35	SPACE	.			.	.	SPACE	36
37	SPACE	.	.			.	SPACE	38
39	SPACE	.		.		.	SPACE	40
41	SPACE	.			.	.	SPACE	42

62 | 63 | 60 AMPS. SUB TOTALS

NOTES:
1–ALL BREAKERS TO BE 20A, UNLESS OTHERWISE NOTED.
2–PROVIDE WITH HINGED DOOR & DOOR LOCK WITH KEY.
3–

STD. NO. : LJVPS–1

SPECIAL FEATURES:
___ COLUMN WIDTH TYPE PANEL
___ TWO SECTIONS PANEL
___ FEED–THRU TYPE PANEL
___ LIGHTING CONTACTOR PANEL
● MONOFLAT FRONT
___ EXTRA WIDE GUTTERS
___ SPLIT BUS
● COPPER BUS BARS

SPECIAL FEATURES:
___ ISOLATED GROUND BAR
___ LOCK–ON DEVICE
___ GROUND FAULT TYPE BREAKER
● "BOLT–ON" TYPE BREAKERS
___ OUTDOOR CONSTRUCTION
___ STAINLESS STEEL CONSTRUCTION
● DOOR–IN–DOOR FRONT
___

⑥ PANELBOARD SCHEDULE

PANELBOARD DESIGNATION : P3

120/208 VOLTS 3 PH. 4 WIRES ● SOLID NEUTRAL 225 AMPERES BUS BARS 22000 AMPS. SYM. INT. CAP.
MAINS: --- AMPS. MAIN LUGS, 150 AMPS. MAIN CIRCUIT BREAKER 3 POLES 250 VOLTS, GRND. BAR ●
MOUNTING: ● FLUSH -- SURFACE, FED FROM: -- TOP ● BOTTOM, LOCATION: SECOND FLOOR
NEMA TYPE: 1 MANUFACTURER: SQUARE D – NQ

CKT NO.	DESCRIPTION	AMPS	*	A	B	C	AMPS	DESCRIPTION	CKT NO.
1	EXIT/EMERGENCY LIGHTS	1	*	7			6	RECEPTACLES	2
3	RESTROOM LIGHTS	5			11		6	RECEPTACLES	4
5	ACTIVITY AREA LIGHTS	8				14	6	RECEPTACLES	6
7	ACTIVITY AREA LIGHTS	8		14			6	RECEPTACLES	8
9	ACTIVITY AREA LIGHTS	5			11		6	RECEPTACLES	10
11	DOWNLIGHTS	6				12	6	RECEPTACLES	12
13	ROOF LIGHTS	3		9			6	RECEPTACLES	14
15	T.V. POWER	6			12		6	RECEPTACLES	16
17	T.V. POWER	6				12	6	RECEPTACLES	18
19	T.V. POWER	6		12			6	RECEPTACLES	20
21	ROOF RECEPTACLES	3			9		6	FLOOR OUTLETS	22
23	HAND DRYER	10				16	6	FLOOR OUTLETS	24
25	HAND DRYER	10		16			6	SPARE	26
27	SPARE	8			14		6	SPARE	28
29	SPARE	8				14	6	SPARE	30
31	SPARE	6		12			6	SPARE	32
33	SPARE	6			12		6	SPARE	34
35	SPARE	6				12	6	SPARE	36
37	SPACE	.		.			.	SPACE	38
39	SPACE	.			.		.	SPACE	40
41	SPACE	.				.	.	SPACE	42

70 | 69 | 80 AMPS. SUB TOTALS

NOTES:
1–ALL BREAKERS TO BE 20A, UNLESS OTHERWISE NOTED.
2–PROVIDE WITH HINGED DOOR & DOOR LOCK WITH KEY.
3–

STD. NO. : LJVPS–1

SPECIAL FEATURES:
___ COLUMN WIDTH TYPE PANEL
___ TWO SECTIONS PANEL
___ FEED–THRU TYPE PANEL
___ LIGHTING CONTACTOR PANEL
● MONOFLAT FRONT
___ EXTRA WIDE GUTTERS
___ SPLIT BUS
● COPPER BUS BARS

SPECIAL FEATURES:
___ ISOLATED GROUND BAR
* LOCK–ON DEVICE
___ GROUND FAULT TYPE BREAKER
● "BOLT–ON" TYPE BREAKERS
___ OUTDOOR CONSTRUCTION
___ STAINLESS STEEL CONSTRUCTION
● DOOR–IN–DOOR FRONT
___

⑦ PANELBOARD SCHEDULE

PANELBOARD DESIGNATION : (PPVAC)

120/208 VOLTS 3 PH. 4 WIRES ● SOLID NEUTRAL 400 AMPERES BUS BARS 25000 AMPS. SYM. INT. CAP.
MAINS: -- AMPS. MAIN LUGS, 400 AMPS. MAIN CIRCUIT BREAKER 3 POLES 250 VOLTS, GRND. BAR ●
MOUNTING: ● FLUSH -- SURFACE, FED FROM: -- TOP ● BOTTOM, LOCATION: OFFICE
NEMA TYPE: 1 MANUFACTURER: SQUARE D – HCM

CKT NO.	DESCRIPTION	AMPS	A	B	C	AMPS	DESCRIPTION	CKT NO.
			175A			50A		
1	RTU–01	129	159			30	CU–01	2
		129		159		30		
		129			159	30		
			125A			125A		
3	RTU–02	95	95			.	SPARE	4
		95		95		.		
		95			95	.		
5	SPACE	.	.			.	SPACE	6
		.		.		.		
		.			.	.		
7	SPACE	.	.			.	SPACE	8
		.		.		.		
		.			.	.		

254 | 254 | 254 AMPS. SUB TOTALS

NOTES:
1–ALL BREAKERS TO BE 20A, UNLESS OTHERWISE NOTED.
2–PROVIDE WITH HINGED DOOR & DOOR LOCK WITH KEY.
3–

STD. NO. : LJVPS–1

SPECIAL FEATURES:
___ COLUMN WIDTH TYPE PANEL
___ TWO SECTIONS PANEL
___ FEED–THRU TYPE PANEL
___ LIGHTING CONTACTOR PANEL
● MONOFLAT FRONT
___ EXTRA WIDE GUTTERS
___ SPLIT BUS
● COPPER BUS BARS

SPECIAL FEATURES:
___ ISOLATED GROUND BAR
___ LOCK–ON DEVICE
___ GROUND FAULT TYPE BREAKER
● "BOLT–ON" TYPE BREAKERS
___ OUTDOOR CONSTRUCTION
___ STAINLESS STEEL CONSTRUCTION
● DOOR–IN–DOOR FRONT
___

OWNER

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PROPONENT

FIGUEROA & FIGUEROA
ARCHITECTS AND
ENGINEERS

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SEAL

YO, LEONARDO J. VIDAL, LIC. 6092, CERTIFICO QUE SOY EL PROFESIONAL QUE CONFECCIONÓ Y/O DISEÑÓ Y/O PREPARÓ ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIÉN CERTIFICO QUE ENTIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CÓDIGOS DE CONSTRUCCIÓN VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PÚBLICAS CON JURISDICCIÓN. CERTIFICO, ADEMÁS, QUE EN LA PREPARACIÓN DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY NÚM. 14 DEL 8 DE ENERO DE 2004, SEGÚN ENMENDADA, CONOCIDA COMO LEY PARA LA INVERCIÓN POR LA INDUSTRIA PUERTORRIQUEÑA Y CON LA LEY NÚM. 319 DEL 15 MAYO DE 1938 , SEGÚN ENMENDADA; LEY NÚM. 96 DEL 6 DE JULIO DE 1978, SEGÚN ENMENDADA; (SEGÚN APLIQUE). RECONOZCO QUE CUALQUIER DECLARACIÓN FALSA O FALSIFICACIONES DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MI, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCIÓN JUDICIAL Y DISCIPLINARIA POR LA OGPE.

PROJECT INFORMATION

EDIFICIO USOS MULTIPLES
BARRANQUITAS,PR

PUEBLO PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	01.15.24
REVIEWED BY:	L.V.-P.E.
DRAWN BY:	F.R.
DESIGNED BY:	L.J.V.-P.E.
BRA PROJECT NUMBER:	

SHEET TITLE

ELECTRICAL
SCHEDULES

SHEET ID

E-9

SHEET

LJV DRAWING HISTORY		LJV-DSB	DESIGN STAGE	
PROJECT NO:	23-045		SCHEMATIC DWGS: (SD)	
DRAWING NO:	E-9		PRELIMINARY DWGS: (PD)	
CAD FILE:	23-045/		DESIGN DEVELOPMENT DWGS: (DD)	
CAD SUBFILE:	23-045-E009	– R00– BD	ADVANCED DWGS: (AD)	
PLOT DATE:	01.15.24		BID DWGS: (BD)	●
PLOT SCALE:	1:1		CONTRACT DWGS: (CD)	
ISSUE DATE:	01.15.24		RECORD DWGS: (RD)	
REMARKS:	NOT FOR CONSTRUCTION		-	%
RELATED PROJECTS:	----------			

1 GENERAL NOTES:

1 – UNLESS OTHERWISE INDICATED ALL CONDUCTORS SHALL BE #12–AWG. UP TO #10–AWG USE SOLID CONDUCTORS, ALL LARGER SIZES SHALL BE STRANDED CONDUCTORS. CONTROL CONDUCTORS TO BE #14 AWG. MINIMUM SIZE.

2 – ALL CONDUCTORS SHALL BE THWN/THHN–600V. INSULATION.

3 – UNLESS OTHERWISE INDICATED ALL CONDUCTORS SHALL BE COPPER.

4 – PROVIDE GROUND CONDUCTOR IN ALL THE CONDUITS.

5 – PROVIDE #12–AWG GREEN JUMPER BETWEEN RECEPTACLE GROUNDING SCREW AND OUTLET BOX GROUNDING SCREW.

6 – UNLESS OTHERWISE INDICATED ALL CONDUITS SHALL BE 3/4" IN DIAMETER MINIMUM.

7 – ALL UNDERGROUND CONDUIT COUPLING SHALL BE WATERTIGHT.

8 – PROVIDE AN EXPANSION JOINT COUPLING OF THE REQUIRED TYPE AND SIZE WHENEVER A CONDUIT CROSSES AN EXPANSION JOINT.

9 – PROVIDE PLASTIC CONDUIT DIVIDERS IN ALL UNDERGROUND CONDUIT RUNS. MAXIMUM DISTANCE BETWEEN DIVIDERS TO BE 4'–0'.

10 – CONTRACTOR MUST MAKE SURE THAT THE ENTIRE ELECTRICAL SYSTEM HAS GROUND CONTINUITY.

11 – ALL THE ELECTRICAL INSTALLATION SHALL BE DONE IN A NEAT & WORKMANLIKE MANNER, ACCORDING TO THE LAST EDITION OF THE NATIONAL ELECTRICAL CODE, THE LUMA ENERGY LATEST STANDARDS & THE NEGOCIADO DE TELECOMUNICACIONES LATEST PRACTICES.

12 – THE CONTRACTOR SHALL VISIT THE JOB SITE AND BECOME ACQUAINTED WITH THE EXISTING FIELD CONDITIONS. IT SHALL BE THE DIRECT RESPONSIBILITY OF THE CONTRACTOR TO BRING PROMPTLY TO THE ATTENTION OF THE ENGINEER ANY DISCREPANCIES BETWEEN THE EXISTING FIELD CONDITIONS AND THOSE THAT WERE USED FOR DESIGN PURPOSES. THIS SHALL BE DONE BEFORE THE CONTRACTOR SUBMITS HIS BID, SO THAT THE ENGINEER CAN RENDER A DECISION ON THE MATTER BEFORE THE BIDS ARE RECEIVED. THE SUBMITTAL OF THE BID BY THE CONTRACTOR WILL BE HELD AS PROOF THAT THE CONTRACTOR UNDERSTAND THROUGHLY AND COMPLETELY THE SCOPE OF THE WORK INVOLVED, HAS FAMILIARIZED HIMSELF WITH THE EXISTING FIELD CONDITIONS, AND HAS INCLUDED IN HIS BID ALL THE ITEMS NECESSARY TO PERFORM THE ELECTRICAL WORK. NO ALLOWANCE WILL BE PERMITTED ON THIS MATTER AFTER THE BIDS ARE RECEIVED.

13 – UNLESS OTHERWISE INDICATED ALL OUTLETS SHALL BE FLUSH MOUNTED AND SHALL HAVE THEIR OWN INDEPENDENT OUTLET BOXES. MINIMUM SIZE OF OUTLET BOX TO BE 4" SQUARE & 1–1/2" DEEP. EXACT SIZE OF OUTLET BOX SHALL BE DETERMINED ACCORDING TO THE MAXIMUM NUMBER OF CONDUCTORS IN THE BOX PER N.E.C. ARTICLE 370–SECTION 6.

14 – ALL INDICATED HEIGHTS ARE FROM CENTER OF BOX TO FINISHED FLOOR.

15 – CONTRACTOR SHALL BALANCE ALL LOADS.

16 – ROUTE OF CONDUITS SHOWN IN THE LAYOUT IS SCHEMATIC AND INTENDED ONLY TO INDICATE INTER–CONNECTIONS BETWEEN OUTLETS. EXACT CONDUIT ROUTING SHALL BE DETERMINED AT THE JOB SITE TO CONFORM WITH THE STRUCTURAL CONDITIONS AND SHALL BE SUBJECT TO THE FINAL APPROVAL OF THE ARCHITECT/ENGINEER.

17 – LEAVE A #12–AWG–TW FISHWIRE IN ALL EMPTY CONDUITS.

18 – ALL PANELBOARDS AND LOAD CENTERS SHALL BE PROVIDED WITH A FACTORY INSTALLED GROUND BUS FOR CONNECTING TO GROUND ALL THE GROUND WIRES OR CABLES ENTERING OR LEAVING THE PANELBOARD. THE GROUND BUS SHALL BE SIMILAR IN SIZE AND CHARACTERISTICS TO THE NEUTRAL BUS. ALL PANELBOARDS SHALL HAVE A MONOFLAT FRONT AND KEY LOCK.

19 – WHEN TWO OR MORE WIRING DEVICES ARE SHOWN TOGETHER IN ADJACENT POSITIONS AND AT THE SAME HEIGHT, THEY SHALL BE INSTALLED IN A MULTIPLE GANG OUTLET BOX OF THE PROPER SIZE SO THAT ONLY ONE RAISED COVER PLATE OF THE REQUIRED TYPE AND SIZE ARE USED.

20 – UNLESS OTHERWISE INDICATED, ALL WIRING DEVICES SHALL BE WHITE COLORED WITH 302 STAINLESS STEEL COVER PLATES, EXCEPT THE WEATHERPROOF OUTLETS WHICH SHALL HAVE THEIR STANDARD GRAY COVER PLATES.

21 – WHEN TWO OR MORE PANELBOARDS OR CABINETS ARE SHOWN TOGETHER IN ADJACENT LOCATIONS, THE TOP OF ALL PANELBOARDS OR CABINETS SHALL BE ALIGNED WITH THE TOP OF THE BIGGEST ONE SO THAT ALL THE TOPS ARE AT EXACTLY THE SAME HEIGHT FROM THE FINISHED FLOOR.

22 – IN CONDUIT RUNS, THE NUMBER OF ARROWS DESIGNATE THE NUMBER OF CIRCUITS IN THE CONDUIT (ONE POLE IN THE PANELBOARD PER EACH CIRCUIT), THE NUMBER OF LINES DESIGNATE THE NUMBER OF CONDUCTORS IN THE CONDUIT , THE LONGER LINE BEING A NEUTRAL CONDUCTOR AND " / " BEING THE GROUND CONDUCTOR.

23 – C1 ○ L1 IN LIGHTING OUTLET, C1 INDICATES THE CIRCUIT NUMBER, L1 INDICATES THE LUMINARY TYPE FROM THE LUMINARY SCHEDULE AND 1 INDICATES THE SWITCH CONTROLLING UNIT.
1
C3 ⇦ IN RECEPTACLE OUTLET, C3 INDICATES THE CIRCUIT NUMBER.

24 – TELEPHONE TERMINALS CABINET SHALL BE APPROVED EQUAL TO COLUMBIA METAL TYPE "PF" WITH THE DOOR HINGES, LOCK AND A 3/4" WHITE PAINTED PLYWOOD BACKBOARD LOCATED AT THE BACK OF THE CABINET.

25 – IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE VOLTAGE CHARACTERISTICS AT THE SITE WITH THE UTILITY COMPANY AT THE TIME OF INSTALLATION BEFORE ORDERING ANY EQUIPMENT.

26 – ALL WIRING DEVICES SHALL BE SPECIFICATION GRADE.

27 – ALL THE SELF–STANDING AND SURFACE MOUNTED ELECTRICAL EQUIPMENT AS WELL AS THE LUMINARIES SHALL ALL BE BRACED FOR SEISMIC SHOCK ACCORDING TO THE SEISMIC RESTRAINT MANUAL GUIDELINES FOR MECHANICAL SYSTEMS. THE SAME APPLIES TO ALL THE CONDUIT WORK. THE DETAILS AND INSTALLATION METHODS IN SAID MANUAL SHALL BE MODIFIED AS REQUIRED TO FIT THE ELECTRICAL INSTALLATION OF THE PROJECT.

28 – FOR FINAL LOCATION OF MECHANICAL EQUIPMENT SEE CORRESPONDING MECHANICAL AND ARCHITECTURAL DRAWINGS. CONTRACTOR TO RELOCATE ELECTRICAL ROUGH–IN ACCORDINGLY AT NO ADDITIONAL COST TO OWNER.

29 – CONDUIT WORK:

A – ALL CONDUITS INSTALLED UNDERGROUND SHALL BE PVC SCH. 40.

B – ALL CONDUITS INSTALLED EMBEDDED IN FLOOR SLABS WHICH ARE IN DIRECT CONTACT WITH THE EARTH SHALL BE PVC SCH. 40.

C – ALL CONDUITS INSTALLED EMBEDDED IN WALLS, CEILING SLABS AND IN FLOOR SLABS WHICH ARE NOT IN DIRECT CONTACT WITH THE EARTH SHALL BE EMT.

D – ALL CONDUITS INSTALLED IN THE AREA BETWEEN HUNG CEILINGS AND CEILING SLABS OR METAL DECKS SHALL BE EMT.

E – ALL CONDUITS INSTALLED EXPOSED IN INDOOR AREAS SHALL BE EMT.

F – ALL CONDUITS INSTALLED EXPOSED IN OUTDOOR AREAS SHALL BE PVC COATED HEAVY WALL RIGID GALVANIZED STEEL.

G – FINAL CONNECTIONS TO ALL MOTORS AND ELECTRICAL EQUIPMENT SHALL BE DONE WITH LIQUIDTIGHT FLEXIBLE STEEL CONDUIT.

H – 'ENT' CONDUIT IS NOT ALLOWED IN THIS PROJECT.

30 – ALL CONDUCTORS SHALL BE #12–AWG, EXCEPT WHEN OTHERWISE INDICATED IN THE DRAWINGS OR AS INDICATED BELOW FOR 20 AMPS. CKTS. CONDUCTOR SIZING.

1 – ALL 20 AMP. 120VOLT CIRCUIT RUNS SHALL BE AS FOLLOWS:
5' TO 100' IN LENGTH, #12–AWG.
100' TO 200' IN LENGTH, #10–AWG.
200' TO 300' IN LENGTH, #8–AWG.
300' TO 400' IN LENGTH, #6–AWG.

31 – ALL PENDANT MOUNTED LUMINARIES SHALL BE INSTALLED USING STEMS, 2 STEMS PER EACH 4' LUMINARY. STEMS SHALL BE PAINTED OF THE COLOR REQUIRED BY THE ARCHITECT.

32 – ALL DIMMERS SHALL BE OF THE SLIDE TYPE.

33 – THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL THE POWER AND CONTROL INTERCONNECTIONS AMONG ALL THE DIFFERENT PARTS OF THE AIR CONDITIONING SYSTEMS (FAN COILS/AHU'S, CONDENSING UNITS, THERMOSTATS, ETC.). THE CONTRACTOR SHALL ALSO PROVIDE ALL THE STARTING AND DISCONNECT EQUIPMENT FOR SAID SYSTEMS.

34 – ALL 15A OR 20A/1P–125V. RECEPTACLES LOCATED OUTDOORS SHALL BE PROVIDED WITH INTEGRAL GROUND FAULT PROTECTION AND WEATHERPROOF COVER PLATES.

35 – ALL THE SMOKE DETECTORS SHALL BE INTERCONNECTED SO THAT IF ONE SMOKE DETECTOR IS ACTIVATED ALL THE SMOKE DETECTORS WILL SOUND THE ALARM.

36 – ALL FLOOR OUTLETS SHALL BE PROVIDED WITH PVC FLOOR BOXES AND GASKETED FLUSH BRONZE COVER PLATES.

2 LEGEND

○	CEILING LIGHTING OUTLET.
⊢○	WALL LIGHTING OUTLET, 7'–6" A.F.F. UNLESS OTHERWISE INDICATED IN THE DRAWINGS.
▭	2' x 4' LED RECESSED LUMINARY.
▣	2' x 2' LED RECESSED LUMINARY.
▭	SURFACE MOUNTED FLUORESCENT LUMINARY.
⊢	SURFACE MOUNTED EMERGENCY EXIT LUMINARY.
⊢	WALL MOUNTED EMERGENCY EXIT LUMINARY, 7'–0" A.F.F. UNLESS OTHERWISE INDICATED IN THE DRAWINGS.
⊢	WALL MOUNTED EMERGENCY LUMINARY, 7'–0" A.F.F. UNLESS OTHERWISE INDICATED IN THE DRAWINGS.
⊢○	SINGLE POLE SWITCH, 20 AMPS, 125 VOLTS, 48" A.F.F.
⊢○3W	THREE–WAY SWITCH, 20 AMPS, 125 VOLTS, 48" A.F.F.
⊢○4W	FOUR–WAY SWITCH, 20 AMPS, 125 VOLTS, 48" A.F.F.
⊢○2P	TWO POLE SWITCH, 20 AMPS, 250 VOLTS, 48" A.F.F.
⊢○M	FRACTIONAL HORSEPOWER MANUAL STARTER WITH RED RUNNING PILOT LIGHT AND OVERLOAD RELAY, RATED FOR 1 HP, 125 VOLTS, 48" A.F.F.
⊂⊃	DUPLEX GROUNDING CONVENIENCE OUTLET, 15 AMPS, 125 VOLTS, 1'–6" A.F.F.
⊂⊃	DUPLEX GROUNDING CONVENIENCE OUTLET, 15 AMPS, 125 VOLTS, 6" ABOVE COUNTER TOP.
⊂⊃	QUADRUPLEX GROUNDING CONVENIENCE OUTLET, 15 AMPS, 125 VOLTS, 1'–6" A.F.F.
⊂⊃	DUPLEX GROUNDING POWER OUTLET, 20 AMPS, 125 VOLTS, 1'–6" A.F.F.
⊂⊃	DUPLEX GROUNDING POWER OUTLET, 20 AMPS, 125 VOLTS, 6" ABOVE COUNTER TOP.
⊂⊃	QUADRUPLEX GROUNDING POWER OUTLET, 20 AMPS, 125 VOLTS, 1'–6" A.F.F.
⊢J	WALL JUNCTION BOX, FLAT BLANK COVER PLATE, 1'–6" A.F.F. UNLESS OTHERWISE INDICATED.
J	CEILING JUNCTION BOX, FLAT BLANK COVER PLATE.
◀	WALL TELEPHONE OUTLET, 1'–6" A.F.F.
◀	WALL TELEPHONE OUTLET, 4'–0" A.F.F.
◀	COMBINATION WALL DATA/TELEPHONE SYSTEM OUTLET, 1'–6" A.F.F.
⊢⊗	TELEVISION SYSTEM OUTLET, 1'–6" A.F.F.
▬	PANELBOARD, CENTER LINE AT 5'–0" A.F.F. SEE ELECTRICAL DRAWINGS FOR DETAILS.
▭	HEAVY DUTY DISCONNECT SWITCH, CENTER LINE AT 5'–0" A.F.F. AND MOUNTED NEXT TO THE UNIT IT FEEDS.
WP	WEATHERPROOF COVER PLATE TO BE PROVIDED IN ALL OUTLETS THIS SYMBOL IS SHOWN ADJACENT TO.
GFCI	INTEGRAL GROUND FAULT PROTECTION TO BE PROVIDED IN ALL RECEPTACLES THIS SYMBOL IS SHOWN ADJACENT TO.
———	CONDUIT INSTALLED IN THE CEILING SLAB.
— — —	CONDUIT INSTALLED BETWEEN THE HUNG CEILING AND THE CEILING SLAB.
—— - ——	CONDUIT INSTALLED IN THE FLOOR SLAB.
– – – –	CONDUIT INSTALLED IN WALL.
——X——	CONDUIT INSTALLED EXPOSED.

3 FIRE ALARM SYSTEM NOTES:

SYMBOL	DESCRIPTION
⊢F	WALL MOUNTED ADDRESSABLE MANUAL FIRE ALARM STATION, 5'–0" A.F.F. SIMPLEX 2099–9761.
HD	SURFACE MOUNTED AUTOMATIC FIRE DETECTOR–COMBINATION RATE–OF–RISE AND FIXED TEMPERATURE. SIMPLEX 4098–9733 WITH BASE 4098–9792.
SD	SURFACE MOUNTED IONIZATION SMOKE DETECTOR. SIMPLEX 4098–9716 WITH BASE 4098–9784.
⊢S H	WALL MOUNTED COMBINATION SYNCHRONIZED SPEAKER/STROBE 15CD 7'–0" A.F.F. SIMPLEX 4903–9301.
SD D	DUCT MOUNTED PHOTOELECTRIC SMOKE DETECTOR WITH RELAY SIMPLEX 4098–9753.
(MFAP)	FLUSH MOUNTED IN WALL FIRE ALARM ADDRESSABLE FIRE ALARM CONTROL PANEL SIMPLEX 4100–8201, CENTER LINE AT 5'–0" A.F.F.

FURNISH AND INSTALL A FIRE ALARM SYSTEM AS MANUFACTURED BY SIMPLEX AND DESCRIBED IN THESE SPECIFICATIONS AND INDICATED IN THE ELECTRICAL DRAWINGS. THE SYSTEM SHALL BE WIRED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS AND IT SHALL BE LEFT IN A COMPLETE AND FIRST CLASS OPERATING CONDITION. THE FIRE ALARM SYSTEM SHALL BE A COMPLETE, AUTOMATIC SYSTEM FOR THE DETECTION AND ALARM OF FIRE, SMOKE AND COMBUSTION GASES. THE SYSTEM AND ITS COMPONENTS SHALL BE U.L. APPROVED. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE DRAWINGS FOR SPECIFIC INSTALLATION SUPPLIED BY SIMPLEX. THE DRAWINGS SHALL BE SUBMITTED TO THE A/E FOR HIS APPROVAL PRIOR TO THE INSTALLATION OF THE SYSTEM. ALL THE INSTALLATION AND WIRING OF THE SYSTEM SHALL BE OF HIGH QUALITY WORKMANSHIP.

THE EMERGENCY VOICE ANNUNCIATION SYSTEM SHALL CONSIST BUT NOT BE LIMITED TO THE FOLLOWING EQUIPMENT:

1 – POWER SUPPLY MODULE.

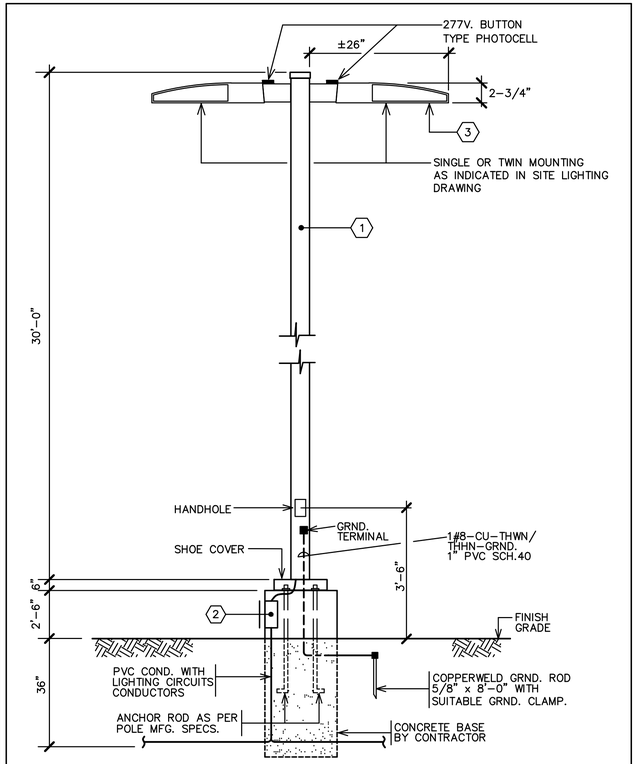
2 – COMON AUDIO MODULE.

3 – AMPLIFIER MODULE / AMPLIFIER SPLITTER MODULE.

4 – MICROPHONE & SERVICE SWITCH MODULE.

5 – COMMERCIAL GRADE CASSETTE PLAYER WITH PRE–RECORDED MESSAGE. THE WORDING OF THE MESSAGE WILL BE DETERMINED BY THE OWNER.

6 – SELECTIVE SWITCHING TO CHOOSE VOICE COMMUNICATION ZONES AS PER FIRE ALARM ZONE DIVISION.



(1)– 30' ROUND TAPPERED ALUMINUM POLE CAPABLE OF WITHSTANDING 180 MPH SUSTAINED WINDS (+3 SECOND GUST) SPEED AREA.

(2)– PVC JUNCTION BOX 12"x12"x12" MIN. DIMENSIONS. GASKETED FRONT COVER PLATE PROVIDED WITH VANDALPROOF SCREWS.

(3)– POLE MOUNTED LED AREA LIGHTING FIXTURE, 163 WATTS, 18992 LUMENS, 117 EFFICIENCY, 70 CRI, 4000K, BRONZE FINISH FOR OPERATING AT 208V WITH A 120V OA/RA 1016 MULTITAP PHOTOCONTROL. INSTALLED WITH 3 1/2" TENON(S). FOR SINGLE MOUNTING USE MA1010–XX–SINGLE TENON ADAPTER FOR 3 1/2" O.D. TENON. FOR TWIN MOUNTING USE MA1011–XX–2@180° TENON ADAPTER FOR 3 1/2" O.D. TENON.
LUMARK PRVC60DUNVT3SABZPER7.

1 / E–10 POLE MOUNTED LUMINAIRE DETAIL
NOT TO SCALE

LJV DRAWING HISTORY		LJV-DSB	DESIGN STAGE	
PROJECT NO:	23-045		SCHEMATIC DWGS: (SD)	
DRAWING NO:	E-10		PRELIMINARY DWGS: (PD)	
CAD FILE:	23-045/		DESIGN DEVELOPMENT DWGS: (DD)	
CAD SUBFILE:	23-045-E010 – R00 – BD		ADVANCED DWGS: (AD)	
PLOT DATE:	01.15.24		BID DWGS: (BD)	●
PLOT SCALE:	1:1		CONTRACT DWGS: (CD)	
ISSUE DATE:	01.15.24		RECORD DWGS: (RD)	
REMARKS:	NOT FOR CONSTRUCTION		-	%
RELATED PROJECTS:	----------			

OWNER

LOGO28barranquitas_municipio_vice_H2000.gif

PROPONENT

FIGUEROA & FIGUEROA
ARCHITECTS AND
ENGINEERS

CONSULTANT

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SEAL

YO, LEONARDO J. VIDAL, LIC. 6092, CERTIFICO QUE SOY EL PROFESIONAL QUE CONFECCIONÓ Y/O DISEÑÓ Y/O PREPARÓ ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIÉN CERTIFICO QUE ENTIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CÓDIGOS DE CONSTRUCCIÓN VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PÚBLICAS CON JURISDICCIÓN. CERTIFICO, ADEMÁS, QUE EN LA PREPARACIÓN DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY NUM. 14 DEL 8 DE ENERO DE 2004, SEGÚN ENMENDADA, CONOCIDA COMO LEY PARA LA INVERCIÓN POR LA INDUSTRIA PUERTORRIQUEÑA Y CON LA (LEY NÚM. 319 DEL 15 MAYO DE 1938 , SEGÚN ENMENDADA; LEY NUM. 96 DEL 6 DE JULIO DE 1978, SEGÚN ENMENDADA; SEGÚN APLIQUE). RECONOZCO QUE CUALQUIER DECLARACIÓN FALSA O FALSIFICACIONES DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MÍ, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCIÓN JUDICIAL Y DISCIPLINARIA POR LA OGPE.

PROJECT INFORMATION

EDIFICIO USOS MULTIPLES
BARRANQUITAS,PR

PUEBLO PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	01.15.24
REVIEWED BY:	L.V.-P.E.
DRAWN BY:	F.R.
DESIGNED BY:	L.J.V.-P.E.
BRA PROJECT NUMBER:	

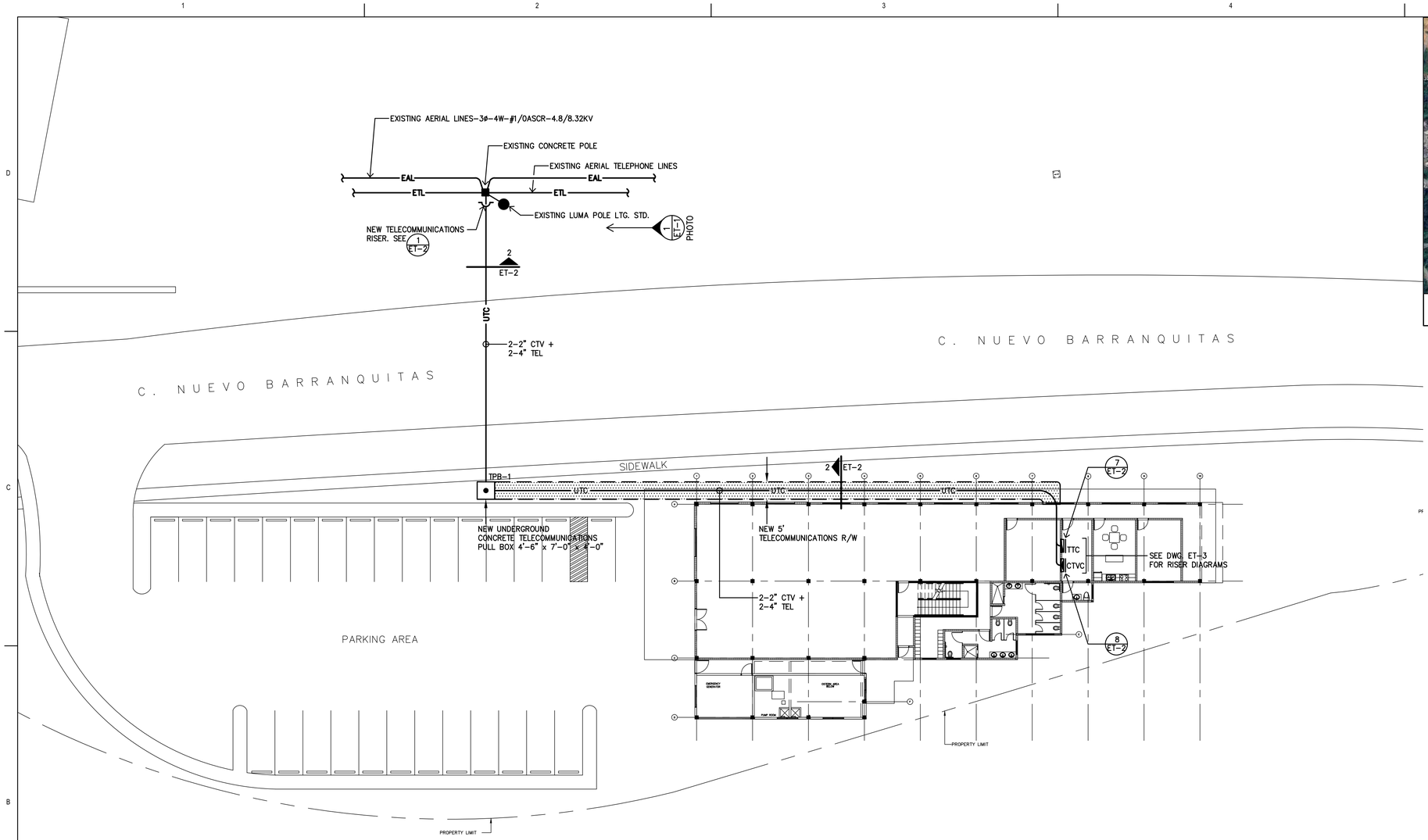
SHEET TITLE

NOTES & LEGEND

SHEET ID

E-10

SHEET



TELECOMMUNICATIONS SITE PLAN

SCALE: 1/16=1'-0"

LOCATION MAP
1:20,000

X = 213283.6443
Y = 239934.3944

PHOTO #1
1 ET-1 TELECOMMUNICATIONS POINT-OF-CONNECTION

OWNER

LOGO/Barranquitas_municipio_oca_m2000.gif

PROPONENT

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ARCHITECTS AND
ENGINEERS

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SEAL

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PROJECT INFORMATION

EDIFICIO USOS MULTIPLES
BARRANQUITAS,PR

PUEBLO PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	01.15.24
REVIEWED BY:	L.V.-P.E.
DRAWN BY:	F.R.
DESIGNED BY:	L.J.V.-P.E.
BRA PROJECT NUMBER:	

SHEET TITLE

TELECOMMUNICATIONS
SITE
PLAN

SHEET ID

ET-1

SHEET

LJV DRAWING HISTORY		LJV-DSB	DESIGN STAGE	
PROJECT NO:	23-045		SCHEMATIC DWGS: (SD)	
DRAWING NO:	ET-1		PRELIMINARY DWGS: (PD)	
CAD FILE:	23-045/		DESIGN DEVELOPMENT DWGS: (DD)	
CAD SUBFILE:	23-045-ET01	R00 BD	ADVANCED DWGS: (AD)	
PLOT DATE:	01.15.24		BID DWGS: (BD)	●
PLOT SCALE:	1:1		CONTRACT DWGS: (CD)	
ISSUE DATE:	01.15.24		RECORD DWGS: (RD)	
REMARKS:	NOT FOR CONSTRUCTION		-	%
RELATED PROJECTS:	----------			

NET NEGOCIADO de TELECOMUNICACIONES DE PUERTO RICO

Negociado de Telecomunicaciones de Puerto Rico

ENDOSO DE PLANOS DE FACILIDADES Y/O SERVIDUMBRE DE TELECOMUNICACIONES Y TELEVISIÓN POR CABLE

NÚMERO DE CASO NETPR

NÚMERO DE CASO OGPE: 2023-497963-SRI-073862

Revisado por: _____ Fecha _____

Aprobado por: _____ Fecha _____

ESTE ENDOSO NO EXIME AL CONSTRUCTOR Y AL DESARROLLADOR DE CUMPLIR CON LOS REQUERIMIENTOS DE CONSTRUCCIÓN CONFORME A TODAS LAS DISPOSICIONES DE LOS REGLAMENTOS APLICABLES.

1 TELECOMMUNICATIONS NOTES:

1. THE DEVELOPER OR ITS REPRESENTATIVES SHALL SUPPLY AND INSTALL ALL MATERIALS REQUIRED FOR THE TELECOMMUNICATIONS INFRASTRUCTURE INCLUDING BUT NOT LIMITED TO THE 1", 2" AND 4" DIAMETER CONDUITS SHOWN ON THE PRINTS.
2. THE 1" ø CONDUITS SHALL BE PVC SCH. 40 RODDED WITH 1/8" ø NYLON ROPE WITH A MINIMUM PULLING STRENGTH OF 300 LBS.
3. THE 2" ø PVC CONDUIT (FOR CATV DISTRIBUTION FACILITIES) AND THE 4" ø (FOR TELEPHONE DISTRIBUTION FACILITIES) SHALL BE INSTALLED IN THE TELECOMMUNICATIONS EASEMENT. THE 2" ø CONDUITS SHALL BE INSTALLED ON THE SIDEWALK SIDE OF THE TRENCH AND THE 4" ø ON THE FARTHERMOST SIDE OF THE TRENCH FROM THE SIDEWALK (SEE EASEMENT CONDUIT INSTALLATION DETAIL).
4. THE 2" ø AND 4" ø CONDUITS SHALL BE SCH. 40 (MINIMUM) RODDED WITH 1/4" ø NYLON ROPE WITH A MINIMUM BREAKING STRENGTH OF 500 lbs. AND SHALL BE TESTED WITH 1-5/8" AND 3-5/8" MANDRELS RESPECTIVELY.
5. ALL CONDUIT ENDS SHALL BE CAPPED WITH PVC END CAPS.
6. THE MINIMUM DEPTH OF THE CONDUITS PLACED ALONG THE EASEMENT AND SERVICE CONDUITS TO EACH RESIDENCE SHALL BE:

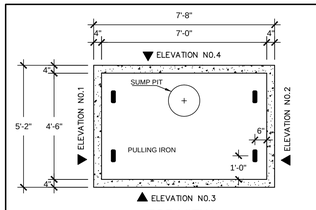
1" ø CONDUITS	14" BELOW GROUND LEVEL
2" ø CONDUITS	24" BELOW GROUND LEVEL
4" ø CONDUITS	24" BELOW GROUND LEVEL

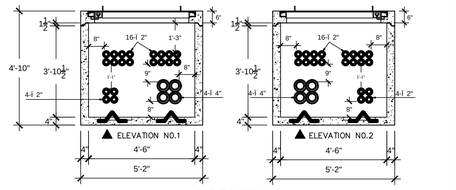
7. WHEN CONDUITS ARE INSTALLED ON CONCRETE ENCASE PLASTIC SPACERS SHALL BE INSTALLED EVERY SIX FEET (6') OR AS SPECIFIED BY THE MANUFACTER IN ORDER TO MANTIEN THE PROPER CONDUIT RUN FORMATION AND SEPARATION.
8. WHEN EXPOSED TO VEHICULAR TRAFFIC (HIGHWAY, STREET, CARPORT CROSSINGS AND PARKING AREAS) CONDUITS SHALL BE INSTALLED AT A DEPTH BETWEEN 30" AND 36" MEASURED FROM THE SURFACE OF THE PAVEMENT AND SHALL BE ENCASED IN CONCRETE WITH A MINIMUM RESISTANCE OF 3,000 lbs. PER SQUARE INCH (3,000 psi).
9. TRENCH BACKFILLING SHALL BE PERFORMED WITH SELECTED MATERIALS FREE OF LARGE STONES AND OTHER CONTAMINATS SUCH AS SCRAPS OF WOOD, ASPHALT, CONCRETE PAVEMENT ETC. BACKFILL SHALL BE COMPACTED TO 95% IN SIX INCH (6") LAYERS BY MEANS OF A TAMPER, WITH THE FIRST TWELVE (12") TAMPED USING LIGHTWEIGHT EQUIPMENT.
10. A SIX INCH (6") WIDE ORANGE WARNING RIBBON (EQUAL OR SIMILAR TO "TERRA TAPE" 42-0007) SHALL BE INSTALLED AT A DEPTH OF TWELVE INCHES (12") BELOW GROUND LEVEL ABOVE THE CONDUITS AND ALONG THE WHOLE CONDUIT RUN.
11. THE DEVELOPER OR HIS REPRESENTATIVES SHALL CLEARLY IDENTIFY ALL CONDUIT ENDS (INCLUDING BUT NOT LIMITED TO DISTRIBUTION POINTS, SERVICE CONDUITS) WHEN SPLICING OR DISTRIBUTION BOXES HAVE NOT BEEN SPIFICIED OR RECOMMENDED. SEE WOOD STAKE DETAIL.
12. THE 2" ø AND 4" ø CONDUITS BENDS SHALL NOT BE LESS THAN 90° AND SHALL HAVE A MINIMUM RADIUS OF 36". ALL CONDUITS SHALL BE LIMITED TO TWO (2) 90° SWEEPING BENDS IN A CONDUIT SECTION.
13. GENERALLY DISTRIBUTION BOXES WILL BE 5'x5'x5', 4'x4'x4' AS WELL AS 6'x4'x4' AND/OR 7'x4'-6"x4' SPLICE BOXES WILL BE INSTALLED FOR TELECOMUNICATIONS SERVICE AS INDICATED ON PRINTS. THESE BOXES WILL NOT BE LOCATED IN AREAS NOT EXPOSED TO VEHICULAR TRAFFIC AND SHOULD BE DESIGNED TO RESIST INCIDENTAL TRAFFIC. IF BOXES WILL BE EXPOSED TO VEHICULAR TRAFFIC A MANHOLE OR SPECIAL BOX DESIGNED FOR THAT APPLICATION SHOULD BE INSTALLED WITH THE CAPACITY TO AVOID ANY DEFORMATION OR COLLAPSE OF ITS ENTRANCE COVER, SIMILAR OR EQUAL TO POWER POLES MH 6'x6'x7'.
14. THE DISTRIBUTION POINTS OR BOXES SHALL BE PLACED IN EASEMENT LOCATED TWO FEET (2') FROM THE PROPERTY LINE BETWEEN LOTS WITHOUT INTERFERING WITH ANY ENTRANCE (CARPORK OR SIMILAR).
15. DISTRIBUTION BOXES AND SPLICE BOXES SHALL BE:
    A. PREFABRICATED WITH STEEL REINFORCED CONCRETE (EQUAL OR SIMILAR TO POWER POLES INC.).
    B. CAST IN PLACE WITH STEEL REINFORCED CONCRETE.
    C. PREFABRICATED WITH POLYMER CONCRETE BOX EQUAL OR SIMILAR TO QUAZITE 17"x30"Ø86" (MAXIMUM SIZE ALLOWED) ONLY WILL BE ACCEPTED FOR CABLE T.V. APPLICATION IN AREAS WITH SPACE PROBLEM.

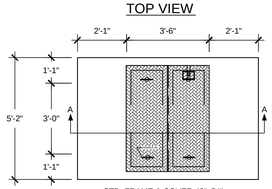
    NOTE:
    ANY CHANGE IN THE TYPE OF BOXES TO BE USED WILL REQUIRED THE APPROVAL OF JRTPR BEFORE THEIR INSTALLATION.
16. ALL CONDUITS, WHETHER OR NOT IN USE, SHALL BE SEALED IN DISTRIBUTION BOXES, SPLICE BOXES AND BLDG. TELECOMMUNICATION CABINET USING A DUCT SEALER (EQUAL OR SIMILAR TO 3M 4414 DUCT SEALING KIT)
17. 2" ø CONDUITS FOR CABLE TELEVISION (CATV) DISTRIBUTION FACILITIES IN RESIDENCIAL PROJECTS, OF SINGLE UNIT HOMES, ROW HOUSES, PATIO HOUSES, ETC. SHALL NOT BE TERMINATED AT TELECOMMUNICATION DISTRIBUTION BOXES. THESE CONDUITS, AS WELL AS THE 1"ø CONDUITS FOR CATV SERVICE DROP, SHALL BE END CAPPED AND LEFT AT CATV DISTRIBUTION POINTS LOCATED IN THE PLANTING STRIP (GENERALLY NEXT TO LIGHT POSTS) AS INDICATED ON PRINTS.
18. THE EXTERIOR METALLIC BOXES 4"x4"x2-1/8" (MINIMUM), FOR TELECOMUNICATIONS SERVICE DROPS (TELEPHONE AND CATV), SHALL BE INSTALLED ON ONE OF THE LIVING UNITS WALLS CONVENIENTLY LOCATED SO AS TO PROVIDE EASY UNOBSTRUCTED ACCESS.
19. THE CONDUIT, THROUGH WHICH THE GROUND WIRE FOR THE EXTERIOR SERVICE DROP METALLIC BOXES SHALL BE INSTALLED, SHALL COME OUT FROM THE LIVING UNIT WALL AT A DEPTH OF SIX INCHES BELOW GROUND LEVEL.
20. THE TELECOMMUNICATIONS SERVICE DROPS ELECTRICAL GROUNDING WILL BE ACHIEVED WITH THE NECESSARY 8'x5/8" COPPER WELDED GROUND ROD INSTALLED BY THE TELECOMMUNICATIONS SERVICE PROVIDER AND MUST COMPLY WITH THE CURRENT NATIONAL ELECTRIC CODE.
21. ALL TELECOMMUNICATIONS SYSTEMS (TELEPHONE AND CATV) SHALL BE BONDED AND GROUNDED AT ALL POINTS AND MUST COMPLY WITH THE CURRENT NATIONAL ELECTRIC CODE.
22. NO MORE THAN TWO 90° BENDS SHALL BE ALLOWED IN THE CONDUITS CONNECTING THE EXTERIOR METALLIC BOXES FOR SERVICE DROP AND THE INTERIOR SERVICE BOXES.
23. THE INTERIOR RESIDENTIAL TELECOMMUNICATIONS SERVICE DISTRIBUTION CONDUITS SHALL HAVE A MINIMUM 3/4" INSIDE DIAMETER AND EACH LIVING UNIT SHALL BE PROVIDED WITH TELECOMMUNICATIONS SERVICES (TELEPHONE AND CATV) OUTLETS IN THE KITCHEN, LIVING ROOM AND EACH OF THE BEDROOMS.
24. AT WALK-UPS AND MULTI-STORY RESIDENCIAL BUILDINGS THE MINIMUM SIZE FOR TELECOMMUNICATION CABINET SHALL BE 30" x 24" x 6" FOR (TELEPHONE) AND 36" x 24" x 6" FOR (CATV) AND SHALL SERVE NO MORE THAN 16 UNITS. THE CABINETS SHALL BE EQUIPPED WITH A 3/4" THICK PLYWOOD BACKBOARD, A HINGED DOOR WITH LATCH AND KEY, AND SHALL HAVE COMPLETE FRONTAL ACCESS. THE CABINETS SHALL ALSO PROVIDE FOR THE PROPER BONDING AND GROUNDING OF THE TELECOMUNICATION FACILITIES AND MUST WITH THE CURRENT NATIONAL ELECTRIC CODE.
25. WALK-UP PROJECT SHALL HAVE INDEPENDENT TELECOMMUNICATION CABINETS FOR TELEPHONE AND CATV SERVICES. THE TELEPHONE CABINET WILL BE CONNECTED TO THE NEAREST SPLICING BOX BY MEANS OF 2-2ø PVC CONDUITS. THE CATV CABINET WILL BE CONNECTED TO THE NEAREST SPLICING BOX OR THE NEAREST CATV CABINET (IN THE NEXT BUILDING) DEPENDING ON THE LOOP DESIGN SPECIFIED ON THE DRAWINGS BY MEANS OF 2-2ø PVC CONDUITS. THE MINIMUM SIZE OF THE SPLICE BOX SHALL BE 7'x4'-6"x4', AND MAY BE JOINTLY USED FOR TELEPHONE AND CATV SERVICES.
26. RESIDENTIAL BUILDINGS (MULTI-STORY APARTMENT BUILDINGS OTHER THAN WALK UPS, HIGH-RISE CONDOMINIUMS, ETC.) SHALL HAVE INDEPENDENT MAIN DISTRIBUTION CABINETS FOR TELEPHONE AND CATV SERVICES. THE MAIN DISTRIBUTION CABINETS, GENERALLY CONSISTING OF AN 8' x 4' x 3/4" TIRE-RETARDANT PLYWOOD PANEL OR AN 8' x 4' x 3/4" TREATED PLYWOOD PANEL PAINTED WITH TWO COATS OF FIRE RETARDANT PAINT, WILL BE PLACED IN A TELECOMMUNICATIONS CLOSET OR ROOM. THE MAIN DISTRIBUTION PANELS FOR TELEPHONE AND CATV SERVICES SHALL BE CONNECTED VERTICALLY TO OTHER DISTRIBUTIONS CABINETS (EACH SERVING A MAXIMUM OF 16 UNITS) BY MEANS OF 2-4"ø AND 2-2"ø PVC CONDUITS RESPECTIVELY.
27. EACH CABINET OR PANEL SHALL ALSO PROVIDED FOR THE PROPER BONDING AND GROUNDING OF TELECOMMUNICATION FACILITIES WITH A GROUND BAR, GROUND WIRE AND CONNECTED TO A 8'x5/8" COPPER WELD GROUND ROD SYSTEM AND MUST COMPLY WITH THE CURRENT NATIONAL ELECTRIC CODE. THIS WILL BE A DEVELOPER RESPONSABILITY.
28. ALL APARTMENTS SHALL BE CONNECTED TO EACH OTHER OF THEIR CORREPONDING DISTRIBUTION CABINETS (TELEPHONE AND CATV) BY MEANS OF 1-1"ø CONDUIT.
29. ENTRANCE FACILITIES FOR RESIDENTIAL BUILDINGS SHALL CONSIST OF A MINIMUM OF 2-4"ø FOR TELEPHONE SERVICE AND 2-2"ø PVC CONDUITS FOR CATV SERVICE. THE CONDUITS SHALL CONNECT THE MAIN DISTRIBUTION CABINETS AND THE DESIGNATED BUILDING TELECOMMUNICATIONS POINT OF CONNECTION. WHEN A BUILDING'S TELECOMMUNICATIONS POINT OF CONNECTION IS A SPLICE BOX IT SHALL HAVE A MINIMUM SIZE OF 7'-0" x 4'-6" x 4'-0" AND MAY BE JOINTLY USED FOR TELEPHONE AND CATV SEVICES.

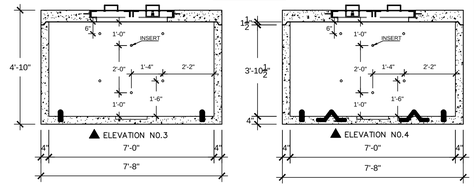
SPECIAL NOTES

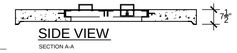
30. THE DEVELOPER IN COMPLIANCE WITH SECTION 19.04 OF THE PUERTO RICO PLANNING BOARD'S "REGLAMENTO DE LOTIFICACION Y URBANIZACION (REGLAMENTO DE PLANIFICACION 3) REVISADO" SHALL TRANSFER TO THE P.R. TELECOMMUNICATIONS REGULATORY BOARD (JRTPR), THE RIGHT OF WAY DEPICTED ON THESE DRAWINGS REQUIRED TO PROVIDE TELECOMMUNICATIONS SERVICES (TELEPHONE AND CATV) TO THIS PROJECT BY MEANS OF A PUBLIC DEED.
31. THE PUERTO RICO TELECOMMUNICATIONS REGULATORY BOARD (JRTPR) MAY ISSUE PARTIAL ENDORSEMENTS FOR SINGLE FAMILY RESIDENTIAL PROJECTS (SINGLE FAMILY HOMES, ROW HOUSES, TOWNHOUSES, PATIO HOUSES, ETC.) SO THAT THE DEVELOPER CAN DELIVER PORTIONS OF THE PROJECT AS THEY ARE COMPLETED. ONCE THE PROJECT IS COMPLETED THE DEVELOPER SHALL COMPLY WITH THE PROCEDURE SPECIFIED IN SECTION 5.02.6 OF THE JRTPR'S "REGLAMENTO PARA ENDOSOS DE SERVIDUMBRE E INFRAESTRUCTURA" RELATED TO OBTAIN THE FINAL ENDORSEMENTS.
32. THE DEVELOPER SHALL ALLOW TELECOMMUNICATIONS SERVICE PROVIDERS (TELEPHONE AND CATV), AUTHORIZED BY THE JRTPR TO PROVIDE SAID SERVICES, TO INSTALL THEIR DISTRIBUTION FACILITIES IN A COORDINATED AND ORDERLY MANNER IN THOSE PORTIONS OF THE PROJECT FOR WHICH A PARTIAL ENDORSEMENT HAS BEEN ISSUED.
33. THE DEVELOPER SHALL COORDINATE WITH TELECOMMUNICATIONS SERVICE PROVIDERS (TELEPHONE AND CATV) AND THE PUERTO RICO ELECTRICAL POWER AUTHORITY (PREPA) THE INSTALLATION OR CONNECTION OF RISERS, CONDUITS OR ANY ACTION TO ACCESS TO THEIR FACILITIES.
34. THE DEVELOPER SHALL COORDINATE WITH THE TELECOMMUNICATIONS SERVICE PROVIDERS (TELEPHONE AND CATV) AND WITH ANY OTHER PUBLIC OR PRIVATE ORGANIZATION WHOSE FACILITIES AFFECT BY THE CONSTRUCTION OF THE PROJECT, THE REMOVALS, RELOCATIONS AND/OR MODIFICATIONS OF ANY EXISTING INFRASTRUCTURE.
35. THE DEVELOPER SHALL ASSIGN AN ENGINEER OR ARCHITECT TO INSPECT AND CERTIFY THAT THE CONSTRUCTION JOBS WERE PERFORMED AND COMPLETED AS THE ENDORSED DRAWINGS BY THE PUERTO RICO TELECOMMUNICATIONS REGULATORY BOARD (JRTPR). FOR THAT PROCESS WILL USED FORM JRTPR F-102 AND SUMMIT TO JRTPR AND OBTAIN THEIR APPROVAL BEFORE APPLY FOR THE PERMIT OF USE AT "OFICINA DE GERENCIA DE PERMISOS" (OGPe).
36. COMMERCIAL BUILDINGS WILL REQUIRE TWO(2) MAIN DISTRIBUTION CABINETS OR PANELS FOR TELEPHONE AND CATV SERVICES RESPECTIVELY. A TELECOMMUNICATION ROOM OR AREA WILL BE DESIGNATED TO PLACE THEM AND THEY MUST COMPLY WITH ONE OF THE SPECIFICATION DESCRIBED BELOW:
    A. TREATED WOOD PANEL 4'-0" x 8'-0" x 3/4" (DOUBLE COATED WITH FIRE RETARDANT PAINT).
    B. TELEPHONE METAL CABINET 36"x24"x6"(MIN.) AND CATV 36"x30"x6". BOTH CABINET SHALL BE EQUIPPED WITH A 3/4" THICK TREATED PLYWOOD BACKBOARD, A HINGED DOOR WITH LATCH AND KEY AND SHALL HAVE COMPLETE FRONTAL ACCESS.











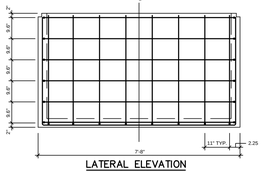
3 ET-2 TELECOMMUNICATION PULL BOX (PB-00)
4'-6" x 7'-0" x 4'-0"
(SPACING BETWEEN BELLS 2")

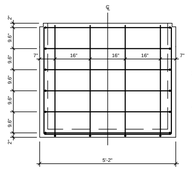
APPROXIMATE WEIGHT:
A) COVER: 1600 LBS.
B) BOX: 6845 LBS.
TOTAL: 8445 LBS.

Aproved
Aproved as Note
Not Aproved
Resubmit
Remark :

POWER POLES Inc.
A COMPANY WITH 35 YEARS OF EXPERIENCE

COMPANY NAME:	FILE NAME: NEW EXAMPLE\	EMAIL: egaud@powerpolespr.com	ITEM NO. PBTC003
PROJECT NAME:	PRODUCT: 4'-6" x 7'-0" x 4'-0"	PHONE: (787) 887-2005	PRODUCT ID. PB-00
	DRAWN BY: ELIAM I. GAUD	FAX: (787) 887-1870 / 888-0350	PAGE: 1 OF 2
	REVISED BY:	DATE: 10-12-2005	
	APPROVED BY:	NOTES:	



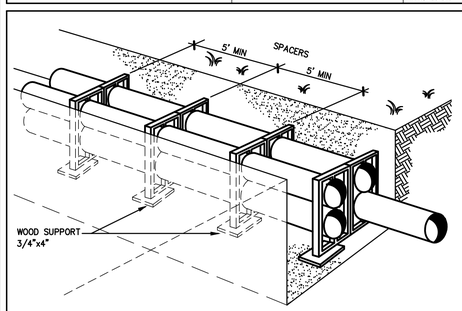


NOTE :
1 – CONCRETE SHALL CONFORM TO THE ASTM SPEC. FOR READY-MIXED CONCRETE, C 94 COMPRESSIVE STRENGTH FOR CONCRETE SHALL BE 4,500 PSI, DETERMINED IN ACCORDANCE WITH THE ASTM METHOD OF TEST FOR COMPRESSIVE STRENGTH OF MOLDED CONC. CYLINDERS, C 39 TESTS TO BE PERFORMED AT 28 DAYS.
2 – REINFORCING BARS, ALL #4(1/2"ø) EXCEPT WHERE NOTED, SHALL CONFORM TO ASTM A 615–97, GRADE 60 STEEL, AS REQUIRED.
3 – ALL ON-SITE CONCRETE MATING SURFACES MUST BE SEALED WITH ONE(1) CONTINUOUS LAYER OF RUBBER BUTYL GASKET.
4 – THIS UTILITY PULL BOX IS DESIGNED TO SPECIFICATIONS FOR SIDEWALK LOADING ACCORDING TO AISHTO (100#/ SQ FT.)

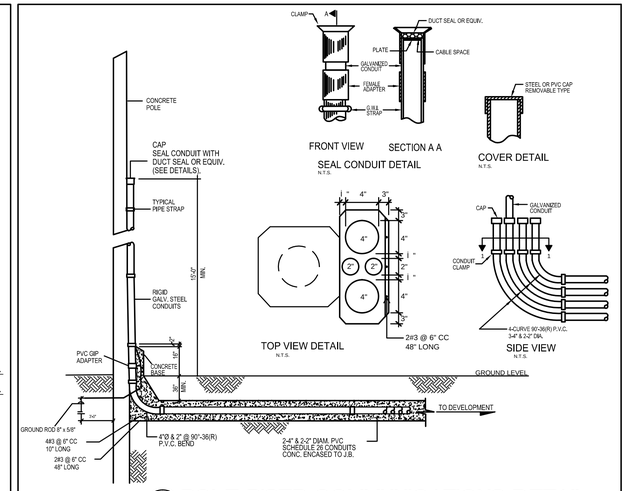
4 ET-2 TELECOMMUNICATION PULL BOX
4'-6" x 7'-0" x 4'-0"
STRUCTURAL DETAILS

POWER POLES Inc.
A COMPANY WITH 35 YEARS OF EXPERIENCE

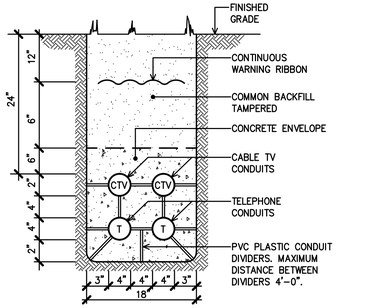
COMPANY NAME:	FILE NAME: NEW EXAMPLE\	EMAIL: egaud@powerpolespr.com	ITEM NO. PBTC003
PROJECT NAME:	PRODUCT: 4'-6" x 7'-0" x 4'-0"	PHONE: (787) 887-2005	PRODUCT ID. PB-00
	DRAWN BY: ELIAM I. GAUD	FAX: (787) 887-1870 / 888-0350	PAGE: 2 OF 2
	REVISED BY:	DATE: 10-12-2005	
	APPROVED BY:	NOTES:	



5 ET-2 CONDUITS INSTALATION DETAIL (TYP.)
NOT TO SCALE

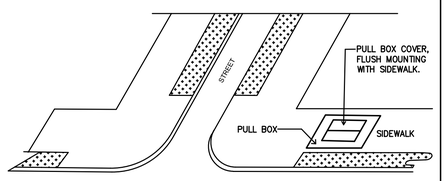


1 ET-2 POLE RISER COMMUNICATIONS DETAIL
NOT TO SCALE



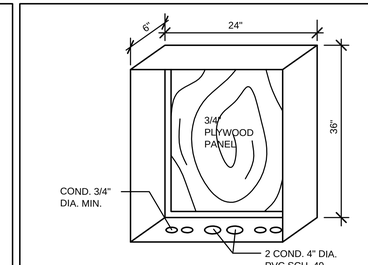
2 ET-2 SECTION
NOT TO SCALE

NOTE:
FOR THE SAFETY OF PEDESTRIANS, THE SURFACE FINISH OF THE PULL BOX SHOULD BE EVEN WITH THE SIDEWALK AND FREE OF IMPERFECTION.

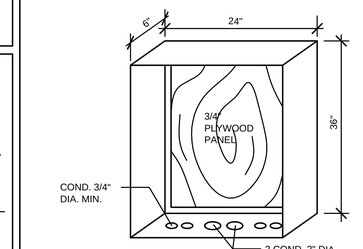


6 ET-2 TYPICAL DISTRIBUTION OF SPLICING BOX INSTALLATION DETAIL
NOT TO SCALE

DETAILS:
PULL BOX FRAME AND COVER FLUSH WITH SIDEWALK SURFACE.



7 ET-2 TELEPHONE TERMINALS CABINET
NOT TO SCALE



8 ET-2 CABLE TV TERMINALS CABINET
NOT TO SCALE

THE MIN. SIZE OF TELECOMM. CABINETS (TEL. OR CATV) WHEN REQUIRED (AT WALK-UPS OR OTHER STRUCTURES) SHALL BE 36"x24"x6" EQUIPPED WITH A 3/4" PLYWOOD BACKBOARD, A HINGED DOOR WITH LATCH & KEY, AND SHALL HAVE COMPLETE FRONTAL ACCESS. THE CABINETS SHALL ALSO PROVIDE FOR THE PROPER BONDING & GROUNDING OF THE TELECOMMUNICATIONS FACILITIES.

LJV DRAWING HISTORY		LJV-DSB	DESIGN STAGE	
PROJECT NO:	23-045		SCHEMATIC DWGS: (SD)	
DRAWING NO:	ET-2		PRELIMINARY DWGS: (PD)	
CAD FILE:	23-045/		DESIGN DEVELOPMENT DWGS: (DD)	
CAD SUBFILE:	23-045-ET02	R00 BD	ADVANCED DWGS: (AD)	
PLOT DATE:	01.15.24		BID DWGS: (BD)	●
PLOT SCALE:	1:1		CONTRACT DWGS: (CD)	
ISSUE DATE:	01.15.24		RECORD DWGS: (RD)	
REMARKS:	NOT FOR CONSTRUCTION		-	%
RELATED PROJECTS:	----------			

NET NEGOCIADO de TELECOMUNICACIONES DE PUERTO RICO

Negociado de Telecomunicaciones de Puerto Rico

ENDOSO DE PLANOS DE FACILIDADES Y/O SERVIDUMBRE DE TELECOMUNICACIONES Y TELEVISIÓN POR CABLE

NÚMERO DE CASO NETPR

NÚMERO DE CASO OGPE : 2023-497963-SRI-073862

Revisado por: _____ Fecha _____

Aprobado por: _____ Fecha _____

ESTE ENDOSO NO EXIME AL CONSTRUCTOR Y AL DESARROLLADOR DE CUMPLIR CON LOS REQUERIMIENTOS DE CONSTRUCCIÓN CONFORME A TODAS LAS DISPOSICIONES DE LOS REGLAMENTOS APLICABLES.

OWNER

ILOGO3bienespbpr_municipio_rico_m2008.gif

PROPONENT

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

The Office of LEONARDO J. VIDAL Consulting Engineers
P.O. Box 363744, San Juan, P.R. 00936-3744
Tel.: (787) 783-5641 Fax: (787) 783-7399
Email: info.lvidal@gmail.com
LIC. No. 6092

SEAL

YO, LEONARDO J. VIDAL, LIC. 6092, CERTIFICO QUE SOY EL PROFESIONAL QUE CONFECCIONÓ Y/O DISEÑÓ Y/O PREPARÓ ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIÉN CERTIFICO QUE ENTIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CÓDIGOS DE CONSTRUCCIÓN VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PÚBLICAS CON JURISDICCIÓN. CERTIFICO, ADEMÁS, QUE EN LA PREPARACIÓN DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY NUM. 14 DEL 8 DE ENERO DE 2004, SEGÚN ENMENDADA, CONOCIDA COMO LEY PARA LA INVERCIÓN POR LA INDUSTRIA PUERTORRIQUEÑA Y CON LA (LEY NÚM. 319 DEL 15 MAYO DE 1938 , SEGÚN ENMENDADA; LEY NUM. 96 DEL 6 DE JULIO DE 1978, SEGÚN ENMENDADA; SEGÚN APLIQUE). RECONOZCO QUE CUALQUIER DECLARACIÓN FALSA O FALSIFICACIONES DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MÍ, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCIÓN JUDICIAL Y DISCIPLINARIA POR LA OGPE.

PROJECT INFORMATION

EDIFICIO USOS MULTIPLES BARRANQUITAS,PR

PUEBLO PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	01.15.24
REVIEWED BY:	L.V.-P.E.
DRAWN BY:	F.R.
DESIGNED BY:	L.J.V.-P.E.
BRA PROJECT NUMBER:	

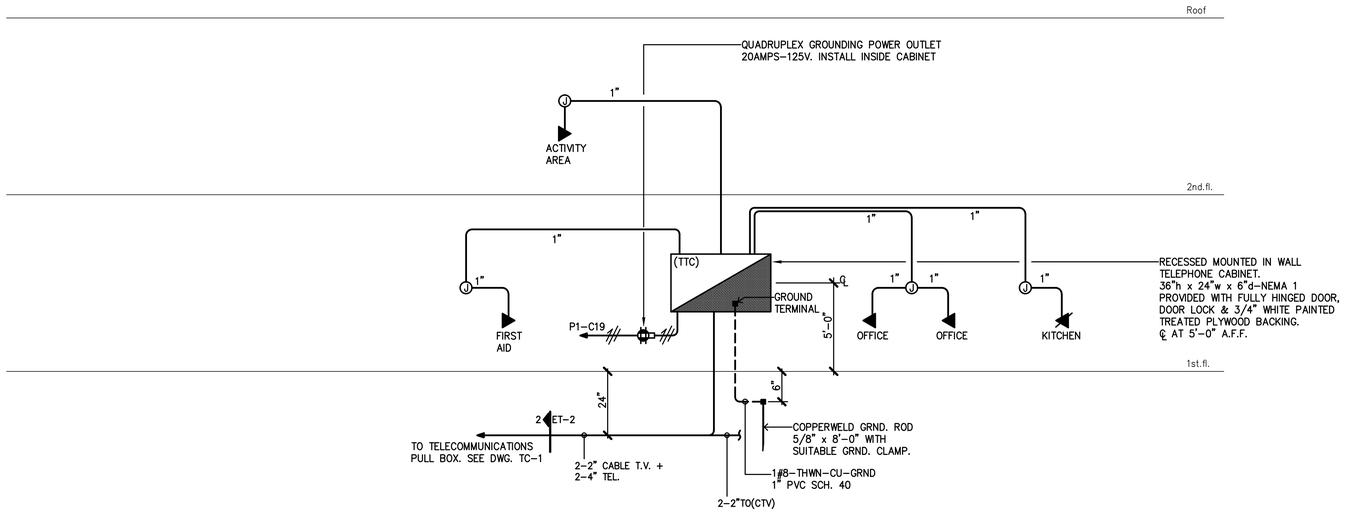
SHEET TITLE

TELECOMM. NOTES & DETAILS

SHEET ID

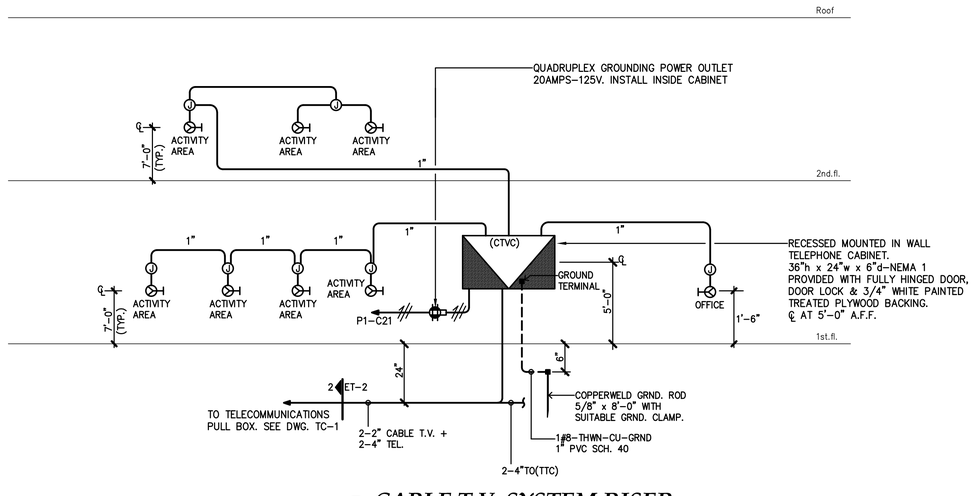
ET-2

SHEET



TELEPHONE SYSTEM RISER

1 / ET–3 NOT TO SCALE



CABLE T.V. SYSTEM RISER

2 / ET–3 NOT TO SCALE

LJV DRAWING HISTORY		LJV-DSB	DESIGN STAGE	
PROJECT NO:	23-045		SCHEMATIC DWGS: (SD)	
DRAWING NO:	ET-3		PRELIMINARY DWGS: (PD)	
CAD FILE:	23-045/		DESIGN DEVELOPMENT DWGS: (DD)	
CAD SUBFILE:	23-045-ET03	– R00 – BD	ADVANCED DWGS: (AD)	
PLOT DATE:	01.15.24		BID DWGS: (BD)	●
PLOT SCALE:	1:1		CONTRACT DWGS: (CD)	
ISSUE DATE:	01.15.24		RECORD DWGS: (RD)	
REMARKS:	NOT FOR CONSTRUCTION		-	%
RELATED PROJECTS:	----------			

NET NEGOCIADO de TELECOMUNICACIONES DE PUERTO RICO

Negociado de Telecomunicaciones de Puerto Rico

ENDOSO DE PLANOS DE FACILIDADES Y/O SERVIDUMBRE DE TELECOMUNICACIONES Y TELEVISIÓN POR CABLE

NÚMERO DE CASO NETPR

NÚMERO DE CASO OGPE : 2023-497963-SRI-073862

Revisado por: _____ Fecha _____

Aprobado por: _____ Fecha _____

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OWNER

LOGO3barranquitas_municipio_oca_m2008.gif

PROPONENT

FIGUEROA & FIGUEROA
ARCHITECTS AND
ENGINEERS

CONSULTANT

The Office of
LEONARDO J. VIDAL
Consulting Engineers
P.O. Box 363744, San Juan P.R. 00936-3744
Tel.: (787) 763-5611 Fax.: (787) 767-7399
E-mail: ljvfaxtel@yahoo.com
LIC. No. 6092

SEAL

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PROJECT INFORMATION

EDIFICIO USOS MULTIPLES
BARRANQUITAS,PR

PUEBLO PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	01.15.24
REVIEWED BY:	L.V.-P.E.
DRAWN BY:	F.R.
DESIGNED BY:	L.J.V.-P.E.
BRA PROJECT NUMBER:	

SHEET TITLE

TELEPHONE &
CABLE T.V. RISER
DIAGRAMS

SHEET ID

ET-3

SHEET

HEAD START

CAMINO NUEVO BARRANQUITAS

EXISTING ROAD

FOYER

BRIDGE

STRUCTURE (2ND. LEVEL)

PARKING AREA (WEST)
S=0.00598

PARKING AREA (EAST)

PLANTING AREA

SIDEWALK

SIDEWALK

RAMP DN.

RAMP DN.

RAMP DN.

RAMP DN.

S=0.01998

652.295

650.66

651

652

653

654

655

656

647

648

649

650

651

652

653

654

655

656

1

2

3

1a

S = −50.0000 % ; −2.0000:1

8'−5¾"

4'−0"

KEYSTONE WALL?

4'−5⅞"

18'−0½"

25'−0"

56'−2"

645

S = −23.2325 % ; −4.3043:1

3'−2"

4'−0"

5'−7⅞"

1'−9¾"

4'−0"

7'−0"

4'−0"

49'−0½"

13'−3"

3'−0⅞"

OWNER

PROPONENT

:\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA
ARCHITECTS AND
ENGINEERS

CONSULTANT

EHA
ENGINEERING, PSC

SEAL

PROJECT INFORMATION

CENTRO DE USOS
MULTIPLES DE
BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	4/15/24
REVIEWED BY:	EHA
DRAWN BY:	SBT
DESIGNED BY:	
BRA PROJECT NUMBER:	

SHEET TITLE

PROPOSED
GRADING PLAN

SHEET ID

SI-5.0

SHEET

12. Distance to noise sources

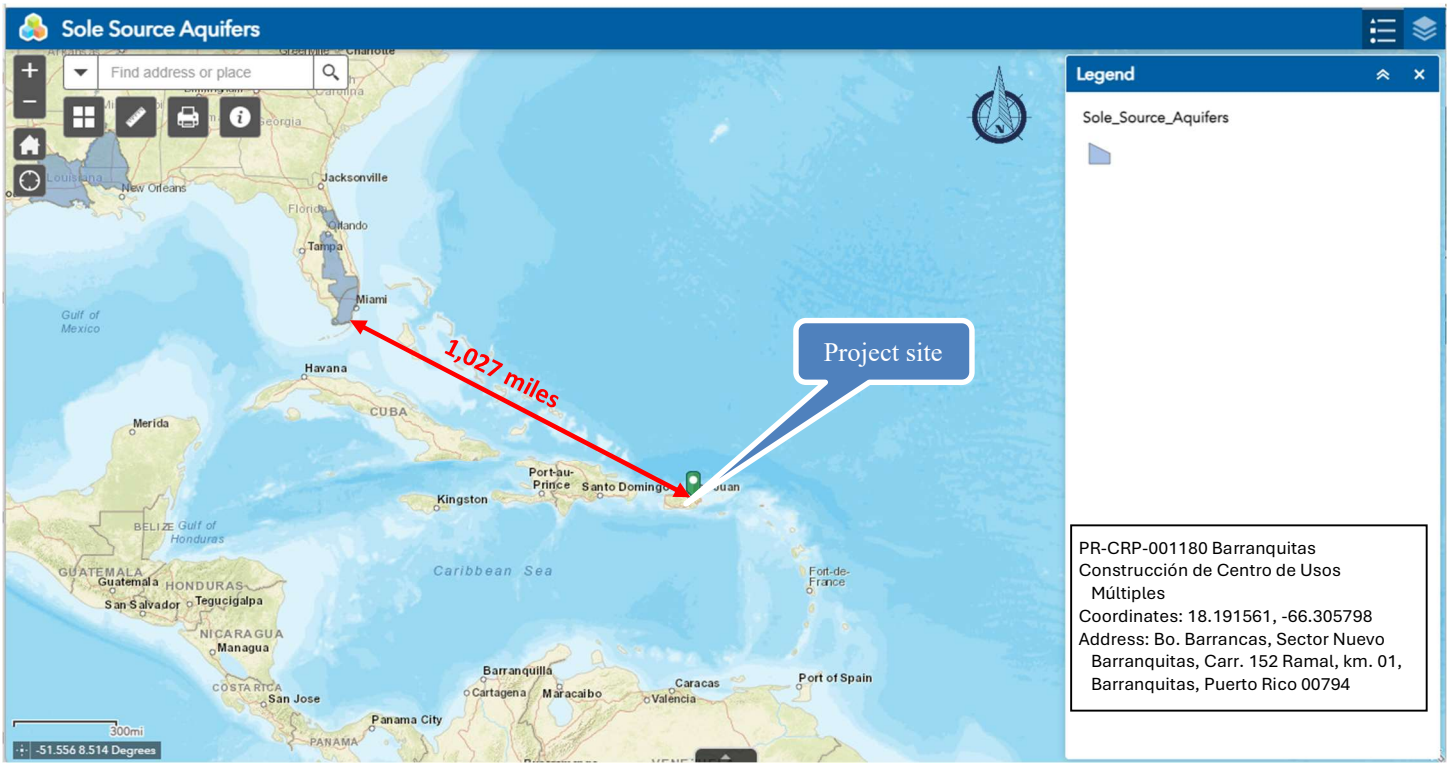
PR-CRP-001180 Barranquitas
Construcción de Centro de Usos Múltiples
Coordinates: 18.191561, -66.305798
Address: Bo. Barrancas, Sector Nuevo Barranquitas, Carr. 152 Ramal, km. 01, Barranquitas, Puerto Rico 00794

Roadway data

HIGHWAY PERFORMANCE MONITORING SYSTEM
OFFICE OF HIGHWAY SYSTEMS PRHTA
2023 CLASSIFICATION LOG

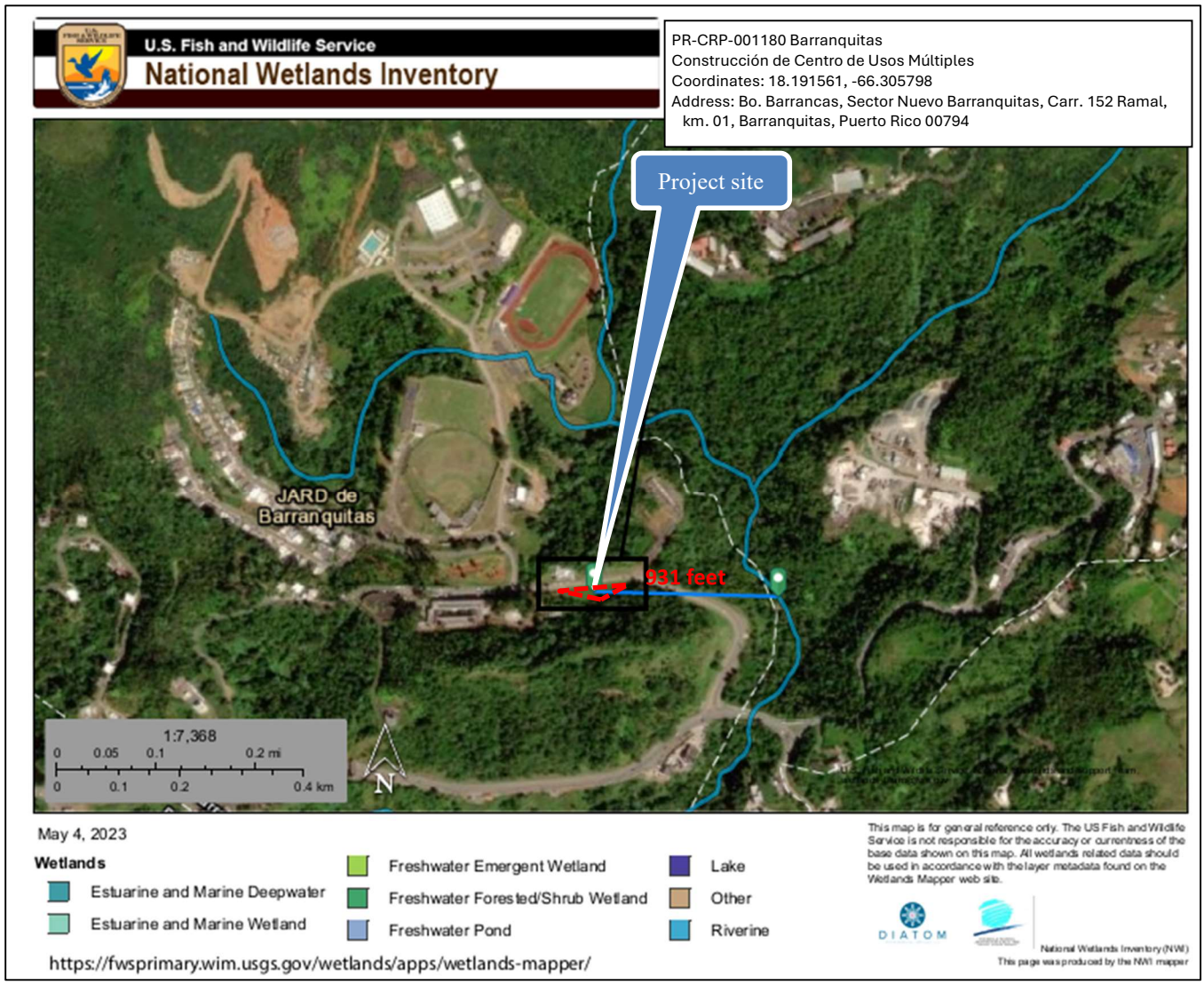
ROUTE NUMBER	COUNTY CODE	FROM KM	FROM DESCRIPTION	TO KM	TO DESCRIPTION	AADT AADT	AADT YEAR	ADT RAW	FUNCTIONAL CLASSIFICATION	MUNICIPALITY
PR 149	005	44.80	(PR 143 NORTH)	45.45	(PR 143 SOUTH/JUANA DIAZ URBAN & MUNICIPAL BOUNDARY)	600	2022	674	MINOR ARTERIAL	OROCOVIS
PR 149	005	45.45	(PR 143 SOUTH/ JUANA DIAZ URBAN & MUNICIPAL BOUNDARY)	47.00	(CAMINO SECTOR CUESTA EL PASTO)	1,800	2012	1,800	MINOR ARTERIAL	VILLALBA
PR 149	005	47.00	(CAMINO SECTOR CUESTA EL PASTO)	50.65	(PR 5514)	1,000	2019	1,022	MINOR ARTERIAL	VILLALBA
PR 149	005	50.65	(PR 5514)	55.10	(PR 5149)	2,300	2019	2,359	MINOR ARTERIAL	VILLALBA
PR 149	005	55.10	(PR 5149)	55.75	(PR 150 KM 0.0)	8,400	2023	8,419	PRINCIPAL ARTERIAL	VILLALBA
PR 149	005	55.75	(PR 150 KM 0.0)	57.75	(PR 514)	6,700	2019	6,758	PRINCIPAL ARTERIAL	VILLALBA
PR 149	005	57.75	(PR 514)	61.50	(MUNICIPAL BOUNDARY)	17,100	2019	17,346	PRINCIPAL ARTERIAL	VILLALBA
PR 149	005	61.50	(MUNICIPAL BOUNDARY)	62.45	(PR 552)	17,800	2019	18,078	PRINCIPAL ARTERIAL	JUANA DIAZ
PR 149	005	62.45	(PR 552)	63.35	(PR 570 KM 2.6)	20,300	2022	20,892	PRINCIPAL ARTERIAL	JUANA DIAZ
PR 149	005	63.35	(PR 570 KM 2.6)	65.00	(PR 519)	22,800	2019	23,117	PRINCIPAL ARTERIAL	JUANA DIAZ
PR 149	005	65.00	(PR 519)	65.15	(PR 570 KM 0.9)	24,200	2019	24,472	PRINCIPAL ARTERIAL	JUANA DIAZ
PR 149	005	65.15	(PR 570 KM 0.9)	65.95	(PR 14)	22,200	2022	22,852	PRINCIPAL ARTERIAL	JUANA DIAZ
PR 149	005	65.95	(PR 14)	66.25	(CALLE ROSENDO MATIENZO CINTRÓN)	24,600	2019	24,971	PRINCIPAL ARTERIAL	JUANA DIAZ
PR 149	005	66.25	(CALLE ROSENDO MATIENZO CINTRÓN)	67.10	(PR 52 EXIT RAMP)	22,700	2019	22,992	PRINCIPAL ARTERIAL	JUANA DIAZ
PR 149	005	67.10	(PR 52 EXIT RAMP)	68.00	(PR 592)	13,300	2021	13,403	MINOR ARTERIAL	JUANA DIAZ
PR 149	005	68.00	(PR 592)	71.25	(AVENIDA CAMINO REAL)	15,361	2022	14,356	MINOR ARTERIAL	JUANA DIAZ
PR 149	005	71.25	(AVENIDA CAMINO REAL)	73.00	(PR 1)	9,300	2019	9,229	MINOR ARTERIAL	JUANA DIAZ
PR 149P	002	0.00	(PR 149 KM 14.05)	0.50	(PR 149 KM 13.5)	11,600	1995	11,600	MINOR ARTERIAL	CIALES
PR 150	005	0.00	(PR 149 KM 55.75)	0.40	(PR 5149)	8,400	2019	8,482	MINOR ARTERIAL	VILLALBA
PR 150	005	0.40	(PR 5149)	1.40	(PR 5561)	8,700	2019	8,766	MINOR ARTERIAL	VILLALBA
PR 150	005	1.40	(PR 5561)	5.30	(PR 557)	6,600	2013	6,600	MINOR ARTERIAL	VILLALBA
PR 150	005	5.30	(PR 557)	9.40	(JUANA DÍAZ EAST URBAN BOUNDARY)	4,400	2007	4,400	MINOR ARTERIAL	VILLALBA
PR 150	005	9.40	(JUANA DÍAZ EAST URBAN BOUNDARY)	12.35	(MUNICIPAL BOUNDARY)	4,400	2007	4,400	MINOR ARTERIAL	VILLALBA
PR 150	005	12.35	(MUNICIPAL BOUNDARY)	15.40	(PR 5150)	3,500	2021	3,506	MINOR ARTERIAL	COAMO
PR 150	005	15.40	(PR 5150)	16.30	(PR 545/COAMO WEST	3,500	2021	3,442	MINOR ARTERIAL	COAMO
PR 150	005	16.30	(PR 545/COAMO WEST URBAN BOUNDARY)	20.20	(PR 138)	7,800	2021	7,775	SMALL URBAN COLLECTOR	COAMO
PR 150	005	20.20	(PR 138)	21.10	(AVE. BALDORIOTY/ CALLE RAMON POWER)	11,500	2019	11,590	SMALL URBAN MINOR ARTERIAL	COAMO
PR 150	005	21.10	(AVE. BALDORIOTY/ CALLE RAMON POWER)	21.20	(PR 14P KM 0.65)	7,100	2006	7,200	SMALL URBAN MINOR ARTERIAL	COAMO
PR 151	005	0.00	(PR 5149 KM 0.6)	3.60	(PR 562)	2,900	2023	2,927	MINOR ARTERIAL	VILLALBA
PR 151	005	3.60	(PR 562)	9.45	(JUANA DÍAZ NORTH URBAN BOUNDARY)	1,500	2019	1,507	MINOR ARTERIAL	VILLALBA
PR 151	005	9.45	(JUANA DÍAZ NORTH URBAN BOUNDARY)	13.10	(PR 143 KM 41.7)	7,400	2010	7,500	MINOR ARTERIAL	VILLALBA
PR 152	006	0.00	(PR 156 KM 16.5)	0.60	(PR 7152)	12,444	2022	11,630	MINOR ARTERIAL	BARRANQUITAS
PR 152	006	0.60	(PR 7152)	4.40	(PR 749)	11,000	2019	10,976	MINOR ARTERIAL	BARRANQUITAS
PR 152	006	4.40	(PR 749)	7.20	(PR-773)	11,000	2019	10,976	MINOR ARTERIAL	BARRANQUITAS
PR 152	002	7.20	(PR-773)	9.63	(COUNTY BOUNDARY)	1,800	2021	1,827	MINOR ARTERIAL	BARRANQUITAS
PR 152	002	9.63	(COUNTY BOUNDARY)	9.80	(PR 779)	9,600	1993	9,600	MINOR ARTERIAL	NARANJITO
PR 152	002	9.80	(PR 779)	12.20	(PR 802)	14,100	2021	14,056	MINOR ARTERIAL	NARANJITO
PR 152	002	12.20	(PR 802)	15.90	(PR 811)	15,900	2021	15,880	MINOR ARTERIAL	NARANJITO
PR 152	002	15.90	(PR 811)	20.40	(PR 5 KM 25.6 INT PR 164 KM 6.35)	18,600	2014	18,600	MINOR ARTERIAL	NARANJITO
PR 153	005	0.00	(PR 1 KM 102.9)	0.17	(CALLE GENERAL CONTRERAS)	7,500	2019	3,700	SMALL URBAN COLLECTOR	SANTA ISABEL
PR 153	005	0.17	(CALLE GENERAL CONTRERAS)	1.20	(PR 161)	8,300	2011	8,300	SMALL URBAN COLLECTOR	SANTA ISABEL
PR 153	005	1.20	(PR 161)	2.40	(SANTA ISABEL NORTH URBAN BOUNDARY)	12,400	2022	12,825	SMALL URBAN MINOR ARTERIAL	SANTA ISABEL
PR 153	005	2.40	(SANTA ISABEL NORTH URBAN BOUNDARY)	4.77	(COAMO URBAN BOUNDARY)	10,800	2022	11,142	MINOR ARTERIAL	SANTA ISABEL

13. Sole Source Aquifers



Map Source: Environmental Protection Agency, Sole Source Aquifers program, Map of Sole Source Aquifers Location, accessed 7/17/2024 https://www.epa.gov/dwssa/map-sole-source-aquifer-locations

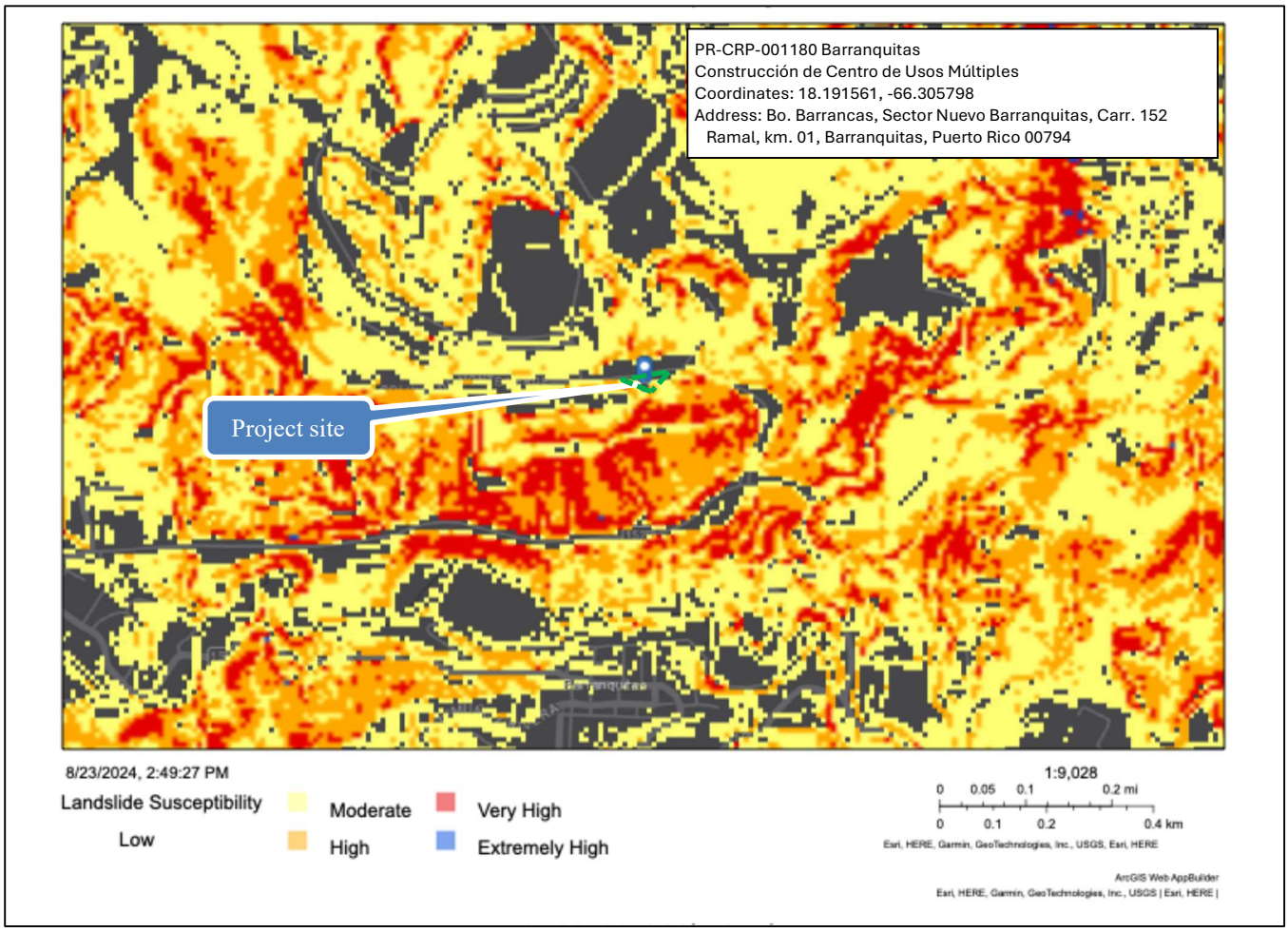
14. Wetlands


U.S. Fish and Wildlife Service
National Wetlands Inventory
PR-CRP-001180 Barranquitas
Construcción de Centro de Usos Múltiples
Coordinates: 18.191561, -66.305798
Address: Bo. Barrancas, Sector Nuevo Barranquitas, Carr. 152 Ramal, km. 01, Barranquitas, Puerto Rico 00794
Project site
JARD de Barranquitas
931 feet
1:7,368
0 0.05 0.1 0.2 mi
0 0.1 0.2 0.4 km
N
May 4, 2023
Wetlands
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Lake
Other
Riverine
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.
DIATOM
National Wetlands Inventory (NWI)
This page was produced by the NWI mapper
https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/

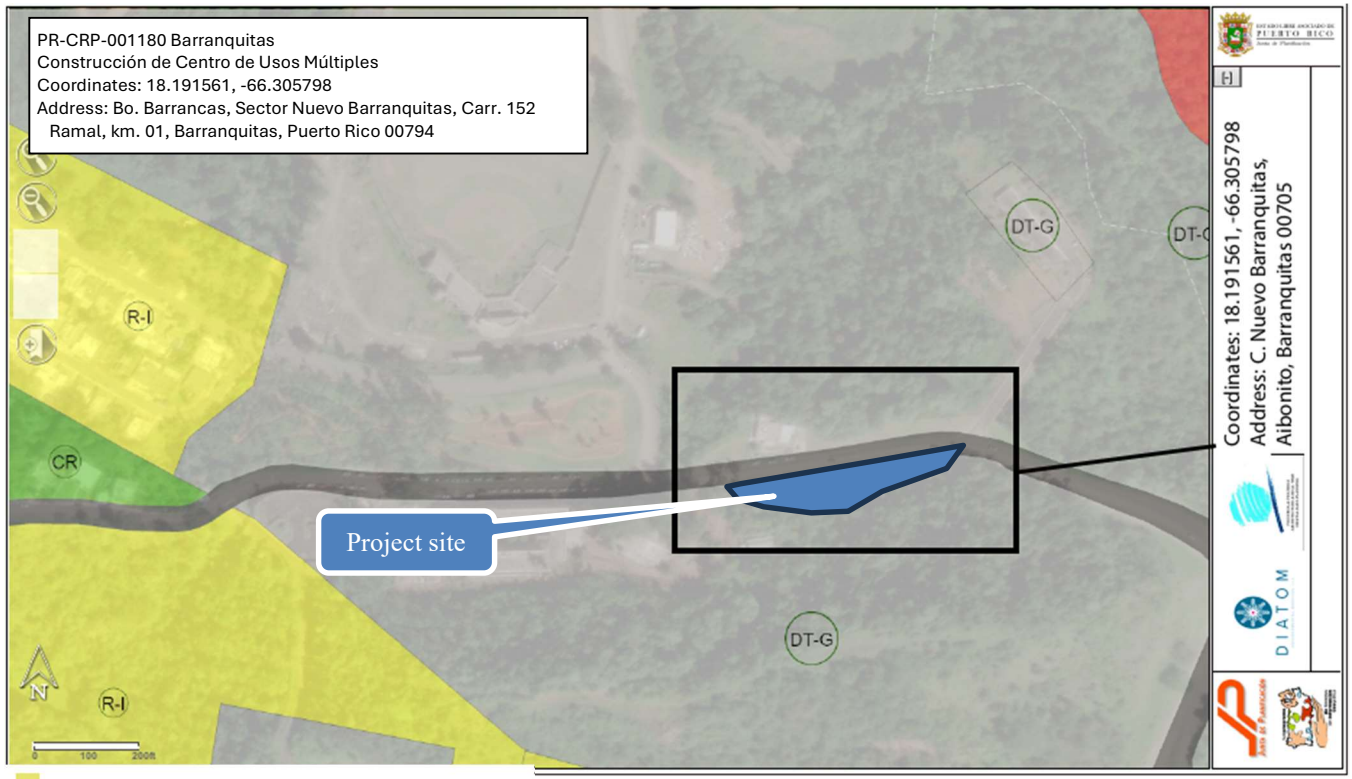
15. Wild and Scenic Rivers

Source: US Forest Service (USFS) (Spatial Reference: WGS84) at URL https://www.arcgis.com/home/webmap/viewer.html?panel=gallery&layers=a37eb56966cc4b11b69909e288414e53

16. Landslide Susceptibility Map



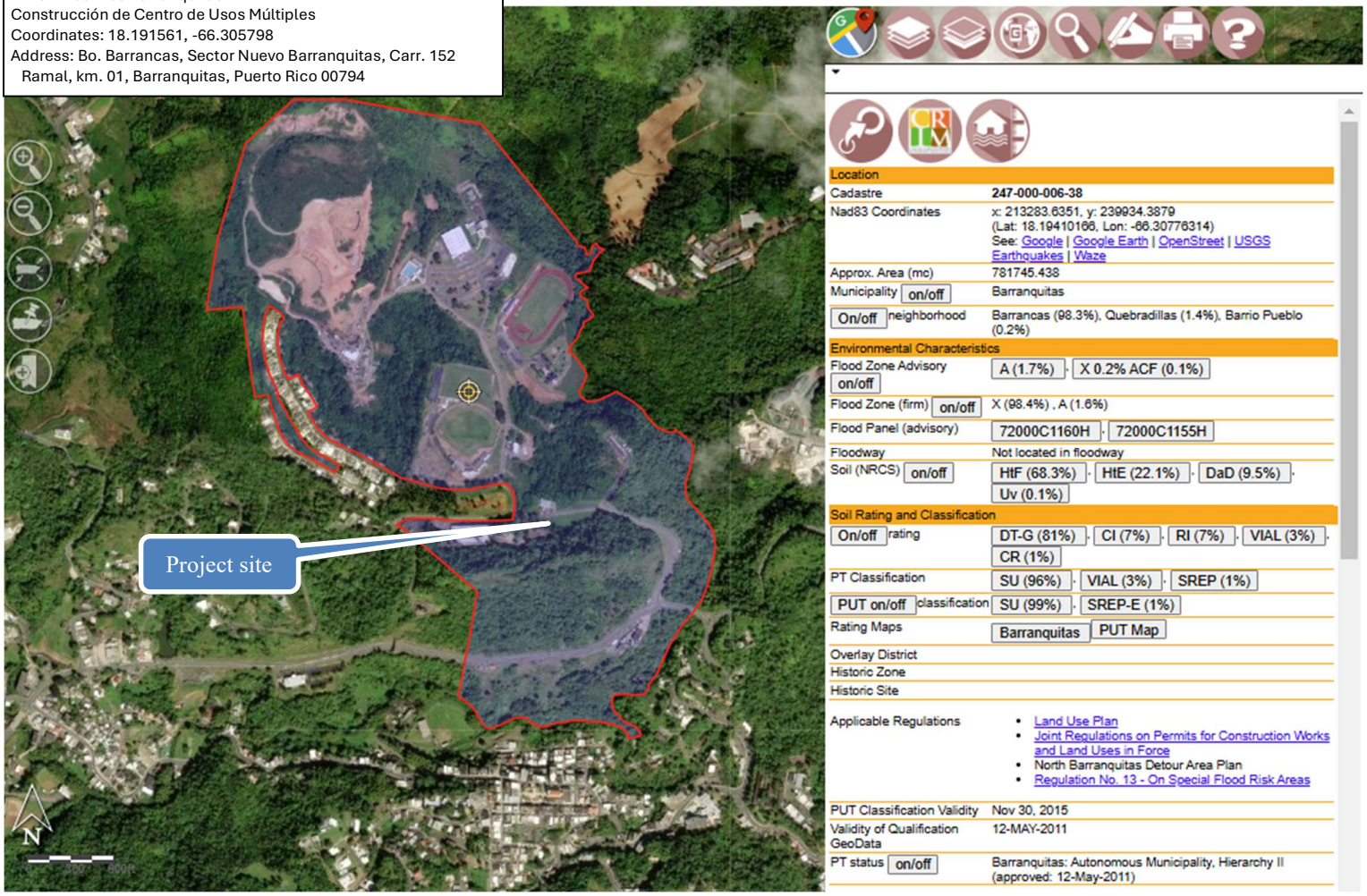
17. Zoning Map



R-I: Residential
CR: Commercial
Dotacional General (general public facilities)

18. Land Use Plan (PUT) Map

PR-CRP-001180 Barranquitas
Construcción de Centro de Usos Múltiples
Coordinates: 18.191561, -66.305798
Address: Bo. Barrancas, Sector Nuevo Barranquitas, Carr. 152 Ramal, km. 01, Barranquitas, Puerto Rico 00794



Source: Puerto Rico Planning Board (Spatial Reference: NAD 83) URL https://gis.jp.pr.gov/mipr/

Prepared by ICF

19. PRASA Approval Letter

See the next pages for letter

27 de enero de 2025

Lcdo. Felix Rivera Torres
Secretario Auxiliar
Oficina de Gerencia de Permisos (OGPe)
PO BOX 41179
San Juan, Puerto Rico 00940-1179

Lcdo. Rivera Torres:

AAA-RE-23-10-0013 BARRANQUITAS – CONSTRUCCION CENTRO DE USOS MULTIPLES PROP. MUNICIPIO DE BARRANQUITAS
CARR. PR-152 KM. 0.1, BO. BARRANCAS
7 UNIDADES EQUIVALENTES
OGPE: 2023-497963-SRI-308376
(APROBACION DE PLANOS)

Nos referimos al proyecto de epígrafe, sometido ante la consideración de la Autoridad de Acueductos y Alcantarillados (AAA) para que se informe en cuanto a las facilidades de agua y alcantarillado sanitario existentes, que puedan servir al mismo. De acuerdo al memorial explicativo el proyecto propuesto consiste de la construcción de un nuevo centro de usos múltiples con capacidad para 200 personas y un área de construcción de 9,000 p/c

Le informamos que los planos para los sistemas de agua y alcantarillado sanitario del proyecto sometidos por el Ing. Jorge Torres Scandali con licencia profesional #10906, han sido aprobados por esta Autoridad, sujeto a las condiciones aplicables cuyos números de orden aparecen en el pliego adjunto, los cuales se enumeran a continuación:

Sistema de Distribución de Agua

1. La interconexión para el servicio de agua será de 4" de diámetro y se localizará, según se indica en los planos aprobados. La interconexión será realizada mediante "tapping sleeve and valve" de 4"a 8"
2. La (s) interconexión (es) para el servicio de agua mencionada (s) en la condición número 1 alimentara un metro contador de 1" y un metro para el sistema de incendio de 2".
3. El dueño del proyecto suplirá e instalará el (los) contador(es) de 1" y de diámetro y los accesorios requeridos para la instalación de los contadores. El dueño o constructor del proyecto suplirá e instalará la(s) caja(s) de hierro fundido con marco y tapa de hierro fundido del tamaño estándar para la protección de cada contador. Esta(s) caja(s) y demás accesorios de dicha(s) instalación(es) pasará a la propiedad de esta Autoridad.
4. El dueño del proyecto suplirá e instalará el (los) contador(es) de 2" y de diámetro para el sistema de incendios y los accesorios requeridos para la instalación de los contadores. El dueño o constructor del proyecto suplirá e instalará la(s) caja(s) de hormigón armado con marco y tapa de hierro fundido del tamaño estándar para la protección de cada contador. Esta(s) caja(s) y demás accesorios de dicha(s) instalación(es) pasará a la propiedad de esta Autoridad.
5. El cargo por la conexión del proyecto al sistema de acueductos de esta Autoridad será de $5,914.20, o el costo vigente al momento de la inspección e interconexión del mismo

6. La distancia entre la acometida de alcantarillado sanitario y la acometida de servicio de agua será mayor o igual a 5 pies, no se permitirá la instalación de ambas acometidas en la misma excavación.
7. La distancia entre las instalaciones de servicio de agua y las instalaciones eléctricas será mayor o igual a 5 pies. Cualquier situación que no permitiese el cumplimiento de esta distancia, deberá ser consultada con esta Oficina para aprobar alternativas que garanticen la seguridad de nuestros empleados.
8. El contador debe instalarse con estabilizador de flujo mecánico o niple de 10 veces el largo de diámetro nominal hasta 4".
9. Se requiere la instalación de un niple de diámetro nominal de 12" después del metro de diámetros de 2" hasta 6". Para los contadores de 8" de diámetro, se requiere un niple de 16".
10. Se utilizaran "Couplings dieléctricos" cuando se utilicen materiales disimilares.
11. Se requiere la instalación de un cedazo antes del estabilizador de flujo o niple según aplique.
12. Se instalara un check valve después del niple de que se instale después del contador.
13. La válvula de control antes del cedazo debe tener operador.
14. Se debe instalar el contador de manera que se pueda leer el contador con facilidad al levantar la tapa. Las tapas de la caja del contador serán del tipo "light duty", de doble hoja, abisagradas y con tiradores escondidizos.
15. La caja para el metro de 4" de diámetro tendrá dimensiones de 3.048 metros (2.743 metros internos) de largo, 1.219 metros (0.914 metros internos) de ancho y 1.067 metros de profundidad como minimo
16. La caja de hormigón deberá sobresalir del nivel de piso al menos 12" (1ft).
17. Los contadores serán instalados fuera de área de rodaje, estacionamiento o rampas de acceso. Además los mismos deberán estar instalados fuera del límite de la propiedad.
18. Las nuevas instalaciones no podrán ser conectadas hasta tanto se realice la desinfección y se emitan los resultados de la mismas.
19. Se instalaran ventosas de aire en todos los puntos altos de la tubería según sea necesario, la instalación de las mismas se determinará en el terreno. Antes de proceder con la compra de las Ventosas, el proyectista será responsable de someter la data técnica de la misma a la consideración de la Autoridad para su evaluación y aprobación.
20. Debemos resaltar que las llaves de pasos, válvulas tirafondos, válvulas auxiliares, hidrantes serán provistos de sus respectivas protecciones de hormigón.
21. Será necesario realizar una excavación exploratoria según lo solicite el inspector de A.A.A. para poder verificar profundidad y materiales de tubería. Deberá solicitarse la inspección correspondiente antes de pavimentar las calles.
22. Se utilizaran "Couplings dieléctricos" cuando se utilicen materiales disimilares.
23. Para aceptar finalmente el proyecto el mismo deberá estar pavimentado cuando se realice la validación final.
24. Se deberá instalar una cinta detectable sobre la tubería de agua, igual o similar a la manufacturada por la compañía "REEF INDUSTRIES INC.". Dicha cinta deberá estar localizada sobre y paralela a la tubería a una profundidad de 0.30 mts. (12") bajo la superficie del terreno.
25. El contratista o urbanizador suministrará evidencia del pago de conexión al sistema previo al endoso final del proyecto.
26. Todas las piezas de conexión como "TEE", válvulas, tapón, etc. serán de hierro fundido.
27. El proponente o dueño deberá notificar por escrito a esta oficina cuando comience la construcción de las obras hidráulicas.
28. La A.A.A. se reserva el derecho de requerir cualquier cambio pertinente que por omisión o error involuntario no se haya incluido en el proyecto y a su juicio, sea necesario para el buen funcionamiento del sistema de acueducto.
29. La tubería de servicio de agua deberá instalarse al lado contrario de la tubería eléctrica, teléfono o cable TV.

30. La tubería para el servicio de acueductos será instalada a una profundidad mínima de 0.75 metros medido desde la superficie del pavimento hasta la parte superior del tubo y a una distancia de 1.5 metros del sardinel.
31. El proponente o dueño deberá notificar por escrito a esta oficina cuando comience la construcción de las obras hidráulicas.
32. Cualquier cambio que sea necesario a lo indicado en este plano o en su carta de aprobación, relacionado al sistema de agua potable, deberá ser consultado y evaluado con esta oficina para aprobación, previo a su construcción y/o desarrollo.
33. Deberán instalarse aditamentos anti-hurtos a las bocas de incendio propuestas dentro del proyecto. Evidencia de la entrega de estos aditamentos deberán ser entregados a nuestra Oficina.
34. Se dejará un espacio de al menos 3" entre la loza de protección de hormigón y la tornillería de la base del hidrante.
35. Se resalta el hecho que el plano es la descripción grafica de las instalaciones a ser realizadas. Toda información presentada en los planos deberá ser corroborada en el campo.

Contadores individuales para sistemas de control de incendios

1. La caja para el metro de 2" de diámetro tendrá dimensiones iguales o mayores a 3.048 metros (2.743 metros internos) de largo, 1.219 metros (0.914 metros internos) de ancho y 1.067 metros de profundidad. Se establece que el largo de los contadores varía de acuerdo al fabricante y la configuración del mismo. A esos efectos, el diseñador procurará que las dimensiones de la caja pueda albergar todas las piezas descritas a continuación.
2. Todo contador para el sistema contra incendios deberá cumplir con las especificaciones de la norma AWWA C703.
3. Los contadores para los sistemas de control de incendios que no sean de turbina o disco no utilizan cedazo.
4. Las piezas de conexión expuestas dentro de la caja del contador de 4" de diámetro a instalarse serán pintadas con pintura anticorrosiva.
5. Las válvulas de paso de los sistemas de control de incendios tienen que ser del tipo vástago ascendente y ubicaran a ambos extremos de la caja. En el caso de contadores de 2" se podrán substituir las válvulas de vástago ascendente por llaves de bola (ball valve).
6. Se instalará un niple luego de la válvula de vástago ascendente no menor de 5 veces el diámetro. En caso de que el metro sea del tipo de lectura "ultra sónica", este niple pudiese no ser necesario. Verificar recomendaciones de instalación del fabricante del metro.
7. Luego del niple, se instalará un metro tipo "Fire Rated". En caso de que el metro sea de turbina, el mismo deberá tener su cedazo ("Basket Strainer") del tipo contra incendios, aguas arriba del contador.
8. Después del metro se deberá instar un niple de un largo no menor de 2 veces el diámetro.
9. Luego del niple después del contador, deberán instalar una válvula de tipo "Fire Control Backflow Prevention Valve" o en su lugar un "doublé check valve".
10. El contador será instalado por el contratista del proyecto y luego cedido y traspasado a esta Autoridad. Una remisión de este aparato deberá ser sometida para nuestra evaluación, previo a la adquisición del equipo. Además deberá presentarse la literatura del aparato anti-retorno ("Backflow preventer" o "double check valve") a escogerse.
11. Se deberán utilizar "Couplings dieléctricos" (uniones dieléctricas) en materiales disimilares.
12. El contador será instalado por el contratista del proyecto. *****
13. Todas las piezas dentro de la caja deben ser metálicas y cubiertas con pintura epóxica.

14. Las tapas de la caja deberán ser abisagradas y provistas de tiradores escondidizos.
15. Las tapas deberán permitir manipular las válvulas desde el tope de la loza.
16. Se debe instalar el contador de manera que se pueda leer con facilidad al levantar la tapa.
17. La caja de contador debe tener un poceto de drenaje adecuado (mínimo 1 pie cuadrado).
18. La caja de contador debe estar localizada fuera del área de rodaje o estacionamiento, rampas de acceso vehicular o peatonal y fuera del límite de propiedad.
19. La caja de contador debe estar localizada a una distancia razonable y segura de equipo eléctrico (5') (postes de alumbrado, transformadores, varillas de tierra (Ground) etc.).
20. Cualquier cambio que sea necesario a lo indicado en este plano o en su carta de aprobación, relacionado a contadores individuales para sistemas de control de incendios, deberá ser consultado y evaluado con esta oficina para aprobación, previo a su construcción y/o desarrollo.

Sistema de Alcantarillado Sanitario

1. **El dueño se hace responsable de la operación mantenimiento y mantenimiento de las líneas internas de servicio más allá del punto de conexión, incluyendo la línea de fuerza y el "lift station" q forma parte del sistema sanitario del proyecto. Además el dueño del proyecto será responsable de cualquier penalidad y/o multa que pudiesen imponer las agencias federales y estatales correspondientes, en la eventualidad de que se causen daños por desbordes, como consecuencia de la operación y mantenimiento del mencionado sistema sanitario.**
2. Aunque el propuesto sistema de alcantarillado sanitario será de operación y mantenimiento privado, esta Autoridad se reserva el derecho de verificar los mismos y someterlos a las pruebas correspondientes.
3. El tope de los registros sanitarios a ser instalados fuera de la zona de rodaje deberán ser instalados al menos 0.30 metros sobre el nivel del terreno.
4. Toda tubería que no llene los requisitos de las pruebas, será reparada por el contratista y sometida a prueba hasta que sea aprobada definitivamente por el inspector de la Oficina de Proyectos Públicos y Privados.
5. La infiltración o exfiltración de agua en las tuberías no será mayor de 50 galones por pulgada de diámetro por milla de longitud en 24 horas. El contratista proveerá los medios según lo requiera el inspector de A.A.A., para llevar a cabo las pruebas de tuberías sanitarias.
6. El dueño o contratista deberá estar preparado con personal y equipo adecuado para realizar las pruebas de nivelación al sistema sanitario propuesto. La misma deberá cumplir en terreno con las pendientes profundidades de los registros adecuadas según Capítulo IV incisos 4.06 y 4.15.01 estipulado en el Manual de Normas de Diseño de esta autoridad.
7. Para aceptar finalmente el proyecto el mismo deberá estar pavimentado cuando se realice la validación final.
8. La distancia entre las instalaciones de servicio de alcantarillado sanitario y las instalaciones eléctricas (pedestales eléctricos, transformadores, postes, etc.) será mayor o igual a 5 pies. Cualquier situación que no permitiese el cumplimiento de esta distancia, deberá ser consultada con esta Oficina para aprobar alternativas que garanticen la seguridad de nuestros empleados.

9. La distancia entre las instalaciones de servicio de agua y las instalaciones de alcantarillado sanitario será mayor o igual a 5 pies. Cualquier situación que no permitiese el cumplimiento de esta distancia, deberá ser consultada con esta Oficina para aprobar alternativas que garanticen la seguridad de nuestros empleados.
10. Los registros de limpieza serán instalados fuera del área de rodaje o rampas de acceso vehicular.En caso de no poder evitarse, los mismos deberán ser provistos de camisillas y tapas del tipo "Heavy Traffic".
11. La A.A.A. se reserva el derecho de requerir cualquier cambio pertinente que por omisión o error involuntario no se haya incluido en el proyecto y a su juicio, sea necesario para el buen funcionamiento del sistema de alcantarillado sanitario.
12. Cualquier cambio que sea necesario a lo indicado en este plano o en su carta de aprobación, relacionado al sistema de alcantarillado sanitario, deberá ser consultado y evaluado con esta oficina para aprobación, previo a su construcción y/o desarrollo.

Vigencia & Disposiciones Generales

36. El dueño del proyecto, el ingeniero que certificó los planos para la instalación de los sistemas de acueducto y alcantarillado sanitario, el inspector designado por el dueño y el contratista deberán cumplir con el "*Reglamento de Certificación y Planos de Construcción",* adoptado por esta Autoridad de acuerdo con la Ley número 7 del 19 de julio de 1985. Este sistema de certificación de planos ha de descansar en la responsabilidad profesional que se le ha conferido al ingeniero o arquitecto colegiado al otorgársele una licencia profesional para garantizar la buena calidad de sus diseños al cumplir con los reglamentos, normas y patrones que rigen en la AAA, la Junta de Planificación y la Oficina de Gerencia de Permisos (OGPe). A esos efectos, el diseñador de las instalaciones a ser aprobadas en esta carta será responsable de corregir cualquier situación que a juicio de la Autoridad represente un detrimento a los sistemas de servicio.

37. Se resalta el hecho, que la aprobación de este plano por la Autoridad de Acueductos y Alcantarillados, en ninguna manera releva de responsabilidad al diseñador del mismo, conforme a la Ley 7 del 19 de julio de 1985.

38. La aprobación de este plano se realiza de acuerdo al Reglamento para la Certificación de Planos de Construcción de la AAA y está sujeto a los procedimientos fiscalizadores establecidos en la Sección 10 del mismo.

39. Una vez se inactive este proyecto por más de dos años, la aprobación del mismo quedará sin efecto. La inactividad del proyecto se refiere a que no se reflejen acciones en el expediente de trabajo de la AAA.

40. Las cartas de recomendaciones vigentes y las condiciones indicadas en las mismas, serán parte de la aprobación de este proyecto. Los dueños del proyecto serán responsables de cumplir con estas condiciones y cualquier omisión nuestra, en esta aprobación, no los releva de realizarlas. Para todos los efectos, se considerarán como incluidas en esta aprobación.

41. La Autoridad de Acueductos y Alcantarillados se reserva el derecho de requerir cualquier obra de mejora pertinente que por omisión involuntaria no se haya incluido en el proyecto y que a su juicio, sea necesaria para el funcionamiento adecuado de los sistemas de distribución de agua y/o alcantarillado sanitario propuestos.

42. Todas las bocas de incendio del proyecto deberán ser del tipo Puerto Rico y se les proveerá un sistema anti-hurto para evitar el uso clandestino de las mismas. Las bocas de incendio deberán ser protegidas contra accidentes o impactos mediante la instalación mínima de tubos de hierro dúctil de 4" de diámetro rellenos de cemento.

43. Todas las conexiones o servicios (temporeros o permanentes) se solicitarán a la Oficina de Proyectos Públicos y Privados.

44. Los pagos de los cargos por conexión, cargos especiales por agua de construcción, los cargos de desinfección de cañerías y cualquier otro cargo aplicable, se harán en las Oficinas Comerciales correspondientes. Las facturas relacionadas a dichos cargos serán emitidas por la oficina de Proyectos Públicos y Privados. La factura deberá ser cumplimentada por el cajero y deberá ser como evidencia de pago copia del recibo emitido por la Oficina Comercial.

Servicios temporeros durante la construcción

45. El método de provisión de agua de construcción deberá ser propuesto por el desarrollador y aprobado por la Oficina de Proyectos Públicos y Privados antes de iniciar la construcción del proyecto. Resaltamos que cualquier persona que hiciera uso del servicio de agua o alcantarillado sin que medie un servicio registrado con la Autoridad, será responsable del pago de los servicios utilizados, del cumplimiento con las normas o reglamentos aplicables y las disposiciones del *Código sobre Tomas o Descargas Clandestinas, Hurto de Agua, Manipulación de Contadores u otros Accesorios Propiedad de la Autoridad de Acueductos y Alcantarillados*.

46. Para la provisión de estos servicios, siempre prevalecerá el método de lectura sobre cualquier método donde el consumo tenga que ser estimado.

47. La(s) acometida(s) temporera(s) para agua durante el proceso de agua de construcción deberán ser solicitadas formalmente a la Oficina de Proyectos Públicos y Privados (PPP), antes de iniciar las obras de construcción del proyecto. La Oficina de PPP emitirá la factura relacionada al trabajo de conexión de dicha acometida, así como la autorización de conexión, y la autorización para registrar temporeramente el servicio solicitado a nombre del contratista.

48. Deberá solicitar un servicio aparte para las oficinas temporeras del proyecto.

49. Proyectos que por su configuración, no puedan suministrar el agua de construcción con un método de lectura, estarán sujetos al pago por unidad establecido para dichos fines al momento de que se emita el endoso final para permiso de uso. Destacamos que el método de provisión de agua de construcción deberá ser propuesto por el desarrollador y aprobado

por la Oficina de Proyectos Públicos y Privados antes de iniciar la construcción del proyecto.

Inspección de Obras

50. Se deberá informar por escrito a esta Autoridad, el Inicio de la Construcción de las obras para poder verificar los materiales y manejo de la tubería a instalarse.

51. Al informar el Inicio de Construcción se deberá incluir copia del Permiso de Construcción (PCO) o Permiso de Urbanización (PCU) emitido por la Oficina de Gerencia de Permisos (OGPE) o la Oficina de Permisos del Municipio Autónomo (Jerarquía I a V), según aplique.

52. Se deberá solicitar en la Oficina de PPP correspondiente, una Reunión Pre-Comienzo, a la cual deberá asistir el inspector designado por el dueño, y el representante del dueño. Lo antes descrito, debe preceder a la solicitud de la primera inspección del proyecto.

53. Deberá someter a las Oficinas de Proyectos Públicos y Privados dos (2) copias del "set" de planos aprobados (sello de la AAA incluido) en tamaño 24" x 36", antes del inicio de construcción del proyecto; estas copias serán para el uso de la AAA.

54. El desarrollador deberá entregar un desglose de los largos de tubería instalados en el proyecto para los sistemas de agua y alcantarillados. En adición proveerá una lista de todas las bocas de incendio dentro del proyecto con su localización exacta y un estimado de las obras hidráulicas. Esto será un requisito para poder emitir la carta de Aceptación Final.

55. El inspector designado en la forma de AAA-881 será responsable de cumplir con las disposiciones de la Sección 4.0 "Certificación de la Inspección de Obras" del Reglamento para la Certificación de Planos de la AAA. Si luego de emitido este formulario AAA-881, cambia el inspector designado se deberá someter un memorial explicativo con un nuevo formulario actualizado del inspector designado.

56. Las solicitudes para inspección deberán realizarse por escrito en la Oficina de PPP correspondiente y deberán ser precedidas por el informe del inspector designado por el dueño. Los informes de inspección deben detallar los elementos o pruebas realizadas así como el resultado de las mismas. En el caso de pruebas se debe describir el método utilizado para realizar la misma. Asimismo, se deben incluir fotografías de los elementos inspeccionados.

57. Deberá proveerse una excavación en todas las acometidas para verificar la profundidad de las tuberías y tipo de material antes de pavimentar la calle de acceso y del proyecto.

58. El inspector designado deberá estar presente en las inspecciones.

59. Las excavaciones de un proyecto que se realicen en las áreas donde haya infraestructura existente deberán ser coordinadas a través en de la oficina de Coordinación de Excavaciones adscrita a la Comisión de Servicio Público.

Cambios al Plano Aprobado

60. Se deberá presentar un plano revisado donde se indique cualquier cambio de los sistemas de agua y sanitario. Estos cambios al plano aprobado inicialmente, deberán ser aprobados antes de proceder con los mismos. Toda solicitud para enmienda de un plano aprobado deberá incluir: un memorial explicativo detallado discutiendo los cambios, los formularios AAA-1294 (Certificación del Diseñador) y AAA-972 (Solicitud de aprobación de planos de construcción).

61. Cualquier cambio/enmienda al plano originalmente aprobado deberá ser presentado a través de una petición de servicio para tales fines a través de la Oficina de Gerencia de Permisos (OGPe).

Otros

62. Aquellos proyectos que vayan a tener un sistema privado alterno de abasto de agua (por ejemplo, sistema de recolección de aguas de lluvia, pozo, etc.) deberán solicitar autorización de esta Autoridad y presentar planos para aprobación. En relación a estos sistemas resaltamos que:

    a. Dichas aguas no podrán ser mezcladas con las aguas del sistema de agua potable, servida por la AAA.
    b. Se deberá proveer un mecanismo para que esta Autoridad pueda facturar por la porción de esta agua, que se vaya a disponer en el sistema de alcantarillado sanitario de la AAA.

63. En aquellos proyectos que requieran de una estación de bombas para descargar al sistema de alcantarillado sanitario de la AAA, la emisión de endosos para permiso de uso estará condicionada, entre otras cosas, a que dicha instalación cuente con planos aprobados por esta Autoridad, y haya pasado por el proceso de inspección que valide que se encuentra funcional y operable en modo automático, es decir: (1) que la subestación eléctrica esté energizada; (2) que haya instalado y operando un generador de emergencia con sistema de transferencia automática; (3) que haya instalado y operando un sistema de control automático para el encendido y apagado de las bombas, y (4) que las bombas tengan un rendimiento GPM adecuado para la descarga que manejan, garantizando el cumplimiento con la velocidad requerida para que no se sedimenten las líneas de bombeo.

64. Aquellos proyectos que estén localizados en áreas en las cuales no haya sistema de alcantarillado sanitario de la AAA, deberán presentar evidencia del método alterno para la disposición de aguas residuales, que haya sido aprobado por la Junta de Calidad Ambiental y la Oficina de Gerencia de Permisos (OGPE).

65. El desarrollador, urbanizador o dueño del proyecto será responsable de toda obra de infraestructura de acueductos y alcantarillado mientras no haya obtenido una aceptación final de parte de la AAA. Toda deficiencia encontrada en los sistemas de distribución de agua y alcantarillado sanitario será de entera responsabilidad de los mismos y deberá ser corregida. Una vez las obras del proyecto hayan sido finalizadas, será responsabilidad del dueño de coordinar con el Inspector del proyecto la inspección final, de modo que obtenga un relevo de la responsabilidad de las obras de infraestructura.

66. Para aceptar finalmente el proyecto, el mismo deberá estar pavimentado al momento de realizar la validación final.

67. Como parte del proceso de endoso y aceptación final del proyecto deberán ser remitidos a nuestra Oficina los siguientes formularios: Formulario AAA-177 (Informe de Terminación de Obra), Formulario AAA-1268 (Documento de Cesión y Traspaso), Formulario AAA-1351 (Declaración y Certificación), Formulario AAA-1294-A (Certificación del Contratista) y la Certificación Final del Inspector Designado.

68. El trámite para constituir las servidumbres de paso que sean necesarias deberá haber sido finalizado antes de solicitar el/los endoso(s) final(es) para permiso de uso relacionados al proyecto.

69. El desarrollador, urbanizador o dueño del proyecto será responsable de toda obra de infraestructura de acueductos y alcantarillado mientras no haya obtenido una aceptación final de parte de la AAA. Toda deficiencia encontrada en los sistemas de distribución de agua y alcantarillado sanitario será de entera responsabilidad de los mismos y deberá ser corregida. Una vez las obras del proyecto hayan sido finalizadas, será responsabilidad del dueño de coordinar con el Inspector del proyecto la inspección final, de modo que obtenga un relevo de la responsabilidad de las obras de infraestructura.

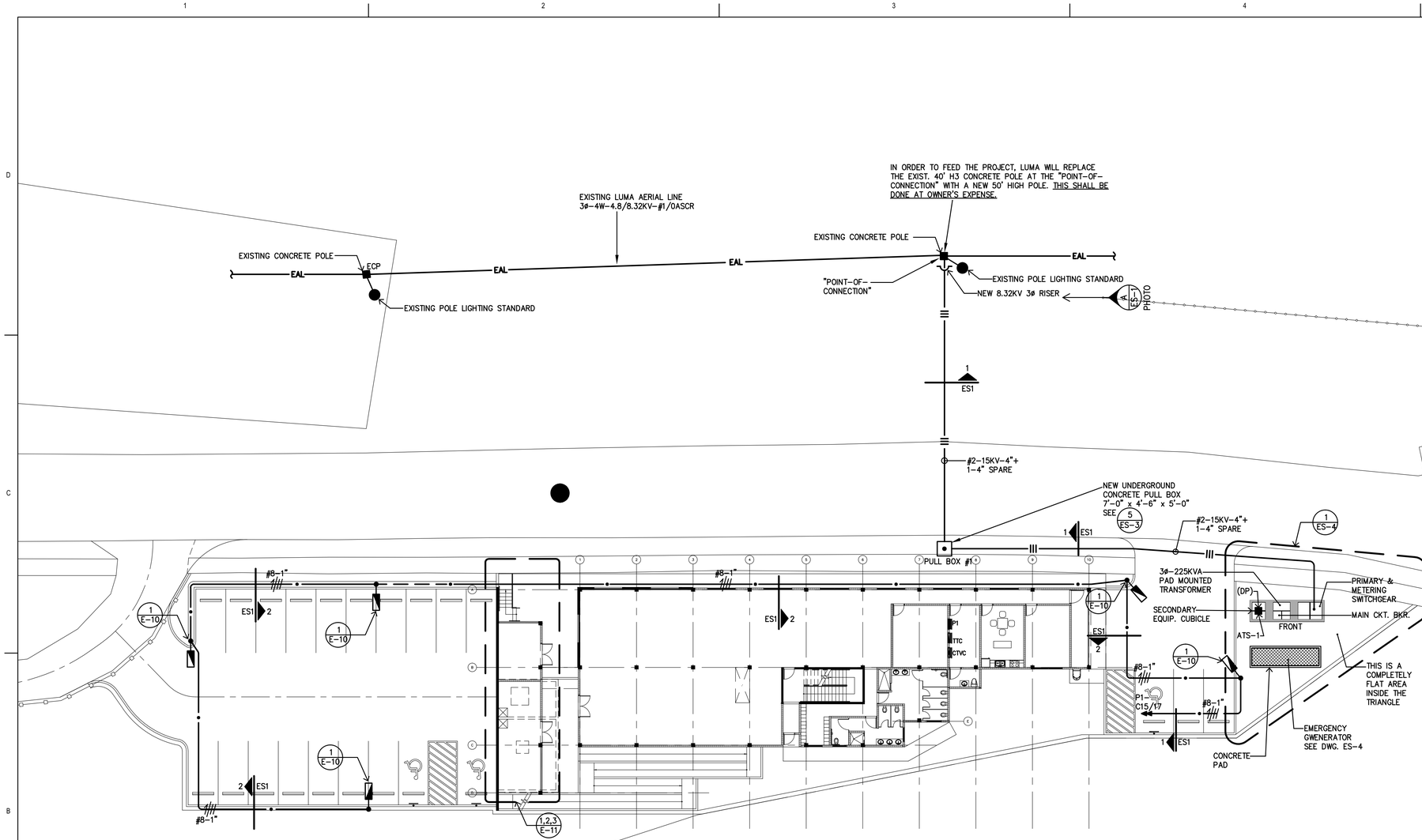
70. El dueño del proyecto tendrá que obtener de la oficina de Proyectos Públicos y Privados, la carta de Aceptación Final, una vez sea inspeccionado y completado el proyecto en su totalidad.

Cordialmente,

Ing. Ricardo Velázquez Medina, PE
Gerente Técnico Región Este
Proyectos Públicos y Privados

20. Project Drawings

See the next pages for project drawings



ELECTRICAL SITE PLAN

SCALE: 1/16=1'-0"

LOCATION MAP
1:20,000

X = 213498.05
Y = 239690.72

① LUMA/P.R.E.P.A. NOTES:

NOTAS GENERALES

1. ESTOS PLANOS COINCIDEN CON LOS PLANOS DE INSCRIPCION RADICADOS EN LA OFICINA GUBERNAMENTAL DE PERMISOLOGIA (O.G.P.e.)
2. EL DUEÑO DEL PROYECTO ES RESPONSABLE DE GESTIONAR Y OBTENER, ANTES DE LA FECHA DE COMIENZO DE LA OBRA, TODOS LOS ENDOSOS, PERMISOS Y SERVIDUMBRES REQUERIDAS POR ENTIDADES GUBERNAMENTALES, ESTATALES, MUNICIPALES, FEDERALES Y PRIVADAS CONCERNIENTES AL DESARROLLO DEL TIPO DE PROYECTO PROPUESTO.
3. EL DUEÑO DE ESTA OBRA TIENE QUE CONTRATAR LOS SERVICIOS DE UN INGENIERO LICENCIADO QUE INSPECCIONE LA CONSTRUCCION DE LAS OBRAS ELECTRICAS DE ACUERDO CON LA LEY Num.7 DEL 19 DE JULIO DE 1985, SEGUN ENMENDADA, Y CON EL REGLAMENTO DE CERTIFICACION DE PLANOS DE PROYECTOS DE CONSTRUCCION ELECTRICA DE LA LUMA/A.E.E. VIGENTE. EL DUEÑO TENDRA QUE NOTIFICAR A LA LUMA/A.E.E. LA DESIGNACION DE ESTE INSPECTOR PRIVADO ANTES DEL COMIENZO DEL PROYECTO.
4. LA EJECUCION DE LAS OBRAS ELECTRICAS, SEGUN DISEÑADAS EN ESTOS PLANOS, DEBERA OBSERVAR LA MEJOR PRACTICA DE LA INDUSTRIA ELECTRICA Y CONSTRUCCION DE ACUERDO CON LAS NORMAS Y REGLAMENTACION ADOPTADAS POR LA LUMA/A.E.E. Y AGENCIAS CONCERNIENTES, AL IGUAL QUE CON LOS CODIGOS, NEC Y NESC, DEMAS ESTANDARES DE IEEE, NPA, NEMA Y ANSI ADOPTADOS.
5. EL CONTRATISTA NO ESTA AUTORIZADO A HACER VARIACIONES A ESTE DISEÑO. ES RESPONSABILIDAD DEL CONTRATISTA CONSULTAR CON EL DISEÑADOR O INSPECTOR DESIGNADO PARA ESTA OBRA CUALQUIER DUDA DUDA QUE SURJA DE LA INTERPRETACION DE LOS PLANOS, DE LA EJECUCION DE LAS OBRAS PROPUESTAS, PROPUESTAS, ESPECIFICACIONES TECNICAS O DISCREPANCIAS ENTRE LAS CONDICIONES EXISTENTES EN EL CAMPO Y AQUELLAS UTILIZADAS PARA PROPOSITO DE DISEÑO.
6. EL DUEÑO O CONTRATISTA ELECTRICO NOTIFICARA A LA LUMA/A.E.E. EL COMIENZO DE ESTAS OBRAS, MEDIANTE LA ENTREGA DEL DOCUMENTO NOTIFICACION DE COMIENZO DE PROYECTO EN EL DEPARTAMENTO DE INGENIERIA DE DISTRIBUCION DE LA REGION CORRESPONDIENTE, CON POR LO MENOS QUINCE DIAS DE ANTICIPACION A LA FECHA PROPUESTA.
7. EL INSPECTOR PRIVADO Y EL CONTRATISTA ELECTRICO SON RESPONSABLES DE ASISTIR A UNA REUNION DE PRECONSTRUCCION A COORDINARSE CON EL DEPARTAMENTO DE INGENIERIA DE DISTRIBUCION DE LA REGION CORRESPONDIENTE.
8. TODO TRABAJO A REALIZARSE EN LINEAS ENERGIZADAS, INCLUYENDO LA CONEXION DE ESTA OBRA, TIENE QUE SER REALIZADO POR LA LUMA/A.E.E. EL PROPONENTE TIENE QUE ASUMIR TODOS LOS COSTOS DE EQUIPO, MATERIALES Y LABOR. EL PROPONENTE TIENE QUE SOLICITAR A LA LUMA/A.E.E. UN ESTIMADO PARA ESTOS TRABAJOS, EL CUAL CUAL TENDRA UNA VIGENCIA DE TRES MESES DESDE SU EXPEDICION.
9. SE PROHIBE LA REALIZACION DE CUALQUIER TIPO DE TRABAJO EN LAS FRANJAS DE SERVIDUMBRE ELECTRICA SIN LA AUTORIZACION POR ESCRITO DE LA LUMA/A.E.E.
10. LA LUMA/A.E.E. NO APROBARA LA CONEXION DE PROYECTOS CON CONDICIONES DE INVASION DE SERVIDUMBRE O QUE NO CUMPLAN CON LOS DESPEJOS DE SEGURIDAD REQUERIDOS.

NOTAS ESPECIALES

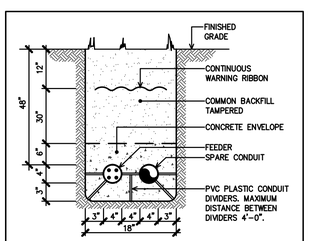
11. EL DUEÑO DEL PROYECTO APORTARA A LA LUMA/A.E.E.:
    ■ LA CANTIDAD DE $ _____ PARA MEJORAS AL SISTEMA ELECTRICO EXISTENTE.
    □ LAS OBRAS REQUERIDAS EN LA EVALUACION PARA ESTE PROYECTO DEL ___ DE _____ DE ____,
    ESTA APORTACION SE REALIZARA SEGUN LA CARGA PROPUESTA DE ACUERDO CON EL REGLAMENTO PARA DETERMINAR Y COBRAR LAS APORTACIONES DE PERSONAS O INSTITUCIONES EN PROYECTOS DE DESARROLLO VIGENTE. LA CANTIDAD SERÁ CARGADA A LA CUENTA 419.06–CIG.
12. LA LUMA/A.E.E. NO CONECTARA EL PROYECTO A SU SISTEMA ELECTRICO HASTA TANTO EL DUEÑO CONSTITUYA LAS SERVIDUMBRES REQUERIDAS DE ACUERDO CON EL REGLAMENTO DE SERVIDUMBRE REQUERIDA, YA SEA DENTRO COMO FUERA DE LOS LIMITES DE PROYECTO.
13. LA INSTALACION DE SISTEMAS DE MEDICION TIENE QUE COORDINARSE CON LA OFICINA DE MEDICION DE LA REGION CORRESPONDIENTE. EL DISEÑADOR O EL CONTRATISTA ELECTRICO TIENE QUE ASEGURARSE DE CONSULTAR CON ESTA OFICINA SOBRE LOS EQUIPOS Y MATERIALES A UTILIZARSE ADEMAS DE LA UBICACION DEL EQUIPO.
14. LA INSTALACION DE SUBESTACIONES, TRANSFORMADORES U OTRO EQUIPO ELECTRICO SOBRE SISTEMAS DE ALCANTARILLADO, LINEAS DE AGUA U OTRAS UTILIDADES ESTA PROHIBIDA.

NOTAS ESPECIALES

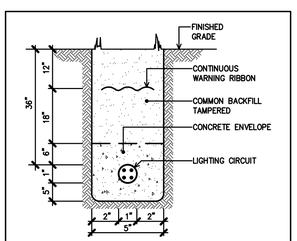
15. TODOS LOS EQUIPOS A UTILIZARSE EN LA CONSTRUCCION TIENEN QUE CUMPLIR CON LOS ESTANDARES DE IEEE, ANSI, NEMA Y ASTM.
16. EL CONTRATISTA ES RESPONSABLE DE VERIFICAR CON LA LUMA/A.E.E. QUE TODO MATERIAL O EQUIPO A UTILIZARSE ESTE APROBADO POR LA LUMA/A.E.E. PREVIO A SU INSTALACION. LA LUMA/A.E.E. SE RESERVA EL DERECHO DE ACEPTAR CUALQUIER EQUIPO QUE SE LE VAYA A TRANSFERIR.
17. TODO EQUIPO Y MATERIAL (INCLUYENDO TRANSFORMADORES Y GABINETES DE SUBESTACIONES) A SER INSTALADOS A UNA MILLA O MENOS DE DISTANCIA DE CUERPOS DE AGUA SALADA TIENE QUE SER CONSTRUIDO EN ACERO INOXIDABLE, CON EXCEPCION DE LAS BASES DE MEDIDORES.
18. EN LOS SISTEMAS SOTERRADOS, TIENEN QUE UTILIZARSE CABLES PRIMARIOS CON TERMINACIONES DE 15KV PARA VOLTAJES DE DISTRIBUCION Y DE 46KV PARA LINEAS DE 38KV.
19. EN LOS SISTEMAS AEREOS, TIENEN QUE UTILIZARSE AISLADORES DE POLIMETRO DE 15KV PARA VOLTAJES DE DISTRIBUCION Y DE 46KV PARA LINEAS DE 38KV.
20. EL CONTRATISTA SERA RESPONSABLE DE ROTULAR TODO TRANSFORMADOR A SER TRANSFERIDO A LA LUMA/A.E.E. CON UN NUMERO DE PROPIEDAD PROVISTO POR EL DEPARTAMENTO DE INGENIERIA DE DISTRIBUCION CORRESPONDIENTE.

SISTEMAS

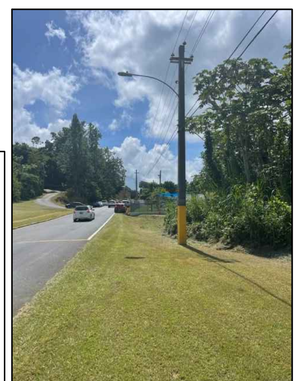
21. EL DUEÑO DEL PROYECTO ES RESPONSABLE DE REALIZAR LAS PRUEBAS DE LOS CABLES PRIMARIOS Y SECUNDARIOS CON SUS TERMINACIONES. LOS RESULTADOS DE ESTAS PRUEBAS TIENEN QUE ESTAR DE ACUERDO CON LOS PARAMETROS ESTABLECIDOS POR LA LUMA/A.E.E. PARA LAS MISMAS. ESTAS PRUEBAS TIENEN QUE REALIZARSE EN COORDINACION CON UN REPRESENTANTE DE LA OFICINA DE INSPECCIONES DEL DEPARTAMENTO DE INGENIERIA DE DISTRIBUCION CORRESPONDIENTE.
22. DURANTE LA INSTALACION DEL CABLE, ESTE DEBRE ESTAR PROTEGIDO DE LA HUMEDAD Y ABRASIONES. EL CONTRATISTA ES RESPONSABLE DE INSTALAR EL CABLE MEDIANTE LAS PRACTICAS RECOMENDADAS DE HALADO PARA NO EXCEDER LA TENSION ESPECIFICADA PARA EL CABLE.
23. LAS TAPAS DE REGISTRO (MANHOLES) A SER INSTALADOS EN EL AREA DE SIEMBRA TIENEN QUE ESTAR PROTEGIDAS MEDIANTE UNA LOZA DE HORMIGON REFORZADO, SEGUN ESPECIFICADO EN EL PATRON URD–52.
24. EN AQUELLOS CASOS DONDE EL PROYECTO ESTE LOCALIZADO A MENOS DE UNA MILLA DE CUERPOS DE AGUA SALADA, LOS CONDUCTOS ASCENDENTES TIENEN QUE SER DE PVC SCHEDULE 80 O DE FIBERGLASS, SEGUN APROBADO POR LA LUMA/A.E.E.
25. LAS BANCADAS DEL SISTEMA SOTERRADO SERAN INSPECCIONADAS POR LA LUMA/A.E.E. ANTES DE SER CUBIERTAS Y COMPACTADAS.
26. TODA BANCADA EXPUESTA A TRAFICO VEHICULAR TENDRA QUE SER PROTEGIDA CON HORMIGON, AQUELLAS QUE SE ENCUENTREN CERCA DE INSTALACIONES DE OTRAS UTILIDADES TENDRAN UN DESPEJO MINIMO DE 13 PULGADAS DE ESTAS.
27. LA CANTIDAD DE FUSIBLES DE REMPLAZO QUE PROVEERA EL CONTRATISTA SERA LA MISMA CANTIDAD DE LOS INSTALADOS EN CADA SUBESTACION.
28. LOS CONECTORES QUE SE UTILIZARAN PARA LA CONEXION A TIERRA DE ANTENAS Y SUBESTACIONES SERAN DE SOLDADURA EXOTERMICA (THERMO–WELD) O DE COMPRESION.
29. EL CONTRATISTA PROVEERA CABLE HALADO (FISHWIRE) EN CADA CONDUCTO DE RESGUARDO.
30. TODO SISTEMA DE DISTRIBUCION TENDRA UNA RESISTENCIA MAXIMA A TIERRA DE 10 OHMIOS. SE INSTALARA UNA VARILLA PARA CONECTAR A TIERRA EL NEUTRAL EN CADA CUATRO POSTES O CADA 1,000 PIES Y EN TODOS LOS TRANSFORMADORES.
31. CADA BASE DE HORMIGON PARA POSTE TIENE QUE INCLUIR DOS CONDUCTOS DE RESGUARDO PARA USO FUTURO, SEGUN REQUERIDO POR LA LUMA/A.E.E.
32. LAS BASES PARA POSTES TIENEN QUE SER INSPECCIONADOS POR LA LUMA/A.E.E. EN SU ETAPA DE CONSTRUCCION.



1 ES–1 SECTION NOT TO SCALE



2 ES–1 SECTION NOT TO SCALE



A ES–1 PHOTO #A POINT-OF-CONNECTION

OGPE: 2023-497963-SRI-073862

CERTIFICACIÓN DEL DISEÑADOR / DESIGNER'S CERTIFICATION

1. Certifico que soy ingeniero, agrimensor o arquitecto, licenciado y colegiado en cumplimiento con la Ley 173 de 1988, según enmendada, y estoy autorizado por el dueño del proyecto a presentar estos planos de construcción ante LUMA Energy como operador y administrador del Sistema de Transmisión y Distribución de la AEE. I certify that I am a licensed and registered engineer, surveyor, or architect (in compliance with Act 173 of 1988, as amended) and authorized by the project or land owner to submit these construction plans to LUMA Energy as operator and administrator of the Transmission and Distribution System of the Puerto Rico Electric Power Authority.
2. En armonía con las disposiciones de la Ley Núm. 135 de 15 de junio de 1967, según enmendada, conocida como Ley de Certificación de Planos o Proyectos, certifico que preparé el diseño eléctrico de este proyecto en conformidad con los códigos, patrones, normas y reglamentos aprobados por la AEE, la Junta de Planificación y la Oficina de Gerencia de Permisos, Luma Energy y el Manual de Prácticas Profesional del CIAPR. I in compliance with Act No.135 of July 15, 1967, as amended known as the "Construction Plans or Projects Certification Act", I certify that I prepared the electric design for this project in accordance with the codes, Standards, rules, and regulations approved by LUMA, Puerto Rico Planning Board and Permits Management Office and the CIAPR Professional Practice Manual.

FIRMA DEL DISEÑADOR / DESIGNER'S SIGNATURE

LUMA

ENDOSO / ENDORSEMENT

Nombre del Proyecto / Project Name: _____
Número de Proyecto / Project Number: 23-2-0772
Carga / Load: (kVA): _____ Revisión / Revision: _____

ENDOSADO POR / ENDORSED BY

1. LUMA endosa el diseño eléctrico mostrado en estos planos de construcción basándose en la certificación sometida por el diseñador en cumplimiento con la Ley Núm. 135 del 15 de julio de 1967, según enmendada. / LUMA endorses the electric design shown in these construction plans based on the certification presented by the designer in compliance with Act 135 of July 15, 1967, as amended.
2. LUMA no asume responsabilidad sobre el diseño certificado. El endoso por parte de la LUMA no releva al diseñador de la responsabilidad con los códigos, estándares, normas y regulaciones aplicables vigentes al inicio de las obras. / LUMA does not assume responsibility over the certified design. LUMA's endorsement does not relieve the designer from the professional responsibility assumed with the certification of these project's plans. This endorsement relieves neither the builder nor private inspector from compliance with asnding dispositions form: National Electric Code, National Electric Safety Code; constructions standards, norms, and regulations from LUMA and other government agencies as well as federal and state laws ruling by the time construction begins.
3. El presente endoso tiene vigencia de un (1) año. De iniciar las obras eléctricas dentro de este término, mediando notificación previa a LUMA, el endoso mantendrá su vigencia hasta la terminación de las mismas. En caso de que no se certifique obra eléctrica en ese término, el endoso perderá su vigencia. Este endoso no constituye un contrato de cesión, ni garantiza el pago a terceros. Para cesión de Contrato y Garantía del equipo: Para esto es necesario cumplir con todos los requisitos en el Reglamento de Servidumbres de la Autoridad de Energía Eléctrica (7282 de 2007 / This endorsement is valid for one (1) year. If electrical works have begun during this year, with prior notification to LUMA, the endorsement will still be valid until work's completion. In case there is no certified electrical work during this period, this endorsement will lose its validity. This endorsement is not to constitute an easement or to complete the Assignment, Transfer and Guarantee process of the equipment. For this, it is necessary to comply with all the provisions of the Easements Regulation for the Electric Power Authority (7282 of 2007).

LJV DRAWING HISTORY		LJV-DSB	DESIGN STAGE	
PROJECT NO:	23-045		SCHEMATIC DWGS: (SD)	
DRAWING NO:	ES-1		PRELIMINARY DWGS: (PD)	
CAD FILE:	23-045/		DESIGN DEVELOPMENT DWGS: (DD)	
CAD SUBFILE:	23-045-ES01	R00 BD	ADVANCED DWGS: (AD)	
PLOT DATE:	01.15.24		BID DWGS: (BD)	●
PLOT SCALE:	1:1		CONTRACT DWGS: (CD)	
ISSUE DATE:	01.15.24		RECORD DWGS: (RD)	
REMARKS:	NOT FOR CONSTRUCTION		-	%
RELATED PROJECTS:	----------			

OWNER

LOGOSbarranquitas_municipio_oca_m2008.gif

PROPONENT

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

The Office of LEONARDO J. VIDAL Consulting Engineers
P.O. Box 363704, San Juan P.R. 00936-3704
Tel.: (787) 763-5651 Fax: (787) 763-7399
E-mail: ljvconsult@gmail.com

SEAL

YO, LEONARDO J. VIDAL, LIC. 6092, CERTIFICO QUE SOY EL PROFESIONAL QUE CONFECCIONÓ Y/O DISEÑÓ Y/O PREPARÓ ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIÉN CERTIFICO QUE ENTIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CÓDIGOS DE CONSTRUCCIÓN VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PÚBLICAS CON JURISDICCIÓN. CERTIFICO, ADEMÁS, QUE EN LA PREPARACIÓN DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY NÚM. 14 DEL 8 DE ENERO DE 2004, SEGÚN ENMENDADA, CONOCIDA COMO LEY PARA LA INVERCIÓN POR LA INDUSTRIA PUERTORIQUEÑA Y CON LA LEY NÚM. 319 DEL 15 MAYO DE 1938 , SEGÚN ENMENDADA; LEY NÚM. 96 DEL 6 DE JULIO DE 1978, SEGÚN ENMENDADA; (SEGÚN APLIQUE). RECONOZCO QUE CUALQUIER DECLARACIÓN FALSA O FALSIFICACIONES DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MÍ, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCIÓN JUDICIAL Y DISCIPLINARIA POR LA OGPE.

PROJECT INFORMATION

EDIFICIO USOS MULTIPLES
BARRANQUITAS,PR

PUEBLO PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	01.15.24
REVIEWED BY:	L.V.-P.E.
DRAWN BY:	F.R.
DESIGNED BY:	L.J.V.-P.E.
BRA PROJECT NUMBER:	

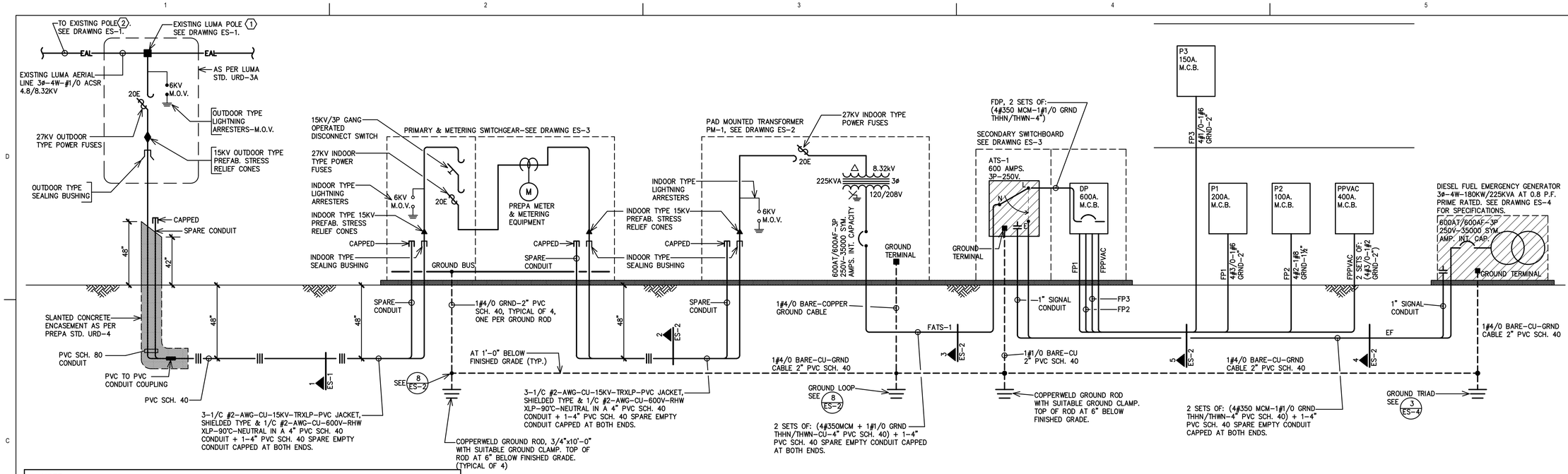
SHEET TITLE

ELECTRICAL SITE PLAN

SHEET ID

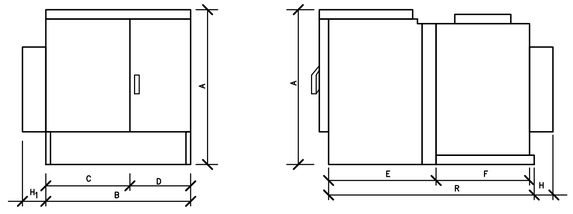
ES-1

SHEET



1 ONE LINE DIAGRAM
1 ES-2 NOT TO SCALE

NOTE:
1- CONCRETE FLOOR PADS FOR TRANSFORMERS SHALL BE 6" HIGH AND 6" ALL AROUND THE TRANSFORMER.
2- TRANSFORMER DIMENSIONS ARE APPROXIMATE. VERIFY WITH TRANSF. MANUFACTURER THE EXACT DIMENSIONS.



TRANSF. NO.	TRANSF. KVA	WEIGHT POUNDS	TRANSFORMER DIMENSIONS (IN.) A	B	C	D	E	F	R	H	H1	SOUND DB	%Z	OIL (GAL.)
PM-1	225	3500	50	50	30	20	19	21	40	14	--	55	4.0	110
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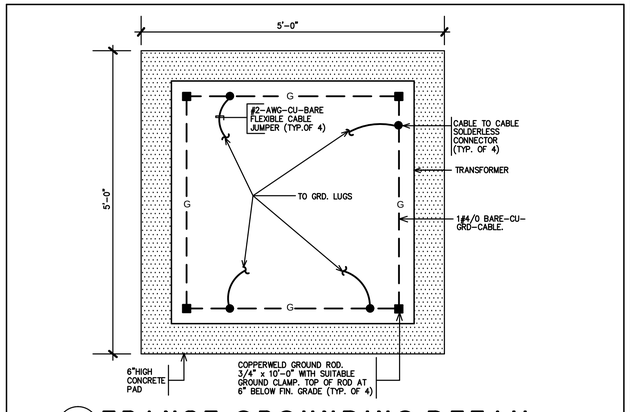
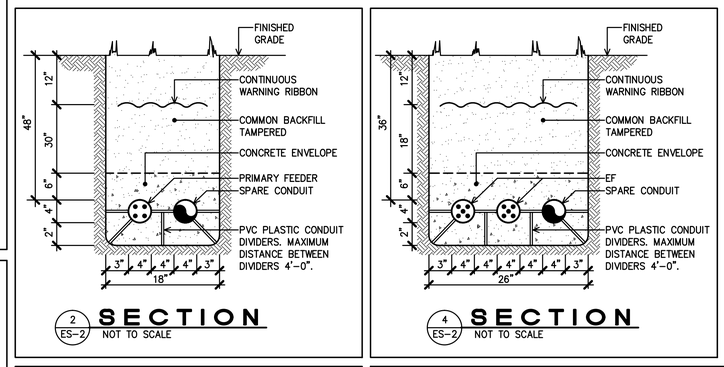
NOTE:
1- PAD MOUNTED TRANSFORMER-3ø-60 HZ, KVA SIZE AS INDICATED AT LEFT.DUAL OPERATION PRIMARY VOLTAGE 8.32 KVΔ TO 120/208V Y-N 6-2 1/2% TAPS(2 ABOVE & 4 BELOW RATED VOLTAGE), OIL INMERSED, SELF-COOLED, NON-PCB, STAINLESS STEEL OUTDOOR CONSTRUCTION COMPLETE WITH PRIMARY SWITCHES FOR RADIAL FEED, PRIMARY FUSES & MAIN SECONDARY CKT. BKR. AS INDICATED IN THE ONE LINE DIAGRAM. APPROVED EQUAL TO SQUARE D CLASS 7230. DEAD FRONT METAL ENCLOSED, SELF STANDING.

7 TRANSFORMER SIZE DETAIL
ES-2 NOT TO SCALE

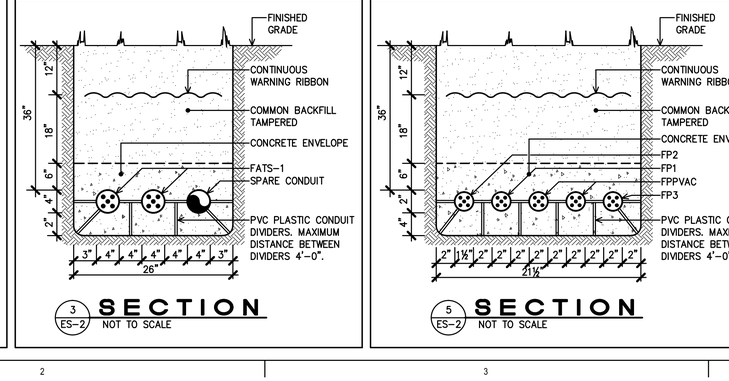


8 TRANSF. GROUNDING DETAIL
ES-2 NOT TO SCALE



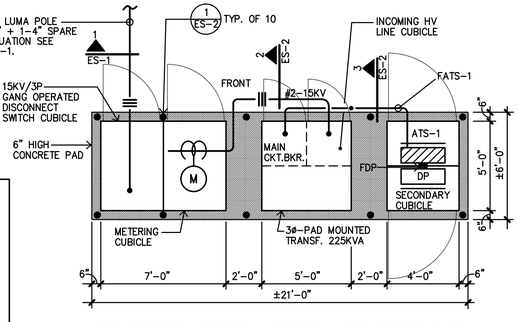
2 SECTION
ES-2 NOT TO SCALE

4 SECTION
ES-2 NOT TO SCALE

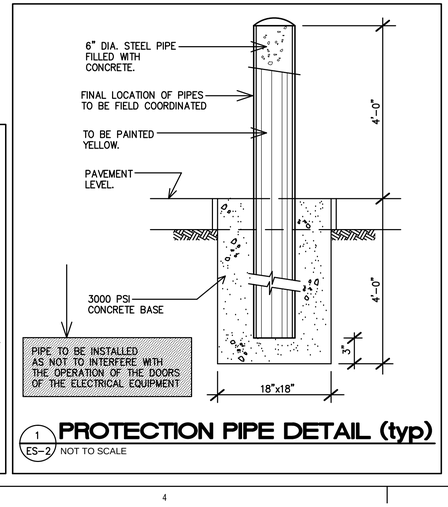


3 SECTION
ES-2 NOT TO SCALE

5 SECTION
ES-2 NOT TO SCALE



6 SUBSTATION AREA BLOW-UP
ES-2 SCALE: 1/4" = 1'-0"



1 PROTECTION PIPE DETAIL (typ)
ES-2 NOT TO SCALE

LJV DRAWING HISTORY		LJV-DSB	DESIGN STAGE	
PROJECT NO:	23-045		SCHEMATIC DWGS: (SD)	
DRAWING NO:	ES-2		PRELIMINARY DWGS: (PD)	
CAD FILE:	23-045/		DESIGN DEVELOPMENT DWGS: (DD)	
CAD SUBFILE:	23-045-ES02	R00 BD	ADVANCED DWGS: (AD)	
PLOT DATE:	01.15.24		BID DWGS: (BD)	●
PLOT SCALE:	1:1		CONTRACT DWGS: (CD)	
ISSUE DATE:	01.15.24		RECORD DWGS: (RD)	
REMARKS:	NOT FOR CONSTRUCTION		-	%
RELATED PROJECTS:	----------			

OGPe: 2023-497963-SRI-073862

Document No.: 429,618 Version: 3

CERTIFICACIÓN DEL DISEÑADOR / DESIGNER'S CERTIFICATION

1. Certifico que soy ingeniero/a agrimensor/a arquitecto, licenciado/a colegiado en cumplimiento con la Ley 173 de 1988, según enmendada, y autorizado/a por el dueño a someter estos planos. Certifico además que he diseñado la obra eléctrica de este proyecto y he sometido certificación de Planos o Proyectos a la AEE. / I certify that I am a licensed and registered engineer, surveyor, or architect (in compliance with Act 173 of 1988, as amended) and authorized by the present or land owner to submit these construction plans to LUMA Energy as operator and administrator of the Transmission and Distribution System of the Puerto Rico Electric Power Authority.
2. En armonía con las disposiciones de la Ley Núm. 135 de 15 de junio de 1967, según enmendada, conocida como Ley de Certificación de Planos o Proyectos, certifico que preparé el diseño eléctrico de este proyecto en conformidad con los códigos, patrones, normas y reglamentación aprobada por LUMA, Puerto Rico Planning Board and Permits Management Office and the OGPE Professional Practice Manual. / In accordance with Act No. 135 of June 15, 1967, as amended known as the "Construction Plans or Projects Certification Act", I certify that I prepared the electric design for this project in accordance with the codes, Standards, rules, and regulations approved by LUMA, Puerto Rico Planning Board and Permits Management Office and the OGPE Professional Practice Manual.

FIRMA DEL DISEÑADOR / DESIGNER'S SIGNATURE

LUMA

ENDOSO / ENDORSEMENT

Nombre del Proyecto / Project Name: EDIFICIO USOS MULTIPLES, BARRANQUITAS
Número de Proyecto / Project Number: 23-2-0772
Carga / Load: (kVA): 225 Revisión / Revision: ____

ENDOSADO POR / ENDORSED BY

1. LUMA endosa el diseño eléctrico mostrado en estos planos de construcción basándose en la certificación sometida por el diseñador en cumplimiento con la Ley Núm. 135 de 15 de junio de 1967, según enmendada. / LUMA endorses the electric design shown in these construction plans based on the certification presented by the designer in compliance with Act 135 of July 15, 1967, as amended.
2. LUMA no asume responsabilidad sobre el diseño certificado. El endoso por parte de la LUMA no reemplaza al diseñador en la responsabilidad profesional que asume en el título antes citados. Este endoso no exime, al consultor ni al inspector de obra por cumplir con las leyes, reglas y reglamentos de construcción vigentes de las agencias, juntas reglamentadoras o corporaciones públicas con jurisdicción y de esas agencias de gobierno, así como leyes federales y estatales, vigentes al inicio de las obras. / LUMA does not assume responsibility over the certified design. LUMA's endorsement does not relieve the designer from the professional responsibility assumed with the certification of these project's plans. This endorsement relieves neither the builder nor private inspector from compliance with standing dispositions from: National Electric Code, National Electric Safety Code, constructors standards, norms, and regulations from the Puerto Rico Planning Board and Permits Management Office and the OGPE Professional Practice Manual.
3. El presente endoso tiene vigencia de un (1) año. De existir las obras eléctricas dentro de este término, mediando notificación previa a LUMA, el endoso mantendrá su vigencia hasta la terminación de las mismas. En caso de que no se certifique obra eléctrica en ese periodo, este endoso perderá su vigencia. Este endoso no es para consultar servidumbres ni para completar procesos de Gestión, Traspaso y Garantía del equipo. Para esto se necesario cumplir con todo lo dispuesto en el Reglamento de Servidumbres Para la Autoridad de Energía Eléctrica (7282 de 2007. / This endorsement is valid for one (1) year. If electrical works have begun during this year, with prior notification to LUMA, the endorsement will still be valid until work's completion. In case there is no certified electrical work during this period, this endorsement will lose its validity. This endorsement is not to consult for easements or to complete Management, Transfer and Guarantee process of the equipment. For this, it is necessary to comply with all the provisions of the Easements Regulation for the Puerto Rico Electric Power Authority (7282 of 2007).

OWNER

PROPONENT

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

The Office of LEONARDO J. VIDAL
Electrical Engineering Consultant
P.O. Box 2837/54, San Juan, PR 00902-3757 Ext. no. 6092
Tels.: (787) 760-4841 - (787) 760-7070 Fax: (787) 760-7588
E-Mail: lvidalpe@gmail.com

SEAL

YO, LEONARDO J. VIDAL, LIC. 6092, CERTIFICO QUE SOY EL PROFESIONAL QUE CONFECCIONÓ Y/O DISEÑÓ Y/O PREPARÓ ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIÉN CERTIFICO QUE ENTIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CÓDIGOS DE CONSTRUCCIÓN VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PÚBLICAS CON JURISDICCIÓN. CERTIFICO, ADEMÁS, QUE EN LA PREPARACIÓN DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY NÚM. 14 DEL 8 DE ENERO DE 2004, SEGÚN ENMENDADA, CONOCIDA COMO LEY PARA LA INVERCIÓN POR LA INDUSTRIA PUERTORRIQUEÑA Y CON LA (LEY NÚM. 319 DEL 15 MAYO DE 1938 , SEGÚN ENMENDADA; LEY NÚM. 96 DEL 6 DE JULIO DE 1978, SEGÚN ENMENDADA; SEGÚN APLIQUE). RECONOZCO QUE CUALQUIER DECLARACIÓN FALSA O FALSIFICACIONES DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MÍ, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCIÓN JUDICIAL Y DISCIPLINARIA POR LA OGPE.

PROJECT INFORMATION

EDIFICIO USOS MULTIPLES BARRANQUITAS,PR

PUEBLO PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	01.15.24
REVIEWED BY:	L.V.-P.E.
DRAWN BY:	F.R.
DESIGNED BY:	L.J.V.-P.E.
BRA PROJECT NUMBER:	

SHEET TITLE

ONE LINE DIAGRAM

SHEET ID

ES-2

SHEET

1 15KV SWITCHGEAR DESCRIPTION

1. DISCONNECT SWITCH SECTION.
2. NON-FUSIBLE DISCONNECT SWITCH, 15KV/3P-GANG OPERATED AIR LOAD BREAK, 600 AMPS. CONTINUOUS DUTY, 40,000 AMP. SYM. INT. CAPACITY, 95KV BIL, NOT INVERTED MOUNTED TO ACT AS LOCAL DISCONNECT.
3. WARNING SIGN "DANGER-PELIGRO & HIGH VOLTAGE-ALTO VOLTAJE".
4. 1#4/0 AWG-CU-BARE GROUND CABLE-2" PVC SCH. 40.
5. TRANSPARENT GLASSTICK SAFETY BARRIERS.
6. SECTION DOOR.
7. CONTINUOUS COPPER GROUND BUS.
8. SOLDERLESS TAP FROM #4/0-AWG-BARE COPPER CABLE TO #4/0 AWG-BARE-COPPER GROUND CABLE OR GROUND BUS.
9. SOLDERLESS LUG FOR #4/0-AWG-BARE COPPER GROUND CABLE TO FLAT SURFACE.
10. CONCRETE PAD, 6" HIGH AND 6" ALL AROUND THE SUBSTATION.
11. VENTILATION OPENINGS.
12. COPPERWELD GROUND ROD - 3/4"x10'-0" WITH SUITABLE GROUND CLAMP. TOP OF ROD AT 6" BELOW FINISHED GRADE, TYPICAL OF 6.
13. FLEXIBLE GROUND CABLE CONNECTOR.
14. LUMA METERING SECTION.
15. LUMA METERING EQUIPMENT.
16. 6" WIDE X 2 1/2" HIGH WINDOW PROTECTED WITH A LEXAN PANEL FOR METER READING.
17. GROUNDED HANDLE OF 15KV GANG OPERATED DISCONNECT SWITCH.

2 15KV SWITCHGEAR NOTES:

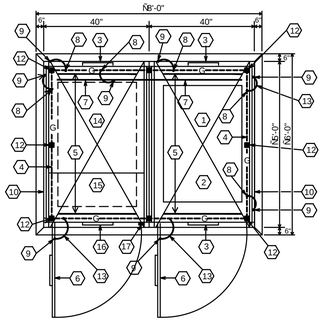
1-SWITCHGEAR DIMENSIONS SHALL BE THOSE APPROVED BY LUMA DUE TO CODE REQUIRED CLEARANCES.

2-IT SHALL BE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY WITH LUMA THE AVAILABILTY OF THE METERING EQUIPMENT TO BE INSTALLED IN THIS PROJECT.

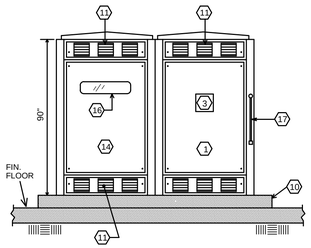
3-THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANCHORING THE SWITCHGEAR TO THE CONCRETE BASE IN AN APPROVED MANNER AS PER A/E FIELD SUPERVISOR INSTRUCTIONS.

3 15KV SWITCHGEAR SPECIFICATIONS

1. SWITCHGEAR SHALL BE TAMPER-PROOF WITH PADLOCK PROVISION ON ALL DOORS.
2. SWITCHGEAR SHALL BE FORMED BY STEEL SECTIONS GANGED TOGETHER WITH THE SECTIONS HAVING FORMED EDGES TO PROVIDE RIGIDITY. THE UNIT SHALL BE FABRICATED FROM GALVANIZED STEEL SECTIONS.
3. SHEET METAL EDGES SHALL BE EXPOSED TO THE WEATHER AT A MINIMUN ANGLE.
4. PRIMARY AND SECONDARY REMOVABLE DOORS SHALL BE PROVIDED WITH SEPARATE LOCKS.
5. THE UNIT SHALL BE FREE-STANDING AND RIGID WHEN ALL DOORS ARE REMOVED.
6. THE EFFECTIVE VENTILATION OPENINGS SHALL MEET THE NATIONAL ELECTRICAL CODE (N.E.C.) REGULATIONS GIVEN IN SECTION 450-45 (B) AND (C).
7. THE VENTILATION OPENINGS SHALL BE COVERED WITH STANDARD EXPANDABLE WIRE MESH OF A SUFFICIENT NUMBER AND TYPE OF INSTALLATION AS TO PROVIDE TAMPER-PROOF VENTILATION FACILITIES OF ADEQUATE CAPACITY TO COOL THE SWITCHGEAR AND ELECTRICAL EQUIPMENT INSIDE THE SWITCHGEAR.
8. THE ROOF SHALL BE DESIGNED IN A 4-WAY PITCH TO PROVIDE GOOD WATER DRAINAGE.
9. ALL RUST SCALES, WELD METAL FLUXS AND/OR WELD SPLATTERS SHALL BE REMOVED FROM ALL SURFACES PRIOR TO PAINTING. THE PRIMER COAT SHALL BE A.R.C. WICH IS A COLD GALVANIZED PROCESS. THE FINISH PAINT SHALL BE LUMA STANDARD GRAY.
10. A MINIMUM OF 8 GROUNDING LUGS SHALL BE PROVIDED. #4/0-AWG BARE COPPER CABLE SHALL BE USED TO GROUND ALL METAL FRAMES. IN LIEU OF THE THE GROUNDING LUGS A CONTINUOS COPPER GROUND BUS OF ADEQUATE CAPACITY CAN ALSO BE USED IN ORDER TO GROUND ALL METAL FRAMES AS PER N.E.C. AND LUMA STANDARDS.
11. SWITCHGEAR SHALL BE LUMA APPROVED TYPE SUITABLE FOR OUTDOOR INSTALLATION.
12. SWITCHGEAR SHALL BE PROVIDED WITH GLASSTICK SAFETY BARRIERS IN ALL DOORS AND ACCESS TO LIVE PARTS AS PER LUMA REQUIREMENTS. THE GLASSTICK BARRIERS SHALL BE SO INSTALLED AS TO PROVIDE CLEAR VIEW OF ALL THE EQUIPMENT COMPONENTS INSIDE THE CUBICLE.



TOP VIEW

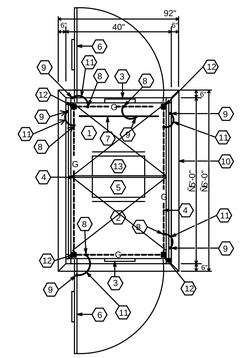


FRONT VIEW

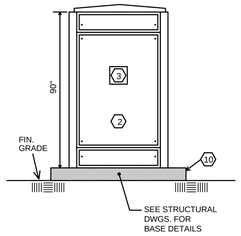
NOTES:

1- SEE STRUCTURAL DWGS. BELOW FOR BASE DETAILS.

1 ES-3 **15KV SWITCHGEAR DETAIL**
NOT TO SCALE



TOP VIEW

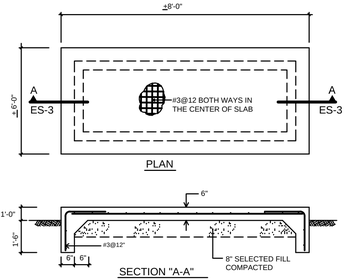


FRONT VIEW

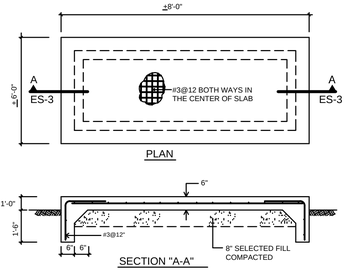
NOTES:

1- SEE STRUCTURAL DWGS. BELOW FOR BASE DETAILS.

3 ES-3 **SECONDARY SWITCHBOARD DETAIL**
NOT TO SCALE



2 ES-3 **SWITCHGEAR CONCRETE PAD DETAIL**
NOT TO SCALE



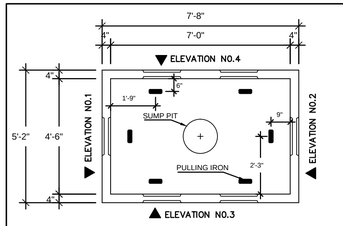
4 ES-3 **SWITCHBOARD CONCRETE PAD DETAIL**
NOT TO SCALE

4 SWITCHBOARD SPECIFICATIONS

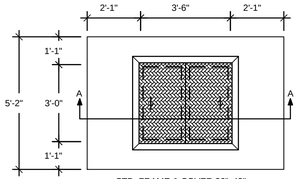
1. SWITCHBOARD SHALL BE TAMPER-PROOF WITH PADLOCK PROVISION ON ALL DOORS.
2. SWITCHBOARD SHALL BE FORMED BY STEEL SECTIONS GANGED TOGETHER WITH THE SECTIONS HAVING FORMED EDGES TO PROVIDE RIGIDITY. THE UNIT SHALL BE FABRICATED FROM GALVANIZED STEEL. IT SHALL BE SUITABLE FOR OUTDOOR INSTALLATION.
3. SHEET METAL EDGES SHALL BE EXPOSED TO THE WEATHER AT A MINIMUN ANGLE.
4. ALL CUBICLES REMOVABLE DOORS SHALL BE PROVIDED WITH SEPARATE LOCKS.
5. THE UNIT SHALL BE FREE-STANDING AND RIGID WHEN ALL DOORS ARE REMOVED.
6. THE ROOF SHALL BE DESIGNED IN A 4-WAY PITCH TO PROVIDE GOOD WATER DRAINAGE.
7. ALL RUST SCALES, WELD METAL FLUXS AND/OR WELD SPLATTERS SHALL BE REMOVED FROM ALL SURFACES PRIOR TO PAINTING. THE PRIMER COAT SHALL BE A.R.C. WICH IS A COLD GALVANIZED PROCESS. THE FINISH PAINT SHALL BE LUMA STANDARD GRAY.
8. A MINIMUM OF 8 GROUNDING LUGS SHALL BE PROVIDED. #4/0-AWG BARE COPPER CABLE SHALL BE USED TO GROUND ALL METAL FRAMES. IN LIEU OF THE THE GROUNDING LUGS A CONTINUOS COPPER GROUND BUS OF ADEQUATE CAPACITY CAN ALSO BE USED IN ORDER TO GROUND ALL METAL FRAMES AS PER N.E.C. AND LUMA STANDARDS.

5 SECONDARY SWITCHBOARD DESCRIPTION

1. – ATS CUBICLE.
2. – SECONDARY CUBICLE.
3. – WARNING SIGN "DANGER-PELIGRO & HIGH VOLTAGE-ALTO VOLTAJE".
4. – 1#4/0 AWG-CU-BARE GROUND CABLE-2" PVC SCH. 40.
5. – DISTRIBUTION PANEL "DP", SEE DRAWING E-9.
6. – SECTION DOOR.
7. – CONTINUOUS COPPER GROUND BUS.
8. – SOLDERLESS TAP FROM #4/0-AWG-BARE COPPER CABLE TO #4/0 AWG-BARE-COPPER GROUND CABLE OR GROUND BUS.
9. – SOLDERLESS LUG FOR #4/0-AWG-BARE COPPER GROUND CABLE TO FLAT SURFACE.
10. – CONCRETE PAD, 6" HIGH AND 6" ALL AROUND THE SWITCHBOARD.
11. – FLEXIBLE GROUND CABLE CONNECTOR.
12. – COPPERWELD GROUND ROD – 3/4"x10'-0" WITH SUITABLE GROUND CLAMP. TOP OF ROD AT 6" BELOW FINISHED GRADE.
13. – AUTOMATIC TRANSFER SWITCH, 600AMPS/3P-250V-35,000 SYM. AMPS. INTERRUPTING CAPACITY-NEMA 1.

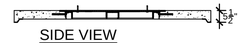


TOP VIEW

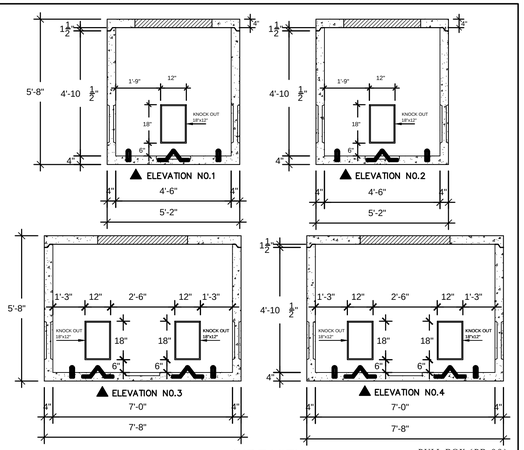


STD. FRAME & COVER 36"x42"
(COV-030 & FRA-030)

PRECAST COVER
TOP VIEW



SIDE VIEW
SECTION A-A



SIDE VIEW

PULL BOX (PB-00)
4'-6" x 7'-0" x 5'-0"
AREA VERDE
TAPA RECTANGULAR
URD-30B
(SPACING BETWEEN BELLS 3")

APPROXIMATE WEIGHT:
A) COVER: 1600 LBS.
B) BOX: 8065 LBS.
TOTAL: 9665 LBS.

5 ES-3 **PULL BOX DETAIL**
NOT TO SCALE

_____Aproved
_____Aproved as Note
_____Not Aproved
_____Resubmit
Remark : _____

POWER POLES Inc. A COMPANY WITH 35 YEARS OF EXPERIENCE	COMPANY NAME:	FILE NAME: NEW EXAMPLE\(7x4-6x5)\	EMAIL: egaud@powerpolespr.com
		PRODUCT: 4'-6" x 7'-0" x 5'-0" URD-30B	PHONE: (787) 887-2005
	PROJECT NAME:	DRAWN BY: ELIAM I. GAUD	FAX: (787) 887-1870 / 888-0350
		REVISED BY:	DATE: 00-00-2005
		APPROVED BY:	NOTES: AREA VERDE / TAPA RECTANGULAR

ITEM NO. PB-002
PRODUCT ID. PB-00
PAGE: 1 OF 1

LJV DRAWING HISTORY		LJV-DSB	DESIGN STAGE	
PROJECT NO:	23-045		SCHEMATIC DWGS: (SD)	
DRAWING NO:	ES-3		PRELIMINARY DWGS: (PD)	
CAD FILE:	23-045/		DESIGN DEVELOPMENT DWGS: (DD)	
CAD SUBFILE:	23-045-ES03	– R00 – BD	ADVANCED DWGS: (AD)	
PLOT DATE:	01.15.24		BID DWGS: (BD)	●
PLOT SCALE:	1:1		CONTRACT DWGS: (CD)	
ISSUE DATE:	01.15.24		RECORD DWGS: (RD)	
REMARKS:	NOT FOR CONSTRUCTION		-	%
RELATED PROJECTS:	----------			

OGPe: 2023-497963-SRI-073862

Document No.: 4379.010 Version: 3

CERTIFICACIÓN DEL DISEÑADOR / DESIGNER'S CERTIFICATION

1. Certifico que soy ingeniero, agrimensor o arquitecto, inscrito y colegiado en cumplimiento con la Ley 173 de 1988, según enmendada, y estoy autorizado por el dueño o arrendatario a someter estos planos de construcción. / I certify, I am a registered engineer, surveyor, or architect (in compliance with Act 173 of 1988, as amended) and authorized by the project or land owner to submit these construction plans to LUMA Energy as operador and administrator of the Transmission and Distribution System of the Puerto Rico Electric Power Authority.
2. En armonía con las disposiciones de la Ley Núm. 135 de 15 de junio de 1967, según enmendada, conocida como Ley de Certificación de Planos y Proyectos, certifico que preparé el diseño eléctrico de este proyecto en conformidad con los códigos, patrones, normas y reglamentos aprobados por la AEE, la Junta de Planificación y la Oficina de Gerencia de Permisos. / LUMA Energy y el Manual de Práctica Profesional del CAAPR. / In compliance with Act No. 135 of June 15, 1967, as amended known as the "Construction Plans or Projects Certification Act", I certify that I prepared the electric design for this project in accordance with the codes, Standards, rules, and regulations approved by LUMA, Puerto Rico Planning Board and Permits Management Office and the CAAPR Professional Practice Manual.

FIRMA DEL DISEÑADOR / DESIGNER'S SIGNATURE

LUMA **ENDOSO / ENDORSEMENT**

Nombre del Proyecto / Project Name: EDIFICIO USOS MULTIPLES, BARRANQUITAS
Número de Proyecto / Project Number: 23-2-0772
Carga / Load: (kVA): 225 Revisión / Revision: _____

ENDOSADO POR / ENDORSED BY

1. LUMA endosa el diseño eléctrico mostrado en estos planos de construcción basándose en la certificación sometida por el diseñador en cumplimiento con la Ley Núm. 135 de 15 de julio de 1967, según enmendada. / LUMA endorses the electric design shown in these construction plans based on the certification presented by the designer in compliance with Act 135 of July 15, 1967, as amended.
2. LUMA no asume responsabilidad sobre el diseño certificado por el ingeniero diseñador. La responsabilidad profesional asumida por el diseñador con la certificación antes dicha. Este endoso no exime a contratistas ni al inspector de obra el cumplir con las disposiciones del Código Eléctrico Nacional, Código Eléctrico de Seguridad, códigos, patrones, normas y reglamentos vigentes de LUMA y de otras agencias de gobierno, así como leyes federales y estatales, vigentes al inicio de las obras. / LUMA does not assume responsibility over the certified design. LUMA's endorsement does not relieve the designer from the professional responsibility assumed with the certification of these project's plans. This endorsement relieves neither the builder nor private inspector from compliance with standing dispositions from: National Electric Code, National Electric Safety Code, constructions standards, norms, and regulations from LUMA and other government agencies, as well as federal and state laws, regulations in force at the start of the works.
3. El presente endoso tiene vigencia de un (1) año. De iniciar las obras eléctricas dentro de este término, mediante notificación previa a LUMA, el endoso mantendrá su vigencia hasta la terminación de las mismas. En caso de que no se certifique obra eléctrica en ese periodo, este endoso perderá su vigencia. Este endoso no es para conflictar servidumbre ni para completar proceso de Cesión, Traspaso y Garantía del equipo. Para esto se necesario cumplir con todo lo dispuesto en el Reglamento de Servidumbres Para la Autoridad de Energía Eléctrica de Puerto Rico. / This endorsement is valid for one (1) year. If electrical works begin within this term, upon previous notification to LUMA, the endorsement will still be valid until work's completion. In case there is no certified electrical work during this period, this endorsement will lose its validity. This endorsement is not to constitute an easement or to complete the Assignment, Transfer and Guarantee process of the equipment. For this, it is necessary to comply with all the provisions of the Easements Regulation for the Puerto Rico Electric Power Authority (7282 of 2007).

OWNER

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PROPONENT

FIGUEROA & FIGUEROA
ARCHITECTS AND
ENGINEERS

CONSULTANT

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SEAL

YO, LEONARDO J. VIDAL, LIC. 6092, CERTIFICO QUE SOY EL PROFESIONAL QUE CONFECCIONÓ Y/O DISEÑÓ Y/O PREPARÓ ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIÉN CERTIFICO QUE ENTIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CÓDIGOS DE CONSTRUCCIÓN VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PÚBLICAS CON JURISDICCIÓN. CERTIFICO, ADEMÁS, QUE EN LA PREPARACIÓN DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY NÚM. 14 DEL 8 DE ENERO DE 2004, SEGÚN ENMENDADA, CONOCIDA COMO LEY PARA LA INVERCIÓN POR LA INDUSTRIA PUERTORRIQUEÑA Y CON LA (LEY NÚM. 319 DEL 15 MAYO DE 1938 , SEGÚN ENMENDADA; LEY NÚM. 96 DEL 6 DE JULIO DE 1978, SEGÚN ENMENDADA; SEGÚN APLIQUE). RECONOZCO QUE CUALQUIER DECLARACIÓN FALSA O FALSIFICACIONES DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MÍ, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCIÓN JUDICIAL Y DISCIPLINARIA POR LA OGPE.

PROJECT INFORMATION

EDIFICIO USOS MULTIPLES
BARRANQUITAS,PR

PUEBLO PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	01.15.24
REVIEWED BY:	L.V.-P.E.
DRAWN BY:	F.R.
DESIGNED BY:	L.J.V.-P.E.
BRA PROJECT NUMBER:	

SHEET TITLE

ELECTRICAL EQUIPMENT SPECIFICATIONS

SHEET ID

ES-3

SHEET

LVAEGS1

1 EMERGENCY GENERATOR(S) AND TRANSFER SWITCH(ES) SPECIFICATIONS

1– THE EMERGENCY GENERATOR(S) SHALL BE FURNISHED COMPLETE WITH A FUEL (DIESEL) TANK, AUTOMATIC TRANSFER SWITCH(ES), BATTERY, AUTOMATIC BATTERY CHARGER, AND ALL THE REQUIRED ACCESORIES FOR NORMAL OPERATION.

2– THE EMERGENCY GENERATOR SHALL BE RATED AS FOLLOWS:

KW = 180
KVA = 225 — AT 0.8 POWER FACTOR PRIME RATED
PHASES = 3
WIRES = 4
VOLTS = 120/208
HERTZ = 60
R.P.M. = 1800

THE EMERGENCY GENERATOR SHALL BE EQUAL TO:
ONAN CAT. NO. C200D6D
THE UNIT SHALL BE SKID MOUNTED AND PROVIDED WITH A LEVEL II SOUND ATTENUATED, WEATHERPROOF ENCLOSURE WITH KEYLOCKS IN ALL DOORS.

3– THE UNIT SHALL IS TO INCLUDE THE FOLLOWING EQUIPMENT AND ACCESORIES:

A.– WATER COOLED RADIATOR.

B.– ONE(1) SUB-BASE 600 GALLONS DUAL WALL DIESEL FUEL TANK WITH A 520 GALLONS USABLE VOLUME CAPACITY & PROVIDED WITH ALL FUEL SUPPLY, RETURN AND VENTILATION LINES AND EQUIPMENT.

C.– ONE 24 VOLTS, HEAVY DUTY BATTERY WITH RACK AND CABLES.

D.– EXHAUST CRITICAL TYPE MUFFLER WITH STEEL CONNECTIONS AND FITTINGS, INCLUDING FLEXIBLE FLEXIBLE SECTION AND RAIN CAP FOR EXHAUST.

E.– VIBRATION ISOLATORS OF THE SIZE, NUMBER AND TYPE REQUIRED BY THE PLANT MANUFACTURER.

F.– SCREEN, BAFFLED, LOUVERED AIR INTAKE.

G.– DUCTED, BAFFLED, LOUVERED AND SCREENED HOT AIR DISCHARGE.

H.– PUMPS AND FILTERS AS REQUIRED.

I.– RELAYS AND CONTACTORS AS REQUIRED FOR REMOTE CONTROL FROM TRANSFER SWITCH.

J.– INSTRUMENTS AND CONTROL PANEL INCLUDING THE FOLLOWING:

a.– VOLTMETER AND SELECTOR SWITCH.
b.– AMMETER AND SELECTOR SWITCH.
c.– WATTMETER AND SELECTOR SWITCH.
d.– FREQUENCY METER AND SELECTOR SWITCH.
e.– RUNNING TIME METER.
f.– FIELD CIRCUIT BREAKER(S).
g.– VOLTAGE REGULATOR WITH A TWO (2) POSITION (OFF AND AUTOMATIC) SWITCH.
h.– WATER TEMPERATURE GAUGE.
i.– OIL PRESURE GAUGE.
j.– AUTOMATIC SHUTDOWN DEVICE WITH INDICATOR LIGHTS FOR:
(1)– OVER CRANKING PROTECTION.
(2)– HIGH WATER TEMPERATURE.
(3)– LOW OIL PRESSURE.
k.– START/STOP SWITCH.
l.– REMOTE START/ STOP TERMINALS.

K.– AUTOMATIC TRANSFER SWITCH(ES) RATED AS FOLLOWS:

DESIGNATION:	ATS–1	–
AMPS:	600	–
VOLTS:	250	–
PHASES:	3	–
POLES:	3	–
NEMA TYPE:	1 (LOCATED INSIDE OUTDOOR SECONDARY SWITCHBOARD)	–

THE TRANSFER SWITCH(ES) SHALL BE FOR OPERATION AT 60 HERTZ AND SHALL BE PROVIDED WITH THE REQUIRED PILOT LIGHTS ON THE DOOR AND WITH THE FOLLOWING ACCESORIES:

a.– SELECTOR SWITCH WITH OFF–AUTOMATIC CHECK POSITIONS
b.– TIME DELAY IN TRANSFER TO EMERGENCY ENGINE START, ADJUSTABLE FROM 1/16 TO 180 SECONDS.
c.– TIME DELAY ON RESTORATION TO NORMAL POWER, ADJUSTABLE FROM 30 SECOND AND 10 MINUTES.
d.– CLOCK EXERCISER TO START GENERATOR SET AUTOMATICALLY. IT SHALL OPERATE EVERY WEEK AND RUN THE GENERATOR SET FOR ONE (1) HOUR AND THEN, STOP THE GENERATOR SET AUTOMATICALLY.
e.– ALL OTHER ACCESORIES REQUIRED FOR NORMAL OPERATION. TIME DELAY RELAYS AND
f.– CONTACTORS (IF SO REQUIRED) TO ACHIEVE THE FOLLOWING STARTING SEQUENCE TO OPERATE UNDER EMERGENCY CONDITIONS:

1 – DP

4– REMARKS:

A.– ALL ELBOWS SHALL BE OF THE LONG RADIUS TYPE.

B.– THE DIAMETER OF THE EXHAUST PIPE MUST BE INCREASED 1" FOR EACH 10 FEET OF VERTICAL RUN AFTER THE FIRST 10 FEET.

C.– THE CONTRACTOR SHALL LEAVE THE TANK(S) FULL OF DIESEL FUEL OF THE TYPE REQUIRED FOR THE OPERATION OF THE EMERGENCY GENERATOR.

D.– THE CONTRACTOR SHALL MAKE SURE THAT THE CONNECTIONS AT THE DIESEL FUEL TANK(S) ARE TIGHT BEFORE PROCEEDING WITH THE FINAL INSTALLATION OF THE TANK(S).

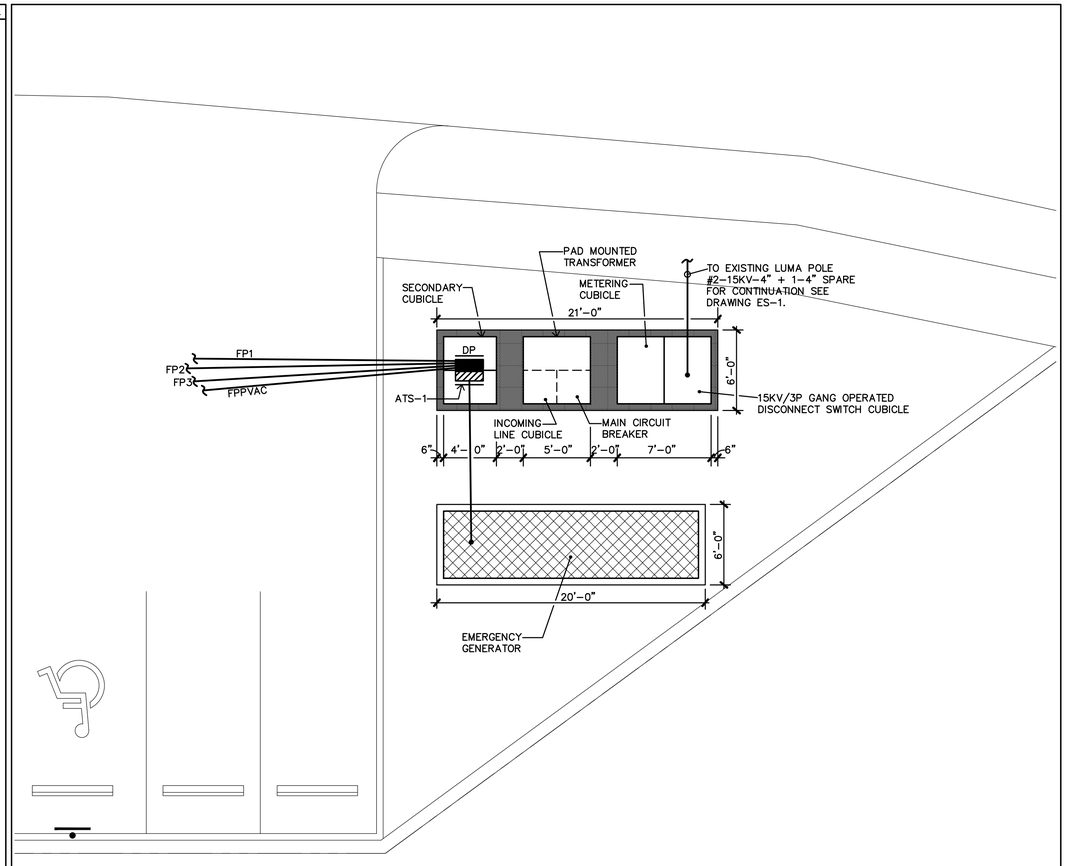
E.– THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE COMPLETE INSTALLATION OF THE EMERGENCY GENERATOR WITH ALL ITS NECESSARY FITTINGS AND APPURTENANCES. THIS SHALL BE DONE ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR LEAVING THE EMERGENCY POWER POWER GENERATING SYSTEM IN PERFECT OPERATING CONDITIONS.

F.– THE STRUCTURAL DETAILS SHOWN IN THE ELECTRICAL DRAWINGS FOR THE SUPPORT OF THE DIESEL FUEL TANK ARE OF A GENERAL NATURE. IT CORRESPONDS TO THE CONTRACTOR TO PROVIDE THE CORRECT TYPE AND SIZE OF STRUCTURAL SUPPORTS ACCORDING TO THE ACTUAL DIMENSIONS AND CHARACTERISTICS OF THE TANK PURCHASED.

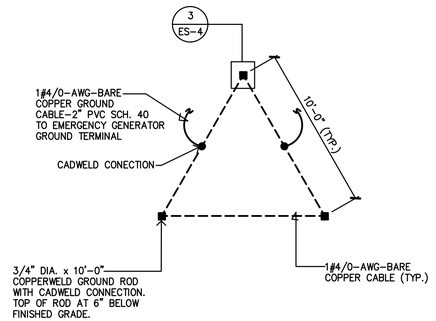
G.– THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE CONSTRUCTION AND OPERATION PERMITS FOR THE GENERATOR FROM THE ENVIRONMENTAL QUALITY BOARD (JUNTA DE CALIDAD AMBIENTAL).

H.– THE CONCRETE PAD INDICATED IS TO BE USED ONLY FOR DIMENTIONING PURPOSES REGARDING ITS LENGTH & WIDTH. THE PAD SHALL BE 6" HIGH ABOVE GROUND. IT CORRESPONDS TO THE CONTRACTOR TO PROVIDE (FURNISH AND INSTALL) THE CONCRETE PAD AS WELL AS THE STRUCTURAL DETAILS FOR THE PAD AS PER A LICENSED STRUCTURAL ENGINEER CERTIFIED DRAWINGS AND SPECIFICATIONS.

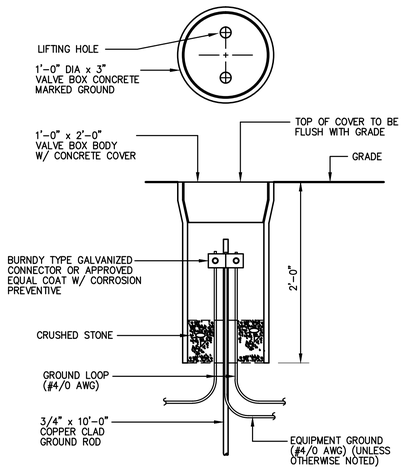
I.– THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A CERTIFICATION BY AN INDEPENDENT TESTING COMPANY THAT THE COMBINATION EMERGENCY GENERATOR AND ENCLOSURE MEET THE REQUIRED NOISE ATTENUATION DESIGN PARAMETER LEVELS WITHOUT REDUCING THE VENTILATION REQUIRED FOR THE CORRECT OPERATION OF THE GENERATOR.



1 ES–4 SCALE: 3/16" = 1'–0"
SUBSTATION AND EMERGENCY GENERATOR AREA BLOW-UP



2 ES–4 NOT TO SCALE
GROUND MAT INSTALLATION DETAIL



3 ES–4 NOT TO SCALE
GROUND WELL DETAIL AND GROUND ROD CONNECTION

LJV DRAWING HISTORY		LJV-DSB	DESIGN STAGE	
PROJECT NO:	23-045		SCHEMATIC DWGS: (SD)	
DRAWING NO:	ES-4		PRELIMINARY DWGS: (PD)	
CAD FILE:	23-045/		DESIGN DEVELOPMENT DWGS: (DD)	
CAD SUBFILE:	23-045-ES04	– R00– BD	ADVANCED DWGS: (AD)	
PLOT DATE:	01.15.24		BID DWGS: (BD)	●
PLOT SCALE:	1:1		CONTRACT DWGS: (CD)	
ISSUE DATE:	01.15.24		RECORD DWGS: (RD)	
REMARKS:	NOT FOR CONSTRUCTION		-	%
RELATED PROJECTS:	----------			

OGPE: 2023-497963-SRI-073862

CERTIFICACIÓN DEL DISEÑADOR / DESIGNER'S CERTIFICATION

1. Certifico que soy ingeniero, agrimensor o arquitecto, licenciado y colegiado en cumplimiento con la Ley 173 de 1988, según enmendada, y estoy autorizado por el dueño del proyecto a presentar estos planos de construcción ante LUMA Energy como operador y administrador del Sistema de Transmisión y Distribución de la AEE. / I certify that I am a licensed and registered engineer, surveyor, or architect (in compliance with Act 173 of 1988, as amended) and authorized by the project or land owner to submit these construction plans to LUMA Energy as operator and administrator of the Transmission and Distribution System of the Puerto Rico Electric Power Authority.
2. Certifico, acorde con las disposiciones de la Ley Núm. 135 de 15 de junio de 1967, según enmendada, conocida como Ley de Certificación de Planos y Proyectos, certifico que preparé el diseño eléctrico de este proyecto en conformidad con los códigos, patrones, normas y reglamentos aprobados por la AEE, la Junta de Planificación y la Oficina de Gerencia de Permisos, Luma Energy y el Manual de Práctica Profesional del CAPR. / In compliance with Act No.135 of July 15, 1967, as amended known as the "Construction Plans or Projects Certification Act", I certify that I prepared the electric design for this project in accordance with the codes, Standards, rules, and regulations approved by LUMA, Puerto Rico Planning Board and Permits Management Office and the CAPR Professional Practice Manual.

FIRMA DEL DISEÑADOR / DESIGNER'S SIGNATURE

LUMA ENDOSO / ENDORSEMENT

Nombre del Proyecto / Project Name: _____
Número de Proyecto / Project Number: 23-2-0772
Carga / Load: (kVA): _____ Revisión / Revision: _____

ENDOSADO POR / ENDORSED BY

1. LUMA endosa el diseño eléctrico mostrado en estos planos de construcción basándose en la certificación someida por el diseñador en cumplimiento con la Ley Núm. 135 del 15 de julio de 1967, según enmendada. / LUMA endorses the electric design shown in these construction plans based on the certification presented by the designer in compliance with Act 135 of July 15, 1967, as amended.
2. LUMA no es responsable por el diseño eléctrico de estos planos de construcción. El diseñador es el único responsable profesional que asume al certificar estos planos. Este endoso no relieva al constructor ni al inspector de obra privado de cumplir con las disposiciones del Código Eléctrico Nacional, Código Eléctrico de Seguridad, códigos, patrones, normas y reglamentos vigentes de LUMA y de otras agencias de gobierno, así como leyes federales y estatales, vigentes al inicio de las obras. / LUMA does no assume responsibility over the certified design. LUMA's endorsement does not relieve the designer from the professional responsibility assumed with the certification of these project's plans. This endorsement relieves neither the builder nor private inspector from compliance with standing dispositions form: National Electric Code, National Electric Safety Code; constructions standards, norms, and regulations from LUMA and other government agencies, as well as federal and state laws, in force at the time of the construction.
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OWNER
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PROPONENT
FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT
The Office of LEONARDO J. VIDAL Consulting Engineers
P.O. Box 363744, San Juan P.R. 00936-3744
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LIC. No. 6092

SEAL

YO, LEONARDO J. VIDAL, LIC. 6092, CERTIFICO QUE SOY EL PROFESIONAL QUE CONFECCIONÓ Y/O DISEÑÓ Y/O PREPARÓ ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIÉN CERTIFICO QUE ENTIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CÓDIGOS DE CONSTRUCCIÓN VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PÚBLICAS CON JURISDICCIÓN. CERTIFICO, ADEMÁS, QUE EN LA PREPARACIÓN DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY NÚM. 14 DEL 8 DE ENERO DE 2004, SEGÚN ENMENDADA, CONOCIDA COMO LEY PARA LA INVERCIÓN POR LA INDUSTRIA PUERTORRIQUEÑA Y CON LA (LEY NÚM. 319 DEL 15 MAYO DE 1938 , SEGÚN ENMENDADA; LEY NÚM. 96 DEL 6 DE JULIO DE 1978, SEGÚN ENMENDADA; SEGÚN APLIQUE). RECONOZCO QUE CUALQUIER DECLARACIÓN FALSA O FALSIFICACIONES DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MÍ, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCIÓN JUDICIAL Y DISCIPLINARIA POR LA OGPE.

PROJECT INFORMATION
EDIFICIO USOS MULTIPLES BARRANQUITAS,PR
PUEBLO PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	01.15.24
REVIEWED BY:	L.V.-P.E.
DRAWN BY:	F.R.
DESIGNED BY:	L.J.V.-P.E.
BRA PROJECT NUMBER:	

SHEET TITLE
EMERGENCY GENERATOR SPECIFICATIONS

SHEET ID
ES-4

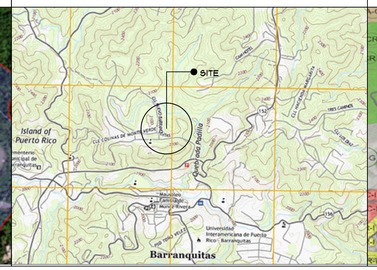
SHEET

DRAWING INDEX

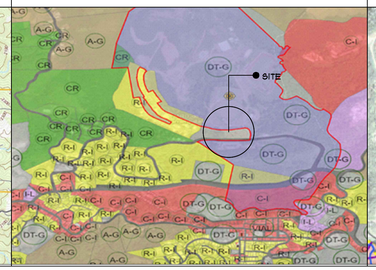
NO.	DRAWING NAME
T-1	TITLE SHEET
OFF-SITE 1.1	SANITARY OFFSITE
OFF-SITE 1.2	SANITARY HYDRAULIC PROFILE STATION 0+000.00 TO STATION 1+135
OFF-SITE 2.1	SANITARY PUMP DETAILS
OFF-SITE 2.2	HYDRAULIC CALCULATION AND DETAILS
SP1.0	POTABLE WATER SITE PLAN
SP1.1	PLUMBING LAYOUT AT SITE PLAN
SP2.1	POTABLE WATER SITE DETAILS
SP2.2	FIRE PROTECTION WATER METER SITE NOTES AND DETAILS
P-4.1	CISTERN PLUMBING LAYOUT
P-4.2	PUMP ROOM DETAILS

LOCATION MAP

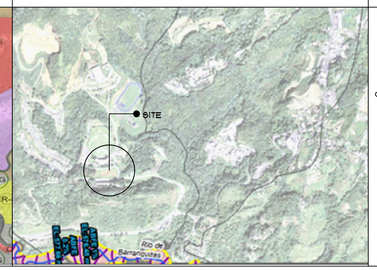
TOPOGRAPHIC MAP



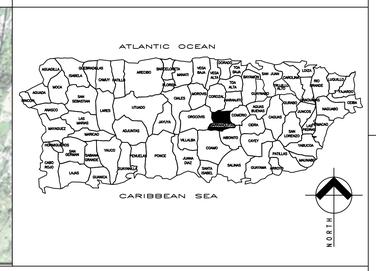
ZONING MAP



FLOOD MAP



PUERTO RICO MAP



PLANOS PARA CONECCION SANITARIA Y AGUA POTABLE DEL CENTRO DE USOS MULTIPLES BARRANQUITAS

BARRANQUITAS, PUERTO RICO

PROJECT INFORMATION

CADASTRE:	247-000-006-38
MUNICIPALITY:	BARRANQUITAS
SECTOR:	-
APROX. AREA:	781719.8097
COORD. X:	2132833.6443
COORD. Y:	239934.3944
FLOOD ZONE:	X (98.4%) , A (1.6%)
FLOOD PANEL:	72000C1160H
CLASSIFICATION:	DT-G
QUALIFICATION:	-

PRASA STAMP

AAA-RE-23-10-0013
OGPE:2023-497963-SRI-073861

FILE NAME	23-078-T-1
PLOT DATE	07/23/24
DWG. #	T-1
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	D.P.D.
ARCHIVO #:	23-078

OWNER

PROPONENT

\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

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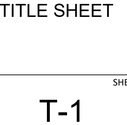
RIO PIEDRAS, P. R. 00925
TEL. (787) 763-5150

JORGE A. TORRES SCANDALI
MECHANICAL ENGINEER, LIC. 10906

JORGE TORRES LOPEZ
MECHANICAL ENGINEER, LIC. 4951

SEAL



NOTA IMPORTANTE:

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PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

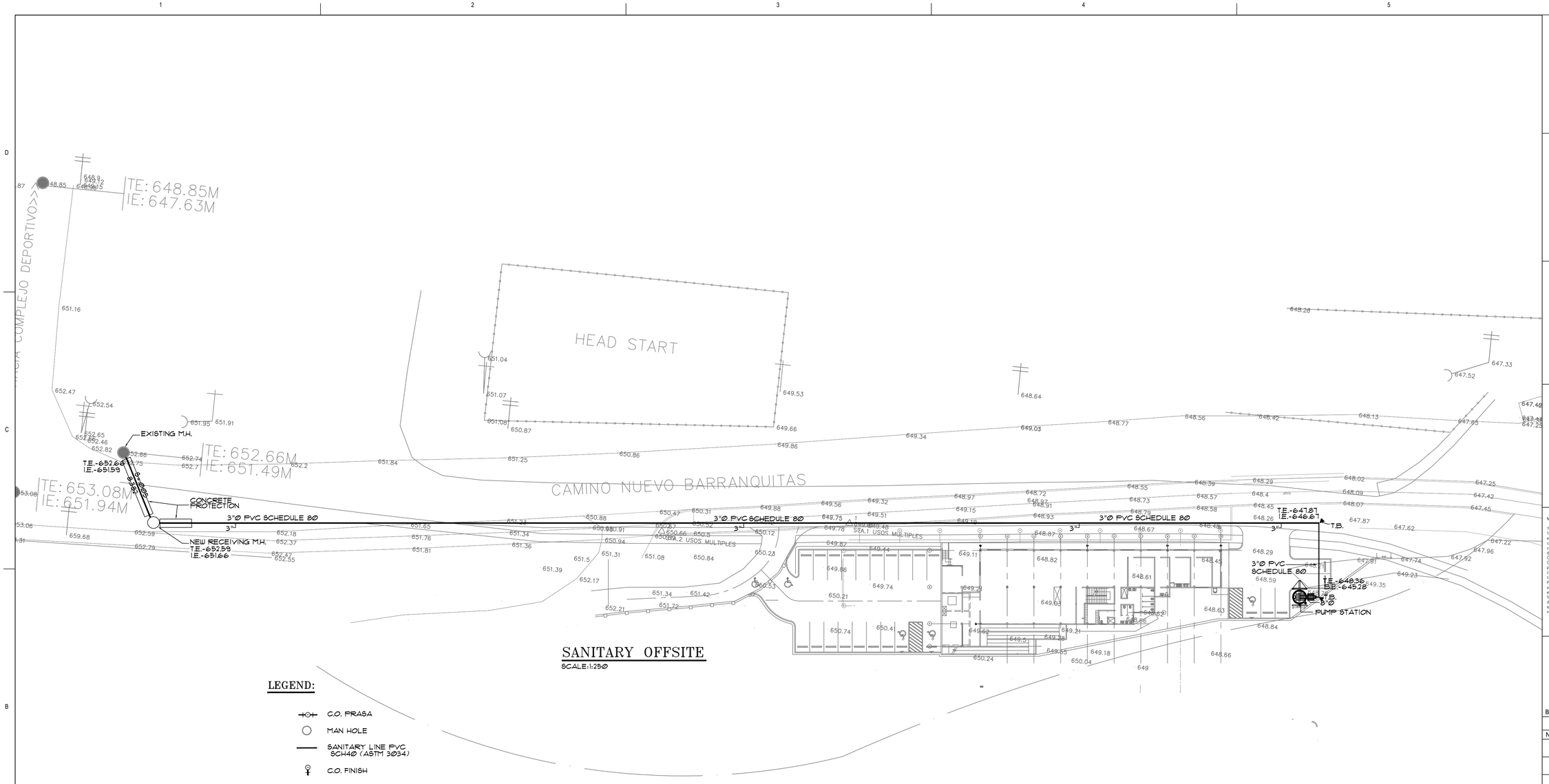
SHEET TITLE

TITLE SHEET

SHEET ID

T-1

SHEET



SANITARY OFFSITE

SCALE:1:250

LEGEND:

- C.O. PRASA
- MAN HOLE
- SANITARY LINE PVC SCH40 (ASTM 3034)
- C.O. FINISH
- TRUST BLOCK

PRASA STAMP

AAA-RE-23-10-0013
0GPE:2023-497963-SRI-073861

FILE NAME	23-078-SAN-OFF1.1
PLOT DATE	10/25/24
DWG. #	SAN-OFF1.1
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	D.P.D.
ARCHIVO #	23-078

OWNER

PROPONENT

'LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

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Ingeniero
Mecánico
Puerto Rico
Fecha de Expiración: 2024.11.19

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PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

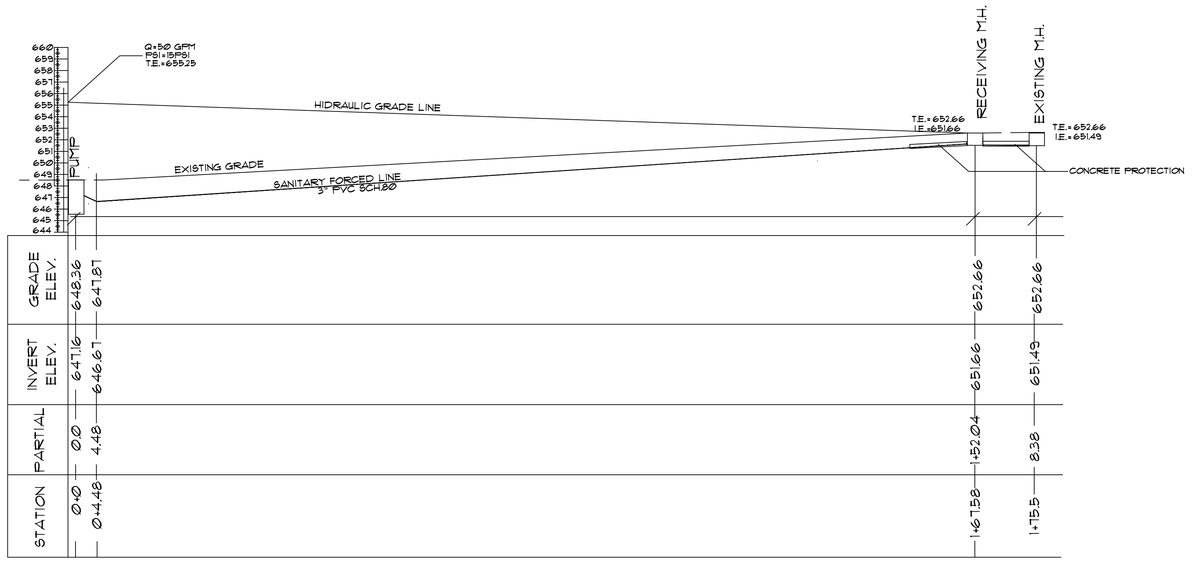
SHEET TITLE

SANITARY OFFSITE

SHEET ID

SAN-OFF1.1

SHEET



SANITARY FORCED LINE PROFILE FROM 0+00.00 TO STA. 1+75.5

SCALE: HOR= 1:500
VERT= 1:250

PRASA STAMP

AAA-RE-23-10-0013
OGPE:2023-497963-SRI-073861

FILE NAME	23-078-SAN-OFF1.2
PLOT DATE	07/23/24
DWG. #	SAN-OFF1.2
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	
ARCHIVO #:	23-078

OWNER

PROPONENT

:\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA
ARCHITECTS AND
ENGINEERS

CONSULTANT

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Puerto Rico
Fecha de Expiración: 2024-11-19

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PROJECT INFORMATION

CENTRO DE USOS
MULTIPLES DE
BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

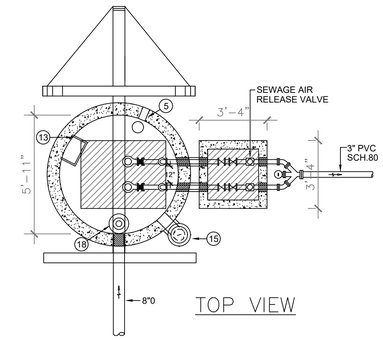
SHEET TITLE

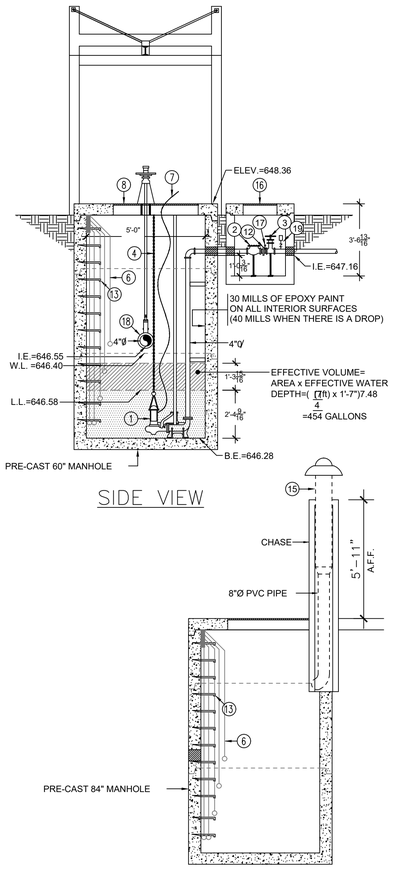
SANITARY
HYDRAULIC PROFILE
STATION 0+00.00 TO
STATION 1+75.5

SHEET ID

SAN-OFF1.2

SHEET





01 PUMPS DETAIL

N.T.S. 1/4"

1. ....
2. 3" DIA. NON-RETURN VALVES, SWING TYPE.
3. 3" DIA. SHUT-OFF GATE VALVES, RESILIENT, NONRISING SYSTEM.
4. LIFTING CHAIN-PROVIDE CLAMPS @ 4'-0"-GALVANIZED CHAIN & SHACKLES.
5. 8" VENTILATION PIPE WITH COPPER INSECT SCREEN.
6. ELECTRODO.
7. POWER CABLES.
8. ACCESS COVER & FRAME W/SLAM LOCK DEVICE STAINLESS STEEL TYPE "S" AS MANUFACTURED BY HALLIDAY PRODUCTS-60"x60".
9. 3" DUCTILE IRON 90° ELBOW.
10. GUIDE BARS (2"0 STD. WALL STAINLESS STEEL #304 SCH. 10)
11. 3" DUCTILE IRON "Y"
12. 3"0 FLANGED COUPLING ADAPTER.
13. LADDER.
15. FAN-PENN FMX 160-1/2 H.P.-1750 RPM TIPSPEED 5040 FPM 2000 CFM @ .25 H20 S.P. EXPLOSSION PROOF CORROSION RESISTANT TYPE WITH ALUM-GLASS COATING.
16. 36"x48" VALVE ACCESS DOOR W/SLAM LOCK DEVICE PROVIDE BAR. BY HALLIDAY PRODUCTS
17. PRESSURE GAUGE (SANITARY) 0-100 PSI.
18. 4" SLUICE GATE.
19. AIR RELEASE VALVE S20SB.

NOTE:

1-ALL HARDWARE SHALL BE S.S., INCLUDING BOLTS, NUTS, WASHERS, EXPANSIONS, DOORSWINGS, LOCKS, ETC. PUMP PIT.

2-PIT LEVEL SHALL BE CONTROLLED BY SETTING LEVEL CONTROL FLOATS.

3-PROVIDE SPARE PUMPS.

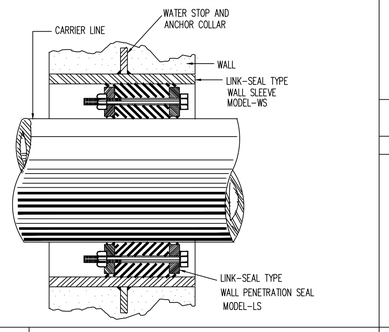
4-PAINT PIT INTERIOR SURFACE WITH 2 COATS OF POLYAMIDE EPOXY.

02 LEGEND

N.T.S.

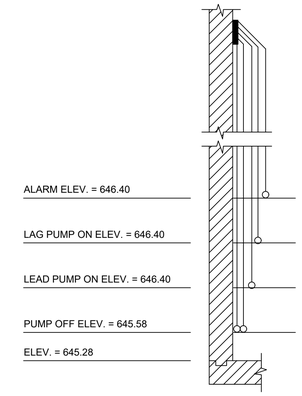
03 CONTROL PANEL SUPPORT

N.T.S.



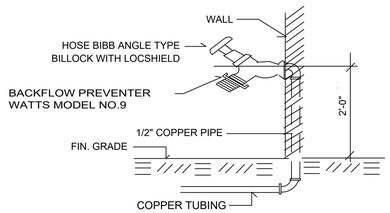
04 PIPE SLEEVE DETAIL

N.T.S.



05 LEVEL REGULATOR DETAIL

N.T.S.

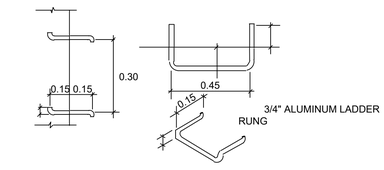


NOTE:

CENTRAL BRASS FIG. # 575-3/4"
LAWN FAUCET WITH HEAVY PATTERN
CAST BRASS BODY WITH FLANGE HOSE
END 3/4"-14 NPS FEMALE

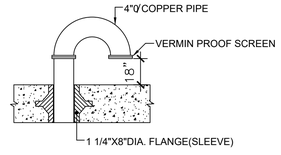
06 HOSE BIBB DETAIL

N.T.S.



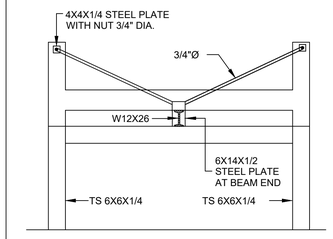
07 LADDER RUNG DETAIL

N.T.S.



08 VENTILATION DETAIL

N.T.S.



SECTION "A-A"

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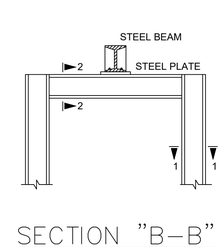

SECTION "B-B"

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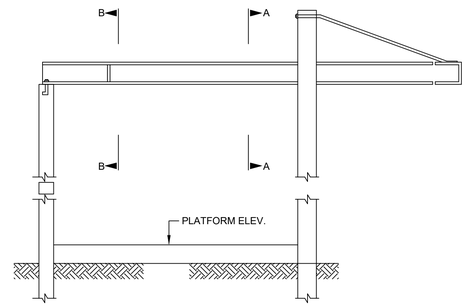
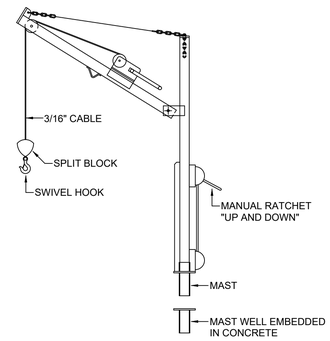


09 STRUCTURE FOR LIFTING PUMP DETAIL

N.T.S.



HOIST MODEL NO.	CAPACITY
MODEL 1052-5	500 LBS.

*AS MANUFACTURER BY WACO

10 REMOVABLE MECHANICAL HOIST DETAIL

N.T.S.

PRASA STAMP

AAA-RE-23-10-0013
OGPE:2023-497963-SRI-073861

FILE NAME	23-078-SAN-OFF2.1
PLOT DATE	07/12/24
DWG. #	SAN-OFF2.1
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	
ARCHIVO #:	23-078

OWNER

PROPONENT

:\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA
ARCHITECTS AND
ENGINEERS

CONSULTANT

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Fecha de Expiración: 2024-11-19

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CENTRO DE USOS
MULTIPLES DE
BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

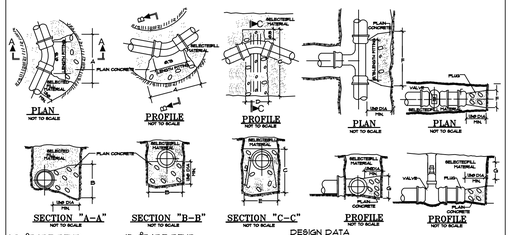
SHEET TITLE

SANITARY PUMP
DETAILS

SHEET ID

SAN-OFF2.1

SHEET



90 GRADE BEND

DIA	C	D
4"	1'-0"	1'-0"
6"	1'-0"	1'-0"
8"	1'-0"	1'-0"
10"	1'-0"	1'-0"
12"	1'-0"	1'-0"
16"	1'-0"	1'-0"
20"	2'-0"	2'-0"
24"	2'-0"	2'-0"

45 GRADE BEND

DIA	C	D	E	CONCRETE VOLUME
4"	2'-0"	2'-0"	4'-0"	1.85	2'-0"
6"	2'-6"	2'-6"	5'-0"	1.85	2'-0"
8"	2'-6"	2'-6"	5'-0"	1.85	2'-0"
10"	2'-6"	2'-6"	7'-0"	3.85	2'-0"
12"	3'-0"	3'-0"	7'-0"	3.85	2'-0"
16"	3'-6"	3'-6"	8'-0"	4.85	2'-0"
20"	4'-0"	4'-0"	10'-0"	4.85	2'-0"
24"	5'-0"	5'-0"	12'-0"	5.81	2'-0"

45 GRADE BEND

DIA	C	D
4"	1'-0"	1'-0"
6"	1'-0"	1'-0"
8"	1'-0"	1'-0"
10"	1'-0"	1'-0"
12"	1'-0"	1'-0"
16"	1'-0"	1'-0"
20"	1'-0"	1'-0"
24"	1'-0"	1'-0"

22 1/2° BEND

DIA	C	D	E	CONCRETE VOLUME
4"	2'-0"	2'-0"	4'-0"	1.85	2'-0"
6"	2'-0"	2'-0"	5'-0"	1.85	2'-0"
8"	2'-0"	2'-0"	5'-0"	1.85	2'-0"
10"	2'-0"	2'-0"	7'-0"	3.85	2'-0"
12"	2'-0"	2'-0"	7'-0"	3.85	2'-0"
16"	3'-0"	3'-0"	8'-0"	4.85	2'-0"
20"	4'-0"	4'-0"	10'-0"	4.85	2'-0"
24"	5'-0"	5'-0"	11'-0"	4.85	4'-0"

22 1/2° BEND

DIA	C	D
4"	1'-0"	1'-0"
6"	1'-0"	1'-0"
8"	1'-0"	1'-0"
10"	1'-0"	1'-0"
12"	1'-0"	1'-0"
16"	1'-0"	1'-0"
20"	1'-0"	1'-0"
24"	1'-0"	1'-0"

11 1/4° BEND

DIA	C	D	E	CONCRETE VOLUME
4"	2'-0"	2'-0"	4'-0"	1.85	2'-0"
6"	2'-0"	2'-0"	5'-0"	1.85	2'-0"
8"	2'-0"	2'-0"	5'-0"	1.85	2'-0"
10"	2'-0"	2'-0"	7'-0"	3.85	2'-0"
12"	2'-0"	2'-0"	7'-0"	3.85	2'-0"
16"	3'-0"	3'-0"	8'-0"	4.85	2'-0"
20"	4'-0"	4'-0"	10'-0"	4.85	2'-0"
24"	5'-0"	5'-0"	11'-0"	4.85	4'-0"

11 1/4° BEND

DIA	C	D
4"	1'-0"	1'-0"
6"	1'-0"	1'-0"
8"	1'-0"	1'-0"
10"	1'-0"	1'-0"
12"	1'-0"	1'-0"
16"	1'-0"	1'-0"
20"	2'-0"	2'-0"
24"	2'-0"	2'-0"

DESIGN DATA

① REINFORCING STEEL. Fc=3,000 P.S.I./Fc=1500 P.S.I. Fs=20,000 P.S.I.
② PRESSURE=150 #WATER IMPACT= 75-225 P.S.I.
③ SOIL PRESSURE=2,000 P.S.F.

NOTES:

① DUCTILE IRON WATER PIPES SHALL BE INSTALLED IN ACCORDANCE WITH AWWA TYPE-2
② THE CONTRACTOR SHALL VERIFY LATERAL SUPPORTING CAPACITY OF TRENCH WALL PRIOR TO CONSTRUCTION OF THRUST BLOCK.
③ SEE AWWA AMERICAN NATIONAL STANDARD.
④ CONCRETE THRUST BLOCKS SHALL BE CONSTRUCTED AT ALL CONNECTING FITTINGS.
⑤ ALL CONNECTING FITTINGS SHALL BE CAST IRON OR DUCTILE IRON WITH MECHANICAL JOINTS.

THRUST BLOCK FOR TEES AND DEAD ENDS

TEES & DEAD ENDS

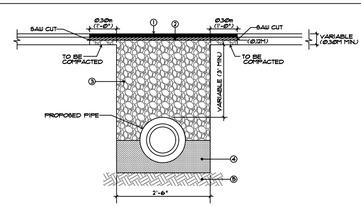
DIA	F	G
4"	2'-0"	2'-0"
6"	2'-0"	2'-0"
8"	2'-0"	2'-0"
10"	2'-0"	2'-0"
12"	2'-0"	2'-0"
16"	3'-0"	3'-0"
20"	4'-0"	4'-0"
24"	5'-0"	5'-0"

THRUST BLOCK FOR WYES

WYES

DIA	H	I
4"	2'-0"	2'-0"
6"	2'-0"	2'-0"
8"	2'-0"	2'-0"
10"	2'-0"	2'-0"
12"	2'-0"	2'-0"
16"	3'-0"	3'-0"
20"	4'-0"	4'-0"
24"	5'-0"	5'-0"

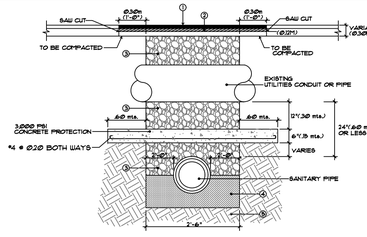
01 THRUST BLOCK DETAIL
N.T.S.



LEGEND:

① Ø.20M HOT PLANT MIX BITUMINOUS CONCRETE PAVEMENT S/TB.Y2) AS PER SPEC. 401 OF THE PUERTO RICO HIGHWAY AND TRANSPORTATION AUTHORITY (PRHTA) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.
② Ø.30M ASPHALT BASE COURSE HOT PLAN MIX BITUMINOUS CONCRETE PAVEMENT, B/TB) AS PER SPEC. 401 (PRHTA)
③ FILLING WILL BE WITH 3/4" COMERCIAL GAVEL THE MUST BE PLACED AND TAMPERED IN LAYERS NO EXCEEDING Ø.45 (1'-6") IN LOOSE THICKNESS. NO BACKFILLING WILL BE ALLOWED.
④ WELL COMPACTED 1/2" DIAMETER DOUN OF CLEAN CRUSHED STONE OR BEDDING SPECIFIED BY DESIGNER.
⑤ EXISTING SOIL.

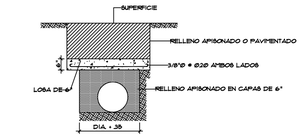
02 TRENCH DETAILS FOR P.V.C. PIPE Ⓐ
N.T.S.



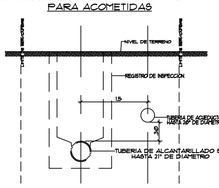
LEGEND:

① Ø.20M HOT PLANT MIX BITUMINOUS CONCRETE PAVEMENT S/TB.Y2) AS PER SPEC. 401 OF THE PUERTO RICO HIGHWAY AND TRANSPORTATION AUTHORITY (PRHTA) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.
② Ø.30M ASPHALT BASE COURSE HOT PLAN MIX BITUMINOUS CONCRETE PAVEMENT, B/TB) AS PER SPEC. 401 (PRHTA)
③ FILLING WILL BE WITH 3/4" COMERCIAL GAVEL THE MUST BE PLACED AND TAMPERED IN LAYERS NO EXCEEDING Ø.45 (1'-6") IN LOOSE THICKNESS. NO BACKFILLING WILL BE ALLOWED.
④ WELL COMPACTED 1/2" DIAMETER DOUN OF CLEAN CRUSHED STONE OR BEDDING SPECIFIED BY DESIGNER.
⑤ EXISTING SOIL.

03 SANITARY PIPE PROTECTION FROM UTILITIES PIPES/CONDUITS
N.T.S.



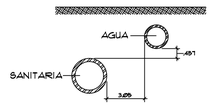
PROTECCION DE HORMIGON PARA TUBERIAS EN PROFUNDIDADES MENORES DE Ø.60M.



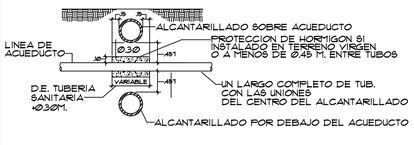
DETALLE DE PROTECCION DE HORMIGON PARA ACOMETIDAS

DETALLE DE ANCHO DE SERVIDUMBRE PARA TUBERIAS DE ACUEDUCTO Y ALCANTARILLADO PARALELAS

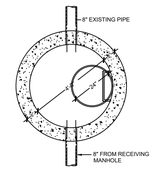
04 DETALLES DE PROTECCION Y SERVIDUMBRE
N.T.S.



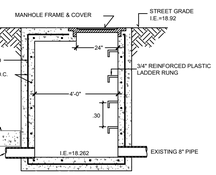
INSTALACION PARALELA



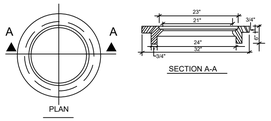
07 INSTALACION EN CRUCE
N.T.S.

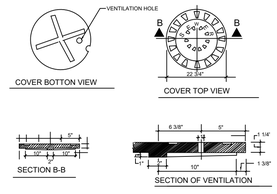


SECTIONAL PLAN

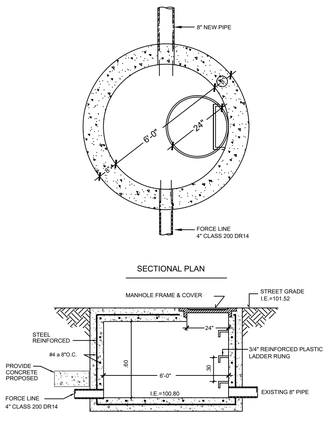


05 CONNETION TO EXISTING MANHOLE
N.T.S.





06 MANHOLE CAST IRON COVER & FRAME DETAIL
N.T.S.



SECTIONAL PLAN

08 RECEIVING / TRANSITION MANHOLE DETAILS
N.T.S.

ITEM NO.	QTY.	DESCRIPTION	UNIT	FIXTURE UNITS	TOTAL
		WATER CLOSET FLUSH TANK			
	12	WATER CLOSET FLUSH VALVE		10.0	120
	10	LAVATORY		2.0	20
	4	SHOWER		4.0	16
		WATER COOLER			
	1	KITCHEN SINK		4.0	4
		LAUNDRY TRAY			
		DISH WASHER			
		WASHING MACHINE			
		URINAL			
		SERVICE SINK			
	1	JANITOR SINK OR BASIN		3.0	3

Subtotal	163
DEMAND FACTOR	100
TOTAL FIX. UNITS	163

DEMAND FACTOR 100 %

09 SYSTEM CURVE DATA FOR C=120
N.T.S.

Tabulated Data for Flow vs Head Curve

Static Head (H) [ft] =	23.22
Existing 4" Equivalent Length (Leq) [ft] =	554.20
Friction Coefficient =	120
Pipe Diameter(d) [in] =	3
Interval =	25

Flow Rate	Flow Rate	Velocity 3" Pipe	"Head Losses" 3" pipe	"Slope" 3" Pipe	"Total Dynamic Head"	"Total Dynamic Head"
gpm	*gpd*	*ft/sec*	*ft.*	*mt/kmt*	*ft.*	*mt*
0	0	0.00	0.00	0.00	23.22	7.08
25	36000	1.14	1.52	2.74	24.74	7.54
50	72000	2.27	5.46	9.86	28.68	8.74
75	108000	3.41	11.57	20.88	34.79	10.60
100	144000	4.54	19.70	35.55	42.92	13.08
125	180000	5.68	29.77	53.71	52.99	16.15
150	216000	6.81	41.71	75.26	64.93	19.79

Tabulated Data for Flow vs Head Curve

Static Head (H) [ft] =	23.22
Existing 4" Equivalent Length (Leq) [ft] =	554.20
Friction Coefficient =	140
Pipe Diameter(d) [in] =	3
Interval =	25

Flow Rate	Flow Rate	CP	"Head Losses" 4" pipe	"Slope" 4" Pipe	"Total Dynamic Head"	"Total Dynamic Head"
gpm	*gpd*	*ft/sec*	*ft.*	*mt/kmt*	*ft.*	*mt*
0	0	0.00	0.00	0.00	23.22	7.08
25	36000	1.14	1.14	2.06	24.36	7.42
50	72000	2.27	4.11	7.41	27.33	8.33
75	108000	3.41	8.70	15.70	31.92	9.73
100	144000	4.54	14.81	26.73	38.03	11.59
125	180000	5.68	22.38	40.38	45.60	13.90
150	216000	6.81	31.36	56.58	54.58	16.64

10 SYSTEM CURVE DATA FOR C=140
N.T.S.

Supply Systems Predominately For Flush Tanks			Supply Systems Predominately For Flushometers		
Load (Water Supply Fixture Units)		Demand (Gallons per Minutes)	Load (Water Supply Fixture Units)		Demand (Gallons per Minutes)
3	3/4"	3			
4		4			
			5	1"	22
6		5	6	1 1/4"	23
7		6	7		24
8		7	8		25
			9		26
10		8	10		27
12		9			
13		10			
15		11	15		31
16		12			
18		13			
20		14	20		35
25		17	25		38
30	3/4"	20	30		41
40		25	40	1 1/4"	47
50		29	50	1 1/2"	51
60	1"	33	60		55
→ 80		39	80		62
100		44	100		68
120	1 1/4"	49	120	1 1/2"	74
140	1 1/2"	53	140	2"	78
160		57	160		83
180		61	180		87
200		65	200		91
225	1 1/2"	75	225		95
250	2"	75	250		100
300		85	300	2"	100
400		105	400	2 1/2"	125
500	2"	125	500		140
750	2 1/2"	170	750	2 1/2"	175
1000		210	1000	3"	218
1250		240	1250		240
1500		270	1500		270
1750	3"	300	1750		300
2000	4"	325	2000	3"	325
2500		380	2500	4"	380
3000		435	3000		435
4000	4"	525	4000		525
5000	6"	600	5000	4"	600
6000		650	6000	6"	650
7000		760	7000		700
8000		730	8000		730
9000		760	9000		760
10,000	6"	790	10,000	6"	790

10 CALCULATION
N.T.S.

COMPUTOS PARA EL FLUJO MAXIMO

PARA ESTIMAR EL FLUJO MAXIMO DE AGUA ESTAMOS USANDO EL METODO EN EL APENDICE E DEL CODIGO INTERNACIONAL DE PLOMERIA DEL 2018. SEGÚN EL CONTEO DE EQUIPOS SANITARIOS EXISTENTES Y LOS FLUJOS POR PIEZA SANITARIA, SEGÚN SE DESCRIBE EN LAS TABLAS I Y II, EL FLUJO MAXIMO PROBABLE ES 39 GPM. SE SELECCIONA UNA BOMBA CON CAPACIDAD DE 50 GPM.

PRASA STAMP

AAA-RE-23-10-0013
OGPE:2023-497963-SRI-073861

OWNER

PROPONENT

:\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

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JORGE TORRES LOPEZ
MECHANICAL ENGINEER, LIC. 4951

SEAL

Jorge Antonio Torres Scandali
Ingeniero
Lic. 10906 PE
Puerto Rico
Fecha de Expiración: 2024-11-19

NOTA IMPORTANTE:

Yo, JORGE A. TORRES SCANDALI, INGENIERO MECANICO, LICENCIA 10906, certifico que soy el profesional que diseñó la MECANICA, en estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estos planos y especificaciones se ha cumplido cabalmente con la disputesta en la Ley 14-2004, según enmendada, conocida como la Ley para la Inversión por la Industria Puertorriqueña y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada; según aplique. Reconozco que cualquier declaración falsa o falsificación de los hechos que se hayo producido por desconocimiento o por negligencia ya sea por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGPe.

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

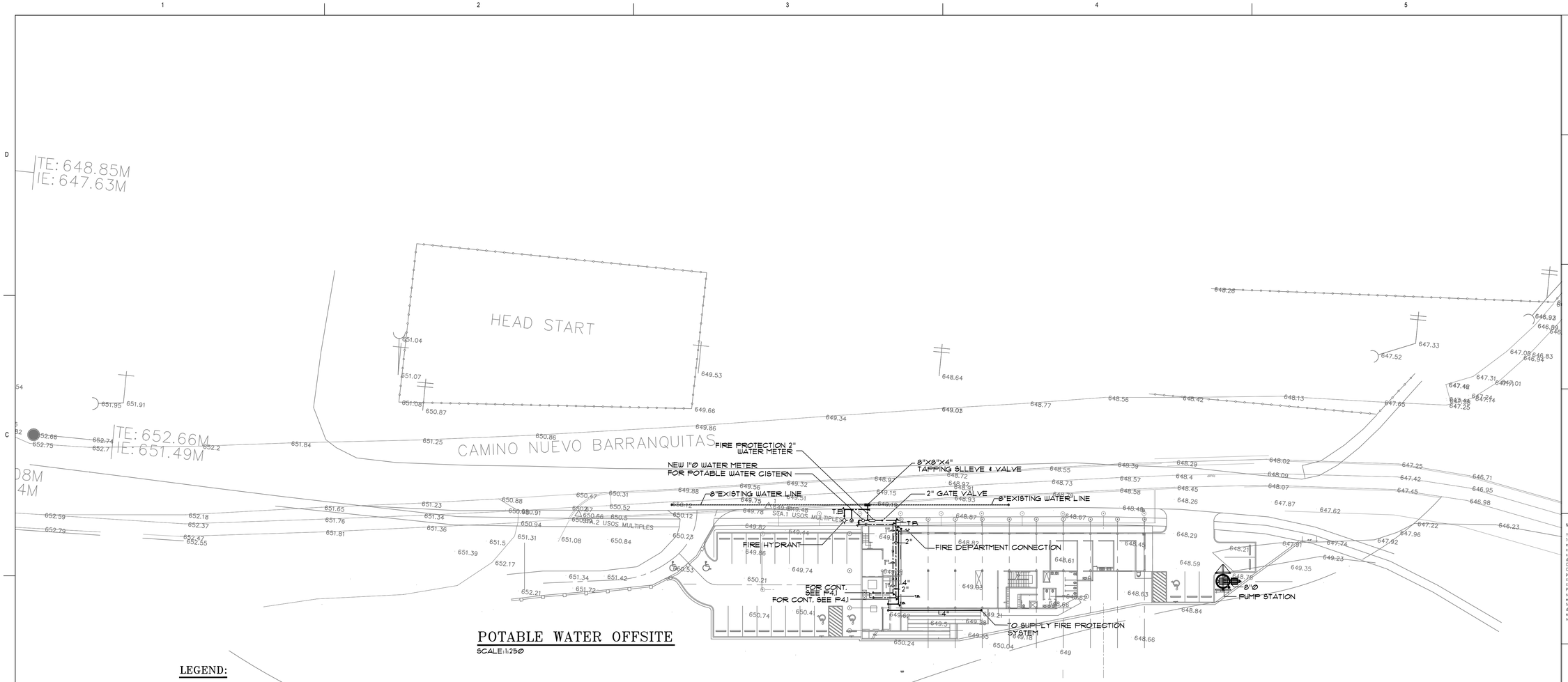
HYDRAULIC CALCULATION AND DETAILS

SHEET ID

SAN-OFF2.2

SHEET

FILE NAME	23-078-SAN-OFF2.2
PLOT DATE	07/15/24
DWG. #	SAN-OFF2.2
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	
ARCHIVO #	23-078



POTABLE WATER OFFSITE

SCALE:1:250

LEGEND:

- TRUST BLOCK
- 2" WATER METER
- TAPPING SLEEVE AND VALVE
- FIRE HYDRANT
- COPPER TYPE K LINE
- PVC
- VENT
- 1" WATER METER
- 8" EXISTING WATER LINE

PRASA STAMP

AAA-RE-23-10-0013
OGPE:2023-497963-SRI-073861

FILE NAME	23-078-SP1.0
PLOT DATE	07/23/24
DWG. #	SP1.0
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	
ARCHIVO #	23-078

OWNER

PROPONENT

'LOGO FIGUEROA.png

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Licencia Núm. 10926
Puerto Rico
Fecha de Expiración: 2024.11.15

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BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

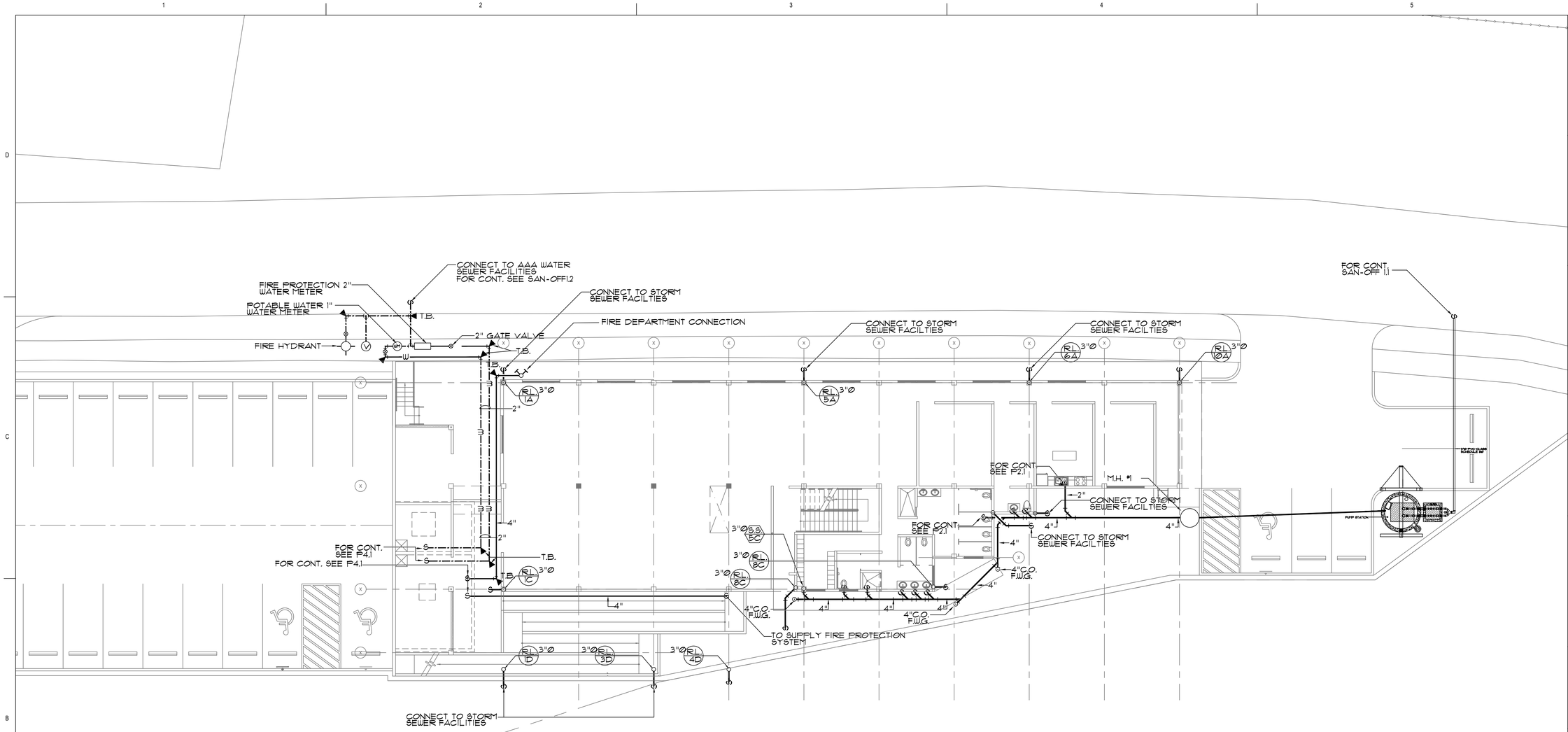
SHEET TITLE

POTABLE WATER SITE PLAN

SHEET ID

SP1.0

SHEET



PLUMBING LAYOUT AT SITE PLAN

SCALE:3/32"=1'-0"

LEGEND:

- C.O. PRASA
- MAN HOLE
- SANITARY LINE PVC SCH40 (ASTM 3034)
- C.O. FINISH
- TRUST BLOCK
- 2" WATER METER
- TAPPING SLEEVE AND VALVE
- FIRE HYDRANT
- COPPER TYPE K LINE
- PVC
- VENT
- 1"Ø WATER METER

PRASA STAMP

AAA-RE-23-10-0013
OGPE:2023-497963-SRI-073861

FILE NAME	23-078-SP1.1
PLOT DATE	10/25/24
DWG. #	SP1.1
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	D.P.D.
ARCHIVO #	23-078

OWNER

PROPONENT

\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

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BARRANQUITAS PUERTO RICO

REVISIONS

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DESIGNED BY:	-
BRA PROJECT NUMBER:	

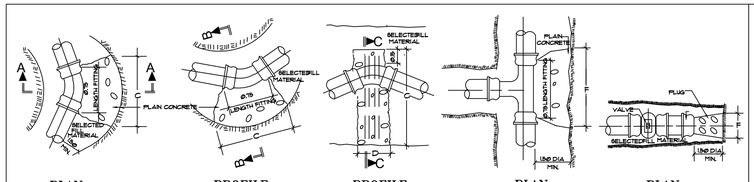
SHEET TITLE

PLUMBING LAYOUT AT SITE PLAN

SHEET ID

SP1.1

SHEET



90° GRADE BEND

DIA.	C	D
4"	3'-0"	3'-0"
6"	3'-0"	3'-0"
8"	4'-0"	4'-0"
10"	5'-0"	5'-0"
12"	6'-0"	6'-0"
16"	7'-0"	7'-0"
20"	8'-0"	8'-0"
24"	10'-0"	10'-0"

45° GRADE BEND

DIA.	C	D
4"	2'-0"	2'-0"
6"	2'-0"	2'-0"
8"	3'-0"	3'-0"
10"	4'-0"	4'-0"
12"	4'-0"	4'-0"
16"	5'-0"	5'-0"
20"	6'-0"	6'-0"
24"	7'-0"	7'-0"

45° GRADE BEND

DIA.	C	D	E	NO.OF BLKNG DIAG.SIDE	LO. FOR.
4"	2'-6"	2'-0"	4'-6"	1 @ 4	2'-0"
6"	3'-6"	2'-6"	5'-0"	1 @ 4	2'-0"
8"	3'-6"	3'-0"	6'-0"	2 @ 4	2'-0"
10"	4'-6"	3'-6"	7'-0"	3 @ 4	2'-0"
12"	4'-6"	3'-6"	10'-0"	3 @ 5	2'-0"
16"	5'-0"	4'-0"	13'-6"	4 @ 6	3'-0"
20"	6'-6"	5'-0"	13'-6"	5 @ 6	3'-0"
24"	7'-6"	6'-0"	13'-6"	5 @ 7	4'-0"

22 1/2° BEND

DIA.	C	D
4"	2'-0"	2'-0"
6"	2'-6"	2'-0"
8"	3'-0"	2'-6"
10"	3'-6"	2'-6"
12"	3'-6"	3'-0"
16"	4'-0"	3'-6"
20"	4'-6"	4'-0"
24"	5'-0"	5'-6"

22 1/2° BEND

DIA.	C	D	E	NO.OF BLKNG DIAG.SIDE	LO. FOR.
4"	2'-0"	2'-0"	4'-6"	1 @ 4	2'-0"
6"	2'-6"	2'-0"	4'-6"	1 @ 4	2'-0"
8"	3'-0"	2'-6"	5'-0"	1 @ 4	2'-0"
10"	3'-6"	2'-6"	7'-6"	2 @ 4	2'-0"
12"	3'-6"	3'-0"	7'-6"	2 @ 4	2'-0"
16"	4'-0"	3'-6"	9'-6"	4 @ 4	2'-0"
20"	4'-6"	4'-0"	10'-6"	4 @ 5	3'-0"
24"	5'-0"	5'-6"	11'-0"	4 @ 6	4'-0"

11 1/4° BEND

DIA.	C	D
4"	1'-0"	1'-0"
6"	1'-6"	1'-6"
8"	2'-0"	2'-0"
10"	3'-0"	3'-0"
12"	3'-0"	3'-0"
16"	4'-0"	4'-0"
20"	4'-0"	4'-0"
24"	5'-0"	5'-0"

11 1/4° BEND

DIA.	C	D	E	NO.OF BLKNG DIAG.SIDE	LO. FOR.
4"	2'-6"	1'-0"	4'-6"	1 @ 4	2'-0"
6"	2'-6"	2'-0"	4'-6"	1 @ 4	2'-0"
8"	2'-6"	2'-0"	4'-6"	1 @ 4	2'-0"
10"	3'-0"	2'-0"	5'-0"	2 @ 4	2'-0"
12"	3'-0"	3'-0"	5'-0"	3 @ 4	3'-0"
16"	3'-6"	3'-6"	6'-0"	4 @ 4	2'-0"
20"	4'-6"	4'-0"	8'-6"	3 @ 5	3'-0"
24"	4'-6"	4'-0"	8'-6"	3 @ 6	3'-0"

DESIGN DATA:

1. REINFORCING STEEL Fc=3,000# P.S.I.Fc=13,000 P.S.I. Fs=20,000 P.S.I.
2. PRESSURE=150 #WATER IMPACT= 75+225 P.S.I.
3. SOIL PRESSURE=2,000 P.S.F.

NOTES:

1. DUCTILE IRON WATER PIPES SHALL BE INSTALLED IN ACCORDANCE WITH AWWA TYPE-2
2. THE CONTRACTOR SHALL VERIFY LATERAL SUPPORTING CAPACITY OF TRENCH WALL PRIOR TO CONSTRUCTION OF THRUST BLOCK.
3. SEE AWWA AMERICAN NATIONAL STANDARD.
4. CONCRETE THRUST BLOCKS SHALL BE CONSTRUCTED AT ALL CONNECTING FITTINGS.
5. ALL CONNECTING FITTINGS SHALL BE CAST IRON OR DUCTILE IRON WITH MECHANICAL JOINTS.

THRUST BLOCK FOR TEES AND DEAD ENDS

TEES & DEAD ENDS

DIA.	F	G
4"	2'-0"	2'-0"
6"	2'-0"	2'-0"
8"	3'-0"	3'-0"
10"	3'-0"	3'-0"
12"	4'-0"	4'-0"
16"	5'-0"	5'-0"
20"	6'-0"	6'-0"
24"	7'-0"	7'-0"

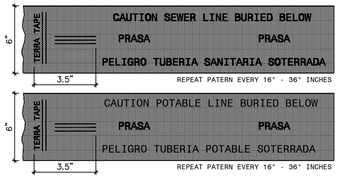
THRUST BLOCK FOR WYES

WYES

DIA.	H	I
4"	2'-0"	2'-0"
6"	2'-0"	2'-0"
8"	3'-0"	3'-0"
10"	3'-0"	3'-0"
12"	4'-0"	4'-0"
16"	5'-0"	5'-0"
20"	6'-0"	6'-0"
24"	7'-0"	7'-0"

01 THRUST BLOCK DETAIL

N.T.S.

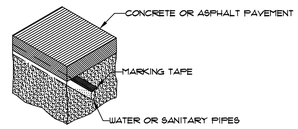


COLOR: GREEN
MATERIAL: ALUMINUM FOIL LAMINATED BETWEEN TWO LAYERS OF INERT PLASTIC FILM
IMPRINT COLOR: BLACK

CUSTOMER: PRASA SAN JUAN, P.R.
PRODUCT CODE: 6" 0521556 3" 0531556

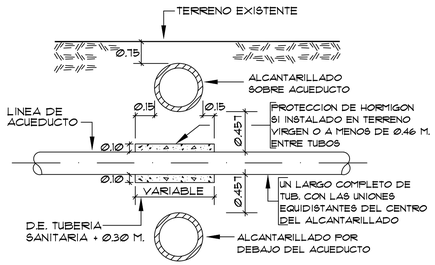
TERRA TAPE

WARNING SIGN
N.T.S.



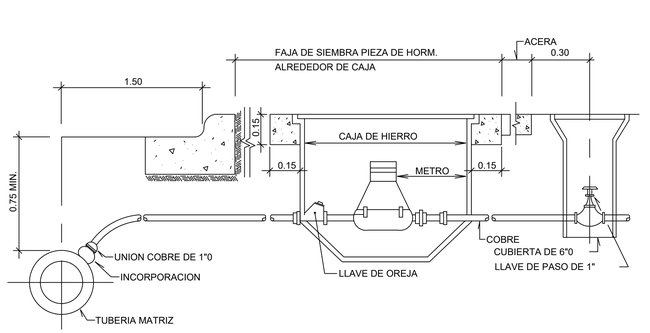
04 MARKING TAPE DETAIL

N.T.S.



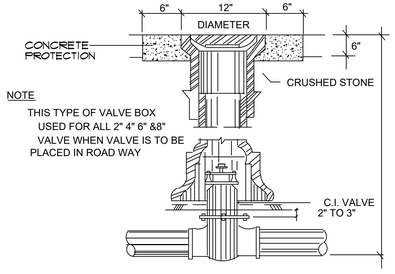
05 INSTALACION EN CRUCE

N.T.S.



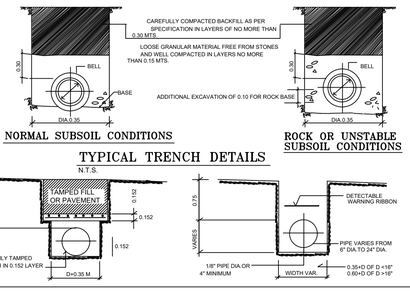
07 INCORPORACION Y CONTADOR DE 1"Ø PARA ACOMETIDA

N.T.S.

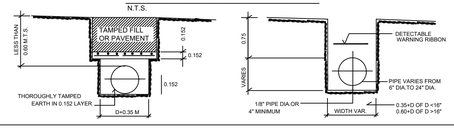


08 GATE VALVE

N.T.S.

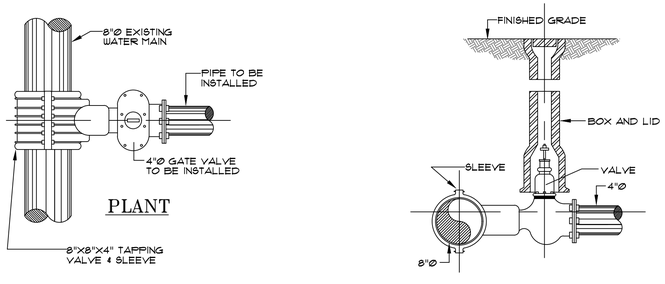


TYPICAL TRENCH DETAILS
N.T.S.



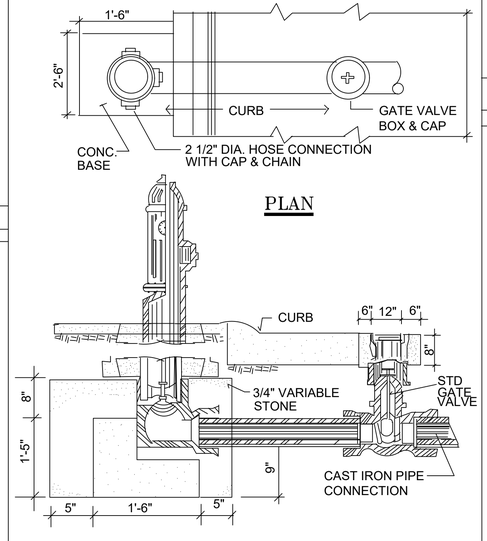
02 TYPICAL DETAIL FOR PIPES STANDARD LAYING CONDITION BEDDED

N.T.S.



03 TAPPING SLEEVE & VALVE

N.T.S.



06 FIRE HYDRANT DETAIL

N.T.S.

PRASA STAMP

AAA–RE–23–10–0013
0GPE:2023–497963–SRI–073861

FILE NAME	23–078–SP2.1
PLOT DATE	07/23/24
DWG. #	SP2.1
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	
ARCHIVO #:	23–078

OWNER

PROPONENT

:\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

JORGE A. TORRES SCANDALI
CONSULTING ENGINEER, PSC
IIII HUMACAO ST, SANTA RITA
RIO PIEDRAS, P. R. 00925
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JORGE A. TORRES SCANDALI
MECHANICAL ENGINEER, LIC. 10906

JORGE TORRES LOPEZ
MECHANICAL ENGINEER, LIC. 4951

SEAL

Jorge Antonio Torres Scandali
Ingeniero
Mecánico
Lic. 10906 PE
Puerto Rico
Fecha de Expiración: 2024-11-19

NOTA IMPORTANTE:

Yo, JORGE A. TORRES SCANDALI, INGENIERO MECANICO, LICENCIA 10906, certifico que soy el profesional que diseñó la MECANICA, en estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estos planos y especificaciones se ha cumplido cabalmente con lo dispuesto en la Ley 14–2004, según enmendada, conocida como la Ley para la Inversión por la Industria Puertorriqueña y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada; según aplique. Reconozco que cualquier declaración falsa o falsificación de los hechos que se haya producido por desconocimiento o por negligencia ya sea por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGPe.

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

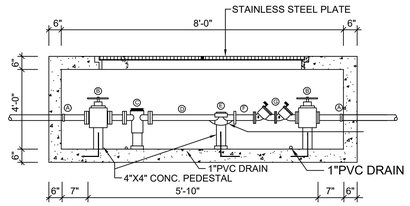
SHEET TITLE

POTABLE WATER SITE DETAILS

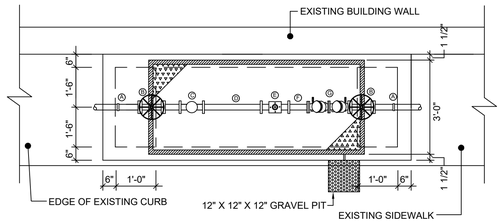
SHEET ID

SP2.1

SHEET



SECTIONAL VIEW
SCALE= 1:20



PLAN VIEW
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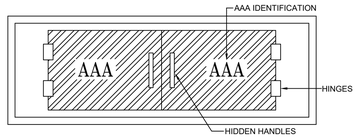
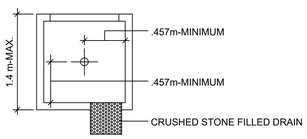


PLAN VIEW
N.T.S.



SECTION
N.T.S.

2"Ø FIRE BOX WATER METER DETAIL

	ITEM	LENGTH
A	BRONZE NIPPLE	6"
B	GATE VALVE, NRS W/HANDLE, FL. & FL.	7"
C	BASKET STRAINER, FL. & FL.	8-1/8"
D	BRASS NIPPLE, FL. & FL.-STABILIZER	10"
E	2"Ø ELECTRONIC WATER METER, FL. & FL. WITH REMOTE READING. SIMILAR TO EVO-Q4 FIRE SERVICE METER-HONEY WELL	17"
F	BRASS NIPPLE, FL. & FL.	6"
G	BACK FLOW PREVENTER ZURN 350	16"

	NOTAS GENERALES
1	TODAS LAS PIEZAS SERAN METALICAS.
2	TODOS LOS TORNILLOS SERAN DE ACERO INOXIDABLE.
3	LOS METALES DEBEN SER COMPATIBLES, DE NO SER ASI SE UTILIZARAN UNIONES (COUPLINGS) DIELECTRICAS.

12 DIAGRAMA PARA CONTADOR PARA SISTEMA DE INCENDIO
N.T.S.

NOTAS PARA SISTEMA DE ACUEDUCTOS

1. LAS CAJAS DE CONTADOR SERAN INSTALADAS FUERA DEL AREA DE RODAJE, ESTACIONAMIENTO O RAMPAS DE ACCESO VEHICULAR.
2. LAS CAJAS DE CONTADOR SERAN INSTALADAS FUERA DEL LIMITE DE PROPIEDAD.
3. LOS CONTADORES DE SERVICIO DE AGUA DEBERAN REGISTRAR EL VOLUMEN DE AGUA EN METROS CUBICOS.
4. LAS CAJAS DE CONTADOR SERAN CONSTRUIDAS CON PIEZAS DE COBRE FLEXIBLE TIPO "K" O BRONCE DE IGUAL CUMPLIMIENTO.
5. LA DISTANCIA ENTRE LA ACOMETIDA DE SERVICIO DE AGUA Y LA ACOMETIDA SANITARIA SERA MAYOR O IGUAL A 5 PIES HORIZONTALES, LA INSTALACION DE AMBAS ACOMETIDAS EN LA MISMA EXCAVACION NO ESTARA PERMITIDA.
6. LAS PIEZAS DE CONEXION A UTILIZARSE PARA LA INSTALACION DE ACOMETIDAS, SERAN DE TIPO "FLARE" O ROSCA EN CASO DE SER DE COBRE FLEXIBLE TIPO "K" O ROSCA EN CASO DE CONSTRUIRSE EN BRONCE, NO SE PERMITIRA CONEXIONES REALIZADAS CON PIEZAS SOLDADAS.
7. SE INSTALARAN VENTOSAS DE AIRE EN TODOS LOS PUNTOS ALTOS DE LA TUBERIA SEGUN SEA NECESARIO, LA INSTALACION DE LAS MISMAS SE DETERMINARA EN EL TERRENO.
8. PARA ACEPTAR FINALMENTE EL PROYECTO EL MISMO DEBERA ESTAR PAVIMENTADO CUANDO SE REALICE LA VALIDACION FINAL.
9. LAS CAJAS DE CONTADORES SERAN INSTALADAS A UNA DISTANCIA RAZONABLE Y SEGURA DE TODO EQUIPO ELECTRICO.
10. TODAS LAS CONEXIONES SERAN REALIZADAS POR UN MAESTRO PLOMERO O BAJO LA SUPERVISION DIRECTA DE ESTE.
11. TODAS LAS ACOMETIDAS DE DIAMETRO SE INSTALARAN CON ABRAZADERA Y LLAVE DE INCORPORACION.
12. SE INSTALARAN METROS DE TUBERIA DE AGUA DE PVC CLASS 200 DR14
13. SE DEBERA INSTALAR UNA CINTA DETECTABLE SOBRE LA TUBERIA DE AGUA, IGUAL O SIMILAR A LA MANUFACTURADA POR LA COMPAÑIA "REEF INDUSTRIES INC.". DICHA CINTA DEBERA ESTAR LOCALIZADA SOBRE Y PARALELA A LA TUBERIA A UNA PROFUNDIDAD DE 0.30 mts. (12") BAJO LA SUPERFICIE DEL TERRENO.
14. DEBERA PROVEERSE UN ACODALAMIENTO ADECUADO ("THRUST BLOCKS") EN HORMIGON CUANDO OCURRA UN CAMBIO DE DIRECCION EN LAS TUBERIAS.
15. SERA NECESARIO REALIZAR UNA EXCAVACION EXPLORATORIA SEGUN LO SOLICITE EL INSPECTOR DE A.A.A. PARA PODER VERIFICAR PROFUNDIDAD Y MATERIALES DE TUBERIA. DEBERA SOLICITAR LA INSPECCION CORRESPONDIENTE ANTES DE PAVIMENTAR LAS CALLES.
16. EL CONTRATISTA O URBANIZADOR SUMINISTRARA EVIDENCIA DEL PAGO DE CONEXION AL SISTEMA PREVIO AL ENDOSO FINAL DEL PROYECTO.
17. TODAS LAS PIEZAS DE CONECXION COMO "TEE", VALVULAS, TAPON, ETC. SERAN DE HIERRO FUNDIDO.
18. LA TUBERIA SE INSTALARA A UNA PROFUNDIDAD DE 0.75 METROS DESDE EL NIVEL DEL TERRENO HASTA LA PARTE SUPERIOR DEL TUBO Y A 1.50 METROS DEL SARDINEL.
19. EL PROPONENTE O DUEÑO DEBERA NOTIFICAR POR ESCRITO A ESTA OFICINA CUANDO COMIENCE LA CONSTRUCCION DE LAS OBRAS HIDRAULICAS.
20. LA A.A.A. SE RESERVA EL DERECHO DE REQUERIR CUALQUIER CAMBIO PERTINENTE QUE POR OMISION O ERROR INVOLUNTARIO NO SE HAYA INCLUIDO EN EL PROYECTO Y A SU JUICIO, SEA NECESARIA PARA EL BUEN FUNCIONAMIENTO DEL SISTEMA DE ACUEDUCTO.
21. EL DUEÑO DEL PROYECTO APORTARA $500.00 DOLARES POR CADA SOLAR O UNIDAD, COMO CARGO POR DERECHO DE CONEXION AL SISTEMA DE ACUEDUCTO.
22. LA TUBERIA DE SERVICIO DE AGUA DEBERA INSTALARSE AL LADO CONTRARIO DE LA TUBERIA ELECTRICA, TELEFONO O CABLE TV.
23. EL PROYECTISTA DEL PROYECTO REALIZARA PRUEBA DE PRESION HIDRAULICA A LA TUBERIA DEL SISTEMA DE DISTRIBUCION DE AGUA A UNA PRESION MINIMA DE 150 PSI O VEZ Y MEDIA LA PRESION REGISTRADA EN EL SISTEMA DE DISTRIBUCION DE AGUA ADYACENTE AL PROYECTO. LA PRUEBA SERA POR UN TIEMPO MINIMO DE 15 MINUTOS Y NO SE DEBERA REGISTRAR PERDIDA DE PRESION MIENTRAS DURE LA MISMA. PERSONAL DE LA OFICINA DE PROYECTOS PUBLICOS Y PRIVADOS DE LA AUTORIDAD DE ACUEDUCTOS Y ALCANTARILLADOS DEBERA ESTAR PRESENTE PARA VALIDAR LA PRUEBA.
24. LOS EQUIPOS PARA REALIZAR LAS PRUEBAS DE PRESION DEBERAN SER PROVISTOS POR EL CONTRATISTA O PLOMERO DEL PROYECTO. PARA PRESIONES DE 150 PSI LA ESCALA DEL MANOMETRO NO DEBE EXCEDER DE 200 PSI.
25. CUALQUIER CAMBIO QUE SEA NECESARIO A LO INDICADO EN ESTE PLANO O EN SU CARTA DE APROBACION, RELACIONADO AL SISTEMA DE AGUA POTABLE, DEBERA SER CONSULTADO Y EVALUADO CON ESTA OFICINA PARA APROBACION, PREVIO A SU CONSTRUCCION Y/O DESARROLLO.

13 NOTAS PARA SISTEMA DE ACUEDUCTOS
N.T.S.

Incluir las siguientes notas generales para contadores individuales para sistemas de control de incendios:

1. Se instalará un niple luego de la válvula de vástago ascendente y antes del metro no menor de 5 veces el diámetro. (Depende de la recomendación del fabricante del metro a escogerse).
2. Los contadores para los sistemas de control de incendios que no sean de turbina o disco no utilizan cedazo.
3. En caso de que el contador escogido sea uno de mecanismo de turbina, se deberá instalar un cedazo del tipo "Fire Rated" aguas arriba del contador.
4. Todo contador para el sistema contra incendios deberá cumplir con las especificaciones de la norma AWWA C703.
5. Después del metro se deberá instar un niple de un largo no menor de 3 veces el diámetro.
6. Despues del niple los contadores para los sistemas de control de incendios deberán tener instalado una válvula de tipo "Fire Control Backflow Prevention AAA-RE-20-13-0025; CAGUAS - BELLA AUTO MALL CAGUAS PROPIEDAD POMPINA INVESTMENTS LLC CARRETERA PR-196, AVENIDA JOSÉ GARRIDO, PARQUE INDUSTRIAL VILLA BLANCA 32 UNIDADES EQUIVALENTES OGPE: 2020-342011-SRI-041634; 2020-342011-SRI-038726 [COMENTARIOS A PLANOS] 21 de abril de 2021 Pág. 5 de 6 Valve" en lugar de un "check valve" convencional después del contador (los contadores de 2" podrán utilizar un "double check valve").
7. Toda válvula de paso de los sistemas de control de incendios tiene que ser expuesta y de tipo vástago ascendente.
8. Se debe instalar Válvula de tipo vástago ascendente o de bola después del "Fire Control Backflow Prevention Valve" o el doublé check valve según aplique. Esto es al final del arreglo aguas abajo.
9. El contador es instalado por el contratista del proyecto. **********
10. Se deberán utilizar utilizan "Couplings dieléctricos" (uniones dieléctricas) en materiales disimilares.
11. Se debe instalar el contador de manera que se pueda leer con facilidad al levantar la tapa.
12. La tapa del contador debe tener los agujeros para levantarla paralelo a los carriles de la tapa.
13. La caja del contador debe tener las dimensiones mínimas requeridas en el detalle estándar.
14. La caja de contador tiene poceto de drenaje adecuado (mínimo 1 pie cuadrado).
15. La caja de contador debe estar localizada fuera del área de rodaje o estacionamiento, Rampas de acceso vehicular o peatonal.
16. La caja de contador debe estar localizada a una distancia razonable y segura de equipo eléctrico (5') (postes de alumbrado, transformadores, varillas de tierra (Ground) etc.).
17. Cualquier cambio que sea necesario a lo indicado en este plano o en su carta de aprobación, relacionado a contadores individuales para sistemas de control de incendios, deberá ser consultado y evaluado con esta oficina para aprobación, previo a su construcción y/o desarrollo.

14 NOTAS PARA CONTADORES PARA SISTEMAS DE CONTROL DE INCENDIOS
N.T.S.

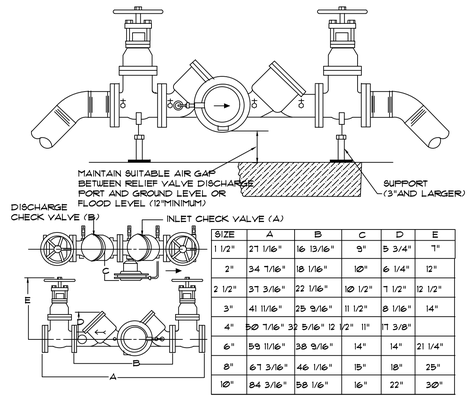
1. LA DISTANCIA ENTRE LA ACOMETIDA DE SERVICIO DE AGUA Y LA ACOMETIDA SANITARIA SERA MAYOR O IGUAL A 5 PIES HORIZONTALES, NO SE PERMITIRA LA INSTALACION DE AMBAS ACOMETIDAS EN LA MISMA EXCAVACION.
2. LOS REGISTROS DE LIMPIEZA SERAN INSTALADOS FUERA DEL AREA DE RODAJE O RAMPAS DE ACCESO VEHICULAR.
3. ESTA AUTORIDAD SERA RESPONSABLE DEL SISTEMA DE ALCANTARILLADO SANITARIO HASTA EL REGISTRO DE INSPECCION SANITARIO ROTULADO C.O. EN EL PLANO, EL DUEÑO DEL PROYECTO SERA RESPONSABLE DE TODA INSTALACION SANITARIA DESPUES DEL REFERIDO REGISTRO.
4. PARA ACEPTAR FINALMENTE EL PROYECTO DEL MISMO DEBERA ESTAR PAVIMENTADO CUANDO SE REALICE LA VALIDACION FINAL.
5. LAS ACOMETIDAS SANITARIAS SERAN INSTALADAS A UNA DISTANCIA RAZONABLE Y SEGURA DE TODO EQUIPO ELECTRICO.
6. LA INFILTRACION O EXFILTRACION DE AGUA EN LAS TUBERIAS NO SERA MAYOR DE 50 GALONES POR PULGADA DE DIAMETRO POR MILLA DE LONGITUD EN 24 HORAS. EL CONTRATISTA PROVEERA LOS MEDIOS SEGUN LO REQUIERA EL INSPECTOR DE A.A.A. PARA LLEVAR A CABO LAS PRUEBAS DE TUBERIAS SANITARIAS.
7. TODA TUBERIA QUE NO LLENE LOS REQUISITOS DE LAS PRUEBAS, SERA REPARADA POR EL CONTRATISTA Y SOMETIDA A PRUEBA HASTA QUE SEA APROVADA DEFINITIVAMENTE POR EL INSPECTOR DE LA A.A.A.
8. LA A.A.A. SE RESERVA EL DERECHO DE REQUERIR CUALQUIER CAMBIO PERTINENTE QUE POR OMISION O ERROR INVOLUNTARIO NO SE HAYA INCLUIDO EN EL PROYECTO Y A SU JUICIO, SEA NECESARIA PARA EL BUEN FUNCIONAMIENTO DEL SISTEMA DE ALCANTARILLADO SANITARIO.
9. TODAS LAS DISTANCIAS ESTAN EXPRESADAS EN METROS, A MENOS QUE SE ESPECIFIQUE OTRA UNIDAD.
10. EL DUEÑO DEL PROYECTO APORTARA $500.00 DOLARES POR CADA SOLAR O UNIDAD, COMO CARGO POR DERECHO DE CONEXION AL SISTEMA DE ALCANTARILLADO SANITARIO.
11. CUALQUIER CAMBIO QUE SEA NECESARIO A LO INDICADO EN ESTE PLANO O EN SU CARTA DE APROBACION, RELACIONADO AL SISTEMA DE ALCANTARILLADO SANITARIO, DEBERA SER CONSULTADO Y EVALUADO CON ESTA OFICINA PARA APROBACION, PREVIO A SU CONSTRUCCION Y/O DESARROLLO.
11. CUALQUIER CAMBIO QUE SEA NECESARIO A LO INDICADO EN ESTE PLANO O EN SU CARTA DE APROBACION, RELACIONADO AL SISTEMA DE ALCANTARILLADO SANITARIO,
12. EN CASO DE QUE LOS REGISTROS DE LIMPIEZA SEAN INSTALADOS EN AREAS DE ZONA DE RODAJE, LOS MISMOS DEBERAN SER PROVISTOS DE SU CAMILLA "HEAVY TRAFFIC".

15 NOTAS PARA SISTEMA DE ALCANTARILLADOS SANITARIO
N.T.S.

NOTAS PARA CONTADORES SISTEMA DOMESTICO

1. Las piezas de conexión expuestas dentro de la caja de contador de 2" para sistema control de incendios a construirse seran de hierro fundido o hierro ductil.
2. Esta Autoridad será responsable del contador general y los contadores individuales, el dueño del proyecto o la asociación de residentes del proyecto serán responsables de la conservación de la tubería entre el contador general y los contadores individuales.
3. Todas las conexiones serán realizadas por un maestro plomero o bajo la supervisión directa de este.
4. El contador para combatir incendio debe instalarse con estabilizador de flujo mecanico o niple de 10 veces el largo de diametro nominal hasta 2".
5. Se requiere la instalación de un Niple de 12" después del metro para servicios hasta 6" de diámetro, para el metro de 8" se requiere niple de 16".
6. Todas las piezas expuestas dentro de la caja deben ser metálicas
7. Se utilizaran "Couplings dieléctricos" cuando se utilicen materiales disimilares.
8. Se instalara un check valve después del niple de que se instale después del contador, ver detalle.
9. La Valvula de control antes del niple.
10. Se debe instalar el contador de manera que se pueda leer el contador con facilidad al levantar la tapa.
11. La tapa debe tener agujeros para levantarla paralelo a los carriles o guías del marco de la tapa.
12. La caja de contador debe ser construida fuera del área de rodaje o estacionamiento, Rampas de acceso vehicular o peatonal.
13. La caja de contador debe ser construida a una distancia razonable y segura de equipo eléctrico (postes de alumbrado, transformadores, varillas de tierra ("ground") etc.).
14. Todas las conexiones serán de tipo flange
15. Cualquier cambio que sea necesario a lo indicado en este plano o en su carta de aprobación, relacionado a contadores generales, deberá ser consultado y evaluado con esta oficina para aprobación, previo a su construcción y/o desarrollo.

16 NOTAS PARA CONTADORES DOMESTICOS
N.T.S.



SIZE	A	B	C	D	E
1 1/2"	27 1/16"	16 13/16"	9"	5 3/4"	7"
2"	34 7/16"	18 1/16"	10"	6 1/4"	12"
2 1/2"	37 3/16"	22 1/16"	10 1/2"	7 1/2"	12 1/2"
3"	41 11/16"	25 9/16"	11 1/2"	8 1/16"	14"
4"	50 7/16"	32 5/16"	12 1/2"	11"	17 3/8"
6"	59 11/16"	38 9/16"	14"	14"	21 1/4"
8"	67 3/16"	46 1/16"	15"	18"	25"
10"	84 3/16"	58 1/16"	16"	22"	30"

17 BACKFLOW PREVENTER VALVE FOR DOMESTIC CISTERN
N.T.S.

PRASA STAMP

AAA-RE-23-10-0013
OGPE:2023-497963-SRI-073861

FILE NAME	23-078-SP2.2
PLOT DATE	07/23/24
DWG. #	SP2.2
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	
ARCHIVO #:	23-078

OWNER

PROPONENT

:\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

JORGE A. TORRES SCANDALI
CONSULTING ENGINEER, PSC
IIII HUMACAO ST. SANTA RITA
RIO PIEDRAS, P. R. 00925
TEL. (787) 763-5180

JORGE A. TORRES SCANDALI
MECHANICAL ENGINEER, LIC. 10906

JORGE TORRES LOPEZ
MECHANICAL ENGINEER, LIC. 4951

SEAL

NOTA IMPORTANTE:

Yo, JORGE A. TORRES SCANDALI, INGENIERO MECANICO, LICENCIA 10906, certifico que soy el profesional que diseñó la MECANICA, en estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estos planos y especificaciones se ha cumplido cabalmente con la disputesto en la Ley 14-2004, según enmendada, conocida como la Ley para la Inversión por la Industria Puertorriqueña y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada; según aplique. Reconozco que cualquier declaración falsa o falsificación de los hechos que se haya producido por desconocimiento o por negligencia ya sea por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGPe.

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

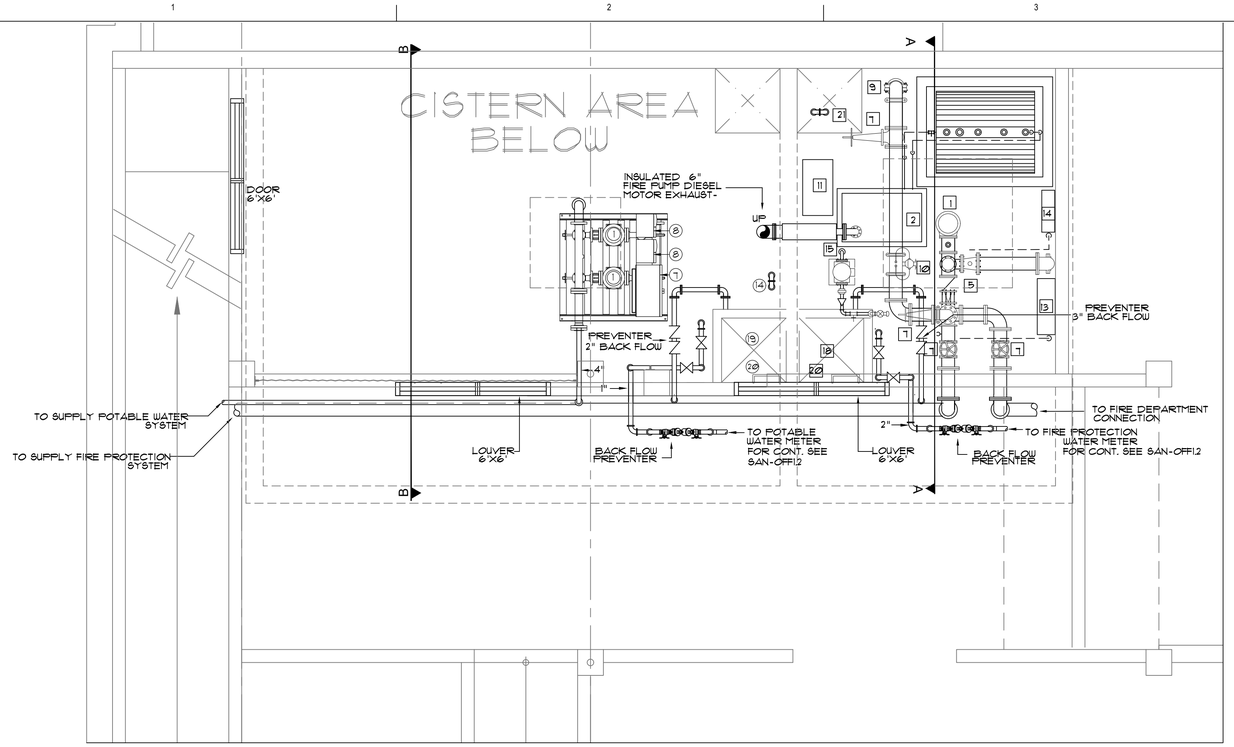
SHEET TITLE

FIRE PROTECTION WATER METER OFFSITE NOTES AND DETAILS

SHEET ID

SP2.2

SHEET



FIRE PROTECTION CISTERN CALCULATION:

(Q = (.10)(1,500)(+100)
DURATION = 30 MINUTES
REQUIRED VOLUME = (30 MIN.)(280 GPM)
= 8,400 GALLONS

DIMENSIONS:
L=10'-0"
W=16'-0"
WATER DEPTH = 6'-10"
AIR GAP = 1'-6"
VOLUME PROVIDED= (10'-0")(16'-0")(6'-10")(7.48)
≅8,168GALLONS

LEGEND: (FIRE PROTECTION)

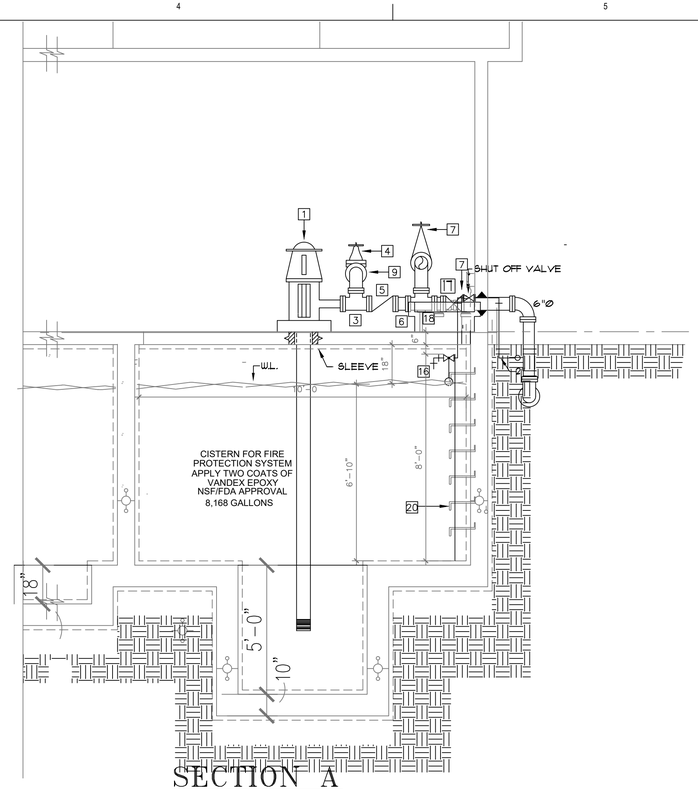
1. FIRE PUMP – 500 GPM @ 100 PSI
2. DIESEL ENGINE DRIVE
3. 6"X4"X6" DISCHARGE TEE
4. 4" MAIN RELIEF VALVE
5. 6" FLANGE CHECK VALVE
6. 6"X6"X6" TEE
7. 6" BUTTERFLY VALVE
8. 6" ELBOW
9. 6" 90 ELBOW
10. FLOW METER
11. DIESEL FUEL TANK–120 GALLONS
12. BATTERIES RACK
13. CONTROL PANEL (ENGINE)
14. CONTROL PANEL (JOCKEY PUMP)
15. JOCKEY PUMP 1 1/2" HP
16. GATE VALVE W/ALARM GONG
17. 4" GATE VALVE
18. MANHOLE(ACCESS HATCHE 30"X30")
19. OVER FLOW 4"
20. LADDER RUNGS (PLASTIC)
21. 4"VENT

LEGEND: POTABLE WATER

1. VMS PUMP MODEL S4V W/MOTOR–(SEE SPECIFICATION)SHP–60 GPM TDH– 5HP
2. CHECK VALVE WAFER STYLE 2"
3. BUTERFLY VALVE 150# LUG 2"
4. SYSTEM PIPING 2"
5. SUCTION HEADER 3"
6. DISCHARGE HEADER 3"
7. SYSTEM POWER AND CONTROL PANEL
8. VARIABLE FREQUENCY DRIVE
9. BLIND FLANGE CLASS 150 3"
10. SYSTEM SKID
11. CHECK VALVE
12. FLEXIBLE CONNECTION
13. DISCHARGE GATE VALVE 2"
14. VENT 4"
15. FLOAT VALVE
16. 2"GATE VALVE
17. PRESSURE RED. VALVE 2"
18. OVER FLOW 4"
19. MANHOLE(ACCESS HATCHE 30"X30")
20. LADDER RUNGS (PLASTIC)

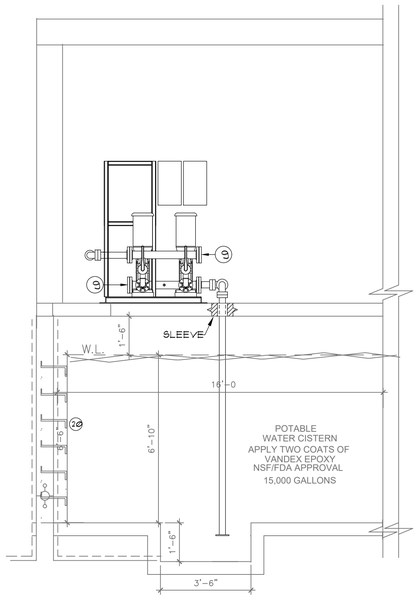
CISTERN PUMP ROOM

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



SECTION A

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



SECTION B

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

PRASA STAMP

AAA–RE–23–10–0013
OGPE:2023–497963–SRI–073861

FILE NAME	23–078–P4.1
PLOT DATE	05/09/24
DWG. #	P1.2
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	D.P.D.
ARCHIVO #	23–078

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

JORGE A. TORRES SCANDALI
CONSULTING ENGINEER, PSC
111 HUMACAO ST. SANTA RITA
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JORGE A. TORRES SCANDALI
MECHANICAL ENGINEER, LIC. 10906

JORGE TORRES LOPEZ
MECHANICAL ENGINEER, LIC. 4951

SEAL

Jorge Antonio Torres Scandali, Ingeniero Licenciado, Lic. 10906 PE, Puerto Rico, Fecha de Expiración: 2024-11-19

NOTA IMPORTANTE:

Yo, JORGE A. TORRES SCANDALI, INGENIERO MECANICO, LICENCIA 10906, certifico que soy el profesional que diseñó la MECANICA, en estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estos planos y especificaciones se ha cumplido cabalmente con lo dispuesto en la Ley 14–2004, según enmendada, conocida como la Ley para la Inversión por la Industria Puertorriqueña y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada, según aplique. Reconozco que cualquier declaración falsa o falsificación de los hechos que se haya producido por desconocimiento o por negligencia yo sea por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGPe.

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

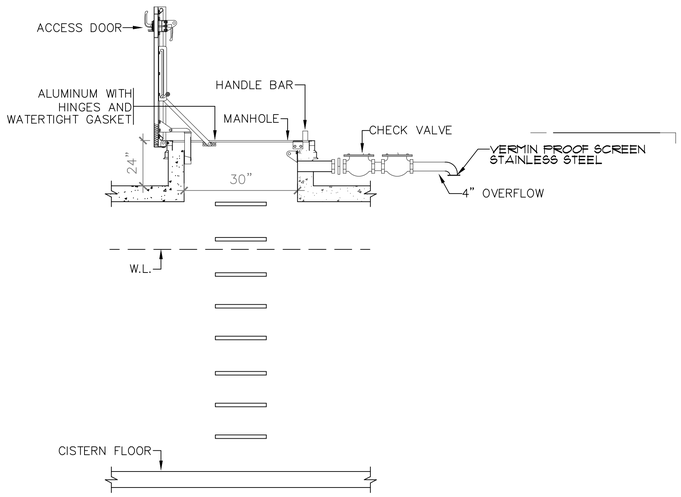
SHEET TITLE

CISTERN PLUMBING LAYOUT

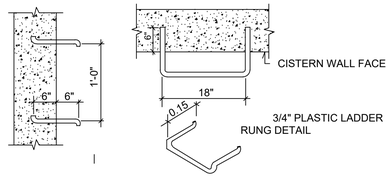
SHEET ID

P4.1

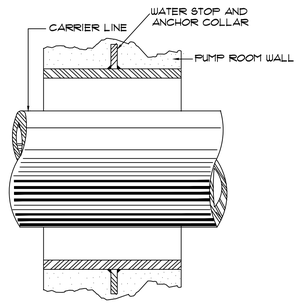
SHEET



MANHOLE DETAIL
N.T.S.



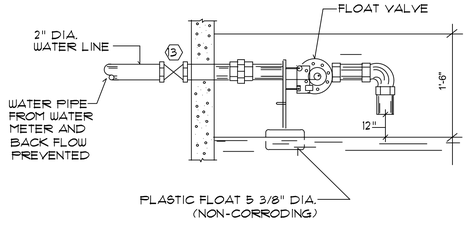
LADDER RUNG DETAIL
N.T.S.



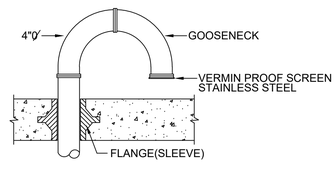
PIPE SLEEVE DETAIL
N.T.S.

ELECTRODE MOUNTING DETAIL DOMESTIC CISTERN
N.T.S.

ELECTRODE MOUNTING DETAIL (FIRE PROTECTION CISTERN)
N.T.S.



FLOAT VALVE DETAIL
N.T.S.



CISTERN VENTILATION DETAIL
N.T.S.

PRASA STAMP

AAA-RE-23-10-0013
0GPE:2023-497963-SRI-073861

FILE NAME	23-078-P4.2
PLOT DATE	07/23/24
DWG. #	P4.2
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	D.P.D.
ARCHIVO #	23-078

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

JORGE A. TORRES SCANDALI
CONSULTING ENGINEER, PSC
1111 HUMACAO ST. SANTA RITA
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JORGE A. TORRES SCANDALI
MECHANICAL ENGINEER, LIC. 12826

JORGE TORRES LOPEZ
MECHANICAL ENGINEER, LIC. 4951

SEAL

Jorge Antonio Torres Scandali
Ingeniero Licenciado
Lic. 10906 PE
Puerto Rico
Fecha de Expiración: 2024-11-19

NOTA IMPORTANTE:

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PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

PUMP ROOM DETAILS

SHEET ID

P4.2

SHEET

NOTES:

1– ALL DISTANCES ARE EXPRESSED IN THE METRIC SYSTEM.
2– THE CONTRACTOR SHALL MATCH EXISTING STREET ELEVATIONS.
3– THE CONTRACTOR SHALL ESTABLISH BOUNDARY LINES ACCORDING TO THE SURVEY PLAN AND STREET LAYOUT BEFORE COMMENCING THE EARTHWORK.
4– THE CONTRACTOR WILL REPAIR ANY DAMAGE TO EXISTING PAVEMENTS, SIDEWALKS OR CURBS WHICH OCCUR DURING THE CONSTRUCTION PERIOD.
5– EXISTING STREET SHALL BE KEPT IN THE EXISTING CONDITION FOUND BEFORE THE CONSTRUCTION BEGINS. ANY DAMAGE DONE DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR WITHOUT COST TO THE OWNER.
6– CONSTRUCT HANDICAPPED RAMPS WHERE INDICATED BY THE LEGEND SYMBOL.
7– THE CONTRACTOR SHALL ESTABLISH ALL NEW LOT BOUNDARY POINTS.
8– THE CONTRACTOR SHALL INFORM THE INSPECTOR OF ANY DISCREPANCIES IN MEASUREMENTS DURING THE STREETS AND LOTS LAYOUT.

LEGEND:

——·——·——	STREET CENTER LINE
———	BOUNDARY LINE
— – — – —	LOT LINE
▨	5.00 METERS WIDE BUFFER ZONE DEPARTMENT OF NATURAL RESOURCES
0+00.000	STREET STATION
N 0–00'–00" E	BEARING
△	SURVEY CONTROL POINT
Ⓐ	LOT NUMBER
	HANDICAPPED RAMP
△	ANGLE
R	RADIUS
T	TANGENT
E	EXTERNAL
L	ARC LENGTH

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

EHA ENGINEERING, PSC

SEAL

CERTIFICACIÓN:
YO, EDGARDO HERNANDEZ ALVARADO, LIC. NO. 13930, CERTIFICO QUE SOY EL PROFESIONAL QUE DISEÑO ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS, TAMBIÉN, CERTIFICO QUE ENTIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CÓDIGOS DE CONSTRUCCIÓN VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PÚBLICAS CON JURISDICCIÓN. CERTIFICO, ADEMÁS, QUE EN LA PREPARACIÓN DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY NÚM. 14 DE 8 DE ENERO DE 2004, SEGÚN ENMENDADA, CONOCIDA COMO LA "LEY PARA LA INVERSIÓN POR LA INDUSTRIA PUERTORRIQUEÑA" Y CON LA [LEY NÚM. 319 DE 15 DE MAYO DE 1938, SEGÚN ENMENDADA; LEY NÚM. 96 DE 6 DE JULIO DE 1978, SEGÚN ENMENDADA; SEGÚN APLIQUE]. RECONOZCO QUE CUALQUIER DECLARACIÓN FALSA O FALSIFICACIÓN DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MÍ, MIS REGLAMENTO CONJUNTO 2019 | 23 AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCIÓN JUDICIAL Y DISCIPLINARIA POR LA OOPE.

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	4/15/24
REVIEWED BY:	EHA
DRAWN BY:	SBT
DESIGNED BY:	
BRA PROJECT NUMBER:	

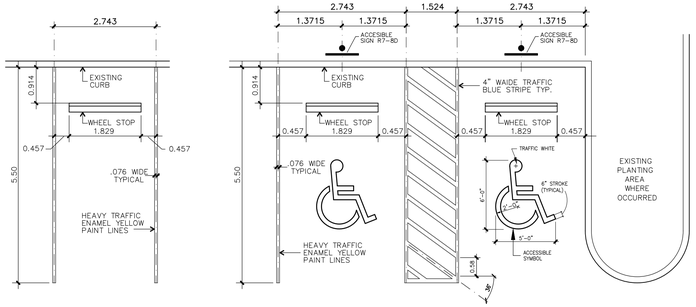
SHEET TITLE

PROPOSED LAYOUT PLAN

SHEET ID

SI-4.0

SHEET



TYPICAL PARKING SPACE DETAIL

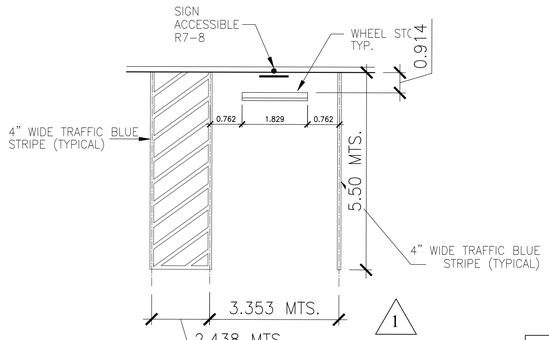
NOTE:

1. THE SUPPLIER SELECTED BY THE CONTRACTOR SHALL PROVIDE MODEL AND MANUFACTURER, OF ALL ACCESSORIES AND PAINTS.

NEW ACCESSIBLE PARKING SPACE DETAIL

NOTE:

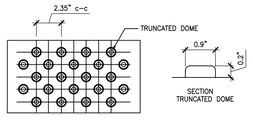
1. THE SUPPLIER SELECTED BY THE CONTRACTOR SHALL PROVIDE MODEL AND MANUFACTURER, OF ALL ACCESSORIES AND PAINTS.



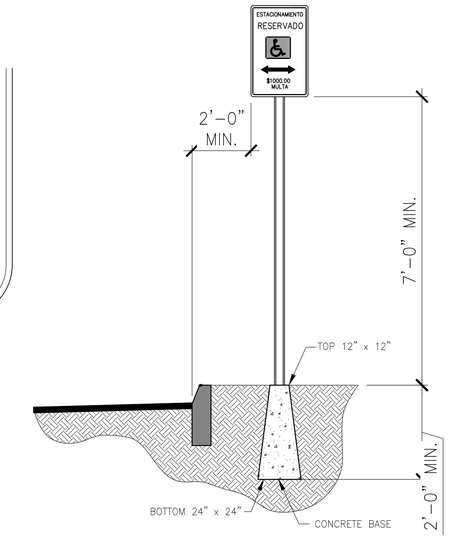
NEW VAN ACCESSIBLE PARKINGS

NOTE:

1. THE SUPPLIER SELECTED BY THE CONTRACTOR SHALL PROVIDE MODEL AND MANUFACTURER, OF ALL ACCESSORIES AND PAINTS.



DETECTABLE WARNING FIELD WITH TRUNCATED DOMES

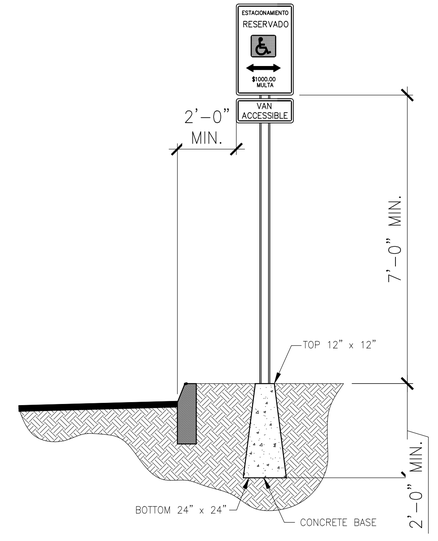


ACCESSIBLE PARKING SIGN R7-8D

AT ALL ACCESSIBLE PARKINGS

NOTE:

1. THE SUPPLIER SELECTED BY THE CONTRACTOR SHALL PROVIDE MODEL AND MANUFACTURER, OF ALL ACCESSORIES AND PAINTS.



VAN ACCESSIBLE PARKING SIGN R7-8

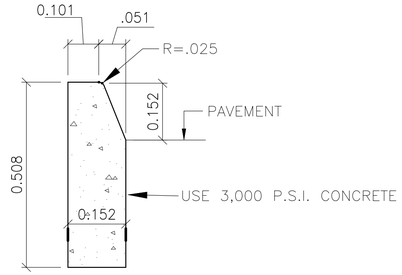
AT ALL ACCESSIBLE PARKINGS

NOTE:

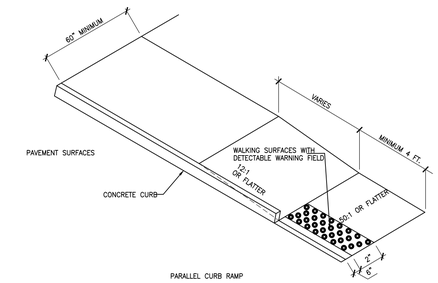
1. THE SUPPLIER SELECTED BY THE CONTRACTOR SHALL PROVIDE MODEL AND MANUFACTURER, OF ALL ACCESSORIES AND PAINTS.

NOTES:

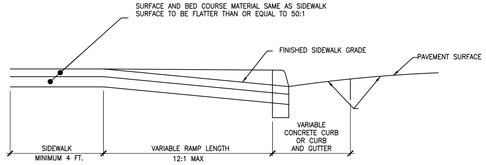
1. THE MAXIMUM CROSS SLOPES OF RAMPS MUST NOT EXCEED 2% IN ANY DIRECTION.
2. USE A COARSE BROOM FINISH RUNNING PERPENDICULAR TO THE SLOPE TO CREATE A SLIP RESISTANT SURFACE ON CONCRETE RAMP SURFACES, EXCLUSIVE OF THE DETECTABLE WARNING FIELDS.
3. CONSTRUCT CURB RAMP PERPENDICULAR TO THE CURB. AVOID SKEWING THE RAMP FACE.
4. CONSTRUCT RAMP TRANSITIONS BETWEEN WALKS, GUTTERS, OR STREET THAT ARE FLUSH AND FREE OF ABRUPT VERTICAL CHANGES NOT TO EXCEED 2.5 INCHES.
5. LOCATE DRAINAGE INLETS AND MANHOLES OUTSIDE OF RAMP WALKING SURFACES OR LANDINGS.
6. LOCATE DETECTABLE WARNING FIELD 6 INCHES BEHIND BACK OF CURB.
7. ALL EXISTING CONCRETE CURBS SHALL BE CLEANED WITH PRESSURE WASHER, AND REPAIRED BEFORE BE PAINTED.



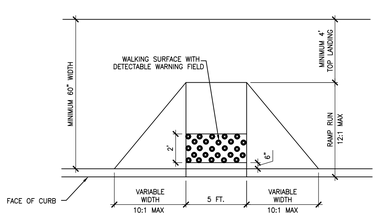
6" HIGH CONCRETE CURB CONSTRUCT IF NECESSARY



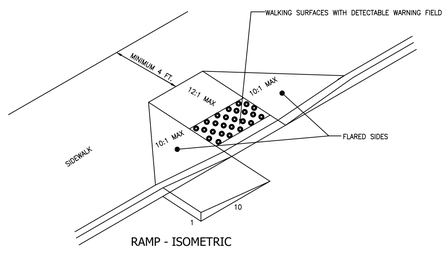
PARALLEL CURB RAMP



RAMP - TYPICAL SECTION



PERPENDICULAR CURB RAMP

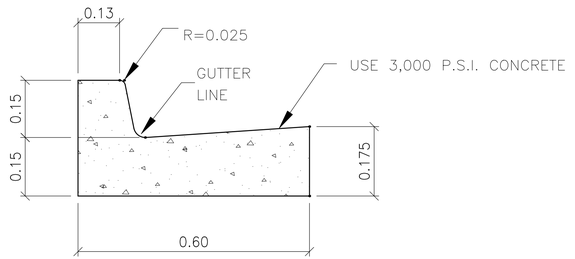


RAMP - ISOMETRIC

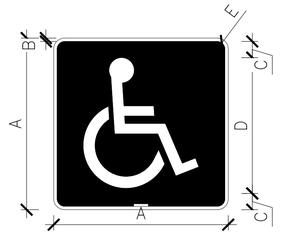
TYPICAL ACCESSIBLE RAMP DETAILS

NOTE:

1. THE SUPPLIER SELECTED BY THE CONTRACTOR SHALL PROVIDE MODEL AND MANUFACTURER, OF ALL ACCESSORIES AND PAINTS.



CURB AND GUTTER CONSTRUCT IF NECESSARY



D9-6

SEÑAL	DIMENSIONES (PULG.)				
	A	B	C	D	E
MINIMO & NORMAL	24	1/2	3	18	1-1/2
ESPECIAL	30	3/4	3-3/4	22-1/2	1-7/8

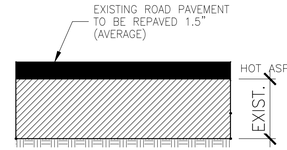
COLORES
LEYENDA – BLANCO (REFL.)
FONDO – AZUL (REFL.)

HANDICAPPED STREET SIGN

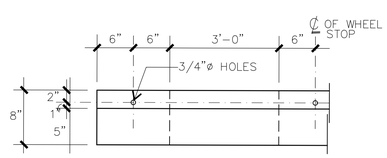
~~AT ALL HANDICAPPED PARKINGS~~

NOTE:

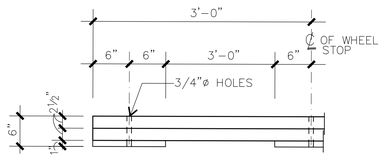
1. THE SUPPLIER SELECTED BY THE CONTRACTOR SHALL PROVIDE MODEL AND MANUFACTURER, OF ALL ACCESSORIES AND PAINTS.



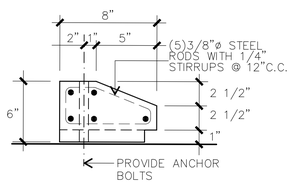
RESURFACING PAVEMENT



PARTIAL TOP VIEW



PARTIAL SIDE VIEW



SECTION

TYPICAL WHEEL STOP DETAIL

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

EHA ENGINEERING, PSC

SEAL

CERTIFICACIÓN:
YO, EDGARDO HERNANDEZ ALVARADO, LIC. NO. 13930, CERTIFICO QUE SOY EL PROFESIONAL QUE DISEÑO ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIEN, CERTIFICO QUE ENTIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CÓDIGOS DE CONSTRUCCIÓN VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PÚBLICAS CON JURISDICCIÓN. CERTIFICO, ADEMÁS, QUE EN LA PREPARACIÓN DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY NÚM. 14 DE 8 DE ENERO DE 2004, SEGÚN ENMENDADA, CONOCIDA COMO LA "LEY PARA LA INVERSIÓN POR LA INDUSTRIA PUERTORRIQUEÑA" Y CON LA [LEY NÚM. 319 DE 15 DE MAYO DE 1938, SEGÚN ENMENDADA; LEY NÚM. 96 DE 6 DE JULIO DE 1978, SEGÚN ENMENDADA; SEGÚN APLIQUE]. RECONOZCO QUE CUALQUIER DECLARACIÓN FALSA O FALSIFICACIÓN DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MI, MIS REGLAMENTO CONJUNTO 2019 | 23 AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCIÓN JUDICIAL Y DISCIPLINARIA POR LA OGPE.

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	4/15/24
REVIEWED BY:	EHA
DRAWN BY:	SBT
DESIGNED BY:	
BRA PROJECT NUMBER:	

SHEET TITLE

PROPOSED LAYOUT PLAN TYP. DETAILS

SHEET ID

SI-4.1

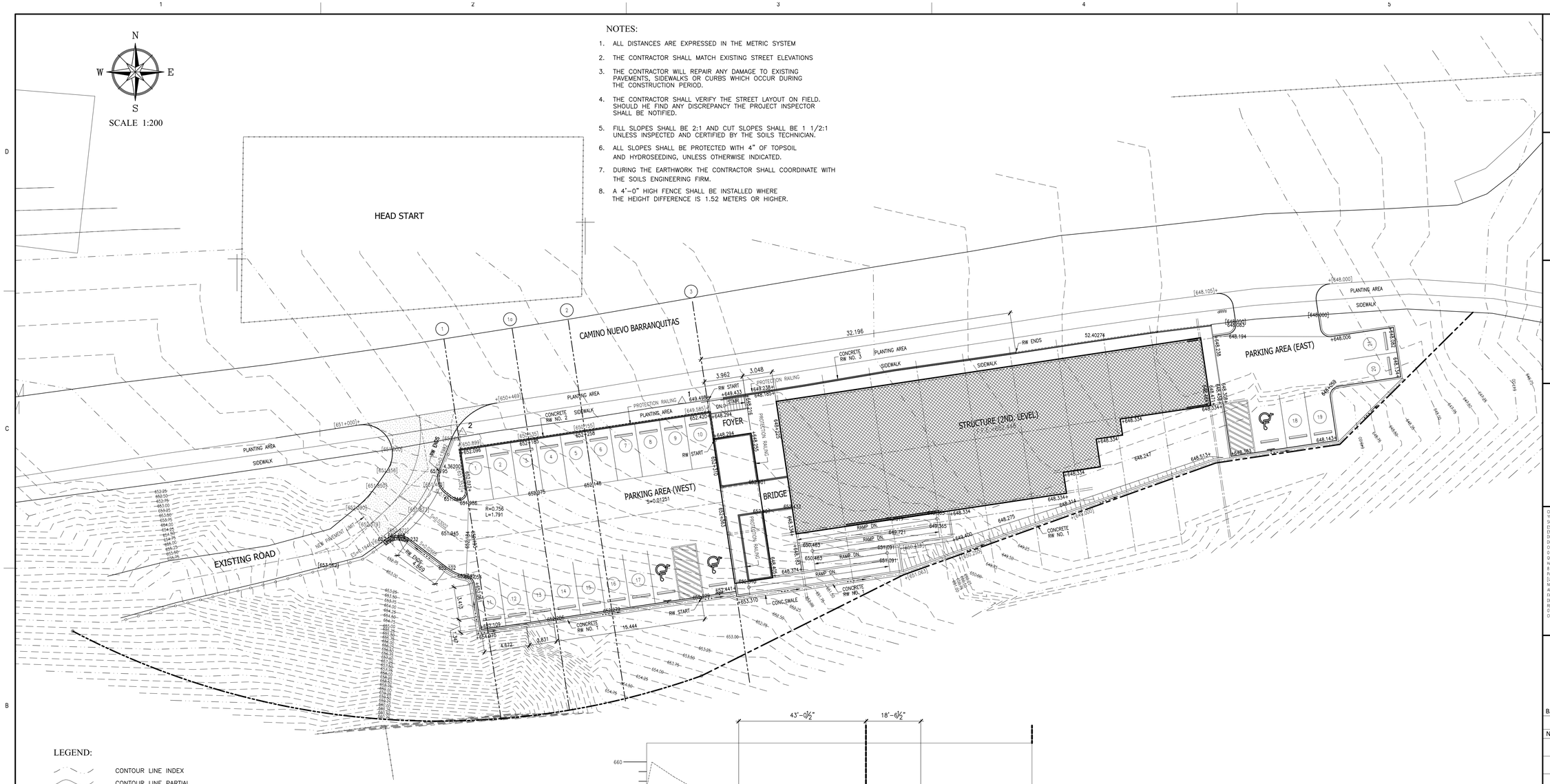
SHEET

N
W E
S

SCALE 1:200

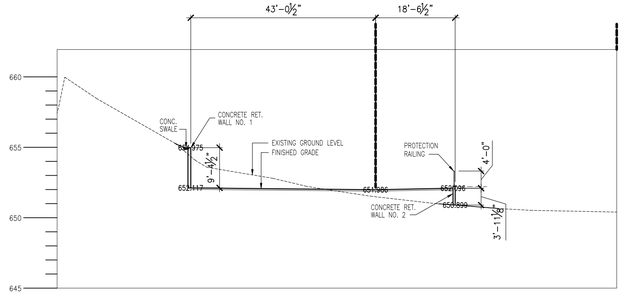
NOTES:

1. ALL DISTANCES ARE EXPRESSED IN THE METRIC SYSTEM
2. THE CONTRACTOR SHALL MATCH EXISTING STREET ELEVATIONS
3. THE CONTRACTOR WILL REPAIR ANY DAMAGE TO EXISTING PAVEMENTS, SIDEWALKS OR CURBS WHICH OCCUR DURING THE CONSTRUCTION PERIOD.
4. THE CONTRACTOR SHALL VERIFY THE STREET LAYOUT ON FIELD. SHOULD HE FIND ANY DISCREPANCY THE PROJECT INSPECTOR SHALL BE NOTIFIED.
5. FILL SLOPES SHALL BE 2:1 AND CUT SLOPES SHALL BE 1 1/2:1 UNLESS INSPECTED AND CERTIFIED BY THE SOILS TECHNICIAN.
6. ALL SLOPES SHALL BE PROTECTED WITH 4" OF TOPSOIL AND HYDROSEEDING, UNLESS OTHERWISE INDICATED.
7. DURING THE EARTHWORK THE CONTRACTOR SHALL COORDINATE WITH THE SOILS ENGINEERING FIRM.
8. A 4'-0" HIGH FENCE SHALL BE INSTALLED WHERE THE HEIGHT DIFFERENCE IS 1.52 METERS OR HIGHER.



LEGEND:

- CONTOUR LINE INDEX
- CONTOUR LINE PARTIAL
- STREET CENTER LINE
- BOUNDARY LINE
- LOT LINE
- LOW WALL
- SLOPE (SEE NOTES)
- 00.00 FINAL ELEVATION
- [100.00] EXISTING ELEVATION
- F.F.E. FINISH FLOOR ELEVATION
- CONCRETE GUTTER
- 6'-0" CHAIN LINK FENCE
- 3'-6" PROTECTION FENCE
- GUARD RAIL
- SURVEY CONTROL POINT
- SWALE
- VERTICAL CURVE



SITE SECTION NO. 1

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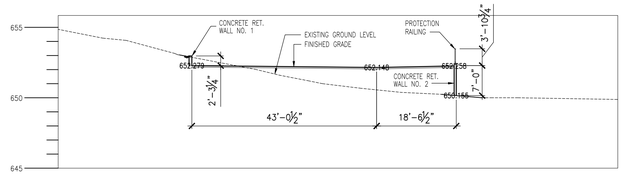
VERTICAL SCALE=1:200.00



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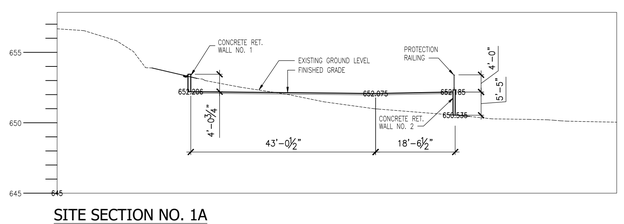

SITE SECTION NO. 1A

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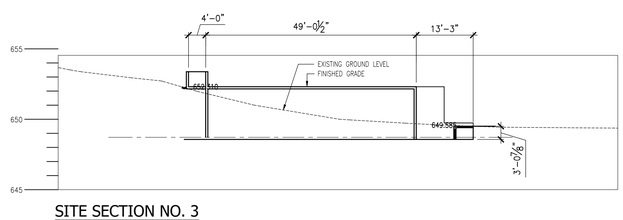


SITE SECTION NO. 3

HORIZONTAL SCALE=1:200.00
VERTICAL SCALE=1:200.00

OWNER

PROPONENT

\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

EHA ENGINEERING, PSC

SEAL

CERTIFICACIÓN:
YO, ISDARIO HERNANDEZ ALVARADO, LIC. NO. 13930, CERTIFICO QUE SOY EL PROFESIONAL QUE DISEÑO ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS, TAMBIEN, CERTIFICO QUE ENTIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CÓDIGOS DE CONSTRUCCIÓN VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PÚBLICAS CON JURISDICCIÓN. CERTIFICO, ADEMÁS, QUE EN LA PREPARACIÓN DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY NÚM. 14 DE 8 DE ENERO DE 2004, SEGÚN ENMENDADA, CONOCIDA COMO LA "LEY PARA LA INVERSIÓN POR LA INDUSTRIA PUERTORRIQUEÑA" Y CON LA [LEY NUM. 319 DE 15 DE MAYO DE 1938, SEGÚN ENMENDADA] LEY NUM. 96 DE 6 DE JULIO DE 1978, SEGÚN ENMENDADA, SEGÚN APLIQUE]. RECONOZCO QUE CUALQUIER DECLARACIÓN FALSA O FALSIFICACIÓN DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MÍ, MIS REGLAMENTO CONJUNTO 2019 | 23 AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCIÓN JUDICIAL Y DISCIPLINARIA POR LA OGPE.

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	4/15/24
REVIEWED BY:	EHA
DRAWN BY:	SBT
DESIGNED BY:	
BRA PROJECT NUMBER:	

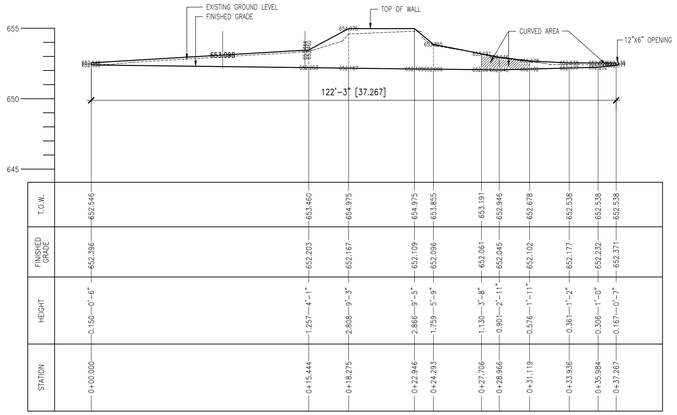
SHEET TITLE

PROPOSED GRADING PLAN

SHEET ID

SI-5.0

SHEET



RETAINING WALL NO. 1

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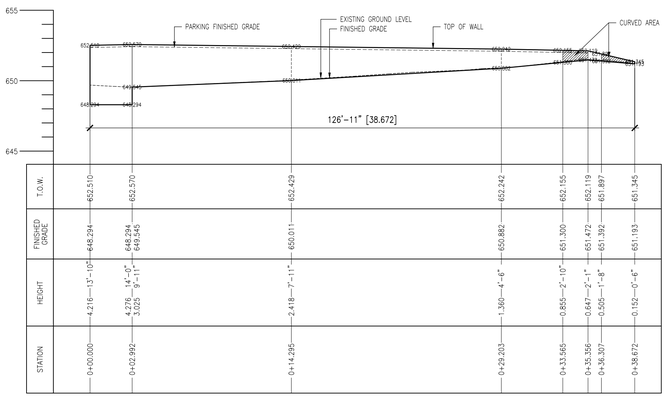

RETAINING WALL NO. 2

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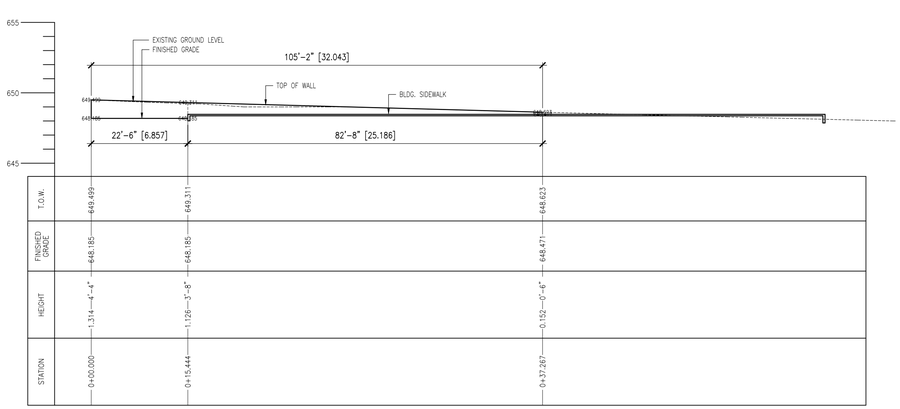

RETAINING WALL NO. 3

HORIZONTAL SCALE=1:200.00
VERTICAL SCALE=1:200.00

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

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PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	4/15/24
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DESIGNED BY:	
BRA PROJECT NUMBER:	

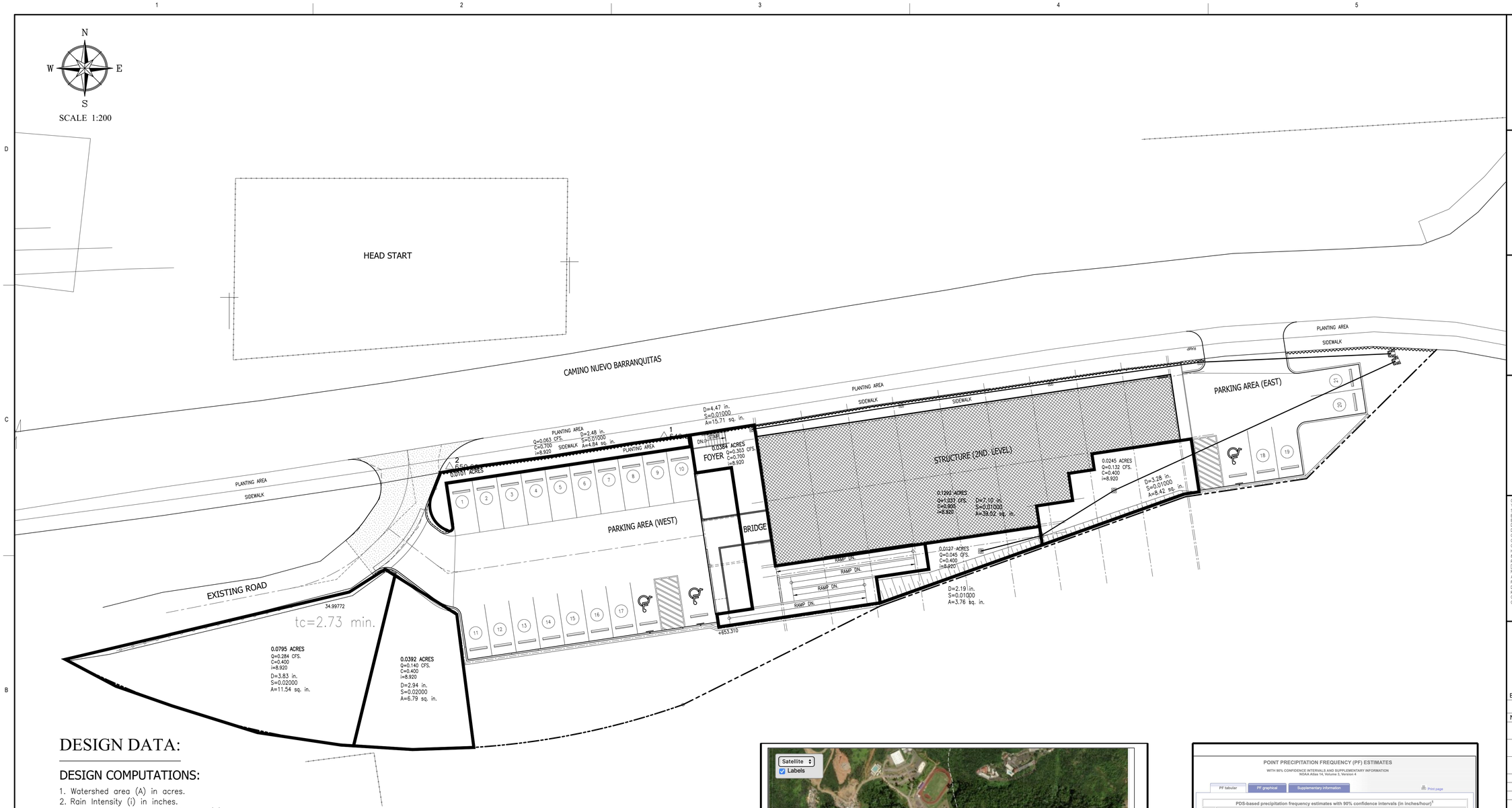
SHEET TITLE

PROPOSED GRADING SECTIONS

SHEET ID

SI-5.1

SHEET



DESIGN DATA:

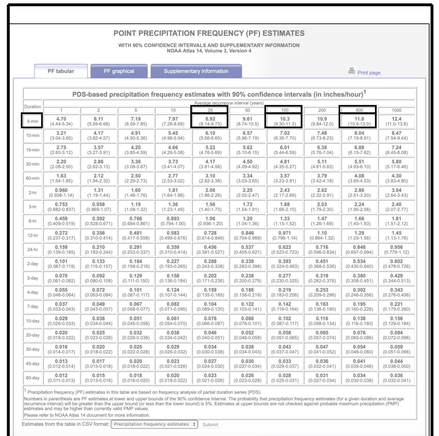
DESIGN COMPUTATIONS:

1. Watershed area (A) in acres.
2. Rain Intensity (i) in inches.
3. Rational Method Runoff Coefficient (C).
4. For PVC pipes, the friction coefficient shall be 0.011.

DESIGN NOTES:

1. Rational Method was used Q=CiA, from "Normas de diseño para Sistemas de Alcantarillado Pluvial de la Junta de Planificación de PR."
2. The Average Recurrence Interval was obtained from Annex no. 2 of the "Normas de Diseño", Intermediate Intensity Commercial Area Zone (Ci) and less than 150 acres lot area. The value of 10, however, the minimum Average Recurrence Interval for the design of Storm Water System shall be 25 years.
3. The value of Runoff Coefficient (C) was obtained from Annex I. For a Commercial Intermediate Intensity (Ci), Slope of 1 to 3 percent the value is (between 0.70 y 0.95), 0.85. This value is an average value for asphalt surfaces and lawns surfaces.
4. The average duration was obtained from the Annex no. 5 of the "Normas de Diseño". The value for asphalt surfaces and lawns surfaces is 5 minutes. (7.42)
5. Rain intensity (i) was obtained from NOAA 'National Oceanic Atmospheric Administration", Atlas no. 14 (Volume 3, Version 4). For a Average Recurrence Interval of 25 years, and duration of 5 minutes, the rain intensity is 8.92 inches.
6. Tc (Time of concentration from) = 2.73 minutes.

NOOA MAP



POINT PRECIPITATION FREQUENCY (PF) ESTIMATES

WITH 90% CONFIDENCE INTERVALS AND SUPPLEMENTARY INFORMATION
NOAA Atlas 14, Volume 3, Version 4

PF tabular | PF graphical | Supplementary information | Print page

PDS-based precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	1	2	5	10	25	50	100	200	500	1000
5-min	4.70 (4.44-5.04)	6.11 (5.84-6.66)	7.19 (6.87-7.85)	7.97 (7.58-8.80)	8.92 (8.42-10.00)	9.61 (9.04-10.90)	10.3 (9.62-12.00)	10.9 (9.84-12.72)	11.8 (10.50-13.97)	12.4 (11.0-14.8)
10-min	3.21 (3.04-3.45)	4.17 (3.82-4.77)	4.91 (4.56-5.58)	5.45 (4.96-6.34)	6.10 (5.44-7.26)	6.57 (5.86-7.93)	7.02 (6.20-8.70)	7.46 (6.73-9.29)	8.04 (6.99-9.91)	8.47 (7.56-10.44)
15-min	2.75 (2.60-2.95)	3.57 (3.27-3.91)	4.20 (3.90-4.78)	4.66 (4.25-5.43)	5.22 (4.65-6.21)	5.62 (5.02-6.79)	6.01 (5.30-7.45)	6.38 (5.76-7.94)	6.88 (5.97-8.47)	7.24 (6.45-8.93)
30-min	2.20 (2.08-2.36)	2.86 (2.62-3.13)	3.36 (3.12-3.82)	3.73 (3.41-4.35)	4.17 (3.71-4.96)	4.50 (4.02-5.43)	4.81 (4.24-5.97)	5.11 (4.61-6.36)	5.51 (4.78-6.78)	5.80 (5.17-7.15)
60-min	1.63 (1.54-1.75)	2.12 (1.94-2.32)	2.50 (2.29-2.73)	2.77 (2.53-3.23)	3.10 (2.82-3.69)	3.34 (3.03-4.03)	3.57 (3.23-4.43)	3.79 (3.43-4.72)	4.09 (3.69-5.03)	4.30 (3.83-5.30)
2-hr	0.960 (0.908-1.04)	1.31 (1.19-1.44)	1.66 (1.48-1.76)	1.81 (1.64-1.98)	2.06 (1.86-2.26)	2.25 (2.02-2.47)	2.43 (2.17-2.66)	2.62 (2.33-2.91)	2.86 (2.53-3.20)	3.04 (2.64-3.45)
3-hr	0.753 (0.662-0.837)	0.958 (0.869-1.07)	1.19 (1.06-1.32)	1.36 (1.23-1.48)	1.56 (1.40-1.73)	1.72 (1.54-1.91)	1.88 (1.68-2.10)	2.03 (1.79-2.30)	2.24 (1.95-2.56)	2.40 (2.07-2.77)
6-hr	0.459 (0.409-0.519)	0.592 (0.539-0.671)	0.766 (0.684-0.861)	0.893 (0.794-1.00)	1.06 (0.936-1.20)	1.20 (1.04-1.36)	1.33 (1.15-1.52)	1.47 (1.26-1.69)	1.66 (1.40-1.93)	1.81 (1.51-2.12)
12-hr	0.272 (0.237-0.317)	0.356 (0.310-0.416)	0.461 (0.417-0.558)	0.583 (0.499-0.676)	0.728 (0.614-0.848)	0.846 (0.704-0.989)	0.971 (0.796-1.14)	1.10 (0.894-1.32)	1.29 (1.03-1.56)	1.45 (1.13-1.76)
24-hr	0.159 (0.139-0.185)	0.210 (0.183-0.244)	0.291 (0.253-0.337)	0.359 (0.310-0.416)	0.456 (0.391-0.527)	0.537 (0.455-0.621)	0.623 (0.522-0.723)	0.716 (0.596-0.834)	0.848 (0.697-0.994)	0.956 (0.776-1.12)
2-day	0.101 (0.087-0.119)	0.133 (0.115-0.157)	0.184 (0.158-0.216)	0.227 (0.195-0.265)	0.288 (0.243-0.336)	0.339 (0.283-0.398)	0.393 (0.324-0.463)	0.451 (0.368-0.536)	0.534 (0.430-0.640)	0.602 (0.479-0.726)
3-day	0.070 (0.061-0.082)	0.092 (0.080-0.109)	0.129 (0.111-0.150)	0.158 (0.136-0.184)	0.202 (0.171-0.236)	0.238 (0.200-0.279)	0.277 (0.229-0.325)	0.319 (0.262-0.378)	0.380 (0.308-0.451)	0.429 (0.344-0.513)
4-day	0.055 (0.048-0.064)	0.072 (0.063-0.084)	0.101 (0.087-0.117)	0.124 (0.107-0.144)	0.159 (0.135-0.185)	0.188 (0.158-0.219)	0.219 (0.180-0.256)	0.253 (0.206-0.299)	0.302 (0.246-0.356)	0.343 (0.276-0.406)
7-day	0.037 (0.033-0.043)	0.049 (0.043-0.057)	0.067 (0.058-0.077)	0.082 (0.071-0.095)	0.104 (0.089-0.120)	0.122 (0.103-0.141)	0.142 (0.118-0.166)	0.163 (0.135-0.193)	0.195 (0.160-0.228)	0.221 (0.179-0.260)
10-day	0.029 (0.026-0.033)	0.038 (0.034-0.044)	0.051 (0.045-0.059)	0.061 (0.054-0.073)	0.076 (0.066-0.087)	0.088 (0.076-0.101)	0.102 (0.087-0.117)	0.116 (0.098-0.134)	0.138 (0.116-0.160)	0.156 (0.130-0.184)
20-day	0.020 (0.018-0.022)	0.025 (0.023-0.028)	0.032 (0.029-0.036)	0.038 (0.034-0.042)	0.046 (0.040-0.051)	0.052 (0.045-0.058)	0.058 (0.051-0.065)	0.065 (0.057-0.074)	0.076 (0.065-0.086)	0.084 (0.072-0.095)
30-day	0.016 (0.014-0.017)	0.020 (0.018-0.022)	0.025 (0.022-0.028)	0.029 (0.026-0.032)	0.034 (0.030-0.038)	0.038 (0.034-0.043)	0.043 (0.037-0.047)	0.047 (0.041-0.052)	0.054 (0.046-0.060)	0.059 (0.051-0.066)
45-day	0.013 (0.012-0.014)	0.017 (0.015-0.018)	0.020 (0.018-0.022)	0.023 (0.021-0.026)	0.027 (0.024-0.030)	0.030 (0.027-0.034)	0.033 (0.029-0.037)	0.036 (0.032-0.041)	0.041 (0.035-0.046)	0.044 (0.038-0.050)
60-day	0.012 (0.011-0.013)	0.015 (0.013-0.016)	0.018 (0.016-0.020)	0.020 (0.018-0.022)	0.023 (0.021-0.026)	0.026 (0.023-0.029)	0.028 (0.025-0.031)	0.031 (0.027-0.034)	0.034 (0.030-0.038)	0.036 (0.032-0.041)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).
Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.
Please refer to NOAA Atlas 14 document for more information.

Estimates from the table in CSV format: Precipitation frequency estimates | Submit

POINT PRECIPITATION FREQUENCY TABLE

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

EHA ENGINEERING, PSC

SEAL

CERTIFICACIÓN:
YO, EDGARDO HERNANDEZ ALVARADO, LIC. NO. 13930, CERTIFICO QUE SOY EL PROFESIONAL QUE DISEÑO ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIEN, CERTIFICO QUE ENTIENDO QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CÓDIGOS DE CONSTRUCCIÓN VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PÚBLICAS CON JURISDICCIÓN. CERTIFICO, ADEMÁS, QUE EN LA PREPARACIÓN DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY NÚM. 14 DE 8 DE ENERO DE 2004, SEGÚN ENMENDADA, CONOCIDA COMO LA "LEY PARA LA INVERSIÓN POR LA INDUSTRIA PUERTORRIQUEÑA" Y CON LA [LEY NÚM. 319 DE 15 DE MAYO DE 1938, SEGÚN ENMENDADA; LEY NÚM. 96 DE 6 DE JULIO DE 1976, SEGÚN ENMENDADA; SEGÚN APLIQUE]. RECONOZCO QUE CUALQUIER DECLARACIÓN FALSA O FALSIFICACIÓN DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MÍ, MIS REGLAMENTO CONJUNTO 2019 | 23 AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCIÓN JUDICIAL Y DISCIPLINARIA POR LA OGPE.

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: 4/15/24
REVIEWED BY: EHA
DRAWN BY: SBT
DESIGNED BY:
BRA PROJECT NUMBER:

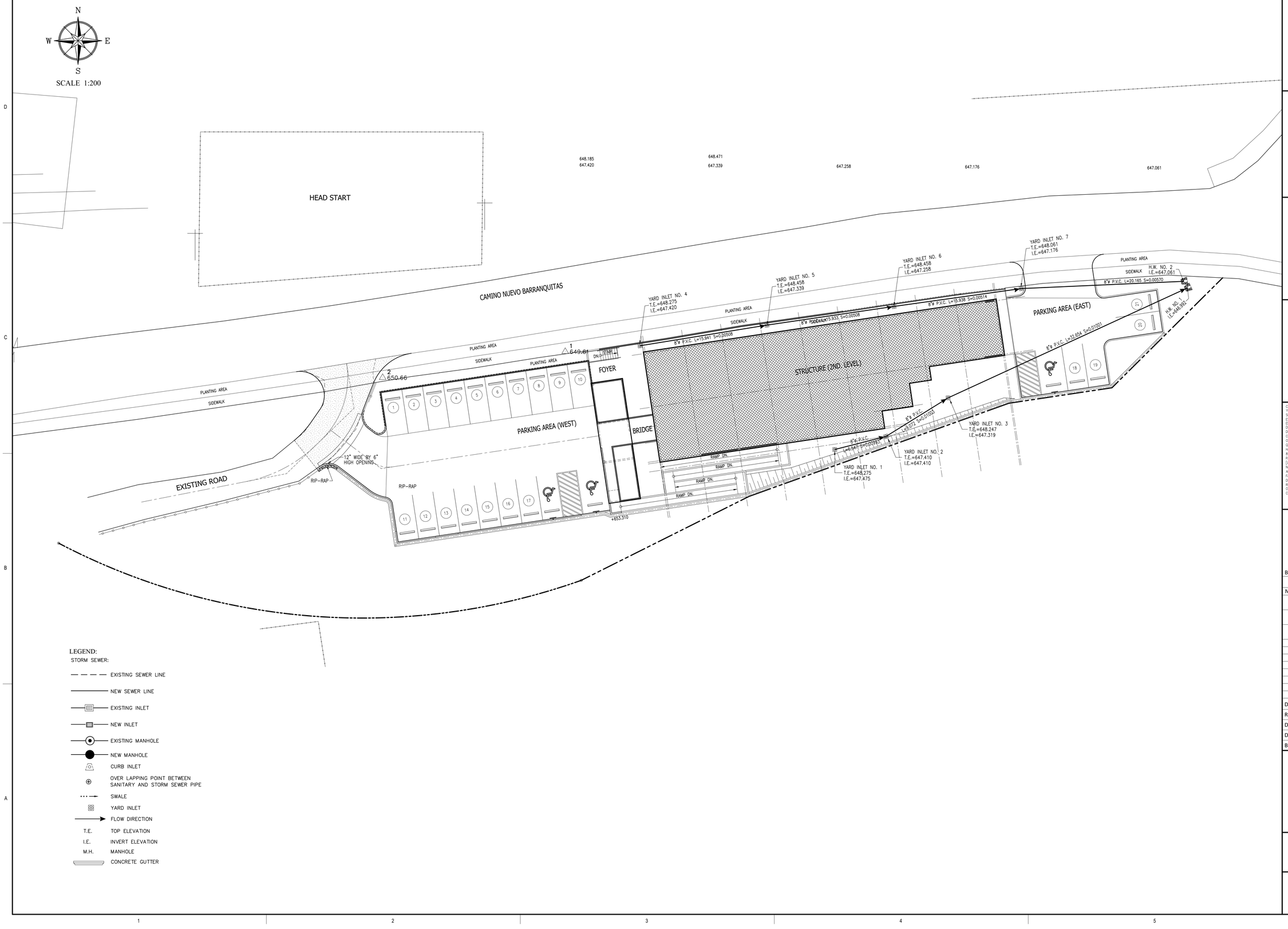
SHEET TITLE

PROPOSED STORM SEWER ANALISYS

SHEET ID

SI-8.0

SHEET



LEGEND:

STORM SEWER:

- EXISTING SEWER LINE
- NEW SEWER LINE
- EXISTING INLET
- NEW INLET
- EXISTING MANHOLE
- NEW MANHOLE
- CURB INLET
- OVER LAPPING POINT BETWEEN SANITARY AND STORM SEWER PIPE
- SWALE
- YARD INLET
- FLOW DIRECTION
- T.E. TOP ELEVATION
- I.E. INVERT ELEVATION
- M.H. MANHOLE
- CONCRETE GUTTER

OWNER

PROPONENT

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FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

EHA ENGINEERING, PSC

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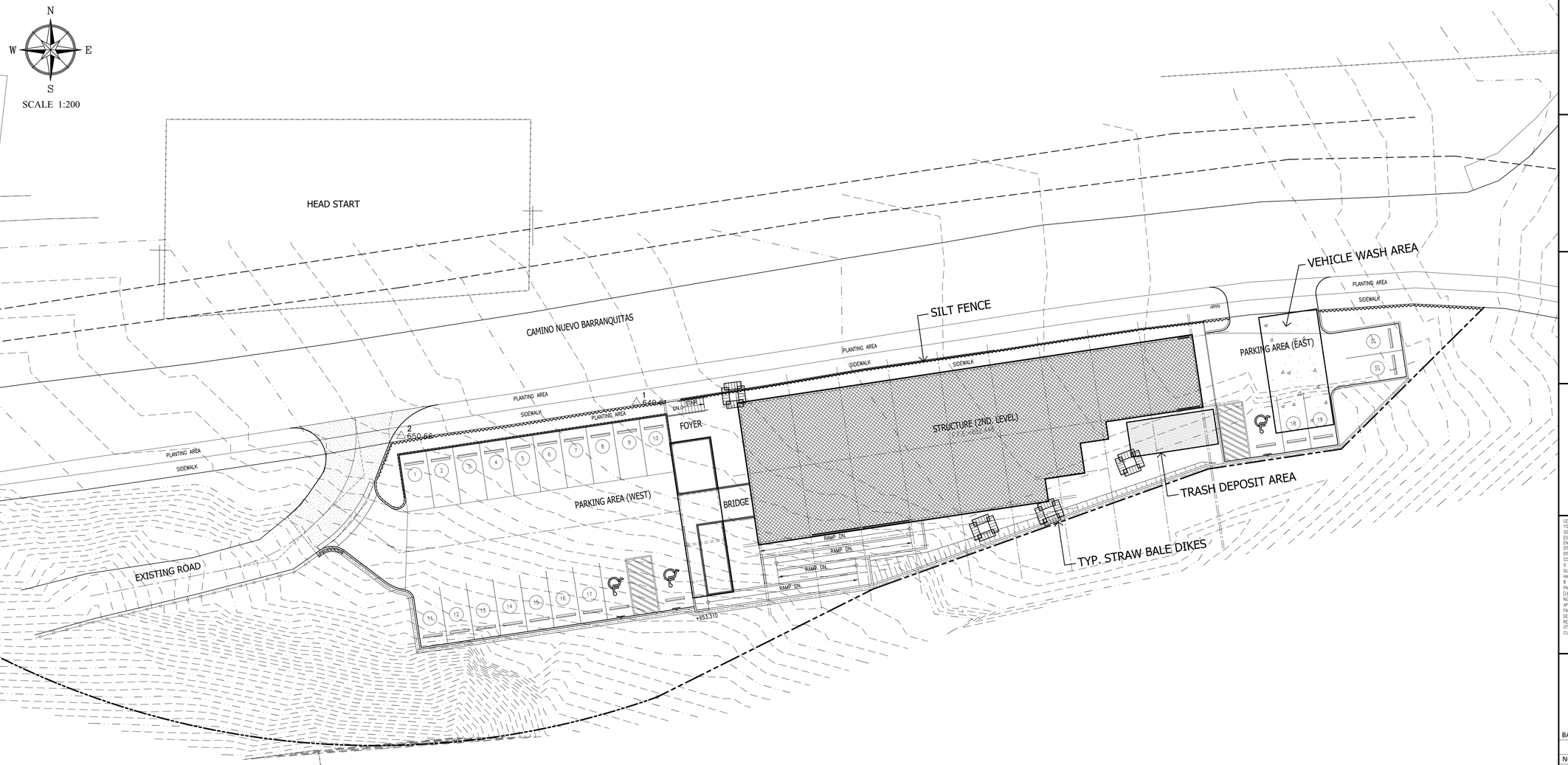

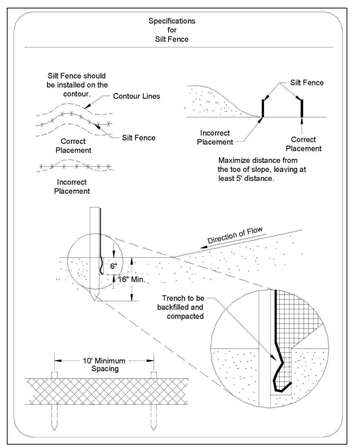

Specifications
for
Silt Fence

1. Silt fence shall be constructed before upslope land disturbance begins.
2. All silt fence shall be placed as close to the contour as possible so that water will not concentrate at low points in the fence and so that small swales or depressions which may carry small concentrated flows to the silt fence are dissipated along its length.
3. To prevent water ponded by the silt fence from flowing around the ends, each end shall be constructed upslope so that the ends are at a higher elevation.
4. Where possible, silt fence shall be placed on the flattest area available.
5. Where possible, vegetation shall be preserved for 5 ft. (or as much as possible) upslope from the silt fence. If vegetation is removed, it shall be reestablished within 7 days from the installation of the silt fence.
6. The height of the silt fence shall be a minimum of 16 in. above the original ground surface.
7. The silt fence shall be placed in a trench cut a minimum of 6 in. deep. The trench shall be cut with a trencher, cable laying machine, or other suitable device which will ensure adequate uniform trench depth.
8. The silt fence shall be placed with the stakes on the downslope side of the geotextile and so that the 8 in. of cloth are below the ground surface. Excess material shall lay on the bottom of the 6-in. deep trench. The trench shall be backfilled and compacted.
9. Seams between sections of silt fence shall be overlapped with the end stakes of each section wrapped together before driving into the ground.
10. Maintenance - Silt fence shall allow runoff to pass only as diffuse flow through the geotextile. If runoff overtops the silt fence, flows under or around the ends, or in any other way becomes a concentrated flow, one of the following shall be performed, as appropriate: 1) The layout of the silt fence shall be changed, 2) Accumulated sediment shall be removed, or 3) Other practices shall be installed.

Criteria for Silt Fence Materials

1. Fence Posts - The length shall be a minimum of 32 in. long. Wood posts will be 2 by 2 in. hardwood of sound quality. The maximum spacing between posts shall be 10 ft.
2. Silt Fence Fabric (See chart below)

Fabric Properties	Values	Test Method
Grab Tensile Strength	90 lb. minimum	ASTM D 1682
Mullen Burst Strength	190 psi minimum	ASTM D 3786
Slurry Flow Rate	0.3 gal/min/ft maximum	
Equivalent Opening Size	40-80	US Std. Sieve CW-02215
Ultraviolet Radiation Stability	90% minimum	ASTM-G-26

SILT FENCE DETAIL

LEGEND:

- SILT FENCE (NEW)
- STRAW BALE DIKE (NEW)
- VEHICLE WASH AREA (NEW)
- TRASH DEPOSIT AREA (NEW)
- TOP SOIL DEPOSIT AREA (NEW)
- CRUSHED STONE ENTRANCE (NEW)

NOTES:

1– ALL ELEVATIONS ARE IN METERS

2– SLAB ON GROUND SHALL BE PROVIDED WITH A COMPACTED GRANULAR CUSHION, 1'–0" THICK, INMEDIATELY UNDERNEATH ITS UNDERSIDE ELEVATION.

3– REMOVE THE TOP 6" INCHES OF ORGANIC MATERIAL BEFORE STARTING THE EARTHWORK.

OWNER

PROPONENT

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FIGUEROA & FIGUEROA
ARCHITECTS AND
ENGINEERS

CONSULTANT

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MULTIPLES DE
BARRANQUITAS

BARRANQUITAS PUERTO RICO

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PROPOSED
CES PLAN

SHEET ID

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SHEET

GENERAL NOTES:

A) PARTICLE MATERIAL CONTROL
1. A WATER TANK SHALL BE AT ALL TIMES IN THE PROJECT TO KEEP THE SOIL AND DUST WET. THIS WILL MINIMIZE EMISSION INTO THE ATMOSPHERE. PROVIDE ALL NECESSARY WATER HOSES.
2. DURING THE DEMOLITION OF THE EXISTING STRUCTURES AND HANDLING OF THE WASTE THE SAME SHALL BE KEPT WET.
3. AREAS TO RECEIVE PLANTING SHALL BE RESTORED IMMEDIATELY ONCE THE HEAVY CONSTRUCTION HAS BEEN COMPLETED.
4. TRUCKS TRANSPORTING BORROW MATERI AL AND SOLID WASTES MUST BE KEPT COVERED AND WETTED DURING HANDLING.
5. NO FILL SHALL BE LEFT UNSTABILIZED MORE THAN FIVE (5) DAYS, NOR STORED WITHOUT COMPACTION.
6. NO FILL SHALL BE STORED IN PROJECT FOR MORE THAN SEVEN (7) DAYS.

B) WASTE MATERIAL DISPOSAL
1. PROJECT SOLID WASTE MUST BE DISPOSED DAILY. AT NO TIME THE WASTE WILL BE STORED IN THE PROJECT OUTSIDE OF AN AUTHORIZED CONTAINER FOR MORE THAN ONE DAY.
2. SOLID WASTE STORE IN THE PROJECT SHALL BE KEPT WET TO AVOID EMISSION INTO THE ATMOSPHERE.

C) PROTECTION OF EXPOSED SOILS
1. CONTRACTOR SHALL SPRAY WITH WATER, AS MANY TIME AS THE CONDITION REQUIRES ALL BARE GROUND THROUGHOUT THE PROJECT.
2. EXISTING PLANTING WITHIN PROJECT LIMITS AND OUTSIDE OF THE LIMITS MUST BE PROTECTED. IF DAMAGED THE SAME SHALL BE RESTORED TO ORIGINAL CONDITION.
3. BORROW MATERIAL WITHIN THE PROJECT LIMITS MUST BE COMPACTED AS PER SPECIFICATION BUT NOT LESS THAN 95% OF ITS DRY WEIGHT DENSITY.
4. EXISTING TOP SOIL TO BE RE-USED SHALL BE STORED WITHIN PROJECT LIMITS AND PROPERLY MAINTAINED.

D) HANDLING OF RUNOFF WATER
1. CONTRACTOR SHALL CONSTRUCT: DITCHES, SWALES, BERMS AND SEDIMENTATION POOLS FOR CONTROLING EROSION AND SEDIMENT POLLUTION DURING CONSTRUCTION AS DETAILED ON THESE DRAWINGS.
2. ALL RUNOFF WATER DURING CONSTRUCTION STAGE SHALL ENTER THE SEDIMENTARY POOLS BEFORE LEAVING THE PROJECT.
3. SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED AND REPAIRED AS NECESSARY TO ASSURE A SATISFACTORY PERFORMANCE DURING CONSTRUCTION.

E) SEDIMENT CONTROL SUCH THAT IT WILL NOT LEA VE THE PROJECT LIMITS.
1. ALL TRUCKS AND EQUIPMENT WHEELS SHALL BE CLEANED AT CLEANING AREA, BEFORE LEAVING THE PROJECT.
2. ALL PERMANENT SLOPES SHALL BE SODDED AS SOON AS POSSIBLE.

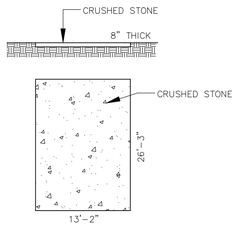
CES PLAN NOTES:

1. NEWLY GRADED SLOPES TWENTY FIVE PERCENT (25" OR GREATER) SHALL BE SODDED OR STABILIZED WITH EROSION CONTROL NETTING.
2. GEOTEXTILE FABRIC SHALL BE CLASS 1. THE TYPE AND/OR THICKNESS SHALL BE DUPONT TYPAR 1/3401 OR APPROVED EQUAL.
3. UPON COMPLETION OR TEMPORARY CESSATION OF ANY EARTH DISTURBANCE ACTIVITY, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.
4. THE STONE USED FOR SUBSURFACE BEDS SHALL BE CLEAN, WASHED CRUSHED STONE AGGREGATE MEETING AASHTO SPECIFICATIONS.
5. SHOULD UNFORESEEN EROSIVE CONDITIONS DEVELOP DURING CONSTRUCTION, THE CONTRACTOR SHALL TAKE ACTION TO REMEDY SUCH CONDITIONS AND TO PREVENT DAMAGE TO ADJACENT PROPERTIES AND BEACHFRONT WATER AS A RESULT OF INCREASED RUNOFF/AND OR SEDIMENT DISPLACEMENT. STOCKPILES OF WOODCHIPS, HAY BALES, CRUSHED STONE AND OTHER MULCHES SHALL BE HELD IN READINESS TO DEAL IMMEDIATELY WITH EMERGENCY PROBLEMS OF EROSION.
6. THE CONTRACTOR SHALL BY SCHEDULING THE CONSTRUCTION, UTILIZE NEW PLANTINGS AND PROPERLY INSTALL EROSION CONTROL FENCING, HAY BALES ANO OTHER EROSION CONTROL MEASURES TO MINIMIZE EROSION DAMAGE.
7. ANY DISTURBED AREA ON WHICH ACTIVITY HAS CEASED MUST BE SEEDED AND MULCHED IMMEDIATELY. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE RECOMMENDED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE YEAR MAY BE SEEDED AND MULCHED WITH A QUICK GROWING TEMPORARY SEEDING MIXTURE AND MULCH. DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE REDISTURBED WITHIN ONE YEAR MUST BE SEEDED AND MULCHED IMMEDIATELY.
8. TEMPORARY EROSION CONTROL MEASURES MAY BE REMOVED ONLY AFTER THE CONSTRUCTION AREA ANO CONTAINED SILT IS STABILIZED AND THE LAWN AREA ESTABLISHED.
9. ALL PERSONS ENTERING ACTIVE TANKS, MANHOLES, INLETS, ETC. MUST COMPLY WITH OSHA REQUIREMENTS FOR ENTRY INTO CONFINED SPACES.
10. WHERE DRAINAGE SWALES ARE WITHIN 20' OF A BASEMENT, WATERPROOFING SHALL BE APPLIED TO THE BASEMENT.
11. ON-SITE TREES TO BE SAVED SHALL BE PREPARED FOR CONSTRUCTION BY APPROPRIATE FERTILIZATION ANO PROTECTED BY APPROPRIATE FENCING. THE TOWNSHIP ARBORIST SHALL APPROVE THE PROCEDURE.
12. GRADING EQUIPMENT SHALL NOT BE ALLOWED TO CROSS PERMANENT OR INTERMITIENT STREAMS PRIOR TO OBTAINING THE APPROPRIATE PERMITS.
13. NO EXCAVATIONS OR FILLS THAT ENCROACH ON NATURAL WATERCOURSES, FLOOD HAZARD AREAS, CONSTRUCTED CHANNELS, OR WETLANDS SHALL OCCUR WITHOUT THE NECESSARY STATE AND/OR FEDERAL PERMITS.
14. EXTREME CARE SHOULD BE EXERCISED IN ALL DISTURBANCE ACTIVITIES TO PREVENT DEGRADATION TO THE WATERS OF THE COMMONWEALTH.

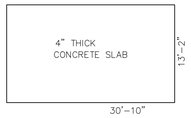
EROSION CONTROL NOTES:

1. ALL EROSION CONTROL MEASURES SHALL BE PLACED IMMEDIATELY.
2. ALL CONSTRUCTION OF EROSION AND SEDIMENT CONTROL SHALL CONFORM TO EQB STANDARDS.
3. CONSTRUCTION ENTRANCE SHALL CONSIST OF AN AREA NOT LESS THAN 50 FEET LONG COVERED WITH 2"O STONE. A THICKNESS OF NOT LESS THAN SIX INCHES SHALL BE USED. A TEMPORARY HOSE BIB SHALL BE PROVIDED.
4. WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS – OF – WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE, WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE THROUGH USE OF SAND BAGS, GRAVEL, BOARDS OR OTHER APPROVED METHODS.
5. ALL SEDIMENT SPILLED, DROPPED OR WASHED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
6. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. PERIODIC MAINTENANCE MIGHT BE REQUIRED. ADD STONES AS CONDITIONS REQUIRE OR CLEANOUTS OF ANY MEASURES TO TRAP SEDIMENTS.
7. THE GEOTEXTILE SHALL BE WRAPPED ON ALL THE TEMPORARY AND PERMANENT CHAIN-LINK FENCE SURFACE. ALUMINUM TIE WIRE AND STEEL STRAPS SHALL BE USED TO FIX GEOTEXTILE TO FENCE.
8. SILT BARRIERS AND HAY BALES SHALL BE INSTALLED AS SHOWN OR DIRECTED BY THE ENGINEER.
9. WATER TRUCK SHALL BE AVAILABLE ON – SITE TO MINIMIZE FUGITIVE DUST IN ACCORDANCE WITH ENVIROMENTAL BOARD REGULATION.
10. PROTECT ALL INLETS WITH SEDIMENT TRAPS DURING THE CONSTRUCTION PROCESS.

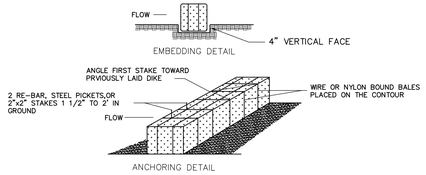
_____
Edgardo Hernández Alvarado, PE, MEM, RPA
EHA Engineering, PSC



VEHICLE WASH AREA



TRASH DEPOSIT AREA



CONSTRUCTION SPECIFICATIONS

1- BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.

2- EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4"

3- BALES SHALL BE SECURELY ANCHORED IN PLACE BY STAKES OR RE-BARS DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.

4- INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.

5- BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

STRAW BALE DIKE

OWNER

PROPONENT

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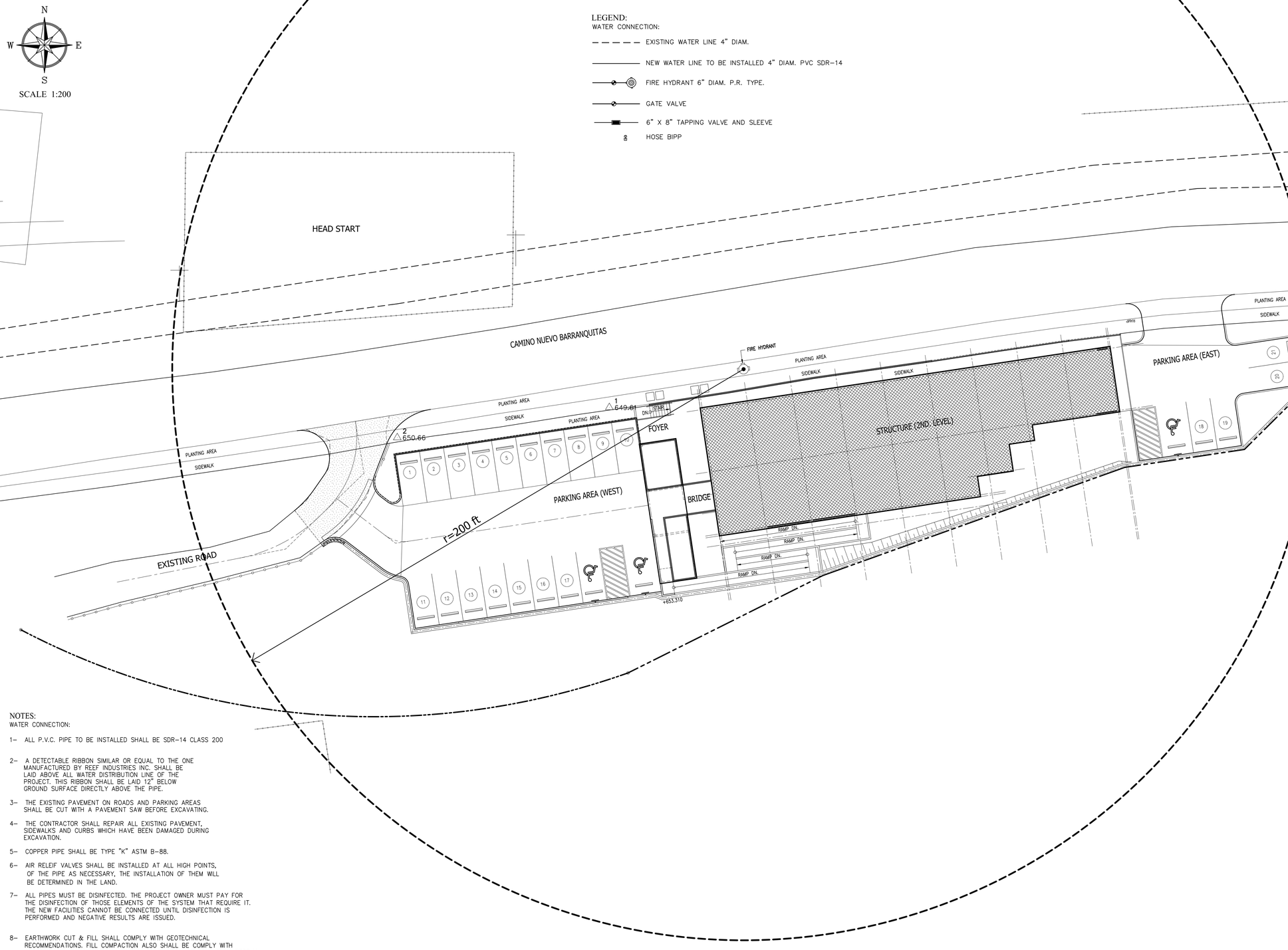

NOTES:
WATER CONNECTION:

1- ALL P.V.C. PIPE TO BE INSTALLED SHALL BE SDR-14 CLASS 200

2- A DETECTABLE RIBBON SIMILAR OR EQUAL TO THE ONE MANUFACTURED BY REEF INDUSTRIES INC. SHALL BE LAID ABOVE ALL WATER DISTRIBUTION LINE OF THE PROJECT. THIS RIBBON SHALL BE LAID 12" BELOW GROUND SURFACE DIRECTLY ABOVE THE PIPE.

3- THE EXISTING PAVEMENT ON ROADS AND PARKING AREAS SHALL BE CUT WITH A PAVEMENT SAW BEFORE EXCAVATING.

4- THE CONTRACTOR SHALL REPAIR ALL EXISTING PAVEMENT, SIDEWALKS AND CURBS WHICH HAVE BEEN DAMAGED DURING EXCAVATION.

5- COPPER PIPE SHALL BE TYPE "K" ASTM B-88.

6- AIR RELEIF VALVES SHALL BE INSTALLED AT ALL HIGH POINTS, OF THE PIPE AS NECESSARY, THE INSTALLATION OF THEM WILL BE DETERMINED IN THE LAND.

7- ALL PIPES MUST BE DISINFECTED. THE PROJECT OWNER MUST PAY FOR THE DISINFECTION OF THOSE ELEMENTS OF THE SYSTEM THAT REQUIRE IT. THE NEW FACILITIES CANNOT BE CONNECTED UNTIL DISINFECTION IS PERFORMED AND NEGATIVE RESULTS ARE ISSUED.

8- EARTHWORK CUT & FILL SHALL COMPLY WITH GEOTECHNICAL RECOMMENDATIONS. FILL COMPACTION ALSO SHALL BE COMPLY WITH GEOTECHNICAL STUDY WITH A MINIMUM COMPACTION OF 95%, FROM DESPIAU ASSOCIATES, CONSULTING GEOTECHNICAL ENGINEERS.

9- I hereby certify that I have observed the ground conditions of the referenced project are suitable to reach the final (grade) levels, and that the area where the residence will be built, does not show any indication of failure to date. I certify that the soil conditions are suitable for the construction of the proposed residential and infrastructure works, and to the approved construction plans.

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

EHA ENGINEERING, PSC

SEAL

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SHEET ID

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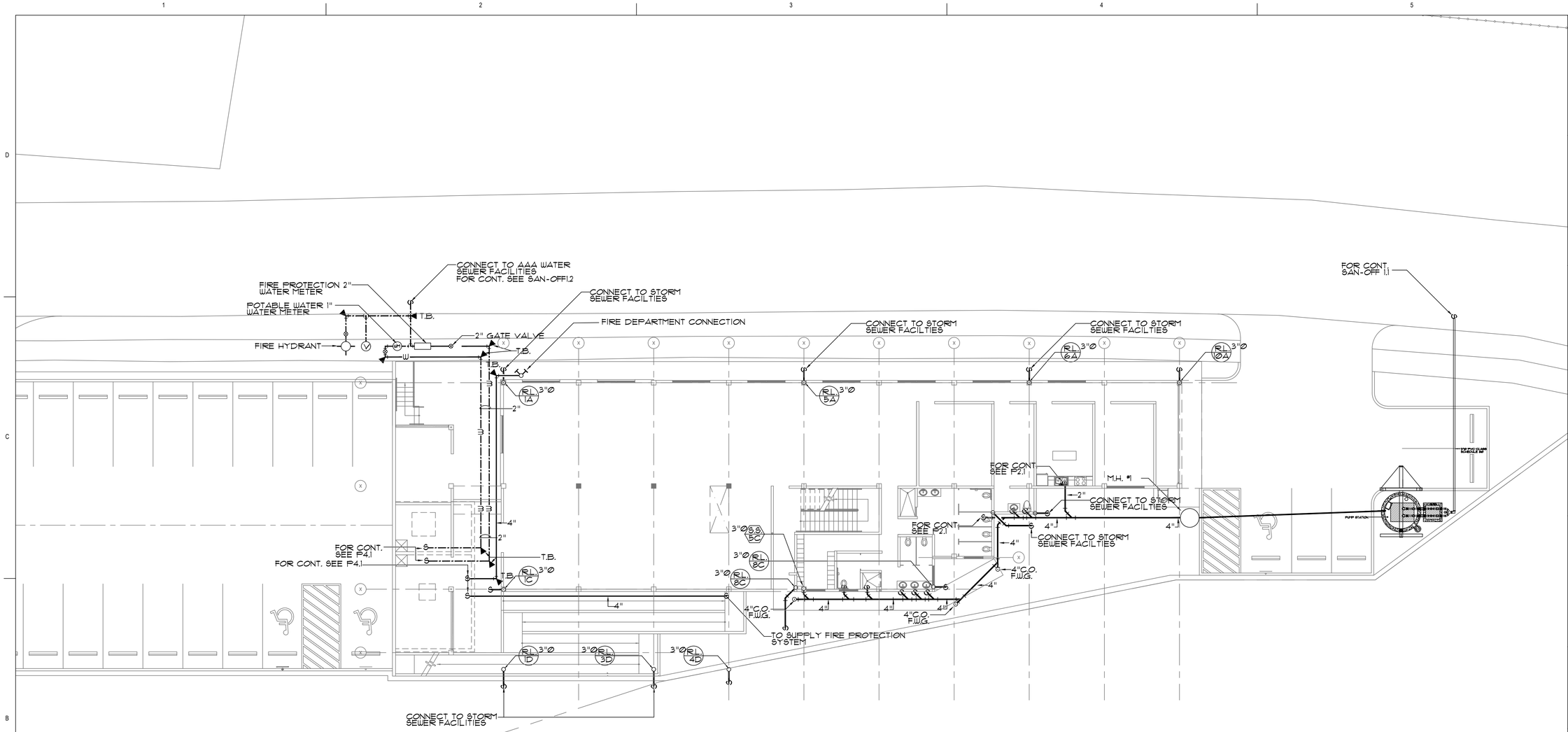

PLUMBING LAYOUT AT SITE PLAN

SCALE:3/32"=1'-0"

LEGEND:

- C.O. PRASA
- MAN HOLE
- SANITARY LINE PVC SCH40 (ASTM 3034)
- C.O. FINISH
- TRUST BLOCK
- 2" WATER METER
- TAPPING SLEEVE AND VALVE
- FIRE HYDRANT
- COPPER TYPE K LINE
- PVC
- VENT
- 1"Ø WATER METER

PRASA STAMP

AAA-RE-23-10-0013
OGPE:2023-497963-SRI-073861

FILE NAME	23-078-SP1.1
PLOT DATE	10/25/24
DWG. #	SP1.1
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	D.P.D.
ARCHIVO #	23-078

OWNER

PROPONENT

\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

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NOTA IMPORTANTE:

Yo, JORGE A. TORRES SCANDALI, INGENIERO MECANICO, LICENCIA 10906, certifico que soy el profesional que diseñó la MECANICA, en estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estos planos y especificaciones se ha cumplido cabalmente con lo dispuesto en la Ley 14-2004, según enmendada, conocida como la Ley para la Inversión por la Industria Puertorriqueña y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada; según aplique. Reconozco que cualquier declaración falsa o falsificación de los hechos que se hayan producido por desconocimiento o por negligencia ya sea por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGPe.

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

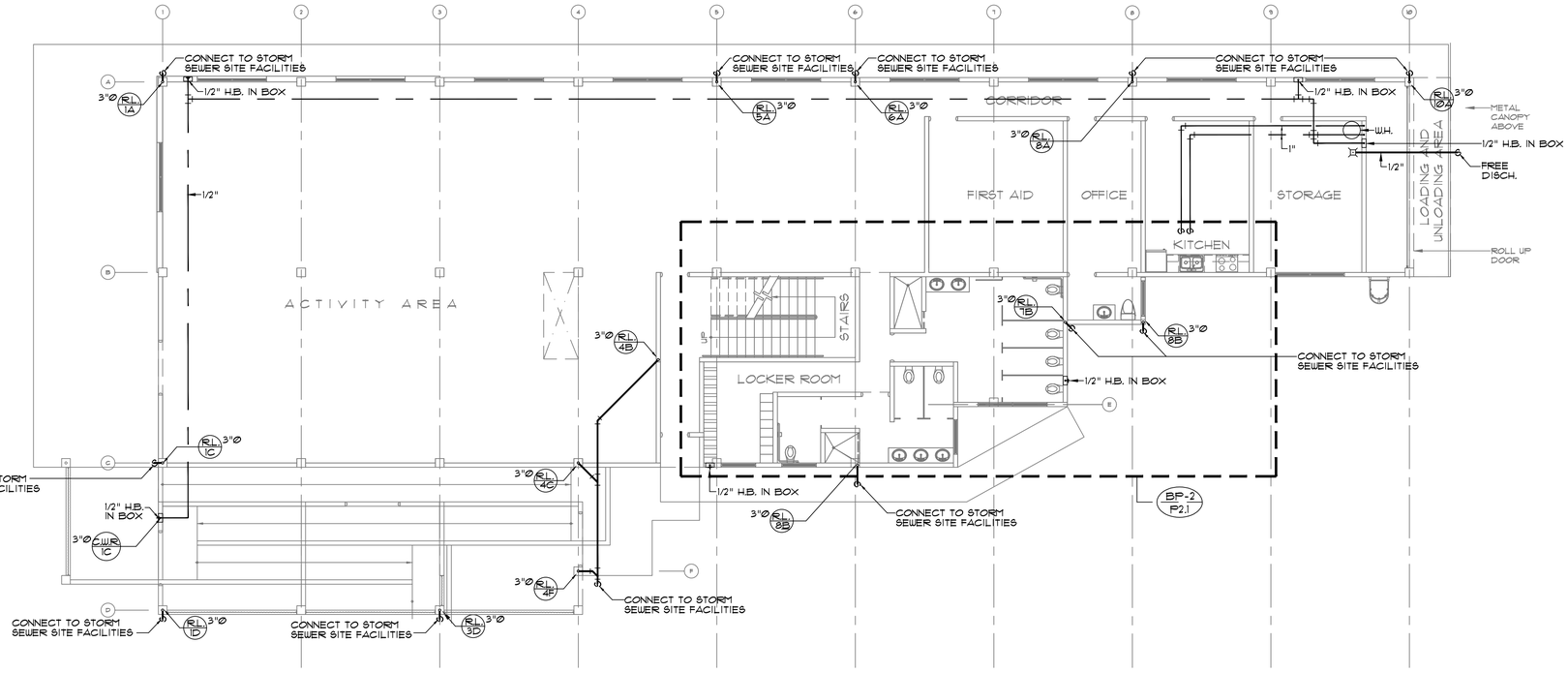
SHEET TITLE

PLUMBING LAYOUT AT SITE PLAN

SHEET ID

SP1.1

SHEET



PLUMBING LAYOUT AT GROUND FLOOR PLAN

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

OWNER

PROPONENT

:\LOGO FIGUEROA.png

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Fecha de Expiración: 2024-11-10

NOTA IMPORTANTE:

Yo, JORGE A. TORRES SCANDALI, INGENIERO MECANICO, LICENCIA 10906, certifico que soy el profesional que diseñó la MECANICA, en estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estos planos y especificaciones se ha cumplido cabalmente con lo dispuesto en la Ley 14-2004, según enmendada, conocida como la Ley para la Inversión por la Industria Puertorriqueña y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada; según aplique. Reconozco que cualquier declaración falsa o falsificación de los hechos que se hayan producido por desconocimiento o por negligencia ya sea por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGPe.

PROJECT INFORMATION

CENTRO DE USOS
MULTIPLES DE
BARRANQUITAS

BARRANQUITAS — PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

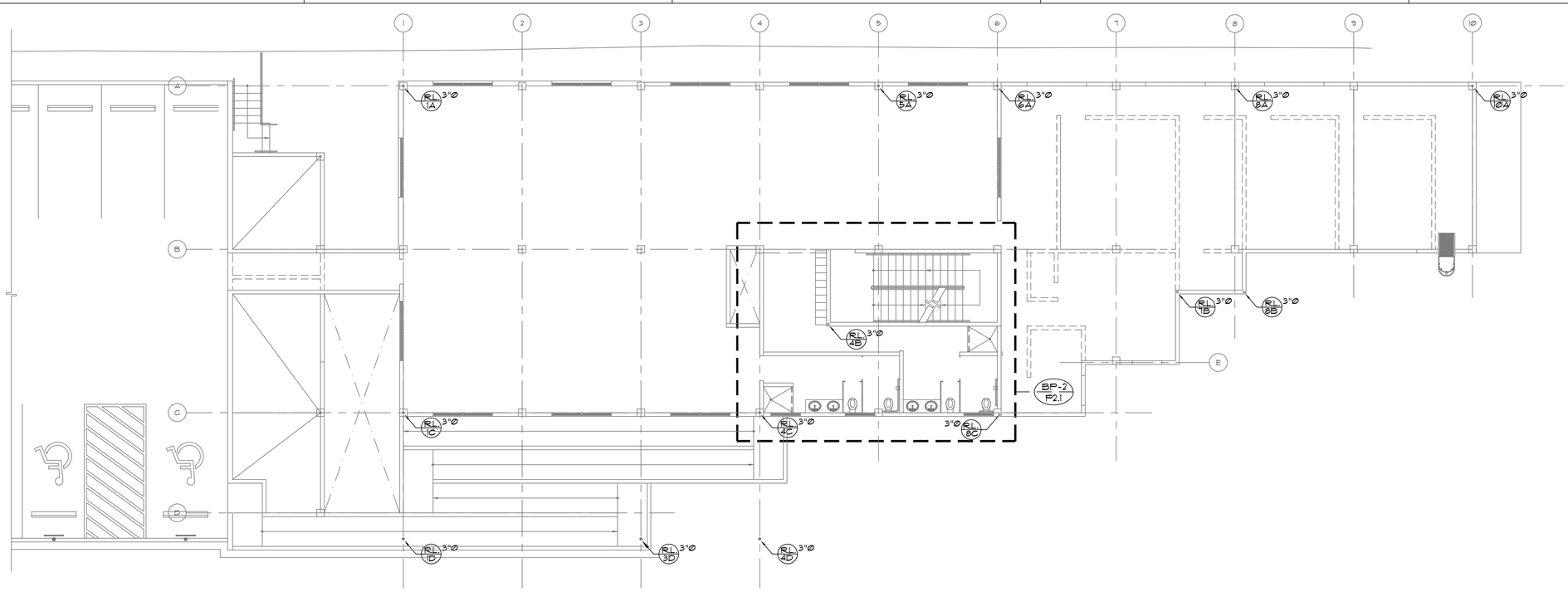
PLUMBING LAYOUT
AT GROUND
FLOOR PLAN

SHEET ID

P1.1

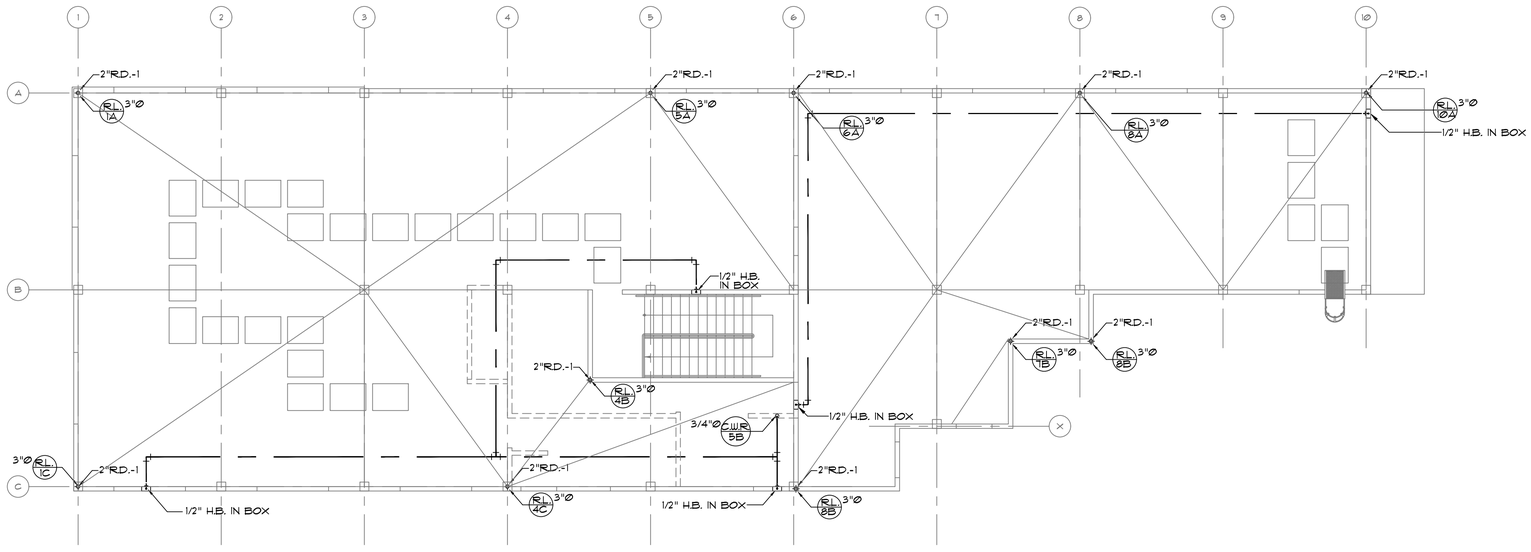
SHEET

FILE NAME	23-078-P1.1
PLOT DATE	04/30/24
DWG. #	P1.2
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	D.P.D.
ARCHIVO #:	23-078



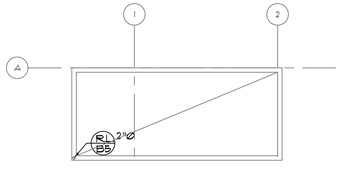
PLUMBING LAYOUT AT SECOND FLOOR PLAN

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



ROOF DRAINAGE PLAN

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



OWNER

PROPONENT

\LOGO FIGUEROA.png

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Fecha de Expiración 2024.11.19

NOTA IMPORTANTE:

Yo, JORGE A. TORRES SCANDALI, INGENIERO MECANICO, LICENCIA 10906, certifico que soy el profesional que diseñó la MECANICA, en estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estos planos y especificaciones se ha cumplido cabalmente con lo dispuesto en la Ley 14-2004, según enmendada, conocida como la Ley para la Inversión por la Industria Puertorriqueña y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada; según aplique. Reconozco que cualquier declaración falsa o falsificación de los hechos que se hayan producido por desconocimiento o por negligencia ya sea por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGPe.

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

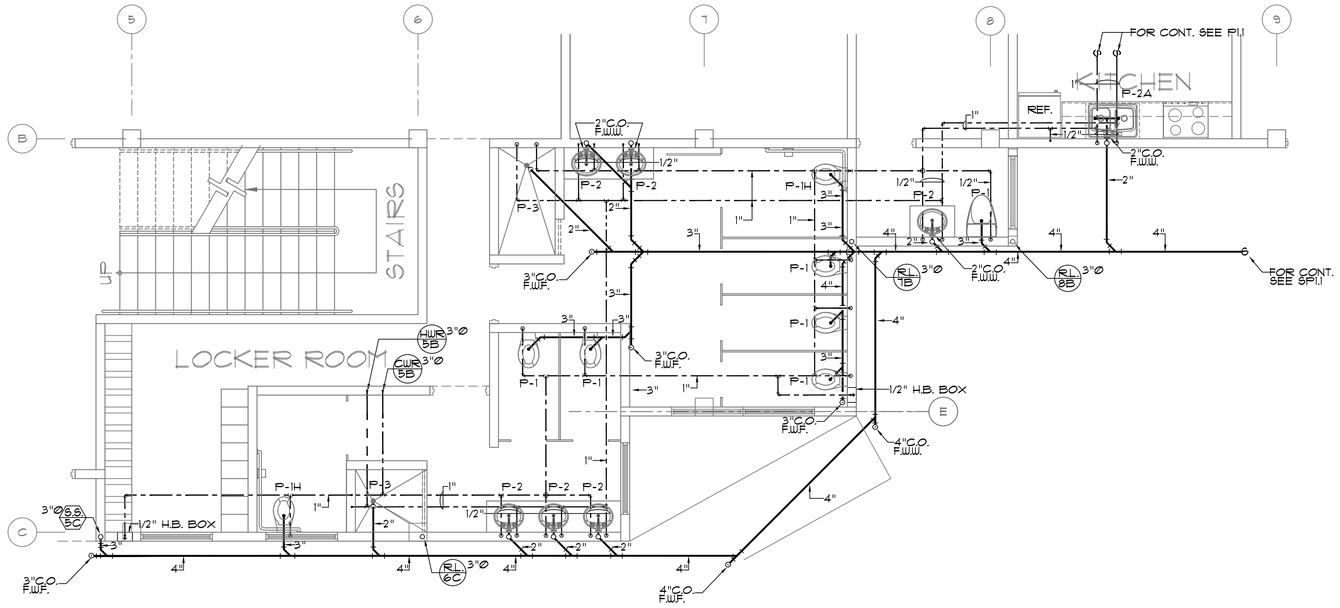
PROPOSED SECOND FLOOR AND ROOF PLAN

SHEET ID

P1.2

SHEET

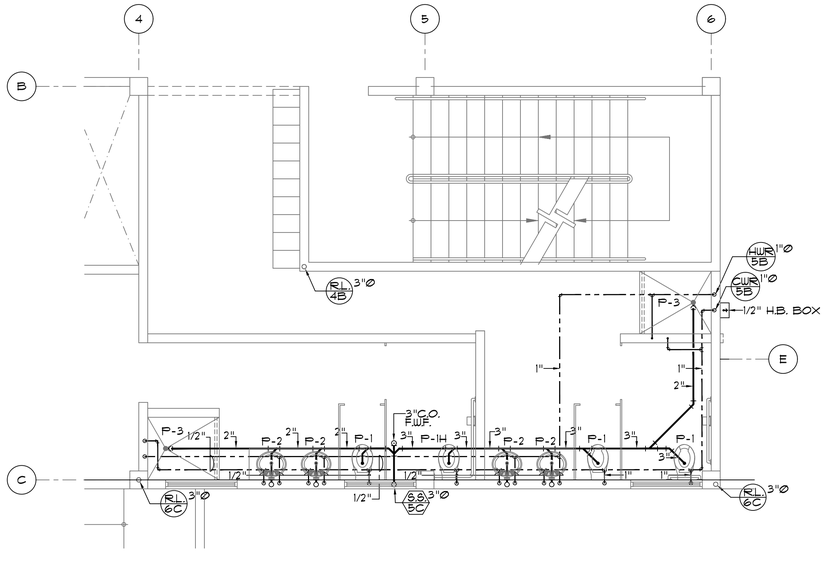
FILE NAME	23-078-P1.2
PLOT DATE	10/09/24
DWG. #	P1.2
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	D.P.D.
ARCHIVO #	23-078



BP-1 / P1.1

PLUMBING LAYOUT AT ENLARGE GROUND FLOOR PLAN

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



BP-2 / P1.2

PLUMBING LAYOUT AT ENLARGE SECOND FLOOR PLAN

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

FILE NAME	23-078-P2.1
PLOT DATE	10/09/24
DWG. #	P2.1
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	D.P.D.
ARCHIVO #:	23-078

OWNER

PROPONENT

:\LOGO FIGUEROA.png

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PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS — PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

PLUMBING LAYOUT AT ENLARGE GROUND & SECOND FLOOR PLAN

SHEET ID

P2.1

SHEET

GENERAL NOTES

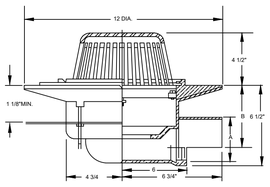
1. ALL PLUMBING WORK SHALL BE IN ACCORDANCE WITH THE BUILDING CODE, P.R. BUILDING CODE 2018, AND THE INTERNATIONAL PLUMBING CODE LATEST EDITION.
2. ALL PLUMBING MATERIAL SHALL BE AS INDICATED IN THE SPECIFICATIONS ISSUED FOR THIS PROJECT, EXCEPT AS OTHERWISE NOTED OR CALLED FOR ON THE DRAWINGS.
3. ALL VALVES SHALL BE PROVIDED WITH ACCESS IN THE WALL OR FLOOR FOR OPERATION AND MAINTENANCE ACCESS DOORS SHALL BE AS SPECIFIED OR REQUIRED BY THE ARCHITECT.
4. LONG SWEEP BENDS OR LONG SWEEP FITTINGS SHALL BE PROVIDED AT THE BASE OF ALL STACKS. CLEANOUTS SHALL BE INSTALLED AT THE BASE FALL STACK AND LEADERS.
5. ALL HORIZONTAL PORTIONS OF SOIL & WASTE STACKS & BRANCHES, SHALL SLOPE 1/4" PER FT., EXCEPT AS OTHERWISE SHOWN.
6. ALL PIPES SHALL BE ADEQUATELY SUPPORTED ON HANGERS OR CARRIERS AS REQUIRED. HANGERS SHALL BE PLACED 4 FT. APART EACH LENGTH VERTICAL RISERS AND STACKS SHALL BE SUPPORTED 10FT. WITH RISER CLAMPS, EXCEPT AS OTHERWISE SHOWN. FOR SIZES 2'0 OR SMALLER A MICRSTORY GUIDE IS REQUIRED.
7. THE SIZES GIVEN IN FIXTURE SCHEDULE ARE MINIMUM AND SHALL BE USED EXCEPT THAT IN SOME CASES THEY SHALL BE INCREASED AS SHOWN ON ISOMETRICS OR AS REQUIRED BY THE INTERNATIONAL PLUMBING CODE.
8. THE PLUMBING CONTRACTOR SHALL PROVIDE PLUMBING FIXTURES AND INSTALL ALL PLUMBING FIXTURES, AND /OR EQUIPMENT AND ROUGHING-IN.
9. CLEANOUTS SHALL BE NOT MORE THAN 50 FEET APART IN HORIZONTAL DRAINAGE LINES OF 4 - INCH NOMINAL DIAMETER OR LESS AND NOT MORE THAN 100 FEET APART FOR LARGER PIPES.
10. TUBING SHALL BE FEX NO JOINTS SHALL BE MADE IN FLOOR SLAB WALLS.
11. PIPES PASSING THROUGH CONCRETE OR CINDER WALLS AND FLOORS OR OTHER CORROSIVE MATERIAL SHALL BE PROTECTED AGAINST EXTERNAL CORROSION BY A PROTECTIVE SHEATHING OR WRAPPING OR OTHER MEANS THAT WILL WITHSTAND ANY REACTION FROM THE LIME AND ACID OF CONCRETE, CINDER OR OTHER CORROSIVE MATERIAL. SHEATHING OR WRAPPING SHALL ALLOW FOR EXPANSION AND CONTRACTION OF PIPING TO PREVENT ANY RUBBING ACTION. MINIMUM WALL THICKNESS OF MATERIAL SHALL BE 0.015 INCH (0.64 mm.).

LEGEND

- WASTE OR SOIL PIPING
- S.D. STORM DRAINAGE PIPING
- COLD WATER PIPING
- HOT WATER PIPING
- VENT PIPING
- C.O.F.W.W. CLEAN OUT FLUSH W/WALL
- C.O.F.W.F. CLEAN OUT FLUSH W/FLOOR OR FIN. GRADE
- C.O.P. CLEAN OUT PLUG
- R.D. ROOF DRAIN
- F.D. FLOOR DRAIN
- 2"Ø W.S. WASTE STACK (NO. AT SIDE INDICATES DIA. OF PIPE)
- 3"Ø S.S. SOIL STACK (NO. AT SIDE INDICATES DIA. OF PIPE)
- 2"Ø V.S. VENT STACK (NO. AT SIDE INDICATES DIA. OF PIPE)
- 2"Ø S.V. STACK VENT (NO. AT SIDE INDICATES DIA. OF PIPE)
- 3"Ø R.L. RAIN LEADER (NO. AT SIDE INDICATES DIA OF PIPE)

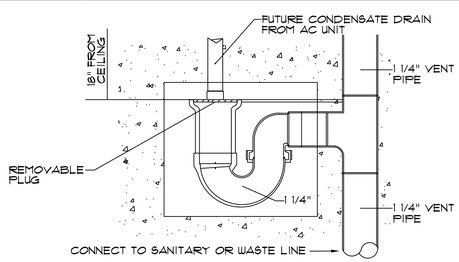
01 GENERAL NOTES AND LEGEND

N.T.S.



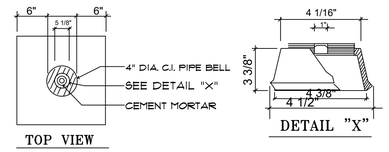
02 ROOF DRAIN DETAIL

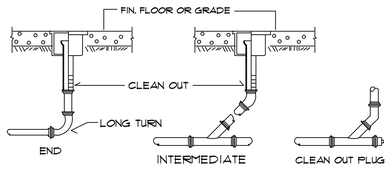
N.T.S.



03 AIR CONDITIONING CONDENSATE DRAIN

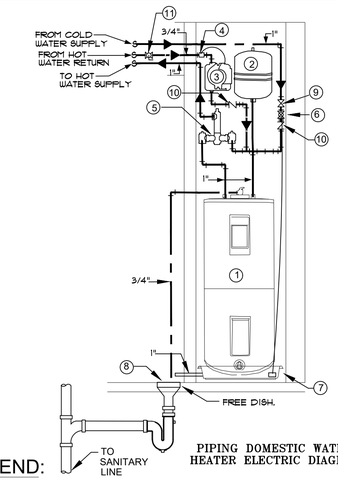
N.T.S.





04 CLEANOUT FLOOR DETAIL

N.T.S.



PIPING DOMESTIC WATER HEATER ELECTRIC DIAGRAM

LEGEND:

1. BRADFORD WHITE WATER HEATER
2. EXPANSION TANK (WATER WORK MODEL G12 4.4 GAL. TANK (00815900144)
3. RECIRCULATION PUMP (TACO MODEL 006e3)
4. AQUASTAT (TACO MODEL 563-2)
5. MIXING VALVE (TACO MODEL 5004 1"Ø)
6. LEAK DETECTOR 9 TACO FLOOD BREAKER MODEL FB 100)
7. PLASTIC WATER HEATER PAN (OATEY MODEL 34165)
8. FLOOR DRAIN (JOSAM 40300 CAST STAINLESS STEEL 1/2 GRADE) (WITH BACKFLOW PREVENTER)
9. BALL VALVE 1"Ø
10. CHECK VALVE 1"Ø
11. BALANCING VALVE 1"Ø

NOTE:

1. ALL VALVES AND FITTINGS TO BE SAME SIZE AS PIPE UNLES NOTED OTHERWISE

WATER HEATER SCHEDULE							
ID	MODEL	CAP. GAL.	DIA.	HEIGHT	WATT UPPER	LOWER	SERVICE AREA
WH-1	LOCHINVAR H15-082	80	26"	60 1/4"	5000	5000	BUILDING

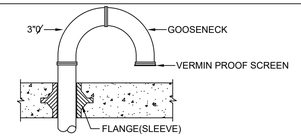
05 WATER HEATER DETAIL

N.T.S.

FLOOR & ROOF DRAIN SCHEDULE			
DRAIN NO.	CATALOG	MANUFACTURER	REMARKS
FD-1	Fig. 2005-U	JAY R. SMITH	WHERE OCCURS
RD-1	Fig. 1010	JAY R. SMITH	ROOF

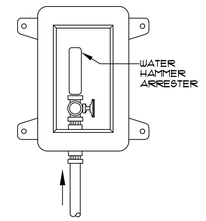
06 FLOOR DRAIN SCHEDULE

N.T.S.



07 VENTILATION DETAIL AT ROOF

N.T.S.

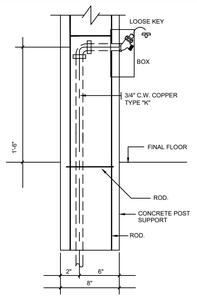


WATER SUPPLY BOX

MODEL-696-1010UF FOR NON FIRE RATED WALLS
MODEL-696-RG-2313XF FOR FIRE RATED WALLS

08 ICE MAKER BOX DETAIL

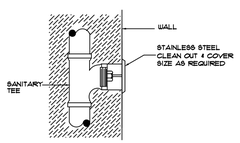
N.T.S.



NOTE:
CENTRAL BRASS FIG. # 575-3/4"
LAWN FAUCET WITH HEAVY PATTERN
CAST BRASS BODY WITH FLANGE HOSE
END 3/4"-14 NPS FEMALE

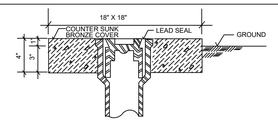
09 HOSE BIBB IN BOX DETAIL

N.T.S.



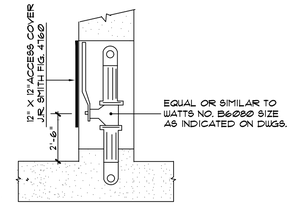
10 CLEANOUT FLUSH W/ WALL

N.T.S.



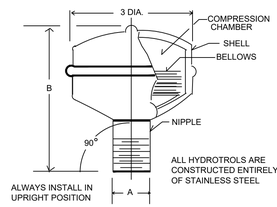
11 CLEANOUT FLUSH W/ GROUND

N.T.S.



12 BALL VALVE IN WALL DETAIL

N.T.S.



NO.	P.D.I. SYMBOL	FIXTURE UNIT RAITING	A SIZE	B	ACCESS COVER MANUFACTURE	ACCESS COVER SIZE
FIG. 2005	A	1-11	3/4	4	JR SMITH FIG. 4735-NB-U	8"X8"
5010	B	12-32	1	5	FIG. 4735-NB-U	10"X10"
5020	C	33-60	1	6	FIG. 4735-NB-U	12"X12"
50-30	D	61-13	1	7	FIG. 4735-NB-U	15"X15"
5040	E	114-154	1	8	FIG. 4735-NB-U	15"X15"
5050	F	155-330	1	9	FIG. 4735-NB-U	15"X15"

NOTE.....

ALL WATER HAMMER ARRESTER SHOWN ON WATER ISOMETRICS SHALL BE PRVIDED WITH AN ACCESS COVER. SIZE OF COVER AS SHOWN ON TABLE ABOVE WITH VANDAL PROOF SCREENS NICKLE BRONZE FRAME OR STAINLESS STEEL COVER. (NOT REQUIRED WHEN W.H.A. SHOWN AT CLNG. AND THE SAME IS REMOVABLE)

13 WATER HAMMER DETAIL

N.T.S.

DESCRIPTION	SYMBOL	UNIT WASTE OR SOIL	UNIT VENT	WATER SUPPLY		REMARKS
				COLD	HOT	
WATER CLOSET	P-1	3"	2"	1"	——	
LAVATORY	P-2	1 1/4"	1 1/4"	3/8"	3/8"	
SHOWER	P-3	1 1/2"	1 1/4"	1/2"	1/2"	
KITCHEN SINK	P-5	2"	1 1/2"	1/2"	1/2"	
LAUNDRY SINK	P-6	2"	1 1/2"	1/2"	1/2"	
WASHING MACHINE	P-7	3"	2"	1/2"	1/2"	

14 PLUMBING FIXTURE SCHEDULE

N.T.S.

OWNER

PROPONENT

'LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

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NOTA IMPORTANTE:

Yo, JORGE A. TORRES SCANDALI, INGENIERO MECANICO, LICENCIA 10906, certifico que soy el profesional que diseñó lo MECANICA, en estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estos planos y especificaciones se ha cumplido cabalmente con lo dispuesto en la Ley 14-2004, según enmendada, conocida como la Ley para la Inversión por la Industria Puertorriqueña y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada; según aplique. Reconozco que cualquier declaración falsa o falsificación de los hechos que se haya producido por desconocimiento o por negligencia ya sea por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGPe.

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

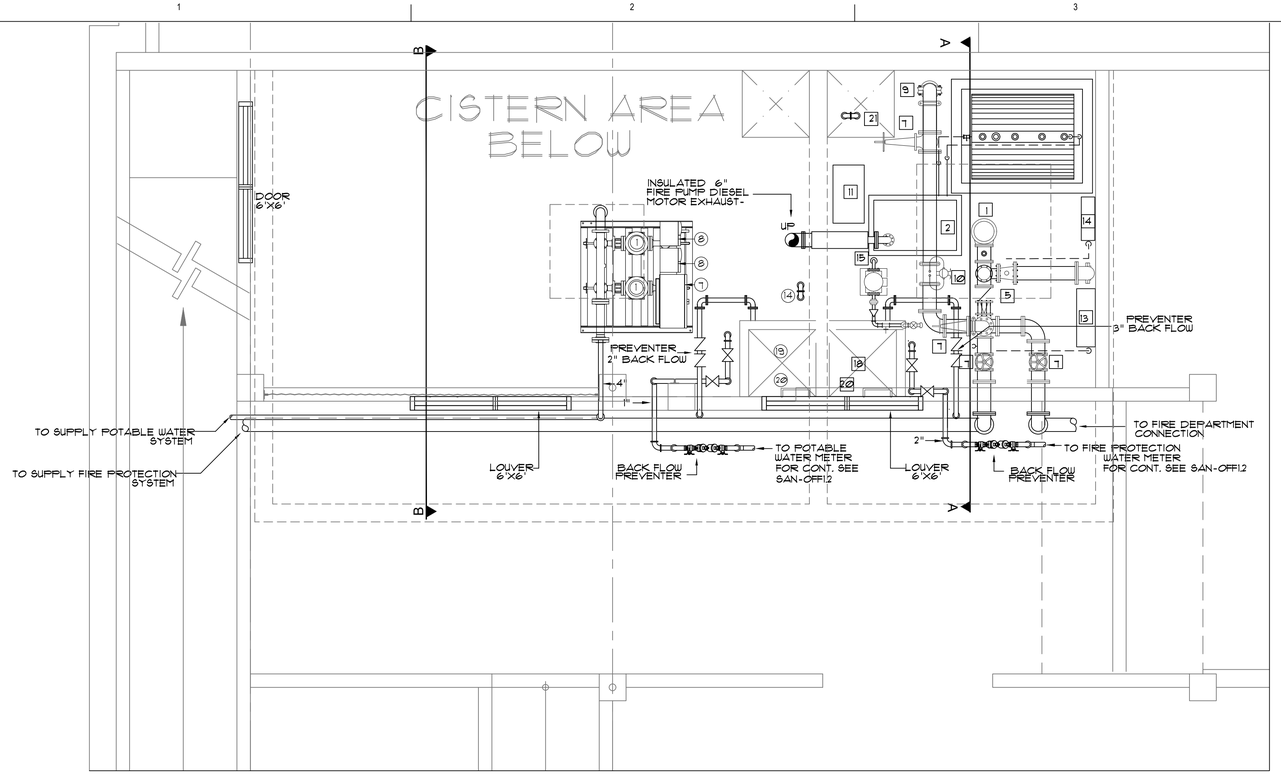
PLUMBING NOTES AND DETAILS

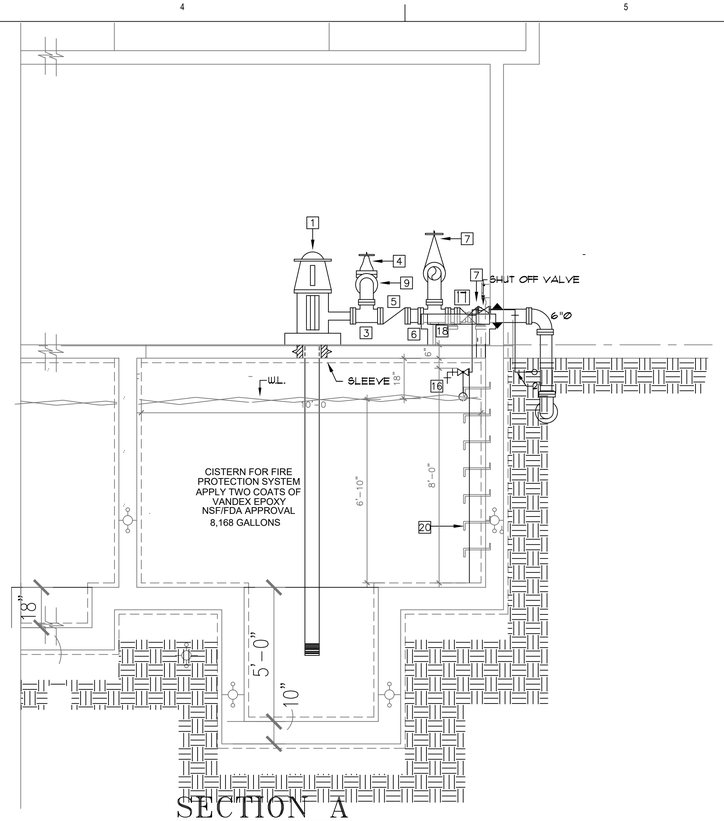
SHEET ID

P3.1

SHEET

FILE NAME	23-078-P3.1
PLOT DATE	10/09/24
DWG. #	P3.1
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	E.C.R.
ARCHIVO #:	23-078





SECTION A
SCALE:3/8"=1'-Ø"

FIRE PROTECTION CISTERN CALCULATION:

(Q = (.10)(1,500)(+100)
DURATION = 30 MINUTES
REQUIRED VOLUME = (30 MIN.)(280 GPM)
= 8,400 GALLONS

DIMENSIONS:
L=10'-0"
W=16'-0"
WATER DEPTH = 6'-10"
AIR GAP = 1'-6"
VOLUME PROVIDED= (10'-0")(16'-0")(6'-10")(7.48)
≅8,168GALLONS

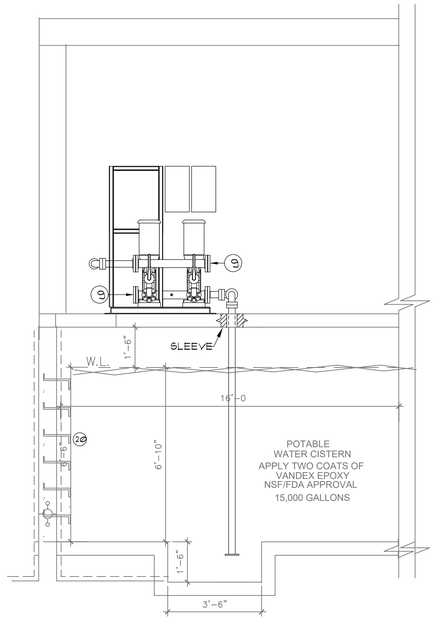
LEGEND: (FIRE PROTECTION)

1. FIRE PUMP – 500 GPM @ 100 PSI
2. DIESEL ENGINE DRIVE
3. 6"X4"X6" DISCHARGE TEE
4. 4" MAIN RELIEF VALVE
5. 6" FLANGE CHECK VALVE
6. 6"X6"X6" TEE
7. 6" BUTTERFLY VALVE
8. 6" ELBOW
9. 6" 90 ELBOW
10. FLOW METER
11. DIESEL FUEL TANK–120 GALLONS
12. BATTERIES RACK
13. CONTROL PANEL (ENGINE)
14. CONTROL PANEL (JOCKEY PUMP)
15. JOCKEY PUMP 1 1/2" HP
16. GATE VALVE W/ALARM GONG
17. 4" GATE VALVE
18. MANHOLE(ACCESS HATCHE 30"X30")
19. OVER FLOW 4"
20. LADDER RUNGS (PLASTIC)
21. 4"VENT

LEGEND: POTABLE WATER

1. VMS PUMP MODEL S4V W/MOTOR–(SEE SPECIFICATION)SHP–60 GPM TDH– 5HP
2. CHECK VALVE WAFER STYLE 2"
3. BUTERFLY VALVE 150# LUG 2"
4. SYSTEM PIPING 2"
5. SUCTION HEADER 3"
6. DISCHARGE HEADER 3"
7. SYSTEM POWER AND CONTROL PANEL
8. VARIABLE FREQUENCY DRIVE
9. BLIND FLANGE CLASS 150 3"
10. SYSTEM SKID
11. CHECK VALVE
12. FLEXIBLE CONNECTION
13. DISCHARGE GATE VALVE 2"
14. VENT 4"
15. FLOAT VALVE
16. 2"GATE VALVE
17. PRESSURE RED. VALVE 2"
18. OVER FLOW 4"
19. MANHOLE(ACCESS HATCHE 30"X30")
20. LADDER RUNGS (PLASTIC)

CISTERN PUMP ROOM
SCALE:3/8"=1'-Ø"



SECTION B
SCALE:3/8"=1'-Ø"

PRASA STAMP

AAA–RE–23–10–0013
OGPE:2023–497963–SRI–073861

FILE NAME	23–078–P4.1
PLOT DATE	05/09/24
DWG. #	P1.2
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	D.P.D.
ARCHIVO #:	23–078

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

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Puerto Rico
Fecha de Expiración 2024-11-15

NOTA IMPORTANTE:

Yo, JORGE A. TORRES SCANDALI, INGENIERO MECANICO, LICENCIA 10906, certifico que soy el profesional que diseñó la MECANICA, en estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estos planos y especificaciones se ha cumplido cabalmente con la dispuesto en la Ley 14–2004, según enmendada, conocida como la Ley para la Inversión por la Industria Puertorriqueña y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada; según aplique. Reconozco que cualquier declaración falsa o falsificación de los hechos que se haya producido por desconocimiento o por negligencia yo sea por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGPe.

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

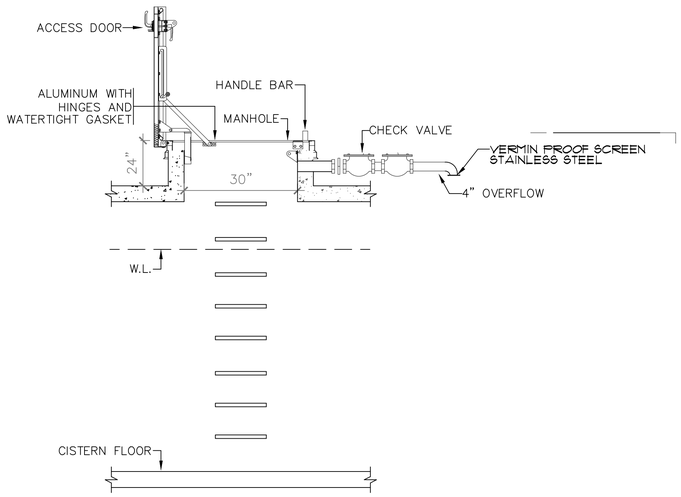
SHEET TITLE

PLUMBING LAYOUT AT PUMP ROOM

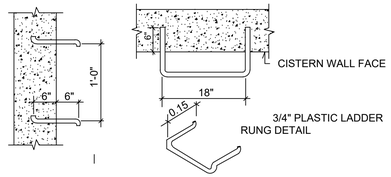
SHEET ID

P4.1

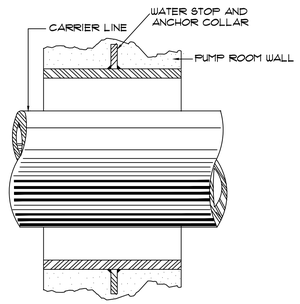
SHEET



MANHOLE DETAIL
N.T.S.



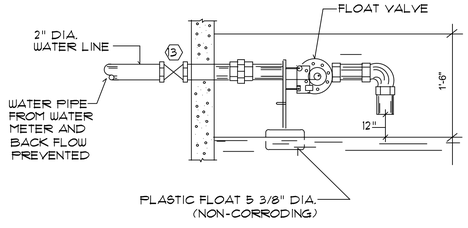
LADDER RUNG DETAIL
N.T.S.



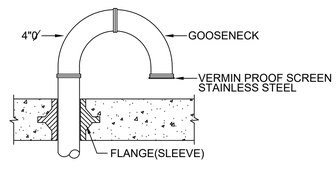
PIPE SLEEVE DETAIL
N.T.S.

ELECTRODE MOUNTING DETAIL DOMESTIC CISTERN
N.T.S.

ELECTRODE MOUNTING DETAIL (FIRE PROTECTION CISTERN)
N.T.S.



FLOAT VALVE DETAIL
N.T.S.



CISTERN VENTILATION DETAIL
N.T.S.

PRASA STAMP

AAA-RE-23-10-0013
0GPE:2023-497963-SRI-073861

FILE NAME	23-078-P4.2
PLOT DATE	07/23/24
DWG. #	P4.2
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	D.P.D.
ARCHIVO #	23-078

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

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Fecha de Expiración: 2024-11-19

NOTA IMPORTANTE:

Yo, JORGE A. TORRES SCANDALI, INGENIERO MECANICO, LICENCIA 10906, certifico que soy el profesional que diseñó la MECANICA, en estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estos planos y especificaciones se ha cumplido cabalmente con lo dispuesto en la Ley 14-2004, según enmendada, conocida como la Ley para la Inversión por la Industria Puertorriqueña y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada; según aplique. Reconozco que cualquier declaración falsa o falsificación de los hechos que se haya producido por desconocimiento o por negligencia ya sea por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por lo OGPe.

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

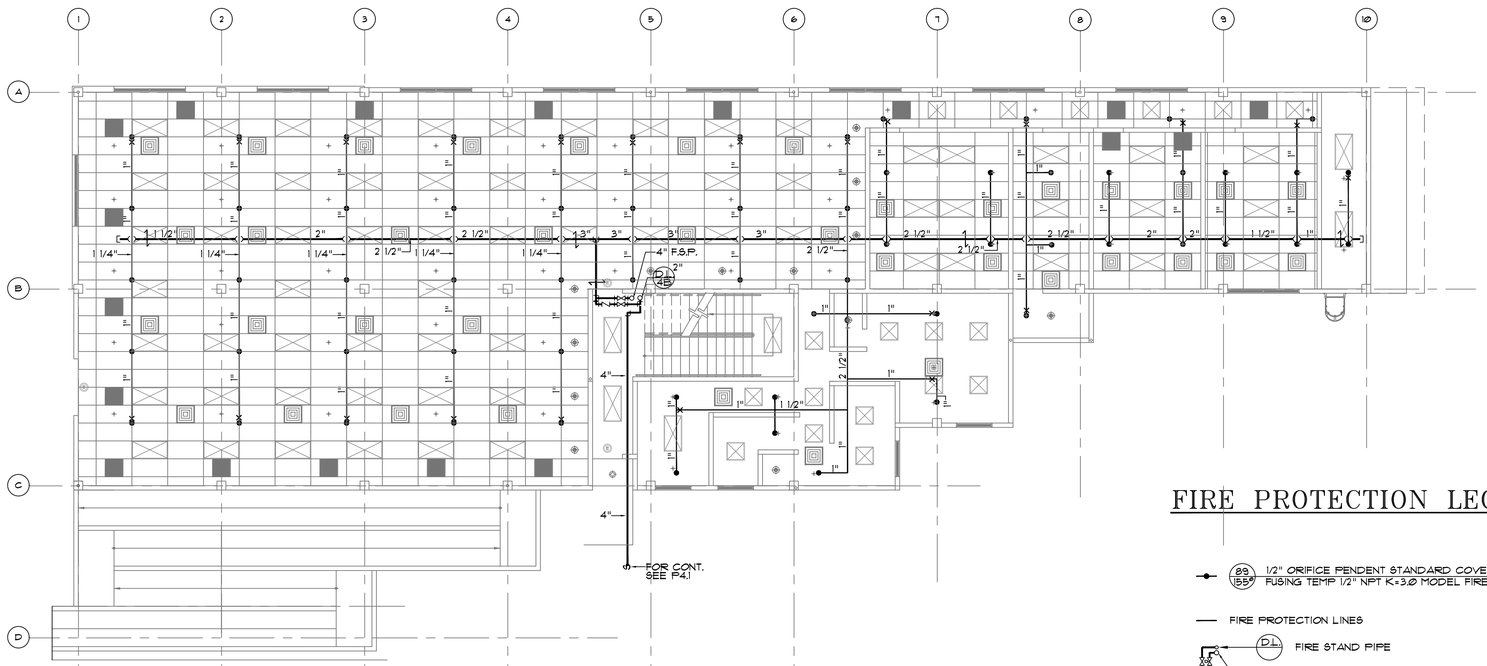
SHEET TITLE

PUMP ROOM DETAILS

SHEET ID

P4.2

SHEET

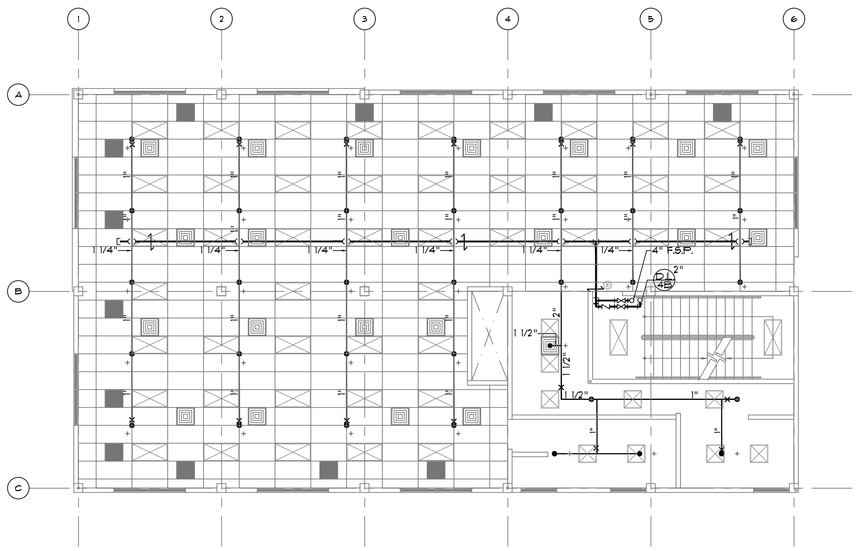


FIRE PROTECTION LAYOUT AT GROUND FLOOR PLAN

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

FIRE PROTECTION LEGEND

- 1/2" ORIFICE PENDENT STANDARD COVERAGE FUSING TEMP 1/2" NPT K=3.0 MODEL FIRES SERIES
- FIRE PROTECTION LINES
- FIRE STAND PIPE
- PIPE HANGER
- EARTHQUAKE HANGER



FIRE PROTECTION LAYOUT AT SECOND FLOOR PLAN

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

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

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Fecha de Expiración: 2024-11-10

NOTA IMPORTANTE:

Yo, JORGE A. TORRES SCANDALI, INGENIERO MECANICO, LICENCIA 10906, certifico que soy el profesional que diseñó la MECANICA, en estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estos planos y especificaciones se ha cumplido cabalmente con lo dispuesto en la Ley 14-2004, según enmendada, conocida como la Ley para la Inversión por la Industria Puertorriqueña y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada; según aplique. Reconozco que cualquier declaración falsa o falsificación de los hechos que se haya producido por desconocimiento o por negligencia yo seo por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGPe.

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

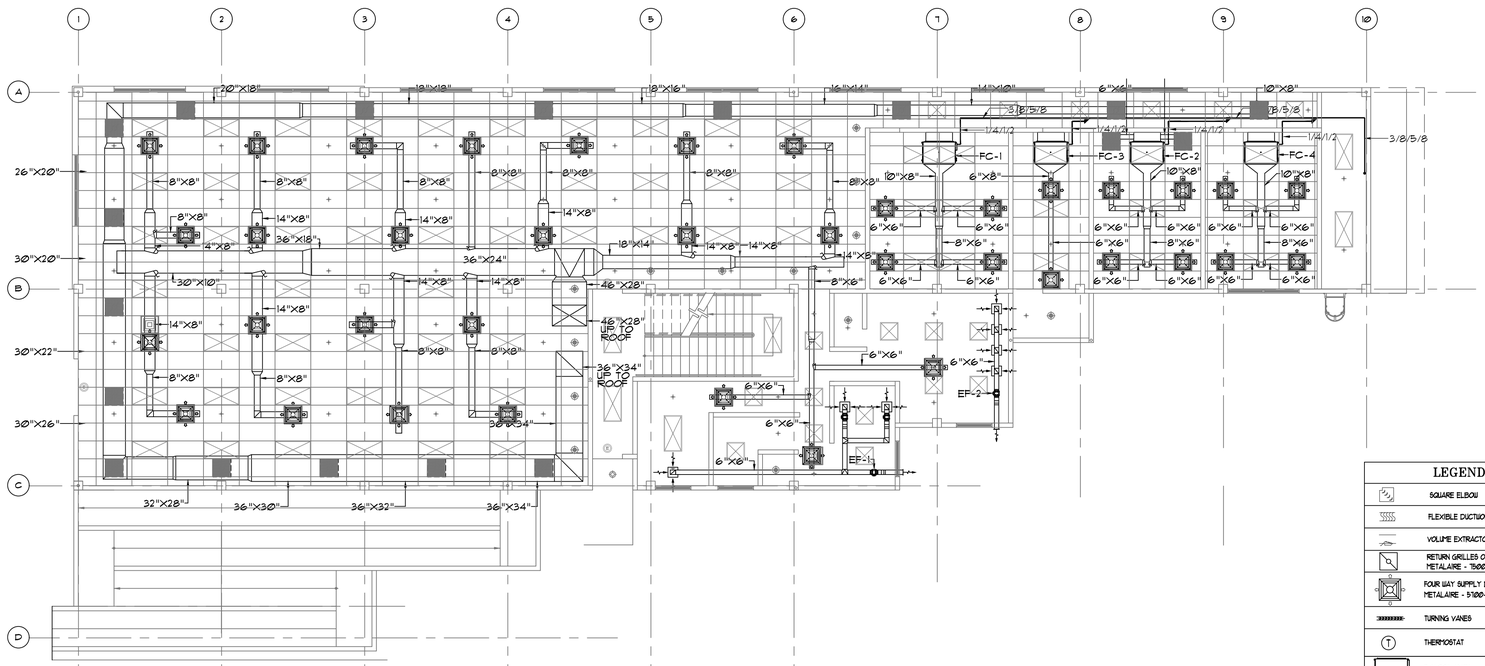
FIRE PROTECTION LAYOUT AT GROUND AND SECOND LEVEL

SHEET ID

FP1.1

SHEET

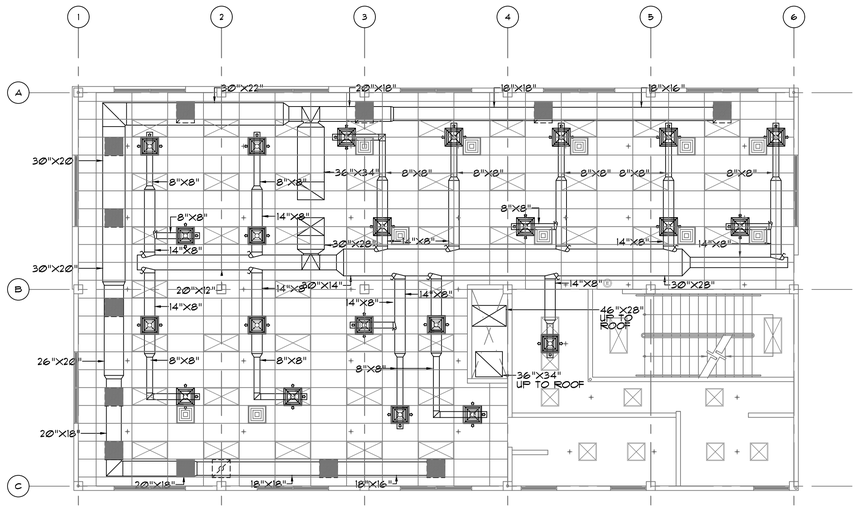
FILE NAME	23-078-FP1.1
PLOT DATE	10/09/24
DWG. #	FP1.1
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	D.P.D.
ARCHIVO #:	23-078



PROPOSED AIR CONDITIONING DISTRIBUTION AT GROUND FLOOR PLAN

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

LEGEND	
	SQUARE ELBOW
	FLEXIBLE DUCTWORK
	VOLUME EXTRACTOR
	RETURN GRILLES OR REGISTERS METALAIRE - T300R-AL-24" X 24"
	FOUR WAY SUPPLY DIFFUSER METALAIRE - 5100-T-24" X 24"
	TURNING VANES
T	THERMOSTAT
FC	FAN COIL UNITS
EF-1	EXHAUST FAN



PROPOSED AIR CONDITIONING DISTRIBUTION AT SECOND FLOOR PLAN

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

FILE NAME:	23-078-AC1.1
PLOT DATE:	10/09/24
DWG. #:	AC1.1
DESIGNER:	J.T.S.
APPROVING:	J.T.S.
DRAFTSMAN:	D.P.D.
ARCHIVO #:	23-078

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

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Fecha de Expiración: 2024-11-19

NOTA IMPORTANTE:

Yo, JORGE A. TORRES SCANDALI, INGENIERO MECANICO, LICENCIA 10906, certifico que soy el profesional que diseñó la MECANICA, en estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estos planos y especificaciones se ha cumplido cabalmente con lo dispuesto en la Ley 14-2004, según enmendada, conocida como la Ley para la Inversión por la Industria Puertorriqueña y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada; según aplique. Reconozco que cualquier declaración falsa o falsificación de los hechos que se haya producido por desconocimiento o por negligencia yo seo por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGPe.

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

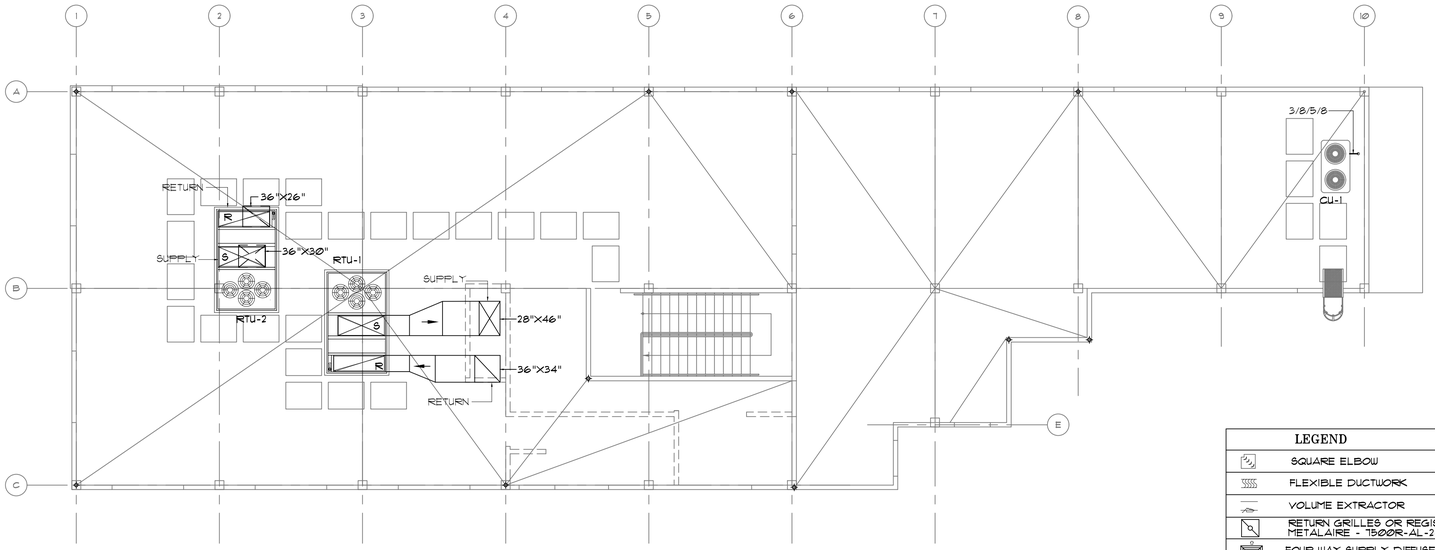
SHEET TITLE

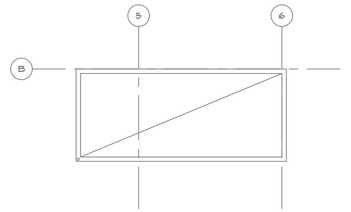
PROPOSED GROUND AND SECOND FLOOR A/C DISTRIBUTION PLAN

SHEET ID

AC1.1

SHEET





AIR CONDITIONING AT ROOF LEVEL

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

LEGEND	
	SQUARE ELBOW
	FLEXIBLE DUCTWORK
	VOLUME EXTRACTOR
R	RETURN GRILLES OR REGISTERS METALAIRE - 7500-AL-24" X 24"
S	FOUR WAY SUPPLY DIFFUSER METALAIRE - 5700-7-24" X 24"
	TURNING VANES
T	THERMOSTAT
FC	FAN COIL UNITS
EF-1	EXHAUST FAN
RTU-	ROOF TOP UNIT
	CU- CONDENSING UNIT

FILE NAME	23-078-AC1.2
PLOT DATE	04/30/24
DWG. #	AC1.2
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	D.P.D.
ARCHIVO #:	23-078

OWNER

PROPONENT

\LOGO FIGUEROA.png

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JORGE TORRES LOPEZ
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SEAL

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BARRANQUITAS PUERTO RICO

REVISIONS

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DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

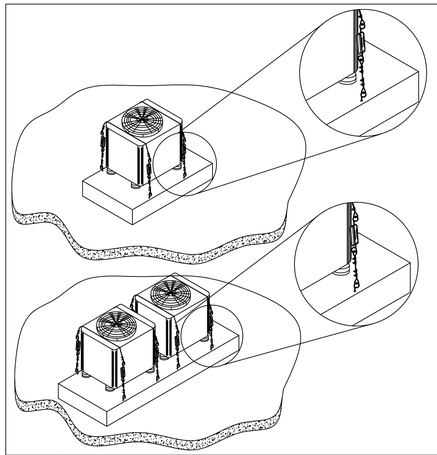
SHEET TITLE

AIR CONDITIONING DISTRIBUTION AT ROOF LEVEL

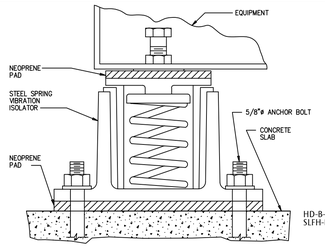
SHEET ID

AC1.2

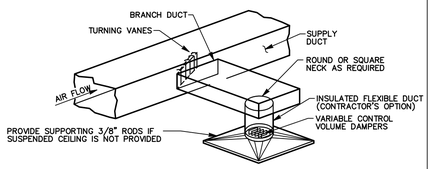
SHEET



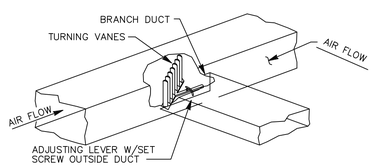
01 CONDENSING UNIT ANCHORAGE DETAIL
N.T.S.



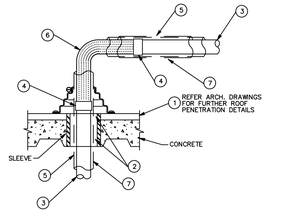
02 VIBRATION ISOLATOR DETAIL FOR CONDENSING UNITS
N.T.S.



03 TYPICAL CEILING DIFFUSER DETAIL
N.T.S.

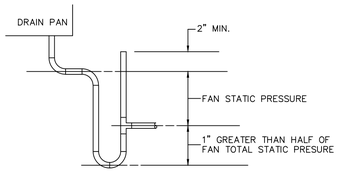


04 TYPICAL BRANCH TAKE-OFF DETAIL
N.T.S.



1. INSULATION AND BUILT UP ROOFING.
2. SEAL PENETRATION GAS-TIGHT WITH INSULATION AND FLEXIBLE SEALANT COMPATIBLE WITH PIPE MATERIAL.
3. STANDARD PIPE MATERIAL FOR REFRIGERANT LINES, SUPPORT PIPE AWAY FROM BUILDING.
4. SUITABLE ADAPTING COUPLING TO CONNECT COPPER REFRIGERANT LINE TO HOSE SECTION.
5. PIPE INSULATION SHALL BE CONTINUOUS THRU BOUNDARY SURFACE(ROOF) AND BEYOND.
6. NON-METAL HIGH PRESSURE HOSE SECTION, HOSE SECTION AND ABOVE ROOF PIPING SHALL BE COVERED W/INSULATION AND BANDED ALUMINUM PIPE JACKET.
7. PIPE SUPPORT POINT. ENSURE HOSE DOES NOT CARRY ANY PIPE LOAD FROM REFRIGERANT LINES, SEE NOTE 3.

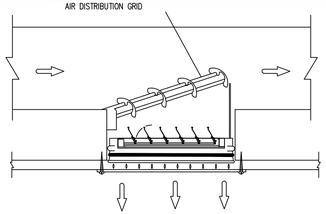
05 REFRIGERANT LINE PENETRATION
N.T.S.



NOTE:

1. DRAIN LINE SHALL BE INSULATED.
2. DRAIN LINE SHALL PENETRATE THE ROOF LINE WITHIN THE CONFINEMENT OF THE HVAC EQUIPMENT CURB.

06 CONDENSATE DRAIN TRAP DETAIL
N.T.S.



1 – CONNECT AIR DISTRIBUTING GRID TO EXTENSION DUCT COLLAR.

2 – FASTEN EXTENSION DUCT COLLAR AND DISTRIBUTING GRID ASSEMBLY TO DUCT WORK WITH SHEET METAL SCREWS

3 – AFTER CEILING OR WALL IS INSTALLED, INSTALL REGISTER WITH SHEET METAL SCREWS.

4 – CHECK TO SEE IF SPONGE RUBBER GASKET IS DRAWN UP AGAINST WALL OR CEILING FORMING AN AIR TIGHT SEAL, IF NOT READJUSTABLE AND RECHECK.

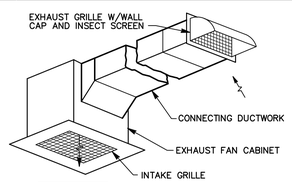
5 – SET FACE BARS AND REAR BARS FOR BEST ROOM DISTRIBUTION.

6 – BALANCE AND ADJUST AIR FLOW QUANTITIES SHOWN ON PLANS.

7 – CLEAN CONSTRUCTION DIRT FROM REGISTER.

8 – REMOVE DAMPER OPERATOR KNOB FROM REGISTER AND TURN OVER TO OWNER'S REPRESENTATIVE.

07 LINEAR DIFFUSER INSTALLATION DETAIL
N.T.S.

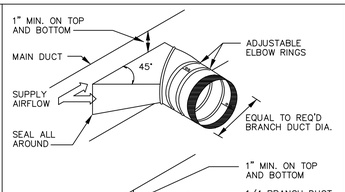


08 CEILING EXHAUST FAN DETAIL
N.T.S.

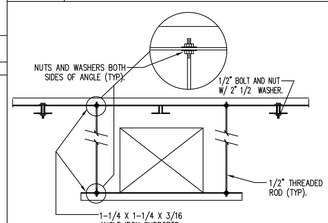
FAN NO.	SONES	CAPACITY C.F.M.	TOTAL STA. PRESS IN H²O	SPEED MAX. R.P.M.	MOTOR H.P.	REMARKS	LOCATION	FAN SELECTED
SF-1								
*EF-1		200	.25	2289	65 WATTS		BATHROOM	SOLER&PALAU TD-150

*CONSTANT OPERATION

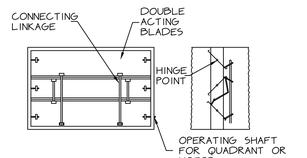
04 SUPPLY & EXHAUST FANS SCEDULE
N.T.S.



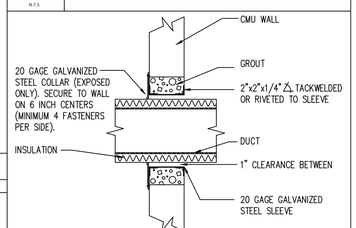
09 TYPICAL BRANCH TAKE-OFF FITTING
N.T.S.



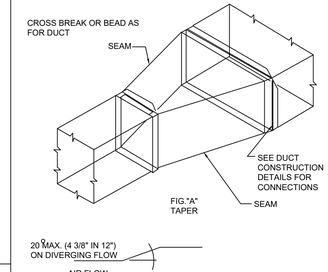
10 DUCT HANGER DETAIL
N.T.S.



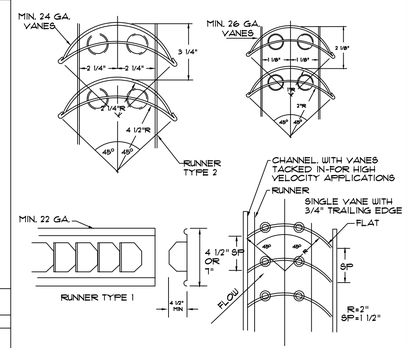
11 TYPICAL VOLUME DAMPER
N.T.S.



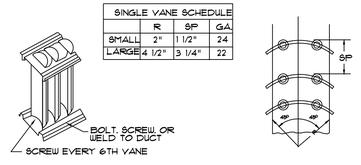
12 DUCT PENETRATION THROUGH WALL
N.T.S.



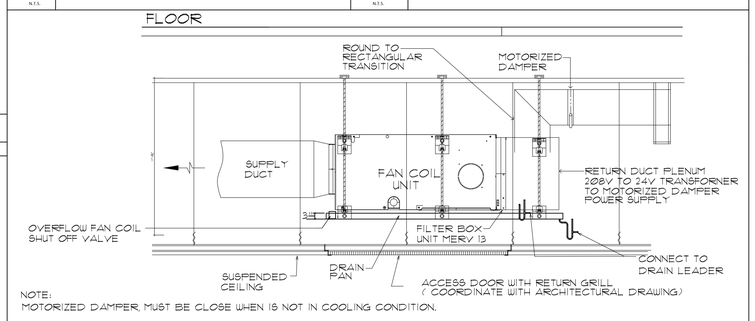
14 TRANSITION & SUPPORT DUCT
N.T.S.



SINGLE VANE SCHEDULE			
	R	SP	GA.
SMALL	2"	1 1/2"	24
LARGE	4 1/2"	3 1/4"	22



15 VANES RUNNERS
N.T.S.



NOTE:
MOTORIZED DAMPER MUST BE CLOSE WHEN IS NOT IN COOLING CONDITION.

13 FAN COIL UNITS INSTALLATION DETAIL
N.T.S.

NO.	MANUFACTURER	MODEL	SIZE	C.F.M.	VOLUME CONTROL TYPE	LOCATION	QTY
1	TUTTLE & BAILEY	1200	24"X24"		OPPOSED BLADE DAMPER	ACTIVITY AREA	
1AR	TUTTLE & BAILEY	APR	24"X24"		OPPOSED BLADE DAMPER	ACTIVITY AREA	
1B	TUTTLE & BAILEY	1200	24"X24"		OPPOSED BLADE DAMPER	FIRST AID	
1BR	TUTTLE & BAILEY	APR	24"X24"		OPPOSED BLADE DAMPER	FIRST AID	
2	TUTTLE & BAILEY	1200	24"X24"		OPPOSED BLADE DAMPER	KITCHEN	
2R	TUTTLE & BAILEY	APR	24"X24"		OPPOSED BLADE DAMPER	KITCHEN	
3	TUTTLE & BAILEY	1200	24"X24"		OPPOSED BLADE DAMPER	OFFICE	
3R	TUTTLE & BAILEY	APR	24"X24"		OPPOSED BLADE DAMPER	OFFICE	
4	TUTTLE & BAILEY	1200	24"X24"		OPPOSED BLADE DAMPER	STORAGE	
4R	TUTTLE & BAILEY	APR	24"X24"		OPPOSED BLADE DAMPER	STORAGE	

16 SUPPLY & EXHAUST GRILLE SCHEDULE
N.T.S.

17 EXHAUST FAN DETAIL
N.T.S.

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

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NOTA IMPORTANTE:

Yo, JORGE A. TORRES SCANDALI, INGENIERO MECANICO, LICENCIA 10906, certifico que soy el profesional que diseñó la MECANICA, en estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estos planos y especificaciones se ha cumplido cabalmente con lo dispuesto en la Ley 14-2004, según enmendada, conocida como la Ley para la Inversión por la Industria Puertorriqueña y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada; según aplique. Reconozco que cualquier declaración falsa o falsificación de los hechos que se hayo producido por desconocimiento o por negligencia ya sea por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGPe.

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

AIR CONDITIONING NOTES AND DETAILS

SHEET ID

AC2.0

SHEET

FILE NAME	23-078-AC2.0
PLOT DATE	01/12/24
DWG. #	FP2.0
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	-
ARCHIVO #:	23-078

MITSUBISHI ELECTRIC TRANE HVAC US: CITY MULTI VRF INDOOR UNIT SCHEDULE

System Tag		CU-01	CU-01	CU-01	CU-01
Tag Reference		FC-01	FC-02	FC-03	FC-04
Nominal Data	Room Name	FIRST AID	KITCHEN	OFFICE	STORAGE
	M-NET Address	1	2	3	4
	Model	TPEFYP008MA144A	TPEFYP012MA143A	TPEFYP008MA144A	TPEFYP006MA143A
	Type	Ceiling-Concealed (Ducted	Ceiling-Concealed (Ducted	Ceiling-Concealed (Ducted	Ceiling-Concealed (Ducted)
	Nominal Cooling Capacity (BTU/h)	8,000	12,000	8,000	6,000
	Nominal Heating Capacity (BTU/h)	9,000	13,500	9,000	6,700
Design Conditions	Cooling Design Entering Temp DB/WB (°F)	73.7/63.0	73.7/63.0	73.7/63.0	73.7/63.0
	Cooling Diversity Full/Partial (See Note 5, 6)	FULL DEMAND	FULL DEMAND	FULL DEMAND	FULL DEMAND
	Refrig Pipe Dim Liquid/Suction (inch)	1/4 / 1/2	1/4 / 1/2	1/4 / 1/2	1/4 / 1/2
Performance Data	Cooling Total Capacity (BTU/h)	7,027.2	10,540.8	7,027.2	5,270.4
	Cooling Sensible Capacity (BTU/h)	5,658.3	7,424.9	5,658.3	5,024.4
	Estimated Cooling Coil LAT (°F) / [LWT]	56.1	55.0	56.1	58.1
Fan / Water Flow Data	Fan Speed Setting	HIGH	HIGH	HIGH	HIGH
	Peak Fan Airflow (cfm)	300	371	300	300
	Max Fan ESP Setting 208V/230V (IN WG)	0.6/0.6	0.6/0.6	0.6/0.6	0.6/0.6
	nd Pressure Per Fan Speed 208V/230V (dBA)	24-28-30	28-30-34	24-28-30	26-28-29
Electrical Data	Voltage / Phase	208/230V/1-phase	208/230V/1-phase	208/230V/1-phase	208/230V/1-phase
	Power Cooling 208V/230V (kW)	0.042	0.090	0.042	0.060
	Electrical MCA/MFS				
	Condensate Removal Rate (gal/hr)	1.75/15	1.20(208V)/1.20(230V)/15	1.75/15	1.05(208V)/1.05(230V)/15
	Actual Port Assignments	0.28	0.45	0.28	0.02
Notes / Options	Applicable System Notes - See Notes Below				
		1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4

Notes & Options:
1 Nominal cooling capacities are based on indoor coil EAT of 80/67°F (DB/WB), outdoor of 95°F (DB)
2 Nominal heating capacities are based on indoor coil EAT of 70°F (DB), outdoor of 43°F (WB)
3 See outdoor unit schedule for outdoor ambient conditions, connected capacity, and other factors associated with corrected capacities
4 See schematic piping/control diagram for indication of required indoor unit remote controllers, system controllers, and integration devices.
5 Full demand corrected capacity includes de-rate associated with indoor vs. outdoor connected capacity indicated on outdoor unit schedule for associated
6 It is recommended to always base heating corrected capacity on full demand.

MITSUBISHI ELECTRIC TRANE HVAC US: CITY MULTI VRF OUTDOOR UNIT

System Tag		CU-01
Tag Reference		CU-01
Nominal Data	M-NET Address	51
	Model Number	TUMYP0361AK42NA
	Modules	P36
	Nominal Cooling Capacity (BTU/h)	36,000
	Nominal Heating Capacity (BTU/h)	42,000
	Cooling Efficiency (I)EER [SEER]	0 / 13.8 [20.3]
	EER2 [SEER2]	0 [0]
	Nom System Connected Capacity (% of NOM)	94.4 %
Design Conditions	Design Cooling Outdoor Temp DB (°F)	92.0
	Max Pipe Length from BC or 1st Joint (feet)	42.0
	ig Pipe Dim High/Low Pressure (inch) (See Note 4)	3/8 / 5/8
Performance Data	Corrected Cooling Total Capacity (BTU/h)	35,770.7
	Sound Pressure (dBA)	49/53
Compressor Data	Compressor Type	SCROLL
	Compressor Quantity	1
	Preliminary Added Field Charge (See Note 5)	7.8
Electrical Data	Voltage / Phase	208/230V / 1-phase
	MCA 208/230 or [460V]	29
	Recommended Fuse Size (RFS)	30
	MOCP	44
Notes / Options	Applicable System Notes - See Notes Below	, 2, 3, 4, 5, 6, 7, 8, 9, 10

Notes & Options:
1 Nominal cooling capacities are based on indoor coil EAT of 80/67°F (DB/WB), outdoor of 95°F (DB)
2 Nominal heating capacities are based on indoor coil EAT of 70°F (DB), outdoor of 43°F (WB)
3 Efficiency values for EER, IEER, COP are based on AHRI 1230 test method for mixture of ducted & non-ducted indoor units.
4 For systems with multiple modules, refrigerant pipe dimensions indicate total system combined piping downstream of module
5 Added field charge listed is in addition to factory charge, this must be updated based upon final as-built piping layout.
6 Corrected capacities shown are based on highest guaranteed outdoor temperature, temperatures above this are not guaranteed.
7 Factory representatives shall review the project prior to and throughout the installation of CITY MULTI equipment
8 Factory representatives shall startup and commission CITY MULTI equipment upon completion of equipment installations
9 Factory representatives shall provide on-site assistance for the BMS integration of the CITY MULTI equipment
10 Factory representatives shall provide end-user training on the CITY MULTI equipment upon completion of the installation of

01 FAN COIL SCHEDULE

N.T.S.

02 CONDENSING UNITS SCHEDULE

N.T.S.

Rooftop Unit Schedule		
Unit Configuration Data		
Tag Name	RTU-01	RTU-02
Unit Model	50FC-M28A2A5-0A0A0	50FC-M24A2A5-0A0A0
Unit Size	28 (25.0 Tons)	24 (20.0 Tons)
Unit Quantity	1	1
Volts-Phase-Hertz	208-3-60	208-3-60
Duct Configuration	Vertical Supply / Vertical Return	Vertical Supply / Vertical Return
Base Unit Length (in)	141.5	141.5
Base Unit Width (in)	86.4	86.4
Base Unit Height (in)	47.8	47.8
Base Unit Weight (lb)	2047	1873
Total Oper. Weight (lb)	0.0	0.0
Part Number	50FC-M28A2A5-0A0A0	50FC-M24A2A5-0A0A0
Unit Ratings		
ARI EER	10.00	10.20
Cooling Performance		
Actual Airflow (CFM)	6250	5200
Condenser Entering Air DB (F)	95.0	95.0
Evaporator Entering Air DB (F)	78.9	78.5
Evaporator Entering Air WB (F)	67.6	67.2
Evaporator Leaving Air DB (F)	54.2	53.7
Evaporator Leaving Air WB (F)	53.3	52.3
Gross Cooling Capacity (MBH)	275.11	235.33
Gross Sensible Cooling Capacity (MBH)	167.03	139.05
Compressor Power Input (kW)	23.37	20.19
Supply Fan		
External Static Pressure (in wg)	1.00	1.00
Total Static Pressure (in wg)	1.00	1.00
Supply Fan RPM	1422	1434
Supply Fan Power (BHP)	2.77	2.21
Maximum Continuous bHP	10	10
Electrical Data		
Rooftop MCA	129.2	95.3
Rooftop MOCP	175	125
Outside Air(cfm)	1300	1300
Accs:		
Hurricane Rated Curbs		
Manual OA Damper		

03 ROOF TOP UNITS SCHEDULE

N.T.S.

OWNER

PROPONENT

:\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

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SEAL

Jorge Antonio Torres Scandali
Ingeniero
Licenciado
Lic. 10906 PE
Puerto Rico
Fecha de Expiración: 2024-11-19

NOTA IMPORTANTE:

Yo, JORGE A. TORRES SCANDALI, INGENIERO MECANICO, LICENCIA 10906, certifico que soy el profesional que diseñó la MECANICA, en estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estos planos y especificaciones se ha cumplido cabalmente con la disputesto en la Ley 14-2004, según enmendada, conocida como la Ley para la Inversión por la Industria Puertorriqueña y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada; según aplique. Reconozco que cualquier declaración falsa o falsificación de los hechos que se hayan producido por desconocimiento o por negligencia ya sea por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGPe.

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

AIR CONDITIONING SCHEDULE

SHEET ID

AC2.1

SHEET

FILE NAME	23-078-AC2.1
PLOT DATE	01/23/24
DWG. #	FP2.1
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	-
ARCHIVO #:	23-078

DIAGRAM SYMBOL LEGEND	
DISPLAY	DESCRIPTION
——///——	POWER WIRE
————	CONTROL WIRE
————	REF. PIPE

CONT.No		PAGE	

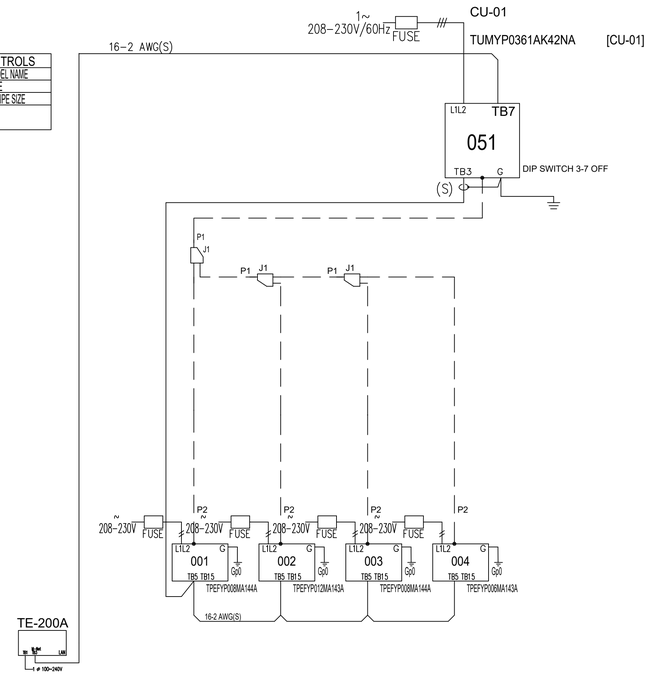
CITY MULTI
SYSTEM SCHEMATIC DWG.

This drawing is schematic in nature. Final routing of piping & wiring shall be determined by the installing contractor and/or designer of record

Additional refrigerant charge is needed depending on the size and length of extended piping. Please refer the amount of pre-charge and the formula of calculation which is mentioned on the data book.

1.25mm²(16 AWG) : 1.25mm²(16 AWG) or more. 0.75mm²(20 AWG) : between 0.5mm²(24 AWG) and 0.75mm²(20 AWG).

PIPING AND CONTROLS	
SYMBOL	BRANCH PIPE MODEL NAME
J1	CMY-Y62-G-E
SYMBOL	LIQUID PIPE/GAS PIPE SIZE
P1	3/8 " / 5/8 "
P2	1/4 " / 1/2 "



FIRST AID , KITCHEN , OFFICE , STORAGE ,
FC-01 , FC-02 , FC-03 , FC-04 ,

01	AIR CONDITIONING SYSTEM DIAGRAM
N.T.S.	

FILE NAME	23–078–AC2.2
PLOT DATE	01/23/24
DWG. #	FP2.2
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	–
ARCHIVO #:	23–078

OWNER

PROPONENT

:\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

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SEAL

NOTA IMPORTANTE:

Yo, JORGE A. TORRES SCANDALI, INGENIERO MECANICO, LICENCIA 10906, certifico que soy el profesional que diseñó la MECANICA, en estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estos planos y especificaciones se ha cumplido cabalmente con lo dispuesto en la Ley 14–2004, según enmendada, conocida como la Ley para la Inversión por la Industria Puertorriqueña y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada; según aplique. Reconozco que cualquier declaración falsa o falsificación de los hechos que se haya producido por desconocimiento o por negligencia ya sea por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGPe.

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	11/13/23
REVIEWED BY:	PF
DRAWN BY:	JIO
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

AIR CONDITIONING SYSTEM SCHEMATIC

SHEET ID

AC2.2

SHEET

AIR CONDITIONING AND VENTILATION SPECIFICATIONS

1. SCOPE

THE WORK UNDER THIS SECTION INCLUDES THE FURNISHING OF ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY FOR PROVIDING, INSTALLING AND PUTTING INTO OPERATION THE VENTILATION AND AIR CONDITIONING WORK AS SHOWN ON DRAWINGS AND SPECIFIED HEREIN.

2. GENERAL

ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE ACCOMPLISHED BY EXPERIENCED PERSONNEL IN ACCORDANCE WITH THE RECOMMENDED PRACTICE OF THE ASHRAE AND THOSE OF THE MANUFACTURER OF THE EQUIPMENT AND MATERIALS INVOLVED. THERE SHALL BE STRICK ADHERANCE TO THE CODE REQUIREMENTS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS. ALL WORK SHALL BE DONE IN A NEAT AND WORKMAN LIKE MANNER AND THE PREMISES SHALL BE LEFT CLEAN AND FREE FROM DEBRIS.

3. GENERAL CONDITIONS

THE GENERAL CONDITIONS OF THE ARCHITECT ARE HERBY MADE PART OF THESE SPECIFICATIONS AND THE CONTRACTOR SHALL ASSUME ALL OBLIGATION CONTAINED THEREIN WHICH ARE APPLICABLE TO HIS WORK. IN THESE SPECIFICATIONS THE WORD "CONTRACTOR" SHALL MEAN THE AIR CONDITIONING CONTRACTOR.

4. PERMITS AND FEES

THE CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS OR LICENSES TO CARRY OUT THIS WORK, AND HE SHALL PAY ALL LAWFUL FEES, TAXES, ETC., IN CONNECTION WITH THE WORK. HE SHALL ARANGE FOR ALL TESTS AND INSPECTIONS ON ANY OR ALL PARTS OF THE WORK REQUIRED BY THE AUTHORITIES AND ORGANIZATIONS HAVING JURISDICTION, AND HE SHALL PAY ALL CHARGES FOR SAME.

5. LAWS AND ORDINANCES

WORK TO BE PERFORMED UNDER THIS CONTRACT SHALL BE IN FULL ACCORDANCE WITH THE LAWS AND ORDINANCES PERTINENT TO SUCH WORK. IN CASE OF ANY CONFLICT WHERE IN THE METHODS OR STANDARDS OF INSTALLATION OR THE MATERIALS SPECIFIED DO NOT EQUAL OR EXCEED THE REQUIREMENTS OF THE LAWS OR ORDINANCES, THE THE LAWS OR ORDINANCES SHALL GOVERN. ANY ITEMS RQUIRED BY THE LAWS OR ORDINANCES BUT NOT SPECIFIED OR SHOWN ON THE DRAWINGS SHALL BE FURNISHED WITHOUT EXTRA CHARGE AS IF SHOWN OR SPECIFIED. THE WORDS "LAWS AND ORDINANCES" AS USED HEREIN SHALL MEAN ALL LOCAL CODES, ORDINANCES, STANDARDS, RULES, OR REGULATIONS OF ANY NATURE WHICH ARE IN ANY WAY PERTINENT TO, OR REGULATORY OVER THE WORK COVERED BY THIS SECTION OF THE SPECIFICATIONS.

6. EXAMINATION OF EXISTING CONDITIONS

A. BIDDERS, BEFORE SUBMITTING PROPOSALS, SHALL VISIT THE SITE AND CAREFULLY EXAMINE THOSE PORTIONS OF THE SITE AFFECTED BY THIS WORK SO AS TO FAMILIARIZE THEMSELVES WITH EXISTING CONDTIONS AND DIFFICULTIES THAT WILL AFFECT THE EXECUTION OF THE WORK.

B. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCES THAT SUCH EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD SUCH EXAMINATION BEEN MADE, WILL NOT BE RECOGNIZED.

7. APPROVALS

A. THE MATERIALS, WORKMANSHIP, DESIGN AND ARRANGEMENT OF ALL WORK INSTALLED UNDER THIS CONTRACT SHALL BE SUBJECTED TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE.

B. IF MATERIAL OR EQUIPMENT IS INSTALLED BEFORE IT IS APPROVED, THE CONTRACTOR SHALL BE LIABLE FOR ITS REMOVAL AND REPLACEMENT AT NO EXTRA CHARGE TO THE OWNER, IF IN THE OPINION OF THE OWNER'S REPRESENTATIVE, THE MATERIAL OR EQUIPMENT DOES NOT MEET THE INTENT OF THE DRAWINGS AND SPECIFICATIONS.

8. SHOP DRAWINGS

A. AFTER RECEIVING APPROVAL OF EQUIPMENT MANUFACTURERS, AND PRIOR TO THE DELIVERY OF ANY MATERIAL TO THE SITE, AND SUFFICIENTLY IN ADVANCE OF REQUIREMENT, TO ALLOW THE OWNER'S REPRESENTATIVE AMPLE TIME FOR CHECKING, SUBMIT FOR APPROVAL (5) COPIES OF DETAILED, DIMENSIONED SHOP OR ERECTION DRAWINGS OR CUTS, SHOWING CONSTRUCTION, SIZE ARRANGEMENT, OPERATING CLERANCES, PERFORMANCE CHARACTERISTICS AND CAPACITY OF MATERIALS AND EQUIPMENT TO BE FURNISHED. NO WORK SHALL BE INSTALLED WITHOUT THE WRITTEN APPROVAL OF SHOP DRAWINGS OR DATA.

B. SAMPLES, DRAWINGS, SPECIFICATIONS CATALOG, ETC., SUBMITTED FOR APPROVAL SHALL BE PROPERLY LABELED INDICATING SPECIFIC SERVICE OF WHICH MATERIAL OR EQUIPMENT IS TO BE USED. SECTION AND ARTICLE NUMBER OF SPECIFICATION GOVERNING, CONTRACTOR'S NAME AND NAME OF JOB.

C. CATALOG, PAMPHLETS OR OTHER DOCUMENTS SUBMITTED TO DESCRIBE ITEMS ON WHICH APPROVAL IS BEING REQUESTED, SHALL BE SPECIFIC AND IDENTIFICATION IN CATALOG, ETC., OF THOSE SUBMITTED SHALL BE CLEARLY MADE IN INK, DATA OF GENERAL NATURE WILL NOT BE ALLOWED.

D. FAILURE BY THE CONTRACTOR TO SUBMIT SHOP DRAWINGS IN AMPLE TIME FOR CHECKING SHALL NOT ENTITLE HIM TO AN EXTENSION OF CONTRACT TIME AND NO CLAIM FOR EXTENSION OF SUCH DEFAULT WILL BE ALLOWED.

E. SHOP DRAWINGS FOR SHEET METAL CONSTRUCTION (WHERE APPLICABLE) SHOULD BE MADE IN AT LEAST 1/4"=1'-0" SCALE WITH SECTION AND DETAILS IN 3/8"=1'-0" SCALE AND THESE DRAWINGS SHOULD BE SUBMITTED FOR APPROVAL BEFORE CONSTRUCTION OF DUCTS INSTALLED WITHOUT APPROVAL SHALL BE MADE ON THE AIR CONDTIONING CONTRACTOR'S BEHALF.

9. DISCREPANCIES

A. WHERE ANY DISCREPANCIES EXIST BETWEEN THE DRAWINGS AND THE SPECIFICATIONS OR WITHIN THE SPECIFICATIONS OR ON THE DRAWINGS, THEY SHALL BE REFERRED TO THE OWNER'S REPRESENTATIVE, FOR DECISION AS TO THE INTENTION, AND IN EACH CASEHIS DECISION SHALL BE FINAL.

B. THE CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AT THE BUILDING. NO EXTRA CHARGES WILL BE GRANTED BECAUSE OF DIFFERENCES BETWEEN ACTUAL JOB DIMENSIONS AND MEASUREMENTS INDICATED ON THE DRAWINGS. ANY DIFFERENCES WHICH MAY BE ENCOUNTERED SHALL BE SUBMITTED WITH THE WORK.

10. TESTS

A. THE CONTRACTOR SHALL CONDUCT SUCH TEST AND ADJUSTMENTS OF EQUIPMENT AS SPECIFIED OR NECESSARY TO VERIFY THE PERFORMANCE REQUIREMNTS AND DEMONSTRATE TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE THAT THE EQUIPMENT IS MECHANICALLY SOUND, THAT THE SYSTEM DELIVERS RATED OUTPUT WITHOUT OBJECTIONABLE NOISE DISTRESS OR VIBRATION AND THAT THE AUTOMATIC TEMPERATURE CONTROLS ARE FUNCTIONING PROPERLY.

B. ALL TEST SHALL BE MADE AT A TIME ACCEPTABLE TO THE OWNER'S REPRESENTATIVE AND IN HIS PRESENCE AND AS REQUIRED BY THE GOVERMENT REGULATIONS. THE CONTRACTOR SHALL SUBMIT DATA TAKEN DURING SUCH TESTS TO THE OWNER'S REPRESENTATIVE.

C. EQUIPMENT, INSTRUMENTS AND SERVICES REQUIRED TO PERFORM TESTING SHALL BE FURNISHED BY THE CONTRACTOR AND HE SHALL PAY ALL PROFESSIONAL ENGINEERING FEES INVOLVED IN REQUIRED TESTING OF EQUIPMENT.

11. GUARANTEE

A. THE CONTRACTOR GURANTEES BY HIS ACCEPTANCE OF THE CONTRACT THAT ALL WORK INSTALLED WILL BE FREE FROM ANY AND ALL DEFECTS IN WORKMANSHIP AND MATERIALS AND THAT ALL APPARATUS WILL DEVELOP CAPACITIES AND CHARACTERISTICS SPECIFIED.

B. PRIOR TO FINAL ACCEPTANCE THE CONTRACTOR SHALL FURNISH THE OWNER A WRITTEN GURANTEE THAT HE WILL MAKE GOOD AT HIS OWN EXPENSE ALL DEFECTS IN MATERIALS, WORKMANSHIP OR PERFORMANCE FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE. IN DEFAULT THEREOF, THEOWNER'S REPRESENTATIVE MAY HAVE SUCH WORK DONE AND CHARGE COST TO THE CONTRACTOR.

C. THE CONTRACTOR SHALL ALSO FURNISH THE OWNER A WRITTEN CERTIFICATE THAT HE WILL FURNISH FREE INSPECTION, ADJUSTMENT AND REPAIR SERVICE FOR A PERIOD OF 90 DAYS FROM DATE OF ACCEPTANCE.

12. CUTTING AND PATCHING

A. THE CONTRACTOR SHALL FURNISH, LOCATE AND INSTALL ALL SLEEVES AND INSERTS REQUIRED BEFORE THE FLOORS AND WALLS ARE BUILT AND SHALL BE RESPONSIBLE FOR THE COST OF PATCHING REQUIRED FOR PIPES OR DUCTS WHERE SLEEVES AND INSERTS ARE NOT INSTALLED, OR WHERE INCORRECTLY LOCATED. THE CONTRACTOR SHALL DO ALL DRILLING REQUIRED FOR THE INSTALLATION OF HANGERS SLEEVES, PIPES AND DUCTS.

B. WHERE REQUIRED, THE CONTRACTOR SHALL MAKE ANY NECESSARY HOLES IN THE ROOF, FLOORS AND WALLS FOR PASSING OF PIPE AND DUCTWORK. THIS CUTTING SHALL BE MADE WITH EXTREME CAUTION SO AS TO REDUCE DAMAGE TO A MINIMUM. ALL HOLES SHALL BE SUITABLY PATCHED AFTER INSTALLAION OF EQUIPMENT TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE. ANY PERFORATION IN THE ROOF SHALL BE WEATHER PROOFED AND WATER TIGHT.

C. ALL HOLES OUT THROUGH CONCRETE SLABS OR ARCHES SHALL BE PUNCHED OR DRILLED FROM THE UNDERSIDE. NO STRUCTURAL MEMBERS SHALL BE CUT WITHOUT THE APPROVAL OF THE OWNER'S REPRESENTATIVE AND ALL SUCH CUTTING SHALL BE DONE IN A MANNER DIRECTED BY HIM.

13. CLEANING

ALL DIRT, RUBBISH, GREASE, OR STAIN DUE TO THE OPERATION OF THE CONTRACTOR SHALL BE REMOVED FROM ALL FLOORS, WALLS, FIXTURES, EQUIPMENT, ETC., BY HIM AND THE PREMISES LEFT IN PERFECT CONDTION AS FAR AS HIS WORK IS CONCERNED. UNLES OTHERWISE SPECIFIED, ALL MECHANICAL EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL SET AND CONNECTED, READY FOR OPERATION, AND SUCH EQUIPMENT SHALL BE CLEANED, LEAVING THE BUILDING READY FOR OCCUPANCY. ANY EQUIPMENT THAT CANNOT BE RESTORED TO ITS ORIGINL APPERANCE BY CLEANING, SHALL BE PAINTED AT THE EXPENSE OF THE CONTRACTOR.

14. ELECTRICAL WIRING AND MOTORS

A. CONTROL WIRING AND CONDUIT SHALL BE INCLUDED AS A PART OF THIS CONTRACT EXCEPT THAT WHICH IS PART OF THE INTERNAL WIRING OF THE MOTOR CONTROL CENTERS.

B. THE ELECTRICAL CONTRACTOR SHALL TERMINATE HIS WORK AT THE POINT INDICATED IN THE PLANS AND SHALL SUPPLY AND INSTALL ONLY THOSE ITEMS INDICATED ON THE ELECTRICAL DRAWINGS. THE AIR CONDITIONING CONTRACTOR SHALL SUPPLY AND INSTALL THOSE PARTS OF THE ELECTRICAL WIRING INDICATED IN THE AIR CONDITIONING PLANS AND SPECIFICATIONS.

C. THE AIR CONDITIONING CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINAL CONNECTION OF ALL MECHANICAL EQUIPMENT TO THE POWER SOURCE SUPPLIED BY THE ELECTRICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL BRING POWER WIRING ORIGINATING AT THE DISCONNECT SWITCHES OR JUNCTION BOXES SHOWN ON THE ELECTRICAL DRAWINGS AND RUNNING TO THE EQUIPMENT.

D. THE AIR CONDITONING CONTRACTOR CAN REQUEST FROM THE ELECTRICAL CONTRACTOR THE CONNECTION OF THE EQUIPMENT AND CONTROL WIRING AND CONDUIT AND SHALL SUPERVISE THEM. THE START UP OF ANY MECHANICAL EQUIPMENT SHALL BE RESPONSABILITY OF THE AIR CONDITIONING CONTRACTOR AND SHALL ALWAYS BE DONE BY HIM.

E. CONNECT MOTORIZED DAMPER TO A/C UNIT ELECTRICAL POWER.

15. FILTERS

A. ALL FILTERS SHALL HAVE A U.L. RATING OF CLASS II.

B. DO NOT OPERATE ANY AIR HANDLING SYSTEM WITHOUT FILTERS IN PLACE DURING THE CONSTRUCTION PERIOD. ON SYSTEM WITH HI-EFFICIENCY FILTERS, PRE-FILTERS DURING CONSTRUCTION.

C. REMOVE ALL FILTERS USED DURING THE CONSTRUCTION PERIOD AND REPLACE WITH NEW FILTERS PRIOR TO FINAL ACCEPTANCE BY THE OWNER.

16. BALANCING OF AIR SYSTEM

A. THE AIR CONDITIONING CONTRACTOR SHALL PROVIDE AIR AND SYSTEM BALANCING TWO COPIES OF THE CERTIFIED BALANCING REPORT SHALL BE PREPARED AND SUBMITTED TO THE ENGINEER AND OWNER.THE BALANCING SHALL INCLUDE:

1. MAKE ANY CHANGES REQUIRED IN THE PULLEYS OR BELTS TO OBTAIN CFM.

2. RECORD MOTOR FULL LOAD AMPS.

3. MAKE PITOT TUBE TRANSVERSE OF MAIN SUPPLY DUCT AND OBTAIN DESIGN CFM AT FAN.

4. RECORD SYSTEM STATIC PRESSURE, SUCTION AND DISCHARGE.

17. SCOPE OF WORK – AIR CONDITIONING INSTALLATION

A. THE WORK TO BE PERFORMED INCLUDES. ALTHOUGHT IT IS NOT LIMITED TO THE FOLLOWING:

1. INSTALL THE NEW AIR DITRIBUTION DUCTS AND ACCESSORIES SHOWN ON THIS DRAWINGS.

2. INSTALL THE UNIT'S THERMOSTAT.

3. BALANCE THE AIR AS PER THE DESIGN CONDTIONS.

18. DUCTWORK (SUPPLY AND RETURN)

A. ALL DUCTWORK SHALL BE MADE OF GALVANIZED SHEET METAL, BUILT AND INSTALLED AS PER THE LATEST EDITION OF SMACNA'S "LOW PRESSURE DUCT CONSTRUCTION STANDARD".

B. RECTANGULAR ELBOWS SHALL HAVE DOUBLE THICKNESS VANES.

C. ROUND ELBOWS AND OFF-SETS SHALL HAVE AN INSIDE RADIUS OF CURVATURE EQUAL TO THE DUCT WIDTH.

D. DUCT HANGERS CAN BE ON TRAPEZE OR STRP TYPE. WIRE HANGER WILL NOT BE ACCEPTED.

E. ACCESS DOORS – INSTALLED AT ALL DUCT MOUNTED INSTRUMENTATION, SPLITTER DAMPERS AND OPPOSED BLADE DAMPERS (O.B.D.). THEY SHALL BE INSULATED AND EQUAL TO "VENTLOCK ACCESS DOORS".

F. FLEXIBLE CONNECTIONS – INSTALL AT INLET AND DISCHARGE OF FANS WHERE THEY CONNECT TO THE DUCTWORK.

G. SPLITTER DAMPERS – INSTALL AT ALL SUPPLY DUCT SPLITS. THEY SHALL BE MADE OF GALVANIZED STEEL NO LIGHTER THAN 18GA. DAMPERS SHALL BE SECURELY HINGED AND CONSTRUCTED WITH 3/8" STEEL TIE RODS. SPLITTER LENGTHS SHALL NOT BE LESS THAN 1.5 TIMES THE WIDTH OF THE SMALLER DUCT SERVED.

H. DUCT SEALING – ALL DUCTWORK EXPOSED TO THE WEATHER (WHETHER INSULATED OR NOT) SHALL BE THOROUGHLY SELAED DURING FABRICATION WITH "EPOLUX MFG. CO. CADASEAL 700" HIGH VELOCITY DUCT SEALER, OR EQUAL. AFTER ERECTION, APPLY SEALANT TO ALL LONGITUDINAL AND CIRCUMFERENTIAL DUCT JOINTS. WAIT UNTIL DUCT SEALANT HAS COMPLETELY DRIED BEFORE INSTALLING INSULATION WHERE REQUIRED.

I. OPPOSED BLADE DAMPERS – USED FOR BALANCING SHALL BE OF GALVANIZED SHEET METAL CONSTRUCTION WITH BLADE LINKAGE MOUNTED EXTERNAL TO THE AIR STREAM.

19. NEW DUCTWORK INSULATION (SUPPLY AND RETURN)

A. DUCTWORK ROUTED INSIDE THE BUILDING – JOHN-MANSVILLE "MICROLITE" 2 INCH THINK WRAP AROUND INSULATION WITH FSK MOISTURE BARRIER.

B. DUCTWORK ROUTED OUTDOORS – PITTSBURG/CORNING FOAM GLASS, 2 INCHES THICK, OR EQUAL.

C. WEATHER PROOFING:

1. FOR MECHANICAL FASTENERS USE NYLON TUFF-WELD STICK CLIPS ADHERED WITH TUFF-BOND QUICK SET ADHESIVE, OR EQUAL.

2. FOR SEALANT USE SIKA PROOF.

3. FOR REINFORCING CLOTH USE 10 X 10 MESH GLASS FABRIC; BENJAMIN FOSTER MAST-A-FAB, OR APPROVED EQUAL.

4. FOR MASTIC USE RUST OLEUM LEAK SEAL WHITE SPRAY OR APPROVED EQUAL.

20. AIR DEVICES (SUPPLY AND RETURN)

A. AIR DISTRIBUTION DEVICES SHALL BE EQUAL TO ALL ALUMINIUM CONSTRUCTION. MODEL NUMBERS AS NOTED BELOW:

1. OPPOSED BLADE DAMPER (O.B.D.): SHALL BE EQUAL TO TUTTLE & BAILEY, MODEL OBD-D WITH SIZE AS SHOWN ON DRAWINGS.
2. VOLUME DAMPER (VD): SHALL BE EQUAL OR SIMILAR TO NCA PBD
3. FIRE DAMPER (FD): SHALL BE EQUAL TO NCA CURTAIN TYPE MODEL FD-A
4. DUCT ACCESS DOOR (AD): SHALL BE EQUAL TO NCA. ADH
5. SUPPLY VAV DIFUSSER: SHALL BE EQUAL TO ACCUTHERM-T.H.C. 24 X 24" -8" NECK-MIB
6. RETURN AIR GRILLE: SHALL BE EQUAL TO TUTTLE & BAILEY MODEL. CRE-LT-24" X 24" L-QT-02-MP

NECK SIZE	RANGE
	CFM
6"	100-160
8"	160-260
10"	260-450

7. DOOR GRILLE (DG): SHALL BE EQUAL TO TUTTLE & BAILEY ADXFR
8. OUTSIDE AIR INTAKE LOUVER (OAI): SHALL BE EQUAL TO NCA MODEL XAD-GMD

FILE NAME	23-078-AC2.3
PLOT DATE	01/26/24
DWG. #	FP2.3
DESIGNER	J.T.S.
APPROVING	J.T.S.
DRAFTSMAN	–
ARCHIVO #:	23-078

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

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SEAL

Jorge Antonio Torres Scandali
Ingeniero Licenciado
Lic. 10906 PE
Puerto Rico
Fecha de Expiración: 2024-11-19

NOTA IMPORTANTE:

Yo, JORGE A. TORRES SCANDALI, INGENIERO MECANICO, LICENCIA 10906, certifico que soy el profesional que diseñó la MECANICA, en estos planos y las especificaciones complementarias. También, certifico que entiendo que dichos planos y especificaciones cumplen con las disposiciones aplicables del Reglamento Conjunto y las disposiciones aplicables de los Reglamentos y Códigos de Construcción Vigentes de las Agencias, Juntas Reglamentadoras o Corporaciones Públicas con jurisdicción. Certifico, además, que en la preparación de estos planos y especificaciones se ha cumplido cabalmente con lo dispuesto en la Ley 14-2004, según enmendada, conocida como la Ley para la Inversión por la Industria Puertorriqueña y con la Ley Núm. 319 de 15 de mayo de 1938, según enmendada; Ley Núm. 96 de 6 de julio de 1978, según enmendada; según aplique. Reconozco que cualquier declaración falsa o falsificación de los hechos que se haya producido por desconocimiento o por negligencia ya sea por mí, mis agentes o empleados, o por otras personas con mi conocimiento, me hacen responsable de cualquier acción judicial y disciplinaria por la OGPe.

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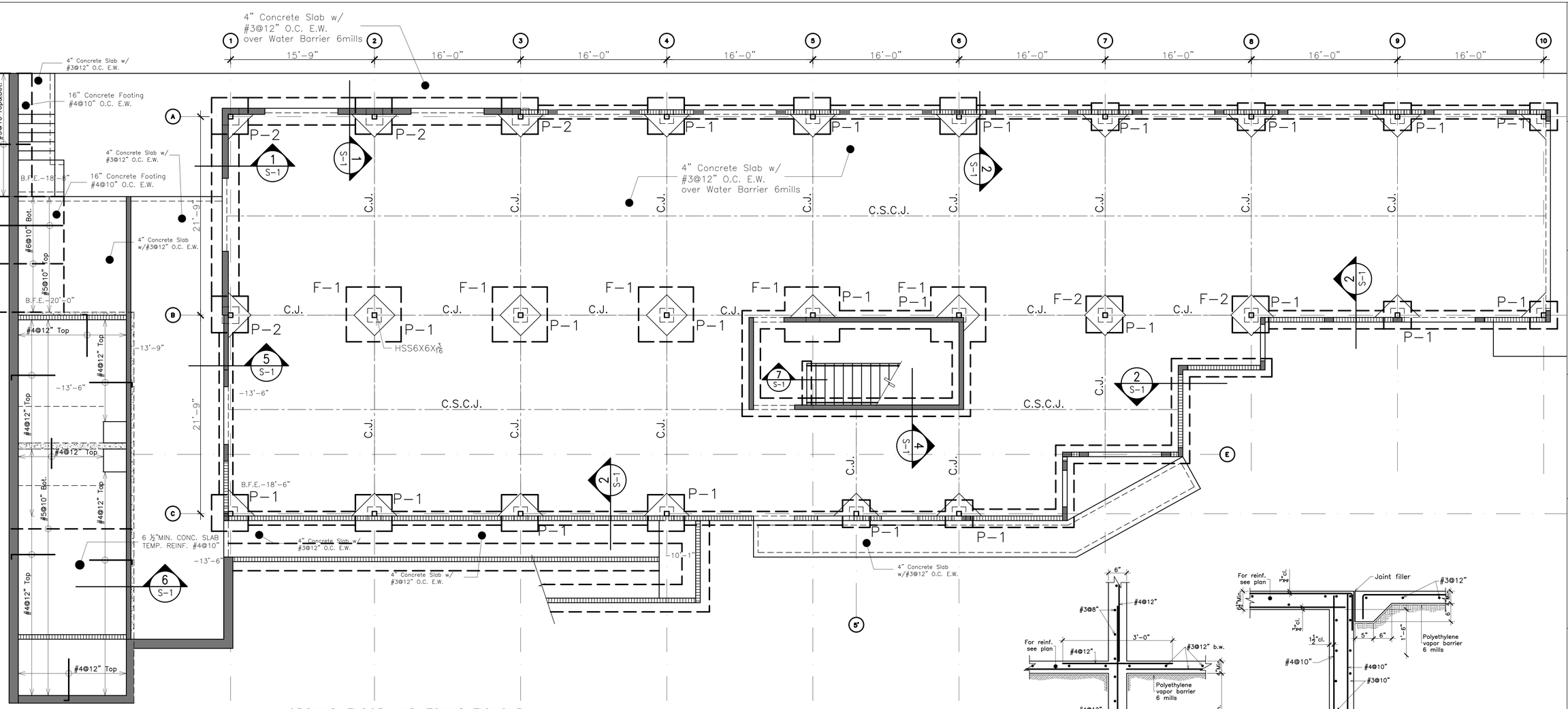
SHEET TITLE

AIR CONDITIONING SPECIFICATION

SHEET ID

AC2.3

SHEET



GROUND FLOOR AND FOUNDATIONS PLAN
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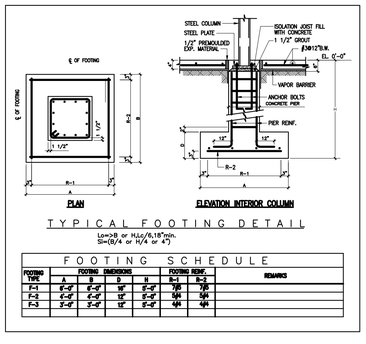
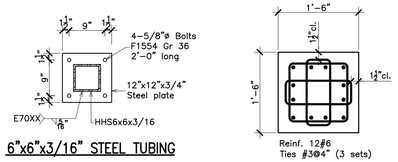


TYPICAL FOOTING DETAIL

Lo=>B or H;Lo/6.18"min.
Si=(B/4 or H/4 or 4")

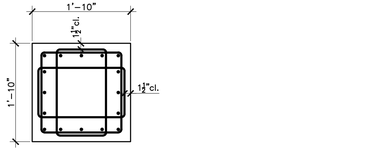
FOOTING SCHEDULE

FOOTING TYPE	FOOTING DIMENSIONS A	B	D	H	FOOTING REINF. B-1	B-2	REMARKS
F-1	6'-0"	6'-0"	16"	2'-0"	7#8	7#8	
F-2	6'-0"	6'-0"	12"	2'-0"	5#8	5#8	
F-3	3'-0"	3'-0"	12"	2'-0"	4#4	4#4	



6"x6"x3/16" STEEL TUBING BASE PLATE DETAIL
(SCALE: 3/4"=1'-0")

P-1



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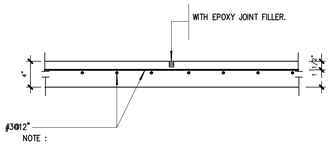
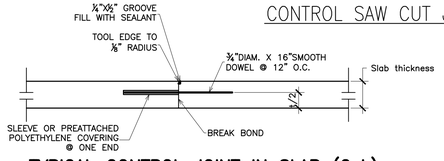
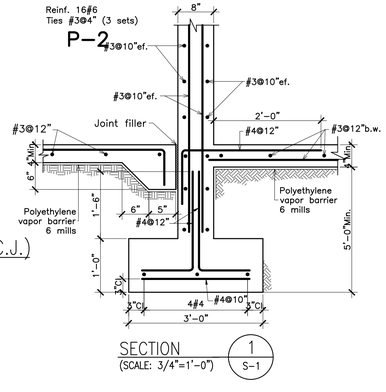


NOTE :
JOINT SHALL BE SAWED AS SOON AS THE CONCRETE IS HARD ENOUGH NOT TO BE TORN OR DAMAGE BY THE BLADE BUT BEFORE RANDOM CRACKS CAN FORM IN THE CONCRETE SLAB.

CONTROL SAW CUT JOINT FOR SLAB OR TOPPING (C.S.C.J.)



TYPICAL CONTROL JOINT IN SLAB (C.J.)



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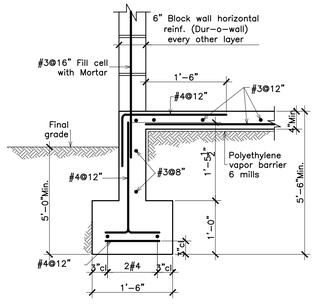

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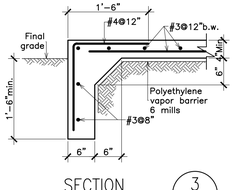

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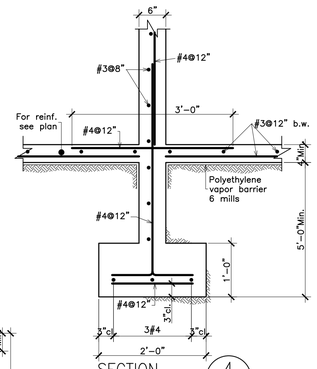

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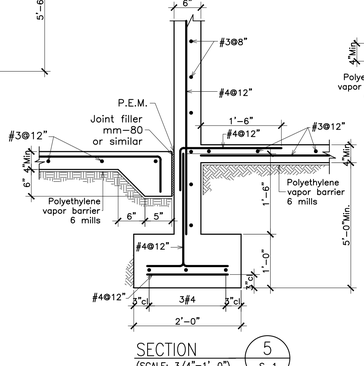

SECTION (5 / S-1)
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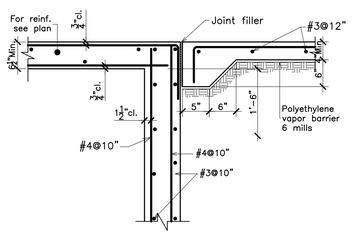

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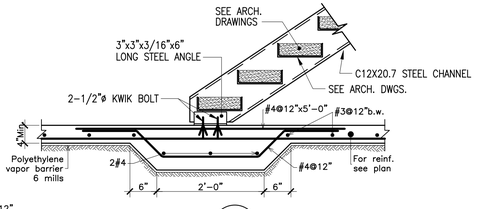
(SCALE: 3/4"=1'-0")



SECTION (7 / S-1)
(SCALE: 3/4"=1'-0")

NOTES:
1) CONTRACTOR SHALL VERIFY ALL DIMENSIONS WITH MANUFACTURER DRAWINGS, ANY SUBSTANTIAL DIFFERENCE SHALL BE NOTIFY TO STRUCTURAL ENGINEER (H.A.G.E.) PRIOR TO ANY CONSTRUCTION.

OWNER

PROPONENT

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

HECTOR A. GONZALEZ QUIÑONES
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P.O. BOX 192344, San Juan
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SEAL

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: 2/21/25
REVIEWED BY: HAG
DRAWN BY: HAG
DESIGNED BY: -
BRA PROJECT NUMBER:

SHEET TITLE

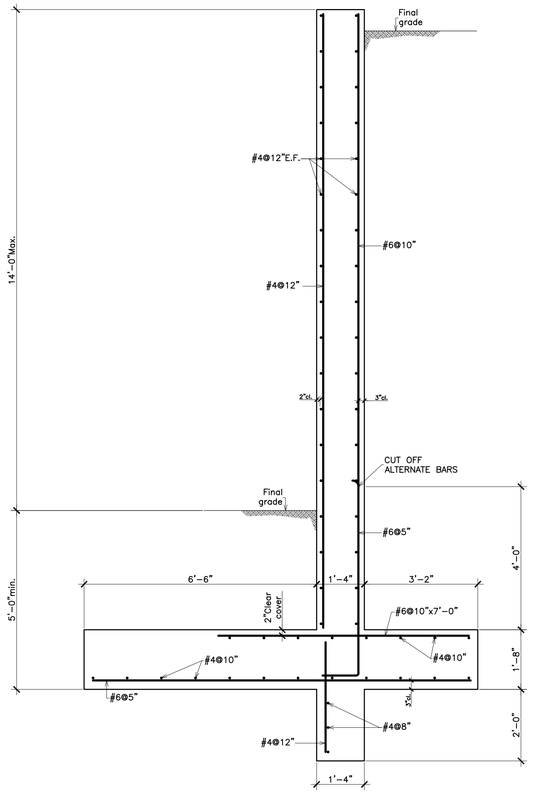
GROUND FLOOR AND FOUNDATION PLAN, SECTIONS AND DETAILS.

SHEET ID

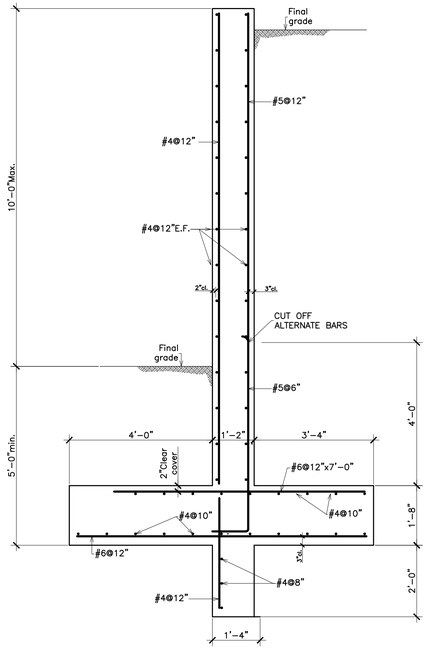
3/16"=1'-0"

SHEET

S-1A



14'-0" MAXIMUN HEIGHT RETAINING WALL TYPICAL SECTION
(SCALE: 3/4"=1'-0")



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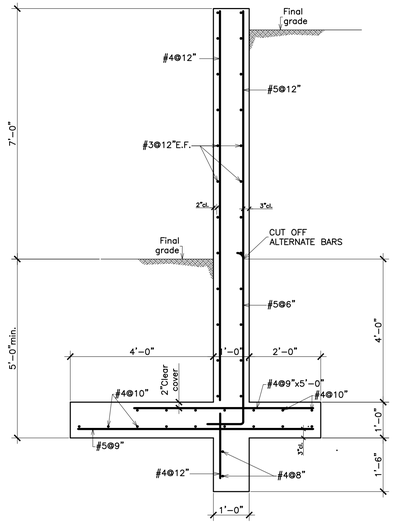

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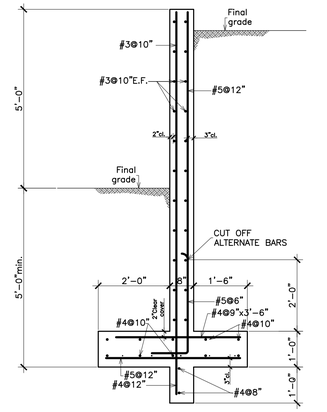

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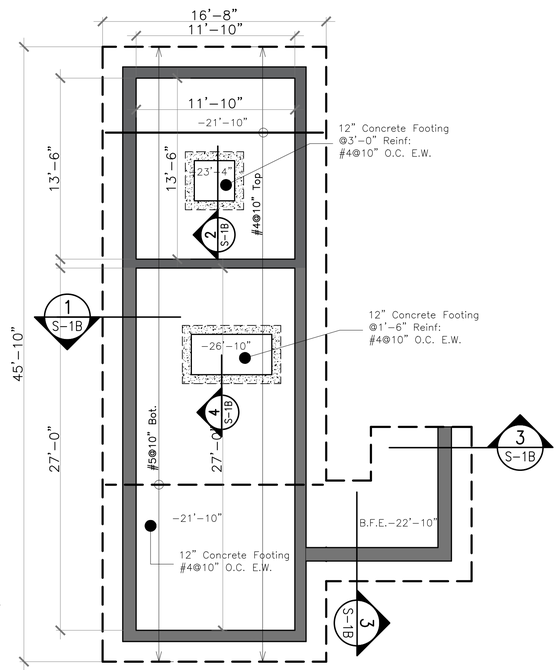
(SCALE: 3/4"=1'-0")



CISTERN FOUNDATIONS PLAN
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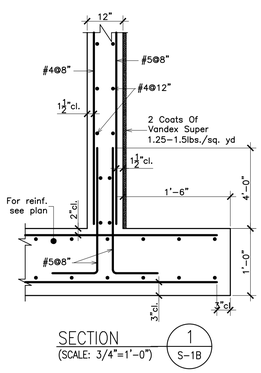
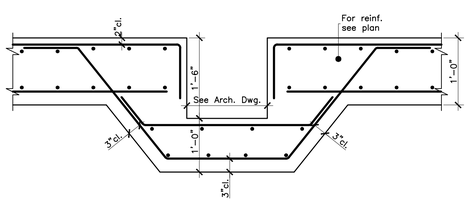


SECTION (1 / S-1B)
(SCALE: 3/4"=1'-0")



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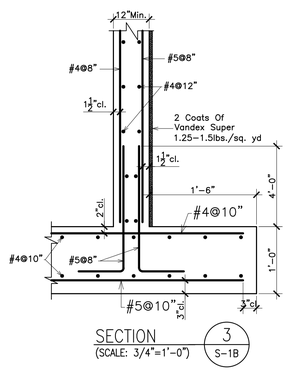

SECTION (3 / S-1B)
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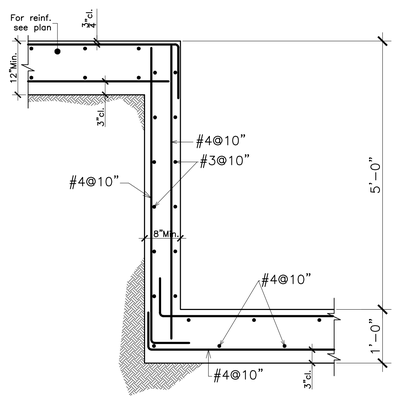

SECTION (4 / S-1B)
(SCALE: 3/4"=1'-0")

NOTES:
1) CONTRACTOR SHALL VERIFY ALL DIMENSIONS WITH MANUFACTURER DRAWINGS, ANY SUBSTANTIAL DIFFERENCE SHALL BE NOTIFY TO STRUCTURAL ENGINEER (H.A.G.E.) PRIOR TO ANY CONSTRUCTION.

OWNER

PROPONENT

\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA
ARCHITECTS AND
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REVISIONS

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SHEET TITLE

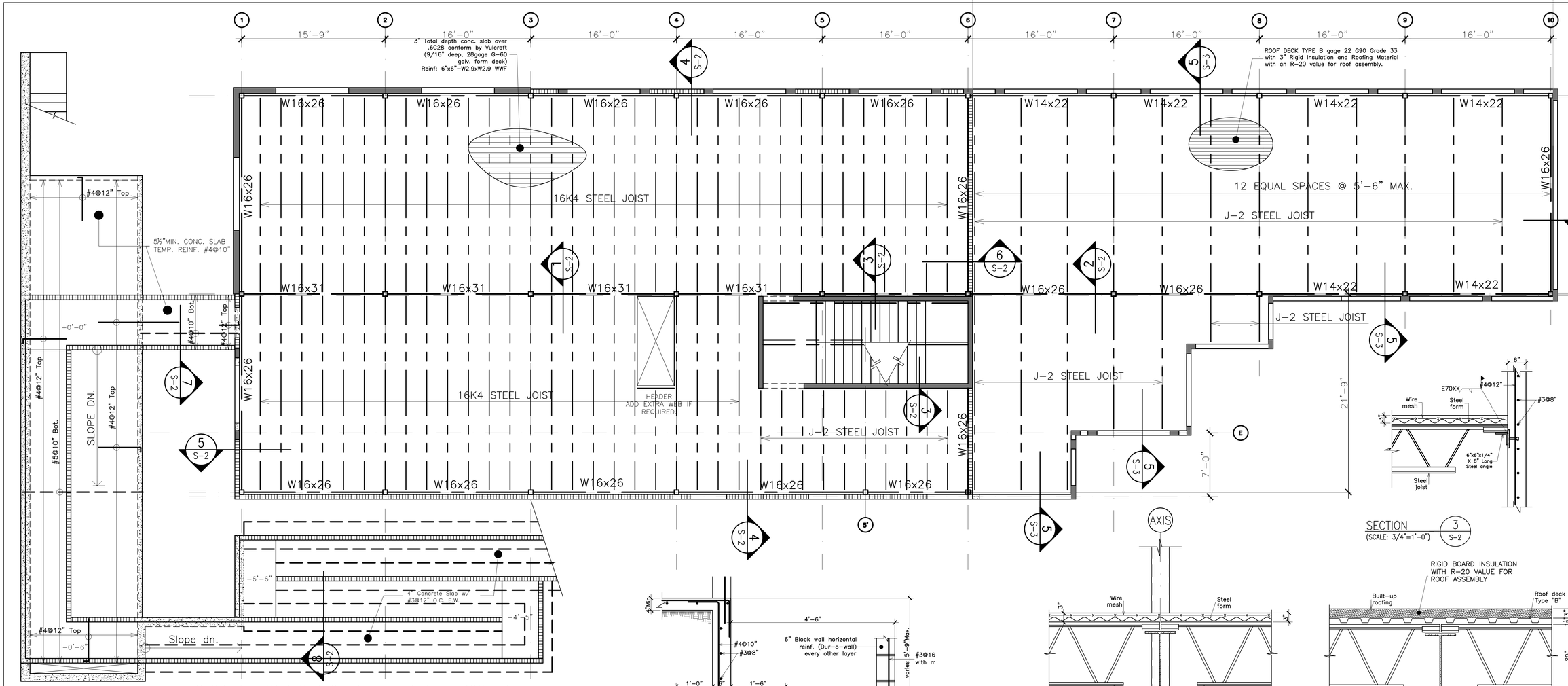
GROUND FLOOR AND FOUNDATION PLAN, SECTIONS AND DETAILS.

SHEET ID

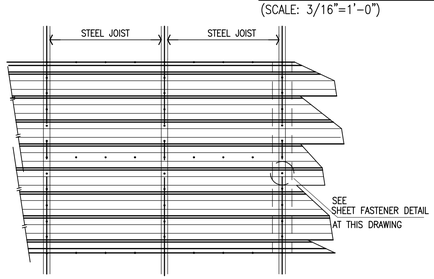
3/16"=1'-0"

SHEET

S-1B



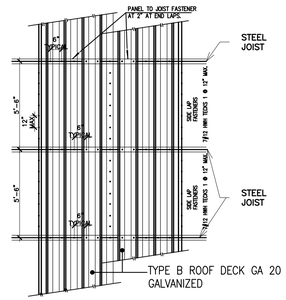
SECOND FLOOR STRUCTURAL AN PARTIAL ROOF PLAN
(SCALE: 3/16"=1'-0")



NOTES FOR SECOND FLOOR PLAN:

1- ALL CONCRETE OVER JOIST, BEAMS, ETC. SHALL BE PLACED ON GALVANIZED STEEL FORM.
2- GALVANIZED STEEL FORM SHEETS ARE 31"WIDE AND LAP 1" ON SIDE FOR A COVER WITH OF 30" CORRUGATION PITCH AS 2 1/2" AND DEPHT 9/16".
3- TENSILFORM SHALL BE PLACED WITH EDGES UP AND FLUTES AT RIGHT ANGLES TO SUPPORTS.
4- SHEETS SHOULD BE PLACED END TO END ALONG ON SIDE OF THE BUILDING.
5- END LAPS SHALL ALWAYS OCCUR OVER SUPPORTING MEMBERS AND SHOULD BE CENTERED OVER THE SUPPORT.
6- MINIMUM END LAPS IS 2" FOR WELDED ATTACHMENT AND IS EQUAL TO TOP CHORD OF SUPPORT FOR CLIP ATTACHMENT. ALL SHEETS SHALL BE LAPPED ONE LAP FLUTE AT SIDE LAPS.
7- SHEETS SHALL BE ATTACHED TO TOP CHORD OF SUPPORTS BY PLUG WELDING THROUGH SPECIAL WASHER OR BY SELF DRILLING OR SELF TAPPING SCREWS.
8- TO PREVENT CONCRETE LEAKAGE AT SIDE LAPS, CONCRETE SHOULD BE PLACED IN THE OPPOSITE DIRECTION TO WHICH SHEETS WERE ERECTED SO THAT TOP SHEET AT LAP RECEIVES PLACEMENT OF CONCRETE FIRST.

INSTALLATION DETAIL OF STEEL DECK AT FLOOR
(NOT TO SCALE)

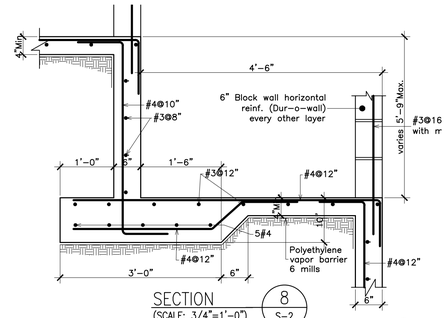


INSTALLATION DETAIL OF STEEL ROOF DECK
(NOT TO SCALE)

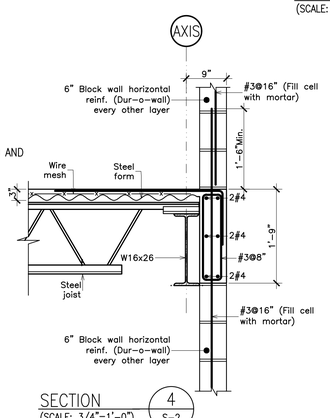
INSTALLATION INSTRUCTIONS

1- STEEL DECK PLATES SHALL SPAN AT LEAST 3 JOIST.
2- DECK SHEETS SHOULD BE PLACED IN ACCORDANCE WITH APPROVED ERECTION LAYOUT DRAWINGS SUPPLIED BY THE DECK MANUFACTURE'S STANDARS AND SHALL BE ERECTED BEGINING AT THE LOW SIDE TO INSURE THAT END LAPS ARE SHINGLE FASHION.
3- END LAPS SHALL BE 2" MINIMUM AND SHOULD OCCURS OVER SUPPORT.
4- ALL LAPS SHALL BE CENTER DIRECTLY OVER JOIST
5- ALL FASTENERS SHALL BE IN ACCORDANCE WITH MANUFACTURE'S SPECIFICATION AND ERECTION LAYOUTS.
6- SUPPORT FASTENERS .36 / 7@12 S-MD 12-24 x 1 5/8 M HWH5 BY HILTI @ 6" c.-c. (24/5 PATTERN FOR 24" WIDE PANELS).

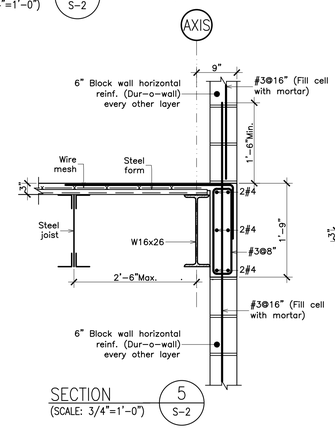
NOTES :
DECK SHALL BE FASTENED TO JOIST TO RESIST AN UPLIFT PRESSURE OF 133PSF THE FIRST 13'-0" FROM EDGES 98PSF ACTING ELSEWHERE.



SECTION 8 (S-2)
(SCALE: 3/4"=1'-0")



SECTION 4 (S-2)
(SCALE: 3/4"=1'-0")



SECTION 5 (S-2)
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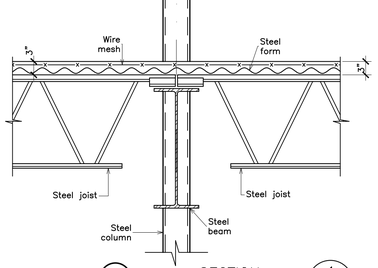

SECTION 1 (S-2)
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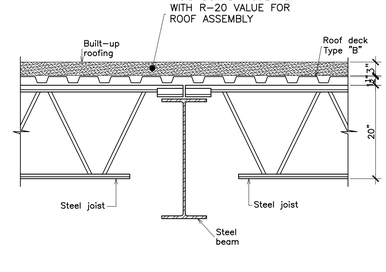

SECTION 2 (S-2)
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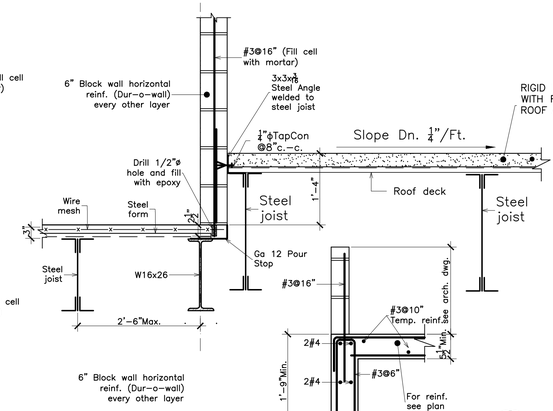

SECTION 6 (S-2)
(SCALE: 3/4"=1'-0")

SECTION 7 (S-2)
(SCALE: 3/4"=1'-0")

NOTES:

1) CONTRACTOR SHALL VERIFY ALL DIMENSIONS WITH MANUFACTURER DRAWINGS. ANY SUBSTANTIAL DIFFERENCE SHALL BE NOTIFY TO STRUCTURAL ENGINEER (H.A.G.E.) PRIOR TO ANY CONSTRUCTION.

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

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PROJECT INFORMATION

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BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	2/21/25
REVIEWED BY:	HAG
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BRA PROJECT NUMBER:	

SHEET TITLE

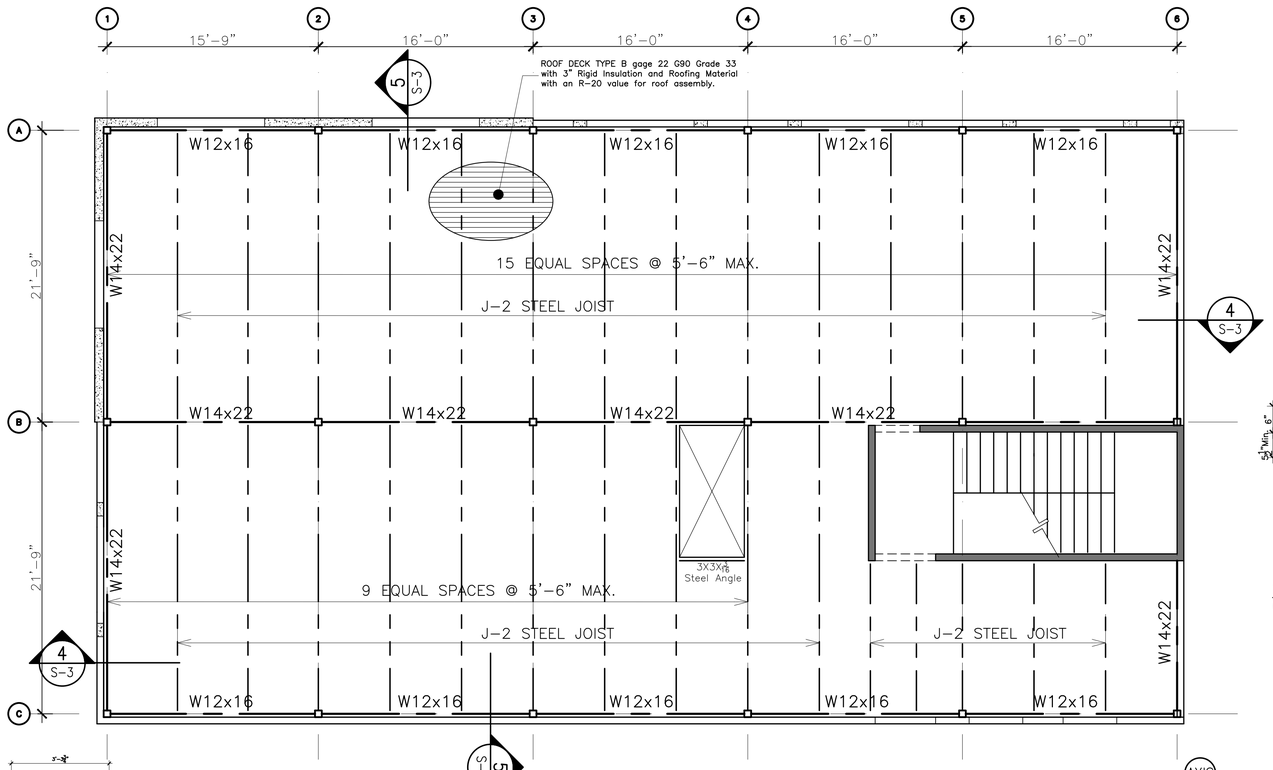
SECOND FLOOR STRUCTURAL AND PARTIAL ROOF PLAN AND DETAILS.

SHEET ID

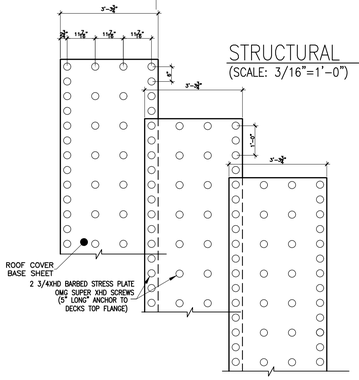
3/16"=1'-0"

SHEET

S-2



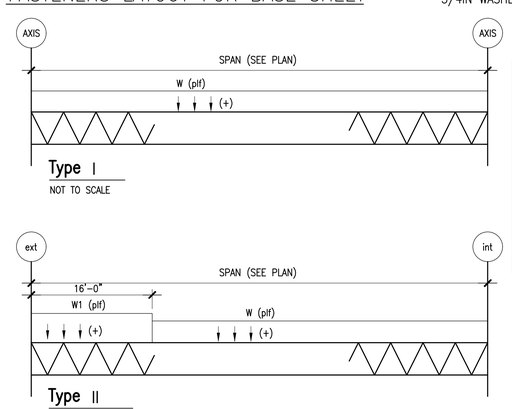
STRUCTURAL ROOF PLAN
(SCALE: 3/16"=1'-0")



FASTENERS LAYOUT FOR BASE SHEET

ROOF ASSEMBLY

1-ROOF AND FLASHING SHALL COMPLY WITH THIS ASSEMBLY AS NOTED.
- CAP PLY: ESTERDAM RM-5 POLYETHYLENE FILM.
- SECUREMENT (SHEET LAP) TORCHED
- SECUREMENT FROM 1. CAP PLY TO 3. BASE PLY TORCHED
- BASE PLY: GLASDAN R36 POLYETHYLENE FILM.
- SECUREMENT (SHEET LAP) TORCHED
- BASE SHEET: ESTERDAM R36 POLYETHYLENE FILM.
- SECUREMENT (SHEET LAP) FASTENED (SEE DETAIL)
- SECUREMENT (BASE SHEEET) FROM BASE SHEET TO (DECK) STEEL
  - 2 3/4XHD BARBED STRESS PLATE
  - OMG SUPER XHD SCREWS @ 12" BOTH WAYS STAGERED AT GA 22
- INSULATION (BOARD STOCK) HUNTER PANEL H-SHIELD
- STEEL DECK GA 22
- STEEL DECK LAP SCREWS #12 HWH TEKS 1 @ 12" C.-C.
- SECUREMENT DECK TO STEEL STRUCTURE #12HWH TEKS 5 W/ 3/4IN WASHERS @ 6" C.-C.



STEEL JOIST TABLE

MK'D	D	TYPE	DL+LL (PLF)		LL (PLF)		WL-DL (PLF)		WL+DL (PLF)		WEIGHT
			W	W1	W	W1	W	W1	W	W1	plf
J-1	20"	I	330	N/A	220	N/A	-145	N/A	170	N/A	7
J-2	20"	II	330	330	220	220	-150	-215	225	225	8
J-3	20"	I	330	N/A	220	N/A	-215	N/A	225	N/A	7
J-4	20"	I	330	N/A	220	N/A	-250	N/A	265	N/A	7

LEGEND:

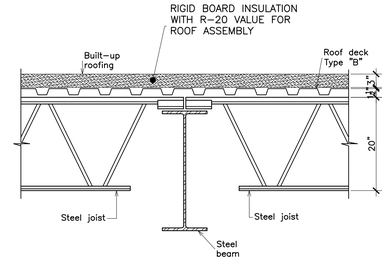
DL = DENOTES DEAD LOAD (STEEL JOIST SELF WEIGHT NOT INCLUDED), DOWN FORCE

LL = DENOTES LIVE OR ACCIDENTAL LOAD, DOWN FORCE

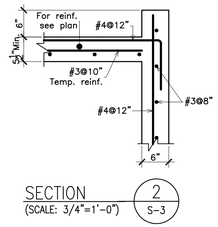
WL-D = DENOTES NET UPLIFT FORCE

WL+D = DENOTES NET DOWN FORCE

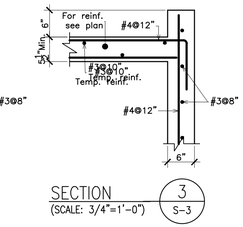
NOTES :
ROOF MEMBRANE INSTALLED FOR IMPERMEABILIZATION AND CLIMATE CONTROL PURPOSE SHALL BE ANCHORAGE TO RESIST A NORMAL TO SURFACE LOAD OF 110 PSF ACTING INWARD OR OUTWARD. WALL COMPONENTS AND THEIR CONNECTIONS, BLOCK WALLS, DOORS, WINDOWS, PERMANENT TERRACE COVERS, NON-RETACTABLE SHADES CURTAINS AND ALL ARCHITECTURAL COMPONENTS SHALL RESIST A NORMAL TO SURFACE LOAD OF 90 PSF (INWARD OR OUTWARD) AT EDGES AND 65 PSF (INWARD OR OUTWARD) ELSEWHERE.



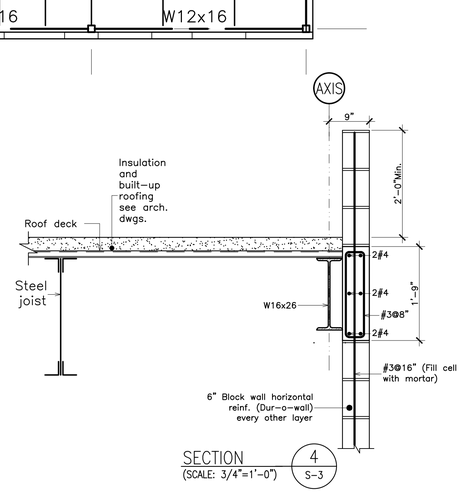
SECTION 1 S-3
(SCALE: 3/4"=1'-0")



SECTION 2 S-3
(SCALE: 3/4"=1'-0")



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



SECTION 4 S-3
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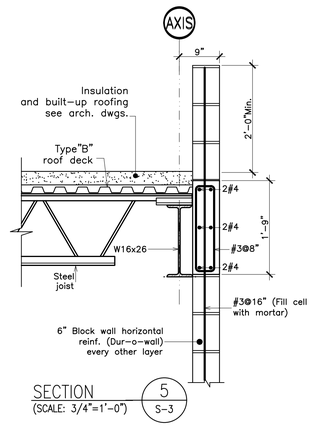
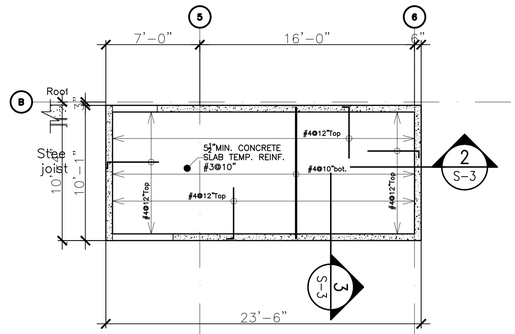
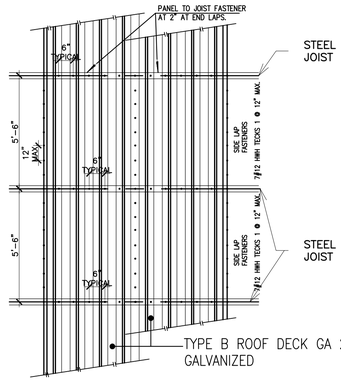


SECTION 5 S-3
(SCALE: 3/4"=1'-0")



STRUCTURAL ROOF PLAN
(SCALE: 3/16"=1'-0")



DETAIL

INSTALLATION DETAIL OF STEEL ROOF DECK
(NOT TO SCALE)

INSTALLATION INSTRUCTIONS

1- STEEL DECK PLATES SHALL SPAN AT LEAST 3 JOIST.
2- DECK SHEETS SHOULD BE PLACED IN ACCORDANCE WITH APPROVED ERECTION LAYOUT DRAWINGS SUPPLIED BY THE DECK MANUFACTURE'S STANDARS AND SHALL BE ERECTED BEGINING AT THE LOW SIDE TO INSURE THAT END LAPS ARE SHINGLE FASHION.
3- END LAPS SHALL BE 2" MINIMUM AND SHOULD OCCURS OVER SUPPORT.
4- ALL LAPS SHALL BE CENTER DIRECTLY OVER JOIST
5- ALL FASTENERS SHALL BE IN ACCORDANCE WITH MANUFACTURE'S SPECIFICATION AND ERECTION LAYOUTS.
6- SUPPORT FASTENERS 36 / 7#12 S-MD 12-24 x 1 5/8 M HWH5 BY HILTI @ 6" c.-c. (24/5 PATTERN FOR 24" WIDE PANELS).

NOTES :
DECK SHALL BE FASTENED TO JOIST TO RESIST AN UPLIFT PRESSURE OF 133PSF THE FIRST 13'-0" FROM EDGES 98PSF ACTING ELSEWHERE.

NOTE:

1-JOIST SELF WEIGHT SHALL NOT BE GREATER THAN AS SHOWN ON TABLE AN INCREASED OF STRESS DUE TO WIND LOAD IS ALLOWED AS PERMITED BY CODES AND STANDARDS. AN MAXIMUM CONSTRUCTION LOAD OF 30 P.S.F. SHALL BE APPLIED IN DESIGN.

2-THE DESIGN, MANUFACTURE. AND USE OF OPEN WEB STEEL JOIST, NUMBER OF ROWS, BRIDGING TYPES AND LOCATION AND JOIST GIRDERS, SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATION FOR STEEL JOIST 1994,PUBLISHED BY JOIST INSTITUTE.

3-A NET UPLIFT FORCE AS SHOWN ON TABLE SHALL BE CONSIDERED IN THE DESIGN OF JOIST AND BRACING.

4-CONTRACTOR SHALL COORDINATE WITH STEEL JOIST DESIGNER FOR ADDITIONAL DEAD LOAD DUE TO MECHANICAL ,ELECTRICAL AND ARCHITECTURAL APPLIANCES (FANS, A/C UNITS, ETC.) SHOWNS AND NOT SHOWN ON STRUCTURAL PLANS.

5-A BRIDGING MUST BE PROVIDED NEAR THE FIRST BOTTOM CHORD PANEL POINT.

6-CONTRACTOR SHALL PROVIDE FRAME AND CURB TO SUPPORT FANS AND A/C UNITS AT ROOF.

7-ALL BRIDGING ANCHOR SHALL BE COMPLETELY INSTALLED BEFORE CONSTRUCTION LOAD ARE PLACED ON THE JOIST. ALL JOIST BRIDGING AND BRIDGING ACCESORIES SHALL BE SPECIFIED AND PROVIDED BY THE JOIST FABRICATOR.

8-ADD 700# (2.5KIPS UPLIFT) AT PIPE LOCATION (SEE PLAN) ON JOITS GIRDERS DESIGN.

NOTES:
1) CONTRACTOR SHALL VERIFY ALL DIMENSIONS WITH MANUFACTURER DRAWINGS, ANY SUBSTANTIAL DIFFERENCE SHALL BE NOTIFY TO STRUCTURAL ENGINEER (H.A.G.E.) PRIOR TO ANY CONSTRUCTION.

OWNER

PROPONENT

:\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

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SHEET TITLE

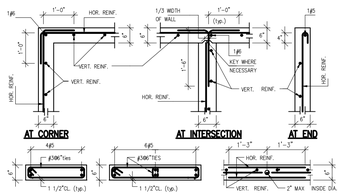
STRUCTURAL ROOF PLAN, SECTIONS AND DETAILS.

SHEET ID

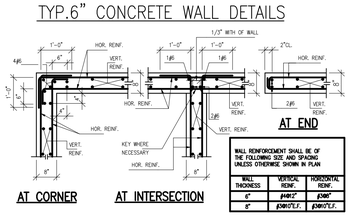
3/16"=1'-0"

SHEET

S-3

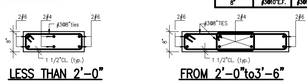


TYP.6" CONCRETE WALL DETAILS

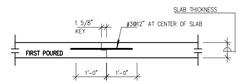


WALL THICKNESS	VERTICAL REINF.	HORIZONTAL REINF.
6"	#4@12"	#3@6"
8"	#3@12"C.F.	#3@6"C.F.

WALL REINFORCEMENT SHALL BE OF THE FOLLOWING SIZE AND SPACING UNLESS OTHERWISE SHOWN IN PLAN



TYP.8" CONCRETE WALL DETAILS

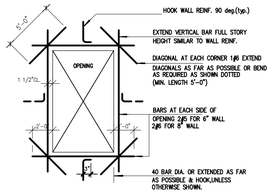


TYPICAL CONSTRUCTION JOINT IN SLAB

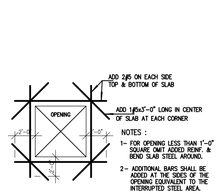
NOTES:

1- PRIOR TO POURING CONCRETE AGAINTS THE HARDENED CONCRETE, THE SURFACE SHALL BE CLEAN, FREE OF LOOSE MATERIAL & INTENTIONALLY ROUGHENED TO A FULL AMPLITUDE OF 1/4" APPROX.

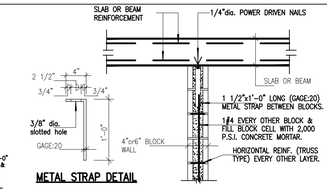
2- CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS IN ORDER TO COMPLETELY FILL THE CONSTRUCTION KEY AT BEAM.



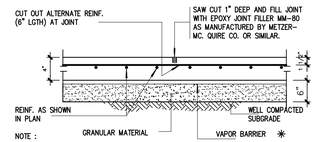
REINF AT WALL OPENING



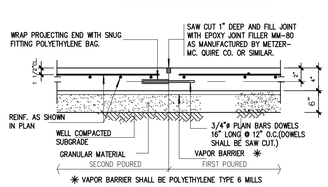
REINF AT SLAB OPENING



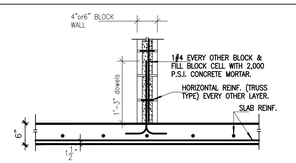
DETAIL OF BLOCK WALL ANCHORAGE AT TOP



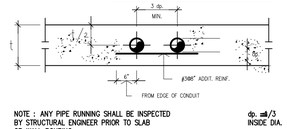
CONTROL SAW CUT JOINT FOR SLAB OR TOPPING



CONSTRUCTION JOINT FOR SLAB ON GRADE



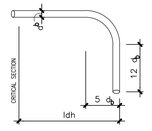
DETAIL OF BLOCK WALL ANCHORAGE TO SLAB



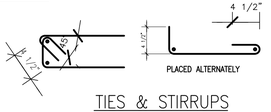
DETAIL FOR CONDUIT AND PIPES EMBEDDED IN CONCRETE

ANCHORAGE LENGTH(ldh)		
BAR SIZE	LENGTH-IN f'c 4,000	LENGTH-IN f'c 5,000
3	12	12
4	12	12
5	12	12
6	15	13
7	18	15
8	20	18
9	22	20
10	24	22
11	26	24

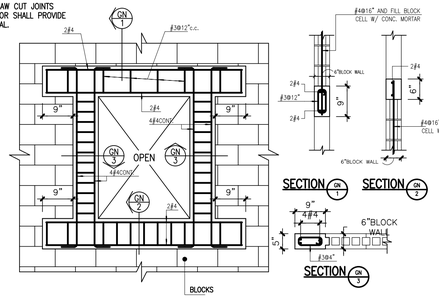
* ldh CAN BE REDUCED 30% IF SIDE COVER OF HOOKED BAR IS NOT LESS THAN 2.5" VERTICAL EXTENSION OF HOOK SHALL BE A MINIMUM OF 12 BAR DIAMETER AS SHOWN BELOW EVEN IF ANCHORAGE LENGTH HAVE BEEN SATISFIED.

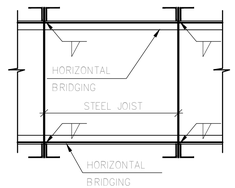


STANDARD HOOK

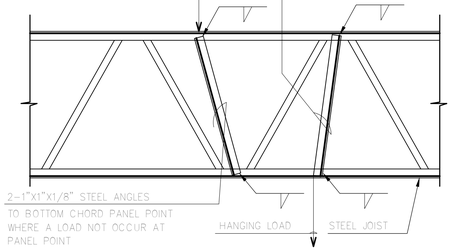


TIES & STIRRUPS BENDING DTL.

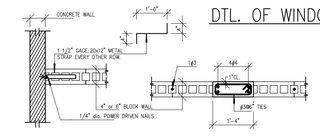




HORIZONTAL BRIDGING DETAIL

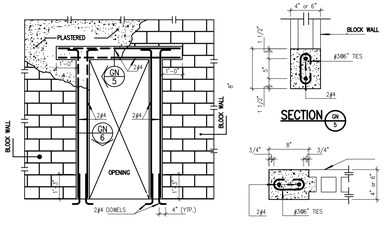


TYPICAL DETAIL FOR ROOF POINT LOAD OR HANGING LOAD ON JOIST

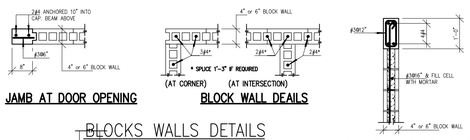


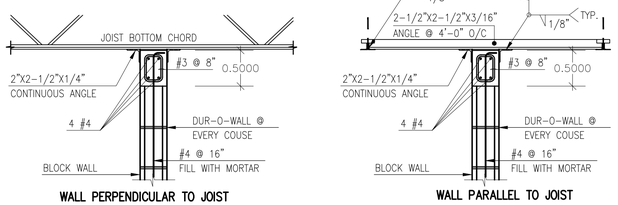
ANCHORAGE OF BLOCK WALL PARTITIONS TO CONC. WALLS

CONCRETE COLUMN DETAIL
(SPACED NO MORE THAN 12'-0")

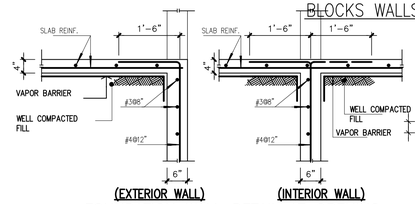


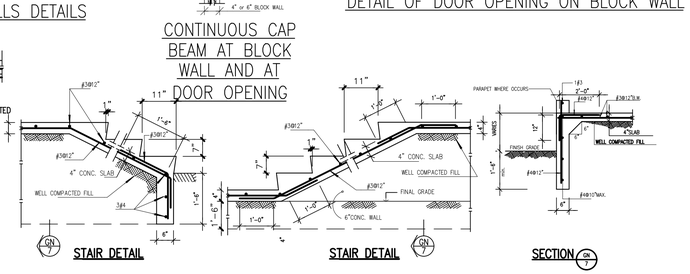
DETAIL OF DOOR OPENING ON BLOCK WALL



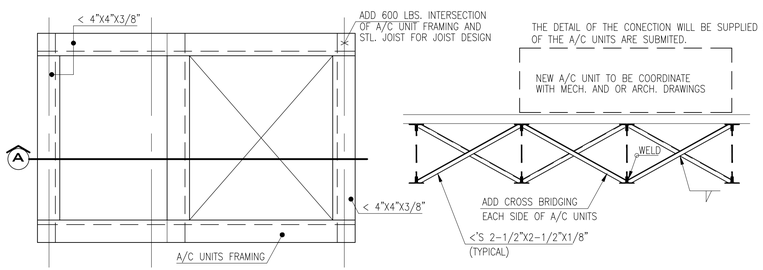


TYPICAL WALL ANCHORAGE DETAILS TO JOIST

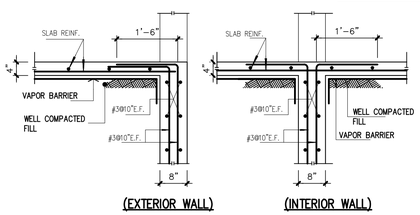




TYPICAL DETAILS FOR STAIRS ON GROUND



TYP. A/C UNITS FRAMING



GENERAL NOTES :

1) THE NOTES ON THESE DRAWINGS ARE NOT INTENDED TO REPLACE THE SPECIFICATIONS, SEE SPECIFICATIONS FOR REQUIREMENTS IN ADDITION TO THE GENERAL NOTES. INCONSISTENCIES BETWEEN THE DRAWINGS AND THE SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH THE AFFECTED PORTION OF THE WORKS.

2) STRUCTURAL DRAWINGS SHALL BE USED IN CONJUCTION WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL AND SITE DRAWINGS. C.C. SHALL COORDINATE LOCATION AND DIMENSIONS OF OPENINGS, CHASES, INSERTS, REGLETS, SLEEVES, DEPRESSIONS, ETC.

3) ALL DIMENSIONS AND COORDINATES SHALL BE VERIFIED. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH AFFECTED PORTION OF THE WORK.

4) THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETED. IT IS THE CONTRACTOR SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO ENSURE THE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS, OR TIEDOWNS. SUCH MATERIAL SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.

5) SECTIONS AND DETAILS SHOWN ON ANY STRUCTURAL DRAWING SHALL BE CONSIDERED TYPICAL FOR SIMILAR CONDITIONS.

6) THE CONTRACTOR SHALL PERFORM ALL WORKS IN CONFORMANCE WITH ALL APPLICABLE FEDERAL, STATE AND MUNICIPAL REGULATIONS.

7) ALL OPEN FOUNDATION EXCAVATIONS MUST BE INSPECTED AND APPROVED BY A LICENSED GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF CONCRETE

DESIGN NOTES :

1) THIS BUILDING IS DESIGNED TO COMPLY WITH THE INTERNATIONAL BUILDING CODE 2018 (IBC) AND ASCE7-16

2) LIVE LOADS:
ROOF = 40 PSF

3) WIND LOAD:
ASCE 7-16 CODE
A. BASIC WIND SPEED = 174 MPH
B. WIND EXPOSURE = EXPOSURE C
C. RISK CATEGOTY III

4) EARTHQUAKE LOAD: IN ACCORDANCE WITH ASCE 7-16
A. RISK CATEGORY = II
B. I = 1.0
C. SITE CLASS = D
D. Ss = .95, S1=.362

FOUNDATION NOTES:

1) FOOTING ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 2,500 psf WITH A BOTTOM FOOTING ELEVATION AT MINIMUM DEPTH OF 5'-0" BELOW THE FINAL GRADE.
2) TEMPORARY EXCAVATION FOR THE INSTALLATION OF FOOTINGS, PIPES OR OTHER PURPOSES SHALL BE SLOPED OR BRACED IN ACCORDANCE WITH "OSHA" REQUIREMENT AND ANY ADDITIONAL RECOMENDATION OF THE STRUCTURAL OR GEOTECHNICAL ENGINEERS.
3) THE TOP SOIL SUPPORTING ANY EXISTING VEGETATION OF SHRUBS AND GRASSES SHALL BE REMOVED PRIOR TO START ANY FILLING OPERATION.
4) FOUNDATION WERE DESIGNED FOLLOWING THE SUBSOIL EXPLORATION AND GEOTECHNICAL REPORT PREPARED BY ENG. ARIEL GRILLASCA OF GEOTECHNICAL ENGINEERS DATED AUG 24, 2023 FOR THIS PROJECT. CONTRACTOR SHALL FALLOW ALL THE RECOMMENDATIONS IN THAT REPORT.
5) THE CONSTRUCTION AREA SHALL BE STRIPPED 30" MINIMUM. AREA SHALL BE COVERED BY MIRAFI HP370 OR STRONGER AND FILLED WITH A-2-6 OR BETTER MATERIAL.

CONCRETE NOTES:

1) ALL CONCRETE WORKS SHALL CONFORM TO THE REQUIREMENTS OF ACI 318-14 AND 301-16.
2) UNLESS OTHERWISE SPECIFIED, ALL CONCRETE SHALL DEVELOP THE FOLLOWING COMPRESSIVE STRENGTH AT 28 DAYS.
FOOTINGS AND SLAB ON GROUND ——— 3,000 P.S.I.
WALLS, COLUMNS, SLABS AND BEAMS ——— 4,000 P.S.I.
3) CONCRETE SHALL NOT BE PLACED IN WATER.
4) REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60 DEFORMED BARS AND SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH AC1 315.
5) SPLICES OF REINFORCING BARS SHALL BE IN ACCORDANCE WITH ACI 318 UNLESS OTHERWISE NOTED ON THE DRAWINGS.
6) ANCHOR BOLTS SHALL CONFORM TO ASTM F1554 GR. 36 UNLESS OTHERWISE NOTED ON DRAWINGS.

STRUCTURAL STEEL NOTES:

1) STRUCTURAL STEEL FABRICATION, ERECTION AND CONNECTION DESIGN SHALL CONFORM TO AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL". THIRTEENTH EDITION.
2) STRUCTURAL STEEL WIDE FLANGE SHAPES SHALL CONFORM ASTM A572, GRADE 50 OR ASTM A992 STEEL WITH A YIELD STRENTH OF 50 KSI, STEEL FOR PLATES, ANGLES, AND CHANNELS SHALL CONFORM TO ASTM A36 WITH A YIELD STRENGTH OF 36 KSI. HOLLOW STRUCTURAL SECTIONS SHALL CONFORM TO ASTM A500 GRADE B WITH A MINIMUM YIELD STRENGTH OF 46 KSI
3) FIELD CONNECTIONS SHALL BE BOLTED USING 3/4" DIAMETER A325N HIGH STRENGTH BOLTS EXCEPT WERE FIELD WELDING IS INDICATED ON THE DRAWING OR WHERE OTHERWISE REQUIRED TO SUPPORT A DESIGN LOADS.
4) ALL WELDING SHALL CONFORM TO AWS D1.1-LATEST EDITION. ELECTRODES SHALL BE E70XX.

OWNER

PROPONENT

.\LOGO FIGUEROA.png

FIGUEROA & FIGUEROA ARCHITECTS AND ENGINEERS

CONSULTANT

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Tel. (787) 379-7132
hageepsc@aol.com

SEAL

PROJECT INFORMATION

CENTRO DE USOS MULTIPLES DE BARRANQUITAS

BARRANQUITAS PUERTO RICO

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED:	2/21/25
REVIEWED BY:	HAG
DRAWN BY:	HAG
DESIGNED BY:	-
BRA PROJECT NUMBER:	

SHEET TITLE

GENERAL NOTES AND TYPICAL DETAILS.

SHEET ID

N.T.S.

SHEET

S-4