Environmental Assessment for Expansion Plan at Navajo Dam Marina to Include New Store, Restaurant & Fuel Dock

Prepared by

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INTRODUCTION

The proposed action is for Navajo Dam Enterprises, Inc. ("NDE"), the concessionaire operating Navajo Dam Marina (the "Marina"), to construct an expansion within the current Marina's footprint to include a new, larger store/office/restaurant and fuel dock facilities as well as a number of new slips. The project would replace the Marina's store and restaurant building, the nucleus of which was purchased in 1964/65 by New Mexico State Parks ("NMSP"). As part of the project, the existing gas dock, and the fuel dock office that was built in 1972, will also be replaced.

There are no plans to remove the existing store and restaurant building. NDE hopes to repurpose them, but has no definitive plans for exact usage at this time. The existing fuel dock will be removed when the new one is ready to go into service and has received all required permits.

Located within Navajo Lake State Park (the "Park"), the Marina is in the area often referred to as the Pine Site. NMSP commenced construction of a marina at this location in 1964 after the lake filled with water after completion of the Navajo Dam in 1962. NMSP archives show that the department was working on dock additions at least into 1978.

The initial covered slips built were rudimentary by the standards of present day docks and are inadequate to accommodate many of today's larger, wider boats. In 1964-1965 a fishing barge with a fishing well was constructed adjacent to a walkway from shore to the existing boat docks. The building on the fishing barge is now the ship's store and restaurant.

Marina plans show the current fuel dock building for the first time in 1972, making it 44 years old. Both the fishing barge and fuel dock building are sheet metal buildings with metal roofs. The buildings have minimal insulation, single pane windows, and narrow doorways. The store has a toilet for staff that is not ADA compliant.

NMSP documents dated 1964, show that the fishing well was originally 12 by 40 feet and was located within a 28 by 71 foot building for a total of 1,988 square feet of covered space. Another drawing from the fall of 1969, documents that 10 feet of the fishing well were covered over reducing the well to 30 feet in length.

By 1977, the fishing well had been further reduced in size and a wall had been put across the width of the building 28 feet in from the northeast wall of the building. By 1977, a walk-in cooler had been installed next to the wall between what was then a store and the fishing well, with both being accessed from the outside. A small office had also been created adjacent to the cooler.

The fishing well was totally eliminated and the space converted to a restaurant after NMSP entered into a new Concession Agreement March 6, 1986 for operation of the Marina. In the 2000s, at least two additions have been made to the store/restaurant building and the interior has been reconfigured. A 6 by 16 foot storeroom was added at the back of the facility in approximately 2000. In 2014, a deck under the store's roofs' overhang was enclosed and a door cut into the store, to provide office space.

Because of the age of the original structure that forms the core of the existing store/restaurant, the NMSP's archaeologist reviewed the project with NDE and evaluated it for historic characteristics and significance, and registered the store with the New Mexico Historic Preservation Division that assigned it a Historic Cultural Property Inventory (HCPN number, HPCI

41129). In addition, because remnants of the original 1964-1965 fuel dock may be present, it was also assessed and assigned an HCPI number, 41130.

Applying the criteria set forth in the National Register Bulletin for designating a property for listing on the National Register of Historic Places, it is apparent that neither the store/office nor fuel dock buildings at the Marina qualify. The buildings have no association with events that have made a significant contribution to the broad patterns of our history nor with the lives of significant persons in our past. The metal shed construction style is not a distinctive characteristic of a type, period or method of construction, or one that represents the work of a master or that possesses high artistic value, or that represents a significant and distinguishable entity whose components may lack individual distinction. Finally, those buildings are not likely to yield information important to history or prehistory, nor have they yielded such. Nor do the buildings meet any of the Criteria Considerations outlined in the National Register Bulletin.

Background

In April 2016, NDE initiated a request to build a new store/restaurant and fuel dock and to add a number of slips. As part of this process, this Environmental Assessment was undertaken. Due to the significant scope of the project and the potential for a negative impact to a historic property, this project was determined not to qualify under any Categorical Exclusion. Instead, an Environmental Assessment under the National Environmental Policy Act (NEPA) of 1969 is required.

The proposed store and restaurant will provide larger, more functional spaces demanded by today's customer. The new building will be far more attractive and esthetically in keeping with the location of the park in the high desert. It will also be more energy efficient, provide ADA compliant bathrooms for the public as well as staff, and will provide badly needed office space. The Marina has more than doubled in size since the store building was built, but the store and restaurant facilities have not kept pace.

Plans call for the new store/restaurant to be constructed during winter 2016/2017 on a floating platform to be installed in late fall 2016, along with the new fuel dock, additional courtesy slips, 10 covered 26 foot slips and two additional uncovered 100 foot slips. The goal is for it to be operational in time for the summer 2017 boating season. All construction will be done on the lake, with construction staging in the parking lot during the off season.

ENVIRONMENTAL SETTING

The Marina is located on Navajo Lake at the Pine River Recreation Area of the Park. Encompassing approximately 20,000 acres of land in San Juan and Rio Arriba counties, New Mexico, the Park includes all of Navajo Lake within New Mexico (approx. 15,600 acres) and five miles of the San Juan River below the dam (Figure I). The Park's land and water area are owned by the Bureau of Reclamation (Reclamation), except for 70 acres along the San Juan River that is owned by NMSP, and are administered by Reclamation's office in Durango, Colorado.

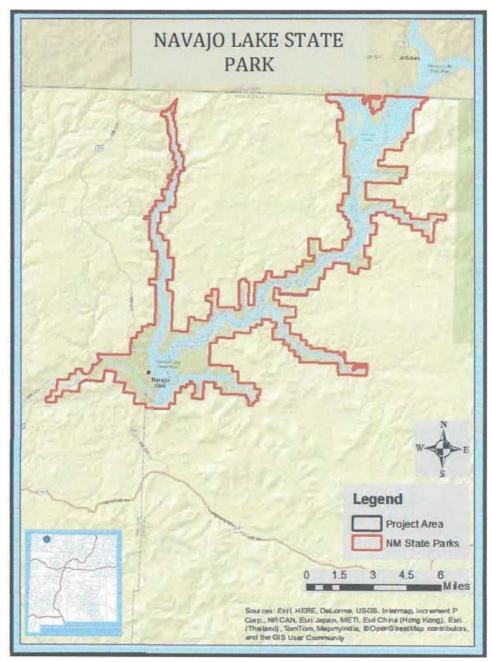


Figure 1 -Project area locations, Navajo Lake State Park, San Juan County, New Mexico

Navajo Lake is a reservoir formed by Navajo Dam's impoundment of water from the Los Piños (Pine) River, Piedra River, and the San Juan River. The dam was built by Reclamation from 1958-1962 as a component of the Colorado River Storage Project. The lake is the principal storage reservoir for the Navajo Indian Irrigation Project that provides irrigation for about 110,000 acres of land on the Navajo Indian Reservation.

The surface area of the lake covers 15,610 acres when full. The spillway is at an elevation of 6,101 feet. Depending on the water levels, there can be 120 miles of shoreline, extending 26 miles up the San Juan River and 12 miles up the Pine River. The water level fluctuates depending on supply and demand. Generally, the water level is lowest in February and March, and highest in June following snow-melt in the San Juan Mountains.

The Marina is located on the Pine River side of the lake about a mile upstream from Navajo Dam. The exact location of the Marina on the water varies according to the Lake's water level. However, even at the lowest water points, the Marina is between shore and an underwater island that becomes exposed during periods of low water. All Marina functions are on the water, with the exception of a fuel storage tank, a maintenance facility and dry storage area at the top of the mesa (Figure 2). The new improvements will all be based on floating docks on the water. Staging for the construction will occur in the parking lot during the off- season.

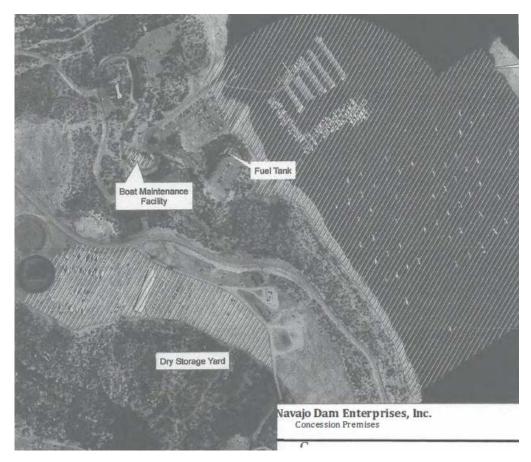


Figure 2 - All lands within the Premises are owned by the Bureau of Reclamation. Facilities and property within the Premises, exclusive of marina tenants' property, are owned by Concessionaire, Navajo Dam Enterprises, Inc.

Vegetation

The plant communities found on land near the Marina are Great Basin Conifer Woodland and Great Basin Desert-Scrub. Woodland areas are characterized by piñon, one-seed and Utah juniper and a variety of shrubs, grasses, and perennials. The scrubland is comprised of shrubs, primarily sage and chamisa, with few trees. Riparian plant communities, characterized by cottonwood and willows, occur along the San Juan River and some drainages near the lake. In the Park, several of the riparian/wetland communities are the result of constructed wetlands fed by river diversions.

There are several non-native invasive plant species that are of concern for their potential to spread and crowd out native species. The invasive trees are Russian olive, Siberian elm, and tamarisk (salt cedar), which occur along the river and in drainages. Russian olive is common in the campgrounds, where it was planted before it was considered an invasive weed tree. Other invasive plants that usually occur in disturbed areas are Russian knapweed, cheatgrass and several species of exotic thistle (Canada, bull, Scotch and musk). It is not anticipated that any vegetation will be disturbed or impacted by the proposed project as it will be constructed on the water, and staging for construction will be from a paved parking lot.

Wildlife

Elk and mule deer are the largest mammals in the Park, and other species are typical of the region. Birds are plentiful, many of which are attracted to the water, such as waterfowl, which are especially abundant during the winter and migration seasons. Swallows nest in the cliffs above the Lake. Merriam's turkeys are present in the Park. Raptors are a common sight around the Lake, with osprey fishing and nesting in the Park.

Species of conservation concern that occur in the Park include bald eagle, peregrine falcon, southwestern willow flycatcher and gray vireo. Because all activities concerned with the proposed new facilities will take place on the water or in a parking lot, it is not anticipated that wildlife will be impacted by the project.

The fish in the Park are predominantly non-native sport fish such as channel catfish, northern pike, smallmouth and largemouth bass, yellow perch, kokanee salmon, and rainbow and brown trout. Two native fishes occur in the Park, the roundtail chub and flannelmouth sucker, although uncommon. The roundtail chub is classified by the New Mexico Department of Game and Fish (DGF) as a species of greatest conservation need in the San Juan Watershed. The tailwaters of the San Juan River below the dam is a nationally renowned trout fishery.

Wildlife found in this area include several special status or species of concern. Such determination refers to species listed by a federal, state, or tribal agency as those requiring special protection to assist in their recovery or maintenance avoiding extinction or extirpation. An example is the Endangered Species Act (ESA). Species known or likely to be listed as special status in the Park include the golden eagle and bald eagle. A complete list of federally protected species that could occur in the Park or in the vicinity of the Park is included in Attachment 1. Currently, no critical habitat, designated or proposed, exists in the project area, park or vicinity based on a review of the USFWS Critical Habitat online mapping application.

Most wildlife in the area are protected by federal statutes such as the ESA, Migratory Bird Treaty Act (MBTA), and the Bald and Golden Eagle Protection Act. Other species are protected by local, state, and federal hunting and fishing regulations.

PURPOSE AND THE NEED FOR THE PROPOSED ACTION

The Proposed Action is to build a new ship's store, restaurant, fuel dock, additional courtesy slips and slips for the rental fleet, as well as 10 new, covered slips and two uncovered slips. Attachments 2 and 7 are schematics for the existing Marina and proposed expansion. Attachment 3 contains renderings of preliminary plans for the new store and restaurant facility, and a preliminary floor plan for the store and office building. The existing store lacks sufficient operating space for

NDE's employees, as well as adequate display and storage space for merchandise, and is functionally obsolete.

The ship's store offers food, non-alcoholic beverages, clothing, water toys, novelties, and fishing tackle and supplies including live bait. Firewood, as well as boating and camping equipment and supplies, can also be purchased. An ATM machine was added in 2015 for the convenience of Park visitors. Occasionally, it is even used by visitors to access cash to pay the daily state park admission. Fuel is available for boaters at the gas dock, as are oil and maintenance related items.

The Marina also offers customers the opportunity to special order kayaks, paddleboards, PWC lifts, boat lifts, Hydro-Bikes and more than 10,000 other marine related items.

The existing store and restaurant building was constructed in 1964 and is inadequate to meet the needs and expectations of the growing customer base. The store and restaurant presently total 1,988 square feet with an additional 240 square feet of office space (Photos of the exterior and interior of the current store/restaurant are contained in Attachment 4). The new store will offer about 4,500 square feet of interior space plus a large outdoor deck. Currently, revenue growth is capped by a lack of retail and storage space. With the new Store, retail space will increase from about 1,100 to more than 3,500 square feet.

The remainder of the planned building, about 1,000 square feet, will be devoted to storage and office space which is sorely lacking in the current, outdated building. Presently, the only places to store inventory are in a non-climate controlled space totaling less than 100 square feet, and an undersized walk-in cooler that is shared between the store and restaurant.

A new store will allow ample storage space for both perishable and non-perishable items, with both a climate controlled storeroom and large cooler and freezer rooms. Back room space will also allow for ice machines to bag ice for resale. Currently, the Marina produces its own ice, but that ice must be carted in wheelbarrows over 200 feet to the store. This is obviously a labor-intensive step that could be eliminated with a modern, automated ice machine within the store.

Finally a properly designed backroom would enhance customer experience and eliminate a major flaw with the current store. Today all merchandise must come through the store's main customer entrance, a 36-inch wide door. Once in the store, the aisles are too narrow to transport the goods in carts. Personnel filling the cooler with ice from a wheelbarrow and merchandise stacked in the aisles until it can be inventoried and put on shelves or into cold storage, is not conducive to a great customer experience.

A new, larger store would allow the Marina not only to carry new items, but also give adequate floor space to existing items. The improved spacing and better floor plan provided by the new facility should allow the Marina to substantially improve its turn rates and increase revenue.

The new store will also feature higher ceilings giving a more spacious feeling and allowing for the display of oversized merchandise such as tubes and other recreational items. It will also mean cases of water and similar items can be stacked and be easily accessible. Behind the store, there will be an open area of water for fishing and fish cleaning stations. It is also anticipated that a portion of the back wall of the store will be smooth to allow for the screening of movies for Park visitors on Friday and Saturday nights.

Office Expansion

In 2014, the Marina enclosed some existing deck space under an overhang to increase the Marina's office space from 80 square feet to the current 240 square feet. This enlargement has greatly improved organization and productivity, but is still inadequate (Attachment 5 is a photo of the inside of the current office space). The new store will include 600 square feet of office space. The increased office space will allow for continued productivity gains and improved workforce moral. The customer experience will also be improved with the addition of a small waiting room and a dedicated conference room for customer meetings and the signing of contracts such as slip lease agreements.

The expansion plan calls for the restaurant to grow from about 900 square feet to roughly 1,300 square feet of interior space to be evenly divided between kitchen/storage and seating. This increase in kitchen and dedicated refrigeration/freezer space will allow for a more desirable expanded menu. A sizable outdoor dining patio will further increase capacity. Between a more functional kitchen and added tables it is estimated the restaurant can accommodate nearly twice as many customers during peak hours.

Public Restrooms

The new structure will offer public, ADA complaint bathroom facilities. Both the public and slip-holders request this amenity frequently. Public restrooms should boost foot traffic and increase store and fuel sales, as well as easing the burden on the Park restrooms that are a substantial distance uphill from the Marina.

Currently, the Marina maintains a pump-out station at the end of the 400s dock and the sewage goes into a two-inch interior diameter hose that runs to a floating pump-out station. Along, the way, a line from the current store restroom for employees ties into the hose. Sewage from that hose as well as the contents of the Marina's "honey-barge" that travels around the Marina to pump-out boats, goes into a holding tank at the pump-out station.

Sewage collected in the pump-out station tank is then pumped to shore and into the State Park's sewage collection system via another two-inch interior hose. It is anticipated that sewage from the Marina will continue to travel through that hose and into the State Parks' system. As all changes to the sewage system will be at the Marina itself it is not anticipated that any land will have to be disturbed to accommodate the new system.

A SaniSailor Masterline CVX400 Central Vacuum System will eliminate the need for the current pump station and its holding tank. The main CVX 400 unit will be located at the site of the current pump station near the trash barge off the walkway between the 100 and 800 docks. The CVX400 Central unit develops a high vacuum that enables it to pump out units located hundreds of feet away.

The Central Vacuum System will also pump discharges up to 350 vertical feet and up to thousands of feet horizontally. The current line to shore will be reutilized with the new system that is capable of handling up to 45 to 50 gallons per minute. The State Park's sewer lift station is between 130 and 140 feet higher than the Marina level and approximately 600 feet away. Consequently, this system should handle the demands of the existing sewer system easily.

As part of the project, the token operated pump-out station will be removed from the end of the 400 docks, and two new pump-out stanchions will be located on the new fuel dock. The

existing two-inch line will be relocated to run from the fuel dock to the Central Vacuum System. The line from the current restroom in the old store building will continue to hook into that line. Because the new fuel dock will be substantially closer to the Central Vacuum System than the end of the 400 docks, the length of hose necessary will also be substantially reduced.

The new store facility will include an ADA compliant private restroom for employees and two ADA compliant public restrooms. Black and gray water from the restrooms will go into a holding tank (currently planned for 750 gallons) underneath the platform supporting the store. Upon reaching a certain fill point a float switch will actuate a ball valve in the tank and the effluent will be pulled through the Central Vacuum System and into the existing hose that runs to shore.

Water from the sinks in the restaurant kitchen will pass through a grease trap and then dump into another holding tank under the restaurant structure. That gray water will also flow through the Central Vacuum system in the same manner as the effluent from the restrooms.

The Marina also plans to replace the existing honey barge that travels around to boats docked in slips to handle pump out needs. The existing honey barge structure is basically a floating dock with a motor attached. It is slow and cumbersome, and can take as long as two hours to make the run over to Sims Marina and back.

The new pump out boat will be on a 30-foot pontoon body that will be outfitted with a new holding tank and the pump from the existing honey barge. The contents of the honey barge will then be brought over to the Central Vacuum system and pumped out and go through the line to shore.

Because the new boat will be far more seaworthy, it will be able to make the trip to Sims quickly which should facilitate pump outs for boats docked there. Sims Marina does not have access to a working sewage system and Navajo Lake Marina provides pump out services to those boats as it is able to do so.

The new facility should not strain the Parks' sewer system. All boats are currently pumped out with the existing system, the new one will just be quicker and more efficient. Additionally, the addition of the public restrooms will accommodate people who currently walk up the hill to use the Park's restrooms, so the net new sewage will be minimal.

New Fuel Dock

NDE's proposal also includes a new fuel dock, courtesy slips, and additional slips for the rental fleet. The existing fuel dock is an 80 by 8 foot finger dock with two analog gas pumps and four fueling hoses. Presently most fuel transactions and rental fleet activities are processed in a 12 by 20 foot metal building on the fuel dock. That building dates from 1972, is neither insulated nor heated, and has only an undersized window unit for cooling (Attachment 6 contains photos of the exterior and interior of the existing fuel dock building, together with a conceptual rendering of the proposed new fuel dock building).

The rental fleet has doubled since 2013 and boat rentals are a rapidly growing segment of the business. A new 25 by 24 foot office will greatly improve the fueling and boat rental processes. On busy days, lines now go out the door during check in and drop off times for boat rentals. The new

building will allow for faster check in-and-out through the addition of two new registers, and climate controlled comfort for customers and staff. Additional retail space will allow for the sale of an expanded variety of boat parts for safety and minor repairs.

The current proposal does not include an expansion of the rental fleet, rather it provides facilities to better handle the existing fleet which consists of two 30-foot pontoon party barges, five 24-foot pontoon boats, 6 pontoon boats measuring 18 and 21 feet (three of each size), four jet skis, and an 18 foot Chapparal bow-rider, a Craig-Cat and a 16 foot bass boat.

For 2017, the Marina anticipates adding another 30-foot pontoon party barge and three 18-foot pontoon boats. However, those additions will be offset by the planned sale of three of the 24-foot pontoon boats, for a net gain of one boat.

The new fueling dock will offer wider walkways to ease congestion, improve safety and further reduce the risk to the environment. Included in the plans are four dedicated fueling slips as well as a head pier with two additional pumps. Two new johnnie pumps for proper waste removal are also planned.

A longer, wider fuel dock will reduce risk to the environment by providing additional maneuvering space for boaters reducing the possibility of collisions that could result in fuel or oil spills or a fire. By moving the pump out station to the fuel dock, dock hands will be available to help boaters with the pump out process reducing the possibility of misuse of the pump out system potentially resulting in a sewage spill.

Currently there is only one fixed waste pump at the marina. Since the pump out is located on a separate dock, this means clients have to move their boats between the fuel dock and the pump-out dock. Providing both together and adding the second pump will allow boaters to spend more time enjoying the lake and less time at the dock, as well as reducing congestion and the potential for collisions and spills.

Finally, the new courtesy and boat rental slips near the store and fuel dock will allow for easier access to marina amenities and faster checkouts for boat rentals. The addition of these pumps and restrooms will require an improved sewage pumping and transport system from the Marina to shore as has been described in the Public Restroom section, above.

The existing fuel dock will remain operational during the construction process so that service is not impacted. It will be removed after the new fuel dock is complete, a revised Spill Prevention Control and Countermeasure Plan (SPCC) has been implemented and all necessary permits are received.

The wider platform in front of the ship's store and courtesy slips that were added in 2014 and 2015 are exceptionally popular, reduced congestion and provided additional spaces for the rental fleet and transient boaters. The expansion includes additional courtesy slips that will also help alleviate congestion at the State's slips next to the boat ramp and expedite the launch and retrieval process for day boaters.

Additional Slips

NDE's proposal includes the addition of six uncovered 60 by 20 foot slips to the 1000 dock, 12 covered 26 by 12 foot slips and two uncovered 100 foot slips to the 900 dock. The smaller size

slip is in high demand and the Marina receives frequent requests to lease such slips. For many years, marinas have focused on larger slips as boat sizes increased. The last time slips under 30 feet other than courtesy slips were added at the Marina was over 40 years ago.

The proposed covered slips will offer wider walkways and more utility options than any others of the same size currently on the lake. They will also be wider and have higher roof clearance allowing room for the modern boat. Those slips will go where the existing coin-operated pump-out station is presently located.

The extra height of the covered slips will allow boat owners the option of installing Hydro-Hoists or other boat lifts. Currently, very few covered slips at the Marina can accommodate boatlifts. Lifts protect boats from algae growth, slow unseen leaks, prevent electrolysis and much more. Most slip holders see this as a great value that will allow them to leave their vessel moored year round while their vessel retains a higher resale value.

The two new 100 foot slips are intended to accommodate two large boats already committed to anchoring at Navajo Lake Marina.

THE PROPOSED ACTION

NDE proposes to expand the Marina as set forth above. The following construction actions will be necessary:

- 1) Retention of an architectural and engineering firm to provide construction plans and engineering support. This firm will work with MDI, the company selected to build the floating platforms for the store/restaurant and the remaining slips and walkways.
- 2) Installation of the floating platform, slips, walkways and fuel dock during the fall of 2016.
- 3) Construction of the new ship's store and restaurant buildings connected by a covered walkway and the new gas dock office during the winter of 2016-2017.
- 4) Installation of fuel pumping equipment and new pump outs on the new fuel dock.
- 5) Installation of a SaniSailor Masterline CVX400 Central Vacuum System to improve pump-out operations for boats and restrooms.
- Removal of the existing fuel dock after new fuel dock is complete, revised Spill Prevention Control and Countermeasure Plan has been implemented and all necessary permits are received for the new fuel dock. The removed fuel dock will be stored in the Marina's dry storage yard (Figure 2).

ALTERNATIVES TO THE PROPOSED ACTION

One alternative, besides a No Action alternative, was considered along with the Proposed Action, but was not further analyzed.

The No Action alternative would result in a continued shortage of retail, office and restaurant space. The building would continue to over-utilize energy while providing inadequate heating and cooling. The only staff restroom would continue to be non-compliant with the ADA and no restroom facilities would be available to the public. Overall, this alternative would contribute to a visitor and staff experience that is much less enjoyable than what is possible at the Marina.

The other alternative considered was to remove slips from the boathouse adjacent to the back of the ship's store and restaurant, and expand the floating platform at that location. An addition to the existing building could then be constructed. However, to do so would result in a functionally obsolete building with an awkward, non-descript addition to a low-slung old metal building. There is no economic way to make the existing structure energy efficient. Additionally, the existing building is listing slightly. New floatation has been added in the past few years, but to continue to use and expand it would require substantial new floatation. That alternate was not further considered.

ENVIRONMENTAL EFFECTS

Natural Resources

Vegetation

All activities proposed for this project will occur on the water or in the paved parking lot. The only activities occurring on land will be the short-term staging of various construction equipment and supplies in the parking lot. As a result, no vegetation will be disturbed during staging or construction activities.

Threatened and Endangered Species and Critical Habitat

The sections below provide an analysis of all federally-listed species and designated critical habitat that were identified as a result of an official request from the US Fish and Wildlife Service (Attachment 1).

Listed Species and/or Their Critical Habitat within the Project Area:

- 1. Southwestern willow flycatcher (*Empidonax trailii extimus*)
- 2. Yellow-billed cuckoo (Coccyzus americanus)
- 3. Colorado pikeminnow (Ptychocheilus lucius)
- 4. Razorback sucker (Xyrauchen texanus)
- 5. Zuni Bluehead sucker (*Catostomus discobolus yarrow*)
- 6. Knowlton's cactus (*Pediocactus knowltonii*)
- 7. Mancos milk-vetch (Astragalus humillimus)
- 8. Mesa Verde catus (*Scelocactus mesae-verdae*)
- 9. Canada lynx (*Lynx canadensis*)
- 10. New Mexico meadow jumping mouse (Zapus hudsonius luteus)

Species status:

1. Southwestern willow flycatcher (Endangered): This species has nested in the park below the dam along the San Juan River, but is not known to occur in or

near the project area. This species inhabits and breeds in dense riparian habitats from southern California to Arizona and New Mexico. In areas dominated by saltcedar and Russian olive, flycatchers tend to use only two conspicuous life forms: (a) low to mid-stature saltcedar (3-6 m tall) found as a component in the understory of a native cottonwood-willow gallery forest, or (b) tall (6-10 m) mature stands of saltcedar that have a high percentage of canopy closure. Southwestern willow flycatchers also use riparian areas dominated by native broadleaf trees and shrubs, which are usually dominated by willows (Salix spp.), cottonwoods (Populus spp.), boxelder (Acer negundo), ash (Fraxinus spp.), alder (Acnus spp.), and buttonbush (Cephalanthus occidentalis). Tree heights vary from 3-15 meters. These riparian areas often have a distinct overstory of cottonwood, willow, or other broadleaf tree. A subcanopy layer also occurs along with a dense understory of mixed species. Critical Habitat for the Southwestern willow flycatcher encompasses riparian ecosystems within the 100-year floodplain or flood prone area. Over a 5-year period, flycatcher habitat can, in optimal conditions, germinate, be used for migration or foraging, continue to grow, and eventually be used for nesting. Subsequently, a flood event or wildfire reverts the area back to its starting point in riparian forest succession. Stopover and nesting habitat exists within Navajo Lake State Park, but there is no quality migratory or nesting habitat in the project area.

- 2. Yellow-billed cuckoo (Threatened): The Yellow-billed cuckoo has declined precipitously throughout its range in southern Canada, the United States, and northern Mexico. It is nearly extinct west of the Continental Divide having disappeared from British Columbia in the 1920's, from Washington in the 1930's, from Oregon in the 1940's, and from northern-most California in the 1950's. It is extremely rare in the interior West. Its only remaining western "strongholds" are three small populations in California, scattered populations in Arizona (especially on the San Pedro River) and New Mexico (especially the Gila River), and an unknown number of birds in northern Mexico. Breeding habitat for this species is typically open woodlands (especially where undergrowth is thick), or deciduous riparian woodlands that contain tall cottonwoods and willow trees. Yellow-billed cuckoo prefer riparian habitat adjacent to permanent water. The western race of the yellow-billed cuckoo is associated with lowland deciduous woodlands, willow and alder thickets, second-growth woods, deserted farmlands, and orchards. It is found at elevations where stream conditions provide sufficient permanent moisture for emergent plants, or for a narrow band of deciduous trees and shrubs. Yellowbilled cuckoos breed in riparian woodlands and similar habitats at lower (2800 - 5500 ft) to middle (5000 - 7500 ft) elevations. This habitat does not occur at or near the project area.
- 3. Colorado pikeminnow (Endangered): Native to the San Juan River in NM. However, modifications of native river habitat has resulted in a sparse population downstream of Shiprock, NM. As such, this species does not occur in the project area. Critical habitat for this species occurs in the San Juan River downstream of the park, below the confluence with the Animas

River. This species occupies slack and slow-moving waters of large, siltladen rivers with varied seasonal flows. Habitat for this species does not occur in the park or in the project area.

- 4. Razorback sucker (Endangered): Native to the San Juan River in NM. However, modifications of native river habitat has resulted in a sparse population in the San Juan River. This species occupies slack and slow-moving waters of large, silt-laden rivers with varied seasonal flows. Habitat for this species does not occur in the park or in the project area.
- 5. Zuni bluehead sucker (Endangered): The Zuni bluehead sucker was first found in the Zuni River watershed in west-central New Mexico. The Zuni River watershed extends west from the continental divide, and across the Pueblo of Zuni tribal lands. The Zuni River then drains into the Little Colorado River in Arizona west of the Zuni reservation. Within the Zuni River watershed, Zuni bluehead sucker have been known to occur in the Zuni River, in the Rio Pescado and Rio Nutria (from the mouth of Rio Nutria Box Canyon near the eastern boundary of the Zuni Indian Reservation upstream), and in some of their tributaries (the headwaters in the Zuni mountains) that include Tampico Spring and Agua Remora (formerly known as Radosevich Creek). Elsewhere in the Zuni River drainage, the Zuni bluehead sucker is rare or absent. Flow is intermittent in the Zuni River, Rio Pescado, and Rio Nutria. Zuni bluehead sucker habitat has been described as stream reaches with clean, perennial water flowing over hard substrate, such as bedrock. Silt-laden habitat, such as beaver ponds, is not suitable habitat for the species. This habitat does not exist in or near the project area.
- 6. Knowlton's cactus (Endangered): Endemic to 30-acre site along the Pine River near the New Mexico-Colorado border. Occurs on rolling, gravelly hills in a piñon-juniper-sagebrush community at about 1,900 m (6,200-6,300 ft). While general habitat conditions exist in the park, this species is only known from one site along the Pine River near the New Mexico-Colorado border. Appropriate habitat does not occur in the project area. Species does not occur in the park or in the project area
- 7. Mancos milk-vetch (Endangered): Species was rediscovered near Farmington, New Mexico in 1980. It was formerly known from only a single collection made in 1875. It is currently known from 13 sites, 10 in New Mexico, and 3 in Colorado. High mortality occurs during periods of extended drought, but the populations regenerate from seed during more favorable years. The plants occur in an area of active oil and gas development. Populations are small and could be eliminated by energy development, road building, and other surface disturbance. Occurs in cracks or eroded depressions on sandstone rimrock ledges and mesa tops in Point Lookout

sandstone, which is a Cretaceous sandstone that is part of the larger Mesa Verde stratigraphic series; 1,500-1,800 m (5,000-6,000 ft). No suitable habitat occurs in the project area. Species is not known to occur in the park and is not present in the project area

- 8. Mesa Verde cactus (Threatened): The growth of Shiprock, New Mexico, has affected plants in the vicinity of the town. The open clay badlands where this plant occurs are attractive for off-road vehicle use. Oil and gas development and pipeline and powerline construction occur throughout the range of this species. This plant is very difficult to keep alive under cultivation because of its specialized soil requirements, so there are few commercial sources of plants. As a result, signs of limited collecting are periodically seen at the best known localities. Occurs on sparsely vegetated low rolling clay hills formed from the Mancos or Fruitland shale formations at 1,500-1,700 m (4,900-5,500 ft). The soils are highly alkaline, gypsiferous, and have shrink-swell potentials that make them harsh sites for plant growth. Commonly associated plants include Atriplex corrugata (mat saltbush), A. confertifolia (shadscale), Frankenia jamesii (frankenia), and Opuntia polyacantha (prickly pear cactus). No suitable habitat occurs in the project area. Species is not known to occur in the park and is not present in the project area.
- 9. Canada lynx (Threatened): Historical and present North American range of this species includes Alaska, Canada, and many of the other northern conterminous states. The range of the lynx includes Colorado. Individuals have been known to enter New Mexico from Colorado, but no occurrences are known from the park. In the Rocky Mountains, this species prefers older, mature spruce/fir forests with downed trees and windfalls for denning sites, escape, and protection from severe weather. Suitable habitat does not occur in or near the project area.
- 10. New Mexico meadow jumping mouse (Endangered): This species is found in the San Juan, Sangre de Cristo, Jemez, and Sacramento mountains, as well as potentially near the White Mountains in Catron County, and along the Rio Grande and Rio Chama drainages. For the meadow jumping mouse, riparian areas with tall, dense vegetation, particularly sedges, with damp to wet soils constitutes good habitat. This species is found in moist grasslands and meadows, often along edges of marshes and near free-flowing water. Cover from vegetation allows the mice to move freely without being seen from above by predators. Dense vegetation cover that is over 0.9 m (3.0 ft) high, with grasses and forbs dominating is considered optimal habitat. In the Rio Grande Valley this species has also been found in irrigation waterways adjacent to agricultural fields. Suitable habitat for this species does not occur in or near the project area. Species does not occur in the project area.

All construction activities will occur outside of the bird nesting season. Bald and golden eagles occur in the area but have not been known to nest in the immediate vicinity of the project area. A recent consultation with New Mexico Department of Game and Fish indicated that eagle nest surveys have not been conducted in New Mexico in over 20 years (M. Darr 2016) and no nest database is known to exist for these species. New Mexico State Park's staff are unaware of any nearby nest or roosting sites for bald or golden eagles. Birds may fly over the project area but construction is not expected to present a significant disturbance of that activity..

Fish present in the Project Area may be subject to brief and temporary disturbance as new floating docks are moved into the water. However, we anticipate that no protected species will be present in the project area and will not be disturbed.

There are no wetlands, wild and scenic rivers, or ecologically critical areas in or near the project area.

Cultural Resources

Because of the age of the original structure that forms the existing store/restaurant, the NMSP's archaeologist reviewed the project with NDE and evaluated it for historic characteristics and significance, and registered the ship's store with the New Mexico Historic Preservation Division that assigned it a Historic Cultural Property Inventory (HCPI) number, HCPI 41129. In addition, because the gas dock may contain original 1964 elements, it was also evaluated and was registered with the state as HCPI 41130.

Applying the criteria set forth in the National Register Bulletin for designating a property for listing on the National Register of Historic Places, it is apparent that neither the store/office nor fuel dock buildings at the Marina qualify. The buildings have no association with events that have made a significant contribution to the broad patterns of our history nor with the lives of significant persons in our past. Archival research has demonstrated that the National Park Service had no role in building the Marina as part of its historically significant Mission 66 program at the Park. The metal shed construction style is not a distinctive characteristic of a type, period or method of construction, or one that represents the work or a master or that possesses high artistic value, or that represents a significant and distinguishable entity whose components may lack individual distinction. Finally, those buildings are not likely to yield information important to history or prehistory, nor have they yielded such. Nor do the buildings meet any of the Criteria Considerations outlined in the National Register Bulletin. Lastly, because the store/restaurant and fuel dock structures are not historically significant nor eligible for listing on the National Register, any viewshed obstructions resulting from the installation of the new facilities will not be significant on the existing Marina structures nor on any historically significant properties on the shore, such as the Park's visitor center. All proposed additions to the marina will occur within its existing location, and none of the additions are proposed to be more than one story in height, similar to the current buildings that will be replaced. As a result, the undertaking will not introduce new areas of potential viewshed impacts to and from historic sites, prehistoric sites, and traditional cultural places, nor will it introduce significant height changes within the existing marina.

Socio-Economic Impact

The Proposed Action is expected to result in a positive benefit to the social and economic conditions of the area. Increased revenues from the new store and restaurant, and the new gas dock

and its increased services, will mean higher marina revenues and higher concession fees paid to NMSP. The ability to stock a wider variety of goods at the store will improve the lake experience for both boaters and campers at NMSP. Esthetic improvements to the Marina will improve the overall experience for Park visitors and create better working conditions for Marina staff. An improved Park experience can lead to increased visitation and an increase in economic activity for local businesses and the state.

ANALYSIS OF SIGNIFICANCE

An analysis of impacts from any of the potential kinds of effects noted above, including those provided as examples above, would follow a process according to Reclamation policies (Reclamation NEPA Handbook) to determine whether the action might have significant impacts according to policies of NEPA. The following discussion is organized around the 10 significance criteria described in 40 CFR 1508.27, which guides Reclamation Environmental Policy.

- 1. Impacts may be both beneficial and adverse. Because the Proposed Action will occur on water and in a parking lot it is not expected to result in any significant adverse impacts as described above in the Environmental Effects section. However, any increase in visitation to the park and marina as a result of the proposed expansion could result in some minor additional impacts to park land and waters. Parking is already very limited and will continue to be a limiting factor for visitation. There are no current plans to expand parking in the park. The anticipated increase in boats mooring at the marina will result in some increased risk of spill and water contamination from boats. Proper care and maintenance of boats and the marina will minimize that risk. This issue will also be fully addressed in the updated SPCC plan. New boats anchoring in the marina also undergo an inspection to insure that no aquatic invasive species are introduced to the lake. Overall, the relatively small anticipated increase in visitation should present minor additional risks to the land and water environments.
- 2. The degree to which the selected alternative will affect public health or safety or a minority or low-income population. The Proposed Action should benefit public safety by increasing the width of some walkways, thereby reducing congestion and the likelihood of a fall into the water. There is no reason to believe that minority or low-income communities would be adversely affected as costs to access the marina will not change, All park visitors, including low-income and minority visitors, will benefit from the improvement of the Marina as it serves all Park visitors.
- **3.** Unique characteristics of the geographic area. The Proposed Action will occur on previously disturbed land and waters of Navajo Lake. There are no wetlands, wild and scenic rivers, or ecologically critical areas that would be affected by the Proposed Action.
- 4. The degree to which the effects on the quality of the human environment are likely to be highly controversial. The Proposed Action is not anticipated to have any highly controversial effects on the quality of the human environment.
- 5. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks. There are no predicted effects on the human environment that are considered highly uncertain or that involve unique or unknown risks.

- **6.** The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration. There are no foreseeable future actions or considerations likely to occur from any precedent set by this action that is likely to be significant. This involves only the Marina and is not a precedent- establishing action.
- 7. Whether the action is related to other actions that are individually insignificant but cumulatively significant. There are no known other actions, which in concert with this Proposed Action, are known or suspected to create significant impacts.
- 8. The degree to which the action may adversely affect sites, districts, buildings, structures, and objects listed in or eligible for listing in the National Register of Historic Places. Consultation with the New Mexico SHPO has determined that the project will not have an adverse effect on a property listed in or eligible for listing in the National Register of Historic Places.
- 9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973. There are currently no listed species or their habitat that may be found in the Project Area, as noted above in Environmental Setting. Therefore, the Proposed Action has no potential to adversely affect an endangered or threatened species.
- 10. Whether the action threatens a violation of Federal, state, local, or tribal law, regulation or policy imposed for the protection of the environment. The Proposed Action does not violate any federal, state, local, or tribal law, regulation, or policy imposed for the protection of the environment. In addition, this project is consistent with applicable land management plans, policies, and programs.

CUMULATIVE EFFECTS

The proposed Marina expansion should not result in any cumulative effects. Neither the Proposed Action nor the No Action alternative is expected to contribute significantly to an accumulation of environmental effects. The project should actually result in preservation of the existing building from 1964 that can be repurposed so that its current limitations will not be a significant impediment to a new use. Possible alternative uses include a maintenance shop and a portion of it may be repurposed to a gym facility for Marina patrons.

REGULATORY ISSUES

43 CFR Part 46. Department of the Interior *Implementation of the National Environmental Policy*Act (NEPA) of 1969; final rule. October 15, 2008. This implements the DOI NEPA guidelines. This EA follows the process outlined in these guidelines.

<u>National Historic Preservation Act (NHPA)</u>. In accordance with Section I 06 of the NHPA, this project was coordinated with the New Mexico State Historic Preservation Officer who concurred with BOR's determination that the Proposed Action would not adversely affect an eligible historic property.

<u>Endangered Species Act (ESA)</u>. In accordance with the ESA, effects of the Proposed Action on threatened and endangered species in the vicinity of the Project Area were evaluated. As a result, BOR determined that there would be no adverse effect on any ESA-listed species.

<u>The Clean Water Act (CWA)</u>. This act regulates discharge of fill material and point and non-point pollutants into waters of the U.S. The anticipated discharges associated with the preferred alternative have been reviewed by the US Army Corps of Engineers and a Nationwide Permit 18 has been issued (Action No. SPA-2015-00392, Pine Marina Complex Expansion Navajo Lake State Park; Attachment X)

<u>E.O. 12898 Environmental Justice</u>. Executive Action Requires that Federal agencies identify and address disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations. The Proposed Action is not expected to affect human health or environment of any such populations.

<u>ECM 97.2 & 512 DM2 Indian Trust Assets</u>. Requires consideration of Indian Trust Assets, listing unresolved issues, commitments to mitigate or avoid impacts, and any monitoring or enforcement plans. The Proposed Action would protect Indian Trust Assets, and there are no unresolved issues or further commitments related to the Proposed Action.



United States Department of the Interior

BUREAU OF RECLAMATION
Western Colorado Area Office
Durango Field Division
185 Suttle Street, Suite 2
Durango, CO 81303-7911

IN REPLY REFER TO:

WCD-GHaymes ENV-3.00

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HISTORIC PRESERVATION DIVISION

CERTIFIED - RETURN RECEIPT REQUESTED

Dr. Jeff Pappas
State Historic Preservation Officer
New Mexico Historic Preservation Division
Department of Cultural Affairs
Bataan Memorial Building
407 Galisteo Street, Suite 236
Santa Fe, NM 87501

Subject: National Historic Preservation Act (NHPA) Section 106 Consultation for the Proposed

Navajo Lake Marina Phase II Expansion, Navajo Lake State Park, San Juan County,

New Mexico.

Dear Dr. Pappas:

The Bureau of Reclamation is initiating consultation with your office under Title 54 U.S.C. 306108, NHPA Section 106, pursuant to its implementing regulations, 36 C.F.R. Part 800. The undertaking and its potential to impact historic properties has been addressed in a report by New Mexico State Parks (NMSP), Letter Report for Historic Building Assessments (HCPI 41129 and 41130) for Proposed Navajo Lake Marina Phase II Expansion, Navajo Lake State Park, San Juan County, New Mexico, State Parks Project No. NMSP-16-10, New Mexico Cultural Resource Information System (NMCRIS) Activity No. 136110.

The proposed undertaking will involve the removal or renovation of various structures within the existing marina complex, portions of which date to 1964. As the undertaking occurs on the lake surface, some 400 to 500 feet from the shore, no Class III inventory cultural resource inventory was required. The cultural resources project was therefore limited to the assessment of the potential eligibility for listing on the National Register of Historic Places (NRHP) of the marina concessionaire store and restaurant and the concessionaire gas dock and building.

Both recorded, historic portions of the Navajo Lake Marina complex are recommended **Not Eligible** for NRHP listing due to a lack of historic significance under Criteria A through D. The research supporting this conclusion notably finds no connection between historic components of the marina complex and the Nation Parks Service's Mission 66 building program, which is represented elsewhere at the reservoir. Due to the lack of potential to directly impact ground surface, the lack of potential to substantially alter or augment existing visual and auditory

impacts, and the lack of historic properties within the marina complex itself, Reclamation tentatively considers the undertaking to have **no effect to historic properties**, pending NMSHPO's concurrence.

Reclamation requests comments regarding our determinations of eligibility and effect for properties identified during the analysis of this undertaking. Your determination of concurrence and reason(s) may be noted in the area provided below. If you have general questions or comments, or wish to engage in further consultation regarding this undertaking, please contact Geoffrey Haymes at 970-385-6571 or ghaymes@usbr.gov or Lead Archaeologist Ernest Rheaume at 970-385-6521 or erheaume@usbr.gov.

Sincerely,

Ed Warner Area Manager

I Concur

In.

Dr. Jeff Pappas

New Mexico State Historic Preservation Officer

Comments:

1-1PB log 104526

Enclosure

bc: WCG-EWarner, WCG-KOzga, WCD-ERheaume, WCD-KBowen, WCD-JMckenzie

WBR:GHaymes:csheata:8/1/2016:970-385-6571

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United States Department of the Interior

FISH AND WILDLIFE SERVICE

New Mexico Ecological Services Field Office 2105 OSUNA ROAD NE ALBUQUERQUE, NM 87113

PHONE: (505)346-2525 FAX: (505)346-2542 URL: www.fws.gov/southwest/es/NewMexico/; www.fws.gov/southwest/es/ES Lists Main2.html



September 27, 2016

Consultation Code: 02ENNM00-2016-SLI-0858

Event Code: 02ENNM00-2016-E-00900

Project Name: Navajo Dam Marina Expansion - Phase 2

Subject: List of threatened and endangered species that may occur in your proposed project

location, and/or may be affected by your proposed project

To Whom It May Concern:

Thank you for your recent request for information on federally listed species and important wildlife habitats that may occur in your project area. The U.S. Fish and Wildlife Service (Service) has responsibility for certain species of New Mexico wildlife under the Endangered Species Act (ESA) of 1973 as amended (16 USC 1531 et seq.), the Migratory Bird Treaty Act (MBTA) as amended (16 USC 701-715), and the Bald and Golden Eagle Protection Act (BGEPA) as amended (16 USC 668-668c). We are providing the following guidance to assist you in determining which federally imperiled species may or may not occur within your project area and to recommend some conservation measures that can be included in your project design.

FEDERALLY-LISTED SPECIES AND DESIGNATED CRITICAL HABITAT

Attached is a list of endangered, threatened, and proposed species that may occur in your project area. Your project area may not necessarily include all or any of these species. Under the ESA, it is the responsibility of the Federal action agency or its designated representative to determine if a proposed action "may affect" endangered, threatened, or proposed species, or designated critical habitat, and if so, to consult with the Service further. Similarly, it is the responsibility of the Federal action agency or project proponent, not the Service, to make "no effect" determinations. If you determine that your proposed action will have "no effect" on threatened or endangered species or their respective critical habitat, you do not need to seek concurrence with the Service. Nevertheless, it is a violation of Federal law to harm or harass any federally-listed threatened or endangered fish or wildlife species without the appropriate permit.

If you determine that your proposed action may affect federally-listed species, consultation with the Service will be necessary. Through the consultation process, we will analyze information contained in a biological assessment that you provide. If your proposed action is associated with Federal funding or permitting, consultation will occur with the Federal agency under section 7(a)(2) of the ESA. Otherwise, an incidental take permit pursuant to section 10(a)(1)(B) of the ESA (also known as a habitat conservation plan) is necessary to harm or harass federally listed threatened or endangered fish or wildlife species. In either case, there is no mechanism for authorizing incidental take "after-the-fact." For more information regarding formal consultation and HCPs, please see the Service's Consultation Handbook and Habitat Conservation Plans at www.fws.gov/endangered/esa-library/index.html#consultations.

The scope of federally listed species compliance not only includes direct effects, but also any interrelated or interdependent project activities (e.g., equipment staging areas, offsite borrow material areas, or utility relocations) and any indirect or cumulative effects that may occur in the action area includes all areas to be affected, not merely the immediate area involved in the action. Large projects may have effects outside the immediate area to species not listed here that should be addressed. If your action area has suitable habitat for any of the attached species, we recommend that species-specific surveys be conducted during the flowering season for plants and at the appropriate time for wildlife to evaluate any possible project-related impacts.

Candidate Species and Other Sensitive Species

A list of candidate and other sensitive species in your area is also attached. Candidate species and other sensitive species are species that have no legal protection under the ESA, although we recommend that candidate and other sensitive species be included in your surveys and considered for planning purposes. The Service monitors the status of these species. If significant declines occur, these species could potentially be listed. Therefore, actions that may contribute to their decline should be avoided.

Lists of sensitive species including State-listed endangered and threatened species are compiled by New Mexico state agencies. These lists, along with species information, can be found at the following websites:

Biota Information System of New Mexico (BISON-M): www.bison-m.org

New Mexico State Forestry. The New Mexico Endangered Plant Program: www.emnrd.state.nm.us/SFD/ForestMgt/Endangered.html

New Mexico Rare Plant Technical Council, New Mexico Rare Plants: nmrareplants.unm.edu

Natural Heritage New Mexico, online species database: nhnm.unm.edu

WETLANDS AND FLOODPLAINS

Under Executive Orders 11988 and 11990, Federal agencies are required to minimize the destruction, loss, or degradation of wetlands and floodplains, and preserve and enhance their natural and beneficial values. These habitats should be conserved through avoidance, or mitigated to ensure that there would be no net loss of wetlands function and value.

We encourage you to use the National Wetland Inventory (NWI) maps in conjunction with ground-truthing to identify wetlands occurring in your project area. The Service's NWI program website, www.fws.gov/wetlands/Data/Mapper.html integrates digital map data with other resource information. We also recommend you contact the U.S. Army Corps of Engineers for permitting requirements under section 404 of the Clean Water Act if your proposed action could impact floodplains or wetlands.

MIGRATORY BIRDS

The MBTA prohibits the taking of migratory birds, nests, and eggs, except as permitted by the Service's Migratory Bird Office. To minimize the likelihood of adverse impacts to migratory birds, we recommend construction activities occur outside the general bird nesting season from March through August, or that areas proposed for construction during the nesting season be surveyed, and when occupied, avoided until the young have fledged.

We recommend review of Birds of Conservation Concern at website www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BCC.html to fully evaluate the effects to the birds at your site. This list identifies birds that are potentially threatened by disturbance and construction.

BALD AND GOLDEN EAGLES

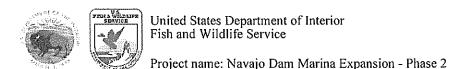
The bald eagle (*Haliaeetus leucocephalus*) was delisted under the ESA on August 9, 2007. Both the bald eagle and golden eagle (*Aquila chrysaetos*) are still protected under the MBTA and BGEPA. The BGEPA affords both eagles protection in addition to that provided by the MBTA, in particular, by making it unlawful to "disturb" eagles. Under the BGEPA, the Service may issue limited permits to incidentally "take" eagles (e.g., injury, interfering with normal breeding, feeding, or sheltering behavior nest abandonment). For information on bald and golden eagle management guidelines, we recommend you review information provided at www.fws.gov/midwest/eagle/guidelines/bgepa.html.

On our web site www.fws.gov/southwest/es/NewMexico/SBC_intro.cfm, we have included conservation measures that can minimize impacts to federally listed and other sensitive species. These include measures for communication towers, power line safety for raptors, road and highway improvements, spring developments and livestock watering facilities, wastewater facilities, and trenching operations.

We also suggest you contact the New Mexico Department of Game and Fish, and the New Mexico Energy, Minerals, and Natural Resources Department, Forestry Division for information regarding State fish, wildlife, and plants.

Thank you for your concern for endangered and threatened species and New Mexico's wildlife habitats. We appreciate your efforts to identify and avoid impacts to listed and sensitive species in your project area. For further consultation on your proposed activity, please call 505-346-2525 or email nmesfo@fws.gov and reference your Service Consultation Tracking Number.

Attachment



Official Species List

Provided by:

New Mexico Ecological Services Field Office
2105 OSUNA ROAD NE
ALBUQUERQUE, NM 87113
(505) 346-2525
http://www.fws.gov/southwest/es/NewMexico/
http://www.fws.gov/southwest/es/ES Lists Main2.html

Consultation Code: 02ENNM00-2016-SLI-0858

Event Code: 02ENNM00-2016-E-00900

Project Type: RECREATION CONSTRUCTION / MAINTENANCE

Project Name: Navajo Dam Marina Expansion - Phase 2

Project Description: The proposed action is for Navajo Dam Enterprises, Inc. ("NDE"), the concessionaire operating Navajo Dam Marina (the "Marina"), to construct an expansion within the current Marina's footprint to include a new, larger store/office/restaurant and fuel dock facilities as well as a number of new slips. The project would replace the Marina's store and restaurant building, the nucleus of which was purchased in 1964/65 by New Mexico State Parks ("NMSP"). As part of the project, the existing gas dock, and the fuel dock office that was built in 1972, will also be replaced.

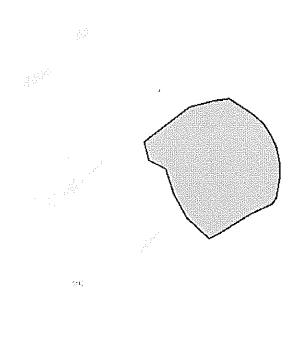
Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.





Project name: Navajo Dam Marina Expansion - Phase 2

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-107.61312246322632 36.81815752773042, -107.61167407035828 36.819067943432316, -107.61090159416199 36.819222541249445, -107.61036515235901 36.81927407378577, -107.60958194732666 36.81885322372377, -107.60926008224487 36.81861273693506, -107.60900259017943 36.81830353852496, -107.60886311531065 36.81803728333755, -107.6087236404419 36.81759065965298, -107.60873436927795 36.81729004609018, -107.60884165763854 36.81672317158797, -107.60898113250732 36.816577157778646, -107.60971069335938 36.8162851293244, -107.61069774627686 36.81580413885332, -107.61104106903076 36.8156667124493, -107.61175990104675 36.81621641658501, -107.61218905448914 36.81683482901893, -107.6124358177185 36.81747041436953, -107.61297225952147 36.81769372688843, -107.61312246322632 36.81815752773042)))

Project Counties: San Juan, NM





Project name: Navajo Dam Marina Expansion - Phase 2

Endangered Species Act Species List

There are a total of 10 threatened or endangered species on your 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. Note that 1 of these species should be considered only under certain conditions. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Birds	Status	Has Critical Habitat	Condition(s)
Southwestern Willow flycatcher (Empidonax traillii extimus) Population: Wherever found	Endangered	Final designated	
Yellow-Billed Cuckoo (Coccyzus americanus) Population: Western U.S. DPS	Threatened	Proposed	
Fishes			
Colorado pikeminnow (Ptychocheilus lucius) Population: Wherever found, except where listed as an experimental population	Endangered	Final designated	
Razorback sucker (Xyrauchen texanus) Population: Wherever found	Endangered	Final designated	
Zuni Bluehead Sucker (Catostomus discobolus yarrowi) Population: Wherever found	Endangered	Final designated	
Flowering Plants		T	





Project name: Navajo Dam Marina Expansion - Phase 2

Knowlton's cactus (Pediocactus knowltonii)	Endangered		
Population: Wherever found Mancos milk-vetch (Astragalus humillimus)	Endangered		
Population: Wherever found Mesa Verde cactus (Sclerocactus mesae-verdae) Population: Wherever found	Threatened		
Mammals			
Canada Lynx (Lynx canadensis) Population: Contiguous U.S. DPS	Threatened	Final designated	
New Mexico meadow jumping mouse (Zapus hudsonius luteus) Population: Wherever found	Endangered	Final designated	If project affects dense herbaceous riparian vegetation along waterways (stream, seep, canal/ditch).





Project name: Navajo Dam Marina Expansion - Phase 2

Critical habitats that lie within your project area

There are no critical habitats within your project area.

Navajo Dam Marina Expansion - Phase 2

IPaC Trust Resources Report

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This report is for informational purposes only and should not be used for planning or analyzing project level impacts. For project reviews that require U.S. Fish & Wildlife Service review or concurrence, please return to the IPaC website and request an official species list from the Regulatory Documents page.



IPaC - Information for Planning and Conservation (https://ecos.fws.gov/ipac/): A project planning tool to help streamline the U.S. Fish & Wildlife Service environmental review process.

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IPaC Trust Resources Report



NAME

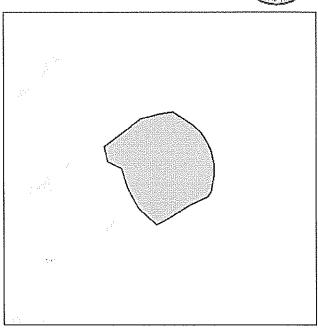
Navajo Dam Marina Expansion - Phase 2

LOCATION

San Juan County, New Mexico

DESCRIPTION

The proposed action is for Navajo Dam Enterprises, Inc. ("NDE"), the concessionaire operating Navajo Dam Marina (the "Marina"), to construct an expansion within the current Marina's footprint to include a new, larger store/office/restaurant and fuel dock facilities as well as a number of new



slips. The project would replace the Marina's store and restaurant building, the nucleus of which was purchased in 1964/65 by New Mexico State Parks ("NMSP"). As part of the project, the existing gas dock, and the fuel dock office that was built in 1972, will also be replaced.

IPAC LINK

https://ecos.fws.gov/ipac/project/ CRPWF-3X4FZ-DBRKT-YQFD3-ENA5WE

U.S. Fish & Wildlife Service Contact Information

Trust resources in this location are managed by:

New Mexico Ecological Services Field Office

2105 Osuna Road Ne Albuquerque, NM 87113-1001 (505) 346-2525

Endangered Species

Proposed, candidate, threatened, and endangered species are managed by the <u>Endangered Species Program</u> of the U.S. Fish & Wildlife Service.

This USFWS trust resource report is for informational purposes only and should not be used for planning or analyzing project level impacts.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list from the Regulatory Documents section.

<u>Section 7</u> 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 either from the Regulatory Documents section in IPaC or from the local field office directly.

The list of species below are those that may occur or could potentially be affected by activities in this location:

Birds

Southwestern Willow Flycatcher Empidonax traillii extimus

Endangered

CRITICAL HABITAT

There is final critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B094

Yellow-billed Cuckoo Coccyzus americanus

Threatened

CRITICAL HABITAT

There is proposed critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06R

Fishes

Colorado Pikeminnow (=squawfish) Ptychocheilus lucius

Endangered

CRITICAL HABITAT

There is final critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=E006

Razorback Sucker Xyrauchen texanus

Endangered

CRITICAL HABITAT

There is final critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=E054

Zuni Bluehead Sucker Catostomus discobolus yarrowi

Endangered

CRITICAL HABITAT

There is final critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=E063

Flowering Plants

Knowlton's Cactus Pediocactus knowltonii

Endangered

CRITICAL HABITAT

No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q1ZY

Mancos Milk-vetch Astragalus humillimus

Endangered

CRITICAL HABITAT

No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q1T9

Mesa Verde Cactus Sclerocactus mesae-verdae

Threatened

CRITICAL HABITAT

No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q21J

Mammals

Canada Lynx Lynx canadensis

Threatened

CRITICAL HABITAT

There is final critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=A073

New Mexico Meadow Jumping Mouse Zapus hudsonius luteus

Endangered

THIS SPECIES ONLY NEEDS TO BE CONSIDERED IF THE FOLLOWING CONDITION APPLIES

If project affects dense herbaceous riparian vegetation along waterways (stream, seep, canal/ditch).

CRITICAL HABITAT

There is final critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=A0BX

Critical Habitats

There are no critical habitats in this location

Migratory Birds

Birds are protected by the <u>Migratory Bird Treaty Act</u> and the <u>Bald and Golden Eagle</u> <u>Protection Act</u>.

Any activity that results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish & Wildlife Service.^[1] There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

1. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern
 http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds
 http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data
 http://www.birdscanada.org/birdmon/default/datasummaries.isp

The following species of migratory birds could potentially be affected by activities in this location:

Bald Eagle Haliaeetus leucocephalus

Bird of conservation concern

Season: Wintering

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B008

Bendire's Thrasher Toxostoma bendirei

Bird of conservation concern

Season: Breeding

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0IF

Black Rosy-finch Leucosticte atrata

Bird of conservation concern

Season: Year-round

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0J4

Brewer's Sparrow Spizella breweri

Bird of conservation concern

Season: Breeding

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HA

Brown-capped Rosy-finch Leucosticte australis

Bird of conservation concern

Season: Wintering

Burrowing Owl Athene cunicularia

Bird of conservation concern

Season: Breeding

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0NC

Flammulated Owl Otus flammeolus

Bird of conservation concern

Season: Breeding

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0DK

Golden Eagle Aquila chrysaetos

Bird of conservation concern

Season: Year-round

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0DV

Grace's Warbler Dendroica graciae

Bird of conservation concern

Bird of conservation concern

Season: Breeding

Gray Vireo Vireo vicinior

Season: Breeding

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0G5

Juniper Titmouse Baeolophus ridgwayi Bird of conservation concern

Season: Year-round

Lewis's Woodpecker Melanerpes lewis Bird of conservation concern

Season: Year-round

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HQ

Loggerhead Shrike Lanius Iudovicianus Bird of conservation concern

Season: Year-round

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FY

Olive-sided Flycatcher Contopus cooperi Bird of conservation concern

Season: Breeding

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0AN

Peregrine Falcon Falco peregrinus Bird of conservation concern

Season: Breeding

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FU

Pinyon Jay Gymnorhinus cyanocephalus Bird of conservation concern

Season: Year-round

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0I0

Prairie Falcon Falco mexicanus Bird of conservation concern

Season: Year-round

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0ER

Short-eared Owl Asio flammeus Bird of conservation concern

Season: Wintering

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HD

Swainson's Hawk Buteo swainsoni

Bird of conservation concern

Season: Breeding

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B070

Virginia's Warbler Vermivora virginiae

Bird of conservation concern

Season: Breeding

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0IL

Western Grebe aechmophorus occidentalis

Bird of conservation concern

Season: Breeding

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0EA

Williamson's Sapsucker Sphyrapicus thyroideus

Bird of conservation concern

Season: Breeding

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FX

Willow Flycatcher Empidonax traillii

Bird of conservation concern

Season: Breeding

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0F6

Wildlife refuges and fish hatcheries

There are no refuges or fish hatcheries in this location

Wetlands in the National Wetlands Inventory

Impacts to <u>NWI wetlands</u> 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>U.S. Army</u> <u>Corps of Engineers District</u>.

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.

This location overlaps all or part of the following wetlands:

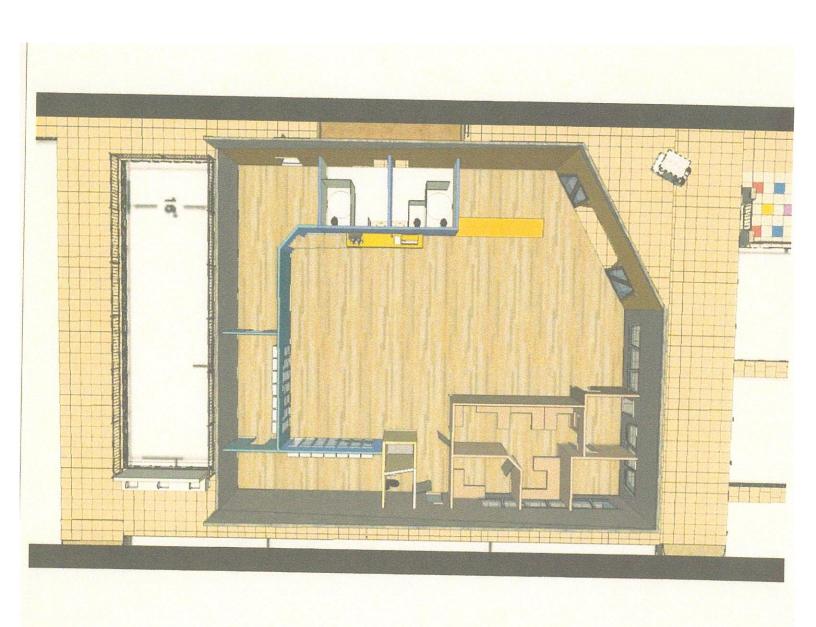
Lake L1UBHh

A full description for each wetland code can be found at the National Wetlands Inventory website: http://107.20.228.18/decoders/wetlands.aspx







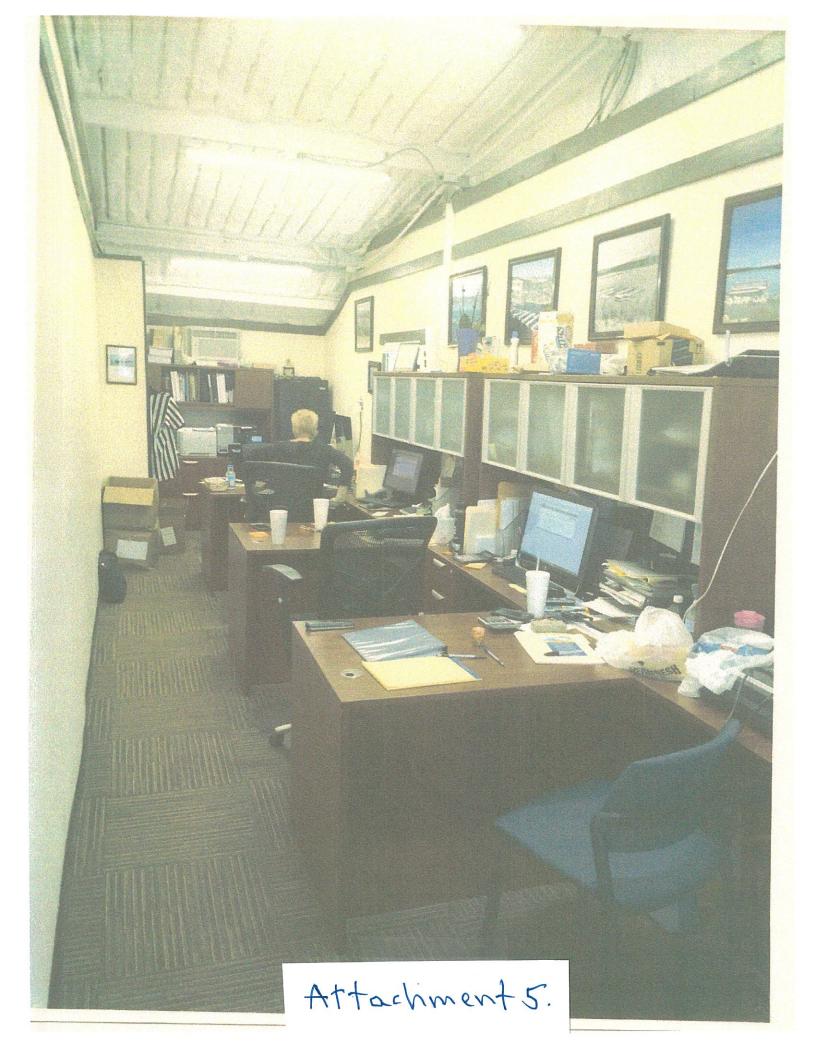


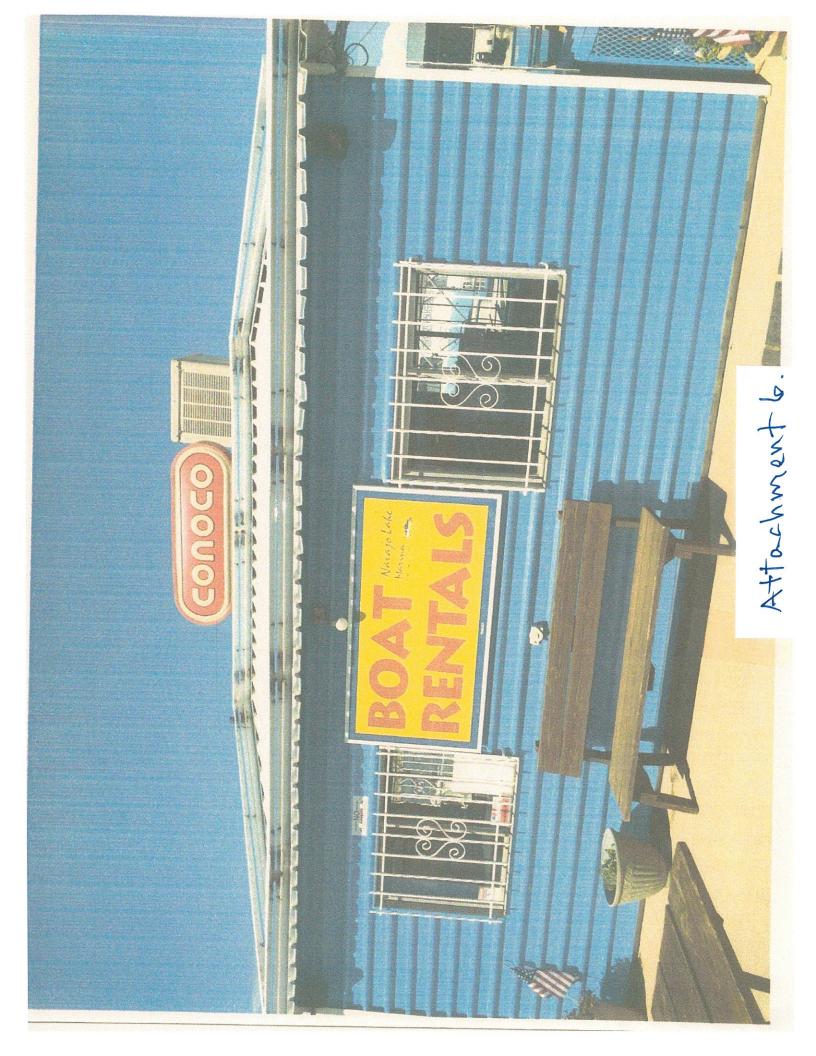
Attachment 4.



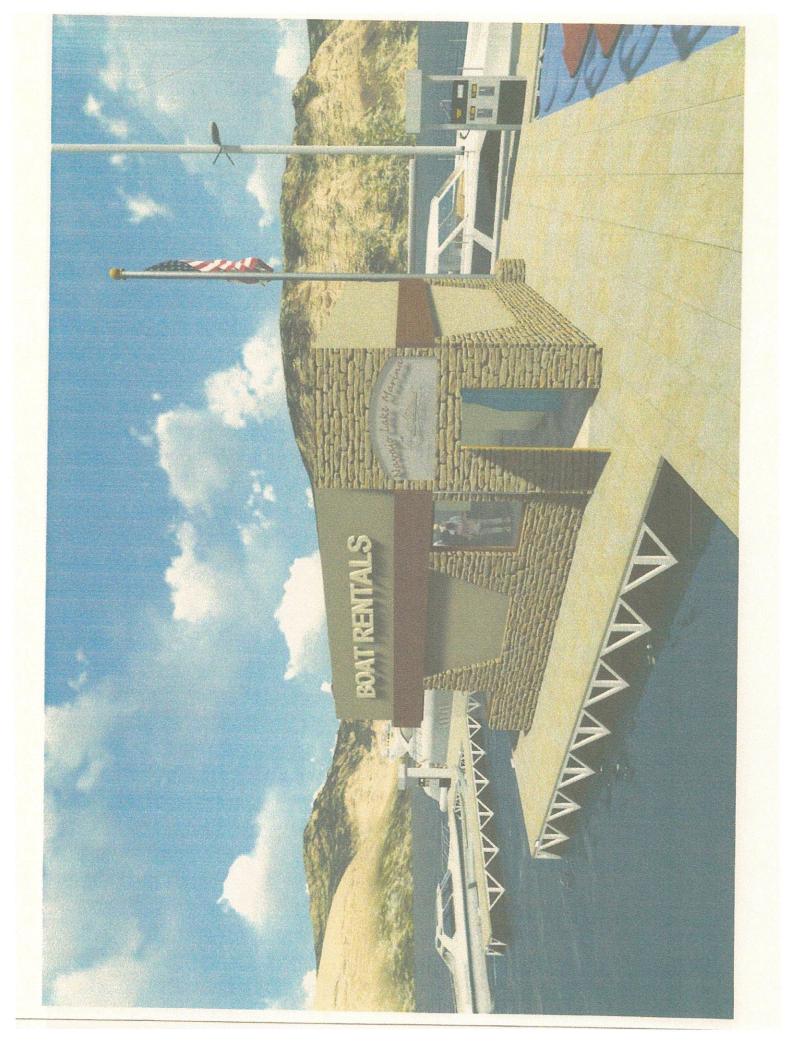


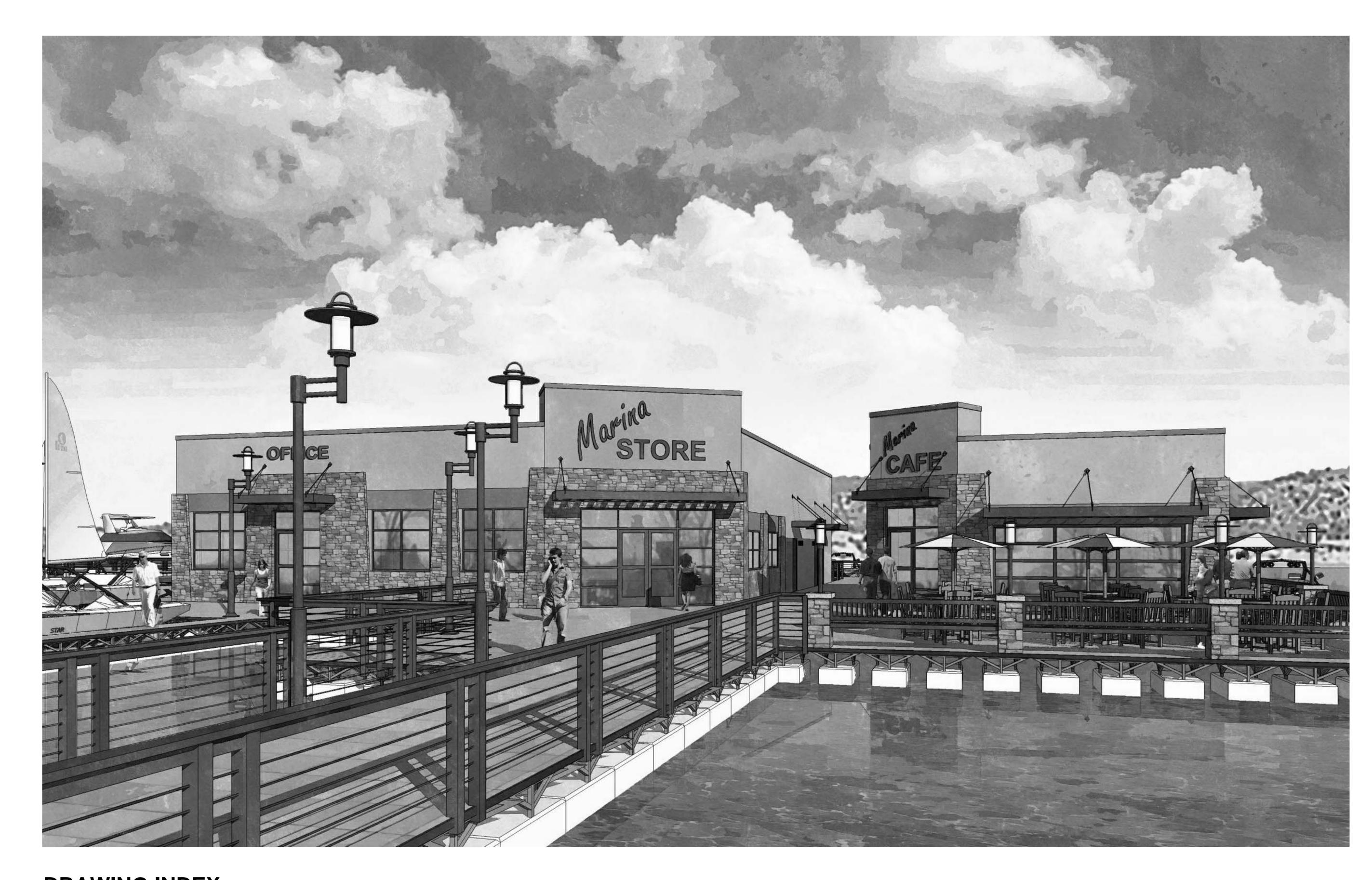












Navajo Lake Marina

Navajo Dam, New Mexico September 2016



OWNER

Navajo Lake Marina 1448 New Mexico 511, Navajo Dam, NM 87419 p_(505) 632-3245

CONSULTANTS

STRUCTURAL Walla Engineering Ltd
6501 Americas Pkwy NE Ste. 302
Albuquerque, NM 87110
p_505.243.9287

M/E/P/FP EEA Consulting Engineers
320 Gold Ave. SW, Suite 500
Albuquerque, New Mexico 87102
p_505.877.4499

FOOD SERVICE **Design Tec** 8436 N. 5th St. Phoenix, AZ 85020 p_602.273.0222

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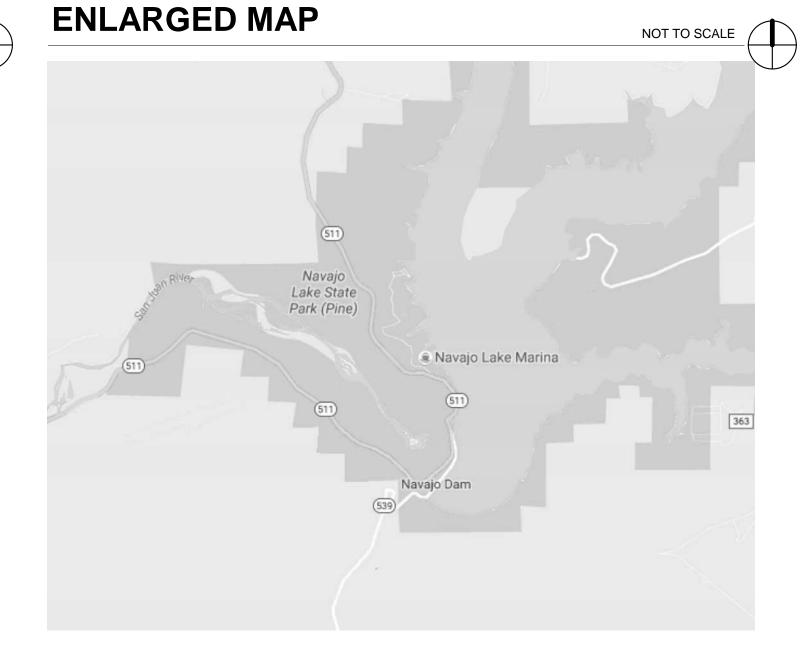
INTERIORS

PLUMBING

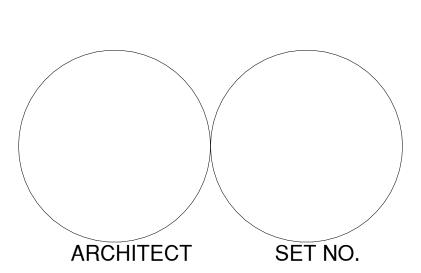
MECHANICAL

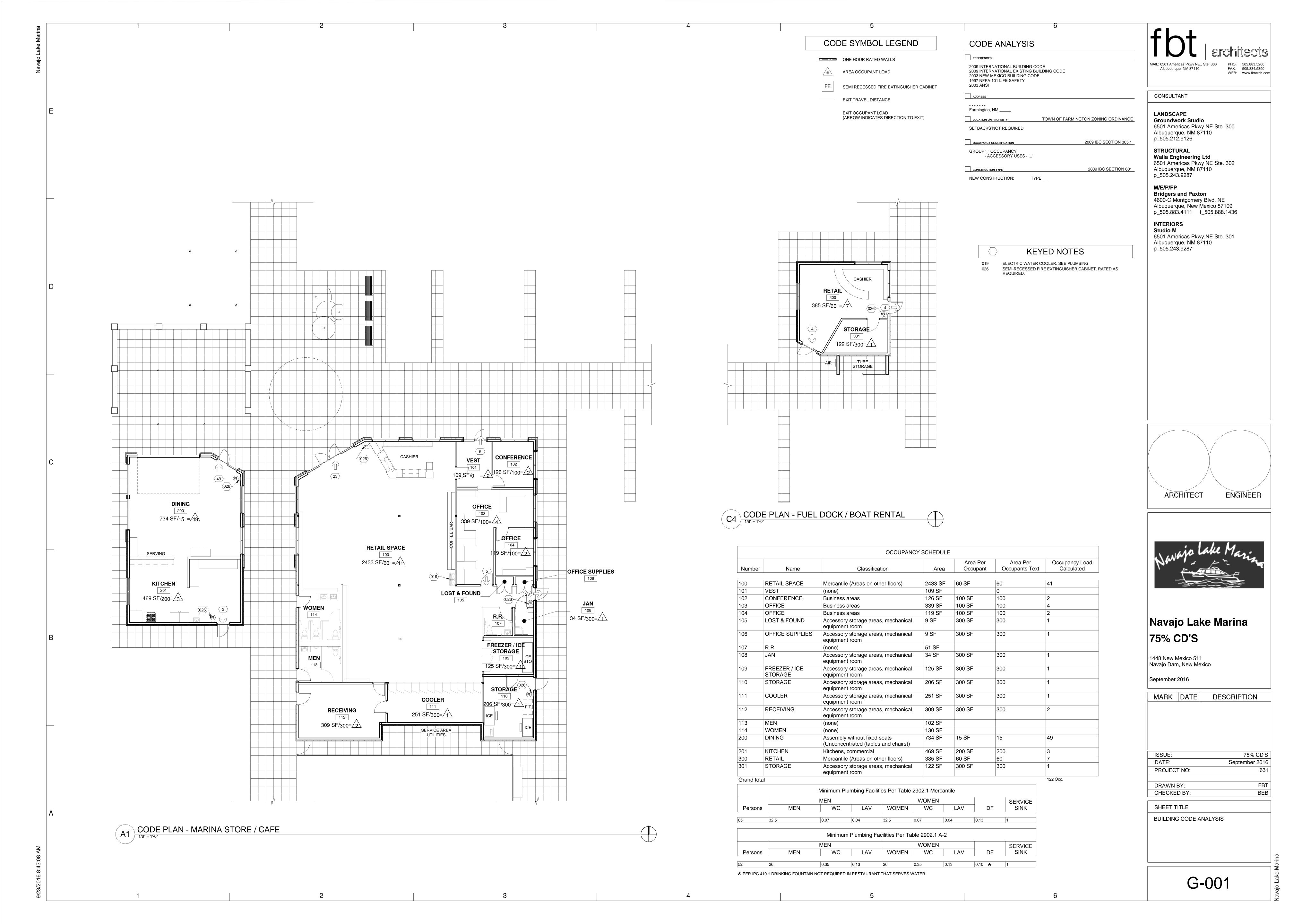
ELECTRICAL

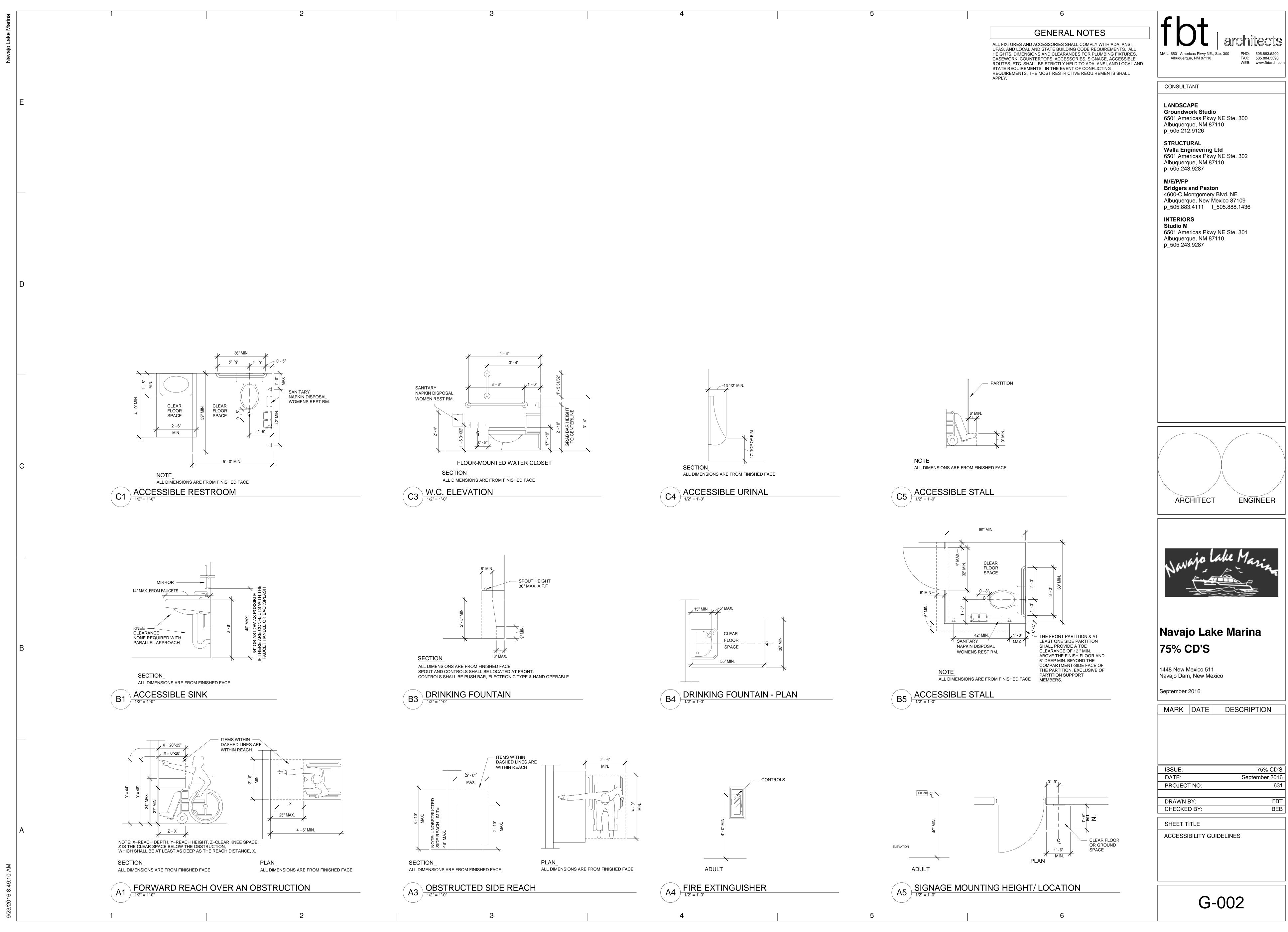












CODES AND MANUALS: INTERNATIONAL BUILDING CODE, 2009 EDITION MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE 7-05, AISC MANUAL OF STEEL CONSTRUCTION, 9TH EDITION SJI STANDARD SPECIFICATIONS, LOAD TABLES AND WEIGHT TABLES FOR STEEL JOISTS AND JOIST GIRDERS SDI DIAPHRAGM DESIGN MANUAL, 2ND EDITION AISI COLD FORMED STEEL MANUAL, CURRENT EDITION AWS D1.1 AND D1.3 NDS 2005 EDITION

2. DESIGN CRITERIA: A. VERTICAL:

> ROOF (20 PSF SNOW, 5 PSF SOLAR PANELS) 25 PSF PARTITION FLOOR 70 PSF CORRIDOR 100 PSF Is (IMPORTANCE FACTOR FOR SNOW) * LOAD HAS NOT BEEN REDUCED

B. HORIZONTAL LOADS: PROCEDURE PER SECTION 1609

> P = WIND PRESSURE x | WWIND SPEED V3s=90 MPH WIND PRESSURE: END ZONE 12.8 PSF 8.5 PSF INTERIOR ZONE HEIGHT & EXPOSURE ADJUSTMENT COEFFICIENT FROM FIGURE 6-2 IN ASCE IMPORTANCE FACTOR lw = 1.0HORIZONTAL WIND LOAD: INTERIOR

19.6 PSF 13.0 PSF (2) SEISMIC* V = Sds le W/RSPECTRAL ACCELERATIONS

IMPORTANCE FACTOR le = 1.0DESIGN SPECTRAL RESPONSE Sds = 0.497ONE SECOND PERIOD RESPONSE ACCEL. Sd1 = 0.237 RESPONSE MODIFICATION COEFFICIENT SEISMIC FORCE V = 0.058 X WSEISMIC DESIGN CATEGORY * ALLOWABLE 1/3 STRESS INCREASE FOR SEISMIC LOADING

C. ALLOWABLE SOIL BEARING PRESSURE = 1500 PSF GENERAL:

THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD. SHOP DRAWINGS, IN HARD COPY FORM, SHALL BE FURNISHED AND REVIEWED BEFORE ANY FABRICATION OR ERECTION IS STARTED. THE CONTRACTOR SHALL REVIEW AND APPROVE SHOP DRAWINGS PRIOR TO

SUBMITTAL TO THE ARCHITECT FOR REVIEW. POORLY EXECUTED SHOP DRAWINGS WILL BE REJECTED AND REQUIRE RESUBMITTAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFE AND ADEQUATE SHORING FOR ALL PARTS OF THE STRUCTURE DURING CONSTRUCTION. TEMPORARY PROVISIONS SHALL BE MADE FOR STRUCTURAL STABILITY DURING CONSTRUCTION. THE STRUCTURE SHOWN ON THE DRAWINGS HAS BEEN DESIGNED FOR STABILITY UNDER FINAL CONFIGURATION. THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL OPENINGS IN FLOORS.

ROOF, WALLS AND BEAMS WITH THE INDIVIDUAL TRADES. NOTCHING OR CUTTING ANY STRUCTURAL MEMBER IN THE FIELD IS PROHIBITED.

4. MATERIALS:

A. STRUCTURAL AND MISCELLANEOUS STEEL (1) ALL STRUCTURAL STEEL SHALL BE DETAILED AND FABRICATED IN ACCORDANCE

QUALIFICATION REQUIRED.

WITH THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS". ALL W-SHAPED MEMBERS SHALL CONFORM TO ASTM A992 (Fy=50KSI). ALL

CHANNELS, ANGLES, & PLATES SHALL BE ASTM A36 (Fy=36KSI). ALL PIPE STEEL SHALL BE ASTM A501 (Fy=36KSI). ALL COLD FORMED STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B.

BOLTS SHALL CONFORM TO ASTM A325 TENSION CONTROL BOLTS UNLESS NOTED OTHERWISE, WITH SIZES AS SHOWN ON THE DRAWINGS. WHERE CLEARANCE WITHIN A CONNECTION DOES NOT PERMIT THE USE OF TENSION CONTROL BOLTS, STANDARD A325 BOLTS SHALL BE USED AND INSPECTED IN ACCORDANCE WITH THE AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS".

ALL BOLTS SHALL BE TIGHTENED SO AS TO SHEAR THE SPLINE OFF THE BOLT. ANCHOR BOLTS EMBEDDED IN CONCRETE SHALL BE ASTM A307 BOLTS OR A36 THREADED BARS. PROVIDE FLAT WASHERS BETWEEN ALL NUTS AND BASEPLATES.

ALL WELDING SHALL BE DONE IN ACCORDANCE WITH THE LATEST STANDARDS OF THE AWS STRUCTURAL WELDING CODE. ALL BOLT HOLES THAT ARE REQUIRED TO BE FIELD DRILLED SHALL BE DRILLED

WITH A MAG DRILL. FLAME CUTTING OF HOLES OR ENLARGING OF UNFAIR HOLES WILL NOT BE ALLOWED. HEADED CONCRETE ANCHORS AND SHEAR CONNECTORS SHALL BE TYPE B, IN CONFORMANCE WITH AWS D1.1 "STRUCTURAL WELDING CODE-STEEL". STRUCTURAL STEEL TO RECEIVE SHEAR CONNECTIONS SHALL BE FREE OF PAINT. WELDING PRE-

SPECIFICATIONS.

STEEL JOISTS SHALL BE MANUFACTURED BY A MEMBER OF SJI. STEEL JOISTS SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE 2002 STEEL JOIST INSTITUTE SPECIFICATIONS.

NO CONSTRUCTION LOADS OF ANY KIND SHALL BE PLACED ON UNBRIDGED JOISTS. WHERE COLUMNS ARE NOT FRAMED IN AT LEAST TWO DIRECTIONS WITH STRUCTURAL STEEL MEMBERS, JOISTS AT OR CLOSEST TO COLUMN LINES SHALL BE FIELD BOLTED TO ADD LATERAL STABILITY DURING CONSTRUCTION. PROVIDE BRIDGING IN ACCORDANCE WITH THE 42ND EDITION OF SJI STANDARD

C. STEEL DECK:

ALL STEEL DECK SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH STEEL

DECK INSTITUTE SPECIFICATIONS. SEE PLAN FOR STEEL DECK GAGE, FINISH AND CONNECTIONS. PROVIDE A MINIMUM OF 1 1/2" BEARING FOR ALL STEEL DECKS.

ALL SPLICES AND LAPS SHALL BE A MINIMUM OF 2" AND SHALL BE AT SUPPORTS. DECKING SHALL BE CONTINUOUS OVER TWO OR MORE SPANS UNLESS NOTED OTHERWISE

POWER DRIVEN FASTENERS SHALL HAVE A MIN. 0.177 INCH SHAFT DIAMETER AND BE EQUIVALENT TO HILTI ENP DECK FASTENERS. (7) CONDUIT PARALLEL TO FLOOR DECK IN CONCRETE TOPPING IS PROHIBITED.

D. LIGHTGAGE STRUCTURAL STEEL FRAMING (20 GAGE OR HEAVIER): (1) ALL LIGHTGAGE METAL FRAMING SHALL CONFORM TO AISI "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS", 2007. WALLS TO BE PROVIDED WITH MANUFACTURER'S STANDARD BRIDGING: (EITHER

WELDED 2 1/2" X 18 GA. STUD OR CLIPPED COLD-ROLLED CHANNEL 1 1/2" X 16 GA.). PROVIDE BRIDGING AT 4'-0" O.C. MAXIMUM. PROVIDE ALL MISCELLANEOUS ACCESSORIES AND FOLLOW ERECTION PROCEDURES

AS PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS. LIGHTGAGE STEEL FRAMING SHALL MEET THE MINIMUM PROPERTIES AS SHOWN IN THE STEEL STUD SCHEDULE.

ALL TRACK SHALL BE DEEP LEG (1 1/2" FLANGE), 18 GA. MINIMUM. TRACK SHALL BE ANCHORED TO SLAB WITH 1/2" DIA. X 3 1/2" EMBED EXPANSION

SLEEVE OR EPOXY ANCHORS AT 4'-0" O.C. UNLESS SHOWN OTHERWISE ON PLANS. PER IBC SECTION 1704, SPECIAL INSPECTION IS REQUIRED FOR THE FOLLOWING ITEMS:

A. WELDING: VISUAL INSPECTION OF ALL FIELD WELDS. NON-DESTRUCTIVE TESTING OF ALL COMPLETE PENETRATION WELDS.

HIGH STRENGTH BOLTING: VERIFICATION OF SNUG TIGHT BOLT INSTALLATION FOR A325N BOLTS. VERIFICATION OF SLIP CRITICAL (SC) BOLTS AT ALL BRACED FRAMES.

DÚTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR: THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO BE CERTAIN IT CONFORMS WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATION. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING

OFFICIAL, AND TO THE ENGINEER OF RECORD. D. SPECIAL INSPECTOR IS TO BE HIRED BY OWNER, NOT CONTRACTOR.

LIGHTGAGE SCHEDULE						
DEPTH	GAGE	AREA	lx	Sx	Fy	
DEI III	O/ (OL	IN	IN4	IN3	KSI	
C 4"	20	0.275	0.692	0.346	33	
C 4"	18	0.357	0.892	0.446	33	
C 6"	18	0.447	2.316	0.772	33	
C 8"	18	0.537	4.634	1.159	33	
T 4"	20	0.225	0.549	0.265	33	
T 4"	18	0.315	0.811	0.390	33	
T 6"	18	0.405	2.072	0.673	33	
T 8"	18	0.496	4.144	1.015	33	

"C" INDICATES STUD, 1 5/8" FLANGES

"T" INDICATES DEEP LEG TRACK, 1 1/2" FLANGES

SCHEDULE OF STRUCTURAL SPECIAL <u>INSPECTIONS</u>

1. SPECIAL INSPECTIONS / TESTING -"SPECIAL STRUCTURAL INSPECTION" SHALL NOT RELIEVE THE OWNER OR THEIR AGENT FROM REQUESTING THE JURISDICTION BUILDING DEPARTMENT INSPECTIONS REQUIRED BY SECTION 110 OF THE IBC.

2. REPORTING FOR SPECIAL INSPECTION -SPECIAL INSPECTION AND TESTING REPORTS SHALL BE COMPLETED AND DISTRIBUTED AT THE COMPLETION OF EACH TASK. IF A TASK IS TO TAKE LONGER THAN (3) DAYS, PROVIDE REPORTS FOR EACH DAY. PROVIDE COPIES OF REPORTS TO: CONTRACTOR, OWNER, ARCHITECT AND STRUCTURAL ENGINEER OF RECORD. SPECIAL INSPECTOR TO KEEP A NON-COMPLIANCE LIST DOCUMENTING ITEMS INSPECTED NOT MEETING APPROVED CONSTRUCTION DOCUMENTS AND WHEN / HOW RESOLVED.

3 SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING CONSTRUCTION DOCUMENTS FOR ADDITIONAL NON-STRUCTURAL SPECIAL INSPECTION ITEMS.

IN ACCORDANCE WITH IBC CHAPTER 17, THE FOLLOWING TYPES OF WORK REQUIRE SPECIAL INSPECTIONS AND TESTING:

SPECIAL	ECIAL INSPECTION AND VER	1	OF INSPECTION	REFERENCE FOR CRITERIA		
INSPECTION REQUIRED Y/N	VERIFICATION AND INSPECTION	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED	IBC SECTION	REFERENCED STANDARD	
Y	MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS: a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.		X		APPLICABLE ASTM MATERIAL SPECIFICATIONS; AISC 360 SECTION A3.3	
Y	b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.		Х			
	2. INSPECTION OF HIGH-STRENGTH BOLTING:					
Y	a. SNUG-TIGHT JOINTS		Х			
Y	b. PRETENSIONED AND SLIP CRITICAL JOINTS USING TURN-OF- NUT WITH MATCHMARKING, TWIST- OFF BOLT OR DIRECT TENSION INDICATOR METHODS OF INSTALLATION		X	1704.3.3	AISC 360, SECTION M2.5	
Y	c. PRETENSIONED AND SLIP CRITICAL JOINTS USING TURN-OF- NUT WITHOUT MATCHMARKING OR CALIBRATED WRENCH METHODS OF INSTALLATION	X				
	3. MATERIAL VERIFICATION OF STRUCTURAL STEEL AND COLD-FORMED STEEL DECK:					
Υ	a. FOR STRUCTURAL STEEL, IDENTIFICATION MARKINGS TO CONFORM TO AISC 360		Х		AISC 360 SECTION M5.5	
Υ	b. FOR OTHER STEEL, IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS		X		APPLICABLE ASTM MATERIAL STANDARDS	
Y	c. MANUFACTURERS CERTIFIED TEST REPORTS		Х			
	4. MATERIAL VERIFICATION OF WELD FILLER MATERIALS:					
Υ	a. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS.				AISC 360, SECTION A3.5	
Υ	b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.					
	5. INSPECTION OF WELDING: a. STRUCTURAL STEEL:					
Y	1) COMPLETE AND PARTIAL PENETRATION GROOVE WELDS.	Х				
Υ	2) MULTIPASS FILLET WELDS.	Х				
Υ	3) SINGLE-PASS FILLET WELDS > 5/16"	х		1704.3.1	AWS D1.1	
Υ	4) PLUG & SLOT WELDS	х				
Y	5) SINGLE-PASS FILLET WELDS < 5/16"		X			
Υ	6) FLOOR AND ROOF DECK WELDS.		X		AWS D1.3	
Υ	b. REINFORCING STEEL:					
Υ	1) VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706.		Х			
Y	2) REINFORCING STEEL- RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL REINFORCED CONCRETE SHEAR WALLS AND SHEAR REINFORCEMENT.	х			AWS D1.4 ACI 318 3.5.	
Υ	3) SHEAR REINFORCEMENT.	Х				
Y	4) OTHER REINFORCING STEEL. 6. INSPECTION OF STEEL FRAME JOINT DETAIL FOR COMPLIANCE		Х			
	WITH APPROVED CONSTRUCTION DOCUMENTS:					
Y	a. DETAILS SUCH AS BRACING AND STIFFENING.		X			
Υ	b. MEMBER LOCATIONS.		X	1704.3.2		
Υ	c. APPLICATION OF JOINT DETAILS AT EACH CONNECTION.		Х			

	SPECIAL INSPECTION AND VER COLD FORMED METAL FR		N OF	
SPECIAL INSPECTION		FREQU INSPE	REFERENCE FOR CRITERIA	
REQUIRED Y/N	VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED	IBC SECTION
Y	1. SEATING OF STUDS IN TRACK.		Х	
Υ	2. WELDING OF ELEMENTS.		Х	1707.4
Y	3. SCREW ATTACHMENTS, BOLTING, ANCHORING, AND OTHER FASTENING OF COMPONENTS.		Х	1707.4
Y	4. STEEL STUD BRIDGING SPACING AND END ATTACHMENT.		х	1707.4
Υ	5. WELDED CONNECTIONS ARE TOUCHED UP WITH PAINT.		х	1707.4
Y	6. VERIFY STRUCTURAL STUD SIZE, DEPTH, AND GAGE.		Х	1707.4

SPECIAL INSPECTION OF WIND FORCE RESISTING SYSTEMS							
SPECIAL INSPECTION		FREQUENCY OF INSPECTION		REFERENCE FOR CRITERIA			
REQUIRED Y/N	VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED	IBC SECTION			
Y	1. WOOD STRUCTURE PANEL SHEATHING, NOMINAL SIZE OF FRAMING MEMBERS AT ADJOINING PANEL EDGES, NAIL OR STAPLE DIAMETER AND LENGTH, NUMBER OF FASTENER LINES, AND SPACING BETWEEN FASTENERS IN EACH LINE AND AT EDGE MARGINS AGREES WITH THE APPROVED BUILDING PLANS.		х	1704.6.1			

SPECIAL INSPECTION OF SEISMIC FORCE RESISTING SYSTEMS (REQUIRED WHEN SDC = C, D, E OR F) AND DESIGNATED SEISMIC SYSTEMS (REQUIRED WHEN SDC=D,E OR F)								
SPECIAL INSPECTION	TOTATIES OF TOTAL TOTAL TRANSPORTER	FREQUINSF	REFERENCE FOR CRITERIA					
REQUIRED Y/N	VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED	IBC SECTION				
	1. STRUCTURAL STEEL:							
Y	a. STRUCTURAL WELDING REQUIRED BY AISC 341	Х		1707.2				
	2. STRUCTURAL WOOD:							
Y	a. FIELD GLUING OPERATIONS OF ELEMENTS IN THE SEISMIC-FORCE-RESISTING SYSTEM.	Х		1707.3				
Y	b. NAILING, BOLTING, ANCHORING, AND OTHER FASTENING OF COMPONENTS WITHIN THE SEISMIC-FORCE-RESISTING SYSTEM, INCLUDING WOOD SHEAR WALLS, WOOD DIAPHRAGMS, DRAG STRUTS, BRACES, AND HOLD DOWNS. (ENGINEERS NOTE: SEE SECTIONS 1707.3 & 1705.3		Х	1707.3				
	EXCEPTION.)							
Y	COLD - FORMED STEEL FRAMING: WELDING OF ELEMENTS IN SEISMIC-FORCE DESCRIPTANCE		X	1707.4				
Y	b. SCREW ATTACHMENTS, BOLTING, ANCHORING, AND OTHER FASTENING OF COMPONENTS WITHIN THE SEISMIC-FORCE-RESISTING SYSTEM.		Х	1707.4				
	4. PIER FOUNDATIONS:							
Y	a. PLACEMENT OF REINFORCING STEEL		х	1707.5				
Y	b. PLACEMENT OF CONCRETE	Х						
	5. STORAGE RACKS AND ACCESS FLOORS:							
Y	a. ANCHORAGE		х	1707.6				

SPECIAL INSPECTION			FREQUENCY OF INSPECTION	
REQUIRED Y/N	VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED	IBC SECTION
Υ	1. VERIFICATION OF F'm AND F'AAC BY UNIT STRENGTH METHOD FOR ENGINEERED MASONRY IN OCCUPANCY CATEGORY I, II,OR III.		Х	1708.1.3
Y	2. VERIFICATION OF F'M AND F'AAC BY UNIT STRENGTH METHOD PRIOR TO CONSTRUCTION & FOR EVERY 5,000 SQUARE FEET PLACED DURING CONSTRUCTION & VERIFICATION OF PROPORTIONS OF MATERIALS IN MORTAR AND GROUT AS DELIVERED TO THE JOB SITE FOR ENGINEERED MASONRY IN OCCUPANCY CATEGORY IV.		Х	1708.1.4
Υ	3. REINFORCING AND PRESTRESSING STEEL CERTIFIED MILL TEST REPORTS SHALL BE PROVIDED FOR EACH SHIPMENT OF REINFORCING STEEL.		Х	1708.2 & 1708.3
Υ	4. STRUCTURAL STEEL	AS REQUIRED BY AISC 341	AS REQUIRED BY AISC 341	1708.2 & 1708.4
Υ	5. STRUCTURAL WELDING OF BASE METAL THICKER THAN 1.5 INCHES.	Х		1708.2 & 1708.4

fht	
	architects

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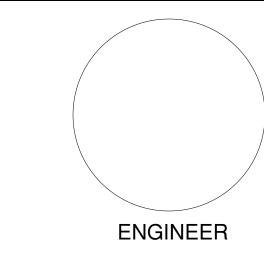
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Structural Engineering
Civil Engineering



Navajo Lake Marina

75% CD's 1448 New Mexico 511 Navajo Dam, New Mexico

September 2016

MARK DATE DESCRIPTION

PROJECT NO: 7319 CAD DWG FILE:
DRAWN BY: DR
CHECKED BY: MJW

SHEET TITLE

GENERAL STRUCTURAL NOTES

S-001

CANOPY

29' - 11"

2.5K2 STEEL JOISTS @ 5'-0" OC -

29' - 11"

1/8" = 1'-0"

250 PLF

D5 S-201

SEE ARCH. FOR LOCATION

26' - 4 1/2"

720 PLF

10K1 STEEL JOISTS

512 PLF

- W/R0 EXTENDED --ENDS @ 5'-0" OC

23' - 1"

 \bigcirc

14' - 8 1/2"

- 12K1 STEEL JOISTS @ 5'-0" OC -

10K1 STEEL JOISTS W/R0 EXTENDED ENDS @ 5'-0" OC

±= == 432 PLF

25' - 0"

10K1 STEEL JOISTS - W/ R0 EXTENDED

ENDS @ 5'-0" OC

13' - 5"

20' - 5"

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STRUCTURAL

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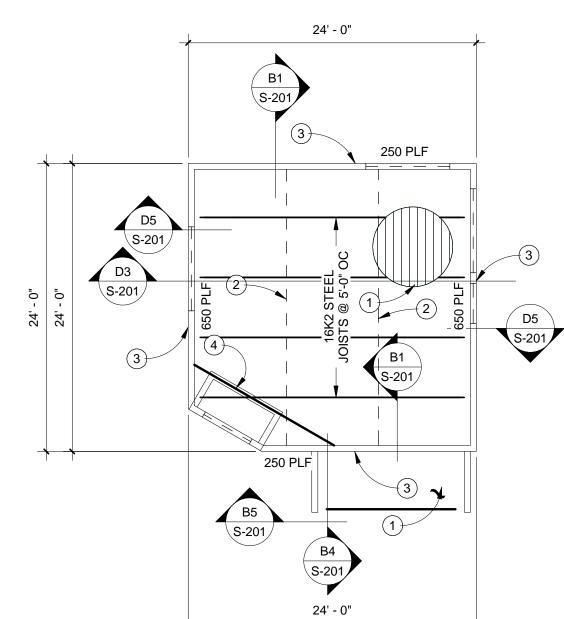
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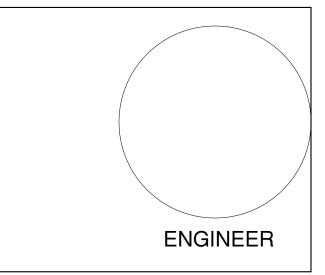
GENERAL NOTES

- A. SEE BUILDING SECTIONS (S-201) FOR TOP OF STEEL ELEVATIONS.
- B. DIMENSIONS ARE TO FACE OF STUD U.N.O.
 C. SEE 2 ON THIS SHEET FOR LIGHTGAGE LINTEL SCHEDULE.
 D. STRUCTURE POINT LOADS AND WALL LOADS ARE INDICATED ON THIS PLAN. POINT LOADS INDICATED ARE TOTAL - MADE UP OF 50% DEAD AND 50% LIVE. WALL LOADS ARE 65% DEAD AND

KEYED NOTES

- 1. 1 1/2" TYPE "B", 22 GA. PAINTED METAL DECK W/ NESTABLE SIDELAPS. ATTACH DECK TO SUPPORTS PERPENDICULAR TO RIBS W/ 5-5/8" DIA. PUDDLE WELDS PER 36" WIDE SHEET AND TO SUPPORTS PARALLEL TO RIBS W/ 5/8" DIA. PUDDLE WELDS @ 12" OC ATTACH SIDELAPS W/ #12 TEK SCREWS @ 12" OC
- 2. L1x1x7/64 HORIZONTAL BRIDGING EQUALLY SPACED AS SHOWN. WELD TO TOP AND BOTTOM CHORDS OF JOISTS.
- 3. SHEATH EXTERIOR FACE OF ALL EXTERIOR STUD WALLS W/ 7/16" APA RATED SHEATHING. ATTACH TO STUDS W/ #8 PLYMETAL TEK SCREWS @ 4" OC @ PANEL EDGES AND 12" OC IN FIELD.
- 4. C12x20.7 FOR WALL SUPPORT.

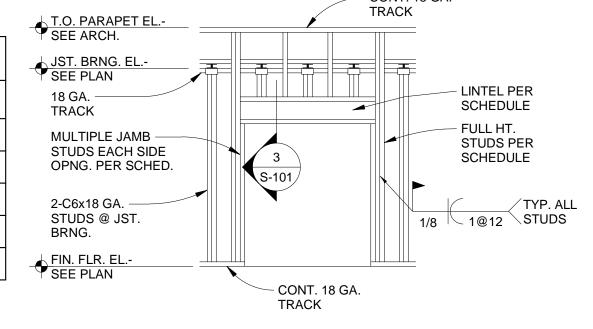




LIGHTGAGE LINTEL SCHEDLILE

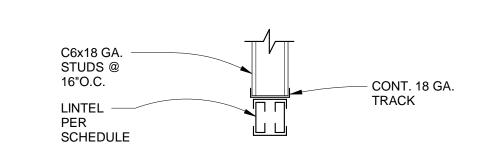
LIGHTGAGE LINTEL SCHEDULE									
OPENING WIDTH	SIZE	NO. STUDS (C6x18 GA.) AT BEARING	NO. FULL HEIGHT STUDS (C6x18 GA.)	WINDOW SILL STUDS					
0'-0" TO 4'-4"	2-C6x18 GA.	1	2	18 GA. TRACK					
4'-5" TO 6'-4"	3-C6x18 GA.	1	3	18 GA. TRACK 1-C8x18 GA					
6'-5" TO 8'-4"	3-C6x16 GA.	2	3	18 GA. TRACK 1-C8x18 GA					
8'-5" TO 14'-4"	HSS6x6x1/4	2	5	18 GA. TRACK 1-C8x18 GA					
14'-5" TO 16'-4"	HSS10x6x1/4	3	6	18 GA. TRACK 1-C8x18 GA					

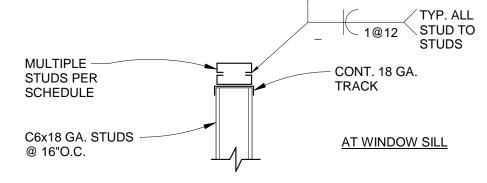
<u>NOTE:</u> SEE 0/S-201 WHERE LINTEL CONNECTS TO STEEL COLUMN.



TYPICAL ELEVATION @ OPNG IN BEARING WALL

2 LIGHTGAGE LINTEL SCHEDULE 3/4" = 1'-0"





3 LIGHTGAGE LINTEL DETAIL 3/4" = 1'-0"

Navajo Lake Marina

75% CD's 1448 New Mexico 511 Navajo Dam, New Mexico

September 2016

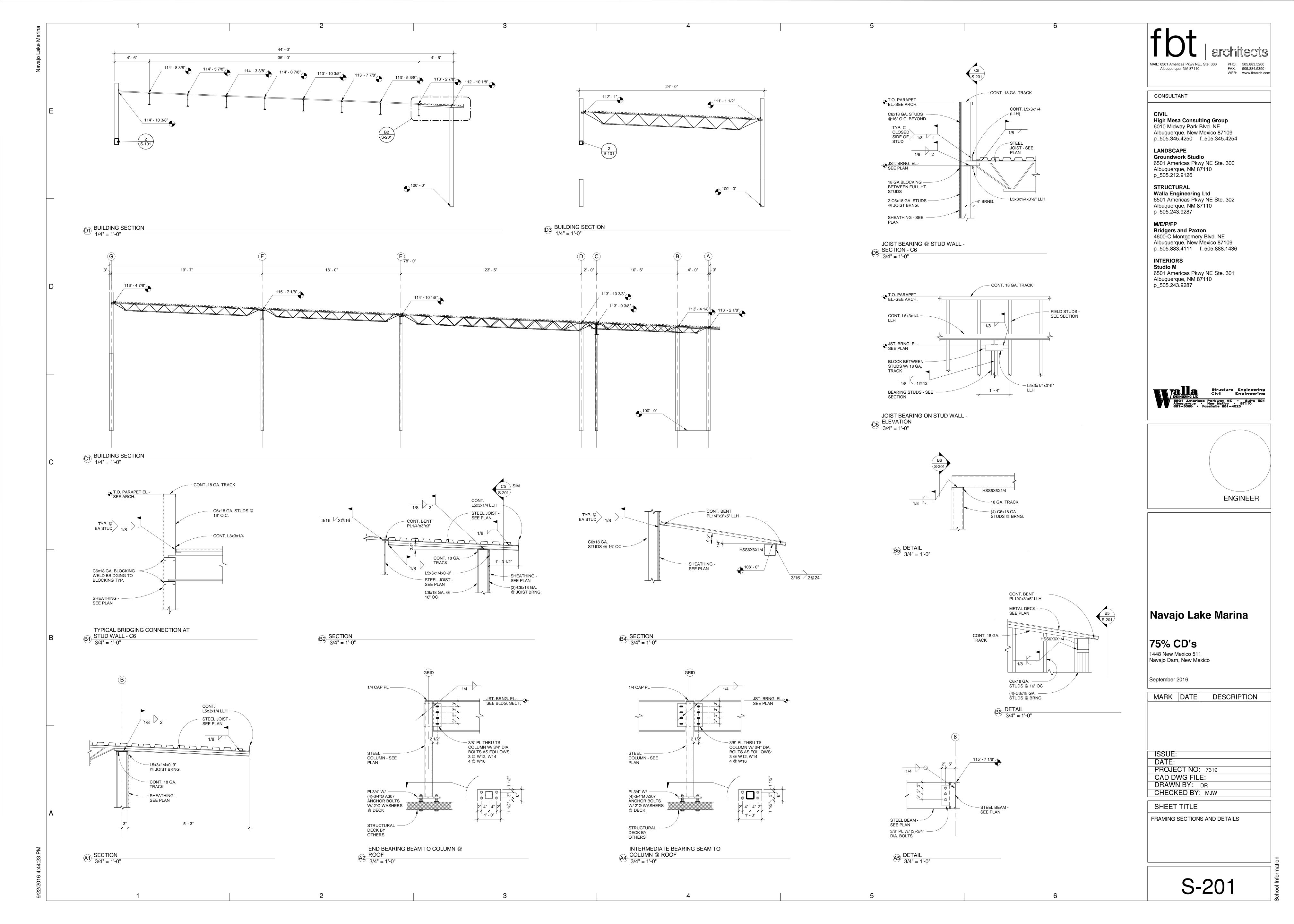
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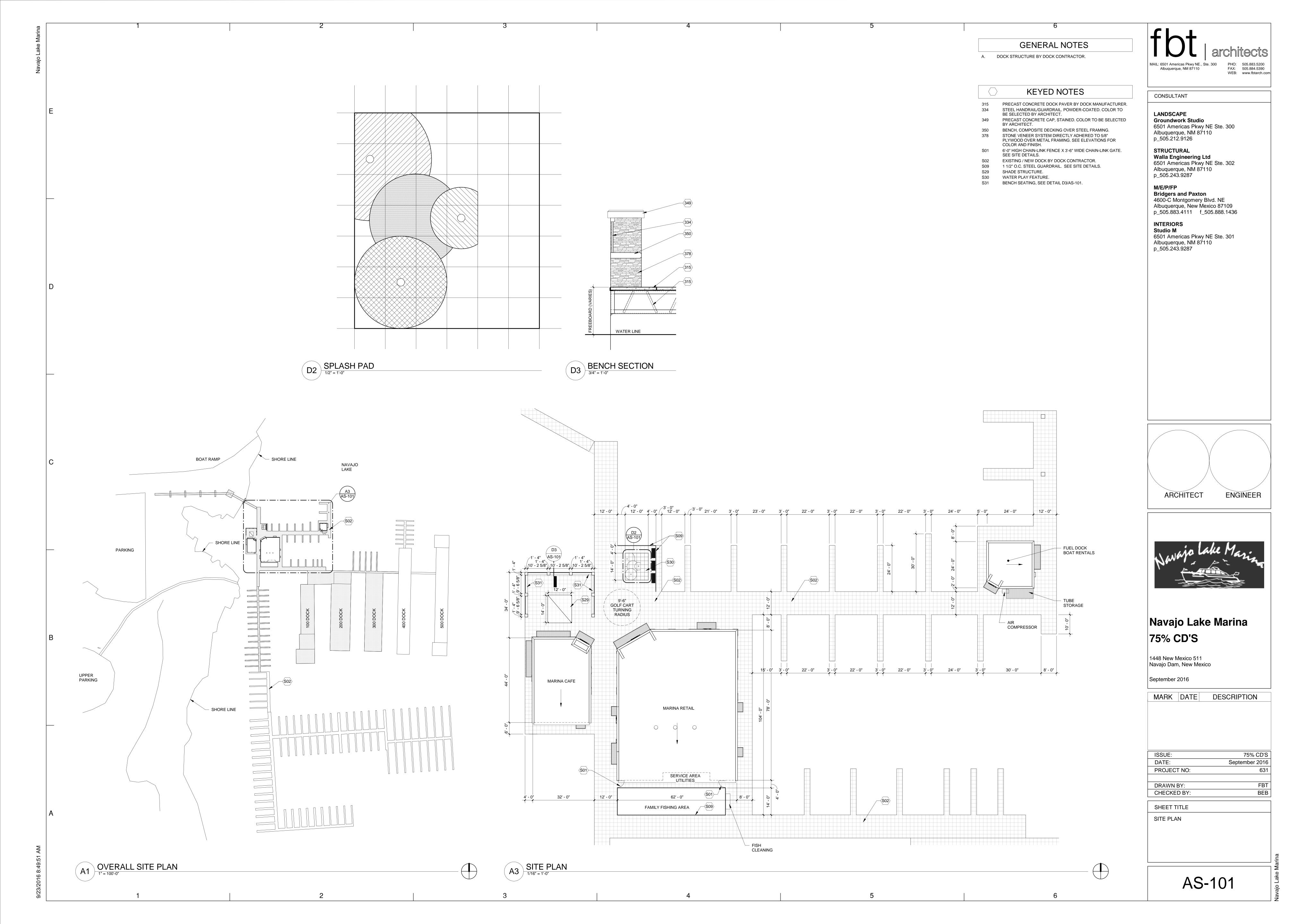
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DATE:
PROJECT NO: 7319
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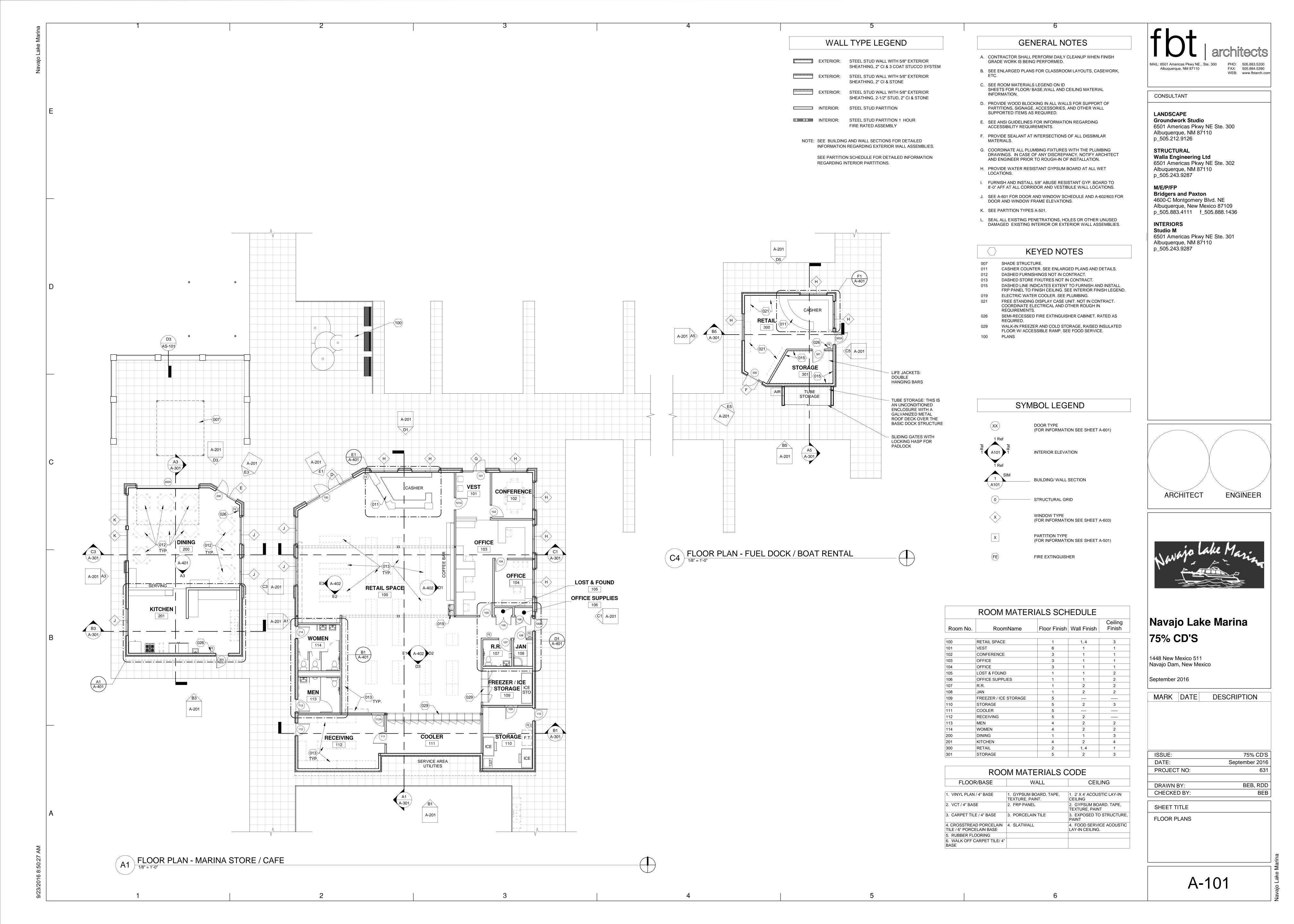
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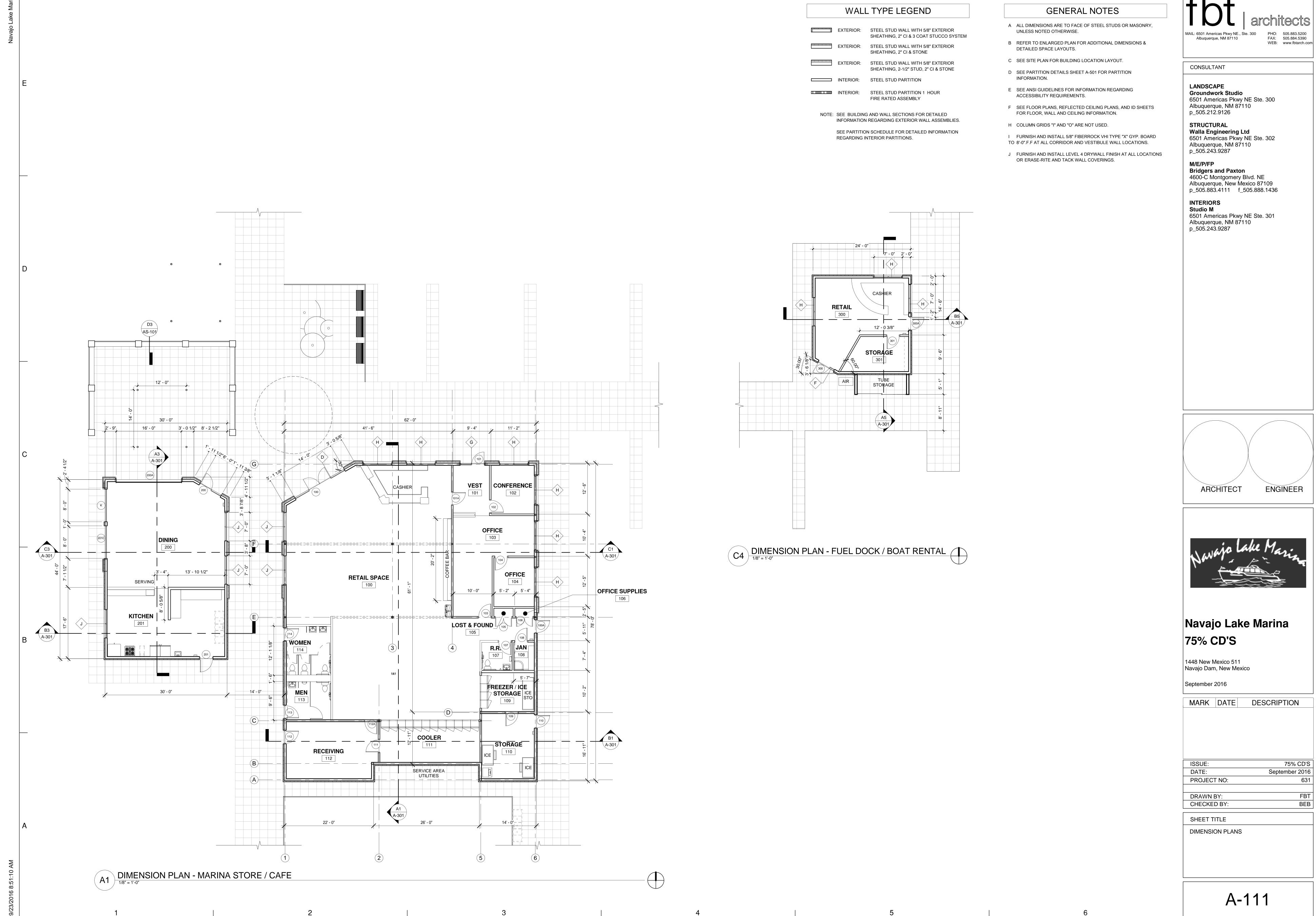
ROOF FRAMING PLAN

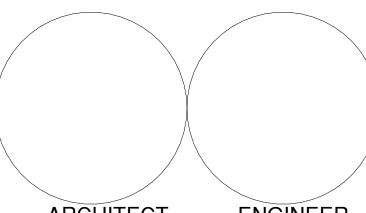
S-101







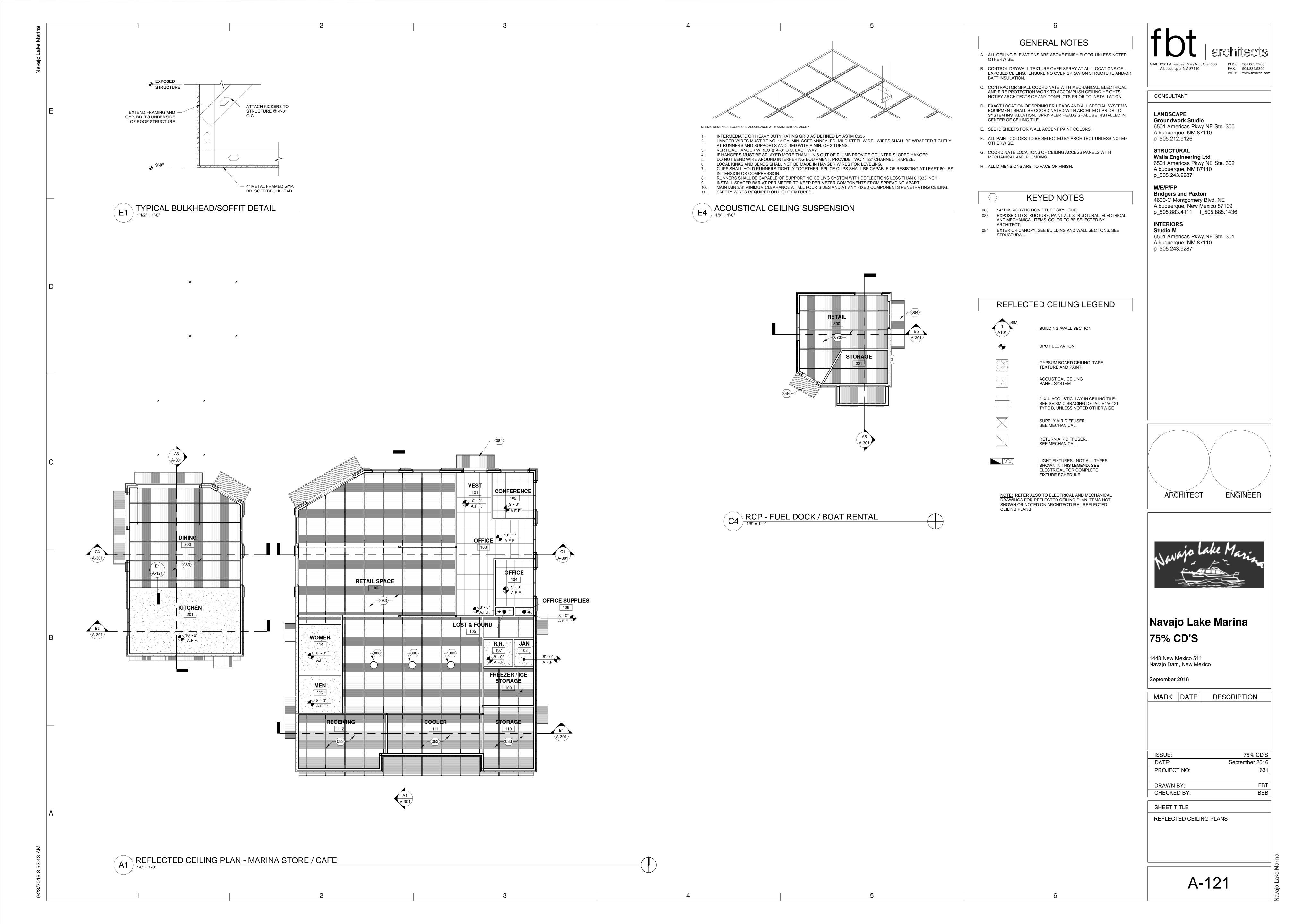






75% CD'S September 2016 631

FBT BEB



ROOF PLAN - MARINA STORE / CAFE

ROOF COMPOSITION LEGEND

ROOF SYSTEM: MECHANICALLY ATTACHED PVC ROOF SYSTEM -72 MIL PVC ROOFING SYSTEM - MECHANICALLY ATTACHED -HIGH DENSITY COVER BOARD; 5/8" DENSDECK PRIME. -STEEL DECK -REFER TO GENERAL NOTES THIS SHEET FOR ADDITIONAL REQUIREMENTS.

(150)

- GALVANIZED **ROOF PANELS**

SLOPE 1/2" / 1'-0"

ROOF PLAN - FUEL DOCK / BOAT RENTAL

GENERAL NOTES

A. THE ROOFING SYSTEM SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS FOR A 20 YEAR WARRANTY. INSTALL PER MOST STRINGENT REQUIREMENT BETWEEN PLANS, SPECIFICATIONS, MANUFACTURER'S REQUIREMENTS, AND IN ACCORDANCE WITH THE NRCA ROOFING & WATERPROOFING MANUAL, CURRENT EDITION. THE ROOFING SYSTEMS SHALL CONSIST OF TPO ROOFING SYSTEMS.

B. ROOFING AND FLASHING SYSTEM REQUIRED TO CONFORM TO ES-1 WIND DESIGN STANDARD FOR EDGE SYSTEMS USED WITH LOW SLOPE ROOFING SYSTEMS.

C. FABRICATE AND INSTALL ALL METAL FLASHING AND ACCESSORIES PER RECOMMENDATIONS OF SMACNA ARCHITECTURAL SHEET METAL MANUAL CURRENT EDITION, AND NRCA ROOFING AND WATERPROOFING MANUAL CURRENT EDITION.

D. PROVIDE SHOP DRAWINGS FOR ALL ROOF ACCESSORIES, SHEET METAL, TAPERED INSULATION LAYOUT. ETC

E. PROVIDE CRICKETS ON THE UPHILL SIDE OF ALL EQUIPMENT, OPENINGS, CURBS, ETC. GREATER THAN 18" IN WIDTH.

F. SLOPE ALL CRICKETS 1/4" MINIMUM GREATER THAN THE SLOPE OF THE DECK, WITH A MINIMUM 3 TO 1 LENGTH TO WIDTH RATIO. MAINTAIN POSITIVE DRAINAGE UNLESS NOTED OTHERWISE.

G. PRE-DRILL ALL METAL FLASHING / COUNTER FLASHING MATERIAL PRIOR TO INSTALLING FASTENERS.

H. ALL PLUMBING VENTS MUST MAINTAIN AN 18" MINIMUM DISTANCE ABOVE ROOF. TYPICAL.

I. PROVIDE A MINIMUM 12" HIGH VERTICAL DISTANCE BETWEEN TOP OF ROOFING FIELD MEMBRANES AND TERMINATION OF ALL FLASHINGS / COUNTER FLASHINGS AND FLASHING MEMBRANES. SEE DETAILS AND ROOFING MANUFACTURERS REQUIREMENTS.

J. PRIME AND PAINT ALL EXPOSED FERROUS METAL UNLESS OTHERWISE NOTED.

K. PROVIDE PRE-MANUFACTURED STANDS, MIRO INDUSTRIES, OR APPROVED EQUIVALENT, FOR ALL ROOFTOP PIPING AND CONDUITS ACROSS ROOF. DO NOT EXCEED MAXIMUM LOAD WEIGHT. INSTALL PER MANUFACTURES REQUIREMENTS. PIPES 1-1/2" AND SMALLER SHALL BE SUPPORTED AT 8'-0" O.C. MAX. AND PIPES 2" AND LARGER SHALL BE SUPPORTED AT 10'-0" O.C. MAX.SEE DETAIL

L. LOCATIONS OF ROOF TOP EQUIPMENT, DUCTWORK, ROOF PENETRATIONS, FLASHINGS, CURBS, ETC. THAT ARE INDICATED ON THE ROOF PLAN DRAWINGS NEED TO BE COORDINATED IN THE FIELD.

M. IMMEDIATELY NOTIFY ARCHITECT OF ANY CONFLICT BETWEEN ROOFING MANUFACTURERS RECOMMENDATION FOR ANY GIVEN CONDITION AND ARCHITECT'S DETAILS.

N. SLOPE DIRECTION INDICATED BY ARROW ON ROOF PLAN. MAINTAIN

DRAINAGE AND SLOPES LISTED. O. EXTEND GAS LINES, CONDUITS, VENTS ETC. PENETRATING THRU

ROOF PER DETAILS ON SHEET A-141. SLEEVE WIRE AND CABLE PENETRATIONS THRU ROOF WITH GOOSE NECK PIPE OR CONDUIT.

P. FURNISH AND INSTALL TREATED 1/2" OR THICKNESS AS DETAILED CDX PLYWOOD ON INSIDE FACE OF ALL PARAPETS.

Q. FURNISH AND INSTALL TREATED WOOD BLOCKING AT ROOF MEMBRANE TERMINATION FASTENING LOCATIONS.

R. FURNISH AND INSTALL INSULATION AT ALL MECHANICAL CURBS IF NOT PROVIDED BY MANUFACTURER.

S. GUTTER LENGTHS OVER 50' MUST USE SMACNA RECOMMENDED EXPANSION JOINT.

T. TURN FLASHING 90 DEGREES VERTICALLY INTO FASCIA WITH

MITERED CORNER AT ALL EXPOSED FLASHING CORNERS. U. THE ROOFING CONTRACTOR SHALL PROVIDE FASTENERS AS REQUIRED FOR CORROSIVE AGENTS ADDED TO TREATED WOOD

NAILERS AND AS RECOMMENDED BY THE ROOFING MANUFACTURER REQUIRED FOR THE WARRANTY. V. FURNISH AND INSTALL MANUFACTURERS WALK PAD. INSTALL AT THE **FOLLOWING LOCATIONS:** (1) AT ALL POINTS OF ROOF LANDING AT ACCESS LADDERS, DOORWAYS, HATCHES ETC.

(2) ALONG DIRECT PATH TO ROOF TOP UNITS FROM POINTS OF LANDING. DO NOT COVER WELDED TPO SEAMS WITH WALK PAD. PROVIDE FOR A GAP OVER SEAM SPACED AS RECOMMENDED BY MANUFACTURER BUT NOT LESS THAN 8". MAXIMUM LENGTH OF ANY SINGLE RUN OF WALK PAD TO BE NO MORE THAN 10'-0". PROVIDE 3" GAP BETWEEN ROWS OF WALK PADS FOR POSITIVE DRAINAGE.

W. COORDINATE ALL ROOF PENETRATIONS BETWEEN ARCHITECTURAL, PLUMBING, AND MECHANICAL WORK. NOTIFY ARCHITECT OF ANY CONFLICTS PRIOR TO PERFORMING WORK.

X. PAINT ALL EXPOSED DUCTS, ELECTRICAL CONDUITS, GAS LINES ETC. RUNNING VERTICAL ON WALLS AND HORIZONTALLY ON ROOF. COORDINATE WITH MECHANICAL, ELECTRICAL AND PLUMBING. PAINT COLOR TO BE SELECTED BY ARCHITECT.

KEYED NOTES

22 GA. METAL COPING CAP. SEE ROOF DETAILS. 22 GA. METAL LEADER HEAD AND DOWNSPOUT. EXTEND DWNSPOUT BELOW DOCK PAVERS. SEE ROOF DETAILS. 72 MIL MIN. TPO MEMBRANE ROOFING SYSTEM. DASHED LINE INDICATES WALL BELOW. SEE FLOOR PLAN.

PREMANUFACTURED SKYLIGHT UNIT. SEE ROOF DETAILS. TAPERED INSULATION ROOF CRICKET. ALL CRICKETS MUST PROVIDE POSITIVE SLOPE AND DRAINAGE WITH A MINIMUM THREE TO ONE LENGTH TO WIDTH RATIO. WATER TEST TO INSURE POSITIVE DRAINAGE. THERE IS TO BE NO STANDING WATER IN CRICKET VALLEYS. REFER TO GENERAL NOTES FOR ADDITIONAL REQUIREMENTS.

DOOR CANOPY. SEE STRUCTURAL, ENLARGED CANOPY PLANS, BUILDING SECTIONS, AND WALL SECTIONS." OPEN BELOW TO ALLOW FOR DRAINAGE.

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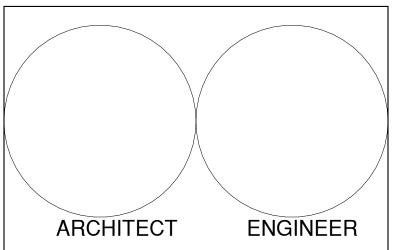
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Navajo Lake Marina 75% CD'S

1448 New Mexico 511 Navajo Dam, New Mexico

September 2016

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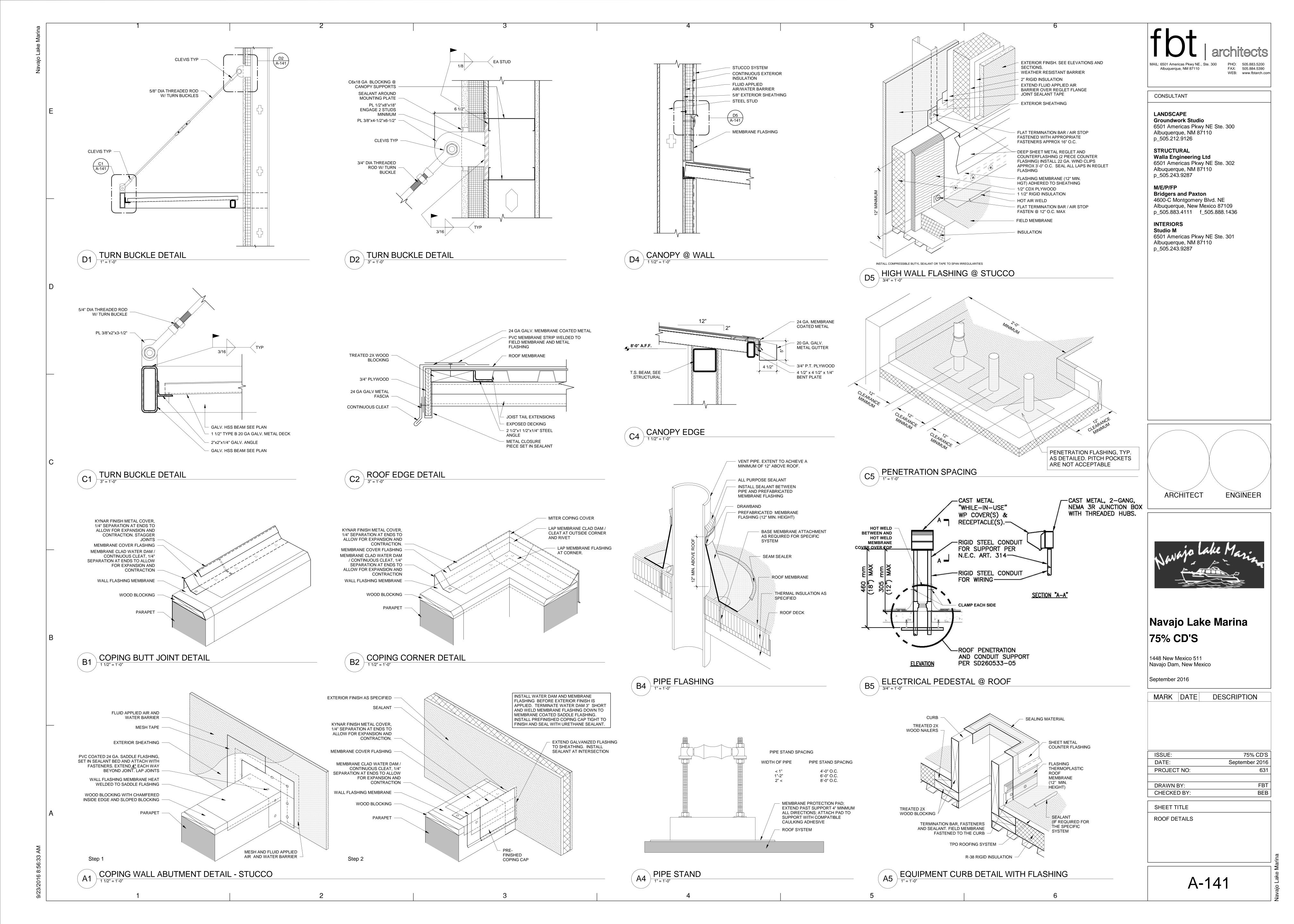
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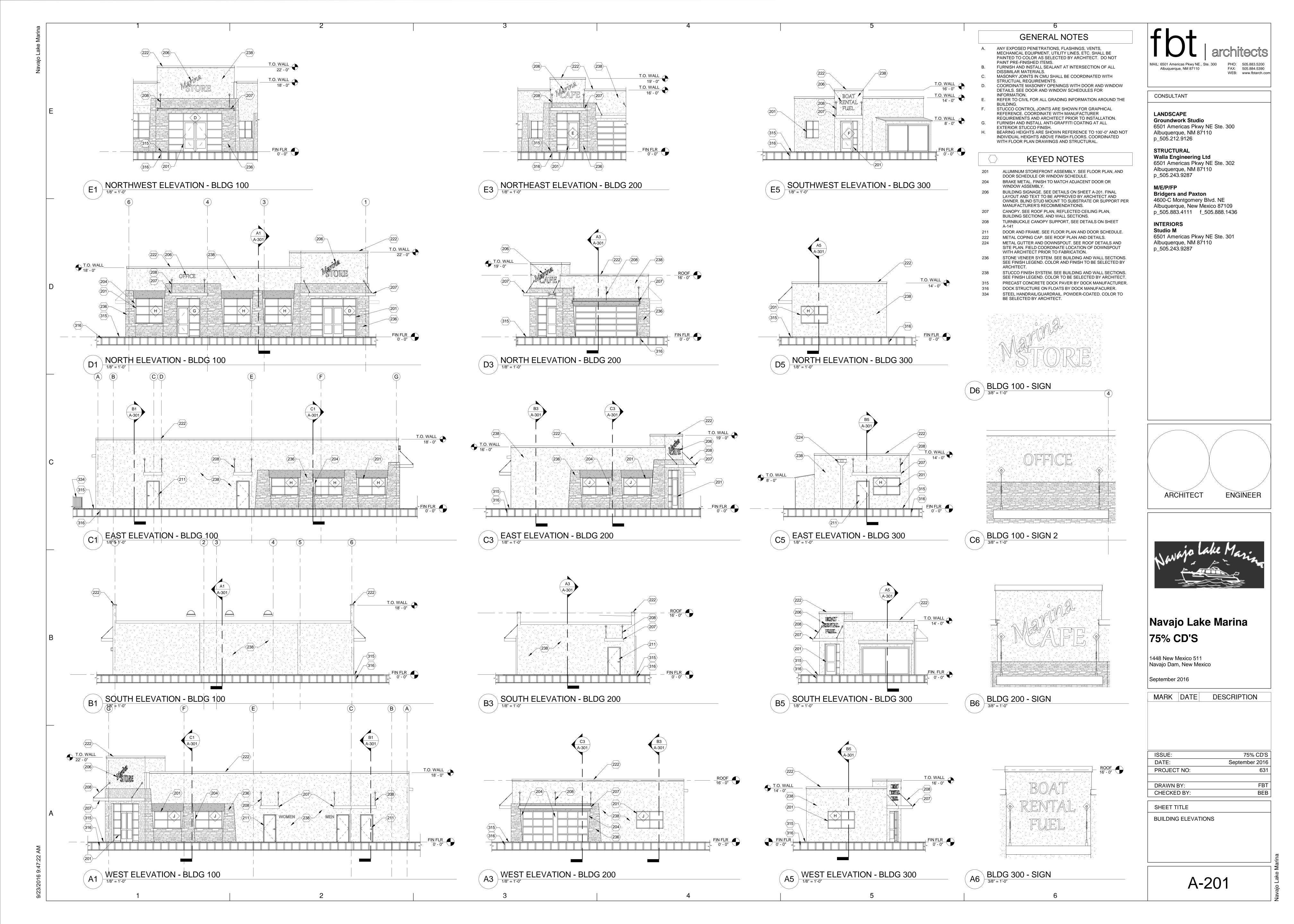
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SHEET TITLE **ROOF PLANS**

A-131





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GENERAL NOTES

A. ANY EXPOSED PENETRATIONS, FLASHINGS, VENTS,

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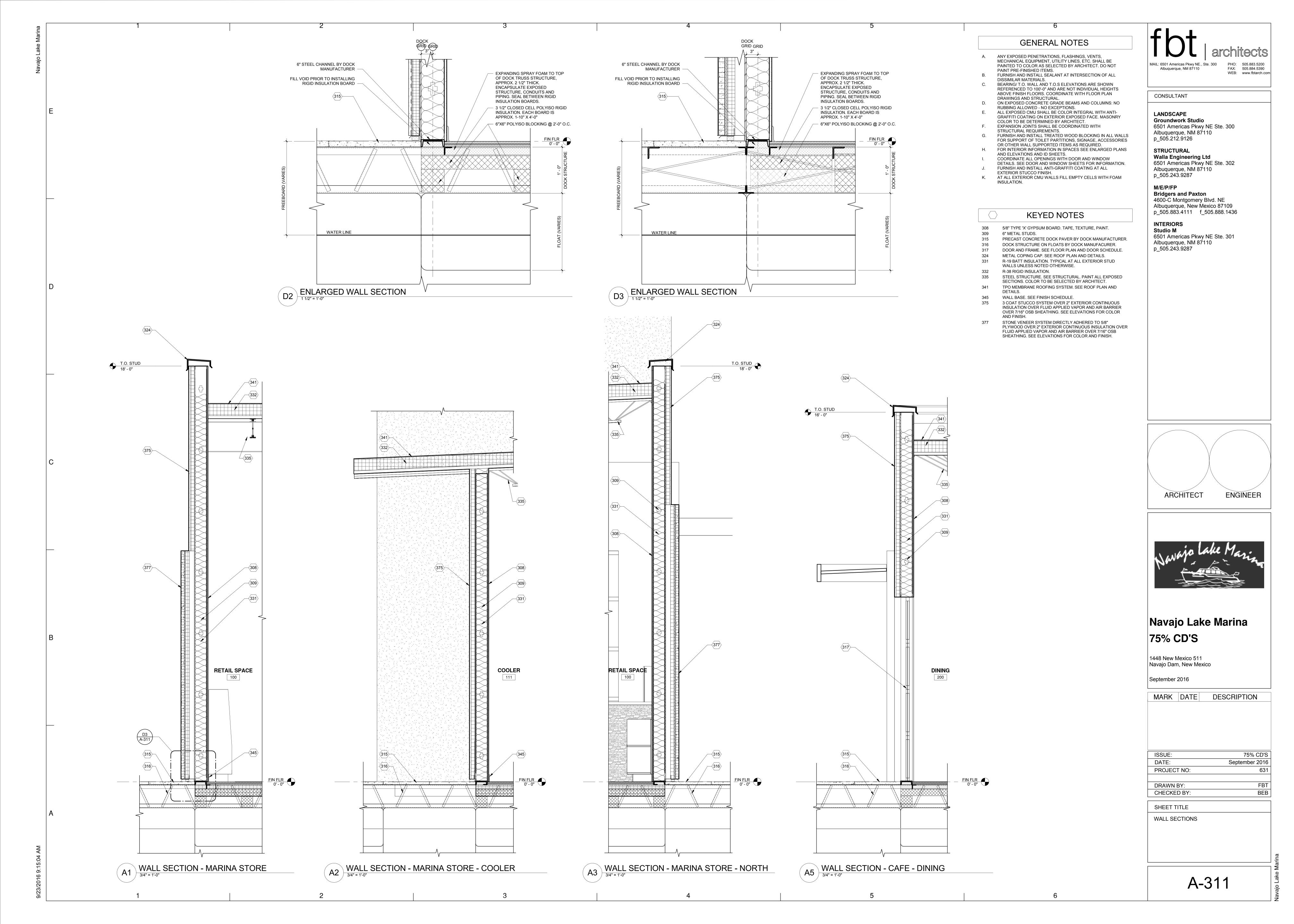
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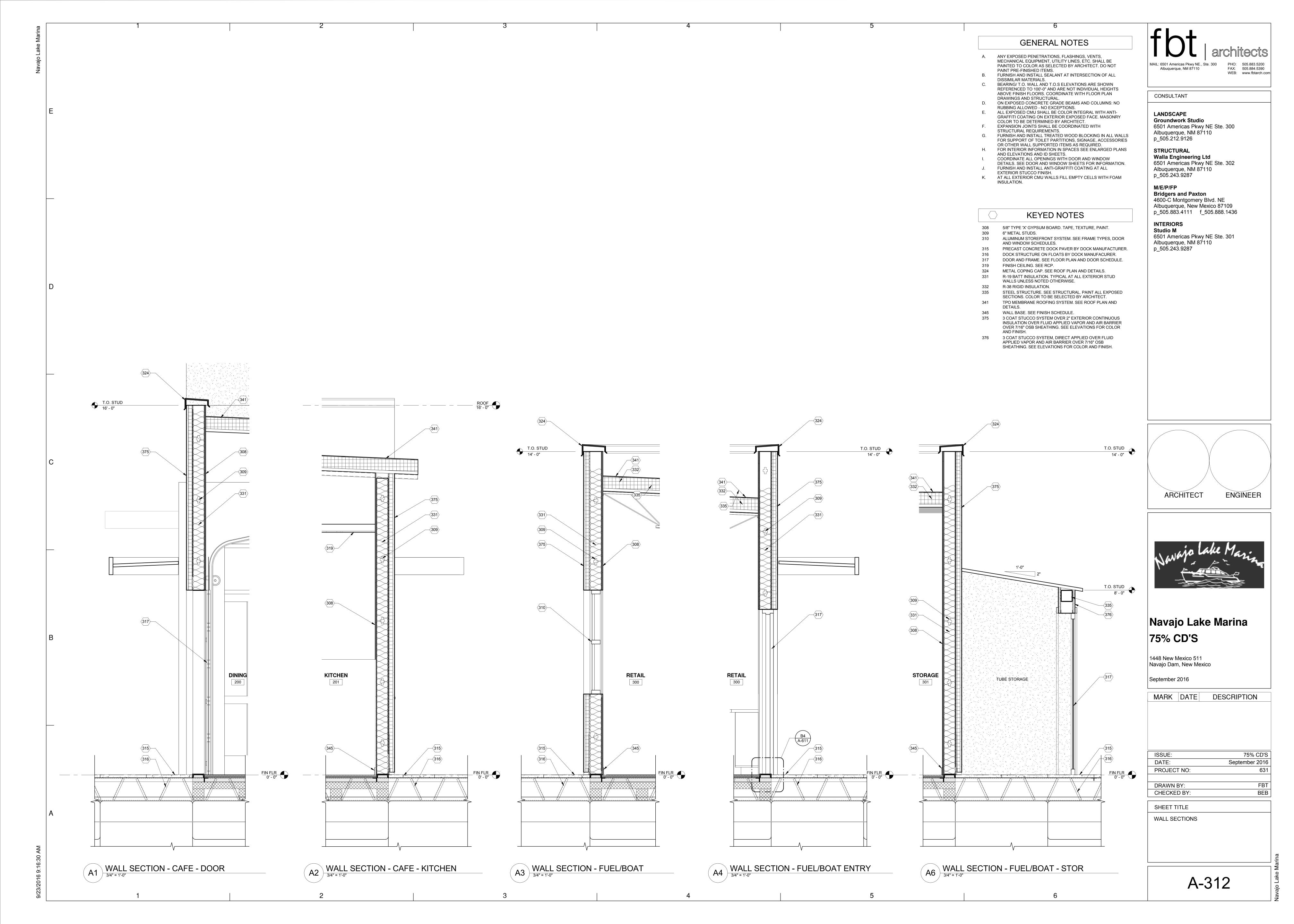
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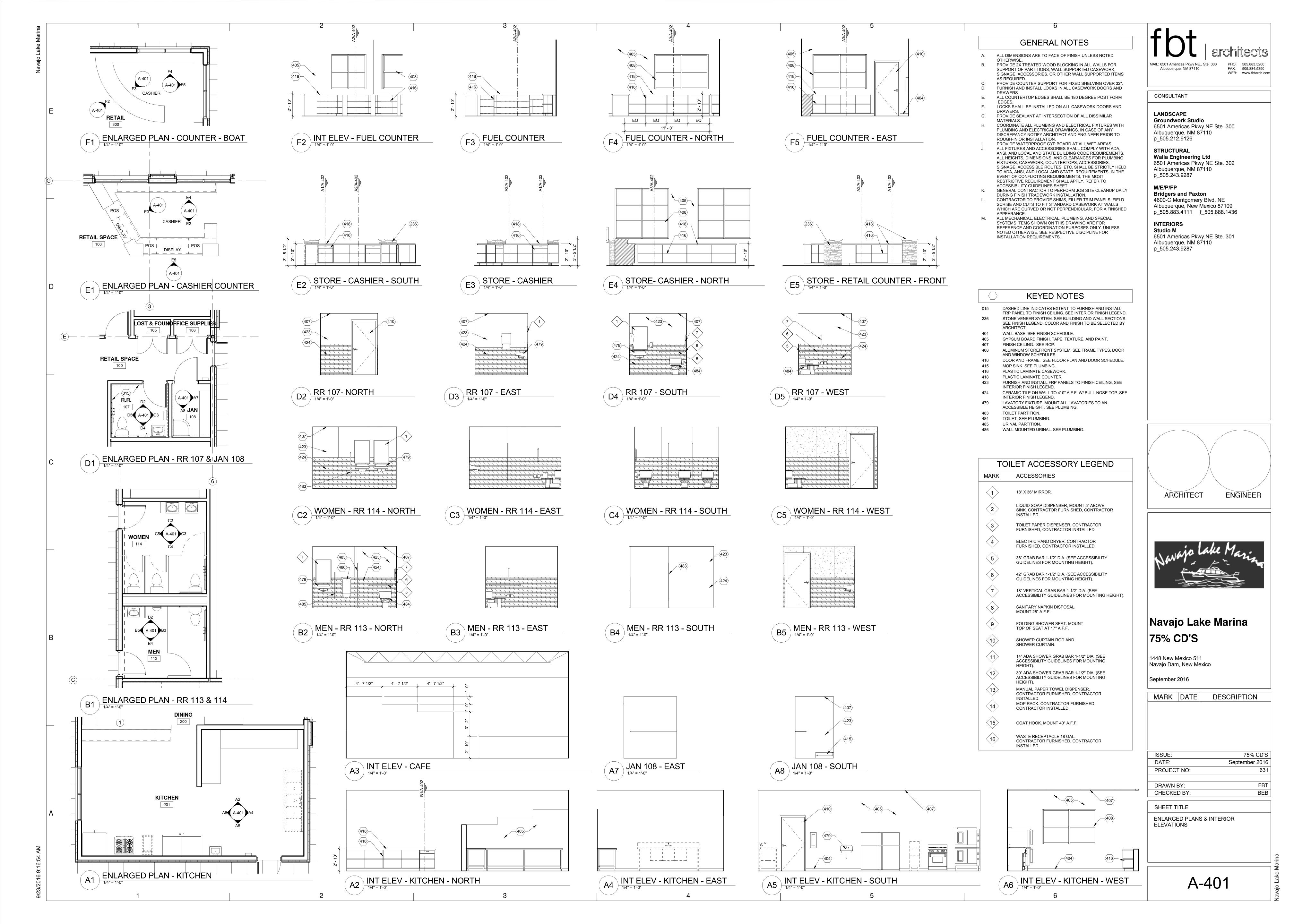
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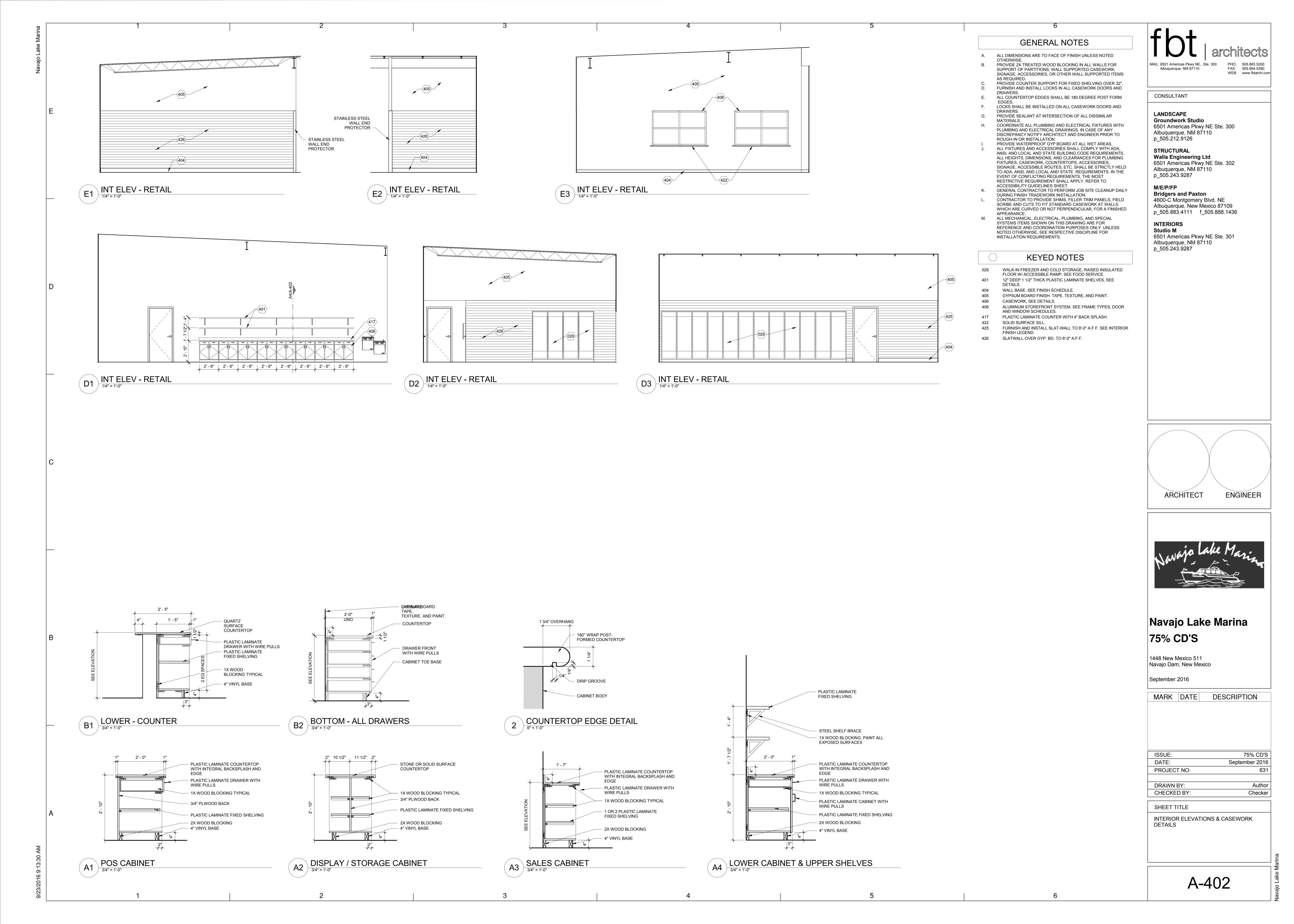
BUILDING SECTIONS

A-301









5/8" TYPE 'X' CEMENTITIOUS BACKER BOARD AT WALL TILE. SEE INTERIOR ELEVATIONS AND FINISH SCHEDULE FOR

5/8" TYPE 'X' WATER RESISTANT GYPSUM BOARD ABOVE

GENERAL NOTES

A. FURNISH AND INSTALL SEALANT AT INTERSECTION OF ALL DISSIMILAR MATERIALS.

B. FURNISH AND INSTALL WOOD BLOCKING IN ALL WALLS FOR SUPPORT OF

TOILET PARTITIONS, SIGNAGE, ACCESSORIES OR OTHER WALL SUPPORTED ITEMS AS REQUIRED.

RESTROOMS, CUSTODIAL ROOMS AND ALL WET AREAS. D. SEE FLOOR PLANS FOR EXTENT OF RATED ASSEMBLIES.

E. SEE BUILDING AND WALL SECTIONS FOR ADDITIONAL INFORMATION OF INTERIOR WALLS THAT EXTEND ABOVE THE ROOF PLANE AND EXTERIOR WALLS. COORDINATE WITH STRUCTURAL.

C. FURNISH AND INSTALL WATER RESISTANT GYPSUM BOARD IN KITCHEN,

F. SEE REFLECTED CEILING PLAN FOR ALL CEILING INFORMATION.

G. AT ALL LOCATIONS OF EXPOSED CEILING STRUCTURE ALL CMU WALLS SHALL BE PAINTED TO ROOF DECK AND ALL STEEL STUD WALLS SHALL BE TAPED, TEXTURED AND PAINTED TO UNDERSIDE OF ROOF DECK. CONTROL ALL PAINT AND TEXTURE OVERSPRAY AT THESE LOCATIONS, OVERSPRAY ON EXPOSED ROOF DECK WILL NOT BE ACCEPTED.

H. SEE STRUCTURAL DRAWINGS FOR LOCATIONS AND DETAIL OF LOAD BEARING STEEL STUDS OR CMU WALLS.

I. PARTITION GAUGE SHALL COMPLY WITH DEFLECTION AND LOADING CRITERIA INDICATED IN THE SPECIFICATIONS.

J. FURNISH AND INSTALL WALL TILE ON 5/8" TYPE X CEMENTITIOUS BACKER BOARD TO HEIGHT INDICATED ON INTERIOR ELEVATIONS IN ALL RESTROOMS AT ALL DRINKING FOUNTAINS.

K. SEE FLOOR PLANS AND ID SHEETS FOR INTERIOR FINISH INFORMATION.

L. NO RIGID INSULATION SHALL BE EXPOSED INSIDE THE BUILDING ENVELOPE. COVER ALL INSULATION WITH GYPSUM BOARD. TAPE BED AND SEAL ALL GAPS AT DECK WITH FIRE/SMOKE SEALANT.

M. FURNISH AND INSTALL SLIP TYPE HEAD JOINTS AT ALL STEEL STUD PARTITIONS THAT EXTEND TO DECK.

N. FURNISH AND INSTALL FIRE STOP TRACKS AT ALL FIRE RATED STEEL STUD PARTITIONS.

O. PARTITIONS THAT HAVE MULTIPLE LAYERS OF GYP BOARD SHALL BE CONTINUOUS ALONG WALL SURFACE. STAGGERED OR STEPPED WALL SURFACES WILL NOT BE ACCEPTED.

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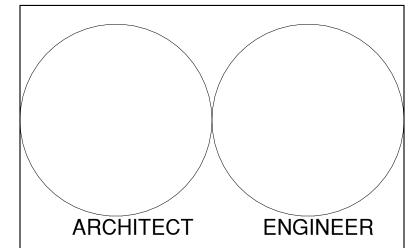
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ACOUSTICAL PARTITION NOTES

- A. BACK TO BACK OUTLETS IN STC RATED PARTITIONS WILL NOT BE
- ALLOWED. B. FURNISH AND INSTALL ACOUSTIC SEALANT AT FLOOR TO

WITH STUDS OR GYPSUM BOARD.

- PARTITION CONNECTIONS AT ALL STC RATED PARTITIONS. C. FURNISH AND INSTALL ACOUSTIC SEALANT AT ALL PENETRATIONS FOR UTILITIES, HVAC, SPRINKLERS, CONDUITS, ETC. AS THEY PENETRATE STC RATED PARTITIONS. SUPPORT PENETRATIONS ON EACH SIDE OF PARTITION TO AVOID MECHANICAL CONTACT
- D. SPACES BETWEEN ITEMS PENETRATING STC RATED PARTITIONS AND THE PARTITION ITSELF SHALL BE SEALED USING ACOUSTIC SEALANT AND BACKER MATERIAL (GLASS FIBER INSULATION OR ROCK WOOL).





Navajo Lake Marina 75% CD'S

1448 New Mexico 511 Navajo Dam, New Mexico

September 2016

MARK DATE DESCRIPTION

ISSUE: 75% CD'S DATE: September 2016 PROJECT NO: 631

SHEET TITLE

DRAWN BY:

CHECKED BY:

PARTITION SCHEDULE

A-501

FBT

BEB

WINDOW TYPES SIZE WINDOW

COMMENTS

FRAME DESIGNATIONS B,I,O,U,X,II,OO,QQ NOT USED.

TYPES LENGTH HEIGHT

GENERAL NOTES

- A. GROUT ALL HOLLOW METAL DOOR FRAMES SOLID. B. FINISH AND INSTALL PAINTABLE SEALANT AT INTERSECTION OF ALL DISSIMILAR MATERIALS.
- C. PAINT ALL VISIBLE SURFACES OF HOLLOW METAL GLASS STOPS. D. ALL FRAME DIMENSIONS AND PROFILES ARE TO BE FIELD VERIFIED
- BEFORE FABRICATION. E. METAL INSERTS FOR GLASS SHALL BE 1-1/4" MAX. PAINT ALL VISIBLE
- F. PAINT ALL HOLLOW METAL DOORS AND FRAMES. COLOR TO BE SELECTED BY ARCHITECT. G. LOCATE ROOM IDENTIFICATION SIGNS AT ALL DOORS AS INDICATED ON THE DOOR SCHEDULE. SEE SPECIFICATIONS FOR SIZE AND TYPE OF SIGN. LOCATE EVACUATION SIGNS AT EACH END OF ALL CORRIDORS. LOCATE EXIT SIGNS AT ALL VESTIBULE DOORS.
- COORDINATE FINAL LOCATION OF ALL BUILDING SINGS WITH OWNER AND ARCHITECT PRIOR TO INSTALLATION. H. GLASS IN ALL EXTERIOR DOORS AND/OR DOOR FRAMES SHALL BE 1"
- INSULATED GLAZING. I. SEE SPECIFICATIONS FOR HARDWARE SCHEDULE AND INFORMATION. J. CENTER MULLION TYPICAL ON ALL DOUBLE-LEAF DOORS UNLESS
- NOTED ON SHEET A-601 DOOR SCHEDULES. K. FURNISH AND INSTALL RESTROOM IDENTIFICATION SIGNS AT ALL RESTROOMS THAT DO NOT HAVE DOORS.

LEGEND

HM/P - HOLLOW METAL/PAINT

SURFACES OF INSERTS.

ALUM - ALUMINUM SYSTEM FINISH TO BE SELECTED BY ARCHITECT

W/SV - WOOD SOLID CORE / STAIN & VARNISH

1" ISG - 1" INSULATED SAFETY GLASS 1/4" SAFETY GLASS

STAINLESS STEEL

CR - ROUGH-IN FOR CARD READER. SEE ELECTRICAL



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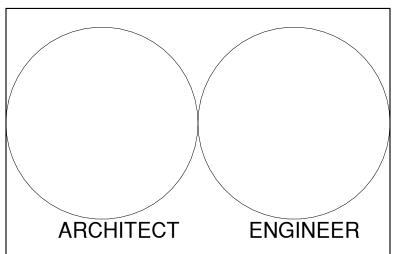
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Navajo Lake Marina 75% CD'S

1448 New Mexico 511 Navajo Dam, New Mexico

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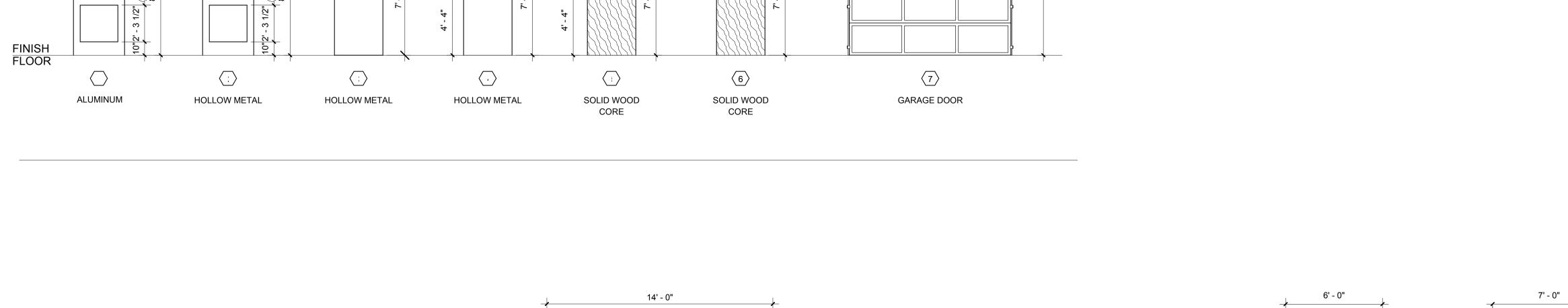
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SHEET TITLE

DOOR & WINDOW SCHEDULE

A-601



				14' - 0" 3' - 8" 2" 6' - 0" 2" 3' - 8"			6' - 0" 2" 2' - 6" 2"	7' - 0" 2" 3' - 3" 2" 3' - 3" 2"	7' - 0"
	SEE SCHEDULE	SEE SCHEDULE	SEE SCHEDULE	<u> </u>					_ <u></u>
SEE SCHEDULE	SEE SCHEDULE	2"	SEE SCHEDULE	E1	E1 A-611 E1 A-611		10' - 0"	3'-6"	8'-0"
FINISH FLOOR	PRE-FINISHED ALUMINUM STOREFRONT	B HOLLOW METAL	HOLLOW METAL	PRE-FINISHED ALUMINUM STOREFRONT	PRE-FINISHED ALUMINUM STOREFRONT	PRE-FINISHED ALUMINUM STOREFRONT	G PRE-FINISHED ALUMINUM STOREFRONT	H PRE-FINISHED ALUMINUM STOREFRONT	PRE-FINISHED ALUMINUM STOREFRONT

VARIES

FRAME TYPES

1/4" = 1'-0"

