MEXICO BEACH PIER REPLACEMENT

PREPARED FOR:

CITY OF MEXICO BEACH
BAY COUNTY FLORIDA

April 2025

CITY OF MEXICO BEACH
CITY COUNCIL MEMBERS

RICHARD WOLFF	MAYOR
JERRY SMITH	COUNCIL MEMBER
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JASON ADAMS	COUNCIL MEMBER
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PREPARED BY:

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927

449 WEST MAIN STREET
PENSACOLA, FLORIDA 32502 (850) 438-9661

PENSACOLA - PANAMA CITY BEACH - TALLAHASSEE - MOBILE

ENGINEERING BUSINESS: EB-0000340

ENGINEER'S PROJECT No.: 90622.01

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SECTION 00010

ADVERTISEMENT FOR BIDS

NOTICE TO RECEIVE SEALED BIDS

This project includes the construction of the **MEXICO BEACH PIER.** The Contractor shall provide all materials, equipment, and labor to complete the project.

Plans and specifications will be available on October 8, 2025 and can be obtained from Baskerville-Donovan, Inc. by e-mailing Dave Hemphill at dkh.7@icloud.com The bid must conform to Section 287.133(3) Florida Statutes, with respect to Public Entity Crimes.

Cost for electronic Plans and Specifications will be $50.00 per set and is non-refundable. Partial sets will NOT be issued. Checks should be made payable to Baskerville-Donovan, Inc.

Bids will be received until **2:00 pm Central Time**, **November 19th, 2025** at **City of Mexico Beach City Hall, 201 Paradise Path, Mexico Beach, Florida** and will be opened and read publicly immediately thereafter. All Bids shall be submitted in an envelope clearly marked "Sealed Bid – Mexico Beach Pier. A Bid Bond in the amount of 5% of the total amount of the Bid shall accompany the Bid. The City of Mexico Beach ("Owner") reserves the right to reject any and all Bids. All Bids shall be firm (including all labor and material prices) for a period of 60 days after opening.

The Owner shall award the Contract to the lowest responsive and responsible bidder; provided, however, the Owner reserves the right to award the Contract to a Bidder who is not the lowest responsive and responsible bidder if the Owner determines in its reasonable discretion that another Bid offers the Owner a better value based upon the reliability, quality of service, or product of such other Bidder.

The successful bidder will be required to hold his prices until April 15, 2026. That is the estimated time by FEMA that the environmental permits will be available.

A non-mandatory Pre-Bid meeting will be held at **1:00 pm Central Time, October 21, 2025** in the Mexico Beach City Hall, 201 Paradise Path, Mexico Beach, FL or by participating via video link. Point of Contact will be Dave Hemphill, at dkh.7@icloud.com. Each bidder must comply with all applicable state and local laws concerning licensing, registration, and regulations of contractors doing business in Florida.

The video link may be found at mexicobeachfl.gov Click the header labeled 'Bids' and scroll down to the Mexico Beach Pier and hit the link to the Video Link.

Advertisement Dates: October 8, October 22nd, and November 5th, 2025.

Notice to Publisher – Please forward the original "Proof of Publication" and the invoice to:

City of Mexico Beach
201 Paradise Path
Mexico Beach, Florida 32410

END OF SECTION 00010

FLORIDA DEPARTMENT OF Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

In the Matter of an
Application for a Joint Coastal Permit, Variance and
Authorization to Use Sovereign Submerged Lands by:

APPLICANT:
City of Mexico Beach
Attn: Douglas Baber
201 Paradise Path
Mexico Beach, Florida, 32410
d.baber@mexicobeachgov.com

AGENT:
Baskerville-Donovan, Inc.
Attn: Dave Hemphill
449 West Main Street
Pensacola, Florida, 32502
Dkh.7@icloud.com

PROJECT INFORMATION:

Project Name: Mexico Beach Fishing Pier

File No. 0206187-004-JC

Bay County

CONSOLIDATED NOTICE OF INTENT TO ISSUE A JOINT COASTAL PERMIT AND AUTHORIZATION TO USE SOVEREIGN SUBMERGED LANDS

The Department of Environmental Protection (Department) gives consolidated notice of its intent to take the following agency actions:

(a) issue a joint coastal permit (draft copy attached), with a 5-year construction phase and a perpetual operational phase, under Chapter 161 which includes consideration of the provisions of Part IV of Chapter 373, Florida Statutes (F.S.), and Title 62, Florida Administrative Code (F.A.C.) for the activity described below; and

(b) grant a lease modification (BOT No. 030033711) to use sovereign submerged lands for the seaward extent of the proposed public fishing pier, under Article X, Section 11 of the Florida Constitution, Chapters 253 and 258, F.S., Title 18, F.A.C., and the policies of the Board of Trustees, as described below.

Issuance of the joint coastal permit (JCP) would constitute a finding of consistency with Florida's Coastal Zone Management Program, as required by Section 307 of the Coastal Zone Management Act. Issuance of the JCP would also constitute certification of compliance with state water quality standards pursuant to Section 401 of the Clean Water Act, 33 United States Code (U.S.C.) 1341.

I. PROPOSED ACTIVITY

A. Project Description

The proposed project is to rebuild the Mexico Beach Fishing Pier, which was completely destroyed by Hurricane Michael in 2018. The new pier will be 840 feet long by 19 feet wide, with a 50-foot wide mid pier deck and a 60-foot wide Terminal 'T' deck. The proposed pier will have a deck elevation of +26 feet NGVD and will include a bait shop, a restroom, turtle friendly lighting, educational signage (e.g., turtle information boards), and fish cleaning stations. The proposed pier will be moved approximately 235 feet seaward and will be built "top down".

The activity includes consideration of the modification of the existing 25-year sovereign submerged lands lease (BOT No. 030033711) containing 23,402.81 square feet, more or less, for the proposed reconstruction of the fishing pier.

B. Project Location

The project site is located at R-Monument (R) 129 or the end of South 37th Street in Mexico Beach, Bay County, Section 22, Township 3 South, Range 12 West, Gulf of Mexico, Class III Waters.

II. AUTHORITY FOR REVIEW

The Department has permitting authority under Chapter 161, which includes consideration of the provisions of Part IV of Chapter 373, F.S., and Chapters 62B-41, 62B-49 and 62-330, F.A.C. The activity is regulated under the JCP program, as indicated in Sections 161.055 and 373.427, F.S. Pursuant to Operating Agreements executed between the Department and the water management districts, as referenced in Chapter 62-113, F.A.C., the Department is responsible for reviewing this application.

The activity also requires a proprietary authorization, as it is located on sovereign submerged lands, which are owned by the Board of Trustees of the Internal Improvement Trust Fund. The activity is not exempt from the need to obtain a proprietary authorization. Pursuant to Article X, Section 11 of the Florida Constitution, Sections 253.002 and 253.77, F.S., Sections 18-21.0040, 18-21.0051, 62-330.075 and 62B-49.001, F.A.C., the policies of the Board of Trustees, and the Operating Agreements executed between the Department and the water management districts, as referenced in Chapter 62-113, F.A.C., the Department has the responsibility to review and take final action on this request for proprietary authorization.

III. BACKGROUND/BASIS FOR ISSUANCE

A. Background Information

The original Mexico Beach Fishing Pier was a wooden structure built in 1964. Over the years, the pier was extended by 90 feet and again by 266.4 feet. The Mexico Beach Fishing pier was recognized by the people of Mexico Beach as the central gathering place for recreational activities. However, it was completely destroyed by Hurricane Michael in 2018. The Applicant proposes to construct a replacement pier using the same layout/alignment but designed to current standards. The proposed pier will be a concrete structure, elevated above the 500 year storm surge (deck elevation of plus 26 NGVD), with blow out panels to lessen the loading on the structure, and a lifespan of over 50 years.

The beach at the location is accreting. When the pier was originally built in 1965, the terminal end was located in approximately 15 feet of water. In 2018, despite the two extensions, the terminal end was located in approximately 5 feet of water. To re-establish the original depth of 15 feet of water at the terminal end, the proposed design for the new pier moves the structure seaward by approximately 235 feet.

The proposed pier will be built "top down", which means the crane and machinery used to set the pilings and deck will work from completed sections of the level pier deck, starting at the landward end of the pier. This eliminates the need for barges or trestles to construct the pier. These completed sections of the pier will provide support for the machinery to build the subsequent sections.

The proposed pier will have fish cleaning stations. To discourage birds from congregating on the pier, the waste from those stations will be deposited below the waterline through PVC pipes connected to the fish cleaning stations. To further reduce potential adverse impacts to the natural resources of the area, there will be informational signs along the pier outlining appropriate actions to take if marine turtles or shorebirds are caught or entangled in fishing line. Additionally, the proposed design utilizes wildlife friendly amber LED lighting.

The old pier had a freestanding restroom. The proposed design includes a restroom and a control building on either side of the first level span of the proposed pier. These structures would now be located above the storm surge elevation of 17.1 feet and would be ADA accessible since they will utilize the ramp to the proposed pier for access.

Permitting History

On July 25, 2003, the Department issued Joint Coastal Permit No. **0206187-001-JC** to the City of Mexico Beach to extend the existing pier by 90 feet, while maintaining the existing width of 14 feet. This permit expired on July 25, 2008.

On March 5, 2009, the Department issued Joint Coastal Permit No. **0206187-002-JC,** to the City of Mexico Beach to authorize an additional extension of 266.4 feet, for a total pier length of 816.4 feet (the Phase II Extension). The top of the extended deck matched the existing pier at a height of +16 feet (NAVD) and a width of 14 feet. The permit also authorized the construction of a 14-foot by 60-foot "T" configuration at the end of the pier.

For additional background, please see the ***CONSOLIDATED NOTICE OF INTENT TO ISSUE*** for Permit No. 0206187-002-JC, dated February 5, 2009, available at the Departments website:

https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=20.194.1]&[profile=Permitting_Authorization]

On December 23, 2010, the Department issued Permit No. **0206187-003-JN** to the City of Mexico Beach to change the twelve (12) bollard type lighting fixtures that were approved in the Phase II permit to a type of lighting fixture that the Permittee believes will be less susceptible to vandalism. The eight (8) existing light fixtures would also be changed to the same type. This permit expired on March 5, 2014.

B. Habitats

Hardbottom/Coral Reef/Submerged Aquatic Vegetation

There are no hardbottom, coral reef or submerged aquatic vegetation (SAV) communities within, or adjacent to the project site. Therefore, no impacts to any of these resources are anticipated from the project activities.

Beach

The beach, swash zone and surf zone of the project area is comprised of soft sandy bottom. The sandy substrate in the subtidal, intertidal and supratidal portions of the beach is an important habitat for invertebrates living on (epibenthos) or within (infauna) the sediment. This invertebrate community can include crabs, polychaates, gastropods, and bivalves. Ghost crabs, mole crabs and coquina clams are common inhabitants. The infaunal organisms are important food items for shorebirds and fish.

Sand placement is not proposed for this project, however, some of the sediment within the project site will be disturbed when the new pilings are driven into the sand. The impact to beach

habitat and infauna will be relatively minor. Therefore, long-term adverse impacts are not expected to the infaunal community.

C. Protected Fish & Wildlife

Pursuant to the Environmental Resource Permit Applicant's Handbook, Volume I, 10.2.7(b), in evaluating whether the proposed activity will adversely impact the ecological value of uplands to aquatic or wetland dependent listed species that nest in upland, such as marine turtle and shorebirds, and to maintain consistency with the authority of the Florida Fish and Wildlife Conservation Commission (FWC) under Florida's Coastal Zone Management Program, the Department considered comments received from the FWC and the U.S. Fish and Wildlife Service (FWS). Pursuant to the Environmental Resource Permit Applicant's Handbook, Volume I, 10.3.1.5, *mitigation can include the implementation of management plans, or other measures,* such as the Terms and Conditions and the Reasonable and Prudent Measures from the FWS Biological Opinion, as well as the recommended conditions from the FWC. These requirements will be incorporated into the permit to provide reasonable assurance that the proposed activity will not adversely impact these upland habitat functions.

Turtles

The beaches in Bay County provide important nesting habitat for threatened loggerhead (*Caretta caretta*) and green (*Chelonia mydas*) marine turtles. There will be no placement of sand on the beach, however the pier will be lit. An increase in artificial lighting due to construction activities or post construction (during regular operation of the pier), can increase the occurrence of disorientation or misorientation of both hatchling and nesting turtles. Artificial lighting on the pier may disrupt the ability of hatchlings to find the sea from their nest and tends to deter female marine turtles from nesting. Hatchlings on adjacent stretches of beach may crawl for great distances in the direction of the lighted pier. Hatchlings that enter the water near the pier may linger in the glow beneath the lighted structure, falling prey to fish that are also attracted to the light, rather than dispersing offshore. To reduce adverse impacts to marine turtles from artificial lights on the pier, the Applicant has agreed to install turtle-friendly lighting in accordance with the exterior lighting plan approved by FWC on June 16, 2022. To avoid marine turtle disorientation or misorientation from construction lighting, the Applicant has agreed to minimize temporary lighting of the construction area during nesting season.

Therefore, in accordance with Florida Statute 379.2431 (1) and 373.414(1)(a)2, FWC has included marine turtle protection conditions in the draft permit. The draft permit will require the Permittee to comply with the approved exterior lighting plan and will prohibit temporary lighting of the construction area from March 1 through October 31

Birds

The Department does not expect any significant adverse impacts to shorebird habitats covered under Part IV of Chapter 373, F.S. This project is not expected to interfere with shorebird nests or nesting areas as there will be no beach work in proximity to the documented potential nesting areas.

Manatees

Florida manatees (*Trichechus manatus latirostris*) are found throughout Florida in marine, brackish and freshwater habitats. They can be found along the beaches, throughout the lagoons and the in various natural and man-made waterways.

The proposed work is not expected to have an adverse impact on the manatee. As a protective measure, the draft permit will require that the FWC Standard Manatee Conditions for In-Water Work be followed during construction.

D. Other Criteria

Public Health, Safety, Welfare or the Property of Others

The proposed construction activities are not expected to adversely impact the health, safety or welfare of the public nor the property of others. The pier will provide ADA accessible access for those who are unable to easily navigate the beach environment.

Temporary hazards to public safety will exist during the construction phase of this project. However, the Applicant has provided reasonable assurance to the department that measures will be taken to reduce these hazards. Specifically, the Applicant has designated construction access and staging areas to minimize interaction with the public. The Department has also included specific conditions in the draft permit that restrict the storage of equipment and stockpiling of materials to these approved areas.

Navigation

The proposed project is not expected to adversely affect navigation or the flow of water nor cause erosion or shoaling.

Recreation

The proposed project is not expected to adversely affect the fishing or recreational value in the vicinity of the activity. The proposed project will replace the pier structure that was completely destroyed by Hurricane Michael in 2018. The previous pier was a keystone tourist

attraction that provided structure for fishing and other recreational activities, like sightseeing. The proposed project will therefore enhance public access to and use of the Gulf for fishing and sightseeing. Additionally, the proposed educational signage, fish cleaning stations and turtle friendly lighting will minimize potential impacts to fish and wildlife.

Historical and Archaeological Resources

According to the Department of State, Division of Historical Resources (DHR), no significant archeological or historic resources have been recorded in the project area. Furthermore, because of the nature of the project, it is unlikely that any historic properties will be affected. General Condition 10, included in the draft permit, establishes a protocol in the case of unexpected fortuitous finds.

E. Water Quality

There are no benthic communities within the vicinity of construction that would be adversely affected by slightly elevated turbidity levels. Typically, the amount of sediment that becomes suspended during pile installation and debris removal activities is minimal. However, in order to provide reasonable assurance that the State water quality standard for turbidity (29 NTUs above background) is met during construction, water quality monitoring will be conducted by measuring turbidity levels at the edge of the mixing zone. If the Applicant can document that turbidity levels remain well below the water quality standard for turbidity (29 NTUs above background) during the initial physical monitoring, visual monitoring could then be used to assure that State water quality standards continue to be met. Therefore, if measured turbidity levels do not exceed 29 NTUs above background for 14 consecutive days of monitoring, turbidity may be visually monitored (without collecting samples). Visual monitoring may continue unless an observed turbidity plume crosses the edge of the 150-meter mixing zone, at which point standard monitoring shall resume.

F. Coastal Engineering

Pursuant to Rule 62B-41.005 (3), Florida Administrative Code, the Department will determine whether to authorize coastal construction at any coastal location upon consideration of the facts or circumstances, including: (a) Adequate engineering data concerning the existing coastal system, including topography, bathymetry; wave and current data; coastal processes, conditions and morphological trends; (b) Design features of the proposed structures or activities; and (c) Such other specific information or calculations as are necessary for the evaluation of the application.

The Permittee has submitted sufficient engineering and design data and computations to show that the pier is adequately designed to withstand at a minimum the erosion, scour, and loads accompanying a storm event comparable to Hurricane Michael. The pier deck and rails

have been designed to be expendable pursuant to Department guidelines. The engineering and design data and computations include the following:

1. Design storm tide level and wave height computations.
2. Design wave load computations, including lateral wave forces.
3. Structural design computations using the design wave loads, wind loads, live and dead loads, including crane loads.
4. Design erosion and scour computations for profile changes due to Hurricane Michael.
5. Geotechnical and foundation analysis.
6. Pile bearing and uplift resistance and design of pile tip elevations showing connectivity to the storm tide, wave loads, and soil conditions.

Expected Effects on Coastal System

Pursuant to Rule 62B-41.005(2), F.A.C., coastal construction authorized by the Department shall have a net positive benefit to the coastal system resulting from the project's effects, as demonstrated by the Applicant, taking into the account the considerations and requirements of Section 161.041, F.S. The Applicant has provided adequate engineering data concerning the coastal system and design features of the proposed project that demonstrates the pier's pile foundation has been designed to not obstruct longshore sediment transport and the pier is not expected to have a significant adverse impact on the shoreline or coastal processes. The pier may be expected to have a net positive benefit to the coastal system through the long term creation of a salient feature along the adjacent shoreline that should increase the stability of the beach in its vicinity.

G. Sovereign Submerged Lands

Pursuant to Rule 18-21.004(3)(a), F.A.C., the proposed project is not expected to unreasonably infringe upon the traditional, common law riparian rights, as defined in Section 253.141, F.S., of upland property owners adjacent to sovereignty submerged lands.

The presence and operation of this pier structure on sovereign submerged lands is currently authorized under a 25-year Board of Trustees (BOT) State Lands Lease No. 030033711, which was executed in 2009. The proposed pier will be moved 235 feet seaward and will therefore preempt additional sovereign submerged lands that extend outside the bounds of the current sovereign submerged lands lease. Interestingly, because of the accretional nature of the beach, the leased area will also commence further seaward, and thus, a lease modification to change the location of the preempted area while decreasing the preempted area from 32,097 square feet to roughly 23,402.81 square feet will be required. Since this proposal is to modify the existing lease and the modification reduces the actual acreage of lands preempted by the existing lease, pursuant to 253.115(5), F.S, public noticing was not required.

Construction of the new pier will not alter the current management of the sovereign submerged lands in the area, which, pursuant to Rule 18-21.004(2)(a), F.A.C., is primarily for the maintenance of essentially natural conditions, propagation of fish and wildlife, and traditional recreation. The project is not expected to impact benthic communities or generate a significant amount of turbidity, so it will not interfere with the propagation of fish and wildlife. The Florida Department of State's Division of Historical Resources evaluated this project and determined that no cultural resources will be affected by this project. The Florida Fish and Wildlife Commission (FWC) evaluated the project and proposed specific conditions to further minimize the potential impact on fish and wildlife during project construction and operation. Additionally, access to the pier will be free to the public as it was before the storm. As explained below, and pursuant to Section 18-21.004(1)(a), F.A.C., the Department has determined that the proposed activity is not contrary to the public interest.

Pursuant to Section 18-21.004(1)(g), F.A.C., *activities on sovereignty lands shall only be limited to water dependent activities and minimal secondary non-water dependent uses pursuant to section 253.03(15), F.S. the activity meets the open-air dining area criteria below or the Board of Trustees determines that it is in the public interest to allow an exception as determined by a case by case evaluation*. The proposed pier includes two *'minimal secondary non-water dependent uses'*: the bait shop and the restroom.

After thorough consideration of the factors above, the Department has determined that the project is expected to meet the Sovereign Submerged Lands criteria in Section 18-21.004, F.A.C., and that pursuant to 18-21.001, F.A.C., Sovereign Submerged Lands will be protected so that the public may continue to enjoy traditional uses.

H. Monitoring

Water Quality Monitoring

Physical water quality monitoring for turbidity will be conducted during construction to ensure that water quality standards are being met. If after 14 consecutive days of physical turbidity monitoring compliance turbidity levels remain well below the water quality standard for turbidity (29 NTUs above background), then visual monitoring will then be used to assure that State water quality standards continue to be met. The turbidity monitoring contractor for the physical sampling of water will be independent of both the design contractor and the construction contractor.

I. Public Interest

Regulatory

As discussed in the sections above, the Department has considered the effects of this project according to the public interest criteria that are specified in Section 373.414(1), F.S., and

the Environmental Resource Permit Applicant's Handbook, Volume I, 10.2.3. The following is brief summary of that evaluation for each of the public interest criteria:

- The proposed activity is not expected to adversely affect public health, safety, welfare or the property of others;
- The draft permit will require measures to protect manatees, marine turtles and other protected species. Therefore, the proposed activity is not expected to adversely affect the conservation of fish and wildlife, including endangered or threatened species, or their habitats;
- The proposed activity is not expected to adversely affect navigation. Additionally, the proposed pile-supported pier will not affect the flow of water nor the movement of sand so it is not anticipated to cause harmful erosion or shoaling;
- The proposed activity is expected to enhance public access to and use of the waterway for recreational fishing or recreational values nor adversely impact marine productivity in the vicinity of the activity;
- The proposed pier is a permanent structure with an expected lifespan of over 50 years;
- The proposed activity is not expected to adversely affect significant historical and archaeological resources under the provisions of s. 267.061; and
- The current condition and relative value of functions being performed by areas to be impacted by the proposed activity is not expected to be adversely impacted.

After weighing the effects of the project for each of these criteria, and based on reasonable assurance provide by the Applicant, the Department has determined that the proposed activity is not contrary to the public interest.

Proprietary

The proposed project will enhance public access to, and use of, the Gulf for fishing and sightseeing at no charge. The concrete structure will provide greater storm protection for the pier and the increased width will improve functionality for fishermen and pedestrians; including the disabled who are unable to easily negotiate the beach environment. The Applicant has agreed to install turtle-friendly lighting and educational signage in order to reduce any potential impacts to marine turtles.The previous pier was a tourist and recreational attraction that drew customers to local businesses. The long-term presence of that pier demonstrated that its reconstruction is in the public interest.

As described above and pursuant to Rule 18-21.003(51), F.A.C., the demonstrable environmental, social, and economic benefits which would accrue to the public at large as a result of this activity would exceed all demonstrable environmental, social and economic costs of the proposed action. Therefore, the Department has determined that this project will meet the Public Interest criteria established in Rule 18-21.003(51), F.A.C.

J. Specific Regulatory Basis for Issuance

The Applicant has provided affirmative reasonable assurance that the construction of the activity will comply with the provisions of Part IV of Chapter 373, F.S., and the rules adopted thereunder. The Department has considered the direct, secondary and cumulative impacts of the project, as well as the general and specific conditions to the attached draft permit, in making this determination. Specifically, construction of the activity will not result in violations of water quality standard, pursuant to Section 373.414(1), F.S., and set forth in Chapters 62-4 and 62-302, F.A.C. The Applicant also has demonstrated that the construction of the activity is not contrary to the public interest, pursuant to Paragraph 373.414(1), F.S.

The Applicant has also provided adequate engineering data to evaluate the design features of the project and any potential effects to the coastal system. Pursuant to Chapter 161, F.S., the Department finds that the proposed activities:

- will not result in any significant adverse impacts to the sandy beaches of the state;
- are not expected to adversely impact nesting marine turtles, their hatchlings or their habitat;
- will not interfere, except during construction, with the use by the public of any area of the beach seaward of mean high water, and
- are appropriately designed in accordance with Rule 62B-41, F.A.C.

K. Specific Proprietary Basis for Issuance

The Applicant has met all applicable requirements for proprietary authorizations to use sovereign submerged lands. That includes the requirements of Article X, Section 11 of the Florida Constitution, Chapter 253, F.S., associated Rule 18-21, F.A.C., and the policies of the Board of Trustees. Therefore, the Applicant has provided reasonable assurance that the proposed activity would:

- not be contrary to the public interest;
- maintain essentially natural conditions;
- not cause adverse impacts to fish and wildlife resources or public recreation or navigation; and
- not interfere with the riparian rights of adjacent property owners.

IV. PUBLICATION OF NOTICE

The Department has determined that the proposed activity, because of its size, potential effect on the environment or the public, controversial nature, or location, is likely to have a heightened public concern or likelihood of request for administrative proceedings. Therefore, pursuant to Subsection 373.413(4), F.S. and section 5.5.5.3 of Applicant's Handbook, Volume I, you (the applicant) are required to publish at your own expense this Notice of Intent to Issue. The notice

is required to be published one time, in the legal ad section in a newspaper or newspapers of general circulation in the areas affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. The applicant shall provide proof of publication to:

Florida Department of Environmental Protection
Office of Resilience and Coastal Protection
Beaches, Inlets, and Ports Program
2600 Blair Stone Road, M.S. 3544
Tallahassee, Florida 32399
Email: BIPP@dep.state.fl.us

The proof of publication shall be provided to the above address within 30 days of issuance of intended agency action, or within 21 days of the date of publication, whichever occurs sooner. Failure to publish the notice and provide proof of publication within the allotted time shall be grounds for denial of the permit and lease to use sovereign and submerged lands.

V. NOTICE OF RIGHTS

This action is final and effective on the date filed with the Clerk of the Department unless a petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. On the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. Because the administrative hearing process is designed to formulate final agency action, the hearing process may result in a modification of the agency action or even denial of the application.

Petition for Administrative Hearing
A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. Pursuant to Rules 28-106.201 and 28-106.301, F.A.C., a petition for an administrative hearing must contain the following information:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests are or will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency decision;

(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;

(e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;

(f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and

(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

The petition must be filed (received by the Clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@dep.state.fl.us. Also, a copy of the petition shall be mailed to the applicant at the address indicated above at the time of filing.

Time Period for Filing a Petition
In accordance with Rule 62-110.106(3), F.A.C., petitions for an administrative hearing by the applicant and persons entitled to written notice under Section 120.60(3), F.S., must be filed within **14** days of receipt of this written notice. Petitions filed by any persons other than the applicant, and other than those entitled to written notice under Section 120.60(3), F.S., must be filed within **14** days of publication of the notice or within **14** days of receipt of the written notice, whichever occurs first. The failure to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

Extension of Time
Under Rule 62-110.106(4), F.A.C., a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@dep.state.fl.us, before the deadline for filing a petition for an administrative hearing. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

Mediation
Mediation is not available in this proceeding.

FLAWAC Review

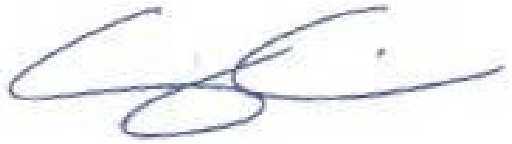
The applicant, or any party within the meaning of Section 373.114(1)(a) or 373.4275, F.S., may also seek appellate review of this order before the Land and Water Adjudicatory Commission under Section 373.114(1) or 373.4275, F.S. Requests for review before the Land and Water Adjudicatory Commission must be filed with the Secretary of the Commission and served on the Department within 20 days from the date when this order is filed with the Clerk of the Department.

Judicial Review

Once this decision becomes final, any party to this action has the right to seek judicial review pursuant to Section 120.68, F.S., by filing a Notice of Appeal pursuant to Florida Rules of Appellate Procedure 9.110 and 9.190 with the Clerk of the Department in the Office of General Counsel (Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000) and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice must be filed within 30 days from the date this action is filed with the Clerk of the Department.

EXECUTION AND CLERKING:

Executed in Tallahassee, Florida.
STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION



Gregory Garis
Program Administrator
Beaches, Inlets and Ports Program
Office of Resilience and Coastal Protection

Attachment(s):

1. Draft Final Order
2. Lighting Plan (approved on June 16, 2022)
3. Permit Drawings (9 Pages, December 2021)

CERTIFICATE OF SERVICE
The undersigned duly designated deputy clerk hereby certifies that this document and all attachments were sent on the filing date below to the following listed persons:

cc:	Sean Green, RCP	Michelle Pasawicz, FWC
	Ivana KennyCarmola, RCP	Rachael Anderson, FWC
	Robert Brantly, RCP	Rachel Joffey, FWC
	Ralph Clark, RCP	Nick Vitale, FWC
	Sarah Lindeman, RCP	ImperiledSpecies@myfwc.com
	Shamim Murshid, RCP	fwcconservationplanningservices@myfwc.com
	Jonathan Brucker, RCP	marineturtle@myfwc.com
	Guy Weeks, RCP	conservationplanningservices@myfwc.com
	Jonathan Dillard, DEP	bipp@dep.state.fl.us
	Scott Robinson, DEP	jcpcompliance@dep.state.fl.us

FILING AND ACKNOWLEDGMENT
FILED, on this date, pursuant to Section 120.52, F. S., with the designated Department Clerk, receipt of which is hereby acknowledged.

Indiya Walker — **Clerk**

09/07/2022 — **Date**

SECTION 00025 PROJECT NARRATIVE

The Mexico Beach Pier was destroyed by Hurricane Michael on October 10, 2018. The Pier was a wood and composite pile pier built in the 1960's and extended several times. Over those years, the beach has accreted, and the end of the pier was no longer in deep water.

FEMA has funded a replacement pier. This package has several unusual components:

1. The project will have one bid and two alternates:

    a. Base Bid: Build the replacement pier in the footprint of the destroyed pier.

    b. Alternate Bid: Build the replacement pier extended 230 feet to enjoy deeper water.
    FEMA wants to know the cost difference between these two alternatives.

    The difference in the two Alternatives is the additional 230 feet of concrete sidewalk, the additional 230 feet of electrical service, and an additional 230 feet of potable waterline. Beyond that, the two piers are identical.

    c. Concrete blowout panels: Blowout panels are used to reduce the impact of waves on the pier structure during heavy storms. Traditionally, wood panels have been used for this purpose. They sit within the structure, but are not attached to the structure, allowing them to move. Concrete blowout panels will perform the same function, but will offer the added advantage of increased longevity, ease of cleaning, and they will not generate slivers.

END OF SECTION

FLORIDA DEPARTMENT OF Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

In the Matter of an
Application for a Joint Coastal Permit, Variance and
Authorization to Use Sovereign Submerged Lands by:

APPLICANT:
City of Mexico Beach
Attn: Douglas Baber
201 Paradise Path
Mexico Beach, Florida, 32410
d.baber@mexicobeachgov.com

AGENT:
Baskerville-Donovan, Inc.
Attn: Dave Hemphill
449 West Main Street
Pensacola, Florida, 32502
Dkh.7@icloud.com

PROJECT INFORMATION:

Project Name: Mexico Beach Fishing Pier

File No. 0206187-004-JC

Bay County

CONSOLIDATED NOTICE OF INTENT TO ISSUE A JOINT COASTAL PERMIT AND AUTHORIZATION TO USE SOVEREIGN SUBMERGED LANDS

The Department of Environmental Protection (Department) gives consolidated notice of its intent to take the following agency actions:

(a) issue a joint coastal permit (draft copy attached), with a 5-year construction phase and a perpetual operational phase, under Chapter 161 which includes consideration of the provisions of Part IV of Chapter 373, Florida Statutes (F.S.), and Title 62, Florida Administrative Code (F.A.C.) for the activity described below; and

(b) grant a lease modification (BOT No. 030033711) to use sovereign submerged lands for the seaward extent of the proposed public fishing pier, under Article X, Section 11 of the Florida Constitution, Chapters 253 and 258, F.S., Title 18, F.A.C., and the policies of the Board of Trustees, as described below.

Issuance of the joint coastal permit (JCP) would constitute a finding of consistency with Florida's Coastal Zone Management Program, as required by Section 307 of the Coastal Zone Management Act. Issuance of the JCP would also constitute certification of compliance with state water quality standards pursuant to Section 401 of the Clean Water Act, 33 United States Code (U.S.C.) 1341.

I. PROPOSED ACTIVITY

A. Project Description

The proposed project is to rebuild the Mexico Beach Fishing Pier, which was completely destroyed by Hurricane Michael in 2018. The new pier will be 840 feet long by 19 feet wide, with a 50-foot wide mid pier deck and a 60-foot wide Terminal 'T' deck. The proposed pier will have a deck elevation of +26 feet NGVD and will include a bait shop, a restroom, turtle friendly lighting, educational signage (e.g., turtle information boards), and fish cleaning stations. The proposed pier will be moved approximately 235 feet seaward and will be built "top down".

The activity includes consideration of the modification of the existing 25-year sovereign submerged lands lease (BOT No. 030033711) containing 23,402.81 square feet, more or less, for the proposed reconstruction of the fishing pier.

B. Project Location

The project site is located at R-Monument (R) 129 or the end of South 37th Street in Mexico Beach, Bay County, Section 22, Township 3 South, Range 12 West, Gulf of Mexico, Class III Waters.

II. AUTHORITY FOR REVIEW

The Department has permitting authority under Chapter 161, which includes consideration of the provisions of Part IV of Chapter 373, F.S., and Chapters 62B-41, 62B-49 and 62-330, F.A.C. The activity is regulated under the JCP program, as indicated in Sections 161.055 and 373.427, F.S. Pursuant to Operating Agreements executed between the Department and the water management districts, as referenced in Chapter 62-113, F.A.C., the Department is responsible for reviewing this application.

The activity also requires a proprietary authorization, as it is located on sovereign submerged lands, which are owned by the Board of Trustees of the Internal Improvement Trust Fund. The activity is not exempt from the need to obtain a proprietary authorization. Pursuant to Article X, Section 11 of the Florida Constitution, Sections 253.002 and 253.77, F.S., Sections 18-21.0040, 18-21.0051, 62-330.075 and 62B-49.001, F.A.C., the policies of the Board of Trustees, and the Operating Agreements executed between the Department and the water management districts, as referenced in Chapter 62-113, F.A.C., the Department has the responsibility to review and take final action on this request for proprietary authorization.

III. BACKGROUND/BASIS FOR ISSUANCE

A. Background Information

The original Mexico Beach Fishing Pier was a wooden structure built in 1964. Over the years, the pier was extended by 90 feet and again by 266.4 feet. The Mexico Beach Fishing pier was recognized by the people of Mexico Beach as the central gathering place for recreational activities. However, it was completely destroyed by Hurricane Michael in 2018. The Applicant proposes to construct a replacement pier using the same layout/alignment but designed to current standards. The proposed pier will be a concrete structure, elevated above the 500 year storm surge (deck elevation of plus 26 NGVD), with blow out panels to lessen the loading on the structure, and a lifespan of over 50 years.

The beach at the location is accreting. When the pier was originally built in 1965, the terminal end was located in approximately 15 feet of water. In 2018, despite the two extensions, the terminal end was located in approximately 5 feet of water. To re-establish the original depth of 15 feet of water at the terminal end, the proposed design for the new pier moves the structure seaward by approximately 235 feet.

The proposed pier will be built "top down", which means the crane and machinery used to set the pilings and deck will work from completed sections of the level pier deck, starting at the landward end of the pier. This eliminates the need for barges or trestles to construct the pier. These completed sections of the pier will provide support for the machinery to build the subsequent sections.

The proposed pier will have fish cleaning stations. To discourage birds from congregating on the pier, the waste from those stations will be deposited below the waterline through PVC pipes connected to the fish cleaning stations. To further reduce potential adverse impacts to the natural resources of the area, there will be informational signs along the pier outlining appropriate actions to take if marine turtles or shorebirds are caught or entangled in fishing line. Additionally, the proposed design utilizes wildlife friendly amber LED lighting.

The old pier had a freestanding restroom. The proposed design includes a restroom and a control building on either side of the first level span of the proposed pier. These structures would now be located above the storm surge elevation of 17.1 feet and would be ADA accessible since they will utilize the ramp to the proposed pier for access.

Permitting History

On July 25, 2003, the Department issued Joint Coastal Permit No. **0206187-001-JC** to the City of Mexico Beach to extend the existing pier by 90 feet, while maintaining the existing width of 14 feet. This permit expired on July 25, 2008.

On March 5, 2009, the Department issued Joint Coastal Permit No. **0206187-002-JC,** to the City of Mexico Beach to authorize an additional extension of 266.4 feet, for a total pier length of 816.4 feet (the Phase II Extension). The top of the extended deck matched the existing pier at a height of +16 feet (NAVD) and a width of 14 feet. The permit also authorized the construction of a 14-foot by 60-foot "T" configuration at the end of the pier.

For additional background, please see the ***CONSOLIDATED NOTICE OF INTENT TO ISSUE*** for Permit No. 0206187-002-JC, dated February 5, 2009, available at the Departments website:

https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=20.194.1]&[profile=Permitting_Authorization]

On December 23, 2010, the Department issued Permit No. **0206187-003-JN** to the City of Mexico Beach to change the twelve (12) bollard type lighting fixtures that were approved in the Phase II permit to a type of lighting fixture that the Permittee believes will be less susceptible to vandalism. The eight (8) existing light fixtures would also be changed to the same type. This permit expired on March 5, 2014.

B. Habitats

Hardbottom/Coral Reef/Submerged Aquatic Vegetation

There are no hardbottom, coral reef or submerged aquatic vegetation (SAV) communities within, or adjacent to the project site. Therefore, no impacts to any of these resources are anticipated from the project activities.

Beach

The beach, swash zone and surf zone of the project area is comprised of soft sandy bottom. The sandy substrate in the subtidal, intertidal and supratidal portions of the beach is an important habitat for invertebrates living on (epibenthos) or within (infauna) the sediment. This invertebrate community can include crabs, polychaates, gastropods, and bivalves. Ghost crabs, mole crabs and coquina clams are common inhabitants. The infaunal organisms are important food items for shorebirds and fish.

Sand placement is not proposed for this project, however, some of the sediment within the project site will be disturbed when the new pilings are driven into the sand. The impact to beach

habitat and infauna will be relatively minor. Therefore, long-term adverse impacts are not expected to the infaunal community.

C. Protected Fish & Wildlife

Pursuant to the Environmental Resource Permit Applicant's Handbook, Volume I, 10.2.7(b), in evaluating whether the proposed activity will adversely impact the ecological value of uplands to aquatic or wetland dependent listed species that nest in upland, such as marine turtle and shorebirds, and to maintain consistency with the authority of the Florida Fish and Wildlife Conservation Commission (FWC) under Florida's Coastal Zone Management Program, the Department considered comments received from the FWC and the U.S. Fish and Wildlife Service (FWS). Pursuant to the Environmental Resource Permit Applicant's Handbook, Volume I, 10.3.1.5, *mitigation can include the implementation of management plans, or other measures,* such as the Terms and Conditions and the Reasonable and Prudent Measures from the FWS Biological Opinion, as well as the recommended conditions from the FWC. These requirements will be incorporated into the permit to provide reasonable assurance that the proposed activity will not adversely impact these upland habitat functions.

Turtles

The beaches in Bay County provide important nesting habitat for threatened loggerhead (*Caretta caretta*) and green (*Chelonia mydas*) marine turtles. There will be no placement of sand on the beach, however the pier will be lit. An increase in artificial lighting due to construction activities or post construction (during regular operation of the pier), can increase the occurrence of disorientation or misorientation of both hatchling and nesting turtles. Artificial lighting on the pier may disrupt the ability of hatchlings to find the sea from their nest and tends to deter female marine turtles from nesting. Hatchlings on adjacent stretches of beach may crawl for great distances in the direction of the lighted pier. Hatchlings that enter the water near the pier may linger in the glow beneath the lighted structure, falling prey to fish that are also attracted to the light, rather than dispersing offshore. To reduce adverse impacts to marine turtles from artificial lights on the pier, the Applicant has agreed to install turtle-friendly lighting in accordance with the exterior lighting plan approved by FWC on June 16, 2022. To avoid marine turtle disorientation or misorientation from construction lighting, the Applicant has agreed to minimize temporary lighting of the construction area during nesting season.

Therefore, in accordance with Florida Statute 379.2431 (1) and 373.414(1)(a)2, FWC has included marine turtle protection conditions in the draft permit. The draft permit will require the Permittee to comply with the approved exterior lighting plan and will prohibit temporary lighting of the construction area from March 1 through October 31

Birds

The Department does not expect any significant adverse impacts to shorebird habitats covered under Part IV of Chapter 373, F.S. This project is not expected to interfere with shorebird nests or nesting areas as there will be no beach work in proximity to the documented potential nesting areas.

Manatees

Florida manatees (*Trichechus manatus latirostris*) are found throughout Florida in marine, brackish and freshwater habitats. They can be found along the beaches, throughout the lagoons and the in various natural and man-made waterways.

The proposed work is not expected to have an adverse impact on the manatee. As a protective measure, the draft permit will require that the FWC Standard Manatee Conditions for In-Water Work be followed during construction.

D. Other Criteria

Public Health, Safety, Welfare or the Property of Others

The proposed construction activities are not expected to adversely impact the health, safety or welfare of the public nor the property of others. The pier will provide ADA accessible access for those who are unable to easily navigate the beach environment.

Temporary hazards to public safety will exist during the construction phase of this project. However, the Applicant has provided reasonable assurance to the department that measures will be taken to reduce these hazards. Specifically, the Applicant has designated construction access and staging areas to minimize interaction with the public. The Department has also included specific conditions in the draft permit that restrict the storage of equipment and stockpiling of materials to these approved areas.

Navigation

The proposed project is not expected to adversely affect navigation or the flow of water nor cause erosion or shoaling.

Recreation

The proposed project is not expected to adversely affect the fishing or recreational value in the vicinity of the activity. The proposed project will replace the pier structure that was completely destroyed by Hurricane Michael in 2018. The previous pier was a keystone tourist

attraction that provided structure for fishing and other recreational activities, like sightseeing. The proposed project will therefore enhance public access to and use of the Gulf for fishing and sightseeing. Additionally, the proposed educational signage, fish cleaning stations and turtle friendly lighting will minimize potential impacts to fish and wildlife.

Historical and Archaeological Resources

According to the Department of State, Division of Historical Resources (DHR), no significant archeological or historic resources have been recorded in the project area. Furthermore, because of the nature of the project, it is unlikely that any historic properties will be affected. General Condition 10, included in the draft permit, establishes a protocol in the case of unexpected fortuitous finds.

E. Water Quality

There are no benthic communities within the vicinity of construction that would be adversely affected by slightly elevated turbidity levels. Typically, the amount of sediment that becomes suspended during pile installation and debris removal activities is minimal. However, in order to provide reasonable assurance that the State water quality standard for turbidity (29 NTUs above background) is met during construction, water quality monitoring will be conducted by measuring turbidity levels at the edge of the mixing zone. If the Applicant can document that turbidity levels remain well below the water quality standard for turbidity (29 NTUs above background) during the initial physical monitoring, visual monitoring could then be used to assure that State water quality standards continue to be met. Therefore, if measured turbidity levels do not exceed 29 NTUs above background for 14 consecutive days of monitoring, turbidity may be visually monitored (without collecting samples). Visual monitoring may continue unless an observed turbidity plume crosses the edge of the 150-meter mixing zone, at which point standard monitoring shall resume.

F. Coastal Engineering

Pursuant to Rule 62B-41.005 (3), Florida Administrative Code, the Department will determine whether to authorize coastal construction at any coastal location upon consideration of the facts or circumstances, including: (a) Adequate engineering data concerning the existing coastal system, including topography, bathymetry; wave and current data; coastal processes, conditions and morphological trends; (b) Design features of the proposed structures or activities; and (c) Such other specific information or calculations as are necessary for the evaluation of the application.

The Permittee has submitted sufficient engineering and design data and computations to show that the pier is adequately designed to withstand at a minimum the erosion, scour, and loads accompanying a storm event comparable to Hurricane Michael. The pier deck and rails

have been designed to be expendable pursuant to Department guidelines. The engineering and design data and computations include the following:

1. Design storm tide level and wave height computations.
2. Design wave load computations, including lateral wave forces.
3. Structural design computations using the design wave loads, wind loads, live and dead loads, including crane loads.
4. Design erosion and scour computations for profile changes due to Hurricane Michael.
5. Geotechnical and foundation analysis.
6. Pile bearing and uplift resistance and design of pile tip elevations showing connectivity to the storm tide, wave loads, and soil conditions.

Expected Effects on Coastal System

Pursuant to Rule 62B-41.005(2), F.A.C., coastal construction authorized by the Department shall have a net positive benefit to the coastal system resulting from the project's effects, as demonstrated by the Applicant, taking into the account the considerations and requirements of Section 161.041, F.S. The Applicant has provided adequate engineering data concerning the coastal system and design features of the proposed project that demonstrates the pier's pile foundation has been designed to not obstruct longshore sediment transport and the pier is not expected to have a significant adverse impact on the shoreline or coastal processes. The pier may be expected to have a net positive benefit to the coastal system through the long term creation of a salient feature along the adjacent shoreline that should increase the stability of the beach in its vicinity.

G. Sovereign Submerged Lands

Pursuant to Rule 18-21.004(3)(a), F.A.C., the proposed project is not expected to unreasonably infringe upon the traditional, common law riparian rights, as defined in Section 253.141, F.S., of upland property owners adjacent to sovereignty submerged lands.

The presence and operation of this pier structure on sovereign submerged lands is currently authorized under a 25-year Board of Trustees (BOT) State Lands Lease No. 030033711, which was executed in 2009. The proposed pier will be moved 235 feet seaward and will therefore preempt additional sovereign submerged lands that extend outside the bounds of the current sovereign submerged lands lease. Interestingly, because of the accretional nature of the beach, the leased area will also commence further seaward, and thus, a lease modification to change the location of the preempted area while decreasing the preempted area from 32,097 square feet to roughly 23,402.81 square feet will be required. Since this proposal is to modify the existing lease and the modification reduces the actual acreage of lands preempted by the existing lease, pursuant to 253.115(5), F.S, public noticing was not required.

Construction of the new pier will not alter the current management of the sovereign submerged lands in the area, which, pursuant to Rule 18-21.004(2)(a), F.A.C., is primarily for the maintenance of essentially natural conditions, propagation of fish and wildlife, and traditional recreation. The project is not expected to impact benthic communities or generate a significant amount of turbidity, so it will not interfere with the propagation of fish and wildlife. The Florida Department of State's Division of Historical Resources evaluated this project and determined that no cultural resources will be affected by this project. The Florida Fish and Wildlife Commission (FWC) evaluated the project and proposed specific conditions to further minimize the potential impact on fish and wildlife during project construction and operation. Additionally, access to the pier will be free to the public as it was before the storm. As explained below, and pursuant to Section 18-21.004(1)(a), F.A.C., the Department has determined that the proposed activity is not contrary to the public interest.

Pursuant to Section 18-21.004(1)(g), F.A.C., *activities on sovereignty lands shall only be limited to water dependent activities and minimal secondary non-water dependent uses pursuant to section 253.03(15), F.S. the activity meets the open-air dining area criteria below or the Board of Trustees determines that it is in the public interest to allow an exception as determined by a case by case evaluation*. The proposed pier includes two *'minimal secondary non-water dependent uses'*: the bait shop and the restroom.

After thorough consideration of the factors above, the Department has determined that the project is expected to meet the Sovereign Submerged Lands criteria in Section 18-21.004, F.A.C., and that pursuant to 18-21.001, F.A.C., Sovereign Submerged Lands will be protected so that the public may continue to enjoy traditional uses.

H. Monitoring

Water Quality Monitoring

Physical water quality monitoring for turbidity will be conducted during construction to ensure that water quality standards are being met. If after 14 consecutive days of physical turbidity monitoring compliance turbidity levels remain well below the water quality standard for turbidity (29 NTUs above background), then visual monitoring will then be used to assure that State water quality standards continue to be met. The turbidity monitoring contractor for the physical sampling of water will be independent of both the design contractor and the construction contractor.

I. Public Interest

Regulatory

As discussed in the sections above, the Department has considered the effects of this project according to the public interest criteria that are specified in Section 373.414(1), F.S., and

the Environmental Resource Permit Applicant's Handbook, Volume I, 10.2.3. The following is brief summary of that evaluation for each of the public interest criteria:

- The proposed activity is not expected to adversely affect public health, safety, welfare or the property of others;
- The draft permit will require measures to protect manatees, marine turtles and other protected species. Therefore, the proposed activity is not expected to adversely affect the conservation of fish and wildlife, including endangered or threatened species, or their habitats;
- The proposed activity is not expected to adversely affect navigation. Additionally, the proposed pile-supported pier will not affect the flow of water nor the movement of sand so it is not anticipated to cause harmful erosion or shoaling;
- The proposed activity is expected to enhance public access to and use of the waterway for recreational fishing or recreational values nor adversely impact marine productivity in the vicinity of the activity;
- The proposed pier is a permanent structure with an expected lifespan of over 50 years;
- The proposed activity is not expected to adversely affect significant historical and archaeological resources under the provisions of s. 267.061; and
- The current condition and relative value of functions being performed by areas to be impacted by the proposed activity is not expected to be adversely impacted.

After weighing the effects of the project for each of these criteria, and based on reasonable assurance provide by the Applicant, the Department has determined that the proposed activity is not contrary to the public interest.

Proprietary

The proposed project will enhance public access to, and use of, the Gulf for fishing and sightseeing at no charge. The concrete structure will provide greater storm protection for the pier and the increased width will improve functionality for fishermen and pedestrians; including the disabled who are unable to easily negotiate the beach environment. The Applicant has agreed to install turtle-friendly lighting and educational signage in order to reduce any potential impacts to marine turtles.The previous pier was a tourist and recreational attraction that drew customers to local businesses. The long-term presence of that pier demonstrated that its reconstruction is in the public interest.

As described above and pursuant to Rule 18-21.003(51), F.A.C., the demonstrable environmental, social, and economic benefits which would accrue to the public at large as a result of this activity would exceed all demonstrable environmental, social and economic costs of the proposed action. Therefore, the Department has determined that this project will meet the Public Interest criteria established in Rule 18-21.003(51), F.A.C.

J. Specific Regulatory Basis for Issuance

The Applicant has provided affirmative reasonable assurance that the construction of the activity will comply with the provisions of Part IV of Chapter 373, F.S., and the rules adopted thereunder. The Department has considered the direct, secondary and cumulative impacts of the project, as well as the general and specific conditions to the attached draft permit, in making this determination. Specifically, construction of the activity will not result in violations of water quality standard, pursuant to Section 373.414(1), F.S., and set forth in Chapters 62-4 and 62-302, F.A.C. The Applicant also has demonstrated that the construction of the activity is not contrary to the public interest, pursuant to Paragraph 373.414(1), F.S.

The Applicant has also provided adequate engineering data to evaluate the design features of the project and any potential effects to the coastal system. Pursuant to Chapter 161, F.S., the Department finds that the proposed activities:

- will not result in any significant adverse impacts to the sandy beaches of the state;
- are not expected to adversely impact nesting marine turtles, their hatchlings or their habitat;
- will not interfere, except during construction, with the use by the public of any area of the beach seaward of mean high water, and
- are appropriately designed in accordance with Rule 62B-41, F.A.C.

K. Specific Proprietary Basis for Issuance

The Applicant has met all applicable requirements for proprietary authorizations to use sovereign submerged lands. That includes the requirements of Article X, Section 11 of the Florida Constitution, Chapter 253, F.S., associated Rule 18-21, F.A.C., and the policies of the Board of Trustees. Therefore, the Applicant has provided reasonable assurance that the proposed activity would:

- not be contrary to the public interest;
- maintain essentially natural conditions;
- not cause adverse impacts to fish and wildlife resources or public recreation or navigation; and
- not interfere with the riparian rights of adjacent property owners.

IV. PUBLICATION OF NOTICE

The Department has determined that the proposed activity, because of its size, potential effect on the environment or the public, controversial nature, or location, is likely to have a heightened public concern or likelihood of request for administrative proceedings. Therefore, pursuant to Subsection 373.413(4), F.S. and section 5.5.5.3 of Applicant's Handbook, Volume I, you (the applicant) are required to publish at your own expense this Notice of Intent to Issue. The notice

is required to be published one time, in the legal ad section in a newspaper or newspapers of general circulation in the areas affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. The applicant shall provide proof of publication to:

Florida Department of Environmental Protection
Office of Resilience and Coastal Protection
Beaches, Inlets, and Ports Program
2600 Blair Stone Road, M.S. 3544
Tallahassee, Florida 32399
Email: BIPP@dep.state.fl.us

The proof of publication shall be provided to the above address within 30 days of issuance of intended agency action, or within 21 days of the date of publication, whichever occurs sooner. Failure to publish the notice and provide proof of publication within the allotted time shall be grounds for denial of the permit and lease to use sovereign and submerged lands.

V. NOTICE OF RIGHTS

This action is final and effective on the date filed with the Clerk of the Department unless a petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. On the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. Because the administrative hearing process is designed to formulate final agency action, the hearing process may result in a modification of the agency action or even denial of the application.

Petition for Administrative Hearing
A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. Pursuant to Rules 28-106.201 and 28-106.301, F.A.C., a petition for an administrative hearing must contain the following information:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests are or will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency decision;

(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;

(e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;

(f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and

(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

The petition must be filed (received by the Clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@dep.state.fl.us. Also, a copy of the petition shall be mailed to the applicant at the address indicated above at the time of filing.

Time Period for Filing a Petition
In accordance with Rule 62-110.106(3), F.A.C., petitions for an administrative hearing by the applicant and persons entitled to written notice under Section 120.60(3), F.S., must be filed within **14** days of receipt of this written notice. Petitions filed by any persons other than the applicant, and other than those entitled to written notice under Section 120.60(3), F.S., must be filed within **14** days of publication of the notice or within **14** days of receipt of the written notice, whichever occurs first. The failure to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

Extension of Time
Under Rule 62-110.106(4), F.A.C., a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@dep.state.fl.us, before the deadline for filing a petition for an administrative hearing. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

Mediation
Mediation is not available in this proceeding.

FLAWAC Review

The applicant, or any party within the meaning of Section 373.114(1)(a) or 373.4275, F.S., may also seek appellate review of this order before the Land and Water Adjudicatory Commission under Section 373.114(1) or 373.4275, F.S. Requests for review before the Land and Water Adjudicatory Commission must be filed with the Secretary of the Commission and served on the Department within 20 days from the date when this order is filed with the Clerk of the Department.

Judicial Review

Once this decision becomes final, any party to this action has the right to seek judicial review pursuant to Section 120.68, F.S., by filing a Notice of Appeal pursuant to Florida Rules of Appellate Procedure 9.110 and 9.190 with the Clerk of the Department in the Office of General Counsel (Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000) and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice must be filed within 30 days from the date this action is filed with the Clerk of the Department.

EXECUTION AND CLERKING:

Executed in Tallahassee, Florida.
STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Gregory Garis
Program Administrator
Beaches, Inlets and Ports Program
Office of Resilience and Coastal Protection

Attachment(s):

1. Draft Final Order
2. Lighting Plan (approved on June 16, 2022)
3. Permit Drawings (9 Pages, December 2021)

CERTIFICATE OF SERVICE
The undersigned duly designated deputy clerk hereby certifies that this document and all attachments were sent on the filing date below to the following listed persons:

cc:	Sean Green, RCP	Michelle Pasawicz, FWC
	Ivana KennyCarmola, RCP	Rachael Anderson, FWC
	Robert Brantly, RCP	Rachel Joffey, FWC
	Ralph Clark, RCP	Nick Vitale, FWC
	Sarah Lindeman, RCP	ImperiledSpecies@myfwc.com
	Shamim Murshid, RCP	fwcconservationplanningservices@myfwc.com
	Jonathan Brucker, RCP	marineturtle@myfwc.com
	Guy Weeks, RCP	conservationplanningservices@myfwc.com
	Jonathan Dillard, DEP	bipp@dep.state.fl.us
	Scott Robinson, DEP	jcpcompliance@dep.state.fl.us

FILING AND ACKNOWLEDGMENT
FILED, on this date, pursuant to Section 120.52, F. S., with the designated Department Clerk, receipt of which is hereby acknowledged.

Indiya Walker — 09/07/2022
Clerk **Date**

This proposal of _____ _____(hereinafter called "BIDDER"), organized and existing under the laws of the State of _____, doing business as _____(a corporation, a partnership or an individual) is hereby submitted to the CITY of MEXICO BEACH, FLORIDA (hereinafter called "OWNER").

In compliance with the Advertisement for Bids, BIDDER hereby proposes to perform all WORK for the **MEXICO BEACH PIER** in strict accordance with the CONTRACT DOCUMENTS, within the time set forth therein, and at the prices stated below.

By submission of this BID, each BIDDER certifies, and in the case of a joint BID, each party thereto certifies as to its own organization, that this BID has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this BID with any other BIDDER or with any competitor.

BIDDER hereby agrees to commence WORK under this contract within 10 days of the NOTICE TO PROCEED and substantially complete the PROJECT within 365 consecutive calendar days thereafter. Final completion date shall be within 60 calendar days of substantial completion.

BIDDER further agrees to pay as liquidated damages, the sum of $1,000.00 for each consecutive calendar day thereafter as provided in Section 15 of the General Conditions.

BIDDER acknowledges receipt of the following ADDENDUM NO 1:

SIGNED: _____

BIDDER acknowledges the Certification listed on page 00030-5.

SIGNED: _____

The BIDDER proposes and agrees, if this Proposal is accepted, to contract with the Owner in the form of contract specified, to furnish all necessary materials, equipment, machinery, tools, apparatus, means of transportation and labor necessary to complete the work in full and in accordance with the shown, noted, described and reasonably intended requirements of the Contract Documents according to the following schedule:

BIDDER agrees to perform all the work described in the CONTRACT DOCUMENTS for the following lump sum price: _____.

BID SCHEDULE

NOTE:

1. BIDS shall include sales tax and all other applicable taxes and fees. The OWNER may elect to utilize the tax savings agreement for material at their sole discretion.

2. BIDS shall be on the basis of a lump sum price and shall be compensation in full for the complete work.

3. The undersigned herewith submits the following Prices, which shall be applicable for any revisions to the extent of the work (either additions or omissions) as indicated on the original Contract Drawings. The unit prices hereafter listed are understood to include all charges for layout, insurance, taxes, field office and supervision, overhead and profit, bonds and miscellaneous items needed to complete the work.

4. The City of Mexico Beach, Florida reserves the right to reject any and all bids received.

5. **Failure to Bid any item (including Alternates) will be considered non-responsive.**

6. The CONTRACTOR and SURETY, for value received, hereby stipulate and agree that any and all claims, demands, actions or suits whatsoever, arising under this contract and/or bonds, shall be subjected to the jurisdiction and venue of the Circuit Court of Bay County, Florida. The CONTRACTOR and SURETY do agree, by execution of these documents, that the jurisdiction and venue in said forum is proper and appropriate since performance of the underlying contract for which these documents are executed is to be accomplished within Bay County, Florida.

Item No.	Description	Unit	Unit Price	Extension
1.	Mobilization / Demobilization (Max 1.5% of bid Amount)	LS		$_____
2.	Bonds and Insurance	LS		$ _____
3.	Prevention, Control and Abatement of Erosion and Water Pollution	LS		$_____
4.	Testing (Concrete and PDA)	LS		$_____
5.	As-Built and Record Drawings and O&M Manuals	LS		$_____
6.	12’ wide Concrete Sidewalk	90 LF_____		$_____
7.	Concrete Octangular Piles	68 EA _____		$_____
8.	Pile Caps	26 EA _____		$_____
9.	Concrete Beams	33 EA _____		$_____
10.	Concrete Square Piles	18 EA _____		$_____
11.	Wood Handrails	1820 LF _____		$_____
12.	Wood Blowout Panels	522 EA _____		$_____
13.	Turtle Friendly Lights including conduit	32 EA_____		$_____
14.	Potable Water Line	1050 LF_____		$_____
15.	Fish Cleaning Stations	2 EA_____		$_____
16.	Composite Benches	12 EA _____		$_____
17.	Outdoor Shower	1 EA _____		$ _____
18.	Restroom	1 EA		$ _____
19.	Privacy Fence	110 LF _____		$ _____
20.	Entrance Sign	1 EA		$ _____
21.	Wood Pedestrian Approach Ramp	1 EA		$ _____
22.	One Year Warranty	1 EA		$ _____

23. Hold Harmless			$ 10.00
24. Duke Power Services		Allowance	$ 20,000.00
25. City of Mexico Beach Water and Sewer		Allowance	$ 10,000.00
26. Trench Safety Act Compliance		LS	$ _____

27. TOTAL BID – Line items 1 through 26
for a complete Pier as shown in the plans and specifications

$ _____

Bid Alternates

28. Concrete Blowout Panels 1044 EA _____ $ _____
In lieu of wood blowout panels
Manufacturer Pematrak or Equal
See Detail on Sheet S-105
Install over AASHTO 1/8th-inch neoprene bearing pad

29. Price to move the entire Pier 230 feet seaward to deeper water.
This line item would include extending the concrete sidewalk, water lines, electrical lines, and any other items needed to move the Pier seaward. The restroom is not affected.

a. 230 feet of Sidewalk
b. 230 feet of Electrical conduit
c. 230 feet of Waterline
d. Other

$ _____

1.

DESCRIPTION SCHEDULE OF MANUFACTURERS AND SUPPLIERS

The Contract Documents are based upon the equipment or products available from the manufacturers/suppliers.

If the BIDDER desires to propose one or more alternate suppliers/manufacturers, he may write in the name of such alternates in the blank space provided below the listed manufacturers, but he must nevertheless also circle one of the listed suppliers/manufacturers because Base Bid Items must be based upon this list. Wherever an alternate supplier is proposed, the BIDDER must insert the amount to be deducted from the Contract Price (either lump sum or unit price) if the alternate supplier is eventually approved. If the proposed alternate supplier is **determined "not equivalent" by the ENGINEER, the BIDDER must use the specified supplier. If the BIDDER fails to indicate, by circling, which listed supplier/manufacturer he intends to use if an alternate is rejected, he must use the supplier listed as "A". Also, if the BIDDER circles more than one listed supplier, he must use in alphabetical order the first supplier circled (unless an alternate is approved).**

CONTRACTOR shall also reimburse the OWNER for any other costs directly attributable to the change in suppliers, such as additional field trips for the ENGINEER, additional redesign costs, additional review and inspection costs, etc. These costs are to be anticipated by the BIDDER and included in the lump sum deductive alternate price. The Owner may request and the BIDDER shall supply complete information on proposed alternates. The first listed manufacturer is the basis of design.

BIDDER'S CERTIFICATION

BIDDER certifies that he has thoroughly familiarized himself with and inspected the site and has read and is thoroughly familiar with the CONTRACT DOCUMENTS, and any ambiguity, inconsistency, omission, or error found in the Contract Documents has been reported to the Engineer and Owner. Additional site investigation, if deemed necessary by the BIDDER, has been performed prior to Bid submittal and at the BIDDER sole expense. BIDDER certifies that the bid submitted is complete and is sufficient for the BIDDER to provide a fully operational and working facility in accordance with the contract documents. Furthermore, BIDDER certifies his understanding that neither the OWNER nor ENGINEER shall provide any labor, equipment or materials of any kind, which may be required for the performance of the work. Likewise, BIDDER certifies that he shall provide all equipment, materials and labor to complete the work in accordance with the contract documents whether or not such equipment, material or labor is specifically addressed under a specific bid item. Such occurrences are deemed subsidiary obligations of the contract for which complete compensation is made under existing bid item(s). The failure or omission of any BIDDER to do any of the foregoing shall in no way relieve any BIDDER from any obligation in respect to its BID.

Information or documentation the BIDDER believes is relevant to addressing the factors of reliability, quality of service and product is attached.

RESPECTFULLY SUBMITTED,

_____
Signature

_____
Title

_____
License Number (if applicable)

SEAL - (if BID is by a corporation)

CONTRACTOR:

_____

_____
Address

_____

_____

_____
Phone Number

_____
Date

BASIS OF CONTRACT AWARD

The contract will be awarded to the lowest, responsive, responsible BIDDER acceptable to the Owner based on the total Base Bid at the Owner's sole discretion in combination with any Alternate Bid Items selected by the Owner, and available funding.

The BIDDER agrees that he will, when so authorized by the Owner, through the change order process, perform additional work in accordance with General Conditions.

The BIDDER understands and agrees that he is completely responsible for all items of this proposal whether subcontracted or of his own construction, for the life of this Contract.

SUBCONTRACTORS

1. Geotechnical Testing _____
2. Electrical _____
3. Site Work _____
4. Plumbing (water and sewer) _____
5. Restroom _____

RESPECTFULLY SUBMITTED,

_____
Signature

_____
Title

CONTRACTOR:

_____

_____
Address

_____

_____

_____
Phone Number

_____
License Number (if applicable)

_____
Date

SEAL - (if BID is by a corporation)

EXTRA WORK AND PAYMENT THEREFORE

The CONTRACTOR shall perform unforeseen work, for which there is no price included in the Proposal, wherever it is deemed necessary or desirable by the ENGINEER to complete satisfactorily the Project as contemplated, as such extra work shall be performed promptly in accordance with the Specifications and as directed by the OWNER; provided, however, that before any extra work is begun, a written order form from the OWNER to do the work shall be given to the CONTRACTOR. No extra work will be paid for unless ordered in writing. Extra work and material will ordinarily be paid for in a lump sum or at unit prices agreed to in writing by the OWNER and the CONTRACTOR before the extra work is ordered.

The performance of any extra work or the furnishing of any extra material which, in the judgement of the ENGINEER, is of like character to and susceptible of classification under a unit price item of the Contract shall, if order of the OWNER shall so provide, be paid for at the unit price bid for such item.

All extra work performed hereunder will be subject to all of the provisions of the Contract.

A requirement for "Schedule of Values" to be used for negotiation of Change Orders during the life of the contract. Items are, but not limited to:

MEXICO BEACH PIER

Prestressed 18" Square Pile	$ _____L.F.
Prestressed 24" Octogonal Pile	$ _____L.F.
Prestressed 24" x 36" Beam	$ _____L.F.
CIP Concrete	$ _____C.Y.
Steel Reinforcement	$ _____LB
Structural Timber	$ _____MBF
Railing	$ _____L.F.
Lighting Fixture	$ _____EA
Wiring with Conduit	$ _____L.F.
Water Line	$ _____L.F.
Pile Build-Ups Concrete	$ _____C.Y.
Pile Build-Ups Reinforcement	$ _____LB

Note: Materials and workmanship of these items to be consistent with original specifications and complete for the purpose of the Change Order.

Whenever, in the judgement of the ENGINEER, such extra work or such extra material is not of like character to and susceptible of classification under a unit price item of the Contract, and it is impracticable because of the nature of the work, or for any other reason, to fix the following price before the extra work is issued, extra work and material will be paid for in the following manner:

A. For all labor, including a foreman in direct charge of the specified operations, the CONTRACTOR shall receive a sum equal to the current local rate of wages for every hour that the labor is actually engaged in such work, to which shall be added an amount equal to fifteen (15) percent of such sum, and the total thereof shall be full compensation to the CONTRACTOR for general supervision and for furnishing and repairing small tools and ordinary equipment used in doing the Extra work. In addition, the CONTRACTOR shall be paid the actual cost of social security taxes, unemployment insurance, workmen's compensation insurance and contractor's public liability, property damage and builder's risk insurance involved in such Extra Work, based on the actual wages paid to such labor.

B. For all materials used, the CONTRACTOR shall receive the actual cost of such materials, including freight charges as shown by original receipted bills, to which cost shall be added an amount equal to 10 percent thereof.

C. For any construction equipment or special equipment including fuel and lubricants therefor, required for the economical performance of Extra Work, the ENGINEER shall allow the CONTRACTOR a rental price, to be agreed upon in writing before such Work is begun, for every hour that such construction equipment or special equipment is actually operated on the work. Such hourly rental price shall not exceed 1/176 part of the monthly rate stated for such equipment in the latest edition of the "Compilation of Rental Rates for Construction Equipment" by Associated Equipment Distributors.

D. SUB CONTRACTORS are subject to the above and the CONTRACTOR mark-up shall not exceed five (5) percent of the amount due to the SUBCONTRACTOR.

The CONTRACTOR'S representative and the inspector shall compare records of Extra Work done at the end of each day. Such records shall be made in duplicate upon a form provided for such purpose by the inspector and shall be signed by both the inspector and the CONTRACTOR'S REPRESENTATIVE, one copy being submitted to the ENGINEER and the other being retained by the CONTRACTOR.

All claims for Extra Work done shall be submitted by the CONTRACTOR upon certified statements, to which shall be attached the original receipted bills covering the costs of and freight charges on all materials used in such work, and such statements, accompanied by copies of the orders authorizing the performance of the work, shall be submitted to the ENGINEER for inclusion in the estimate of the month in which the work was actually done.

If required, the CONTRACTOR shall produce any books, vouchers, other records, or memoranda, which will assist the ENGINEER in determining the true, necessary cost of the work and materials to be paid for on a cost-plus basis.

TRENCH SAFETY

Any excavation is subject to the Excavation Safety Standards established by the Occupational Safety and Health Administration 29 C.F.R. s. 1926.650 Subpart P.

By the signature of its undersigned authorized representative, the BIDDER hereby assures the Owner that any such excavation performed by the BIDDER will be performed in compliance with all applicable trench safety laws and standards.

The cost of compliance with applicable trench safety standards is estimated by the BIDDER to be $_____, which cost is included in the amount of the BID.

The anticipated specific methods of compliance with applicable Trench Safety Laws and Standards are as follows:

_____
_____
_____
_____
_____

_____
AUTHORIZED OFFICIAL

IF MORE SPACE IS NEEDED, USE THE BACK SIDE OF THIS FORM.

RESPECTFULLY SUBMITTED,

_____
Signature

_____
Title

_____
License Number (if applicable)

CONTRACTOR:

_____

_____
Address

_____

_____
Phone Number

_____
Date

SEAL - (if BID is by a corporation)

EXPERIENCE RECORD

In order for the Owner to satisfy himself regarding the BIDDER qualifications, the BIDDER shall provide in the space below information regarding previous work comparable with the proposed work in size, capacity, and complexity of construction which he may have completed during the past twenty years. Following receipt of bids, each BIDDER shall be prepared to furnish such additional information as the Owner may reasonably request regarding his equipment, personnel, and financial resources. The information provided herewith shall constitute an integral part of the Proposal.

	DATE CONST-RUCTED	DESCRIPTION	NAME OF OWNER	PHONE NO.	CONSTRUCTION COST
1					
2					
3					
4					
5					
6					
7					
8					

END OF SECTION 00030

SECTION 00040

BID BOND

KNOW ALL PERSONS BY THESE PRESENTS, that we, the undersigned,

_____, as Principal, and _____, as Surety,

are hereby held and firmly bound unto the City of Niceville, Florida, as OWNER, in the penal sum of _____

for the payment of which, will and truly be made, we hereby jointly and severally bind ourselves, successors and assigns. Signed this ____ day of _____, 20__. The Condition of the above obligation is such that whereas the Principal has submitted to the OWNER a certain BID, attached hereto and hereby made a part hereof to enter into a contract in writing, for the construction of

_____

NOW THEREFORE,

(a) If said BID shall be rejected, or

(b) If said BID shall be accepted and the Principal shall execute and deliver the Agreement in the form of contract as set forth in Section 00050 (properly completed in accordance with said BID) and shall furnish a BOND for faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform its obligations created by OWNER's acceptance of said BID, then this obligation shall be void, otherwise the same shall remain in force and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

(c) NOW, THEREFORE, if the OWNER shall accept the BID of the Principal and the Principal shall execute and deliver to OWNER the required Agreement and within ten days after the date of a written Notice of Award in accordance with the terms of such BID, and within said ten days deliver to OWNER the required Certificates(s) of Insurance, together with the required Performance and Payment Bonds in an

amount of 100% the total Contract Amount as specified in the Bidding Documents or Contract Documents with good and sufficient surety for the faithful performance of the Agreement and for the prompt payment of labor, materials and supplies furnished in the prosecution thereof or, in the event of the failure of the Principal to execute and deliver to OWNER such Agreement or to give such bond or bonds, and deliver to OWNER the required certificates of insurance, if the Principal shall pay to OWNER the fixed penal sum of $_____ noted above as liquidated damages, and not as a penalty, as provided in the Instructions for Bidder, then this obligation shall be null and void, otherwise to remain in full force and effect.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may have to accept said BID; and Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Principal

Surety

By:

IMPORTANT - Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of Florida.

END OF SECTION 00040

Bid or Contract No. _____

SWORN STATEMENT PURSUANT TO SECTION 287.133(3)(a),
FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES

(This form must be signed and sworn to in the presence of a Notary Public or other official authorized to administer oaths.)

1. This sworn statement is submitted to _____
[print name of the public entity]

by_____
[print individual's name and title]

for_____
[print name of entity submitting sworn statement]

whose business address is _____

_____

and (if applicable) its Federal Employer Identification Number (FEIN) is ___ (If the entity has no FEIN,include the Social Security Number of the individual signing this sworn statement: _____.)

2. I understand that a "public entity crime" as defined in Paragraph 287.133(1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or of the United States, including, but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the Untied States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

3. I understand that "convicted" or "conviction" as defined in Paragraph 287.133(1)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.

4. I understand that an "affiliate" as defined in Paragraph 287.133(1)(a), Florida Statutes,

means:

1. A predecessor or successor of a person convicted of a public entity crime; or
2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

5. I understand that a "person" as defined in Paragraph 287.133(1)(e), Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

6. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. [Indicate which statement applies.]

___ Neither the entity submitting this sworn statement, nor any of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, nor any affiliate of the entity, has been charged with and convicted of, a public entity crime subsequent to July 1, 1989.

___ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

___ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, share holders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. However, there has been a subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearings and the Final Order entered by the Hearing Officer determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor

list. [Attach a copy of the final order.]

UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 (ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

_____
[signature]

Sworn to and subscribed before me this _____ day of _____, 20___.

Personally known _____ Notary Public-State of

OR Produced identification_____

My Commission expires_____

_____

(Type of identification) (Printed, typed or stamped Commissioned name of notary public)

END OF SECTION 00045

Bid or Contract No. _____

STATEMENT UNDER SECTION 287.087
FLORIDA STATUTES, ON PREFERENCE TO BUSINESSES WITH DRUG-FREE WORKPLACE PROGRAMS

IDENTICAL TIE BIDS: Preference shall be given to businesses with drug-free workplace programs. Whenever two or more bids which are equal with respect to price, quality and service are received by the State or by any political subdivision for the procurement of commodities or contractual services, a bid received by the State or by any political subdivision for the procurement of commodities or contractual services, a bid received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. Established procedures for processing tie bids will be followed if none of the tied vendors have a drug-free workplace program. In order to have a drug-free workplace program, a business shall:

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the dangers of drug abuse in the workplace, the business' policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

3. Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).

4. In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace not later than five (5) days after such conviction.

5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by an employee who is so convicted.

6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign this statement, I certify that this firm complies fully with the above requirements.

_____

BIDDER SIGNATURE

END OF SECTION 00046

SECTION 00050

AGREEMENT

THIS AGREEMENT is made this _____day of _____, 20___ by and between MEXICO BEACH, FLORIDA, (hereinafter called "OWNER") and_____, doing business as a _____(an individual), or (a partnership), or (a corporation), having a business address of _____ (hereinafter called "CONTRACTOR") , for the performance of the Work (as that terms is defined below) in connection with the construction of the MEXICO BEACH PIER ("Project"), to be located at Mexico Beach, Florida , in accordance with the Drawings and Technical Specifications prepared by Baskerville-Donovan, Inc., the Engineer of Record (hereinafter called "Engineer") and all other Contract Documents hereafter specified.

OWNER and CONTRACTOR, for the consideration herein set forth, agree as follows:

1. The CONTRACTOR shall furnish, at its sole expense, all supervision, labor, equipment, tools, material, and supplies to properly and efficiently perform all of the work required under the Contract Documents and shall be solely responsible for the payment of all taxes, permits and license fees, labor fringe benefits, insurance and bond premiums, and all other expenses and costs required to complete such work in accordance with this Agreement (collectively the "Work"). CONTRACTOR'S employees and personnel shall be qualified and experienced to perform the portions of the Work to which they have been assigned. In performing the Work hereunder, CONTRACTOR shall be an independent contractor, maintaining control over and having sole responsibility for CONTRACTOR'S employees and other personnel. Neither CONTRACTOR, nor any of CONTRACTOR'S sub-contractors or sub-subcontractors, if any, nor any of their respective employees or personnel, shall be deemed servants, employees, or agents of OWNER.

2. The CONTRACTOR will commence the Work required by the Contract Documents within ten (10) calendar days after the date of the NOTICE TO PROCEED to be issued by OWNER in writing within thirty (30) calendar days from the date of this Agreement and will achieve Substantial Completion of the Work within 365 calendar days of the required commencement date, except to the extent the period for Substantial Completion is extended pursuant to the terms of the Contract Documents ("Contract Time"). Final Completion of the Work shall be achieved by CONTRACTOR within sixty (60) calendar days after the date of Substantial Completion.

3. The CONTRACTOR agrees to pay the OWNER, as liquidated damages, the actual damages for each calendar day that expires after the Contract Time for Substantial Completion as more fully set forth in Section 15 of the General Conditions.

4. The CONTRACTOR agrees to perform all of the Work described in the Contract Documents and comply with the terms therein for the sum of $_____ as shown in the BID SCHEDULE, included within the Bid Proposal Form, as said amount may be hereafter adjusted pursuant to the terms of the Contract Documents ("Contract Price").

5. The term "Contract Documents" means and includes the following documents, all of which are incorporated into this Agreement by this reference:

Section 00010 ADVERTISEMENT FOR BIDS
Section 00020 INFORMATION FOR BIDDER OR BIDDERSS
Section 00030 BID PROPOSAL FORM
Section 00040 BID BOND
Section 00050 AGREEMENT
Section 00060 PERFORMANCE BOND
Section 00070 PAYMENT BOND

Section 00080 NOTICE OF AWARD

Section 00090 NOTICE TO PROCEED

Section 00096 TRENCH SAFETY ACT CERTIFICATE OF COMPLIANCE

Section 00097 PUBLIC ENTITY CRIMES STATEMENT

Section 00098 SALES TAX EXEMPT PURCHASING AGREEMENT

Section 00099 CERTIFICATE OF INSURANCE

Section 00100 GENERAL CONDITIONS

Section 00800 SUPPLEMENTAL CONDITIONS (including Section 00801 through Section 00803)

Section 01000 GENERAL REQUIREMENTS (including Section 01406 through Section 01705)

DRAWINGS prepared by Baskerville-Donovan, Inc. numbered _____, dated _____, 2025.

TECHNICAL SPECIFICATIONS prepared or issued by Baskerville-Donovan, Inc. dated _____, 2025.

ADDENDA

No. ___, dated _____, 20___

No. ___, dated _____, 20___

No. ___, dated _____, 20___

The Contract Documents also include any written amendments to any of the above signed by the party to be bound by such amendment. The Contract Documents are sometimes referred to herein as the "Agreement".

6. The OWNER will pay the Contract Price to the CONTRACTOR in the manner and at such times as set forth in Contract Documents.

7. This Agreement shall be binding upon all parties hereto and their respective

heirs, executors, administrators, successors, and assigns.

8. This Agreement shall be governed by the laws of the State of Florida.

9. All notices required or made pursuant to this Agreement shall be in writing and, unless otherwise required by the express terms of this Agreement, may be given either (i) by mailing same by United States mail with proper postage affixed thereto, certified, return receipt requested, or (ii) by sending same by Federal Express, Express Mail, Airborne, Emery, Purolator or other expedited mail or package delivery, or (iii) by hand delivery to the appropriate address as herein provided. Notices to OWNER required hereunder shall be directed to the following address:

If to Owner:

Mexico City
201 Paradise Path
Mexico Beach, FL 32410
ATTENTION: Mell Smigielski, City manager
E-Mail.: mell@mexicobeachfl.gov

If to Contractor:

_____
_____
_____
ATTENTION: _____
E-Mail.: _____

Either party may change its above noted address by giving written notice to the other party in accordance with the requirements of this Section.

10. CONTRACTOR recognizes that OWNER is exempt from sales tax and may wish to generate sales tax savings for the Project. Accordingly, to the extent directed by and without additional charge to OWNER, CONTRACTOR shall comply with and fully implement the sales tax savings program as more fully described in the Sales Tax Exempt Purchasing Agreement. If required by

OWNER, the CONTRACTOR shall fully execute a copy of such Sales Tax Exempt Purchasing Agreement, the form of which is set forth in Section 00098.

11. The failure of OWNER to enforce at any time or for any period of time any one or more of the provisions of the Agreement shall not be construed to be and shall not be a continuing waiver of any such provision or provisions or of its right thereafter to enforce each and every such provision.

12. Each of the parties hereto agrees and represents that the Agreement comprises the full and entire agreement between the parties affecting the Work contemplated, and no other agreement or understanding of any nature concerning the same has been entered into or will be recognized, and that all negotiations, acts, work performed, or payments made prior to the execution hereof shall be deemed merged in, integrated and superseded by this Agreement.

13. Should any provision of the Agreement be determined by a court with jurisdiction to be unenforceable, such a determination shall not affect the validity or enforceability of any other section or part thereof.

14. Unless the context of this Agreement otherwise clearly requires, references to the plural include the singular, references to the singular include the plural. The term "including" is not limiting, and the terms "hereof", "herein", "hereunder", and similar terms in this Agreement refer to this Agreement as a whole and not to any particular provision of this Agreement, unless stated otherwise. Additionally, the parties hereto acknowledge that they have carefully reviewed this Agreement and have been advised by counsel of their choosing with respect thereto, and that they understand its contents and agree that this Agreement shall not be construed more strongly against any party hereto, regardless of who is responsible for its preparation.

15. With respect to the Project, OWNER has designated a Project Representative to assist OWNER with respect to the administration of this Agreement. The Project Representative to be utilized by OWNER for this Project, shall be _____.

16. CONTRACTOR acknowledges and agrees that no interruption, interference, inefficiency, suspension or delay in the commencement or progress of the Work from any cause whatever, including those for which the OWNER, PROJECT REPRESENTATIVE, or ENGINEER may be responsible, in whole or in part, shall relieve CONTRACTOR of its duty to perform or give rise to any right to damages or additional compensation from OWNER. CONTRACTOR expressly acknowledges and agrees that it shall receive no damages for delay. CONTRACTOR's sole remedy, if any, against OWNER will be the right to seek an extension to the Contract Time; provided, however, the granting of any such time extension shall not be a condition precedent to the aforementioned "No Damage For Delay" provision. This section shall expressly apply to claims for early completion, as well as to claims based on late completion. Notwithstanding the foregoing, if the Work is delayed due to the fault or neglect of OWNER or anyone for whom OWNER is liable, and such delays have a cumulative total of more than ____ calendar days, CONTRACTOR may make a claim for its actual and direct delay damages accruing after said ____ calendar days. Provided, however, CONTRACTOR expressly acknowledges and agrees that its actual and direct delay damages shall not exceed $_____ per calendar day. Except as expressly set forth in this section, in no event shall OWNER be liable to CONTRACTOR whether in contract, warranty, tort (including negligence or strict liability) or otherwise for any acceleration, soft costs, lost profits, special, indirect, incidental, or consequential damages of any kind or nature whatsoever.

17. INSURANCE - BASIC COVERAGES REQUIRED

The CONTRACTOR shall procure and maintain the following described insurance, except for coverages specifically waived by OWNER, on policies and with insurers acceptable to OWNER. Current Insurance Service Office (ISO) policies, forms, and endorsements or equivalents, or broader, shall be used where applicable.

These insurance requirements shall not limit the liability of the CONTRACTOR. The insurance coverages and limits required of CONTRACTOR under this Agreement are designed to meet the minimum requirements of OWNER and the OWNER does not represent these types or amounts of insurance to be sufficient or adequate to protect the CONTRACTOR'S interests or liabilities. CONTRACTOR alone shall be responsible to the sufficiency of its own insurance program.

The CONTRACTOR and the CONTRACTOR'S subcontractors and sub-subcontractors shall be solely responsible for all of their property, including but not limited to any materials, temporary facilities, equipment and vehicles, and for obtaining adequate and appropriate insurance covering any damage or loss to such property. The CONTRACTOR and the CONTRACTOR'S sub-contractors and sub-subcontractors expressly waive any claim against OWNER arising out of or relating to any damage or loss of such property, even if such damage or loss is due to the fault or neglect of the OWNER or anyone for whom the OWNER is responsible. The CONTRACTOR is obligated to include, or cause to be included, provisions similar to this paragraph in all of the CONTRACTOR'S subcontracts and its subcontractors' contracts with their sub-subcontractors.

The CONTRACTOR'S deductibles/self-insured retention's shall be disclosed to OWNER and may be disapproved by OWNER. They may be reduced or eliminated at the option of OWNER. The CONTRACTOR is responsible for the amount of any

deductible or self-insured retention. Any deductible or retention applicable to any claim or loss shall be the responsibility of CONTRACTOR and shall not be greater than $25,000, unless otherwise agreed to, in writing, by OWNER.

Insurance required of the CONTRACTOR or any other insurance of the CONTRACTOR shall be considered primary, and insurance of OWNER shall be considered excess, as may be applicable to claims or losses which arise out of the Hold Harmless, Payment on Behalf of OWNER, Insurance, Certificates of Insurance and any Additional Insurance provisions of this agreement, contract or lease.

WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY INSURANCE COVERAGE

The CONTRACTOR shall purchase and maintain workers' compensation and employers' liability insurance for all employees engaged in the Work, in accordance with the laws of the State of Florida, and, if applicable to the Work, shall purchase and maintain Federal Longshoremen's and Harbor Workers' Compensation Act Coverage. Limits of coverage shall not be less than:

$1,000,000	Limit Each Accident
$1,000,000	Limit Disease Aggregate
$1,000,000	Limit Disease Each Employee

The CONTRACTOR shall also purchase any other coverage required by law for the benefit of employees.

The CONTRACTOR shall provide to OWNER an Affidavit stating that he meets all the requirements of Florida Statute 440.02 (13) (d).

COMMERCIAL GENERAL LIABILITY COVERAGE

CONTRACTOR shall purchase and maintain Commercial General Liability Insurance on a full occurrence form. Coverage shall include, but not be limited to, Premises and Operations, Personal Injury, Contractual for this Agreement, Independent Contractors, Broad Form Property Damage, Products and Completed Operation Liability Coverages and shall not exclude coverage for the "X" (Explosion), "C" (Collapse) and "U" (Underground) Property Damage Liability exposures. Limits of coverage shall not be less than:

Bodily Injury, Property Damage & Personal Injury Liability	$1,000,000 Combined Single Limit Each Occurrence, and
	$2,000,000 Aggregate Limit

The General Aggregate Limit shall be specifically applicable to this Project. The Completed Operations Liability Coverages must be maintained for a period of not less than three (3) years following OWNER'S final acceptance of the project.

The CONTRACTOR shall add OWNER as an additional insured through the use of Insurance Service Office Endorsements No. CG 20.10.10.01 and No. CG 20.37.10.01 wording or equivalent, or broader, an executed copy of which shall be attached to or incorporated by reference on the Certificate of Insurance to be provided by CONTRACTOR pursuant to the requirements of the Contract Documents.

BUSINESS AUTOMOBILE LIABILITY COVERAGE

The CONTRACTOR shall purchase and maintain Business Automobile Liability Insurance as to ownership, maintenance, use, loading and unloading of all of CONTRACTOR'S owned, non-owned, leased, rented or hired vehicles with limits not less than:

Bodily Injury & Property Damage	$1,000,000 Combined Single Limit Each Accident

EXCESS OR UMBRELLA LIABILITY COVERAGE

CONTRACTOR shall purchase and maintain Excess Umbrella Liability Insurance or Excess Liability Insurance on a full occurrence form providing the same continuous coverages as required for the underlying Commercial General, Business Automobile and Employers' Liability Coverages with no gaps in continuity of coverages or limits with OWNER added by endorsement to the policy as an additional insured in the same manner as is required under the primary policies, and shall not be less than $10,000,000,each occurrence and aggregate as required by OWNER.

IN WITNESS WHEREOF, the parties hereto have executed or caused to be executed by their duly authorized officials, this Agreement in two (2) copies each of which shall be deemed an original on the date first written above.

(SEAL)

ATTEST:

_____
City Clerk

_____
City Attorney (as to form only)

OWNER:

MEXICO BEACH, FLORIDA

BY:
_____

NAME:_____
(Please type)

TITLE:_____

CONTRACTOR:

ATTEST:

_____

NAME_____
(Please Type)

BY: _____

NAME:_____
(Please Type)

ADDRESS:_____

END OF SECTION 00050

SECTION 00060

PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS: that

_____
(Name of Contractor)

_____
(Address of Contractor)

a _____, hereinafter called Principal and
(Corporation, Partnership, or Individual)

_____
(Name of Surety)

_____
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto:

City of Mexico Beach
(Name of Owner)

201 Paradise Path, Mexico Beach, FL 32410
(Address of Owner)

hereinafter called OWNER in the total aggregate penal sum of _____ Dollars ($_____) for Contract in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered a certain contract with the OWNER, dated the _____ day of _____, 20___, a copy of which is hereto attached and made a part hereof for the construction of:

MEXICO BEACH PIER
"PROJECT NAME(s)"

NOW, THEREFORE, if the PRINCIPAL shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or

without notice to the SURETY and during the one year guaranty period and if the PRINCIPAL shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said SURETY, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to WORK to be performed thereunder or the SPECIFICATIONS accompanying same shall in any way affect its obligation on this BOND, and does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that it is expressly agreed that the BOND shall be amended automatically and immediately, without formal and separate amendments hereto, upon amendment to the Contract not increasing the contract price more than twenty percent, so as to bind the PRINCIPAL and the SURETY to the full and faithful performance of the CONTRACT as so amended. The term "Amendment", wherever used in this BOND, and whether referring to this BOND, or the CONTRACT DOCUMENTS, shall include any alteration, addition, extension or modification of any character whatsoever.

PROVIDED, FURTHER, that no final settlement between the OWNER and the PRINCIPAL shall abridge the right of the other beneficiary hereunder, whose claim may be unsatisfied. The OWNER is the only beneficiary hereunder.

THE REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK.

IN WITNESS WHEREOF, this instrument is executed in **three (3)** counterparts, each one of which shall be deemed an original, this the _____ day of _____, 20___.

_____
Principal

_____
(Principal) Secretary

(SEAL) BY _____

_____
(Address)

_____

_____
Witness as to Principal

_____
(Address)

_____

_____
(Surety)

ATTEST:

_____ BY _____
Witness to Surety Attorney-In-Fact

_____ _____
(Address) (Address)

_____ _____

NOTE: Date of BOND must not be prior to date of Contract.
Contractor's Surety shall use this form along with their personal documentation.

If CONTRACTOR is partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the Project is located.

END OF SECTION 00060

SECTION 00070

PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS: that

_____
(Name of Contractor)

_____
(Address of Contractor)

a _____, hereinafter called Principal and
(Corporation, Partnership, or Individual)

_____
(Name of Surety)

_____
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto:

City of Mexico Beach
(Name of Owner)

201 Paradise Path, Mexico Beach, FL 32456
(Address of Owner)

hereinafter called OWNER, and unto all persons, firms and corporations who or which may furnish labor, or who furnish materials to perform as described under the contract and to their successors and assigns in the total aggregate penal sum of _____ Dollars ($_____) for Contract in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the PRINCIPAL entered into a certain contract with the OWNER, dated the ____ day of _____, 20___, a copy of which is hereto attached and made a part hereof for the construction of :

MEXICO BEACH PIER
"PROJECT NAME(s)"

NOW, THEREFORE, if the PRINCIPAL shall properly make payment to all persons, firms, and corporations furnishing materials for or performing labor in the prosecution of the WORK provided for in such contract, and any authorized extensions or modification thereof, including all amounts due for materials, lubricants, fuel, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and for all labor cost incurred in such WORK including that by a SUBCONTRACTOR or SUPPLIER of any tier, and to any construction lien holder whether it acquires its lien by operation of State or Federal law; then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, that beneficiaries or claimants hereunder shall be limited to the SUBCONTRACTORS, SUPPLIERS and persons, firms and corporations having a direct contract with the PRINCIPAL or its SUBCONTRACTORS or SUPPLIERS.

PROVIDED, FURTHER, that said Surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to WORK to be performed thereunder or SPECIFICATIONS accompanying the same shall in any way affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of this contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no suit or action shall be commenced hereunder by any claimant: (a) Unless claimant, other than one having a direct contract with the PRINCIPAL, shall have given written notice to any two of the following: The PRINCIPAL, the OWNER, or the SURETY above named within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the PRINCIPAL, OWNER, or SURETY, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer. (b) After expiration of one (1) year following the date of which PRINCIPAL ceased work on said CONTRACT, is being understood, however, that if any limitation embodied in the BOND is prohibited by any law controlling the construction hereof, such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

PROVIDED, FURTHER, that it is expressly agreed that this BOND shall be deemed amended automatically and immediately, without formal and separate amendments hereto, upon amendment to the Contract not increasing the contract price more than twenty percent so as to bind the PRINCIPAL and the SURETY to the full and faithful performance of the Contract as so amended. The term "Amendment", wherever used in this BOND and whether referring to this BOND, or the CONTRACT DOCUMENTS shall include any alteration, addition, extension or modification of any character whatsoever.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

THE REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK.

WITNESS WHEREOF, this instrument is executed in **three (3)** counterparts, each one of which shall be deemed an original, this the _____ day of _____, 20___.

_____
Principal

_____
(Principal) Secretary

(SEAL) BY _____

_____
(Address)

_____

_____
Witness as to Principal

_____
(Address)

_____

_____
(Surety)

ATTEST:

_____ BY _____
Witness as to Surety Attorney-In-Fact

_____ _____
(Address) (Address)

_____ _____

NOTE: Date of BOND must not be prior to date of Contract.

If CONTRACTOR is partnership, all partners should execute BOND. Contractor's Surety shall use this form along with their personal documentation.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the Project is located.

END OF SECTION 00070

SECTION 00080

NOTICE OF AWARD

TO: _____
_____
_____

PROJECT DESCRIPTION:

MEXICO BEACH PIER

The City of Mexico Beach (Owner) has considered the BID submitted by you for the above described Project in response to its Advertisement for Bids dated October 8, 2025 and associated Information for Bidders.

You are hereby notified that your Bid in the amount of $ _____ has been accepted by the Owner. Provided, however, nothing in this Notice or your delivery to the Owner of the agreement executed by you (with the required Bonds and Certificates of Insurance) shall in any manner or way be deemed to create any contract between you and the County. No such contract shall be created unless and until the City signs the Agreement.

You are required by the Information for Bidders to execute the Agreement and furnish the required CONTRACTOR'S Performance Bond, Payment Bond, and Certificates of Insurance within ten (10) calendar days from the date of this Notice.

If you fail to execute said Agreement and to furnish said Bonds within ten (10) calendar days from the date of this Notice, City will be entitled to consider all your rights arising out of City's acceptance of your BID as abandoned and as a forfeiture of your Bid Deposit. The Owner will be entitled to all other rights and remedies as may be available to it at law.

You must return an acknowledged copy of this Notice of Award to the Owner within the above noted ten (10) calendar day period.

Dated this _____ day of _____, 20__.

MEXICO BEACH, FLORIDA
Owner

By _____

Name: Mell Smigielski

Title: City Manager

ACCEPTANCE OF NOTICE

Receipt of the above Notice of Award is hereby acknowledged.

By_____

This the _____day of _____, 20___.

Name_____

Title_____

END OF SECTION 00080

SECTION 00090

NOTICE TO PROCEED

TO:

PROJECT DESCRIPTION:

MEXICO BEACH PIER

You are hereby notified to commence Construction in accordance with the Agreement dated _____, 2025 on or before xxxxx, and you are to be substantially complete the WORK before xxxxxx. You must return and acknowledge a copy of this Notice to Proceed to the County within five (5) calendar days of your receipt of this Notice.

CITY of MEXICO BEACH, FLORIDA
Owner

By: _____

Name: Chris Truitt, City Manager

Title: City Manager

ACCEPTANCE OF NOTICE

Receipt of the above Notice to Proceed is hereby acknowledged

By:

This the _____ day of _____, 2025

_____
(Signature)

_____
(Type or Print Name)

_____
(Title)

END OF SECTION 00090

SECTION 00096

CERTIFICATE OF COMPLIANCE WITH THE FLORIDA TRENCH SAFETY ACT

Bidder acknowledges sole responsibility for complying with the Florida Trench Safety Act (Act) and Occupational Safety and Health Administration's excavation safety standard 29 CFR 1926.650 (Subpart P as amended). Bidder further acknowledges that included in the various items of its BID and in the Grand Total Base Bid Price are costs for complying with the Florida Trench Safety Act (90-96, Laws of Florida) effective October 1, 1990. The Bidder further identifies the costs to be summarized below:

	Trench Safety Method (Description)	Units of Measure (LF, SY)	Quantity	Unit Cost	Extended Cost	Unit Extended
A.						
B.						
C.						
D.						
					Total	$_____

Failure to complete the above may result in your BID being declared non-responsive. The costs indicated above are provided to comply with the Act and shall not constitute grounds for any additional compensation to that listed for the separate line items of the Bid Form.

Bidder _____
By: _____
Its _____

Date _____

_____
Authorized Signature

END OF SECTION 00096

SECTION 00098

SALES TAX EXEMPT PURCHASING AGREEMENT

THIS SALES TAX EXEMPT PURCHASING AGREEMENT made as of _____ between _____ hereinafter called the "Contractor" and the City of MEXICO BEACH, FLORIDA, hereinafter called the "Owner."

RECITALS

1. Contractor and Owner entered into a contract dated _____,(the "Contract") for the performance of the work described therein, to which an executed copy of this Agreement shall be attached thereto and incorporated therein.

2. Contractor and Owner desire to enter into an arrangement whereby certain purchases under the Contract can be made through the Owner as a means of taking advantage of the Owner's status of being exempt from sales and use taxes.

3. The Owner is exempt from sales and use taxes. As such it is exempt from the payment of sales and use tax on purchases of building materials or equipment necessary for the performance of work under construction contracts, provided the Owner determines it is to its best interest to do so, and provided the purchase of such building materials and equipment are handled in the manner hereinafter described.

4. The Owner has determined it is in its best interest to provide the opportunity to eliminate the payments of sales tax for building materials or equipment to be used in the construction of this project, and notifies the Contractor of its intent to do so.

AGREEMENT

1. The parties intend by this Agreement to comply with the procedures and elements described in Florida Department of Revenue Technical Assistance Advisements 01A-003 (January 8, 2001) and 00A-083 (December 21, 2000), and any conflict or ambiguity in this Agreement shall be resolved in favor of meeting the elements necessary to make tax exempt the purchases contemplated by this Agreement.

2. The Owner shall, at its sole discretion, have the option to purchase directly from the supplier or vendor, any building materials or equipment included in the Contractor's bid for the Contract. The Owner reserves the right to require Contractor to assign to the Owner agreements with suppliers for such goods. Contractor shall, from time to time submit, update and keep current, for consideration by the Owner, a list of all building materials and equipment to be purchased, organized by supplier or vendor. Such list shall include a brief description of the building materials and equipment and the name and address of the supplier or vendor. Suppliers or vendors reasonably anticipated to furnish

building materials and equipment with an aggregate purchase value of less than $10,000 need not be listed. Contractor's initial list is attached hereto and incorporated herein. Building materials and equipment not required for the performance of the Contract shall not be purchased under this Agreement. The Owner reserves the right to delete or add items from this Agreement when it is in the Owner's best interest.

3. The Owner will be liable for the payment of all purchases properly made hereunder.

4. Contractor shall notify all suppliers not to make sales to the Contractor under this Agreement.

5. For each purchase approved by the Owner to be made under this Agreement, the Contractor shall furnish the County in writing information sufficient for the Owner to issue to the supplier the Owner's purchase order for the requested building materials or equipment which shall include as an attachment the Owner's Certificate of Exemption. Suppliers will render statements for materials purchased to the Owner in care of the Contractor. After receiving and inspecting the materials when they arrive at the job site, verifying that all necessary documentation accompanies the delivery and conforms with the purchase order, Contractor will forward the invoices to the Owner's Engineer for approval, processing and delivery to the Owner for payment. The Owner will process the invoices and issue payment directly to the supplier. Contractor will keep and furnish to the Owner all such records, summaries, reports of purchase orders and invoices, and reports of the status and use of goods handled under this Agreement, as the Owner may reasonably require.

6. The Contract provides that Contractor will perform the work under the Contract for the Contract Price in the amount of $[_____], as may be amended from time to time as provided in the Contract. Said amount, as amended, due Contractor under the Contract shall be reduced by the sum of all amounts paid by the Owner for materials and equipment purchased under this Agreement, including any shipping, handling, insurance or other, similar charges paid by the Owner, and all of the savings of sales and use tax on the purchase of such items.

7. The Contractor shall submit his proposal for base bid and proposals for each Alternate with the inclusion of all required taxes including applicable sales and use tax, the same as if tax were to be paid in the normal manner. Any sales and use tax savings will be effected during the performance of the Contract.

8. Contractor shall immediately notify all subcontractors and material and equipment dealers of the Owner's intent to reduce the construction cost of the project by the purchase of building materials and equipment in the manner herein described and the Contractor shall not withhold his consent to the arrangement.

9. Administrative costs incurred by the Contractor with this Agreement shall be considered to be included in the base bid proposal for work. No addition shall be added to the Contract amount because of the service provided by the Contractor in the purchase

of building materials and equipment by the Owner.

10. All sales and use tax savings on the purchase of building materials and equipment shall be credited to the Owner and the amount of the Contract shall be reduced by the full amount of savings which result from the omission of payment of sales and use tax.

11. By virtue of its payment of material and equipment invoices, the Owner further intends to benefit from any discounts offered for timely payment to the extent of one-half of the discount offered, the remaining one-half to accrue to the Contractor as an incentive for the Contractor to process invoices well within the discount period. The Contractor shall pay any late penalties caused by their failure to facilitate the processing of invoices within allotted time.

12. The Contractor, not withstanding this special purchase arrangement, shall select, describe, obtain approvals, submit samples, coordinate, process, prepare shop drawings, pursue, receive, inspect, store, protect and guarantee the same as would have been the case if the tax saving procedures were not implemented.

13. The Contractor as bailee shall have the obligation of receiving, inspecting, storing and safekeeping all goods and materials purchased on behalf of the Owner pursuant to this Agreement. Further, the Contractor shall be responsible for the cost of replacing or repairing any goods or materials lost, stolen, damaged or destroyed while in the Contractor's possession or control as bailee, as well as processing all warranty claims for defective goods and materials to the same extent as if such goods had been Contractor-supplied or purchased in the name of the Contractor.

14. Contractor shall maintain separate accounting records for all transactions carried out under the authority granted to it under this Agreement. Such records shall be open to the Owner or its authorized agent during normal business hours of Contractor.

15. The Owner will take both legal and equitable title to the building materials and equipment received from the vendor when delivery is made by the vendor at the job site. As equitable and legal owner of the materials and equipment purchased under this Agreement, the Owner shall bear the risk of loss thereto and shall have the insurable interest therein. Therefore, unless already provided for under the terms of the Contract Documents, Contractor shall cause the Owner to be insured or named as an additional insured as its interest may appear against any loss or damage to such goods to the extent of their full insurable value. All such insurance shall be in such form and through such companies as may be reasonably acceptable to Owner and Contractor shall provide Owner certificates thereof requiring each insurer to provide the Owner ten (10) days written notice in advance of cancellation or modification of coverage. Pursuant to the terms of the Contract Documents, the Owner will reimburse the Contractor for any additional premium amounts paid solely for such insurances against loss or damage.

16. Contractor shall be fully responsible for all matters relating to the procurement of materials and equipment covered by this Agreement, including but not limited to,

overseeing that the correct materials and the correct amounts are received timely with appropriate warranties; for inspecting and receiving the goods; and for unloading, handling and storing the materials until installed. Contractor shall inspect the materials when they arrive at the job site, verify that all necessary documentation accompanies the delivery and conforms with the Owner's purchase order, and forward the invoice to the Owner for payment if the goods are conforming and acceptable. Contractor shall verify that the materials conform to plans and specifications and determine before installation that such materials are not defective. Contractor shall manage and enforce the warranties on all materials and equipment covered by this Agreement. Contractor shall be responsible to the Owner for its failure to fully and timely perform its obligations under this paragraph, and this Agreement generally.

17. When title to the materials and equipment covered by this Agreement passes to the Owner prior to being incorporated into the work, the Contractor's possession of the goods is a bailment until such time as each of such goods is returned to the Owner by being incorporated into the work.

18. The Owner shall not be liable for delays in the work caused by delays in delivery of or defects in the goods covered by this Agreement, nor shall such delays or defects excuse Contractor in whole or in part from its obligation to timely perform the Contract.

19. In the event Contractor objects to the payment of any invoice for goods covered by this Agreement, Contractor shall at no additional cost to the Owner, provide all assistance, records and testimony necessary or convenient for the Owner to resolve the supplier's claim for payment.

20. This Agreement and the authority granted to Contractor hereunder may be revoked by the Owner at any time upon verbal or written notice to Contractor at its offices located at _____, during normal business hours.

IN WITNESS WHEREOF the parties have caused these presents to be executed in their names as of the date and year first above written.

[CONTRACTOR]

By:_____

Title:_____

MEXICO BEACH, FLORIDA

By:_____
Chris Truitt, City Manager

END OF SECTION 00098

SECTION 00100

GENERAL CONDITIONS

1. Definitions
2. Additional Instructions and Detail Drawings
3. Schedules, Reports and Records
4. Intent of the Contract Documents, Drawings and Specifications
5. Shop Drawings
6. Materials, Services, and Facilities
7. Inspection and Testing
8. Substitutions
9. Patents
10. Surveys, Permits, Regulations, and Project Layout
11. Protection of Work, Property, Persons
12. Supervision by Contractor
13. Changes in the Work
14. Changes in Contract Price
15. Time for Completion and Liquidated Damages
16. Correction of Defective Work
17. Suspension of Work, Termination, and Delay
18. Payments to Contractor
19. Acceptance of Final Payment as Release
20. Contract Security
21. Assignments
22. Indemnification
23. Separate Contracts
24. Subcontracting
25. Engineer's Authority
26. Land and Right-of-Ways
27. Guarantee
28. Claims and Disputes
29. Taxes
30. Contract Time, Schedule of the Work, and Time Extensions
31. Use of Site
32. Temporary Facilities
33. Clean Up and Disposal of Waste Materials
34. Warranty of Title
35. Ownership of Hidden Valuable Materials
36. As-Built Plans and Documents to be kept at the Site
37. Silence of Specifications
38. Gratuities
39. Audit and Access to Records
40. Equal Opportunity Requirements
41. Changed Conditions
42. Compliance with Laws
43. Public Entity Crimes
44. Insurance Requirements

1.0 DEFINITIONS

1.1 Unless otherwise expressly noted, wherever used in the Contract Documents the following terms shall have the meanings indicated and shall be applicable to both the singular and plural thereof:

1.2 ADDENDA - Written or graphic instruments, issued by Owner or Engineer prior to the execution of the Agreement, which modify or interpret any of the Contract Documents by additions, deletions, clarifications, or corrections.

1.3 BID - The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

1.4 BIDDER - Any person, firm, or corporation submitting a Bid for the Work.

1.5 BONDS - Bid, Performance, and Payment Bonds and other instruments or surety, furnished by the Contractor and the Contractor's surety in accordance with the Contract Documents.

1.6 CHANGE ORDER - A written order to the Contractor issued in accordance with the procedures set forth in the Contract Documents, authorizing an addition, deletion, or revision in the Work within the general scope of the Contract Documents, or authorizing an adjustment in the Contract Price or Contract Time.

1.7 CONSTRUCTION CHANGE DIRECTIVE – A Construction Change Directive is a written order prepared by the Engineer and signed by the Owner, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Price or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Agreement, order changes in the Work within the general scope of the Agreement consisting of additions, deletions or other revisions, the Contract Price and Contract Time being adjusted accordingly.

1.8 CONTRACT DOCUMENTS – Collectively the Agreement, Advertisement for Bids, Information for Bidders, Proposal Form, Bid Bond, Payment Bond, Performance Bond, General Conditions, Supplemental Conditions, if any, Notice of Award, Notice to Proceed, Trench Safety Act Certificate of Compliance, Public Entity Crimes Statement, Sales Tax Exempt Purchasing Agreement, Certificate of Insurance, Release and Affidavit from Contractor, Release and Affidavit from Subcontractor, Application and Certificate for Payment, Certificate of Substantial Completion, Contract Change Order(s), Construction Change Directives, Field Orders, Drawings, Specifications and Addenda. The Contract Documents are sometimes referred to herein as the Agreement.

1.9 CONTRACT PRICE - The total compensation payable by Owner to Contractor under the terms and conditions of the Contract Documents.

1.10 CONTRACT TIME - The total period of time beginning with the date of

commencement of the Work as authorized by the Owner and ending on the required date for Substantial Completion of the Work. The Contract Time is set forth with more specificity in Section 2 of the Agreement.

1.11 CONTRACTOR - The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Contractor" means the Contractor or the Contractor's authorized representative.

1.12 CITY or OWNER – The City of Mexico Beach, Florida, acting through its City Council and Charter Officers.

1.13 DRAWINGS - The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

1.14 ENGINEER - The person, firm or corporation named as such in the Agreement.

1.15 FIELD ORDER - A written order effecting a clarification or change in the Work not involving an adjustment in the Contract Price or an extension of the Contract Time, issued by Engineer or Owner to Contractor during construction.

1.16 NOTICE OF AWARD - The written notice of the acceptance of the Bid from the Owner to the successful Bidder.

1.17 NOTICE TO PROCEED - Written communication issued by the City to the Contractor authorizing it to proceed with the Work and establishing the date for commencement of the Work.

1.18 OWNER - Same as City; same as City of Mexico Beach, Florida.

1.19 PROJECT – The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the City or by separate contractors, and is formally known as "_____".

1.20 PROJECT ADMINISTRATION MANUAL (sometimes referred to herein as the "MANUAL") – The City's manual of forms and standard administrative procedures regarding project administration. Contractor acknowledges and agrees it has received a copy of the current Manual and shall incorporate any modifications or updates issued by the City into its copy of the Manual to ensure the Manual is kept up to date.

1.21 PROJECT REPRESENTATIVE -The Project Representative shall be the City's representative with respect to the Project and may be a Owner employee or an outside consultant. The Project Representative shall have authority to transmit instructions, receive information, and interpret and define the City's policies and decisions with

respect to the Work. However, except as may be otherwise expressly authorized in writing by the City, the Project Representative is not authorized on behalf of the City to issue any verbal or written orders or instructions to Contractor that would have the affect, or be interpreted to have the affect, of amending or modifying the terms or conditions of the Contract Documents or modifying or amending in any way whatever the: (1) scope or quality of Work to be performed and provided by Contractor as set forth in the Contract Document; (2) the time within which Contractor is obligated to complete the Work; or (3) the amount of compensation the City is obligated or committed to pay Contractor as set forth in the Contract Documents.

1.22 SHOP DRAWINGS - All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the Contractor, a Subcontractor, manufacturer, supplier or distributor, which illustrate how specific portions of the Work shall be fabricated or installed.

1.23 SPECIFICATIONS - The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

1.24 SUBCONTRACTOR - An individual, firm, or corporation having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the site.

1.25 SUBSTANTIAL COMPLETION - That date certified by the Engineer when the Work or an Owner specified part thereof is sufficiently completed, in accordance with the Contract Documents, so that the Work or the Owner specified part thereof can be utilized by Owner for the purposes for which it is intended.

1.26 SUPPLEMENTAL CONDITIONS - Modifications to the General Conditions required by Owner, set forth in the Section 00800 series of documents.

1.27 SUPPLIER - Any person or organization who supplies materials or equipment for the Work for or on behalf of Contractor, including those fabricated to a special design, but who does not perform labor at the site.

1.28 WORK - The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

2.0 ADDITIONAL INSTRUCTION AND DETAIL DRAWINGS

2.1 From time to time, Contractor may be furnished additional instructions and detail

drawings by the Engineer as necessary to permit Contractor to carry out the Work required by the Contract Documents.

2.2 Any such additional drawings and instructions supplied to Contractor shall be issued as a Field Order. The Contractor shall carry out the Work in accordance with the additional detailed drawings and instructions.

3.0 SCHEDULES, REPORTS AND RECORDS

3.1 The Contractor shall submit to the Owner such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data where applicable as are required by the Contract Documents for the Work to be performed.

3.2 Contractor shall prepare and provide its construction progress schedule ("Construction Schedule") prior to submitting is first Application for Payment, showing the order in which the Contractor proposes to carry on the Work, including dates at which the various parts of the Work will be started, estimated date of completion of each part and, as applicable, the dates at which special drawings will be required and dates for submission of Shop Drawings, the beginning of manufacture, the testing and the installation of materials, supplies and equipment. Further, the Construction Schedule shall not only include the overall progress schedule for the Work to be provided by Contractor hereunder, but also shall include reasonable time periods for Engineer's performance, as accepted by Engineer. The Construction Schedule and any other schedules required by the Owner hereunder shall be updated monthly. The Construction Schedule and all updates to it shall not exceed the time periods established in the Contract Documents and shall be subject to the Owner's and Engineer's review and comment. Contractor's submittal of a satisfactory Construction Schedule and updates thereto and the Owner's acceptance of same shall be a condition precedent to the Owner's obligation to pay Contractor; provided, however, the acceptance of any such schedule or update by Owner shall not be deemed an admission by Owner that such schedule or update is reasonable, accurate or correct.

3.3 The Contractor shall also submit a schedule of payments, for Owner's review and approval that the Contractor anticipates will be earned during the course of the Work.

4.0 INTENT OF THE CONTRACT DOCUMENTS, DRAWINGS AND SPECIFICATIONS

4.1 It is the intent of the Contract Documents to describe a functionally complete Project (or portion thereof) to be constructed in accordance with the Contract Documents. Any work, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result shall be supplied whether or not specifically called for in the Contract Documents. If the Contract Documents include words or terms that have a generally accepted technical or industry meaning, then such words or terms shall be interpreted to have such standard meaning unless otherwise expressly noted in the Contract Documents. Reference to standard

specifications, manuals or codes of any technical society, organization or association or to the laws or regulations of any governmental authority having jurisdiction over the Project, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, law or regulation in affect at the time the Work is performed, except as may be otherwise specifically stated herein. Provided, however, in the event the standard specification, manual, code, law or regulation is changed after the Agreement has been executed by the parties, a Change Order shall be issued equitably adjusting the Contract Price and/or Contract Time to the extent such change materially impacts the Contract Time and/or Contract Price.

4.2 Contractor shall perform the Work consistent with the intent of the Drawings, Specifications, and other Contract Documents, and Contractor shall furnish all labor, materials, tools, equipment, and transportation necessary for the proper execution of the Work in accordance with the Contract Documents and all incidental items necessary to complete the Work in an acceptable manner, ready for use, occupancy or operation by the Owner.

4.3 Drawings are intended to show general arrangements, design and extent of Work and are not intended to serve as shop drawings. Specifications are separated into divisions for convenience of reference only and shall not be interpreted as establishing divisions for the Work, trades, subcontracts or extent of any part of the Work. In the event of a discrepancy between or among the Drawings, Specifications or other Contract Document provisions, Contractor shall be required to comply with the provision which is the more restrictive or stringent requirement upon Contractor, as determined by the Owner.

4.4 If during the performance of the Work Contractor discovers a conflict, error or discrepancy in the Contract Documents, including the Drawings and Specifications, Contractor immediately shall report same to Engineer and Owner in writing, and before proceeding with the Work affected thereby, shall obtain a written interpretation or clarification from Engineer. Work done by the Contractor after discovery of such conflict, error, or discrepancy without such written interpretation or clarification from Engineer, shall be done at the Contractor's risk. Prior to commencing the Work, Contractor shall first take all necessary field measurements and verify the applicable field conditions. After taking such measurements and verifying such conditions, Contractor shall carefully compare such measurements and conditions with the requirements of the Contract Documents, taking into consideration all other relevant information known to Contractor, for the purpose of identifying and bringing to Engineer’s and Owner’s attention all conflicts or discrepancies with the Contract Documents. Contractor is solely responsible for verifying all field measurements and conditions.

4.5 Contractor shall comply with the Owner’s standard forms and procedures as set forth in the Owner’s Project Administration Manual relating to Project administration. To the extent there is no form or procedure for a particular matter, then Contractor shall comply with the form or procedure reasonably required by the Owner. Once a standard form has been executed by Contractor and Owner as necessary, the executed copy shall

become part of the Contract Documents.

5.0 SHOP DRAWINGS

5.1 The Contractor shall provide shop drawings as may be necessary for the prosecution of the Work as required by the Contract Documents. The Engineer shall promptly review all shop drawings. The Engineer's approval of any shop drawing shall not release the Contractor from responsibility for deviations from the Contract Documents. Any shop drawing which deviates from the requirements of the Contract Documents must be first authorized by a Change Order.

5.2 When submitted for the Engineer's review, shop drawings shall bear the Contractor's certification that it has reviewed, checked and approved the shop drawings and that they are in conformance with the requirements of the Contract Documents.

5.3 Portions of the Work requiring a shop drawing or sample submission shall not begin until the shop drawing or submission has been approved by the Engineer. A copy of each approved shop drawing and each approved sample shall be kept in good order by the Contractor at the site and shall be available to the Engineer.

6.0 MATERIALS, SERVICES AND FACILITIES

6.1 It is understood that, except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete and deliver the Work within the Contract Time.

6.2 Materials and equipment shall be stored by Contractor to ensure the preservation of their quality and fitness for the Work. Stored materials and equipment to be incorporated in the Work shall be located so as to facilitate prompt inspection.

6.3 Manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used cleaned and conditioned as directed by the manufacturer.

6.4 Materials, supplies, and equipment shall be in accordance with samples submitted by the Contractor and approved by the Engineer.

6.5 Materials, supplies and equipment to be incorporated into the Work shall not be purchased by the Contractor or the Subcontractor subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest or lien is retained by the seller.

7.0 INSPECTION AND TESTING

7.1 All materials and equipment used in the construction of the Project shall be subject to

adequate inspection and testing in accordance with generally accepted standards, as required and defined in the Contract Documents or required by applicable governmental law, rule or regulation.

7.2 The Owner, Engineer, their respective representatives, agents and employees and governmental agencies with jurisdiction over the Project shall have access at all times to the Work whether the Work is being performed on or off of the Project site, for their observation, inspection and testing. Contractor shall provide proper and safe conditions for such access, and also for any inspection or testing thereof. Contractor shall provide the Owner and Engineer with timely prior written notice (at least 48 hours) of the readiness of the Work for all required inspections, tests or approvals. In addition, authorized representatives and agents of any participating Federal or State agency shall be permitted to inspect all Work, materials, payrolls, personnel records, material invoices, and other relevant data and records.

7.3 The Contractor shall provide at the Contractor's expense all testing and inspection services required by the Contract Documents or any applicable governmental law, rule or regulation. Re-inspection and re-testing fees and costs of all testing failures shall be at the Contractor's expense.

7.4 If the Contract Documents or any applicable governmental law, rule, or regulation requires any portion of the Work to specifically be inspected, tested, or approved, Contractor shall assume full responsibility therefore, pay all costs in connection therewith and furnish the Engineer the required certificates of inspection, testing or approval. All inspections, tests or approvals shall be performed in a manner and by organizations acceptable to the Owner and Engineer.

7.5 Neither observations by Engineer or the Owner, nor inspections, tests or approvals by the Engineer or others shall relieve the Contractor from the obligations to perform the Work in accordance with the requirements of the Contract Documents.

7.6 If any Work is covered contrary to the written instruction of the Engineer, it must, if requested by the Engineer, be uncovered for the Engineer’s observation and replaced at the Contractor's expense.

7.7 If any Work that is to be inspected, tested or approved pursuant to the Contract Documents or any applicable governmental law, rule or regulation is covered without such inspection, testing or approval having been satisfactorily obtained by Contractor and without obtaining the written concurrence from Engineer, Contractor shall uncover, expose or otherwise make available the Work for such observation, inspection or testing as directed by Engineer, and Contractor shall be responsible for all such costs of uncovering, exposing, observation, inspection, testing, and reconstruction.

7.8 If the Engineer considers it necessary or advisable that covered Work be inspected or tested by others that was not otherwise required to be tested or inspected by the terms of the Contract Documents or any applicable governmental law, rule or regulation, the

Contractor, at the Engineer 's request, will uncover, expose or otherwise make available for observation, inspection or testing as the Engineer may require, that portion of the Work in question, furnishing all necessary labor, materials, tools, and equipment. If it is found that such Work is defective, the Contractor will bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction. If, however, such Work is not found to be defective, the Contractor will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction and an appropriate Change Order shall be issued.

8.0 SUBSTITUTIONS

8.1 Whenever a material, article, or piece of equipment is identified on the Drawings or Specifications by reference to brand name or catalogue numbers, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements and that other products of equal capacities, quality and function may be considered. The Contractor may recommend the substitution of a material, article, or piece of equipment of equal substance, quality, and function for those referred to in the Contract Documents by reference to brand name or catalogue number, and if, in the opinion of the Engineer, such material, article, or piece of equipment is of equal substance, quality and function to that specified, the Engineer may allow its substitution and use by the Contractor. If the Contractor based its bid on "or equal" products and the Owner and/or Engineer determine that one or more of the Contractor’s proposed "or equal" products included in its bid fails to meet the requirements of the Contract Documents, Contractor may be required, at Owner’s sole discretion, to provide products conforming with the requirements of the Contract Documents at no additional cost to the Owner per the Owner’s direction.

8.2 If Contractor wishes to furnish or use a substitute item of material or equipment, Contractor shall certify that the proposed substitute shall perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified. Contractor shall also certify that the evaluation and acceptance of the proposed substitute will not prejudice Contractor’s achievement of Substantial Completion of the Work within the Contract Time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for the Project) to adapt the design to the proposed substitute and whether or not incorporation or use by the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service shall be indicated. Contractor shall also provide an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs for redesign and claims of other contractors affected by the resulting change, all of which shall be considered by Engineer in evaluating the proposed substitute. Engineer or Owner may require Contractor to furnish at Contractor’s expense additional data about the proposed

substitute. Further, Contractor shall reimburse Owner for the changes of Engineer and Engineer's consultants for evaluating each proposed substitute submitted after the effective date of the Agreement and all costs resulting from any delays in the Work while the substitute was undergoing review.

9.0 PATENTS

9.1 The Contractor shall pay all applicable royalties and license fees, and shall defend all suits or claims for infringement of any patent rights and save the Owner harmless from loss on account thereof, except that the Owner shall be responsible for any such loss when a particular process, design, or product of a particular manufacturer or manufacturers is specified. Provided, however, if the Contractor has reason to believe that the design, process or product specified is an infringement of a patent, the Contractor shall be responsible for such loss or claim unless the Contractor promptly gives such information in writing to the Engineer and Owner.

10.0 SURVEYS, PERMITS, REGULATIONS, AND PROJECT LAYOUT

10.1 The Owner shall furnish all boundary surveys and establish all base lines for locating the principal component parts of the Work together with a suitable number of bench marks adjacent to the Work as shown in the Contract Documents. From the information provided by the Owner, unless otherwise specified in the Contract Documents, the Contractor shall develop and make all detail surveys needed for construction such as slope stakes, batten boards, stakes for pipe locations and other working points, lines, elevations and cut sheets.

10.2 The Contractor shall carefully preserve benchmarks, reference points and stakes. Contractor is solely responsible for maintaining all benchmarks, reference points, and stakes, and is solely responsible for any mistake that may be caused by their loss or disturbance. The Contractor shall be held responsible for all mistakes that may be caused by the loss or disturbance of any such benchmarks, reference points or stakes.

10.3 The Contractor shall engage for the performance of Project layout and control, a Professional Land Surveyor registered in the State of Florida to practice land surveying. Said surveyor must carry Professional Liability Insurance in the amount of at least one million dollars ($1,000,000) per occurrence. The land surveyor employed for this Project must comply with the Minimum Technical Standards for land surveyors in the State of Florida pursuant to Florida Statute 472.027 Adopted rule 121HH-6.

10.4 Should the Contractor in the course of its Work find that the points, grades and levels which are shown upon the Drawings are not conformable to the physical conditions of the locality at the proposed work or structure, it shall immediately inform the Engineer of the discrepancy between actual physical conditions of the locality of the proposed work, and the points, grades and levels which are shown on the drawings. No claim shall be made by the Contractor against the Owner for compensation or damage by reasons of failure of the Engineer to represent upon the Drawings points, grades and levels conformable to the

actual physical conditions of the locality of the proposed work.

10.5 All permits and licenses necessary for the prosecution of the Work shall be secured and paid for by the Contractor unless otherwise expressly noted in the Contract Documents. These shall include all building permits, burn permits, debris disposal permits, etc. The Contractor's obligations with respect to permits and licenses are further described in Section 01065. All licenses, easements and variances for permanent structures or permanent changes in existing facilities shall be secured and paid for by the Owner, unless otherwise specified in the Contract Documents. The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations and governmental permits and approvals bearing on the conduct of the Work as drawn and specified. If the Contractor observes that the Contract Documents are at variance therewith, the Contractor shall promptly notify the Engineer and Owner in writing, and any necessary changes shall be adjusted as provided in Section 13 below.

11.0 PROTECTION OF WORK, PROPERTY, AND PERSONS

11.1 The Contractor is responsible for the safety and protection of all persons and property on or about the Project site during the progress of the Work, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction. Further, it is Contractor's responsibility to protect from damage or loss all material and equipment to be incorporated into the Work whether in storage on or off the Project site. Contractor shall initiate, maintain and supervise all safety precautions and programs in connection with the Work and shall develop and implement, in accordance with the requirements of the Contract Documents, a safety plan for the Work. Contractor's safety plan shall include a hurricane protection plan. Contractor's duties and responsibilities for the safety and protection of the Work shall continue until such time as the Work is completed and final acceptance of same by the Owner has occurred.

11.2 The Contractor will comply with all applicable codes, laws, ordinances, rules, regulations and orders of the Owner and any public body having jurisdiction over the Work, including the Occupational Safety and Health Administration (OSHA) and any State Safety and Health agency requirements and all of their safety codes, laws, ordinances, rules and regulations. The Contractor will erect and maintain, as required by the conditions and progress of the Work, all necessary safeguards for safety and protection. Contractor shall notify owners of adjacent property and of any underground structures or improvements and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation or replacement of their property. The Contractor will remedy all damage, injury or loss to any property caused by the Contractor, any Subcontractor or anyone directly or indirectly employed by any of them or anyone of whose acts any of them be liable.

11.3 Barricades, Guards and Safety Provisions: To protect persons from injury and to avoid property damage, adequate barricades, construction signs, torches, red lanterns and guards shall be placed and maintained during progress of construction work and until it

is safe for both pedestrians and vehicular traffic. Rules and regulations of local authorities regarding safety provisions shall be observed.

11.4 In emergencies affecting the safety of persons or the Work or property at the site or adjacent thereto, the Contractor, without special instructions or authorization from the Engineer or Owner, shall act to prevent threatened damage, injury or loss. The Contractor will give the Engineer prompt written notice of any such emergency and to the extent the emergency was not caused by the fault or neglect of Contractor or anyone for whom Contractor is responsible, a Change Order shall be issued covering the necessary and reasonable changes and deviations involved.

11.5 At all times during the performance of the Work at the Project site, Contractor shall have designated, and located on a full time basis at the Project site, a qualified individual whose responsibility shall be to monitor and enforce Contractor's safety program at the Project site; such individual shall be deemed to be the Contractor's Project Superintendent. However, Contractor may designate by written notice to the Owner another individual, reasonably acceptable to the Owner, who shall be Contractor's safety representative at the Project site.

11.6 Alcohol, drugs and all illegal substances are strictly prohibited on the Project site and any Owner property. All employees of Contractor, as well as those of all Subcontractors and those of any other person or entity for whom Contractor is legally liable (collectively referred to herein as "Employees"), shall not possess or be under the influence of any such substances while on the Project site or any Owner property. Further, employees shall not bring on to the Project site or any Owner property any gun, rifle or other firearm, or explosives of any kind. Provided, however, to the extent explosives are reasonably required with respect to the performance of the Work, Contractor shall strictly comply with the Contract Documents and any and all rules and regulations of Owner or of any applicable governmental agency as it relates to the storage, handling and use of such explosives.

12.0 SUPERVISION BY CONTRACTOR

12.1 The Contractor will supervise and direct the Work. Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction. The Contractor will employ and maintain on the Project site on a full time basis a qualified superintendent acceptable to the Owner. The superintendent and his or her designees shall have full authority to act on behalf of the Contractor and all communications given to the superintendent or his or her designee shall be as binding as if given to the Contractor. The superintendent or his or her designee shall be present on the site at all times when any portion of the Work is being performed to ensure adequate supervision and coordination of the Work.

13.0 CHANGES IN THE WORK

13.1 The Owner may at any time during the progress of the Work, as the need arises and in

its sole discretion, order changes within the general scope of the Work without invalidating the Agreement. Promptly after being notified of a change, but in no event more than fourteen (14) days after its receipt of such notification (unless the Owner has agreed in writing to a longer period of time), Contractor shall submit an itemized estimate of any cost or time increases or savings it foresees as a result of the change. Except in an emergency endangering life or property, no addition or changes to the Work shall be made except upon a properly issued Change Order, Construction Change Directive or Field Order. No officer, employee or agent of the Owner is authorized to direct any extra or changed work without a properly issued Change Order, Construction Change Directive, or Field Order.

13.2 All changes to the Work must be authorized by means of a written Change Order that is mutually agreed to by the Owner and Contractor or a Construction Change Directive issued by the Owner or a Field Order issued by the Owner or Engineer. If the change is to be accomplished through a Change Order, the Change Order, in the form set forth in the Owner's Project Administration Manual, shall be prepared by Contractor, reviewed by Engineer and the Owner, and executed promptly by the parties after an agreement is reached between Contractor and the Owner concerning the requested changes. Contractor shall promptly perform changes authorized by duly executed Change Orders. The Contract Price and Contract Time shall be adjusted in the Change Order in the manner as the Owner and Contractor shall mutually agree. The Change Order shall identify the changed work. Also, where the Contract Price is based upon unit prices, a Change Order may be used for work for which quantities have been altered from those shown in the bidding schedule, as well as decreases or increases in the quantities of installed units which are different than those shown in the bidding schedule because of final measurements. All changes must be recorded on an executed Change Order before they can be included in a monthly Application for Payment.

13.3 To the extent the Contract Price is based on unit prices, the Owner reserves the right to increase or decrease a unit price quantity as may be deemed reasonable or necessary in order to complete the Work contemplated by this Agreement.

13.4 If the Owner and Contractor are unable to agree on a Change Order for the requested change, Contractor shall, nevertheless, promptly perform the change as directed by the Owner in a written Construction Change Directive. In that event, the Contract Price and Contract Time shall be adjusted in the Construction Change Directive as determined by the Owner. If Contractor disagrees with the Owner's adjustment determination, Contractor must make a claim strictly in accordance with the terms of the Contract Documents or else be deemed to have waived any claim it might otherwise have had on that matter.

13.5 The Owner shall have the right to conduct an audit of Contractor's books and records, as well as those of its Subcontractors and Suppliers, to verify the accuracy of Contractor's estimates or claims with respect to Contractor's cost and time impacts associated with any Change Order or Construction Change Directive.

13.8 The Engineer or Owner at any time may direct Contractor to make changes to the Work by issuing a Field Order, so long as such changes do not require or result in any adjustment to the Contract Price or Contract Time, and are generally within the scope of the Work. Contractor shall proceed with the performance of any changes in the Work so ordered by the Engineer or Owner unless the Contractor believes that such Field Order entitles the Contractor to a change in the Contract Price or Contract Time, or both. In the event Contractor believes the Field Order requires a change to the Contract Price or Contract Time, it must provide written notice to the Engineer and Owner within five (5) business days of receipt of the Field Order and before starting with any changed Work. Failure to provide such notice waives Contractor's right to claim such work requires a change in the Contract Price or Contract Time. Once Contractor has provided timely written notice, it shall proceed as directed by Owner in writing, and thereafter shall file a claim in accordance with the procedures required herein.

14.0 CHANGES IN CONTRACT PRICE

14.1 The Contract Price may be changed only by a Change Order or Construction Change Directive issued in accordance with the terms of the Contract Documents. If the Change Order or Construction Change Directive provides for an adjustment to the Contract Price, the adjustment shall be based on one of the following methods: mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation; or unit prices stated in the Contract Documents or subsequently agreed upon; or cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or on a time and material basis.

14.2 In the event the Owner elects to proceed with changed work on a time and material basis, the following provisions shall apply:

14.2.1 For all labor, including a foreman in direct charge of the specified operations, the Contractor shall receive a sum equal to the current standard local rate of wages actually paid for every hour that the labor is actually engaged in such changed work, plus the actual cost of social security taxes, unemployment insurance, and workmen's compensation insurance based on the actual wages paid for such labor, to which cost shall be added an amount equal to ten percent (10%) thereof for all overhead and profit (including all general supervision and for furnishing and repairing small tools and ordinary equipment used in doing the changed work).

14.2.2 For all materials used, the Contractor shall receive the actual cost of such materials, including freight charges as shown by original receipted bills, to which cost shall be added an amount equal to ten percent (10%) thereof for all overhead and profit.

14.2.3 For any construction equipment or special equipment including fuel and

lubricants therefor, required for the economical performance of the changed work, the Engineer shall allow the Contractor a rental price, to be agreed upon in writing before such work is begun, for every hour that such construction equipment or special equipment is actually operated on the work, which rental price shall include all overhead and profit. Such hourly rental price shall not exceed 1/176 part of the monthly rate stated for such equipment in the latest edition of the "Compilation of Rental Rates for Construction Equipment" by Associated Equipment Distributors.

14.2.4 Subcontractors are subject to the above and the Contractor mark-up for overhead and profit shall not exceed five percent (5%) of the amount due to the Subcontractor.

14.2.5 The Contractor shall keep and present, in such form as the Engineer may prescribe, an itemized accounting of all time and material costs, together with appropriate supporting data.

15.0 TIME FOR COMPLETION AND LIQUIDATED DAMAGES

15.1 Time is of the essence in the performance of the Work under this Agreement. The date of beginning and the time for completion of the Work are essential conditions of the Contract Documents. The required date of commencement of the Work shall be established in the Notice to Proceed to be issued by the Owner. As noted in the Agreement, Contractor shall commence the Work within ten (10) calendar days after the required date of commencement. Any Work performed by Contractor prior to the required date of commencement shall be at the sole risk of Contractor. The Notice to Proceed shall be issued within thirty (30) days of the execution of the Agreement by the Owner. Should there be reasons why the Notice to Proceed cannot be issued within such period, the time may be extended by mutual agreement of the Owner and Contractor. If the Notice to Proceed has not been issued within ten (10) days period or within the period mutually agreed upon, the Contractor may terminate the Agreement without further liability on the part of either party by providing the Owner written notice of such termination, in which event such termination shall be deemed a termination for convenience of the Owner as set forth in Section 17.5 below. Provided, however, notwithstanding anything in the Contract Documents to the contrary, in the event of such termination pursuant to this Section 15.1, Contractor acknowledges and agrees that no payments will be due Contractor nor shall the Owner make any payments to Contractor for any Work that would have been authorized under the Agreement once executed by both parties.

15.2 The Contractor will proceed with the Work at such rate of progress to ensure Substantial Completion within the Contract Time. It is expressly understood and agreed, by and between the Contractor and the Owner, that the Contract Time for Substantial Completion of the Work is a reasonable period of time. The Construction Schedule shall include the date the Work must be substantially completed by Contractor and all interim milestones required by the Owner. Substantial Completion

of the Work shall be achieved when the Work has been completed to the point where the Owner can occupy or utilize the Work for its intended purpose. The Engineer shall certify the date Substantial Completion of the Work is achieved. If the Owner has designated portions of the Work to be turned over to the Owner prior to Substantial Completion of the entire Work as provided in Section 15.3 below, the Engineer shall certify the date as to when Substantial Completion of such designated portions of the Work have been achieved. The entire Work shall be fully completed and ready for final acceptance by the Owner within 30 calendar days after Substantial Completion of the Work or thirty (30) days after Contractor's receipt of the punch list, whichever date occurs last.

15.2.1 Once the Contractor believes it has achieved Substantial Completion of the Work, it shall notify the Owner and Engineer in writing and request a substantial completion inspection. Concurrent with its delivery of such written notice, Contractor shall submit its initial punch list for the Owner's and Engineer's review. Any Work remaining to be completed or any defective work to be remedied shall be listed on the punch list. Once the substantial completion inspection has been made, Owner and Engineer shall modify the Contractor's initial punch list to include all items to be completed or repaired by Contractor in order to achieve final acceptance of the Work. Thereafter, the Engineer shall provide Contractor a copy of the final punch list. Such final punch list shall be in compliance with the Contract Documents and all applicable laws, including Section 218.735 of the Florida Statutes. Accordingly, if the Contract Price is less than $10 million, Engineer shall provide the final punch list to Contractor within 30 calendar days after Contractor has achieved Substantial Completion. If the Contract Price is $10 million or more, Engineer shall provide the final punch list to Contractor within 60 calendar days after Contractor has achieved Substantial Completion. Contractor acknowledges and agrees that the failure to include any corrective work or pending items not yet completed on the punch list does not alter the responsibility of Contractor to complete all the Work required under this Contract.

15.3 The Owner may take early occupancy of all or any portions of the Work, at the Owner's election, by designating in writing to Contractor the specific portions of the Work to be occupied and the date such occupancy shall commence. If any such specific early occupancy was not expressly identified in the bidding documents issued with respect to this Agreement (as they may have been modified by any applicable Addenda) and such early occupancy adversely impacts Contractor's cost or time of performance, Contractor shall be entitled to an equitable adjustment to the Contract Price and the Contract Time, all in accordance with the other terms and conditions of the Contract Documents.

15.4 The Owner and Contractor recognize that, since time is of the essence for this Agreement, the Owner will suffer financial loss if the Work is not substantially completed within the Contract Time, as said time may be adjusted as provided for

herein. In such event, the total amount of the Owner's damages, will be difficult, if not impossible, to definitely ascertain and quantify, because this is a public construction project that will, when completed, benefit the public. It is hereby agreed that it is appropriate and fair that the Owner receive liquidated damages from Contractor, if Contractor fails to achieve Substantial Completion of the Work within the required Contract Time. Should Contractor fail to substantially complete the Work within the Contract Time, the Owner shall be entitled to assess, as liquidated damages, but not as a penalty, the amount for liquidated damages as specified in the Agreement for each calendar day thereafter until Substantial Completion is achieved. Contractor hereby expressly waives and relinquishes any right which it may have to seek to characterize the above noted liquidated damages as a penalty, which the parties agree represents a fair and reasonable estimate of the Owner's actual damages at the time of contracting if Contractor fails to achieve Substantial Completion of the Work within the Contract Time.

15.4.1 In the event the Work is not fully completed within 30 days from the date of Substantial Completion, the Owner reserves the right to assess against Contractor its actual damages incurred as a result of such delay by Contractor.

16.0 CORRECTION OF DEFECTIVE WORK

16.1 Work not conforming to the requirements of the Contract Documents shall be deemed defective Work. If required by the Owner or Engineer, the Contractor shall as directed, either correct all defective Work, whether or not fabricated, installed or completed, or, if the defective Work has been rejected by the Owner or Engineer, remove it from the site and replace it with non-defective Work in accordance with the Contract Documents and without additional expense to the Owner. Further, Contractor shall bear the expense of making good all work of other contractors performing work on the Project destroyed or damaged by such removal or replacement. Contractor shall bear all direct, indirect and consequential costs of such correction or removal (including, but not limited to fees and charges of engineers, architects, attorneys and other professionals) made necessary thereby, and shall hold the Owner and Engineer harmless for same. Notwithstanding anything herein to the contrary, the Owner may determine, at its sole discretion, to accept defective Work. If such determination is rendered prior to final payment, a Change Order or Construction Change Directive shall be executed evidencing such acceptance of such defective Work, incorporating the necessary revisions in the Contract Documents and reflecting an appropriate decrease in the Contract Price. If the Owner accepts such defective Work after final payment, Contractor shall promptly pay the Owner an appropriate amount determined by the Owner to adequately compensate the Owner for its acceptance of the defective Work.

16.2 If the Contractor does not take action to correct defective Work or to remove and replace rejected defective Work or if Contractor fails to comply with any of the provisions of the Contract Documents within ten (10) days after receipt of written notice from the Owner or Engineer, the Owner may correct and remedy any such

deficiency at the expense of the Contractor. To the extent necessary to complete corrective and remedial action, the Owner may exclude Contractor from any or all of the Project site, take possession of all or any part of the Work, and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Project site and incorporate in the Work all materials and equipment stored at the Project site or for which the Owner has paid Contractor but which are stored elsewhere. Contractor shall allow the Owner, Engineer and their respective representatives, agents, and employees such access to the Project site as may be necessary to enable the Owner to exercise the rights and remedies under this Section. All direct, indirect and consequential costs of the Owner in exercising such rights and remedies shall be at Contractor's expense, and a Change Order or a Construction Change Directive shall be issued, incorporating the necessary revisions to the Contract Documents, including an appropriate decrease to the Contract Price. Such direct, indirect and consequential costs shall include, but not be limited to, fees and charges of engineers, architects, attorneys and other professionals, and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of Contractor's defective Work. Contractor shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by the Owner of the Owner's rights and remedies hereunder.

17.0 SUSPENSION OF WORK, TERMINATION, AND DELAY

17.1 The Owner shall have the right to suspend the Work or any portion thereof for a period of not more than ninety (90) days or such additional time as agreed upon by the Contractor, upon giving Contractor written notice of such suspension to the Contractor. The Owner or Engineer shall fix the date on which Work shall be resumed. The Contractor will resume that Work on the date so fixed unless otherwise directed by the Owner. Provided Contractor strictly complies with the Change Order and Claims procedures set forth in the Contract Documents, Contractor will be entitled to a Change Order adjusting the Contract Price and Contract Time, as provided in the Contract Documents, to the extent attributable to any such suspension, unless said suspension is due to the fault or neglect of Contractor or anyone for whom Contractor is responsible.

17.2 If, through no act or fault of the Contractor, the Work is suspended for a period of more than ninety (90) days by the Owner or under an order of court or other public authority, or the Engineer fails to act on any request for payment within thirty (30) days after it is submitted, or the Owner fails to pay the Contractor any undisputed amounts within thirty (30) days of its approval, then the Contractor may after ten (10) days from delivery of a written notice to the Owner and the Engineer and the Owner's failure to cure such default (or a maximum of sixty (60) days in the event the default cannot reasonably be cured within ten (10) days provided that the Owner commences to cure within ten (10) days and thereafter diligently and continuously pursues said cure) terminate the Agreement and recover from the Owner payment for all Work properly executed and reasonable termination expenses sustained. In addition, and in lieu of terminating the Agreement, if the Engineer has failed to act on a request for payment or

if the Owner has failed to make any payment within the aforesaid thirty (30) day periods, the Contractor may upon ten (10) days written notice to the Owner and the Engineer stop the Work until paid all amounts then due, in which event and upon resumption of the Work, a Change Order shall be issued adjusting the Contract Price and Contract Time as provided in the Contract Documents.

17.3 Contractor shall be considered in material default of the Agreement and such default shall be considered cause for the Owner to terminate the Contractor's right to continue to perform under the Agreement, in whole or in part, as further set forth in this Section, if Contractor: (1) fails to begin the Work under the Contract Documents within the time specified herein; or (2) fails to properly and timely perform the Work as directed by the Owner or Engineer or as provided for in the approved Construction Schedule; or (3) performs the Work unsuitably or neglects or refuses to remove materials or to correct or replace such Work as may be rejected as unacceptable or unsuitable; or (4) discontinues the prosecution of the Work contrary to the requirements of the Agreement; or (5) fails to resume Work which has been suspended within a reasonable time after being notified to do so; or (6) becomes insolvent or is declared bankrupt, or commits any act of bankruptcy; or (7) allows any final judgment to stand against it unsatisfied for more than ten (10) days; or (8) makes an assignment for the benefit of creditors; or (9) fails to comply with any applicable codes, laws, ordinances, rules or regulations with respect to the Work; or (10) fails to supply sufficient skilled workmen or suitable materials or equipment; or (11) fails to promptly pay its Subcontractors and Suppliers; or (12) disregards the authority of the Owner or Engineer; or (12) materially breaches any other provision of the Contract Documents. In rendering its decision as to whether one of the causes under Section 17.3 exist which would permit the Owner to terminate the Agreement, the Owner shall be entitled to rely upon the determination of the Engineer concerning such matter.

17.3.1 In such event, and after giving the Contractor and its surety a minimum of ten (10) days from delivery of a written notice to cure any such default (or a maximum of sixty (60) days in the event the default cannot reasonably be cured within ten (10) days provided that Contractor commences to cure within ten (10) days and thereafter diligently and continuously pursues said cure), the Owner may at its option, and without releasing or waiving its rights and remedies against Contractor's sureties and without prejudice to any other right or remedy, terminate Contractor's right to proceed under the Agreement in whole or in part, and take possession of the Project and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor, take assignments of any of Contractor's subcontracts and purchase orders that the Owner may designate, and finish the Work by whatever method the Owner in its sole discretion may deem expedient.

17.3.2 If Contractor's right to proceed under the Agreement is terminated, Contractor shall not be entitled to receive any further payment until the Work is finished. All monies expended and all of the costs, losses,

damages and extra expenses, including all management, administrative and other overhead and other direct and indirect expenses (including Engineer and attorneys' fees) or damages incurred by the Owner incident to such completion (collectively "Completion Costs"), shall be deducted from the unpaid balance of the Contract Price. Upon the Owner's completion, if the unpaid balance of the Contract Price exceeds the Completion Costs, such excess shall be paid to the Contractor. If the Completion Costs exceed the unpaid balance of the Contract Price, Contractor shall pay promptly to the Owner on demand the full amount of such excess and interest thereon at a rate of 6% per annum until paid.

17.3.3 The liability of Contractor hereunder for Completion Costs shall extend to and include the full amount of any and all sums paid, expenses and losses incurred, damages sustained, and obligations assumed by the Owner in good faith under the belief that such payments or assumptions were necessary or required, in completing the Work and providing labor, materials, equipment, supplies, and other items therefor or re-letting the Work, and in settlement, discharge or compromise of any claims, demands, suits, and judgments pertaining to or arising out of the Work hereunder. Further, in the event the Owner has exercised its right to terminate due to Contractor's default, Contractor shall be prohibited from bidding or otherwise seeking additional work from the Owner in accordance with the Owner's then current debarment policy.

17.3.4 The Owner may deduct from any payment, any sum owed by the Owner to Contractor, either under this Agreement or any other agreement between the Owner and the Contractor. Further, a default by Contractor under any other agreement with the Owner shall be deemed a default under this Agreement and a default under this Agreement shall be deemed a default under any other agreement between the Owner and Contractor.

17.4 Where the Contractor's services have been so terminated by the Owner, said termination shall not affect any right of the Owner against the Contractor then existing or which may thereafter accrue. Any retention or payment of monies by the Owner due the Contractor will not release the Contractor from compliance with the Contract Documents. Further, if after notice of termination of Contractor's right to proceed pursuant to this Section 17.3, it is determined for any reason that Contractor was not in default, or that its default was excusable, or that the Owner is not entitled to the remedies against Contractor provided herein, then such termination shall be deemed a termination for the Owner's convenience and Contractor's remedies against the Owner shall be the same as and limited to those afforded Contractor under Section 17.5 below.

17.5 The Owner shall have the right to terminate this Agreement without cause upon ten (10) days from delivery of a written notice to the Contractor. In the event of such termination for convenience, Contractor's sole and exclusive recovery against the Owner shall be limited to that portion of the Contract Price earned through the date of termination, together with any retainage withheld and reasonable termination expenses incurred, but Contractor shall not be entitled to any other or further recovery against the

Owner, including, but not limited to, damages or any anticipated profit on portions of the Work not performed.

18.0 PAYMENT TO CONTRACTOR

18.1 At least ten (10) days before submitting the first Application for Payment, the Contractor shall submit to the Owner and Engineer a schedule of values allocated to various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as the Owner or Engineer may require. It is anticipated the schedule of values substantially will be based upon the Contractor's completed Bid Proposal Form, attached as Section 00030. This schedule, unless objected to by the Owner or Engineer, shall be used as a basis for reviewing the Contractor's Applications for Payment. On or before the 25th of each month, the Contractor will submit to the Engineer an Application for Payment filled out and signed by the Contractor covering the Work performed since the previous month's Application for Payment. The Application for Payment may also include the cost of such materials and equipment which are suitably stored either at or off the site to the extent such payment is approved by Owner as provided in Section 18.1.1 below. Invoices received after the 25th day of each month shall be considered for payment as part of the next month's Application for Payment. Contractor's Application for Payment shall be in such form and contain such detail and backup as the Owner reasonably may require.

18.1.1 If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at or off the site, the Application for Payment shall also be accompanied by such supporting data, satisfactory to the Owner, as will establish the Owner's title to the material and equipment free and clear of all liens, charges, security interests and encumbrances, together with evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect Owner's interest therein, all of which shall be subject to Owner's satisfaction. Owner has the discretion whether or not to pay for such unincorporated materials.

18.1.2 The Engineer will, within ten (10) days after receipt of each Application for Payment, indicate in writing its recommendation as to that portion of the payment being requested by Contractor in the Application for Payment which Engineer believes is due and payable. The Owner shall pay Contractor that portion of the Application for Payment approved by Engineer and Owner within twenty (20) days of the Owner's receipt of the Engineer's payment recommendation.

18.1.3 Owner shall retain an amount equal to 10% of the approved amount to be paid Contractor under each monthly Application for Payment. The retainage shall be accumulated and not released to Contractor until final payment is due. Provided, however, the Owner reserves the right, in its sole discretion, to reduce such retainage prior to final payment; but at no

time shall the retainage be reduced to less than five percent (5%) prior to Contractor achieving Substantial Completion. Provided, further however, if at any time during this Agreement, and in the Owner's sole discretion, the Owner becomes dissatisfied with Contractor's performance or if Contractor is in default, the Owner shall have the right to reinstate the full amount of retainage at ten percent (10%).

18.1.4 Monthly payments to Contractor shall in no way imply approval or acceptance of the Work.

18.1.5 Each Application for Payment shall be accompanied by a claim release and waiver in the form set forth in the Owner's Project Administration Manual from Contractor for all materials, labor, equipment, services and other bills associated with that portion of the Work payment is being requested in that Application for Payment . Further, each Application for Payment shall be accompanied by a claim release and waiver in the form set forth in the Owner's Project Administration Manual from all Subcontractors and Suppliers evidencing their payment in full through the previous month's Application for Payment. Also, each Application for Payment shall be accompanied by an updated Construction Schedule, a list inventorying all stored materials, a monthly progress status report, and any other document reasonably requested by Owner. The Owner shall not be required to make payment until and unless such releases, documents and information are furnished by Contractor. Further, if Contractor is withholding any portion of a payment to any Subcontractor or Supplier for any labor, services, or materials for which the Owner has paid Contractor, Contractor agrees to refund such money to the Owner upon demand by the Owner.

18.1.6 Engineer shall review each Application for Payment submitted by Contractor and shall make recommendations to the Owner as to the proper amounts, if any, which may be owed Contractor thereunder. Both Engineer and the Owner shall have the right to refuse to approve payment amounts, or portions thereof, requested by Contractor in an Application for Payment, or rescind any amount previously approved, and the Owner may withhold any payments otherwise due Contractor under this Agreement or any other agreement between the Owner and Contractor, to the extent it is reasonably necessary, to protect the Owner from any expense, cost or loss attributable to: (a) defective or deficient Work not properly remedied in accordance with the terms of the Contract Documents; (b) the filing or reasonable evidence indicating the probable filing of third party claims against the Owner attributable to the fault or neglect of Contractor; (c) Contractor's failure to make timely and proper payments to all Subcontractors and Suppliers; (d) reasonable evidence that the remaining Work cannot be completed for the unpaid Contract Price balance; (e) reasonable evidence indicating that the remaining Work

cannot be completed within the remaining Contract Time; (f) Contractor's failure to satisfactorily prosecute the Work in accordance with the requirements of the Contract Documents; or (g) any other material breach of the requirements of the Contract Documents by Contractor. The Owner shall have the right, but not the obligation, to take any corrective action the Owner deems appropriate to cure any of the above noted items, at Contractor's expense, if such items are not cured by Contractor to the Owner's reasonable satisfaction within three (3) days after Contractor's receipt of written notice from the Owner.

18.2 Prior to Substantial Completion, the Owner, with the approval of the Engineer, may use any completed or substantially completed portions of the Work. Such use shall not constitute an acceptance of such portions of the Work.

18.3 The Owner shall have the right to enter the Project site for the purposes of doing work not covered by the Contract Documents. This provision shall not be construed as relieving the Contractor of the sole responsibility for the care and protection of the Work, or the restoration of any damaged Work except such as may be caused by agents or employees of the Owner.

18.4 Upon completion and acceptance of the Work, the Engineer shall issue a certificate attached to the final payment request that states the Work has been fully performed in accordance with the requirements of the Contract Documents and that Engineer recommends final payment in the amount reflected in the attached final payment request. The Owner shall make final payment to Contractor within thirty (30) days after the Work is finally accepted by the Owner, provided that Contractor first, and as an explicit condition precedent to the accrual of Contractor's right to final payment, shall have furnished the Owner with a properly executed and notarized final release in the form set forth in the Owner's Project Administration Manual, as well as, a duly executed copy of the surety's consent to final payment and such other documentation that may be required by the Contract Documents or the Owner.

18.5 Late payments shall accrue interest from the date payment was due until payment is received at the rate of six percent (6%) per annum.

18.6 No error or oversight in the making of payment or completion certificates shall relieve the Contractor from its obligation to do and complete the Work in accordance with the requirements of the Contract Documents.

19.0 ACCEPTANCE OF FINAL PAYMENT AS RELEASE

19.1 The acceptance by the Contractor of final payment shall be and shall operate as a full release and waiver of any and all claims by Contractor against the Owner arising out of this Agreement or otherwise relating to the Project, except those identified in writing by Contractor as unsettled in its final Application for Payment. Any payment, however, final or otherwise shall not release the Contractor or its sureties from any obligations

under the Contract Documents or the Performance and Payment Bonds. Neither the acceptance of the Work nor payment by the Owner shall be deemed to be a waiver of the Owner's right to enforce any obligations of Contractor hereunder or to the recovery of damages for defective Work not discovered by the Owner or Engineer at the time of final inspection.

20.0 CONTRACT SECURITY

20.1 The Contractor shall within ten (10) days after the receipt of the Notice of Award and prior to the start of any Work furnish the Owner with a Performance Bond and a Payment Bond in penal sums equal to 100% of the amount of the Contract Price and in the forms attached as Sections 00060 and 00070. Such Bonds shall be executed by the Contractor and a corporate bonding company licensed to transact such business in the State of Florida and named on the current lists of "Surety Companies Acceptable on Federal Bonds" as published in the Treasury Department Circular Number 570 and approved by the Owner. The expense of these Bonds shall be borne by the Contractor. If at any time a surety on any such Bond is declared as bankrupt or loses its rights to do business in Florida or is removed from the list of Surety Companies accepted on Federal Bonds, Contractor shall within ten (10) days after notice from the Owner to do so, substitute an acceptable Bond (or Bonds) in such form and sum and signed by such other surety or sureties as may be satisfactory to the Owner. The premiums on such replacement Bond shall be paid by the Contractor. No further payment shall be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable Bond to the Owner.

20.2 The Contractor and its Surety, for value received, hereby stipulate and agree that any and all claims, demands, actions or suits whatsoever, arising under this Agreement and/or bonds, shall be subject to the sole and exclusive jurisdiction and venue of the appropriate state court in and for Bay Owner, Florida. The Contractor and its Surety do agree, by execution of these documents, that the sole and exclusive jurisdiction and venue in said forum is proper and appropriate since performance of the underlying contract for which these documents are executed is to be accomplished within Bay Owner, Florida.

21.0 ASSIGNMENTS

21.1 Contractor shall not assign this Agreement or any part thereof, without the prior consent in writing of the Owner, which consent shall be at Owner's' sole discretion. If Contractor does, with Owner's written approval, assign this Agreement or any part thereof, Contractor shall not be released from any of its obligations or responsibilities under this Agreement.

22.0 INDEMNIFICATION AND HOLD HARMLESS

22.1 To the maximum extent permitted by Florida law, Contractor shall indemnify and hold harmless the Owner and its officers and employees from any and all liabilities, claims,

damages, penalties, demands, judgments, actions, proceedings, losses or costs, including, but not limited to, reasonable attorneys' fees and paralegals' fees, whether resulting from any claimed breach of this Agreement by Contractor or from personal injury, property damage, direct or consequential damages, or economic loss, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of Contractor or anyone employed or utilized by the Contractor in the performance of this Agreement.

22.2 Contractor's obligation to indemnify and hold harmless under this Article 22 will survive the expiration or earlier termination of this Agreement until it is determined by final judgment that an action against the Owner or an indemnified party for the matter indemnified hereunder is fully and finally barred by the applicable statute of limitations.

22.3 The obligation of the Contractor under this Article 22 shall not extend to the liability of the Engineer, its agents or employees arising out of the preparation of approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications.

23.0 SEPARATE CONTRACTS AND COOPERATION

23.1 The Owner reserves the right to perform other work related to the Project at the site by the Owner's own forces, have other work performed by utility owners or let other direct contracts for work to be constructed at the same time, and in connection with, the Work included in this Agreement. The Contractor shall cooperate with all other contractors in such a manner, and to such extent, as best to facilitate the completion of the entire Project in the shortest time possible, subject to, at all times, the approval of the Engineer and Owner. It shall be the duty of each contractor to work with the other contractors, render such assistance, and to arrange its work in such a manner that shall allow the entire Project to be delivered complete and in the best possible condition. The Contractor shall afford other contractors and utility owners reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate the Work with theirs. If the proper execution or results of any part of the Contractor's Work depends upon the work of any other Contractor, the Contractor shall inspect and promptly report to the Engineer any defects in such work that render it unsuitable for such proper execution and results.

23.2 If the performance of additional work by other contractors, utility owners, or the Owner is not noted in the Contract Documents prior to the execution of the Agreement, written notice thereof shall be given to the Contractor prior to starting any such additional work. If the Contractor believes that the performance of such undisclosed additional work by the Owner or others involves it in additional expense or entitles it to an extension of the Contract Time, the Contractor shall send written notice of that fact to the Owner and Engineer within seven (7) calendar days of being notified of the other work and the Contractor may make a claim thereof as provided in Sections 13 and 14. If Contractor fails to send the above required seven (7) calendar days' notice, Contractor will be deemed to have waived any rights it otherwise may have had to seek an extension to the Contract

Time or adjustment to the Contract Price.

23.3 Contractor shall afford each utility owner and Owner's other contractors (or the Owner, if the Owner is performing the additional work with the Owner's employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work and shall properly connect and coordinate its Work with theirs. Contractor shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. Contractor shall be responsible for all damage to the work of others caused by the performance of its Work. Further, Contractor shall not in any way cut or alter the work of others without first receiving the written consent of that other person and Engineer. If any part of Contractor's Work depends for proper execution or results upon the work of any other contractor or utility owner (or the Owner), Contractor shall inspect and promptly report to Engineer in writing any delays, defects or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. Such report must be made within three (3) business days of the time Contractor first became aware of the delay, defect or deficiency. Contractor's failure to report within the allotted time will constitute an acceptance of the other work as fit and proper for integration with Contractor's Work, except for latent defects not discovered by Contractor.

23.4 The Contractor shall keep itself fully informed at all times regarding all details of the work of other contractors working at the site, and it shall be responsible for all delays that may result from its failure to install the Work in the proper manner and at the proper time.

23.5 The Contractor shall be responsible for coordinating the relocation of existing utilities (with the respective utility companies) as needed to construct the Project. Attention is called to the fact that Contractor is responsible for contacting all utility companies to obtain locations of all existing utilities or obstructions which it may encounter during construction. After location of utilities by the appropriate utility company, it is the Contractor's liability to protect all such utility lines, including service lines and appurtenances, and to replace at its own expense any which may be damaged by the Contractor's equipment or forces during construction of the Project. The Owner will pay fees charged by the utility company for relocating these utilities.

24.0 SUBCONTRACTING

24.1 Contractor shall review the design and shall determine how it desires to divide the sequence of construction activities. Contractor will determine the breakdown and composition of bid packages for award of subcontracts, based on the current Construction Schedule, and shall supply a copy of that breakdown and composition to the Owner and Engineer for their review and approval. The Contractor may utilize the services of specialty Subcontractors on those parts of

the Work which, under normal contracting practices, are performed by specialty Subcontractors. Contractor shall be solely responsible for and have control over the Subcontractors.

24.2 Prior to submitting its first Application for Payment, Contractor shall submit to the Owner a list of the names, addresses, licensing information and phone numbers of the Subcontractors Contractor intends to use for each portion of the Work, as well as identifying in writing those portions of the Work it intends to perform with its own employees. The Contractor shall not use a Subcontractor or Supplier against whom the Owner has a reasonable objection. The list identifying each Subcontractor cannot be modified, changed, or amended without prior written approval from the Owner. Contractor shall continuously update that list, so that it remains current and accurate throughout the entire performance of the Work. Any and all work to be self-performed by Contractor must be approved in writing by the Owner in its sole discretion prior to commencement of such Work. The Contractor shall not award work to Subcontractor(s) in excess of fifty percent (50%) of the Contract Price, without prior written approval of the Owner.

24.3 The Contractor shall be fully responsible for and have control over the acts and omissions of its Subcontractors, and of persons either directly or indirectly employed by them, as the Contractor is for the acts and omissions of persons directly employed by it.

24.4 The Contractor shall cause appropriate provisions to be inserted in all Subcontracts relative to the work to bind Subcontractors to the Contractor by the terms of the Contract Documents insofar as applicable to the work of Subcontractors and give the Contractor the same power to terminate any subcontract that the Owner may exercise over the Contractor under any provision of the Contract Documents. Further, each subcontract shall require that any claims by a Subcontractor for delay or additional cost must be submitted to Contractor within the time and in the manner in which Contractor must submit such claims to the Owner, and that failure to comply with such conditions for giving notice and submitting claims shall result in the waiver of such claims.

24.5 All subcontracts between Contractor and its Subcontractors shall be in writing and are subject to the Owner's approval. Further, all subcontracts shall (1) require each Subcontractor to be bound to Contractor to the same extent Contractor is bound to the Owner by the terms of the Contract Documents, as those terms may apply to the portion of the Work to be performed by the Subcontractor, (2) provide for the assignment of the subcontracts from Contractor to the Owner at the election of the Owner upon termination of Contractor, (3) provide that the Owner will be an additional indemnified party of the subcontract, (4) provide that the Owner will be an additional insured on all insurance policies required to be provided by the Subcontractor except workmans' compensation, (5) assign all warranties directly to the Owner, and (6) identify the Owner as an intended third-party beneficiary of the subcontract.

24.6 Nothing contained in this Agreement shall create any contractual relation between

any Subcontractor or Supplier and the Owner. All subcontracts and purchase orders entered into by Contractor must be in writing, and upon demand from Owner, Contractor shall deliver to Owner a full and complete copy of any or all such subcontracts and purchase orders.

24.7 Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract, copies of the Contract Documents to which the Subcontractor will be bound. Each Subcontractor shall similarly make copies of such documents available to its sub-subcontractors.

24.8 The Contractor shall not use a Subcontractor or Supplier against whom the Owner has a reasonable objection and Contractor shall not be required to contract with anyone it reasonably objects to.

24.9 The Owner and Engineer are under no duty or obligation whatsoever to any Subcontractor, Supplier, laborer or other party to ensure that payments due and owing by the Contractor to any of them will be made. Such parties shall rely only on the Contractor's surety bonds for remedy of nonpayment by the Contractor.

25.0 ENGINEER'S AUTHORITY

25.1 The Engineer shall act as the Owner's representative during the construction period, shall decide questions which may arise as to quality and acceptability of materials furnished and Work performed, and shall interpret the intent of the Contract Documents in a fair and reasonable manner. The Engineer will make visits to the site and determine if the Work is proceeding in accordance with the Contract Documents.

25.2 The Contractor will be held strictly to the intent of the Contract Documents in regard to the quality of materials, workmanship, and execution of the Work. Inspections may be at the factory or fabrication plant of the source of material supply.

25.3 The Engineer and the Owner will not be responsible for the construction means, controls, techniques, sequences, procedures, or construction safety.

25.4 The Engineer shall promptly make decisions relative to interpretation of the Contract Documents.

26.0 LAND AND RIGHT-OF-WAYS

26.1 Prior to the issuance of the NOTICE TO PROCEED, the Owner shall obtain all land and rights-of-way necessary for carrying out and for the completion of the Work to be performed pursuant to the Contract Documents, unless otherwise noted in the Contract Documents.

26.2 The Owner shall provide to the Contractor information which delineates and describes the lands owned and rights-of-way acquired.

26.3 The Contractor shall provide at its own expense and without liability to the Owner any additional land and access thereto that the Contractor may desire for temporary construction facilities, or for storage of materials.

27.0 GUARANTEE

27.1 The Contractor warrants to the Owner and Engineer that materials and equipment furnished under the Agreement will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform to the requirements of the Contract Documents. Contractor further warrants to the Owner that all materials and equipment furnished under the Contract Documents shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable manufacturers, fabricators, suppliers or processors except as otherwise provided for in the Contract Documents. Further, any special warranty to be provided will be in such form as is acceptable to the Owner and shall not include any exclusions, exceptions or modifications except to the extent approved by the Owner in its sole discretion. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, modifications not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear from normal usage. If required by the Engineer, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

27.2 Contractor expressly warrants to the Owner that it shall promptly correct, upon receipt of written notice from the Owner, any portion of the Work which is found to be defective or otherwise not in conformance with the requirements of the Contract Documents. The Owner will give notice of observed defects with reasonable promptness. Provided, however, in the event that any defective or non-conforming Work is determined by the Owner in its sole discretion to present an immediate threat to safety or security, the Owner shall be entitled to correct or replace such defective or non-conforming portions of the Work, and Contractor shall reimburse the Owner for all costs and expenses incurred by the Owner in correcting or replacing such Work. In the event that the Contractor should fail to make such repairs, adjustments, or other work that may be made necessary by such defects, the Owner may do so and charge the Contractor the cost thereby incurred. The Performance Bond shall remain in full force and effect through the guarantee period. With respect to the correction or replacement of any defective or nonconforming Work, Contractor shall be liable for all damage to any part of the Work itself and to any adjacent property which is caused by such corrective or replacement work.

27.3 If, within one year after the date of final acceptance of the Work by the Owner, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor an express written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. If the Contractor fails to correct nonconforming Work within a reasonable period of time (not to exceed 10 days) after receipt of notice from the Owner or Engineer, the Owner may correct or replace it in accordance with Section 27.1 above. This one year correction period is in addition to all other rights and does not limit the time period the Owner can seek to have the defective Work corrected.

27.4 Contractor shall obtain and assign to the Owner all express warranties given to Contractor by any Subcontractors or by Suppliers.

28.0 CLAIMS AND DISPUTES

28.1 The term “Claim” as used herein shall mean any and all demands made by one party hereunder against the other party, whether such demand be for money, time or the assertion of any right or obligation that arises out of the Contract Documents.

28.2 Initial notice of Claims by Contractor shall be made in writing to the Owner and Engineer within seven (7) calendar days after the first day of the event giving rise to such Claim or such other time period as may be expressly provided in the Contract Documents. If Contractor fails to give such written notice within the required time period, Contractor shall be deemed to have waived the Claim.

Written data supporting Contractor's claim shall be submitted to the Owner and Engineer within thirty (30) calendar days after the occurrence of the event, or such other time period as may be expressly provided in the Contract Documents, unless the Owner grants additional time in writing, or else Contractor shall be deemed to have waived the Claim.

28.3 Contractor shall proceed diligently with its performance as directed by the Owner, regardless of any pending Claim, unless otherwise agreed to by the Owner in writing. The Owner shall continue to make payments of all undisputed amounts in accordance with the Contract Documents during the pendency of any Claim.

28.4 Prior to the initiation of any action or proceeding permitted by this Agreement to resolve disputes between the parties, the parties shall make a good faith effort to resolve any such disputes by negotiation between the President or Vice-President for the Contractor and the Owner Manager Failing resolution, and prior to the commencement of depositions in any litigation between the parties with respect to the Project, the parties shall attempt to resolve the dispute through mediation before an agreed-upon Circuit Court Mediator certified by the State of Florida. Should either party fail to submit to mediation as required hereunder, the other party may request a court of law to order mediation under Florida Statutes Section 44.102.

28.5 Any litigation between the Owner and Contractor (which term for the purposes of this Section shall include Contractor's surety), whether arising out of any Claim or arising out of the Agreement or any breach thereof, shall be brought, maintained and pursued solely and exclusively in the appropriate State courts of the State of Florida as set forth in Section 20.2. The Owner and Contractor each hereby waive and renounce any and all rights and options which they, or either of them, have or might have to bring or maintain any such litigation or action in the Federal Court system of the United States or in any United States Federal District Court. Venue of any such litigation between the Owner and Contractor shall lie and be only in the appropriate State courts in and for Bay Owner, Florida. Contractor consents and submits to the exclusive jurisdiction of any such court and agrees to accept service of process from the State of Florida in any matter to be submitted to any such court.

29.0 TAXES

29.1 The Contractor will pay all applicable sales, consumer, use and other similar taxes required by the laws of the place where the Work is performed.

30.0 CONTRACT TIME, SCHEDULE OF WORK AND TIME EXTENSIONS

30.1 Contractor shall diligently pursue the completion of the Work and coordinate the Work being done on the Project by its Subcontractors and Suppliers, as well as coordinating its Work with all work of others at the Project site, so that its Work

or the work of others shall not be delayed or impaired by any act or omission by Contractor or anyone for whom Contractor is liable. All Work under this Agreement shall be arranged and be carried out in such a manner as to complete the Work on or before the required date of Substantial Completion. The Contractor must notify the Owner at the time of bidding if the chronology of the Work as shown or the subdivision of work will affect warranties or guarantees in any way. No such claims shall be allowed once the Work has begun.

30.2 Should Contractor be obstructed or delayed in the prosecution of or completion of the Work as a result of unforeseeable causes beyond the control of Contractor, and not due to its fault or neglect, including but not restricted to acts of God or of the public enemy, acts of government, fires, floods, epidemics, quarantine regulation, strikes, lockouts, unusually severe weather conditions by comparison with the ten-year Bay Owner, Florida average not reasonably anticipatable (to the extent Contractor was unable to perform any portion of the Work that was on the critical path of the approved Construction Schedule during those inclement weather days), Contractor shall notify Owner and Engineer in writing within seven (7) calendar days after the commencement of such delay, stating the cause or causes thereof, or be deemed to have waived any right which Contractor may have had to request a time extension.

30.3 The Contractor is required to furnish adequate manpower at the Project to complete the Work within the Contract Time and in accordance with the Construction Schedule. Should payment of premium time, bonuses, or the like be necessary to attract sufficient manpower for the Project, such extra labor costs shall be borne by the Contractor without additional compensation from the Owner. Further, should the Contractor's Work, through no fault of the Engineer, the Owner, or Owner's other contractors, fail to progress in accordance with the Construction Schedule, and if, in the opinion of the Engineer, the Work cannot be substantially completed within the Contract Time, or if deemed necessary to protect this or adjoining work from damage, the Contractor shall work such additional time over the established hours of work, but excluding Holidays, as required to meet the schedule time without additional expense to the Owner. In such event, Contractor shall reimburse Owner for any additional costs incurred by the Owner associated with such overtime, including any additional costs of the Engineer.

30.4 When so ordered in writing by the Engineer or Owner, whether to advance the date of Substantial Completion, or for any other reason for the Owner's benefit, the Contractor shall work overtime and or additional shifts. If the order for such acceleration is not the result of Contractor being behind the approved Construction Schedule, Contractor shall be entitled to a Change Order increasing the Contract Price by its actual net premium costs of such overtime and or shifts so ordered and so worked, including insurance and taxes applicable thereto, (without other overhead or profit). Such costs and expenses shall be subject to audit by the Owner.

30.5 When any period of time is referenced by days herein, it shall be computed to exclude the first day and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day recognized by the Owner as a legal holiday, such day shall be omitted from the computation, and the last day shall become the next succeeding day which is not a Saturday, Sunday or legal holiday. The term "business day" as used herein shall mean all days of the week excluding Saturdays, Sundays and all legal holidays observed by the Owner.

31.0 USE OF SITE

31.1 The Contractor shall confine its use of the site for storage of materials, erection of temporary facilities and parking of vehicles to areas within its Agreement limits as directed by the Engineer. The Contractor shall not unnecessarily encumber the site at any time.

31.2 Contractor acknowledges that areas of the site in which Work under this Agreement may be performed may be used by other contractors for storage of materials, erection of temporary facilities and parking of vehicles. Areas used by other contractors will be vacated, as directed by the Engineer to permit Work under this Agreement, provided reasonable notice is given requesting such, all in accordance with the approved Construction Schedule.

31.3 No signs or advertisements shall be displayed on the site or building except with the written consent of the Owner.

32.0 TEMPORARY FACILITIES

32.1 The Contractor shall provide electric power and water as it may require for its construction purposes, and shall pay all costs incurred. At completion of the Work, all temporary facilities shall be removed from the site. Upon Substantial Completion of the Work, Contractor shall cause all permanent utilities to be utilized by the Owner that were in Contractor's name during construction of the Project to be transferred over to the Owner's name.

32.2 The Contractor shall provide sanitary facilities for its workmen at all times. Sanitary facilities shall be of an approved chemical type with regular servicing and appropriately screened from public view, as approved by the Engineer and all applicable health authorities.

33.0 CLEAN UP AND DISPOSAL OF WASTE MATERIALS AND HAZARDOUS MATERIALS

33.1 No burial of waste materials will be permitted on the site. The Contractor shall at all times keep the site free from accumulations of waste material or debris caused by its operations and shall immediately remove same when necessary or required

by the Engineer or the Owner. If Contractor fails to keep the Project site clean, the Owner has the right, after providing a twenty-four (24) hour written notice, to perform any required clean up and to backcharge Contractor for the costs of such clean up. At the completion of the Work, and before final inspection and acceptance of the Work, Contractor shall clean ditches, shape shoulders and restore all disturbed areas, including street crossings, grass plots, regrassing if necessary, to as good condition as existed before Work started, and remove all debris, rubbish and waste materials from and about the Project site, as well as all of Contractor's (and its Subcontractors') tools, appliances, construction equipment and machinery and surface materials, and shall leave the Project site clean and ready for occupancy by the Owner. Any existing surface or subsurface improvements, including, but not limited to, pavements, curbs, sidewalks, pipes, utilities, footings, structures, trees and shrubbery, not indicated in the Contract Documents to be removed or altered, shall be protected by Contractor from damage during the prosecution of the Work. Any such improvements so damaged shall be restored by Contractor to condition at least equal to that existing at the time of Contractor's commencement of the Work

33.2 If Contractor encounters on the Project site any materials reasonably believed by Contractor to be petroleum or petroleum related products or other hazardous or toxic substances which have not been rendered harmless, Contractor immediately shall (i) stop Work in the area affected and (ii) report the condition to the Owner in writing. If the Work is so stopped and hazardous material is found, the Work in the affected area shall not thereafter be resumed except by Change Order. Any such Change Order shall include, but not be limited to, an equitable adjustment to the Contract Time and Contract Price as appropriate and in accordance with the terms of the Contract Documents. If no hazardous material is found after the Work is stopped, no Change Order is required to resume the Work in the affected area. Further, if the hazardous material was generated or caused by Contractor or anyone for whom Contractor is responsible, or if Contractor failed to stop Work or give the written notice required above, no Change Order will be required for an adjustment in the Contract Time or Contract Price and Contractor shall indemnify the Owner and hold the Owner harmless for any costs incurred by the Owner with respect to such hazardous material generated or caused by Contractor or anyone for whom it is responsible or any increased costs incurred by Owner as a result of Contractor's failure to stop Work or give the required written notice.

34.0 WARRANTY OF TITLE

34.1 No material, supplies or equipment for the Work shall be purchased by the Contractor subject to any chattel mortgage or under a conditional sale or other agreement by which a lien or an interest therein or any part thereof is retained by the seller or supplier. The Contractor warrants good title to all materials, supplies and equipment installed or incorporated in the Work and title to all such items shall pass to the Owner upon its incorporation into the Work or payment, whichever occurs first. Contractor shall, at all times, keep the site, together with

all improvements and appurtenances constructed or placed thereon by it, free from any claims, liens or charges and further agrees that neither Contractor nor any person, firm, or corporation furnishing any material or labor for any Work covered by this Agreement shall have any right to a lien upon the Work, site or any improvements or appurtenances thereon. The Contractor shall not at any time suffer or permit any lien, attachment, or other encumbrances under the law of Florida or otherwise by any person or persons whomsoever to remain on file with the Owner against any money due or to become due for any work done or materials furnished under the Agreement or by reason of any other claim or demand against the Contractor. Such lien, attachment, or other encumbrance, until it is removed, shall preclude any and all claims or demands for any payment to Contractor under virtue of this Agreement.

35.0 OWNERSHIP OF HIDDEN VALUABLE MATERIALS

35.1 All items having any apparent historical or archaeological interest or treasure or valuable materials discovered during any construction activities shall be carefully preserved and reported immediately to the Owner for determination of appropriate actions to be taken. Any increases to Contractor's time or cost of performance due to historical or archaeological items discovered on the site shall entitle Contractor to a Change Order equitably adjusting the Contract Time and the Contract Price as appropriate and in accordance with the terms of the Contract Documents. Notwithstanding anything in the Contract Documents to the contrary, Contractor shall have no claim or entitlement to any such historical or archaeological interest or treasure or other valuable materials discovered, and all such items shall remain the property of the Owner.

36.0 AS-BUILT PLANS and DOCUMENTS TO BE KEPT AT THE SITE

36.1 Before final inspection the Contractor shall turn over to the Engineer a set of drawings showing field changes and actual installed conditions. CONTRACTOR shall provide to the ENGINEER two (2) hard copies and one (1) electronic copy of the as-built plans in AutoCAD 2000. The plans shall be certified by a P.L.S. registered in the State of Florida.

36.2 Contractor shall maintain at the Project site or such other place as may be expressly approved in writing by Owner, originals or copies of, on a current basis, all Project files and records, including, but not limited to, the following administrative records: Subcontracts and Purchase Orders; Subcontractor Licenses; Shop Drawing Submittal/Approval Logs; Equipment Purchase/Delivery Logs; Contract Drawings and Specifications with Addenda; Warranties and Guarantees; Cost Accounting Records; Payment Request Records; Meeting Minutes; Insurance Certificates and Bonds; Contract Changes; Permits; Material Purchase Delivery Logs; Technical Standards; Design Handbooks; "As-Built"

Marked Prints; Operating & Maintenance Instruction; Daily Progress Reports; Monthly Progress Reports; Correspondence Files; Transmittal Records; Inspection Reports; Bid/Award Information; Bid Analysis and Negotiations; Punch Lists; and a Construction Schedule (including all updates). The Project files and records shall be available at all times to the Owner and Engineer or their designees for reference, review or copying.

37.0 SILENCE OF SPECIFICATIONS

37.1 To the extent the Work involves road or bridge construction, the apparent silence of the Contract Documents as to any details or the omission from them of a detailed description concerning any point shall be regarded as meaning that such portion of the Work shall be performed in accordance with the latest edition of the Florida DOT Standard Specifications for Road and Bridge Construction.

38.0 GRATUITIES

38.1 If the Owner finds after a notice and hearing that the Contractor, or any of the Contractor's agents or representatives, offered or gave gratuities (in the form of entertainment, gifts or otherwise) to any official, employee, or agent of the Owner, the State, or other officials in an attempt to secure this Agreement or favorable treatment in awarding, amending, or making any determinations related to the performance of this Agreement, the Owner may, by written notice to the Contractor, terminate this Agreement for Contractor default. The Owner may also pursue other rights and remedies that the law or this Agreement provides.

38.2 In the event this Agreement is terminated as provided in Section 44.1, the Owner may pursue the same remedies against the Contractor as it could pursue in the event of a breach of the Agreement by the Contractor. As a penalty, in addition to any other damages to which it may be entitled by law, the Owner may pursue exemplary damages in an amount (as determined by the Owner) which shall be not less than three nor more than ten times the costs the Contractor incurs in providing any such gratuities to any such official, agent or employee of the Owner.

39.0 AUDIT AND ACCESS TO RECORDS

39.1 Contractor shall keep all records and supporting documentation which concern or relate to the Work hereunder for a minimum of three (3) years from the date of termination of this Agreement or the date the Project is completed, whichever is later or such longer period of time as may be required by law. Contractor shall require all of its Subcontractors to likewise retain all of their Project records and supporting documentation. The Owner, and any duly authorized agents or representatives of the Owner, shall be provided access to all such records and supporting documentation at any and all times during normal business hours upon request by the Owner. Contractor shall make all such Project records and

supporting documentation available in Bay Owner, Florida. Further, the Owner, and any duly authorized agents or representatives of the Owner, shall have the right to audit, inspect and copy all of Contractor's and any Subcontractor's Project records and documentation as often as they deem necessary and Contractor shall cooperate in any audit, inspection, or copying of the documents. These access, inspection, copying and auditing rights shall survive the termination of this Agreement.

40.0 EQUAL OPPORTUNITY REQUIREMENTS

40.1 For all contracts in excess of $10,000, the Contractor shall comply with Executive Order 11246, entitled "Equal Employment Opportunity", as amended by Executive Order 11375, and as supplemented in Department of Labor regulations (41 CFR Part 60).

40.2 The Contractor's compliance with Executive Order 11246 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the Standard Federal Equal Employment Opportunity Construction Contract Specifications, as set forth in 41 CFR Part 60-4 and its efforts to meet the goals established for the geographic area where the Agreement is to be performed.

41.0 CHANGED CONDITIONS

41.1 Notwithstanding anything in the Contract Documents to the contrary, if conditions are encountered at the Project site which are (i) subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents or (ii) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, and which reasonably should not have been discovered by Contractor as part of its scope of site investigative services required pursuant to the terms of the Contract Documents, then Contractor shall provide the Owner with prompt written notice thereof before conditions are disturbed and in no event later than seven (7) calendar days after first observance of such conditions. The Owner and Engineer shall promptly investigate such conditions and, if they differ materially and cause an increase or decrease in Contractor's cost of, or time required for, performance of any part of the Work, the Owner will acknowledge and agree to an equitable adjustment to the Contract Price or Contract Time, or both, for such Work. If the Owner determines that the conditions at the site are not materially different from those indicated in the Contract Documents or not of an unusual nature or should have been discovered by Contractor as part of its investigative services, and that no change in the terms of the Agreement is justified, the Owner shall so notify Contractor in writing, stating its reasons. Claims by Contractor in opposition to such determination by the Owner must be made within seven (7) calendar days after Contractor's receipt

of the Owner's written determination notice. If the Owner and Contractor cannot agree on an adjustment to the Contract Price or Contract Time, the dispute resolution procedure set forth in the Contract Documents shall be complied with by the parties.

42.0 COMPLIANCE WITH LAWS

42.1 Contractor agrees to comply, at its own expense, with all federal, state and local laws, codes, statutes, ordinances, rules, administrative orders, regulations and requirements applicable to the Project, including but not limited to those dealing with safety (including, but not limited to, the Trench Safety Act, Chapter 553, Florida Statutes). An executed copy of Contractor's Trench Safety Act Certificate of Compliance (the form of which is attached hereto as Section 00096) has been delivered to Owner with the Contractor's Bid Proposal Form. If Contractor observes that the Contract Documents are at variance therewith, it shall promptly notify the Owner and Engineer in writing. Contractor has provided a separate line item in its Bid identifying the cost of compliance with the applicable trench safety standards set forth in the Trench Safety Act.

43.0 PUBLIC ENTITY CRIMES

43.1 By its execution of the Agreement and the Contractor's Public Entities Crime Statement (in the form set forth in Section 00097), Contractor acknowledges that it has been informed by the Owner of and warrants that it is in compliance with the terms of Section 287.133(2)(a) of the Florida Statutes which read as follows:

"A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity in excess of the threshold amount provided in s. 287.017 for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list."

44.0 INSURANCE

44.1 During the term of this Agreement, Contractor shall provide, pay for, and maintain, with companies satisfactory to the Owner, the types and limits of insurance required by the Contract Documents. All insurance shall be from responsible companies eligible to do business in the State of Florida. Simultaneously with the execution and delivery of this Agreement by Contractor, Contractor shall deliver to the Owner the properly completed and executed Certificate of Insurance, in the form set forth in Section 00099 along with any other properly completed and executed Certificates of Insurance that may be

necessary, evidencing the fact that Contractor has acquired and put in place the insurance coverages and limits required herein. In addition, certified, true and exact copies of all insurance policies required shall be provided to the Owner, on a timely basis, if requested by the Owner. These Certificates and policies shall contain provisions that at least thirty (30) calendar days advanced written notice by registered or certified mail shall be given the Owner of any cancellation, intent not to renew, or any policy change that would result in a reduction in the policies' coverages, except in the application of the Aggregate Limits Provisions. The renewal of any insurance required to be maintained by Contractor hereunder shall be by a renewal Certificate of Insurance in the same form as was required for the original Certificate of Insurance, which renewal Certificate of Insurance shall be delivered to Owner at least ten (10) calendar days prior to expiration of current coverages so that there shall be no interruption in the Work due to lack of proof of insurance coverages required of Contractor under this Agreement.

44.2 Contractor shall also notify the Owner, in the same manner required in Section 44.1 above, within two (2) calendar days after Contractor's receipt, of any notices of expiration, cancellation, non-renewal or material change in coverages or limits received by Contractor from its insurer, and nothing contained herein shall relieve Contractor of this requirement to provide notice. In the event of a reduction in the aggregate limit of any policy to be provided by it hereunder, Contractor shall immediately take steps to have the aggregate limit reinstated to the full extent permitted under such policy. If, at any time, Owner requests a written statement from an insurance company as to any impairment to any aggregate limit of any policy to be provided by it hereunder, Contractor shall promptly authorize and cause to be delivered such statement to Owner. All insurance coverages of Contractor shall be primary to any insurance or self-insurance program carried by the Owner applicable to this Agreement. Any such self insurance programs or coverages shall not be contributory with any insurance required of the Contractor under the terms of this Agreement. All insurance policies, other than the Workers Compensation policy and the Surveyor's Professional Liability policy, provided by Contractor to meet the requirements of this Agreement shall name the Owner as an additional insured through the use of ISO Endorsement No. CG 20.10.10.01 and No. CG 20.37.10.01 wording, as to the operations of Contractor under the Contract Documents and shall also provide the Severability of Interest provision (also referred to as the Separation of Insureds provision). Companies issuing the insurance policy or policies shall have no recourse against the Owner for payment of premiums or assessments for any deductibles which all are at the sole responsibility and risk of Contractor.

44.3 All insurance policies to be provided by Contractor pursuant to the terms hereof shall be performable in Bay Owner, Florida and must expressly state that the insurance company will accept service of process in Bay Owner, Florida and that the exclusive venue and exclusive jurisdiction for any action concerning any matter under those policies shall be in the appropriate state court situated in Bay

Owner, Florida.

44.4 The acceptance by the Owner of any Certificate of Insurance pursuant to the terms of this Agreement evidencing the insurance coverages and limits required hereunder does not constitute approval or agreement by the Owner that the insurance requirements have been met or that the insurance policies shown on the Certificates of Insurance are in compliance with the requirements of this Agreement.

44.5 Before starting and until completion of all Work required hereunder, Contractor shall procure and maintain insurance of the types and to the limits specified in the Contract Documents. Contractor shall require each of its Subcontractors to procure and maintain, until the completion of that Subcontractor's work or services, insurance of the types and to the limits specified in the Contract Documents, unless such insurance requirement for the Subcontractor is expressly waived or modified in writing by the Owner. Contractor shall not enter or otherwise occupy the Project site or commence any Work to be performed under this Agreement at the Site or any other property of the Owner until all insurance required hereunder has been obtained by Contractor and such proof of insurance, as the same is required under this Agreement, has been delivered to Owner. Contractor shall require all property insurance policies related to the Work and secured and maintained by Contractor and its Subcontractors to include provisions providing that each of their insurance companies shall waive all rights of recovery, under subrogation or otherwise, against the Owner and any of its separate contractors and the agents, employees and subcontractors of any of them.

44.6 Should at any time Contractor or any of its Subcontractors not maintain the insurance coverages required in this Agreement, the Owner may terminate this Agreement for Contractor default or at its sole discretion shall be authorized to purchase such coverages and charge Contractor for such coverages purchased, to include a fifteen percent (15%) administrative fee. If Contractor fails to reimburse the Owner for such costs within thirty (30) calendar days after demand, the Owner has the right to offset those costs from any amount due Contractor under this Agreement. The Owner shall be under no obligation to purchase such insurance, nor shall it be responsible for the coverages purchased or the insurance company/companies used. The decision of the Owner to purchase such insurance coverages shall in no way be construed to be a waiver of any of its rights under this Agreement. If the Owner exercises its option to purchase such required coverages, the coverages shall not be cancelled by Contractor and shall stay in force until the normal expiration date according to the terms and conditions of the insurance policy.

44.7 As may be required by Owner from time to time, the status of any insurance aggregate limits are to be confirmed in writing by the respective insurance companies. The amounts and types of insurance Contractor shall comply with all of the requirements of this Section 44 unless otherwise agreed to, in writing, by Owner.

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END OF SECTION 00100

PART 1 - SCOPE OF WORK

The scope of this section of the Contract Documents is to further define the items included in each Bid Item in the Bid Proposal section of these Specifications. Payment will be made based on the specified items included in the description in this section for each bid item.

1.1 GENERAL

All Contract Prices included in the Bid Proposal section will be full compensation for all labor, materials, tools, equipment and incidentals necessary to complete the construction as shown on the drawings and/or as specified in the Contract Documents to be performed under this contract. Actual quantities of each item bid on a unit price basis will be determined upon completion of the construction in the manner set up for each item in this section of the specifications. Payment for all items listed in the Bid Form will constitute full compensation for all work shown and/or specified to be performed under this project.

1.2 ESTIMATED QUANTITIES

The quantities shown are approximate and are given only as a basis of calculation upon which the award of the Contract is to be made. The Owner/Engineer does not assume any responsibility that the final quantities, nor shall the Contractor claim misunderstanding because of such estimate of quantities. Final payment will be made only for satisfactorily completed quantity of each item.

1.3 WORK OUTSIDE AUTHORIZED LIMITS

No payment will be made for work constructed outside the authorized limits of work.

1.4 MEASUREMENT STANDARDS

Unless otherwise specified for the particular items involved, all measurements of distance shall be taken horizontally or vertically.

1.5 AREA MEASUREMENTS

In the measurement of items to be paid for on the basis of area of finished work, the lengths and/or widths to be used in the calculations shall be the final dimensions measured along the surface of the completed work within the neat lines shown or designated.

1.6 LUMP SUM ITEMS

Where payment for items is shown to be paid for on a lump sum basis, no separate payment will be made for any item of work required to complete the lump sum item. Lump sum bid items shall be complete, tested and fully operable prior to request for final payment. The

lump sum price bid for various items shall be compensation in full for furnishing all materials, labor, equipment, dewatering and incidentals necessary to install these items complete and operable in every detail and in accordance with these plans and specifications.

1.7 UNIT PRICE ITEM

Separate payment will be made for the items of work described herein and listed on the Bid Form. Any related work not specifically listed, but required for satisfactory completion of the work shall be considered to be included in the scope of the appropriate listed work items. The unit price bid for the various items shall be compensation in full for furnishing all materials, labor, equipment, and incidentals for the item in place, complete in every detail. There will be no direct payment for clearing, grubbing, excavation, bracing, dewatering, backfilling, clean-up, sheeting, shoring, restoration of property, testing or other items of work necessary for installation of the item.

1.8 OTHER PROVISIONS

No separate payment will be made for the following items and the cost of such work shall be included in the applicable pay items of work. Reduction in retainage shall not be requested by the Contractor or made by the Owner until as-built (record) drawings have been submitted to the Engineer and approved.

- Trench excavation, including necessary pavement removal, rock removal, and muck removal.
- Sheeting and shoring.
- Clearing, grubbing and grading.
- Excavation, including necessary pavement removal, rock removal and muck removal.
- Dewatering and disposal of surplus water.
- Structural fill, backfill and grading.
- Testing and placing system in operation.
- Any material and equipment required to be installed and utilized for tests.
- Maintain the existing quality of service during construction.
- Appurtenant work as required for a complete and operable system.
- Operation and Maintenance manuals.

1.9 APPLICATION FOR PAYMENT

The Contractor shall submit an application for payment, no more frequent than monthly, to the Engineer for review and approval upon partial completion of the project before the Contractor will be compensated for the work performed during that period. The application shall invoice work completed as detailed in the Contractor's Proposal. Final payment in full will be made when work is completed to the satisfaction of the Owner, and the Engineer, when it has been shown that the Contractor has discharged all obligations of this Contract (Release of Liens) and when all punch list items have been corrected. Application for

payment will be made on the standard AIA form, or type of form approved by the Owner.

PART 2 NOT APPLICABLE

PART 3 EXECUTION

3.1 Bid Item No. 1 - MOBILIZATION/DEMOBILIZATION

Payment for all work included under this bid item will be made at the lump sum price bid for mobilization and demobilization of all labor, equipment, materials and appurtenances necessary for construction of the project. Mobilization shall include all items detailed in Article 101-1 of the FDOT Standard Specification. Also included, but not limited to, as part of this bid item is the cost for project performance indemnification's, photographs, shop drawings, working drawings, schedules, record drawings and documents, coordination, and phasing and other miscellaneous items associated with the work. Payment for this bid item will be lump sum. The lump sum price for mobilization/demobilization will be limited to one and one half (1.5) percent of the total contract amount. Two thirds of the lump sum amount will be payable upon mobilization only after proper documentation is submitted to the Engineer, including an approved CPM Schedule, approved Schedule of Values. and Preconstruction Photographs. The remaining third will be payable upon demobilization.

3.2 Bid Item No. 2 - PREVENTION, CONTROL AND ABATEMENT OF EROSION AND WATER POLLUTION

Payment for all work included under this bid item will be made at the lump sum price bid for all work associated with the prevention, control and abatement of erosion and water pollution in accordance with the contract documents. Payment shall include all items and incidentals necessary to complete the work. Payment for work included under this bid item will be lump sum. Contractor is advised that erosion control measures shown on the plans are the minimum. Additional erosion control measures may be required due to Contractors operations. Such additional erosion control measures shall be included in the Contractors lump sum price.

3.3 Bid Item No. 3 – TESTING

The Lump Sum price bid for all testing will be compensation in full for furnishing all material, labor, equipment and incidentals necessary to successfully perform all concrete testing and pile dynamic analysis (PDA). Testing will be coordinated by the Contractor, paid by the Owner, and reported to the Engineer required by the contract documents so that compliance may be demonstrated to the Engineer. This pay item shall also include all additional tests required due to failure of previous tests or reinstallation of any work.

3.4 Bid Item No. 4 - RECORD DRAWINGS AND O&M MANUALS

The Lump Sum price bid for furnishing record drawings and O & M manuals shall be

compensation in full for all material, labor, equipment and incidentals necessary to prepare and furnish all engineer-approved record drawings and O & M manuals required by the contract documents. The Owner shall make no additional payment for draft or preliminary submittals initially made or resubmitted due to incompleteness or rejection by the Engineer. Payment for work included under this bid item will be lump sum.

3.5 Bid Item No. 5 – FISHING PIER

Payment for all work included under this bid item will be made at the lump sum amount for the work covered by this item and shall be full and complete compensation for the entire work. The work covered by this item includes installation of a Fishing Pier construction consists of concrete piling, cap beams, prestressed girders, timber deck panels. Cast-in-place bollards, Precast rail post and timber posts and railing. Water and electrical utilities on the pier are also included. Structure shall be fully functional and built in accordance with specifications. Omission of a specific item or component part of a system obviously necessary for the proper functioning of the equipment or system shall not relieve the Contractor of the responsibility of furnishing the item as part of the work at no additional cost to the Owner. Measurement for work included under this bid item will be lump sum.

Bents 1 through 13 (over beachfront)
Bents 14 through 25
Bents 26 and 27
Bents 28 to 40
Bents 40 to 41
Bents 41 to 42
Bents 42 to 43
Bents 43 to 44
Bents 44 to 45
Bents 46 to 47
Bents 47 to 50

3.6 Bid Item No. 6 – ONE YEAR WARRANTY

Payment includes all repairs to the structure for a period of one year. Acts of God are not included in the warranty.

3.7 Bid Item No. 7 – DEMOLITION OF THE EXISTING PIER

Lump sum payment to remove the existing structure. Concrete components shall be deposited at the bay Owner Reef site, approximately 9 miles off-shore. The remaining components shall be taken to an approved disposal site.

3.8 Bid Item No. 8 – HOLD HARNESS

Payment for this bid item will be made at the lump sum price bid of ten dollars ($10.00) for agreeing to Hold Harmless and indemnify the Owner and Engineer as specified in the Contract Documents.

3.9 Bid Item No. 9 – GULF POWER SERVICES

Payment for this bid item will be made as a reimbursement up to the amount of thirty-five thousand dollars ($20,000.00) allowance for fee required by Gulf Power Company for installation of electrical service to the lift station site. All monies will be held by the Owner and disbursed only to the extent of actual Gulf Power fees incurred.

3.10 Bid Item No. 10 – PERMIT FEE

The Owner has allocated $5,000 for permit fee allowance. The Contractor is responsible to initially pay all permit fees associated with the Work. The Owner will reimburse the Contractor the actual amount of the permit fee for all paid permit fees provided copies of the paid receipts are included with the Contractor's request for payment. Cost for Contractor's overhead and profit shall be included in other bid items.

3.11 Bid Item No. 11 – BONDS AND INSURANCE

Payment for this bid item will be made at the lump sum price bid for all bonds and insurance policies as required by the Contract Documents. Payment will be made only after proper documentation is provided to the Engineer. Measurement for this bid item shall be lump sum.

END OF SECTION 00120

CITY OF MEXICO BEACH INSURANCE REQUIREMENTS

CITY DEFINED

The term City (wherever it may appear) is defined to mean the City itself, its City Council, to the extent of their interests, officers, employees, volunteers, representatives and agents.

OTHER PARTY DEFINED

The term Other Party (wherever it may appear) means the other person or entity which is a party to this agreement or contract, any subsidiaries or affiliates, officers, employees, volunteers, representatives, agents, contractors and subcontractors.

HOLD HARMLESS

The City shall be held harmless against all claims for bodily injury, sickness, disease, death or personal injury or damage to property or loss of use resulting therefrom, arising out of the agreement, contract or lease, unless such claims are a result of the City's sole negligence.

PAYMENT ON BEHALF OF CITY

The Other Party agrees to pay on behalf of the City, and to pay the cost of the City's legal defense, for all claims described in the Hold Harmless paragraph.

Such payment on behalf of the City shall be in addition to any and all other legal remedies available to the City and shall not be considered to be the City's exclusive remedy.

CONSIDERATION FOR HOLD HARMLESS/PAYMENT ON BEHALF
Applicable to Florida Construction Contracts

The Other Party agrees to accept, and acknowledges as adequate remuneration, the consideration of $10 for agreeing to the Hold Harmless, Payment on Behalf of City, Insurance and Certificates of Insurance provisions in this agreement or contract. (Florida Statute 725.06)

LOSS CONTROL/SAFETY

Precaution shall be exercised at all times by the Other Party for the protection of all persons, including employees, and property. The Other Party shall be expected to comply with all laws, regulations or ordinances related to safety and health including but

not limited to, CFR 1910.146 Permit Confined Space Entrys, 1910.147 Control of Hazardous Energy and CF121926.650 Excavations, and shall make special effort to detect hazardous conditions and shall take prompt action where loss control/safety measures should reasonably be expected.

The City may order work to be stopped if conditions exist that present immediate danger to persons or property. The Other Party acknowledges that such stoppage will not shift responsibility for any damages from the Other Party to the City.

INSURANCE - BASIC COVERAGES REQUIRED

The Other Party shall procure and maintain the following described insurance, except for coverages specifically waived by the City, on policies and with insurers acceptable to the City.

These insurance requirements shall not limit the liability of the Other Party. The City does not represent these types or amounts of insurance to be sufficient or adequate to protect the Other Party's interests or liabilities, but are merely minimums.

Except for workers compensation and professional liability, the Other Party's insurance policies shall be endorsed to name the City as an additional insured to the extent of the City's interests arising from this agreement, contract, or lease.

Except for workers compensation, the Other Party waives its right of recovery against the City, to the extent permitted by its insurance policies.

The Other Party's deductibles/self-insured retention's shall be disclosed to the City and may be disapproved by the City. They shall be reduced or eliminated at the option of the City. The Other Party is responsible for the amount of any deductible or self-insured retention.

Insurance required of the Other Party or any other insurance of the Other Party shall be considered primary, and insurance of the City shall be considered excess, as may be applicable to claims which arise out of the Hold Harmless, Payment on Behalf of the City, Insurance, Certificates of Insurance and any Additional Insurance provisions of this agreement, contract or lease.

WORKER'S COMPENSATION COVERAGE

The Other Party shall purchase and maintain workers compensation insurance for all workers compensation obligations imposed by state law and employers liability limits of at least $100,000 each accident and $100,000 each employee/$500,000 policy limit for disease.

The Other Party shall also purchase any other coverage required by law for the benefit of employees.

The Other Party shall provide to the City an Affidavit stating that he meets all the requirements of Florida Statute 440.02 (13) (d).

GENERAL, AUTOMOBILE AND EXCESS OR UMBRELLA LIABILITY COVERAGE

The Other Party shall purchase and maintain coverage on forms no more restrictive than the latest editions of the Commercial or Comprehensive General Liability and Business Auto policies of the Insurance Services Office.

Minimum limits of $1,000,000 per occurrence for all liability must be provided, with excess or umbrella insurance making up the difference, if any, between the policy limits of underlying policies (including employers liability required in the Worker's Compensation Coverage section) and the amount of coverage required.

GENERAL LIABILITY COVERAGE

Commercial General Liability - Occurrence Form Required

If Commercial General Coverage is provided:

Coverage A shall include premises, operations, products and completed operations, independent contractors, contractual liability covering this agreement contract or lease, and broad from property damage coverage.

Coverage B shall include personal injury.

Coverage C, medical payments, is not required.

Comprehensive General Liability

If Comprehensive General Liability coverage is provided it shall include at least:

Bodily injury and property damage liability for premises/operations, products/completed operations, independent contractors, and property damage resulting from explosion, collapse or underground (x,c,u) exposures.

Broad Form Comprehensive General Liability coverage, or its equivalent, with at least broad form contractual liability covering this agreement, contract or lease, personal injury liability and broad form property damage liability.

PRODUCTS/COMPLETED OPERATIONS

The Other Party is required to continue to purchase products and completed operations coverage, at least to satisfy this agreement, contract or lease, for a minimum of three years beyond the City's acceptance of renovation or construction projects.

BUSINESS AUTO LIABILITY COVERAGE

Business Auto Liability coverage is to include bodily injury and property damage arising out of

ownership, maintenance or use of any auto, including owned, non-owned and hired automobiles and employee non-ownership use.

EXCESS OR UMBRELLA LIABILITY COVERAGE

Umbrella Liability insurance is preferred, but an Excess liability equivalent may be allowed. Whichever type of coverage is provided, it shall not be more restrictive than the underlying insurance policy coverages.

CERTIFICATES OF INSURANCE

Required insurance shall be documented in Certificates of Insurance, which provide that the City shall be notified at least 30 days in advance of cancellation, non-renewal or adverse change.

New Certificates of Insurance are to be provided to the City at least 15 days prior to coverage renewals.

If requested by the City, the Other Party shall furnish complete copies of insurance policies, forms and endorsements.

For the Commercial General Liability coverage the Other Party shall, at the option of the City, provide an indication of the amount of claims payments or reserves chargeable to the aggregate amount of the liability coverage.

Receipt of certificates or other documentation of insurance or policies or copies of policies by the City, or by any of its representatives, which indicate less coverage than required does not constitute a waiver of the Other Party's obligation to fulfill the insurance requirements herein.

ADDITIONAL INSURANCE

The City requires the following additional types of insurance.

XX Commercial General Liability Increased General Aggregate Limit

Because the Commercial General Liability form of coverage includes an annual aggregate limitation on the amount of insurance provided, a separate project

aggregate limit of $1,000,000 is required by the City for this agreement of contract.

END OF SECTION 00201

PART 1 - GENERAL

1.1 CONTRACT DOCUMENTS

Should a conflict exist within the contract documents, the precedence in ascending order of authority is as follows:

1. Change Order
2. Addenda
3. Specifications
4. Plans

1.2 CLAIM PERIOD

No claim of the Contractor shall be allowed unless 1) Contractor has given written notice within 14 days of the incident, and 2) within thirty days after Contractor has given the written notice, Contractor submits to Owner a detailed claim setting forth Contractor's right to recover any additional costs and lost time as provided in the General Conditions. No claim by the Contractor for an equitable adjustment hereunder shall be allowed if asserted after final payment under this Contract.

1.3 REGULAR WORKING HOURS

A. Regular working hours are defined as up to forty hours per week with a maximum of ten hours per day, Monday through Friday, beginning no earlier than 7:00 A.M. and ending no later than 7:00 P.M., excluding holidays. Any work beyond ten hours per day or forty hours per week shall be considered overtime. The Contractor shall not work on holidays. The contract time shall not be extended due to holidays falling within the contract time. Whenever the Contractor is performing any part of the work, with the exception of equipment maintenance and cleanup, Owner's representative and/or inspection will be required. Requests to work other than regular working hours must be submitted to the Owner's designated representative, at least 48 hours prior to any proposed weekend work or scheduled extended workweeks, to give the Owner ample time to arrange for representation and/or inspection during those periods. Periodic unscheduled overtime on weekdays will be permitted provided that two hours notice is provided to the Owner's designated representative. Maintenance of the Contractor’s equipment and cleanup may be performed during hours other than regular working hours.

B. Contractor shall reimburse the Owner for additional engineering and/or inspection costs incurred as a result of overtime work in excess of the regular working hours. At Owner's option, overtime costs may either be deducted from the Contractor's monthly payment request or deducted from the Contractor's retention prior to release of final payment.

Engineering/Inspection costs shall be calculated at the following rates:

Field Representative	$80/hour
Engineer	$150/hour

1.4 SUBSTITUTIONS

Contractor shall reimburse Owner for the charges of Engineer and Engineer's consultants for evaluating each proposed substitute submitted after the effective date of the Agreement and all costs resulting from any delays in the work while the substitute was undergoing review.

1.5 WRITTEN NOTICE

Any claim for an increase or decrease in the contract price shall be based on written notice delivered by the party making the claim to the other party and to Engineer promptly (but in no event later than fourteen days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered within thirty days after such occurrence.

1.6 DEFECTIVE WORK

The Contractor shall not be entitled to an extension of the Contract Time for correcting or removing defective work.

1.7 CORRECTIVE WORK

A. If within one year after the date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any special guarantee required by the contract documents or by any specific provision of the contract documents, any work is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions: (i) correct such defective work, or, if it has been rejected by Owner, remove it from the site and replace it with work that is not defective, and (ii) satisfactorily correct or remove and replace any damage to other work or the work of others resulting therefrom. If Contractor does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risks of loss or damage, Owner may have the defective work corrected or the rejected work removed and replaced, and all claims, costs, losses and damages caused by or resulting from such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

B. Where defective work (and damage to other work resulting therefrom) has been corrected, removed or replaced under paragraph 1.7, the correction period hereunder with respect to such work will be extended for an additional period of

one year after such correction or removal and replacement has been satisfactorily completed.

1.8 MONTHLY STATUS REPORTS

Each monthly application for progress payment shall incorporate the corresponding "Monthly Progress Status Report" prepared per the requirements of the contract documents.

1.9 STORED EQUIPMENT AND MATERIALS

The Contractor shall furnish evidence that payment received on the basis of materials and equipment, not incorporated and suitably stored, has in fact been paid to the respective supplier(s) within sixty (60) days of the Application of Payment on which the material/equipment first appeared. Failure to procure said evidence of payment shall result in the withdrawal of previous approval(s) and removal of the related equipment and materials from the Application of Payment.

1.10 SUBCONTRACTOR OBLIGATIONS

Notwithstanding any other profession of these Contract Documents to the contrary, Owner and Engineer are under no duty or obligation whatsoever to any Sub-contractor, laborer or other party to ensure that payments due and owing by the Contractor to any of them will be made. Such parties shall rely only on the Contractor's surety bonds for remedy of nonpayment by the Contractor.

1.11 SUBSTANTIAL COMPLETION

The Work will be considered substantially complete when each of the following portions of the Work is completed to the satisfaction of the Owner:

- all components of the Work have been installed, tested and approved.
- all repair and coating systems have been properly cured.
- all data specified in the Contract Documents have been delivered to the Owner.
- all instructions have been provided to the designated Owner's representative(s) in accordance with the Contract Documents.
- all training has been completed.

DUTIES, RESPONSIBILITIES AND LIMITATIONS OF AUTHORITY OF RESIDENT PROJECT REPRESENTATIVE

A. GENERAL

Resident Project Representative as Engineer's agent, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding his actions. Resident Project Representative's dealings in matters pertaining to the on-site work shall, in general, be only with Engineer and Contractor, and dealings with sub-contractors shall only be through or with the full knowledge of Contractor. Written communication with Owner will be only through or as directed by Engineer.

B. DUTIES AND RESPONSIBILITIES

Resident Project Representative will:

1. Schedules: Review the progress schedule, schedule of shop drawing submissions and schedule of values prepared by Contractor and consult with Engineer concerning their acceptability.

2. Conferences: Attend pre-construction conferences. Arrange a schedule of progress meetings and other job conferences as required in consultation with Engineer and notify those expected to attend in advance. Attend meetings and maintain and circulate copies of minutes thereof.

3. Liaison:

   a. Serve as Engineer's liaison with Contractor, working principally through Contractor's superintendent and assist him in understanding the intent of the Contract Documents. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-site operations.

   b. As requested by Engineer, assist in obtaining from Owner additional details or information when required at the job site for proper execution of the work.

4. Shop Drawings and Samples

   a. Receive and record date of receipt of shop drawings and samples, receive samples which are furnished at the site by Contractor and notify Engineer of their availability for examination.

   b. Advise Engineer and Contractor or his superintendent immediately of the commencement of any work requiring shop drawing or sample submission if the submission has not been approved by the Engineer.

5. Review of work, rejection of defective work, inspections and tests:

a. Conduct on-site observations of the work in progress to assist Engineer in determining if the work is proceeding in accordance with the Contract Documents and that completed work will conform to the Contract Documents.

b. Report to Engineer wherever he believes that any work is unsatisfactory, faulty or defective or does not conform to the Contract Documents, or does not meet the requirements of any inspections, tests or approval required to be made or has been damaged prior to final payment; and advise Engineer when he believes work should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.

c. Verify that tests, equipment and systems start-ups and operating and maintenance instructions are conducted as required by the Contract Documents and in presence of the required personnel and that Contractor maintains adequate records thereof; observe, record and report to Engineer appropriate details relative to the test procedures and start-ups.

d. Accompany visiting inspectors representing public or other agencies having jurisdiction over the project, record the outcome of these inspections and report to Engineer.

6. Interpretation of Contract Documents: Transmit to Contractor Engineer's clarifications and interpretations of the Contract Documents.

7. Modifications: Consider and evaluate Contractor's suggestions for modifications in Drawings and Specifications and report them with recommendations to Engineer.

8. Records:

a. Maintain at the job site orderly files for correspondence, reports of job conferences, shop drawings and samples submissions, reproductions of original Contract Documents including all Addenda, change orders, field orders, additional drawings issued subsequent to the execution of the Contract, Engineer's clarifications and interpretations of the Contract Documents, progress reports, and other project related documents.

b. Keep a diary or log book, recording hours on the job site, weather conditions, data relative to questions of extras or deductions, list of visiting officials and representatives of manufacturers, fabricators, suppliers and distributors, daily activities, decisions, observations in general and specific observations in more detail as the case of observing test procedures. Send copies to Engineer.

c. Record names, addresses and telephone numbers of all contractors, sub-contractors and major suppliers of materials and equipment.

9. Reports:

   a. Furnish Engineer periodic reports as required of progress of the work and Contractor's compliance with the approved progress schedule and schedule of shop drawing submissions.

   b. Consult with Engineer in advance of scheduling major tests, inspections or start of important phases of the work.

   c. Report immediately to Engineer upon the occurrence of any accident.

10. Payment Requisitions: Review applications for payment with Contractor for compliance with the established procedure for their submission and forward them with recommendations to Engineer, noting particularly their relation to the schedule of values, work completed and materials and equipment delivered at the site but not incorporated in the work.

11. Certificates, Maintenance and Operation Manuals: During the course of the work, verify that certificates, maintenance and operation manuals and other data required to be assembled and furnished by Contractor are applicable to the items actually installed; and deliver this material to Engineer for his review and forwarding to Owner prior to final acceptance of the work.

12. Completion:

   a. Conduct final inspection in the company of Engineer, Owner and Contractor and prepare a final list of items to be completed or corrected.

   b. Verify that all items on final list have been completed or corrected and make recommendations to Engineer concerning acceptance.

C. LIMITATIONS OF AUTHORITY

Except upon written instructions of Engineer, Resident Project Representative:

1. Shall not authorize any deviation from the Contract Documents or approve any substitute materials or equipment.

2. Shall not exceed limitations or Engineer's authority as set forth in the Contract Documents.

3. Shall not undertake any of the responsibilities of Contractor, sub-contractors or contractor's superintendent, or expedite the work.

4. Shall not advise on or issue directions relative to any aspect of the means, methods, techniques, sequences or procedures of construction unless such is specifically called for in the Contract Documents.

5. Shall not advise on or issue directions as to safety precautions and programs in connection with the work.

6. Shall not authorize Owner to occupy the project in whole or in part.

7. Shall not participate in specialized field or laboratory tests.

END OF SECTION 00800

SECTION 00801

SUPPLEMENTAL CONDITIONS

CONSTRUCTION SCHEDULE

PART 1 – GENERAL

1.1 Construction Schedule: The Construction Schedule to be submitted by Contractor within the timeframe set forth in the Contract Documents shall be in CPM schedule format.

Contractor shall develop the schedule in Precedence Diagram Method (PDM) format, consistent with Contract milestones, showing activities for each discrete Contract activity to be accomplished within each Maintenance of Traffic phase. It shall include activities for deliverables and reviews in the schedule. Sufficient liaison shall be conducted and information provided to indicate coordination with utility owners having facilities within the project limits. The Construction Schedule must reflect the utility requirements included in the Contract Documents, unless changed by mutual agreement of the utility company, the Contractor, the Owner and the Project Representative. The Construction Schedule shall assign calendar day durations to each activity.

Failure to include any element of work or any activity relating to utility relocation will not relieve the Contractor from completing all work within the Contract Time at no additional contract time or cost, not withstanding prior acceptance of the schedule.

Contractor shall prepare a CPM Network Diagram in time-scale logic diagram, by week starting on Monday, grouped (banded) by work areas and sorted by early start days. Contractor shall prominently identify the critical path activities, defined as the longest continuous path of work activities and submit the Network Diagram on D size, 22 by 34 inch [559 by 864 mm] or E size, 34 by 44 inch [864 by 1,118 mm] paper.

Contractor shall submit one copy of schedule reports containing, as a minimum, identification, activity description, estimated total duration, estimated remaining duration, computed or specified early start date, computed or specified late finish date, and total float. Submit all reports on 8.5 by 11 inch [216 by 280 mm] paper, sorted as follows:

1. Activity Report: Include activities shown on the Contract Schedule listed in order of ascending activity number.

2. Float Report: Include activities shown on the Contract Schedule listed in order of the ascending total float values.

3. Early Start Report: Include activities shown on the Contract Schedule in chronological order by early start date.

4. Predecessor/Successor Report: Include activities shown on the Contract Schedule listed in order of ascending activity numbers with the associated predecessor and successor activity numbers.

5. Narrative: Explain, in narrative form, how durations were determined and describe the proposed approach for meeting interim and final completion milestone dates specified in the Contract. Include assumptions made, restraints, critical path activities, means and methods, crews planned for each operation, equipment requirements, activities requiring overtime, additional shifts, permits, coordination requirements, long lead delivery items, or other significant requirements which would affect the ability to meet the interim and final milestone dates. Failure to include in the schedule any element of work shall not excuse the Contractor from completing all work required to achieve completion.

The Project Representative will have 30 days to accept the Construction Schedule or to schedule a meeting with the Contractor to resolve any problems that prevent acceptance of the schedule. Contractor shall attend the meeting scheduled by the Project Representative, and submit a corrected Construction Schedule to the Project Representative within seven days after the meeting. The process will be continued until a Construction Schedule is accepted by the Project Representative.

The Construction Schedule may indicate a completion date in advance of the Contract completion date. However, the Owner will not be liable in any way for the Contractor's failure to complete the project prior to the Contract completion date. Any additional costs, including extended overhead incurred between the Contractor's schedule completion date and the completion of Contract Time, shall be the responsibility of the Contractor. The Contractor shall not be entitled to claim or recover any such cost from the Owner.

On each Monday prior to the monthly estimate cutoff date, submit Contract Schedule, updated to reflect actual start dates, actual finish dates, added activities, changes in sequence and days remaining, to the Projective

Representative for acceptance. Include an updated Network Diagram and computer-generated reports and a narrative as herein specified. In the narrative, address changes in duration of any activity and changes to logic of activities which were performed in a sequence different from those shown in the latest accepted Construction Schedule. Also address activities to be added to the
schedule, identification of supplemental agreements and change orders, and the incorporation of accepted schedule revisions. Any changes to the sequencing must be coordinated with the utility work shown in the plans. If the schedule provided indicates an actual or potential delay to the completion of the Contract include in the narrative a discussion of problems, causes, activities affected and describe the means and methods to be utilized to complete the project in the authorized time. Attend meetings scheduled by the Project Representative to resolve any problems that prevent acceptance of the updated

Construction Schedule, and submit revised schedules as necessary for the Project Representative's acceptance. By acceptance of the Construction Schedule, the Project Representative does not endorse or otherwise certify the validity or accuracy of the activity durations or logic utilized.

The Project Representative will withhold monthly payments due for failure of the Contractor to meet the requirements for submittal and acceptance of the Construction Schedule, including the monthly updates.

1.2 WEEKLY MEETINGS

Attend weekly meetings scheduled by the Project Representative to discuss Contract progress, near term scheduled activities, including utility relocations, problems and their proposed solutions. Submit a Two-Week Planning Schedule at each weekly meeting, showing the items of work planned for the next two weeks. Develop the schedule in Bar Chart format, identifying current and planned activities and related Construction Schedule work activities, including subcontractor work. Designate all activities that are controlling work items as determined by the currently accepted Construction Schedule.

1.3 FLOAT

Float is not for the exclusive use or benefit of either the Owner or the Contractor.
The Project Representative will grant time extensions only to the extent that time adjustments to the affected activities exceed the total float along the affected paths of the currently accepted Construction Schedule at the time of delay. Submit a network diagram, total float report a narrative report to support any request for additional Contract time.

1.4 PERFORMANCE OF WORK

By submitting a schedule the Contractor is making a positive assertion that the Project will be constructed in the order indicated on the Construction Schedule. Contractor shall prosecute the work in accordance with the latest accepted Construction Schedule. Any costs associated with meeting milestones and completing the Project within the authorized Contract Time will be borne solely by the Contractor.

1.5 AS-BUILT SCHEDULE

As a condition for the release of any retainage, submittals of as-built schedules which describes the actual order and start and stop times for all activities by the Contractor is required.

END OF SECTION 00801

SECTION 00802

SUPPLEMENTAL CONDITIONS

PREVENTION, CONTROL AND ABATEMENT
OF EROSION AND WATER POLLUTION

PART 1 – GENERAL

1.1 PRECONSTRUCTION REQUIREMENTS

At the Preconstruction Conference, Contractor shall provide to the Project Representative an Erosion Control Plan meeting the requirements or special conditions of all permits authorizing project construction and the contract requirements.

When a DEP generic permit is issued, the Contractor's Erosion Control Plan shall be prepared to accompany the Stormwater Pollution Prevention Plan (SWPPP). Contractor shall ensure the Erosion Control Plan includes procedures to control off-site tracking of soil by vehicles and construction equipment and a procedure for cleanup and reporting of non-storm water discharges, such as contaminated groundwater or accidental spills. Contractor shall not begin any soil disturbing activities until receipt of Project Representative's written approval of the Contractor's Erosion Control Plan, including required signed certification statements.

Contractor's failure to sign any required documents or certification statements will be considered a default of the Contract. Any soil disturbing activities performed by Contractor or any of its subcontractors without the required signed documents or certification statements may be considered a violation of the DEP Generic Permit.

When the SWPPP is required, Contractor shall prepare the Erosion Control Plan in accordance with the planned sequence of operations and present the Erosion Control Plan in a format acceptable to the Project Representative. The Erosion Control Plan shall include, but not be limited to, descriptions of the following items or activities:

(1) For each phase of construction operations or activities, supply the following information:
    (a) Locations of all erosion control devices
    (b) Types of all erosion control devices
    (c) Estimated time erosion control devices will be in operation
    (d) Monitoring schedules for maintenance of erosion control devices
    (e) Methods of maintaining erosion control devices
    (f) Containment or removal methods for pollutants or hazardous wastes
(2) The name and telephone number of the person responsible for monitoring and maintaining the erosion control devices.

(3) The Erosion Control Plan submitted to the Project Representative for Engineer approval.

Contractor shall not begin construction activities until the Erosion Control Plan receives written approval from the Engineer. Contractor shall comply with the approved Erosion Control Plan.

1.2 BALES

Contractor shall provide baled hay or straw having minimum dimensions of 14 by 18 by 36 inches [350 by 450 by 900 mm] at the time of placement. Contractor shall construct baled hay or straw dams according to details shown in the plans or as directed by the Project Representative to protect against downstream accumulations of sediment.

Contractor shall use natural baled hay or straw or synthetic hay bales as an alternative to natural baled hay or straw. Synthetic hay bales should be interlocking, have pre-made stake holes, made of synthetic fibers (polypropylene, nylon, polyester) that meet the Environmental Protection Agency's TCLP standards, and be produced into a filter medium with needle-punches fibers. Contractor shall wash out and remove sediment deposits when the deposits reach ½ the height of the reusable synthetic hay bale or as directed by the Project Representative. Contractor shall dispose of the washout in an area approved by the Project Representative. Synthetic hay bales that have had sediment deposits removed may be reinstalled on the project as approved by the Project Representative.

1.3 ARTIFICIAL COVERINGS

General: Contractor shall install artificial coverings in locations where temporary protection from erosion is needed. Two situations occur that require artificial coverings. The two situations have differing material requirements, which are described below.

(1) During temporary pauses in construction caused by inclement weather or other circumstances, use artificial coverings composed of natural or synthetic fiber mats, plastic sheeting, or netting as protection against erosion, when directed by the Project Representative,. Remove the material when construction resumes.

(2) While permanent grassing is being established, use artificial coverings as erosion control blankets, at locations shown in the plans, to facilitate plant growth, in accordance with FDOT specification 104-6.4.13.

1.4 MAINTENANCE AND INSPECTION

Contractor shall provide routine maintenance of permanent and temporary erosion control features, at no additional Contract expense, until the project is complete and accepted. If reconstruction of such erosion control features is necessary due to the Contractor's negligence or carelessness or, in the case of temporary erosion control features, failure by the Contractor to install permanent erosion control features as scheduled, the Contractor shall replace such erosion control features at no additional Contract expense.

Contractor shall inspect all erosion control features at least once every seven calendar days and within 24 hours of the end of a storm of 0.50 inches [12 mm] or greater. Contractor shall maintain all erosion control features as required in the SWPPP, Contractor's Erosion Control Plan and as specified in the State of Florida Department of Environmental Protection Generic Permit for Stormwater Discharge from Large and Small Construction Activities.

1.5 MOWING

The Project Representative may require mowing by Contractor of areas within the limits of the project as deemed necessary by the Project Manager. Contractor shall mow these designated areas within seven days of receiving such order from the Project Representative. Contractor shall remove and properly dispose of all litter and debris prior to the mowing operation. Contractor shall use conventional and specialized equipment along with hand labor to mow the entire area including slopes, wet areas, intersections, and around all appurtenances. Contractor shall mow all areas to obtain a uniform height of 6 inches [150 mm], unless directed otherwise by the Project Representative.

END OF SECTION 00802

SECTION 00803

SUPPLEMENTAL CONDITIONS

CONTRACTOR QUALITY CONTROL
GENERAL REQUIREMENTS – PERSONNEL QUALIFICATIONS

PART 1 – GENERAL

1.1 Personnel Qualifications

General: Contractor shall provide qualified personnel for sampling, testing, and inspection of materials and construction activities. Contractor shall ensure that qualifications are maintained during the course of sampling, testing, and inspection.

Quality Control Manager: Contractor shall designate a Quality Control ("QC") Manager who has full authority to act as the Contractor's agent to institute any and all actions necessary for the successful implementation of the QC Plan required by FDOT specifications. The QC Manager must speak and understand English. The QC Manager must be on-site at the project on a daily basis or always available upon four hours notice from the Project Representative to administer the QC Plan. Successful implementation of the QC Plan includes, but is not limited to, administering, implementing, monitoring, and as necessary, adjusting the processes to ensure compliance with the Contract Documents. Contractor shall ensure that the QC Manager is qualified as such through the FDOT Construction Training/Qualification Program.

Under the direction of the QC Manager, and using FDOT standard forms, summarize the daily QC activities including testing and material sampling. Contractor shall make copies of the completed forms available daily for Project Representative review. Contractor shall maintain all Quality Control related reports and documentation for a period of three years from final acceptance of the project.

Worksite Traffic Supervisor: Contractor shall provide a Worksite Traffic Supervisor who is responsible for initiating, installing, and maintaining all traffic control devices as required in the Contract Documents. Contractor shall ensure that the Worksite Traffic Supervisor is certified in the advanced training category by an approved training Provider as posted on the FDOT's website at the following URL address: www.dot.state.fl.us/rddesign/MOT/MOT.htm. Contractor shall use approved alternate Worksite Traffic Supervisors when necessary.

Flagger: Contractor shall provide trained flaggers to direct traffic where one-way operation in a single lane is in effect and in other situations as required. The Worksite

Traffic Supervisor or others as approved by the Department will provide training for flaggers.

Signal Installation Inspector: Contractor shall provide an inspector, trained and certified by the International Municipal Signal Association (IMSA) as a Traffic Signal Inspector, to perform all signal installation inspections. Contractor shall use only the FDOT approved signal inspection report forms during the signal inspection activities. Contractor shall ensure all equipment, materials, and hardware is in compliance with FDOT Specifications and verify that all equipment requiring certification is listed on the FDOT's Approved Product List (APL). Contractor shall provide the completed signal inspection report form(s), certified by the IMSA Traffic Signal Inspector to the Project Representative.

The FDOT's approved inspection report forms are available at the following URL: www.dot.state.fl.us/trafficoperations/.

END OF SECTION 00803

NAME OF CONTRACTOR PROJECT NUMBER

INSTRUCTIONS

This certification is required pursuant to executive Order 11246 (30 F. R. 12319-25). The implementing rules and regulations provide that any bidder or prospective contractor, or any of their proposed subcontractors, shall state as an initial part of the bid or negotiations of the contract whether it has participated in any previous contract or subcontract subject to the equal opportunity clauses; and, if so, whether it has filed all compliance reports due under applicable instructions.

Where the certification indicates that the contractor has not filed a compliance report due under applicable instructions, such contractor shall be required to submit a compliance report before the owner approves the subcontract or permits work to begin under the subcontract.

CONTRACTORS CERTIFICATION

NAME AND ADDRESS OF CONTRACTOR (Include Zip Code)

1. Bidder has participated in previous contract subject to the Equal Opportunity Clause. Yes [ ] No [ ]

2. Compliance reports were required to be filed in connection with such contract or contractor. Yes [ ] No [ ]

3. Bidder has filed all compliance reports due under applicable instructions, including SF-100. Yes [ ] No [ ]

4. Have you ever been or are you being considered for sanction due to violation Executive Order 11246, as amended? Yes [ ] No [ ]

NAME AND TITLE OR SIGNER (Please type):

SIGNATURE DATE SF950.2
SAMPLE

PART 1 – GENERAL

1.1 CONSTRUCTION AREAS

CONTRACTOR shall:

A. Limit use of the construction areas for work and for storage to allow for:
   1. Work by other contractors;
   2. Utilities Use;
   3. Owner use; and
   4. Public use.

B. Coordinate use of work site under direction of PROJECT REPRESENTATIVE.

C. Assume full responsibility for the protection and safekeeping of materials and products under this Contract, stored on or off the site.

D. Move any stored products, under CONTRACTOR'S control, which interfere with operations of the OWNER, Utilities, or any separate contractor.

E. Obtain and pay for the use of additional lay down areas needed for operations.

1.2 SPECIFICATIONS

A. All work called for in the Specifications applicable to this Contract, but not shown on the plans in their present form, or vise versa, shall be of like effect as if shown or mentioned in both. Work not specified in either the plans or the Specifications, but involved in carrying out their intent or in the complete and proper execution of the work is required and shall be performed by the CONTRACTOR as though it were specifically delineated or described.

The apparent silence of the specifications as to any detail, or the apparent omission from them of a detailed description concerning any work to be done and materials to be furnished, shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of the best quality is to be used, and interpretation of these specifications shall be made upon that basis. The inclusion of the General Requirements (or work specified elsewhere) in the General part of the specifications is only for the convenience of the CONTRACTOR, and shall not be interpreted as a complete list of related Specification Sections.

1.3 WORK PROGRESS

A. The CONTRACTOR shall construct the work as shown on the drawings and provide equipment which will be efficient, appropriate and large enough to secure a satisfactory quality of work and a rate of progress which will insure the completion of the work within the Contract Time. If at any time project execution appears to be inefficient, inappropriate or insufficient for securing the quality of work required or for producing the necessary rate of progress, the PROJECT REPRESENTATIVE may request the CONTRACTOR to increase the efficiency, change the character or increase the project equipment and the CONTRACTOR shall
conform to such request. Failure of the PROJECT REPRESENTATIVE to give such request shall in no way relieve the CONTRACTOR of their obligations to secure the quality of the work and rate of progress required.

1.4 PRIVATE LAND

A. The CONTRACTOR shall not enter or occupy private land outside of the construction site or easements, except by written permission of the land owner.

1.5 WORK LOCATIONS

A. Structures, pipelines, and equipment shall be located substantially as indicated on the Drawings, but the ENGINEER through the PROJECT REPRESENTATIVE reserves the right to make such modifications in locations as may be found desirable to avoid interference with existing structures or for other reasons.

1.6 OPEN EXCAVATIONS

A. All open excavations shall be adequately safeguarded by CONTRACTOR by providing temporary barricades, caution signs, lights and other appropriate means to prevent accidents to persons and damage to property. The CONTRACTOR shall, at its own expense, provide suitable and safe bridges and other crossings for accommodating travel by pedestrians and workmen. Bridges provided for access during construction shall be removed when no longer required. The length or size of excavation will be controlled by the particular surrounding conditions. The PROJECT REPRESENTATIVE may require special construction procedures such as limiting the length of the open trench, prohibiting stacking excavated material in the street or requiring that the trench shall not remain open overnight.

B. The CONTRACTOR shall take precautions to prevent injury to the public due to open trenches. All trenches, excavated material, equipment, or other obstacles which could be dangerous to the public shall be properly signed and appropriately barricaded at all times and well lighted.

C. The CONTRACTOR shall adhere to the requirements of Chapter 553 Part II of

the Florida Statutes entitled Trench Safety Act, and O.S.H.A. Excavation Safety Standards 29 CFRs 1926.650 Subpart P.

1.7 TEST PITS

A. Test pits for the purpose of locating all known and unknown underground pipelines, utilities, or structures in advance of the construction shall be excavated and backfilled by the CONTRACTOR at the direction of the PROJECT REPRESENTATIVE. Test pits shall be backfilled immediately after their purpose has been satisfied and the surface restored and maintained in a manner satisfactory to the PROJECT REPRESENTATIVE. No separate payment will be made for such test pit obligations.

1.8 CARE AND PROTECTION OF PROPERTY

A. The CONTRACTOR shall be responsible for the preservation of all public and private property and shall use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work on the part of the CONTRACTOR, such property shall be restored by the CONTRACTOR, at its expense, to a condition similar or equal to that existing before the damage was done, or make good the damage in other manner acceptable to the OWNER and PROJECT REPRESENTATIVE.

B. All sidewalks, mailboxes, and driveways which are disturbed by the CONTRACTOR's operations shall be restored to their original construction or better and in accordance with best practice and the requirements of the Contract Documents.

C. Along the location of this work, all fences, walks, bushes, trees, shrubbery, and other physical features shall be protected and restored in a thoroughly workmanlike manner. Fences and other features removed by the CONTRACTOR shall be replaced in the location and by the date indicated by the PROJECT REPRESENTATIVE. All grass areas beyond the limits of construction which have been damaged by the CONTRACTOR shall be regraded, seeded, and re-established as before damage.

D. Trees close to the work shall be boxed or otherwise protected against injury. The CONTRACTOR shall trim all branches that are liable to be damaged because of construction operations, but in no case shall any tree be cut or removed without prior notification or written approval of the PROJECT REPRESENTATIVE. All injuries to bark, trunk, limbs, and roots of trees shall be repaired by dressing, cutting, and painting according to appropriate methods, using only appropriate tools and materials. All landscaping to be removed shall be documented and replaced with like kind or better and re-established as before removal. All palm trees shown on plans shall be spaded out, protected, temporarily stored, and

replaced to their same location(s).

E. The protection, removal, and replacement of existing physical features along the line of work shall be a part of the work under the Contract, and all costs in connection therewith shall be included in the lump sum prices.

1.9 PROTECTION AND RELOCATION OF EXISTING STRUCTURES AND UTILITIES

A. The CONTRACTOR shall assume full responsibility for the protection of all buildings, structures, and utilities, public or private, including poles, signs, services to buildings, utilities in the street, gas pipes, water pipes, hydrants, sewers, storm drains and electric and telephone cables, whether or not they are shown on the Drawings. The CONTRACTOR shall carefully support and protect all such structures and utilities from injury of any kind. Any damage resulting from the CONTRACTOR's, or any of its subcontractors, operations shall be repaired at its expense.

B. The CONTRACTOR shall bear full responsibility for obtaining all locations of underground structures and utilities (including existing water services, drain lines and sewers). Services to buildings shall be maintained, and all costs or charges resulting from damage thereto shall be paid by the CONTRACTOR.

C. Protection and temporary removal and replacement of existing utilities and structures shall be a part of the work under the Contract and all costs in connection therewith shall be included in the lump sum price.

D. The CONTRACTOR shall be responsible to maintain water, telephone, power, cable TV, sewer, gas and other related utilities throughout construction at no additional cost to OWNER.

E. The CONTRACTOR shall fully cooperate with all private and public utilities during the installation of new facilities, or relocation of existing facilities. The CONTRACTOR shall coordinate its work accordingly and shall have no claim except for time extension for delays associated with the proposed utility improvements.

1.10 WATER FOR CONSTRUCTION PURPOSES

A. In locations where public water supply is available, the CONTRACTOR may purchase water for construction purposes.

B. The express approval of the OWNER shall be obtained before water is used. Waste of water by the CONTRACTOR shall be sufficient cause for withdrawing the privilege of unrestricted use. Hydrants shall only be operated under the supervision of the appropriate utility personnel.

C. All water drawn from a public water supply shall be metered using a meter supplied by the appropriate utility, and CONTRACTOR shall pay Owner based on water usage according to such metering.

1.11 MAINTENANCE OF FLOW

A. The CONTRACTOR shall at its own cost, provide for the flow of sewers, drains and water courses interrupted during the progress of the work, and shall immediately cart away and remove all offensive matter. The entire procedure of maintaining existing flow shall be fully coordinated with the PROJECT REPRESENTATIVE well in advance of the interruption of any flow.

1.12 CLEANUP AND DISPOSAL OF EXCESS MATERIAL

A. During the course of the work, the CONTRACTOR shall keep the construction site in a reasonably clean and neat condition. The CONTRACTOR shall dispose of all residue resulting from the construction work and, at the conclusion of the work, shall remove and haul away any surplus excavation, broken pavement, lumber, equipment, temporary structures and any other refuse remaining from the construction operations and shall leave the entire site of the work in a neat, orderly, and restored condition.

B. In order to prevent environmental pollution arising from the construction activities related to the performance of this Contract, the CONTRACTOR and its subcontractors shall comply with all applicable Federal, State and local laws and regulations concerning waste material disposal, as well as any other specific requirements stated elsewhere in the Specifications or the Contract Documents.

1.13 MAINTENANCE OF ACCESS

A. Portions of the work are located in developed areas requiring access for fire, police, emergency, and other City, State, or Federal agencies to be provided and at least one free lane must be available at all times for all traffic. The CONTRACTOR shall arrange operations in these areas to meet these requirements and secure approval or operating procedures from City of Panama City Beach, or Florida Department of Transportation as the case may be.

1.14 MAINTENANCE OF TRAFFIC

A. Open pits, trenches, unpaved streets, debris, or other obstructions due to construction that will prevent the normal flow of traffic during an extended construction stoppage, for any reason, shall be minimized. In the event an extended construction stoppage is found to be necessary, CONTRACTOR shall, at its own expense, maintain normal traffic flow during extended construction stoppage.

B. All excavated material shall be placed so that vehicular and pedestrian traffic may be maintained at all times. If construction operations cause traffic hazards, the CONTRACTOR shall repair the road surface, provide temporary roadways, erect wheel guards or fences, or take other satisfactory measures for safety, subject to approval by the PROJECT REPRESENTATIVE.

C. Detours around construction areas will be subject to the approval of the PROJECT REPRESENTATIVE. Where detours are permitted the CONTRACTOR shall provide all necessary barricades and signs as required by the PROJECT REPRESENTATIVE to divert the flow of traffic. While traffic is detoured, the CONTRACTOR shall expedite construction operations and the PROJECT REPRESENTATIVE will strictly control periods when traffic is being detoured.

1.15 CONNECTION TO WORK BY OTHERS

A. If construction by others occurs at the same time and in the same areas as work being done under this Contract, the CONTRACTOR shall conduct operations as follows:
   1. Force Mains and Water Mains
      a. If shown on the Drawings, pipelines constructed under this Contract may be connected to pipelines to be built by others.
      b. Pipelines built under this Contract will be connected to pipelines constructed by others by removing the plugs at both ends of the pipeline segment and making the connection.
      c. If the pipelines have not been constructed by others, the pipeline under this Contract shall be laid to the required line and grade, terminated with a plugged connection, precisely at the location of the connection indicated on the Drawings, and then backfilled and marked with a stake and the connection made later as specified in (b) above.

1.16 PROTECTION OF CONSTRUCTION AND EQUIPMENT

A. All newly constructed work shall be carefully protected from any injury or damage. CONTRACTOR shall not allow any wheeling or walking or placing of heavy loads on any newly constructed Work and all portions injured or damaged shall be reconstructed by the CONTRACTOR at its own expense.

B. All structures shall be protected in a manner approved by the PROJECT REPRESENTATIVE. If, in the final inspection of the work, any defects, faults or omissions are found, the CONTRACTOR shall cause the same to be repaired or removed and replaced by proper materials and workmanship without extra compensation by OWNER for the materials and labor required. Further, the

CONTRACTOR shall be fully responsible for the satisfactory maintenance and repair of the construction and other work undertaken herein, for at least the guarantee period described in the Contract.

C. The CONTRACTOR shall take all necessary precautions to prevent damage to any structure due to water pressure during and after construction and until such structure is accepted and taken over by the OWNER.

D. The CONTRACTOR shall maintain the work during construction and until the project is accepted. Such maintenance shall constitute continuous and effective work prosecuted on a daily basis, with adequate equipment and forces in order that the roads or structures are kept in satisfactory condition at all times. In the case of a contract for the placing of a previously constructed course or subgrade, the CONTRACTOR shall maintain the previous course or subgrade during all construction operations.

All cost of maintenance work during construction and before the project is accepted shall be included in the contract price and the CONTRACTOR will not be paid an additional amount for such work.

1.17 WORKING HOURS

A. Regular working hours are defined as up to ten hours per day, Monday through Friday, beginning no earlier than 7:00 A.M. and ending no later than 5:00 P.M., excluding holidays. The CONTRACTOR shall not work on holidays. The Contract Time shall not be extended due to holidays falling within the Contract Time. All Work performed by CONTRACTOR is subject to observation at all times by OWNER and its agents, including the PROJECT REPRESENTATIVE. Requests to work outside of the defined regular working hours must be submitted in writing to the PROJECT REPRESENTATIVE, at least 48 hours prior to any proposed weekend work or scheduled extended workweeks. Periodic unscheduled overtime on weekdays will be permitted provided that two hours notice is provided to the PROJECT REPRESENTATIVE. Maintenance of the CONTRACTOR’s equipment and cleanup may be performed during hours other than regular working hours.

B. Florida Department of Transportation Standard Specifications for Road and Bridge Construction, Subarticle 8-6.4 (Page 78-79) regarding “Suspension of Contractor’s Operations – Holidays” applies to this Project.

C. CONTRACTOR shall reimburse the OWNER for additional engineering and/or inspection costs incurred as a result of overtime work in excess of the regular working hours. At OWNER’S option, overtime costs may either be deducted from the CONTRACTOR's monthly payment request or deducted from the CONTRACTOR's retention prior to release of final payment.

Engineering/Inspection costs shall be calculated at the following rates:

Professional Engineer	$_____
Project Engineer	$_____
Sr. Field Representative	$_____
Field Representative	$_____

1.18 MEETINGS

A. Immediately after awarding the Contract but before construction work begins, the CONTRACTOR shall attend a preconstruction conference as scheduled by the PROJECT REPRESENTATIVE to review construction aspects of the project and to provide required preconstruction submittals and other documentation.

B. In addition, the CONTRACTOR shall attend weekly meetings scheduled by the PROJECT REPRESENTATIVE to discuss Contract progress, near term scheduled activities, including utility relocations, problems and their proposed solutions. The CONTRACTOR shall submit a two-week planning schedule at each weekly meeting, showing the work planned for the next two weeks in bar chart format, identifying current and planned activities and related contract schedule work activities, including subcontractor work. The planning schedule shall designate all activities that are controlling work items as determined by the currently accepted contract schedule.

C. The CONTRACTOR shall also attend other meetings as may be required by OWNER or PROJECT REPRESENTATIVE from time to time to discuss, coordinate and resolve specific issues, problems, change orders or disputes.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION 01046

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

The CONTRACTOR shall:

A. Obtain and pay for any and all permits and licenses as specified in the General Conditions, except as otherwise provided herein, and in effect at the time of bidding.

B. Schedule all inspections and obtain all written approvals of the agencies required by the permits and licenses.

C. Comply with all construction related conditions specified in each of the permits and licenses.

A copy of the permits obtained by the OWNER will be furnished to CONTRACTOR.

1.2 PERMITS BY OWNER

A. The OWNER will acquire the following permits when applicable:
1. Florida Department of Environmental Protection (FDEP) Permit to Construct a Fishing Pier In the Gulf

1.3 CONSTRUCTION PERMIT

A. CONTRACTOR shall be responsible for acquiring all construction permits including local building permits and any permits necessary to comply with the Northwest Florida Water Management District ("NWFWMD") dewatering plan and the National Pollutant Discharge Elimination System ("NPDES") stormwater discharge from construction site if required.

B. The dewatering plan shall include sequence of excavation, discharge locations, sediment sump, turbidity control, erosion control, and turbidity monitoring points.

1.4.1 NPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION SITE

A. The CONTRACTOR shall comply with stormwater discharge regulations and Amendments to the Clean Water Act (33 U.S.C. 1251 et seq.).

On September 17, 1992, the State of Florida certified the general permit for stormwater discharges from construction sites for use in Florida. This project is

governed by regulations under this general permit and CONTRACTOR shall comply with all such regulations.

B. Under these regulations, construction projects that disturb more than five acres must have and comply with a stormwater pollution prevention plan. CONTRACTOR shall complete and sign a stormwater pollution prevention plan prior to initiation of any construction activities on the site.

C. The CONTRACTOR shall ensure that all employees and subcontractors implement the specified erosion control practices to properly manage stormwater.

PART 2 - PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION 01065

PART 1 - GENERAL

1.1 REQUIREMENT

A. Except as modified by these Contract Documents, or applicable codes which establish stricter standards, the Florida Department of Transportation, Standard Specifications for Road and Bridge Construction, 2004 shall apply.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION 01095

PART 1 - GENERAL

1.1 HURRICANE PREPAREDNESS PLAN

A. Within 20 days of the date of Notice to Proceed, the CONTRACTOR shall submit to the PROJECT REPRESENTATIVE a Hurricane Preparedness Plan. The plan shall outline the necessary measures which the CONTRACTOR proposes to perform at no additional cost to the OWNER in case of a hurricane warning. Such measures shall be in accordance with local and state requirements.

B. In the event of inclement weather, CONTRACTOR will, and will cause Subcontractors to, protect carefully the Work and materials against damage or injury from the weather. If, in the opinion of PROJECT REPRESENTATIVE, any portion of Work or materials are damaged or injured by reason of failure on the part of the CONTRACTOR or Subcontractors to so protect the Work, such Work and materials shall be removed and replaced at the expense of CONTRACTOR.

1.2 CONSTRUCTION CONDITIONS AND SUBSURFACE INVESTIGATION

A. The CONTRACTOR shall strictly adhere to the specific requirements of the government unit(s) or agency (ies) having jurisdiction over the Work. Wherever there is a difference in the requirements of a jurisdictional body and these Specifications, the more stringent shall apply.

B. The CONTRACTOR shall be responsible for having determined, prior to bid submission, the nature and location of the Work, the conformation of the ground, the character and quality of the substrata, the types and quantity of materials to be encountered, the nature of the groundwater conditions, the character of equipment and facilities needed preliminary to and during the prosecution of the Work, the general and local conditions and all other matters which can in any way affect the Work under this Contract. The prices established for the Work to be done will reflect all costs pertaining to the Work. Any claims for extras based on substrata, groundwater table, and other such conditions will not be allowed.

1.3 PUBLIC NUISANCE

A. The CONTRACTOR shall not create a public nuisance including, but not limited to, encroachment on adjacent lands, flooding of adjacent lands, excessive noise, or odor.

B. No extra charge may be made for time lost due to work stoppage resulting from the CONTRACTOR’s creation of a public nuisance.

1.4 RELOCATIONS

A. The CONTRACTOR shall be responsible for the relocation of structures, including, but not limited to, light poles, signs, sign poles, fences, piping, conduits and drains that interfere with the positioning of the work as set out on the Drawings. The cost of all such relocations shall be included in the Contract Price.

1.5 WORK ON PRIVATE PROPERTY

A. The CONTRACTOR shall maintain construction operations within the presently existing road right-of-way and established easements throughout the Project. In the event that it becomes necessary or advisable to operate beyond the limits of the existing right-of-way, established easements and Right of Entry Agreements, the CONTRACTOR shall be responsible for securing written agreements with the property owners. Immediately after contract award, the CONTRACTOR shall submit to the PROJECT REPRESENTATIVE a listing of those areas in which it is deemed necessary to work outside of the road right-of-way, easements, or agreements. The listing shall be subject to the approval of the PROJECT REPRESENTATIVE and as construction areas are secured, copies of all written agreements shall be placed on file with the PROJECT REPRESENTATIVE.

B. The CONTRACTOR shall be responsible for any encroachments on rights- of-way or property of the public or adjoining property owners caused by its operations and shall indemnify, defend and hold the OWNER, ENGINEER and PROJECT REPRESENTATIVE harmless because of any encroachments. In this regard, the CONTRACTOR shall, without extra cost to the OWNER, move any Work or that portion of any Work that encroaches on the property of others, or that is built beyond legal building or setback limits, and the CONTRACTOR shall rebuild the affected Work or portion of Work at the proper location and in full compliance with the Contract Documents.

C. Before final payment will be authorized, the CONTRACTOR will be required to furnish the OWNER with written releases from property owners or public agencies where side agreements or special easements have been made by the CONTRACTOR or when the CONTRACTOR'S operations, for any reason, have not been kept within the construction right-of-way, easements or Right of Entry Agreements by the OWNER.

D. In the event written releases required in the above paragraph cannot be secured, the CONTRACTOR shall inform the PROJECT REPRESENTATIVE of the reasons for failure to do so. The PROJECT REPRESENTATIVE in conjunction with the OWNER, will then examine the Site and direct the CONTRACTOR to complete any Work that may be necessary to satisfy the terms of the permit or easement. Should the CONTRACTOR refuse to do the Work, the OWNER reserves the right to have the Work done by separate contract and deduct the cost of same from moneys

due the CONTRACTOR, or require the CONTRACTOR to furnish a bond in a sum satisfactory to the OWNER to cover any legal claims for damages. When the PROJECT REPRESENTATIVE is satisfied that the Work has been completed in accordance with the Contract Documents, permits and/or agreements, the OWNER reserves the right to waive the requirement of obtaining the statement if the CONTRACTOR'S failure to obtain such statement is due to the grantor's refusal to sign and this refusal is not based upon any legitimate claims that the CONTRACTOR has failed to fulfill any contract permit or agreement requirements, or if the CONTRACTOR is unable to contact, or has undue hardship in contacting, the grantors.

1.7 DAILY REPORTS

A. The CONTRACTOR shall submit daily reports of construction activities, including any activities that may occur on non-work days. The report shall include:

1. Weather conditions;
2. Manpower, number of men by craft;
3. Equipment on the project;
4. Major deliveries;
5. Activities work with reference to the CPM schedule activity numbers;
6. New problems; and
7. Other pertinent information

B. A similar report shall be submitted for/by each Subcontractor.

C. The reports shall be submitted to the PROJECT REPRESENTATIVE within two days of the respective report date. Each report shall be signed by the CONTRACTOR'S Superintendent or Project Manager.

D. Information provided on the daily report shall not constitute notice of delay or any other notice required by the CONTRACT DOCUMENTS. Notice shall be as required therein.

1.8 EMERGENCIES

A. The CONTRACTOR shall at all times after regular working hours, including weekend and holidays, maintain a telephone where the CONTRACTOR's representative can be reached on an emergency basis. The CONTRACTOR or CONTRACTOR's representative shall be prepared to act to correct conditions on the Site deemed to constitute an emergency by either the OWNER, the PROJECT REPRESENTATIVE, or local authorities and is obligated to act to prevent threatened damage, injury or loss without special instructions from the OWNER, PROJECT REPRESENTATIVE, or ENGINEER. The CONTRACTOR shall give the PROJECT REPRESENTATIVE prompt written notice of all significant changes in the Work or deviations from the Contract Documents caused thereby. If a condition on the Site requires attention after working hours, either the OWNER,

PROJECT REPRESENTATIVE, or local authority shall call the CONTRACTOR or representative at the emergency telephone number, identify themselves and describe the emergency condition. The CONTRACTOR is expected to dispatch personnel and equipment to adequately institute corrective measures within two (2) hours. If for some reason the CONTRACTOR or representative cannot be reached at the emergency number within two hours, the OWNER shall have the right to immediately initiate corrective measures, and the cost shall be borne by the CONTRACTOR.

B. In the event that the CONTRACTOR fails to maintain safe job conditions and traffic conditions, including, but not limited to, trench settlement and hazardous storage of backfill or construction materials, the OWNER, after failure of the CONTRACTOR to commence substantial steps at the job site to rectify the situation within two (2) hours of the time the CONTRACTOR has been notified of the unsafe condition, may hire guards, take such precautions, make such repairs and take any other steps which the OWNER or the PROJECT REPRESENTATIVE, in their sole discretion, consider necessary to protect the property, persons, or the OWNER. The cost of any of these precautions, guards, or steps shall be deducted from the payments due the CONTRACTOR, and the costs for such services, work and material shall be calculated at prevailing market rates.

1.9 PROPERTY DAMAGES

In the event of any indirect or direct damage to public or private property caused in whole or in part by an act, omission or negligence on the part of the CONTRACTOR, any of its Subcontractors, any of its Sub-subcontractors or anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable, the CONTRACTOR shall at no additional cost to OWNER promptly remedy and restore such property to a condition equal to or better than that existing before such damage was done. The CONTRACTOR shall perform such restoration by "underpinning", repairing, rebuilding, replanting, or otherwise restoring as may be required by the PROJECT REPRESENTATIVE, or shall correct such damage in a satisfactory and acceptable manner to the OWNER or the PROJECT EPRESENTATIVE. In case of failure on the part of the CONTRACTOR to promptly restore such property or correct such damage, the OWNER may, upon five (5) calendar days written notice, proceed to repair, rebuild or otherwise restore such property as may be necessary and the cost thereof, or a sum sufficient in the judgment of the OWNER to reimburse the owners of the property so damaged, will be deducted from any monies due or to become due the CONTRACTOR under the Contract.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION 01100

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. The Work covered by this Section consists of furnishing all labor, materials and equipment and performing all Work required for the prevention of environmental pollution in conformance with applicable laws and regulations, during and as the result of construction operations under this Contract. For the purpose of this Specification, environmental pollution is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorable alter ecological balances of importance to human life; affect other species of importance to man; or degrade the utility of the environment for aesthetic and/or recreational purposes; or violate any applicable environmental laws, rules, codes or regulations.

B. The control of environmental pollution requires consideration of air, water and land, and involves management of noise, odor, and solid waste, as well as other pollutants.

C. These Specifications are intended to ensure that construction is achieved with a minimum of disturbance to the existing ecological balance between a water resource and surroundings. These are general guidelines. It is the CONTRACTOR'S responsibility to determine the specific construction techniques to meet these guidelines.

D. The CONTRACTOR shall secure, if required, at its own cost, a surface water management permit from the Northwest Florida Water Management District and approvals from Mexico Beach for any construction dewatering activities associated with this project.

1.2 APPLICABLE REGULATIONS

A. The CONTRACTOR shall comply with all applicable Federal, State and local laws and regulations concerning environmental pollution control and abatement.

1.3 NOTIFICATIONS

A. The OWNER through the PROJECT REPRESENTATIVE will notify the CONTRACTOR in writing immediately following identification of any non-compliance with the foregoing provisions or of any environmentally objectionable acts and any required corrective action to be taken by CONTRACTOR. State or local agencies responsible for verification of certain aspects of the environmental

protection requirements may notify the CONTRACTOR of any non-compliance with State or local requirements. The CONTRACTOR shall, after receipt of such notice from the regulatory agency shall immediately notify the PROJECT REPRESENTATIVE in writing and immediately take correction action. If the CONTRACTOR fails or refuses to comply promptly, the OWNER may issue an order stopping all or part of the Work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made the subject of a claim for extension of time or for excess costs or damages by the CONTRACTOR unless it is later determined that the CONTRACTOR was in compliance and subject to the other terms of the Contract Documents.

1.4 IMPLEMENTATION

A. Prior to commencement of the Work, the CONTRACTOR shall meet with the PROJECT REPRESENTATIVE to develop mutual understandings relative to compliance with this specification and administration of the environmental pollution control program.

B. The CONTRACTOR shall remove temporary environmental control features, when approved by the PROJECT REPRESENTATIVE, and incorporate permanent control features into the Project at the earliest practicable time, consistent with the approved construction schedule.

1.5 EROSION CONTROL

A. The CONTRACTOR shall ensure sufficient precautions are taken during construction to minimize the run-off of polluting substances such as silt, clay, fuels, oils, bitumens, calcium chloride, or other polluting materials harmful to humans, fish, or other life, into the supplies and surface waters of the State. Control measures must be adequate to assure that turbidity in the receiving water will not be increased more than 10 nephelometric turbidity units (NTU), or as otherwise required by the State or other controlling body, in water used for public water supply or fish unless limits have been established for the particular water. In surface water used for other purposes, the turbidity must not exceed 25 NTU unless otherwise permitted. Special precautions shall be taken in the use of construction equipment to prevent operations which promote erosion.

Erosion evident within the limits of construction shall be the responsibility of the CONTRACTOR during the full term of the Contract and for the full (1) year guarantee period. Areas subject to erosion during this time shall be fully restored to original or design conditions (as applicable) within 10 days of notice to the CONTRACTOR.

B. The CONTRACTOR shall provide positive means of erosion control such as shallow ditches around construction to carry off surface water. Erosion control measures, such as siltation basins, hay check dams, mulching, jute netting and other equivalent techniques, shall be used as appropriate. Flow of surface water into excavated areas shall be prevented. Ditches around construction area shall be used to carry away water resulting from dewatering of excavated areas. At the completion of the Work, ditches shall be backfilled and the ground surface restored to original condition.

C. The CONTRACTOR shall schedule and conduct all Work in a manner that will minimize the erosion of soils in the area of the Work. Erosion control measures shall be provided such as diversion channels, sedimentation or filtration systems, berms, staked hay bales, seeding, mulching or other special surface treatments as are required by regulatory authorities to prevent silting and muddying of streams, rivers, canals, impoundments, lakes, etc. All erosion control measures shall be in place prior to any construction activity in any area of the Work.

1.6 PROTECTION OF LAND RESOURCES

A. Land resources within the Project boundaries and outside the limits of permanent Work shall be restored by CONTRACTOR to a condition, after completion of construction, that will appear to be natural and not detract from the appearance of the project.

B. Outside of areas requiring earthwork for the construction of the new facilities, the CONTRACTOR shall not deface, injure, or destroy trees or shrubs, nor remove or cut them without prior approval. No ropes, cables, or guys shall be fastened to or attached to any existing nearby trees for anchorage unless specifically authorized by the PROJECT REPRESENTATIVE. Where such special emergency use is permitted, first wrap the trunk with a sufficient thickness of burlap or rags over which softwood cleats shall be tied before any rope, cable, or wire is placed. The CONTRACTOR shall in any event be responsible for any damage resulting from such use.

C. Where trees may possibly be defaced, bruised, injured, or otherwise damaged by the CONTRACTOR'S equipment, dumping or other operations, CONTRACTOR shall protect such trees by placing board, planks, or poles around them. Monuments and markers shall be similarly protected by CONTRACTOR before beginning operations near them.

D. Any trees or other landscape feature scarred or damaged by the CONTRACTOR'S equipment or operations shall be restored as nearly as possible to its original condition. The PROJECT REPRESENTATIVE will decide what method of restoration shall be used and whether damaged trees shall be treated and healed or

removed and disposed of.

All scars made on trees by CONTRACTOR's equipment, construction operations, or by the removal of limbs by CONTRACTOR larger than 1 inch in diameter shall be coated as soon as possible with an approve tree wound dressing. All trimming or pruning by CONTRACTOR shall be performed in an approved manner by experienced workmen with saws or pruning shears. Tree trimming with axes will not be permitted.

Climbing ropes shall be used where necessary for safety. Trees that are to remain, either within or outside established clearing limits, that are subsequently damaged by the CONTRACTOR and are beyond saving in the opinion of a certified nurseryman, shall be immediately removed and replace in kind and maintained until growth is assured.

E. The locations of the CONTRACTOR's lay down area, storage and other construction buildings, required temporarily in the performance of the Work, shall require written concurrence of the PROJECT REPRESENTATIVE. The preservation of the landscape and public perception shall be an imperative consideration in the selection of the lay down area and in the provision of any buildings. Drawings showing the lay down area and any buildings shall be submitted by CONTRACTOR for approval of the PROJECT REPRESENTATIVE.

F. If temporary roads or embankments and excavations for plant and/or work areas are proposed, the CONTRACTOR, shall submit the following for approval by the PROJECT REPRESENTATIVE at least ten days prior to scheduled start of such temporary work.

    1. A layout of all temporary roads, excavations and embankments to be constructed within the work area.
    2. Details of temporary road construction.
    3. Drawings and cross sections of proposed embankments and their foundations, including a description of proposed materials.
    4. A landscaping drawing showing the proposed restoration of the area. Removal of any trees and shrubs outside the limits of existing clearing area shall be indicated. The drawing shall also indicate location of required guard posts or barriers required to control vehicular traffic passing close to trees and shrubs to be maintained undamaged. The drawing shall provide for the obliteration of construction scars as such and shall provide for a natural appearing final condition of the area. Modification of the CONTRACTOR'S approved drawings shall be made only with the written concurrence of the PROJECT REPRESENTATIVE. No unauthorized road construction, excavation or embankment construction including disposal areas will be permitted.

G. The CONTRACTOR shall remove all signs of temporary construction facilities such as haul roads, work areas, structures, foundations of temporary structures, stockpiles of excess materials, or any other vestiges of construction as requested by the PROJECT REPRESENTATIVE. Any construction disturbed area shall be restored to near natural conditions.

H. All debris and excess material will be disposed of by CONTRACTOR outside wetland or floodplain areas in an environmentally sound and lawful manner.

1.7 PROTECTION OF AIR QUALITY

A The use of burning for the disposal of refuse and debris will not be permitted.

B. The CONTRACTOR shall maintain all excavations, embankment, stockpiles, access roads, plant sites, waste areas, borrow areas, and all other work areas within or without the project boundaries free from dust which could cause the standards for air pollution to be exceeded, and which would cause a hazard or nuisance to others.

C. An approved method of stabilization consisting of sprinkling or other similar methods will be permitted to control dust. The use of petroleum products is prohibited. The use of chlorides may be permitted with concurrence from the appropriate regulatory authority.

D. Sprinkling must be repeated at such intervals as to keep all parts of the disturbed area at least damp at all times, and the CONTRACTOR must have sufficient competent equipment on the job to accomplish needed sprinkling. Dust control shall be performed as the work proceeds and whenever a dust nuisance or hazard occurs.

1.8 MAINTENANCE OF POLLUTION CONTROL FACILITIES DURING CONSTRUCTION

A. During the life of this Contract, CONTRACTOR shall maintain all facilities constructed for pollution control as long as the operations creating the particular pollutant are being carried out or until the material concerned has become stabilized to the extent that pollution is no longer being created. All pollution control devices shall be inspected regularly to ensure they are operating correctly.

1.9 NOISE CONTROL

A. The CONTRACTOR shall make every effort to minimize noises caused by operations. Equipment shall be equipped with silencers or mufflers designed to operate with the least possible noise in compliance with State and Federal Regulations.

B. Sound levels measured by the PROJECT REPRESENTATIVE shall not exceed 55 dBA from 8:00 PM to 7:00 AM or 65 dBA from 7:00 AM to 8:00 PM. This sound

level to be measured at the OWNER'S property line. Sound levels of equipment shall not exceed 95 dBA at any time. Sound levels in excess of these values are sufficient cause to have the Work halted until equipment can be quieted to acceptable levels. Work stoppage for excessive noise shall not relieve the CONTRACTOR of the other portions of this specification including, but not limited to Contract Time and Contract Price.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION 01110

SECTION 01230 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.

C. Execute accepted alternates under the same conditions as other work of the Contract.

END OF SECTION 01230

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

A. The CONTRACTOR shall submit to the ENGINEER for review such working drawings, shop drawings, test reports and data on materials and equipment (hereinafter in this Section called “Data”), and material samples (hereinafter in this Section called “Samples”) as are required for the proper control of work, including but not limited to those working drawings, shop drawings, Data and Samples for materials and equipment specified elsewhere in the Specifications and in the Contract Drawings.

B. The CONTRACTOR shall note that there are specific submittal requirements in other sections of these Specifications.

C. The CONTRACTOR is to maintain an accurate updated submittal log and shall bring this log to each scheduled progress meeting with the PROJECT REPRESENTATIVE and the ENGINEER. This log shall be organized using the ten (10) character numbering system in subparagraph 1.6 F. This log should include the following items:

1. Submittal-Description and File Number assigned.
2. Date to ENGINEER.
3. Date returned to CONTRACTOR (from ENGINEER).
4. Status of Submittal
    a. Approved
    b. Approved As Noted
    c. Approved As Noted/Confirm
    d. Not Approved/Resubmit
    e. Not Approved
5. Date of Resubmittal and Return (as applicable).
6. Date material released (for fabrication).
7. Projected date of fabrication.
8. Projected date of delivery to site.
9. Status of O&M submittal.

1.2 SHOP DRAWINGS

A. When used in the Contract Documents, the term "shop drawings" shall be considered to mean CONTRACTOR's plans for material and equipment which become an integral part of the Project. These drawings shall be complete and detailed. Shop drawings shall consist of fabrication, erection and setting drawings and schedule drawings, manufacturer's
scale drawings, bills of material, wiring and control diagrams, and inspection and

test reports including performance curves and certifications as applicable to the Work.

B. All details on shop drawings submitted for approval shall show clearly the elevations of the various parts to the main members and lines of the structure and/or equipment, and where correct fabrication of the Work depends upon field measurements, such measurements shall be made and noted on the shop drawings before being submitted for approval.

C. See Shop Drawing Schedule requirements in Subparagraph 1.7 CONTRACTOR'S RESPONSIBILITY.

1.3 PRODUCT DATA

A. Product data as specified in individual sections, include, but are not necessarily limited to, standard prepared data for manufactured products (sometimes referred to as catalog data), such as the manufacturer's product specification and installation instructions, availability of colors and patterns, MANUFACTURER'S printed statements of compliances and applicability, roughing-in diagrams and templates, catalog cuts, product photographs, standard wiring diagrams, printed performance curves and operational-range diagrams, production or quality control inspection and test reports and certifications, mill reports, product operating and maintenance instructions and recommended spare-parts listing storage instructions, and printed product warranties, as applicable to the Work.

1.4 WORKING DRAWINGS

A. When used in the Contract Documents, the term "working drawings" shall be considered to mean the CONTRACTOR's plans for temporary structures such as temporary bulkheads, support of open cut excavation, support of utilities, ground water control systems, forming and false work; for underpinning; and for such other work as may be required for construction but does not become an integral part of the Project.

B. Working drawings shall be signed and sealed by a registered Professional Engineer, currently licensed to practice in the State and shall convey, or be accompanied by, calculations or other sufficient information to completely explain the structure, machine, or system described and its intended manner of use. Prior to commencing such Work, working drawings must have been reviewed without specific exceptions by the ENGINEER. Such review will be for general conformance and will not relieve the CONTRACTOR in any way from his responsibility with regard to the fulfillment of the terms of the Contract. All risks of error are assumed by the CONTRACTOR; the OWNER and ENGINEER shall have no responsibility, therefore.

1.5 SAMPLES

A. The CONTRACTOR shall furnish, for the approval of the ENGINEER, samples required by the Contract Documents or requested by the ENGINEER. Samples shall be delivered to the ENGINEER as specified or requested and in quantities and sizes as specified. A minimum of two samples of each item shall be submitted unless otherwise specified. The CONTRACTOR shall prepay all shipping charges on samples. Materials or equipment for which samples are required shall not be used in the Work until approved by the ENGINEER.

B. Samples specified in individual sections, include, but are not necessarily limited to, physical examples of the Work such as sections of manufactured or fabricated work, small cuts or containers of materials, complete units of repetitively-used products, color/texture/pattern swatches and range sets, specimens for coordination of visual effect, graphic symbols, and units of Work to be used by the ENGINEER or PROJECT REPRESENTATIVE for independent inspection and testing, as applicable to the Work.

C. The CONTRACTOR shall prepare a transmittal letter in triplicate for each shipment of samples to the ENGINEER. The CONTRACTOR shall enclose a copy of this letter with the shipment and send a copy of this letter to the PROJECT REPRESENTATIVE. Approval of a sample shall be only for the characteristics or use named in such approval and shall not be construed to change or modify any Contract requirements.

D. Approved samples not destroyed in testing shall be sent to the ENGINEER or stored at the site of the Work. Materials and equipment incorporated in the Work shall match the approved samples. Samples which fail testing or are not approved will be returned to the CONTRACTOR at their expense, if so requested at time of submission.

1.6 SUBMITTAL REQUIREMENTS

A. The CONTRACTOR shall review, approve, and submit, with reasonable promptness and in such sequence as shown on the Shop Drawing Submittal Schedule so as to cause no delay in the Contract Work or in the Work of the OWNER or any separate contractor, all shop drawings, product data, working drawings and samples required by the Contract Documents.

B. The CONTRACTOR shall submit Ten (10) copies of all shop drawings for the ENGINEER to review, of which the ENGINEER will retain (8) sets.

C. All submittals shall be directly transmitted to the ENGINEER’s office. Submittals to the PROJECT REPRESENTATIVE will not be accepted.

D. Shop drawings, product data, working drawings and Samples shall be furnished

with the following information:

1. Number and title of the drawing.
2. Date of drawing or revision.
3. Name of project building or facility.
4. Name of contractor, subcontractor, and manufacturer submitting drawing.
5. Clear identification of contents, location of the work, and the sheet numbers where the product is found in the contract drawings.
6. CONTRACTOR Certification Statement.
7. Submittal Identification Number.
8. Contract Drawing Number Reference.
9. A certification by the CONTRACTOR that states the following: I hereby certify that the (equipment) (material) (article) shown and marked in this submittal is in compliance with the Contract Drawings and Specifications, can be installed in the allocated space, will be stored in accordance with the manufacturer's recommendations and the Specifications, and is submitted for approval.

E. In accordance with Subparagraph 1.7 A, each shop drawing, working drawing, Sample, and catalog data submitted by the CONTRACTOR shall have affixed to it the following Certification Statement, signed by the CONTRACTOR: "Certification Statement: By this submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers, and similar data and I have checked and coordinated each item with other applicable approved shop drawings and all contractor requirements."

F. The CONTRACTOR shall utilize a 10-character submittal identification numbering system in the following manner:

1. The first character shall be a D, S, P, M, or R, which represents Shop/Working Drawing and other Product Data (D), Sample (S), Preliminary Submittal (P), Operating/Maintenance Manual (M), or Request for Information (R).
2. The next five digits shall be the applicable Specification Section Number.
3. The next three digits shall be the numbers 001-999 to sequentially number each item or drawing submitted under each specific Section number.
4. The last character shall be a number 1-10, indicating the submission, or resubmission of the same Drawing, i.e., 1=1st submission, 2=2nd submission, 3=3rd submission, etc. A typical submittal number would be as follows:

D-03300-008.2

D	=	Shop Drawing
03300	=	Specification Section for Concrete
008	=	The eighth submittal under this specification section
2	=	The second submission (first resubmission) of that particular shop drawing.

G. The CONTRACTOR shall submit a copy of each submittal transmittal sheet (for shop drawings, product data, working drawings and Samples) to the PROJECT REPRESENTATIVE simultaneously with the CONTRACTOR's submission of said drawings, Data, Samples or manual packages to the ENGINEER.

H. All items specified are not necessarily intended to be a manufacturer's standard product. Variations from specified items will be considered on an "or equal" basis. If submittals show variations from Contract requirements because of standard shop practice or for other reasons, the CONTRACTOR shall describe such variations in the letter of transmittal and on the shop drawings along with notification of intent to seek contract adjustment. If acceptable, proper adjustment in the Contract shall be implemented where appropriate. If the CONTRACTOR fails to describe such variations, responsibility will not be waived for executing the Work in accordance with the Contract, even though such drawings have been reviewed. Variations submitted but not described may be cause for rejection. Any variations initiated by the CONTRACTOR will not be considered as an addition to the scope of work unless specifically noted and then approved as such in writing by the ENGINEER.

I. Data on materials and equipment shall include materials and equipment lists giving, for each item thereon, the name and location of the supplier or manufacturer, trade name, catalog reference, material, size, finish, and all other pertinent data.

J. For all mechanical and electrical equipment furnished, the CONTRACTOR shall provide a list including the equipment name, and address and telephone number of the manufacturer's representative and service company so that service and/or spare parts can be readily obtained. In addition, a maintenance and lubrication schedule for each piece of equipment shall be submitted.

K. The CONTRACTOR shall use the color "green" to make his remarks on the Submittals. Only the ENGINEER will utilize the color "red" in marking submittals.

L. Facsimiles or copies of facsimiles will not be accepted for review.

1.7 CONTRACTOR'S RESPONSIBILITY

A. It is the duty of the CONTRACTOR to check, and coordinate with the work of all trades, all drawings, Data, schedules and Samples before submitting them to the ENGINEER for review. Each and every copy of any drawing or data sheet larger than 11"x17" shall bear CONTRACTOR's stamp showing that they have been so checked and approved. Drawings or data sheets 11"x17" and smaller shall be bound together in an orderly fashion and bear the CONTRACTOR's stamp on the cover sheet. The cover sheet shall fully describe the packaged data and include a

list of all sheet numbers within the package. Shop drawings submitted to the ENGINEER without the CONTRACTOR's stamp will be returned to the CONTRACTOR, without review at the ENGINEER's option, for conformance with this requirement.

B. The CONTRACTOR shall review shop drawings, product data, and Samples prior to submission to determine and verify the following:
   1. Field measurements.
   2. Field construction criteria.
   3. Manufacturer's catalog numbers and similar data.
   4. Conformance with Specifications.

C. Shop drawings shall indicate any deviations in the submittal from the requirements of the Contract Documents.

D. At a time decided upon at the preconstruction meeting the CONTRACTOR shall furnish the PROJECT REPRESENTATIVE and ENGINEER a Shop Drawing schedule fixing the respective dates for the initial submission of shop and working drawings, the beginning of manufacture, testing and installation of materials, supplies and equipment. This schedule shall be provided as a separate entity and indicate those submittals that are critical to the progress schedule. The CONTRACTOR shall prepare and transmit each submittal sufficiently in advance of performing the related work or other applicable activities, or within the time specified in the individual work sections of the Specifications, so that the installation will not be delayed by processing times including disapproval and resubmittal (if required), coordination with other submittals, testing, purchasing, fabrication, delivery, and similar sequenced activities. No extension of time will be authorized because of

   the CONTRACTOR's failure to transmit complete and acceptable submittals sufficiently in advance of the Work.

E. The CONTRACTOR shall not begin any Work affected by a submittal returned not approved. Before starting this Work, all revisions must be corrected by the CONTRACTOR. After resubmittal they will be reviewed and returned by the ENGINEER. If approved or approved as noted, then the CONTRACTOR may begin this Work. Any corrections made to the shop drawings are to be followed without exception.

F. The CONTRACTOR shall submit to the ENGINEER all shop drawings and data sufficiently in advance of construction requirements to provide no less than **twenty-one (21)** calendar days for review from the time the ENGINEER receives them. No less than **thirty (30)** calendar days will be required for major equipment that requires review by more than one (1) engineering discipline.

G. The CONTRACTOR shall be responsible for and bear all cost of damages which

may result from the ordering of any material or from proceeding with any part of Work prior to the review and approval by ENGINEER of the necessary shop drawings.

H. All shop drawings, product data, working drawings and Samples submitted by subcontractors for approval shall be sent directly to the CONTRACTOR for checking. The CONTRACTOR shall be responsible for their submission according to the approved shop drawing schedule so as to prevent delays in delivery of materials and project completion.

I. The CONTRACTOR shall check all subcontractor's shop drawings, product data, working drawings and Samples regarding measurements, size of members, materials, and details to satisfy himself that they are in conformance to the Contract Documents. Shop drawings found to be inaccurate or otherwise in error shall be returned to the subcontractors for correction before submission to the ENGINEER.

J. Requests for Information (RFI) shall be submitted on a standard form through the PROJECT REPRESENTATIVE. RFIs shall indicate their importance to the timely completion of the project. RFIs will be processed as a shop drawing unless there is an urgent need for immediate response.

1.8 ENGINEER'S REVIEW OF SHOP DRAWINGS, PRODUCT DATA, WORKING DRAWINGS AND SAMPLES

A. The ENGINEER's review is for general conformance with the design concept and contract drawings. Markings or comments shall not be construed as relieving the CONTRACTOR from compliance with the contract plans and specifications or from departures therefrom. The CONTRACTOR remains responsible for details and accuracy, for coordinating the Work with all other associated work and trades, for selecting fabrication processes, for techniques of assembly, and for performing work in a safe manner.

B. The review of shop drawings, Data, and Samples will be general. They shall not be construed:
   1. as permitting any departure from the Contract requirements;
   2. as relieving the CONTRACTOR of responsibility for any errors, including details, dimensions, and materials;
   3. as approving departures from details furnished by the ENGINEER, except as otherwise provided herein.

C. If the shop drawings, Data or Samples as submitted describe variations per subparagraph (1.6H), and show a departure from the Contract requirements which ENGINEER finds to be in the interest of the OWNER and to be so minor as not to involve a change in Contract Price or Contract Time for performance, the ENGINEER may return the reviewed drawings without noting an exception.

D. Submittals will be returned to the CONTRACTOR under one of the following codes:

Code 1 - "APPROVED" is assigned when there are no notations or comments on the submittal. When returned under this code the CONTRACTOR may release the equipment and/or material for manufacture.

Code 2 - "APPROVED AS NOTED" is assigned when notations or comments have been made on the submittal pointing out minor discrepancies as compared with the Contract Documents. Resubmittal or confirmation is not necessary prior to release for manufacturing.

Code 3 - "APPROVED AS NOTED/CONFIRM." This combination of codes is assigned when a confirmation of the notations and comments is required by the CONTRACTOR. The CONTRACTOR may release the equipment or material for manufacture; however, all notations and comments must be incorporated into the final product. This confirmation is to address the omissions and/or nonconforming items that were noted. Only the items to be "confirmed" need to be resubmitted.

Code 4 - "NOT APPROVED/RESUBMIT." This combination of codes is assigned when the submittal is in noncompliance with the Contract Documents and must be corrected and the entire package resubmitted. This code generally means that the equipment or material cannot be released for manufacture unless the CONTRACTOR takes full responsibility for providing the submitted items in accordance with Contract Documents.

Code 5 - "NOT APPROVED" is assigned when the submittal does not meet the intent of the Contract Documents. The CONTRACTOR must resubmit the entire package revised to bring the submittal into conformance. It may be necessary to resubmit using a different manufacturer/vendor to meet the Contract Documents.

Code 6 - "COMMENTS ATTACHED" is assigned where there are comments attached to the returned submittal which provide additional data to aid the CONTRACTOR.

Code 7 - "FOR YOUR INFORMATION" is assigned when the package provides information of a general nature that may or may not require a response.

Codes 1 through 5 designate the status of the reviewed submittal with Code 6 showing there has been an attachment of additional data.

Code 7 is used as may be necessary.

E. Resubmittals will be handled in the same manner as first submittals. On resubmittals the CONTRACTOR shall direct specific attention, in writing on the letter of transmittal and on resubmitted shop drawings by use of revision triangles or other similar methods, to revisions other than the corrections requested by the ENGINEER on previous submissions. Any such revisions which are not clearly identified shall be made at the risk of the CONTRACTOR. The CONTRACTOR shall make corrections to any Work done because of this type revision that is not in accordance to the Contract Documents as may be required by the ENGINEER.

F. If the CONTRACTOR considers any correction indicated on the shop drawings to constitute a change to the Contract Documents, the CONTRACTOR shall give written notice thereof to the PROJECT REPRESENTATIVE at least seven (7) working days prior to release for manufacture.

G. The ENGINEER will review a submittal a maximum of two (2) times, after which cost of review will be borne by the CONTRACTOR. The cost of engineering shall be equal to the ENGINEER's charges to the OWNER under the terms of the ENGINEER's agreement with the OWNER.

H. When the shop drawings have been completed to the satisfaction of the ENGINEER, the CONTRACTOR shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the ENGINEER.

I. Partial submittals may not be reviewed. The ENGINEER will be the only judge as to the completeness of a submittal. Submittals not complete will be returned to the CONTRACTOR, and will be considered "Not Approved" until resubmitted. The ENGINEER may, but is not required to, provide a list or mark the submittal directing the CONTRACTOR to the areas that are incomplete.

1.9 PROFESSIONAL ENGINEER (P.E.) CERTIFICATION FORM

A. If specifically required in other sections of these Specifications, the CONTRACTOR shall submit a P.E. Certification for each item required, in the form attached to this Section, completely filled in and stamped.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

P.E. CERTIFICATION FORM

The undersigned hereby certifies that he/she is a Professional Engineer registered in the (State) of Florida and that he/she has been employed by (Name of Contractor) _____ to design _____ in accordance with Specification Section _____. The undersigned further certifies that he/she has performed the design of the _____, that said design is in conformance with all applicable local, state and federal codes, rules, and regulations, and that his/her signature and P.E. stamp have been affixed to all calculations and drawings used in, and resulting from, the design.

The undersigned hereby agrees to make all original design drawings and calculations available to the OWNER or OWNER's representative within seven (7) days following written request therefor by the OWNER.

_____
P.E. Name

_____
Signature

_____
Address

_____
Contractor's Name

_____
Signature

_____
Title

_____
Address

END OF SECTION 01300

PART 1 - GENERAL

1.1 REQUIREMENTS

The CONTRACTOR shall employ a competent photographer to take construction record photographs or perform video taping, including providing all labor, materials, equipment and incidentals necessary to obtain specified photographs and/or video tapes.

1.2 QUALIFICATIONS

A. All photography shall be accomplished by a competent camera operator who is fully experienced and qualified with the specified equipment.

B. For the video tape recording, the audio portion should be accomplished by a person qualified and knowledgeable in the specifics of the Contract, who shall speak with clarity and diction so as to be easily understood.

1.3 PROJECT PHOTOGRAPHS

A. Provide photographs of the entire work area prior to any construction for the purpose of recording of conditions prior to construction. Photographs should be spaced at approximately 100-foot intervals. In addition, all special features shall be photographed prior to construction.

B. Photographs shall be submitted each month with Request for Payment. A minimum of 10 photographs will be required each month for processing of Request of Payment.

C. Provide each photograph to the PROJECT REPRESENTATIVE.

D. The CONTRACTOR shall pay all cost associated with the required photography.

E. Each photo shall be labeled with the name of the project, the orientation of view, the date and time of exposure, name and address of photographer.

F. All project photographs shall be taken from locations to adequately illustrate conditions prior to construction, or conditions of construction and state of progress or particular construction activities or problems. The CONTRACTOR shall consult with the PROJECT REPRESENTATIVE for instructions concerning views required.

1.4 VIDEO TAPE RECORDINGS

A. Video taping shall be accomplished along all routes that are scheduled for construction in addition to required construction photographs. All video taping shall be in full color. Video taping shall include full taping of both sides of all streets on which construction is to be performed.

B. The taping shall, when viewed, show the image, ¼ of the roadway fronting all property and ¾ of the image shall be of the property. The taping shall be accomplished so as to show the roadway and property in an oblique view (30 degrees).

C. A complete view, in sufficient detail, of all existing facilities with audio description of the exact location shall be provided.

D. The construction plans shall be used as a reference for stationing in the audio portion of the tapes for easy location identifications. If visible, house or business numbers shall be mentioned on the audio.

E. Two complete sets of video tapes shall be delivered to the PROJECT REPRESENTATIVE for the permanent and exclusive use of the PROJECT REPRESENTATIVE prior to the start of any construction on the project.

F. All video tapes shall contain the name of the project, the date and time of the video taping, the name and address of the photographer and any other identifying information required.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION 01380

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

A. CONTRACTOR shall employ and pay for the services of an Independent Testing Laboratory to perform testing specifically indicated in the Contract Documents and The Florida Department of Transportation "Standard Specifications for Road and Bridge Construction". These tests include concrete moisture and cylinder tests and pile driving analysis tests.

1. CONTRACTOR shall cooperate with the laboratory to facilitate the execution of its required services.
2. Employment of the laboratory shall in no way relieve CONTRACTOR's obligations to perform the Work of the Contract.
3. The Testing Laboratory shall be acceptable to the PROJECT REPRESENTATIVE and approved by the ENGINEER.

1.2 LIMITATIONS OF AUTHORITY OF TESTING LABORATORY

A. Laboratory is not authorized to:

1. Release, revoke, alter or enlarge on Contract requirements.
2. Approve or accept any portion of the Work.
3. Perform any duties of the CONTRACTOR.

1.3 CONTRACTOR'S RESPONSIBILITIES

A. Cooperate with laboratory and testing personnel.

B. Secure and deliver to the laboratory adequate quantities of representational samples of materials proposed to be used which require testing.

C. Provide to the laboratory the preliminary design mix proposed to be used for concrete, asphalt and other materials mixes which require control by the testing laboratory.

D. Materials and equipment used in the performance of work under this Contract are subject to inspection and testing at the point of manufacture or fabrication. Standard specifications for quality and workmanship are indicated in the Contract Documents. The PROJECT REPRESENTATIVE may require the CONTRACTOR to provide statements or certificates from the manufacturers and fabricators that the materials and equipment provided by them are manufactured or fabricated in full accordance with the standard specifications for quality and workmanship indicated in the Contract Documents. All costs of this testing and providing statements and certificates shall be a subsidiary obligation of the

CONTRACTOR, and no extra Contract charge shall be allowed for of such testing and certifications.

E. Furnish incidental labor and facilities:
   1. To provide access to work to be tested.
   2. To obtain and handle samples at the Project site or at the source of the product to be tested.
   3. To facilitate inspections and tests.
   4. For storage and curing of test samples.

F. Notify laboratory sufficiently in advance of operations to allow laboratory assignment of personnel and scheduling of tests.

   1. When tests or inspections cannot be performed after such notice, reimburse OWNER for laboratory personnel and travel expenses incurred.

G. Employ and pay for the services of the same or a separate, equally qualified independent testing laboratory to perform additional inspections, sampling and testing required for the CONTRACTOR'S convenience and as approved by the PROJECT REPRESENTATIVE.

H. Additional testing or retesting shall be undertaken at CONTRACTOR's expense if required by the PROJECT REPRESENTATIVE.

I. All laboratory and testing expenses including retesting will be at the CONTRACTOR's expense with no separate Contract reimbursement.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION 01410

PART 1 - GENERAL

1.1 DEFINITION AND SCOPE

A. As required for the proper performance and completion of the Work, mobilization shall include, but not be limited to, the following principal items:

1. Move onto the site all CONTRACTOR'S plant and equipment required for the first month's operation.
2. Install temporary construction fencing, power, wiring, telephone, and lighting facilities.
3. Establish a fire protection plan and safety program.
4. Secure construction water supply.
5. Provide field office trailers for CONTRACTOR.
6. Provide on-site sanitary facilities and potable water facilities.
7. Arrange for and erect CONTRACTOR'S lay down and storage yard and employee's parking facilities.
8. Submit all required insurance certificates and bonds.
9. Obtain all required permits.
10. Post all OSHA, FDEP, Department of Labor, and all other required notices.
11. Have CONTRACTOR'S project manager and/or superintendent at the job site full time.
12. Submit a detailed construction schedule acceptable to the PROJECT REPRESENTATIVE.
13. Submit a Schedule of Values of the Work in an approved format acceptable to the PROJECT REPRESENTATIVE.
14. Submit a hurricane preparedness plan acceptable to the PROJECT REPRESENTATIVE.
15. Erect all required Project signs.

1.2 PAYMENT FOR MOBILIZATION

A. Payment for all mobilization/demobilization work will be made at the lump sum price bid for mobilization and demobilization of all labor, equipment, materials and appurtenances necessary for construction of the project. Mobilization shall include all items listed in the above paragraph. Also included, but not limited to, as part of this bid item is the cost for project performance indemnification's, shop drawings, working drawings, schedules, record drawings and documents, coordination, and phasing and other miscellaneous items associated with the work. Measurement and payment for this bid item will be lump sum. The lump sum price for mobilization/demobilization will be limited to 1.5 percent of the total contract amount. Eighty percent (80%) of the lump sum amount will be payable upon mobilization. The remaining 20% will be payable upon

demobilization.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION 01505

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

The CONTRACTOR shall:

A. Furnish, install and maintain one (1) project identification sign.

B. Remove sign on completion of construction.

C. No other signs shall be displayed.

1.2 PROJECT IDENTIFICATION SIGNS

A. One printed sign on an aluminum backboard, of not less than 32 square feet (4' x 8') area, with painted graphic content to include:
   1. Title of Project;
   2. Project Cost;
   3. Name of Owner, including council members and city manager;
   4. Names and titles of authorities;
   5. Names and title of:
      a. Engineer;
      b. Prime Contractor.
      c. City Logo

B. Graphic design, style of lettering and colors: As approved by the PROJECT REPRESENTATIVE and subject to the approval of the OWNER.

1.3 QUALITY ASSURANCE

A. Finishes: Adequate to resist weathering and fading for scheduled construction period.

PART 2 - PRODUCTS

2.1 SIGN MATERIALS

A. Structure and Framing: May be new wood, in sound condition structurally adequate to work and suitable for specified finish. Example: Plywood sheeting with 4" x 4" supports and 2" x 4" cross braces. Paint structure white.

B. Sign Surfaces: Printed aluminum substrate with pvc surface, mounted on a ¾" 4 x 8 sheet of exterior plywood.

1. Thickness; 3/4" minimum.

C. Rough Hardware: Stainless steel

D. Paint: Exterior quality, latex based paint and primer.

PART 3 – EXECUTION

3.1 PROJECT IDENTIFICATION SIGNS

The CONTRACTOR shall:

A. Erect sign on site within lighted area of high public visibility as approved by PROJECT REPRESENTATIVE. Paint exposed surfaces of supports, framing and surface material; one coat of primer and one coat of exterior paint.

B. Anchor sign with concrete to prevent damage from wind. Paint graphics in styles, sizes and colors selected by PROJECT REPRESENTATIVE.

C. Erect sign so that it is plumb and level.

3.2 MAINTENANCE

The CONTRACTOR shall:

A. Maintain signs and supports in a neat, clean condition; repair damages to structures, framing or sign.

3.3 REMOVAL

The CONTRACTOR shall:

A. Remove signs, framing, supports and foundations at completion of project.

END OF SECTION 01580

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

A. The CONTRACTOR shall comply with all closeout requirements specified in the General Conditions and this Specification.

1.2 SUBSTANTIAL COMPLETION

A. When CONTRACTOR considers the Work is substantially complete the following shall be submitted by CONTRACTOR to the PROJECT REPRESENTATIVE:

1. A written notice that the Work, or designated portion thereof, is substantially complete.
2. A list of items to be completed or corrected.

B. Within a reasonable time after receipt of such notice, the PROJECT REPRESENTATIVE will make an inspection to determine the status of completion.

C. Should the PROJECT REPRESENTATIVE determine that the Work is not substantially complete:
1. The PROJECT REPRESENTATIVE will promptly notify the CONTRACTOR in writing, giving the reasons therefore.
2. CONTRACTOR shall remedy the deficiencies in the Work, and send a second written notice of substantial completion to the PROJECT REPRESENTATIVE.
3. The PROJECT REPRESENTATIVE will reinspect the Work.

D. When the PROJECT REPRESENTATIVE finds that the Work is substantially complete:
1. The PROJECT REPRESENTATIVE will prepare and deliver to OWNER a tentative Certificate of Substantial Completion, with a tentative list of items to be completed or corrected before final payment.
2. After consideration of any objections made by the OWNER as provided in Conditions of the Contract, and when the PROJECT REPRESENTATIVE considers the Work substantially complete, a definite Certificate of Substantial Completion with a revised tentative list of items to be completed or corrected will be executed and delivered to the OWNER and the CONTRACTOR by the PROJECT REPRESENTATIVE.

1.3 FINAL INSPECTION

A. When CONTRACTOR considers the Work complete, the CONTRACTOR shall certify in writing to the PROJECT REPRESENTATIVE:
   1. Contract Documents have been reviewed.
   2. Work has been inspected for compliance with Contract Documents.
   3. Work has been completed in accordance with Contract Documents.
   4. Equipment and systems have been tested in presence of the OWNER'S representative and are operational.
   5. Work is completed and ready for final inspection.

B. The PROJECT REPRESENTATIVE will inspect to verify the status of completion with reasonable promptness after receipt of such certification.

C. Should the PROJECT REPRESENTATIVE consider that the Work is incomplete or defective:
   1. The PROJECT REPRESENTATIVE will promptly notify the CONTRACTOR in writing, listing the incomplete or defective work.
   2. CONTRACTOR shall take immediate steps to remedy the stated deficiencies and send a second written certification to PROJECT REPRESENTATIVE that the Work is complete.
   3. The PROJECT REPRESENTATIVE will reinspect the Work.

D. When the PROJECT REPRESENTATIVE finds that the Work is acceptable under the Contract Documents, the CONTRACTOR shall be requested to make closeout submittals.

1.4 REINSPECTION FEES

A. Should the PROJECT REPRESENTATIVE perform reinspection due to failure of the Work to comply with the claims of status of completion made by the CONTRACTOR, OWNER will deduct the amount of any additional compensation it paid to the ENGINEER or PROJECT REPRESENTATIVE for such reinspection, from the final payment to the CONTRACTOR.

1.5 CONTRACTOR'S CLOSEOUT SUBMITTALS TO PROJECT REPRESENTATIVE

A. Evidence of compliance with requirements of governing authorities.

B. Project As Built Drawings and Other Record Documents.

C. Operating and Maintenance Data.

D. Warranties and Bonds.

E. Keys and Keying Schedule.

F. Spare Parts and Maintenance Materials.

G. Evidence of Payment and Releases of Liens.

1.6 FINAL ADJUSTMENTS OF ACCOUNTS

A. The CONTRACTOR shall submit a final statement of accounting to the PROJECT REPRESENTATIVE.

B. Statement shall reflect all adjustments to the original Contract amount:

1. The original Contract amount.
2. Additions and deductions resulting from:
    a. Previous Change Orders.
    b. Unit Prices.
    c. Deductions for uncorrected Work.
    d. Penalties and Bonuses.
    e. Deductions for liquidated damages.
    f. Deductions for reinspection payments.
    g. Other adjustments.
    h. Inspection overtime.
    i Excessive shop drawing review cost by the ENGINEER.
3. Total Contract amount, as adjusted.
4. Previous Payments.
5. Amount remaining due.

C. PROJECT REPRESENTATIVE will prepare a final Change Order, reflecting approved adjustments to the Contract amount which were not previously made by Change Orders.

1.7 FINAL APPLICATION FOR PAYMENT

A. CONTRACTOR shall submit the Final Application for Payment in accordance with procedures and requirements stated in the General Conditions.

PART 2 – PRODUCTS (Not Applicable)

END OF SECTION 01705

SECTION 02110 - SITE CLEARING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Construction Drawings, Agreement Declarations, Exhibits and other Technical Specification Sections apply to this Section.

1.2 SUMMARY

A. This Section includes, but is not limited to, the following:

1. Protection of existing trees to remain.
2. Removal of trees and other vegetation.
3. Clearing and grubbing.
4. Removing above-grade improvements.
5. Removing below-grade improvements.

B. Extent of site clearing shall remain in R.O.W. or easements unless otherwise noted or instructed.

1.3 PROJECT CONDITIONS

A. Traffic: Conduct site-clearing operations to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Do not close or obstruct streets, walks, or other occupied or used facilities without prior approval.

B. Protection of Existing Improvements: Provide protections necessary to prevent damage to existing improvements indicated to remain in place.

1. Protect improvements on adjoining properties and on Owner's property.
2. Restore damaged improvements to their original condition.

C. Protection of Existing Trees and Vegetation: Protect existing trees and other vegetation indicated to remain in place against unnecessary cutting, breaking or skinning of roots, skinning or bruising of bark, smothering of trees by stockpiling construction materials or excavated materials within drip line, excess foot or vehicular traffic, or parking of vehicles within drip line. Provide temporary guards to protect trees and vegetation to be left standing. Submit plans detailing the temporary guards to the Engineer. For any tree designated to be saved prior to construction that is damaged beyond salvage by the contractor's forces, a sum of $150.00 per inch diameter will be paid by the Contractor to the Owner.

1. Water trees and other vegetation to remain within limits of contract work as required to maintain their health during course of construction operations.
2. Provide protection for roots over 1-1/2 inch in diameter that are cut during construction operations. Coat cut faces with an emulsified asphalt or other acceptable coating formulated to use on damaged plant tissues. Temporarily cover exposed roots with wet burlap to prevent roots from drying out; cover with earth as soon as possible.
3. Repair or replace trees and vegetation indicated to remain that are damaged by construction operations in a manner acceptable to Engineer. Employ a licensed arborist, as needed, to repair damage to trees and shrubs.
4. Replace trees that cannot be repaired and restored to full-growth status, as determined by arborist.

1.4 EXISTING UTILITIES AND OTHER SERVICES

A. General: Indicated locations are approximate; determine exact locations before commencing Work.

B. Coordinate relocation of existing utilities required on new construction. Relocation costs shall be at expense of utility.

C. Place markers to indicate location of disconnected services. Identify service lines and capping locations on Project Record Documents.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 SITE CLEARING

A. General: Remove trees, shrubs, grass, and other vegetation, improvements, or obstructions, as required, to permit installation of new construction. Remove similar items elsewhere on site or premises as specifically indicated. Removal includes digging out and off-site disposal of stumps and roots.

B. Clearing and Grubbing: Clear site of trees, shrubs, and other vegetation, except for those indicated to be left standing.
1. Completely remove stumps, roots, and other debris protruding through ground surface.
2. Use only hand methods for grubbing inside drip line of trees indicated to remain.

3. Fill depressions caused by clearing and grubbing operations with satisfactory soil material, unless further excavation or earthwork is indicated.

. Place fill material in horizontal layers not exceeding 6 inches loose depth, and thoroughly compact each layer to a density equal to adjacent original ground.

C. Removal of Improvements: Remove existing above-grade and below-grade improvements as indicated and as necessary to facilitate new construction, and other work as indicated. The site was cleared after Hurricane Michael, but there may be some underground debris remaining. Extract all piles in their entirety. All other materials are to be disposed of at an approved site.

Do not excavate in areas that will threaten the support of existing asphalt pavement. Maintain asphalt pavement throughout project duration.

3.2 DISPOSAL OF WASTE MATERIALS

A. Burning on Owner's Property: Burning is not permitted on Owner's property.

B. Removal from Owner's Property: Remove waste materials and unsuitable or excess topsoil from Owner's property, and dispose of off site in a legal manner.

END OF SECTION 02110

SECTION 02200 - EARTHWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Construction Drawings, Agreement Declarations, Exhibits and other Technical Specification Sections apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Preparing and grading subgrades for pavements and curbs.
2. Excavating and backfilling for drainage pipes and structures.
3. Ditch grading and swale grading.

B. Related Sections: The following Sections contain requirements that relate to this Section.

1. "Site Clearing" for site stripping, grubbing, topsoil removal, and tree protection.

1.3 DEFINITIONS

A. Excavation: Excavation shall consist of excavating and grading all types of materials encountered in areas as designated on the construction plans or specified in the technical specifications; and the placement of the excavation material, wherever practicable, in embankments.

B. Subgrade: The uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, base, drainage fill, or topsoil materials.

C. Borrow: Soil material obtained off-site when sufficient approved soil material is not available from excavations.

D. Subbase Course: The (optional) layer placed between the subgrade and base course in a paving system or the layer placed between the subgrade and surface of a pavement or walk or the existing layer beneath this base.

E. Base Course: The layer placed between the subbase and surface pavement in a paving system.

F. Unauthorized excavation consists of removing materials beyond indicated subgrade elevations or dimensions without direction by the Engineer. Unauthorized excavation, as well as remedial work directed by the Engineer, shall be at the Contractor's expense.

G. Ditch/Swale Grading: Consists of the excavation and satisfactory disposal of all materials from the limits of ditch/swale as shown on the plans.

H. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below ground surface.

I. Utilities include on-site underground pipes, conduits, ducts, and cables, as well as related appurtenances and underground services within building lines.

1.4 SUBMITTALS

A. General: Submit the following according to the Conditions of the Contract.

B. Product data for the following:

1. Not used.

C. Samples of the following:

1. 20-lb. samples, sealed in air-tight containers, of each proposed fill and backfill soil material from borrow sources.

D. Test Reports: In addition to test reports required under field quality control, submit the following original copy directly to the Engineer from the testing services with a copy to the Contractor:

1. Laboratory analysis of each soil material proposed for fill and backfill from borrow sources.

1.5 QUALITY ASSURANCE

A. Codes and Standards: Perform earthwork complying with all requirements of authorities having jurisdiction. All material and construction methods shall be in accordance with the Standard Specifications for Road and Bridge Construction, State of Florida, Department of Transportation, latest edition.

B. Testing and Inspection Service: Employ, at Contractor's expense, and coordinated by

the Contractor, a qualified independent geotechnical engineering testing agency, under the direction of a Professional Engineer, licensed in the State of Florida, to classify, perform soil tests, and provide inspection services for quality control during earthwork operations. All proposed borrow soils will require the testing agency to verify that soils comply with specified requirements and to perform required field and laboratory testing. Contractor shall replace materials removed for testing purposes. Should any work or materials fail to meet the requirements set forth in the plans and specifications, contractor shall pay for re-testing of same.

C. Testing Laboratory Qualifications: To qualify for acceptance, the geotechnical testing laboratory must demonstrate to the Engineers' satisfaction, based on evaluation of laboratory-submitted criteria, that it has the experience and capability to conduct required field and laboratory geotechnical testing without delaying the progress of the work.

D. Preconstruction Conference: Conduct conference at Project site:

Before commencing earthwork, meet with representatives of the governing authorities, Owner, Engineer, Geotechnical Engineer, and independent testing laboratory. Review earthwork procedures and responsibilities including testing and inspection procedures and requirements. Notify participants at least 3 working days prior to convening conference. Record discussions and agreements and furnish a copy to each participant.

1.6 PROJECT CONDITIONS

A. Site Information: Data in the subsurface investigation report was used for the basis of the design and are available to the contractor for information only. Conditions are not intended as representations or warranties of accuracy or continuity between soil borings. The Engineer/Owner will not be responsible for interpretations or conclusions drawn from this data by the contractor.

B. Existing Utilities: Locate existing underground utilities in areas of excavation work. If utilities are indicated to remain in place, provide adequate means of support and protection during earthwork operations. Do not interrupt existing utilities serving facilities occupied by the Owner or others except when permitted in writing by the Engineer and then only after acceptable temporary utility services have been provided.

1. Provide a minimum 48-hours' notice to the Engineer and receive written notice to proceed before interrupting any utility.
2. The contractor is responsible for contacting all utility companies to verify locations of all existing utilities, utility-related obstructions, or utility relocations which he may encounter during construction.
3. Adequate provision shall be made for the flow of existing sewers, drains, and water courses encountered during construction, and structures which may be

disturbed shall be satisfactorily restored by the Contractor.

C. Should uncharted, or incorrectly charted, piping or other utilities be encountered during the course of the work, consult Engineer immediately for directions. Cooperate with owner and utility companies in keeping respective services and facilities in operation. Repair, at contractor's expense, damaged utilities to the satisfaction of owner and utility company.

PART 2 - PRODUCTS

1.1 SOIL MATERIALS

A. General: Soils used as fill shall be clean sands, similar to existing site soil, with less than 5 percent passing the number 200 sieve. The sand shall have a maximum dry density of at least 100 pounds per cubic foot according to the Standard Proctor compaction test, AASHTO T-99, ASTM D698-12(2021). Provide approved borrow soil materials from off-site when sufficient satisfactory soil materials are not available from excavations.

B. Cut: Where required, the site shall be excavated to the grades shown. Excavated material that is suitable shall be used in the fill sections of the site.

C. Fill: In order to insure proper bond and previent slipping between the original ground and fill, the surface of the original ground shall be scarified to a depth of at least three inches. Each layer of fill material shall be compacted until the required density is achieved.

If the Contractor elects to import any materials other than that excavated on site, then he will do so only with Engineers' approval and at his own expense, unless separate payment for such items are called for in these specifications.

D. Backfill Materials: Satisfactory soil materials.

E. Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand, ASTM D 2940-20, with at least 95 percent passing a 1-1/2-inch sieve and not more than 8 percent passing a No. 200 sieve.

F. Bedding Material: Subbase or base materials with 100 percent passing a 1-inch sieve and not more than 8 percent passing a No. 200 sieve.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.

B. Provide erosion control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

C. Tree protection is specified in the Division 2 Section "Site Clearing."

3.2 DEWATERING

A. Prevent surface water and subsurface or ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.

B. Protect subgrades and foundation soils from softening and damage by rain or water accumulation.

C. The Contractor shall prevent the accumulation of water in excavated areas, and shall remove by pumping or other means any water which accumulates in the excavation. The Contractor shall prevent the accumulation of water in both structural and trench excavations and shall remove by well point system or by other means water which accumulates. The Contractor shall provide, install and operate a suitable and satisfactory dewatering system. The contractor shall include the cost of this pumping equipment and work in the unit price bid for the work.

D. Establish and maintain temporary drainage ditches and other diversions outside excavation limits to convey rain water and water removed from excavations to collection or runoff areas. Do not use trench excavations as temporary drainage ditches.

3.3 EXCAVATION

A. Explosives: Not permitted.

B. Unclassified Excavation: Excavation is unclassified and includes excavation to required subgrade elevations regardless of the character of materials and obstructions encountered.

3.4 STABILITY OF EXCAVATIONS

A. Comply with local codes, ordinances, and requirements of authorities having jurisdiction to maintain stable excavations.

B. All excavation work shall conform to OSHA Publication "Excavations 2226," 1990 revision, and OSHA Excavation; Final Rule 29, CFR, Part 1926, October 31, 1989, or other applicable excavation safety standards. The Contractor will provide written assurance of compliance with the law and with the laws of Florida Chapter 90-96. The Contractor's method of providing protective support to prevent cave-ins shall be submitted with the bid and conform to OSHA requirements. Slope excavations, shoring, and trench box usage in the field must be based on tabulated data and designed by the Contractor.

3.5 EXCAVATION FOR STRUCTURES

A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 0.10 foot. Extend excavations a sufficient distance from structures for placing and removing concrete formwork, installing services and other construction, and for inspections.

1. Excavations for Manholes, Catch Basins, and Other Facilities: Excavation shall be sufficient to leave at least 12 inches in the clear between their outer surfaces and the embankment of timber that may be used to protect them. Backfill of earth around manholes shall be thoroughly compacted sand or gravel at the expense of the contractor. Excavation for all structures shall be made to the dimensions and elevations indicated on the drawings. Where the excavation is made below the indicated elevations, the excavation shall be restored to the proper elevation with concrete fill, or the heights of the walls and footings shall be increased. Such fill or increased height of walls and footings shall be furnished by the Contractor without extra compensation.

3.6 EXCAVATION FOR WALKS AND PAVEMENTS

A. Excavate surfaces under walks and pavements to indicated cross sections, elevations, and grades.

3.7 EXCAVATION FOR STORMWATER PIPING/UTILITY TRENCHES

A. Excavate trenches to indicated slopes, lines, depths, and invert elevations.

B. Excavate trenches to uniform widths to provide a working clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches higher than top of pipe or conduit, unless otherwise indicated.

1. Clearance: 12 inches each side of pipe or conduit or as indicated.

C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits. Remove stones and sharp objects to avoid point loading.

1. For pipes or conduit less than 6 inches in nominal diameter and flat-bottomed, multiple-duct conduit units, hand-excavate trench bottoms and support pipe and conduit on an undisturbed subgrade.
2. For pipes and conduit 6 inches or larger in nominal diameter, shape bottom of trench to support bottom 90 degrees of pipe circumference. Fill depressions with tamped sand backfill. A Class "C" bedding is applicable.
3. Except in water bearing earth, or where a granular, concrete, or other bedding course is to be used, mechanical excavation of trenches shall be stopped above the final invert grade elevation so that the pipe may be laid on a firm undisturbed native earth bed. If over digging occurs, all loosened earth must be removed and the trench bottom brought back to grade with granular material well compacted to the satisfaction of the Engineer.
4. If there is not a good natural foundation it will be responsibility of the Contractor to stop construction and notify the Engineer of the condition encountered. The Engineer will then instruct the Contractor as to the method or steps to be taken.

3.8 STORAGE OF SOIL MATERIALS

A. Stockpile excavated materials acceptable for backfill and fill soil materials, including acceptable borrow materials. Stockpile soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent wind-blown dust.

1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.10 BACKFILL

A. Backfill excavations promptly, but not before completing the following:

1. Acceptance of construction below finish grade including, where applicable, filter fabric installation, and gravel bedding.
2. Surveying locations of underground drainage/utilities for record documents.
3. Testing, inspecting, and approval of underground construction.
4. Removal of trash and debris from excavation.
5. Removal of temporary shoring and bracing, and sheeting.

B. No backfill material shall be placed, spread or rolled during unfavorable weather conditions. When the work is interrupted by heavy rain, backfill operations shall not be resumed until the moisture content and density of the fill are as previously specified.

3.10 TRENCH BACKFILL

A. Place and compact bedding course on unyielding bearing surfaces and to fill unauthorized excavations. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.

B. Concrete backfill trenches that carry below or pass under footings and that are excavated within 18 inches of footings. Place concrete to level of bottom of footings.

C. Place and compact initial backfill of satisfactory soil material or subbase material, free of particles larger than 1 inch, to a height of 12 inches over the utility pipe or conduit.

1. Backfill shall be deposited in layers not to exceed 6 inches in thickness, moistened, and compacted to density equal to or greater than 100% of the maximum density of Standard Proctor (ASTM D698-12 2021), to a minimum depth of 12 inches over the pipe. The remainder of the backfill shall be placed in 12-inch layers compacted to 95% maximum density unless the backfill is beneath paved or building areas in which case it shall be compacted to 100% of a Standard Proctor Test.
2. Carefully compact material under pipe haunches and bring backfill evenly up on both sides and along the full length of piping to avoid damage or displacement of piping system.

D. Coordinate backfilling with testing/inspection of system.

E. Fill voids with approved backfill materials as shoring and bracing, and sheeting is removed.

F. Place and compact final backfill of satisfactory soil material to final subgrade.

G. Install warning tape directly above utilities, 12 inches below finished grade, except 6 inches below subgrade under pavements and slabs.

3.11 SUBSURFACE DRAINAGE BACKFILL

A. Subsurface Drain: Place a layer of filter fabric around perimeter of drainage trench or at footing, as indicated. Place a 6-inch compacted course of filtering material on filter

fabric to support drainage pipe. After installing and testing, encase drainage pipe in a minimum of 6 inches of compacted filtering material and wrap in filter fabric, overlapping edges at least 2 feet.

3.13 FILL

A. Preparation: Remove vegetation, topsoil, debris, wet, and unsatisfactory soil materials, obstructions, and deleterious materials from ground surface prior to placing fills.

1. Plow, strip or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing surface.

B. When subgrade or existing ground surface to receive fill has a density less than that required for fill, break up ground surface to depth required, pulverize, moisture-condition or aerate soil and recompact to required density.

C. Place fill material in layers to required elevations for each location listed below.

1. Under grass, use satisfactory excavated or borrow soil material.
2. Under walks and pavements, use subbase or base material, or satisfactory excavated or borrow soil material.
3. Under steps and ramps, use subbase material.
4. Under building slabs, use drainage fill material.
5. Under footings and foundations, use engineered fill.

3.14 MOISTURE CONTROL

A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill layer before compaction to within 2 percent of optimum moisture content.

1. Do not place backfill or fill material on surfaces that are muddy.
2. Remove and replace, or scarify and air-dry satisfactory soil material that is too wet to compact to specified density.

a. Stockpile or spread and dry removed wet satisfactory soil material.

3.15 COMPACTION

A. Place fill materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.

B. Place backfill and fill materials evenly on all sides of structures to required elevations. Place backfill and fill uniformly along the full length of each structure.

C. Percentage of Maximum Dry Density Requirements: Compact soil to not less than the following percentages of maximum dry density according to ASTM D698-12 (2021) (Standard Proctor):

1. Under structures, building slabs, steps, and pavements, compact the top 12 inches below subgrade and each layer of backfill or fill material at 100 percent maximum dry density.
2. Under walkways, compact the top 6 inches below subgrade and each layer of backfill or fill material at 98 percent maximum dry density.
3. Under lawn or unpaved areas, compact the top 6 inches below subgrade and each layer of backfill or fill material at 95 percent maximum dry density.

3.15 GRADING

A. General: Uniformly grade areas to a smooth surface, free from irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.

1. Provide a smooth transition between existing adjacent grades and new grades.
2. Cut out soft spots, fill low spots, and trim high spots to conform to required surface tolerances.

B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:

1. Lawn or Unpaved Areas: Plus or minus 0.10 foot.
2. Walks: Plus or minus 0.10 foot.
3. Pavements: Plus or minus 1/2 inch.

C. Grading Inside Building Lines: Finish subgrade to a tolerance of 1/2 inch when tested with a 10-foot straightedge.

3.16 STABILIZED SUBGRADE

A. For stabilized subgrade the type of materials, commercial or local, is at the Contractor's option and no separate payment for stabilizing materials will be made (other than as may be paid for as borrow).

B. When stabilizing is designated as Type B, compliance with the bearing value requirements will be determined by the Limerock Bearing Ratio Method; min. LBR = 40.

C. It is the Contractor's responsibility that the finished roadbed section meets the bearing value requirements, regardless of the quantity of stabilizing materials necessary to be added. Also, full payment will be made for any areas where the existing subgrade materials meet the design bearing value requirements without the addition of stabilizing additives, as well as areas where the Contractor may elect to place select high-bearing materials from other sources, within the limits of the stabilizing.

D. After the roadbed grading operations have been substantially completed, the Contractor shall make his own determination as to the quantity (if any) of stabilizing material, of the type selected by him, necessary for compliance with the bearing value requirements. The contractor shall notify the Engineer of the approximate quantity to be added, and the spreading and mixing-in of such quantity of materials shall meet the approval of the Engineer as to uniformity and effectiveness. Adhere to FDOT Standard Specification for Road and Bridge Construction, latest Edition, for related information in Section 160, STABILIZING.

3.17 FIELD QUALITY CONTROL

A. Testing Agency Services: Allow testing agency to inspect and test each subgrade and each fill or backfill layer. Do not proceed until test results for previously completed work verify compliance with requirements.

1. Perform field in-place density tests according to ASTM D 1556 (sand cone method), ASTM D 2167-15 (rubber balloon method), or ASTM D 2937-17e2 (drive cylinder method), as applicable.

    a. Field in-place density tests may also be performed by the nuclear method according to ASTM D 2922-05, provided that calibration curves are periodically checked and adjusted to correlate to tests performed using ASTM D 1556. With each density calibration check, check the calibration curves furnished with the moisture gages according to ASTM D 3017-05.
    b. When field in-place density tests are performed using nuclear methods, make calibration checks of both density and moisture gages at beginning of work, on each different type of material encountered, and at intervals as directed by the Engineer.

2. Paved Areas: Make at least one field density test of subgrade, base, and each compacted fill layer for every 750 square yards of area, but in no case less than three tests.
3. Unpaved Areas: Make at least one field density test of each compacted fill layer or subgrade for every 1000 square yards of area, but in no case less than three

tests.

4. Trench Backfill: A field density test shall be performed at the following locations in the trench backfill:

    1) Bottom lift
    2) Center of pipe
    3) 12" over pipe
    4) Every second (12") lift to subgrade elevation

    These tests to be performed for each 150 feet or less of trench.

B. If in the opinion of the Engineer, based on testing service reports and inspection, when subgrades, fills, or backfills are below specified density, scarify and moisten or aerate, or remove and replace soil to the depth required, recompact and retest until required density is obtained at no additional expense.

3.18 PROTECTION

A. Protecting Graded Areas: Protect newly graded areas from traffic and erosion. Keep free of trash and debris.

B. Repair and re-establish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or lose compaction due to subsequent construction operations or weather conditions.

1. Scarify or remove and replace material to depth directed by the Engineer; reshape and recompact at optimum moisture content to the required density.

C. Settling: Where settling occurs during the Project correction period, remove finished surfacing, backfill with additional approved material, compact, and reconstruct surfacing.

1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to the greatest extent possible.

D. Barricades, Guards, and Safety Provisions: To protect persons from injury and to avoid property damage, adequate barricades, construction signs, torches, red lanterns and guards as required shall be placed and maintained by the contractor during the progress of the construction work. Rules and regulations of the local authorities with respect to safety provisions shall be observed.

E. Traffic Controls: Excavation for pipe laying operation shall be conducted in a manner to cause the least interruption to traffic. When traffic must cross open trenches, the contractor shall provide suitable bridges.

F. Property Protection: Trees, fences, poles, and all other property shall be protected unless their removal is authorized; and any property damaged shall be satisfactorily restored by the contractor at the contractor's expense.

G. Erosion Control: The Contractor shall be responsible for the prevention of erosion from the site and for maintaining filled and graded surfaces for the duration of the project. This includes, but is not limited to, the erection of a silt fence and hay bale barricade at all locations requiring erosion control. The Contractor shall take whatever steps necessary to prevent erosion and sedimentation and will be responsible for any damages which might occur to down-land properties as a result of run-off from the site during sitework construction.

3.19 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Disposal: Transport surplus satisfactory soil to designated storage areas on the Owner's property. Stockpile or spread soil as directed by Engineer.

1. Remove waste material, including unsatisfactory soil, trash, and debris, and legally dispose off the Owner's property.

3.20 CLEAN-UP AND FINAL INSPECTION

A. Before final inspection and acceptance the Contractor shall clean ditches, shape shoulders and restore all disturbed areas, including street crossings, grass plots, re-grassing if necessary, to as good a condition as existed before work started. All trenches shall be drainage structures, and sidewalks, employing hand labor if necessary.

END OF SECTION 02200

SECTION 02457 - PRESTRESSED CONCRETE PILES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes hollow, prestressed, precast concrete piles.

1.3 UNIT PRICES

A. Basis for Bids: Base bids on number and dimensions of piles indicated from tip to cutoff, plus not less than 12 inches of over-length for cutting piles at required cutoff elevations.

B. Basis for Payment: From data obtained as a result of driving test piles, calculate actual total net length of piles used. Contract price includes labor, materials, tools, equipment, and incidentals for performing work for furnishing, driving, cutting off and capping piles. This includes splicing and disposal of cutoffs.

1. Measurements will be based on effective length of piles in place, with lengths measured to nearest 12 inches.
2. Test piles that become part of completed foundation system will be considered as an integral part of the Work.
3. No payment will be made for rejected piles, including piles driven out of place, defective piles, or piles damaged during handling or driving.

1.4 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide piles capable of withstanding transportation, erection, and driving stresses and design loads within limits indicated and under conditions existing at Project site.

1.5 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Prepared by or under the supervision of a qualified professional engineer detailing fabrication and lifting devices necessary for handling and driving piles.

1. Indicate pile dimensions and cross sections; locations and sizes. Show details of pile splices and shoes.
2. Indicate types of reinforcement, including prestressing strand, detailing fabricating, bending, and placing.
3. Indicate layout and dimensions, and identify each precast concrete pile. Indicate welded connections by AWS standard symbols. Detail cast-in hardware.
4. Include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

C. Welding Certificates: Copies of certificates for welding procedures and personnel.

D. Design Mixes: Mix design for each precast concrete mix will be submitted to the Engineer for approval. Mix designs will include all admixtures and mixing durations.

E. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

F. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of each of the following with requirements:

G. Material Certificates: Signed by manufacturers certifying that each of the following items complies with requirements:

1. Concrete materials.
2. Reinforcing materials.
3. Prestressing strands.
4. Admixtures.

H. Pile-Driving Equipment: Include type, make, maximum rated energy, and rated energy per blow of hammer; weight of striking part of hammer; weight of drive cap; details, type, and structural properties of hammer cushion and pile cushion; and details of follower and jetting equipment.

I. Dynamic Pile Test Reports: Submit within two days of completing test.

J. Driving Records: Submit within two days of driving.

K. Vibration Monitoring: Ongoing during pile driving operations to determine affects on adjacent structures.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: An experienced marine installer who has specialized in installing piling similar in material, design, and extent to that indicated for this Project.

B. Fabricator Qualifications: A firm complying with the following requirements and experienced in producing piles similar to those indicated for this Project, and with a record of successful in-service performance:

1. Engineering Responsibility: Assumes engineering responsibility to comply with requirements in "Performance Requirements" Article by engaging a qualified professional engineer to prepare design calculations, Shop Drawings, and other structural data for piles.
2. PCI Plant Certification Program: Participates in PCI's Plant Certification Program and be designated a PCI Certified Plant for B2 or C2 product group and category, or better.

C. Survey Work: Provide pile-driving records, including surveys, layouts, and measurements, prepared by a surveyor or professional engineer who is legally qualified in jurisdiction where Project is located to perform these kinds of services.

D. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services for piles that are similar to those indicated for this Project in material, design, and extent.

E. Testing Agency Qualifications: An independent testing agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1077-17 and ASTM E 329-21 to conduct the testing indicated, as documented according to ASTM E 548-94e1.

F. Design Practices: Comply with PCI Committee Report: "Recommended Practice for Design, Manufacture and Installation of Prestressed Concrete Piling."

G. Quality-Control Standard: Comply with applicable requirements of PCI MNL-116, "Manual for Quality Control for Plants and Production of Precast and Prestressed Concrete Products," including manufacturing and testing procedures, quality-control recommendations, and dimensional tolerances.

H. Comply with requirements of the following publications:

1. ACI 301, "Specifications for Structural Concrete."

I. Welding Standards: Qualify welding procedures and personnel according to the following standards:

1. AWS D1.1, "Structural Welding Code--Steel."
2. AWS D1.4, "Structural Welding Code--Reinforcing Steel."

J. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Meetings."

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver prestressed, precast concrete piles to Project site in such quantities and at such times to ensure continuity of installation. Handle and store piles at Project site to prevent cracking, distorting, warping, or other physical damage, and so markings are visible.

B. Lift and support units only at designated lifting or supporting points as shown on Shop Drawings.

PART 2 - PRODUCTS

2.1 FORMWORK

A. Forms: Provide forms of metal, plastic, wood, or another material that is non-reactive with concrete and will produce required finish surfaces.

2.2 REINFORCING MATERIALS

A. Reinforcing Bars: ASTM A615, Grade 60; deformed.

B. Steel Wire: ASTM A82, plain, cold drawn.

2.3 PRESTRESSING TENDONS

A. Prestressing Strand: ASTM A416, Grade 270; uncoated, seven-wire, low-relaxation strand.

2.4 CONCRETE MATERIALS

A. General: Use materials that result in concrete with a maximum water-soluble chloride-ion content of 0.06 percent by weight of cementitious material.

B. Portland Cement: ASTM C150, Type I.

C. Portland Cement: ASTM C150, Type II.

D. Fly Ash: ASTM C 618-19, Class C or Class F.

E. Silica Fume: ASTM C 1240-20, amorphous silica.

F. Normal-Weight Aggregates: ASTM C 33-18, Class 4S. Provide aggregates from a single source.

1. Nominal Maximum Size of Aggregate: 3/4 inch .

G. Water: Potable.

H. Water-Reducing Admixture: ASTM C 494-19, Type A.

I. High-Range, Water-Reducing Admixture: ASTM C 494-19, Type F.

J. Water-Reducing and Accelerating Admixture: ASTM C 494-19, Type E.

K. Water-Reducing and Retarding Admixture: ASTM C 494-19, Type D.

L. Corrosion Inhibiting Admixture

2.5 CONCRETE MIXES

A. Prepare design mixes for each type of concrete required.

1. Limit use of fly ash and silica fume to not exceed, in total, 25 percent of portland cement by weight.

B. Design mixes may be prepared by a qualified independent testing agency or by qualified precast manufacturing plant personnel at precast fabricator's option.

C. Proportion mixes by either laboratory trial batch or field test data methods according to ACI 211.1 and ACI 301, using materials to be used on Project, to provide concrete with the following properties:

1. Compressive Strength (28 Day): 6000 psi.
2. Maximum Water-Cementitious Material Ratio: 0.40.

D. Other Admixtures: Use water-reducing, high-range water-reducing, water-reducing and accelerating, or water-reducing and retarding admixtures according to manufacturer's written instructions. Use corrosion inhibiting admixture in accordance with manufacturer dosage recommendation.

2.6 FABRICATION

A. Pile Lengths: Pile lengths will be verified by an Engineer after submission of dynamic PDA pile test reports.

B. Formwork: Accurately construct forms, mortar tight, of sufficient strength to withstand pressures due to concrete placement, temperature changes, and for pretensioning and detensioning operations. Maintain formwork to provide completed prestressed concrete

piles of shapes, lines, and dimensions indicated, within fabrication tolerances specified in PCI MNL-116.

1. Unless forms are stripped before detensioning, design forms so stresses are not induced in prestressed concrete piles due to deformation of concrete under prestress or movement during detensioning.
2. Chamfer edges and corners of square piles with minimum 0.75-inh chamfer.

C. Reinforcement: Comply with recommendations of CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement. Clean reinforcement of loose rust and mill scale, earth, and other materials that reduce or destroy bond with concrete.

1. Accurately position, support, and secure reinforcement against displacement by formwork, construction, or concrete placement. Locate and support reinforcement by metal chairs, runners, bolsters, spacers and hangers, as required.
2. Place reinforcement to obtain at least the minimum coverages for concrete protection. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position while placing concrete. Set wire ties so ends are directed into concrete, not toward exposed concrete surfaces.

D. Pretensioning: Pretension tendons either by single-strand or multiple-strand tensioning method.

E. Concrete Mixing: Comply with requirements and with ASTM C 94-21b. Following concrete batching, no additional water may be added.

F. Concrete Placement: Place concrete in a continuous operation to prevent seams or planes of weakness from forming. Comply with requirements of ACI 304R for measuring, mixing, transporting, and placing concrete.

1. Thoroughly consolidate placed concrete by internal and external vibration without dislocating or damaging reinforcement and built-in items. Use equipment and procedures complying with ACI 309R.
2. Comply with ACI 306R procedures for cold-weather concrete placement.
3. Comply with ACI 305R procedures for hot-weather concrete placement.

G. Identify pickup points of precast concrete piles with permanent markings, complying with markings indicated on Shop Drawings. Imprint casting date on each precast unit.

H. Cure concrete by moisture retention without heat or by accelerated heat curing, using low-pressure live steam or radiant heat and moisture.

I. Delay detensioning prestressed concrete piles until concrete has attained at least 70 percent of its compressive strength as established by test cylinders cured under the same conditions as concrete.

1. If concrete has been heat cured, detension while concrete is still warm and moist to avoid dimensional changes that may cause cracking or undesirable stresses.
2. Detension pretensioned tendons either by gradually releasing tensioning jacks or by heat-cutting tendons, using a sequence and pattern to prevent shock or unbalanced loading.

J. Where ends of strands will not be enclosed or covered, cut flush and cover with a high-strength mortar bonded to unit with an epoxy-resin bonding agent.

K. Finish formed surfaces of precast concrete as indicated for each type of unit, and as follows:

1. Standard Finish: Normal plant-run finish produced in forms that impart a smooth finish to concrete. Small surface holes caused by air bubbles, normal color variations, form joint marks, and minor chips and spalls will be tolerated. Major or unsightly imperfections, honeycombs, or structural defects are not permitted.

L. Finish unformed surfaces by trowel, unless otherwise indicated. Consolidate concrete, bring to proper level with straightedge, float, and trowel to a smooth, uniform finish.

M. Pile-Length Markings: Mark each pile length with horizontal line at 12-inch intervals, and the distance from pile tip at 60-inch intervals.

2.7 SOURCE QUALITY CONTROL

A. Owner will employ an independent testing agency to evaluate precast concrete fabricator's quality-control and testing methods, but the cost of this testing will be included in the contractor’s bid price..

1. Allow Owner's testing agency access to material storage areas, concrete production equipment, concrete placement, and curing facilities. Cooperate with Owner's testing agency and provide samples of materials and concrete mixes as may be requested for additional testing and evaluation.

B. Quality-Control Testing: Test and inspect precast concrete piles according to PCI MNL-116 requirements.

C. Strength of precast concrete units will be considered deficient if units fail to comply with requirements.

D. Testing: If there is evidence that the strength of precast concrete units may be deficient or may not comply with requirements, Owner will employ an independent testing agency to obtain, prepare, and test cores drilled from hardened concrete to determine compressive strength according to ASTM C 42-20.

1. A minimum of three representative cores will be taken from precast concrete piles of suspect strength, from locations directed by Engineer.

2. Cores will be tested, following immersion in water, in a wet condition per ACI 301 when precast concrete units will be wet under service conditions.
3. Cores will be tested in an air-dry condition per ACI 301 when precast concrete units will be dry under service conditions.
4. Strength of concrete for each series of three cores will be considered satisfactory if the average compressive strength is at least 85 percent of the 28-day design compressive strength and no core compressive strength is less than 75 percent of the 28-day design compressive strength.
5. Test results will be made in writing on the same day that tests are performed, with copies to Engineer, Contractor, and precast fabricator. Test reports will include the Project identification name and number; date; name of precast concrete fabricator; name of concrete testing agency; identification letter; name; type of precast concrete unit or units represented by core tests; design compressive strength; type of break; compressive strength at break, corrected for length-diameter ratio; and direction of applied load to core in relation to horizontal plane of concrete as placed.

E. Patching: If core test results are satisfactory and precast concrete units comply with requirements, solidly fill core holes with patching mortar and finish to match adjacent concrete surfaces.

F. Defective Work: Discard precast concrete units that do not comply with requirements, including strength, manufacturing tolerances, and finishes. Replace with precast concrete units that comply with requirements.

PART 3 - EXECUTION

3.1 DRIVING EQUIPMENT

A. Pile Hammer: Air-, steam-, or diesel-powered type capable of developing ultimate pile capacity indicated considering length and weight of pile and character of subsurface material anticipated.

1. Use pile hammer capable of adjustment to deliver reduced impact to maintain tensile stress within 70 percent of yield strength of pile reinforcement.

B. Hammer Cushions, Driving Caps, and Pile Cushions: Between hammer and top of pile, provide hammer cushion, loosely fitted steel driving cap allowing rotation of pile without restraint, and replaceable pile cushion recommended by hammer manufacturer for type of piles.

C. Leads: Use fixed or rigid-type pile-driver leads that will hold full length of pile firmly in position and in axial alignment with hammer. A template will be used to position and align piles to correct location and batter. Template shall be free-standing and may be braced against previously installed piles.

3.2 DYNAMIC PILE TESTS

A. General: Dynamic pile tests will be used to verify design pile lengths and to confirm design load capacity of piles.

1. Furnish test piles 120 inches longer than production piles.
2. Actual length of piles will be based on results of dynamic pile tests.

B. Pile Tests: Arrange for and perform the following pile tests:
1. Dynamic PDA testing performed by a recognized independent testing agency acceptable to the Engineer.
2. Use the Wave Equation using PDA data and the CAPWAP analysis.
3. Factor of Safety applied to the design load shall be 2.0.
4. The Ultimate Pile Loading shall be 300 tons. Any cracked or damaged piles shall be removed and replaced.
5. To perform dynamic load testing, provide 110VAC, 60Hz. 30amp electric power supply.

C. Drive test piles at locations indicated to a tip elevation below final cutoff elevation equal to pile length specified as basis of bid and as required to achieve the required dynamic resistance as determined by the Wave Equation. Piles will be considered as driven to refusal when five blows of hammer are required to produce a total penetration of 1/4 inch or less.

D. Driving Test Piles: Use test piles identical to those required for Project and drive with appropriate pile-driving equipment operating at rated driving energy to be used in driving permanent piles.

1. Pile Design Load: As indicated.

E. Driving Records: Prepare driving records for each test pile, compiled and attested to by a qualified professional engineer. Include same data as required for driving records of permanent piles.

F. Test piles that comply with requirements, including location tolerances, may be used on Project. Test piles unacceptable as production piles shall be removed and replaced.

3.3 DRIVING PILES

G. General: Continuously drive piles to tip elevations or penetration resistance indicated. Establish and maintain axial alignment of leads and pile before and during driving. The pier structure has been designed to be constructed by a top-down sequence of construction. The structure has been designed to support an Link-Belt model 218H II W/AB (50706#) counter weight crane using 36” wide tracks and 48 x 48 Boom with a total weight of 181,490 lbs. Deck timbers are anticipated to transfer the crane load to the concrete beams. Construction is planned to proceed from the beach waterward using

the previous span to support the crane and install the next row of piles. Piles must be accepted prior to setting forms for casting pile cap beam.

H. Jetting: Jetting may be used to within 5 feet of minimum pile tip elevation. Jetting procedures and equipment shall be submitted to the Engineer prior to installation of test piles.

I. Heaved Piles: Redrive heaved piles to tip elevation at least as deep as original tip elevation with a driving resistance at least as great as original driving resistance.

J. Pile Splices: Pile splices will not be allowed; however build-ups will be allowed.

K. Driving Tolerances: Drive piles without pile heads exceeding the following tolerances:

1. Location: 4 inches from location indicated after initial driving, and 6 inches after pile driving is completed.
2. Plumb: Maintain 1 inch in 10 feet from vertical, or a maximum of 4 inches, measured when pile is above ground in leads.
3. Batter Angle: Maximum 1 inch in 10 feet from required angle, measured when pile is above ground in leads.

L. Withdraw damaged or defective piles and piles that exceed driving tolerances and install new piles within driving tolerances. Fill holes left by withdrawn piles as directed by Engineer.

M. Cutting off: Cut off tops of driven piles square with pile axis and at elevations indicated.

N. Build-ups: Construct build-up to elevations indicated of cast-in-place reinforced concrete with compressive strength not less than 6000 psi at 28 days.

O. Driving Record: Maintain accurate driving records for each pile, compiled and attested to by a qualified professional engineer. Include the following data:

1. Project name and number.
2. Name of Contractor.
3. Type of pile and date of casting.
4. Pile location in pile group and designation of pile group.
5. Sequence of driving in pile group.
6. Pile dimensions.
7. Ground elevation.
8. Elevation of tip after driving.
9. Final tip and cutoff elevations of pile after driving pile group.
10. Records of redriving.
11. Type, make, model, and rated energy of hammer.
12. Weight and stroke of hammer.
13. Type of pile-driving cap used.
14. Cushion material and thickness.

15. Actual stroke and blow rate of hammer.
16. Pile-driving start and finish time; and total driving time.
17. Time, pile-tip elevation, and reason for interruptions.
18. Record of number of blows for each 12 inches of penetration, and number of blows per 1 inch for the last 6 inches of driving.
19. Pile deviations from location and plumb.
20. Record preboring, jetting, or special procedures used.
21. Record of unusual occurrences during pile driving.

3.4 FIELD QUALITY CONTROL

P. Testing Agency: Owner will engage a qualified independent testing agency to perform field quality-control testing.

Q. High-Strain Dynamic Monitoring: High-strain dynamic monitoring will be performed and reported according to ASTM D 4945-17 during initial driving and during restriking on the following number of piles:

1. Number of Test Piles: 2 single piles.

R. Low-Strain Integrity Measurement: Low-strain integrity measurements will be performed and reported for each pile.

3.5 DISPOSAL

Remove withdrawn piles and cutoff sections of piles from site and legally dispose of them off Owner's property.

END OF SECTION 02457

SECTION 03300 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section specifies cast-in place concrete, including formwork, reinforcement, concrete materials, mix design, placement procedures, and finishes.

1.3 DEFINITIONS

A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume.

1.4 SUBMITTALS

A. Product Data: For each type of manufactured material and product indicated.

B. Design Mixes: For each concrete mix. Include alternate mix designs when characteristics of materials, project conditions, weather, test results, or other circumstances warrant adjustments.

1. Indicate amounts of mix water to be withheld for later addition at Project site.

C. Steel Reinforcement Shop Drawings: Details of fabrication, bending, and placement, prepared according to ACI 315, "Details and Detailing of Concrete Reinforcement." Include material, grade, bar schedules, stirrup spacing, bent bar diagrams, arrangement, and supports of concrete reinforcement. Include special reinforcement required for openings through concrete structures.

D. Formwork Shop Drawings: Prepared by or under the supervision of a qualified professional engineer detailing fabrication, assembly, and support of formwork. Design and engineering of formwork are Contractor's responsibility.

1. Shoring and Reshoring: Indicate proposed schedule and sequence of stripping formwork, shoring removal, and installing and removing reshoring.

E. Welding Certificates: Copies of certificates for welding procedures and personnel.

F. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated, based on comprehensive testing of current materials:

G. Material Certificates: Signed by manufacturers certifying that each of the following items complies with requirements:

1. Cementitious materials and aggregates.
2. Form materials and form-release agents.
3. Steel reinforcement and reinforcement accessories.
4. Fiber reinforcement.
5. Admixtures.
6. Waterstops.
7. Curing materials.
8. Floor, Beam and Slab treatments.
9. Bonding agents.
10. Adhesives.
11. Vapor retarders.
12. Epoxy joint filler.
13. Joint-filler strips.
14. Repair materials.

H. Minutes of preinstallation conference.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed concrete Work similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

B. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for formwork and shoring and reshoring installations that are similar to those indicated for this Project in material, design, and extent.

C. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products complying with ASTM C 94-21b requirements for production facilities and equipment.

1. Manufacturer must be certified according to the National Ready Mixed Concrete Association's Certification of Ready Mixed Concrete Production Facilities.

D. Testing Agency Qualifications: An independent testing agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1077-17 and ASTM E 329-21 to conduct the testing indicated, as documented according to ASTM E 548.

1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-1 or an equivalent certification program.

E. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, each aggregate from one source, and each admixture from the same manufacturer.

F. Welding: Qualify procedures and personnel according to AWS D1.4, "Structural Welding Code--Reinforcing Steel."

G. ACI Publications: Comply with the following, unless more stringent provisions are indicated:

1. ACI 301, "Specification for Structural Concrete."
2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

H. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Meetings."

1. Before submitting design mixes, review concrete mix design and examine procedures for ensuring quality of concrete materials. Require representatives of each entity directly concerned with cast-in-place concrete to attend, including the following:

a. Contractor's superintendent.
b. Independent testing agency responsible for concrete design mixes.
c. Ready-mix concrete producer.
d. Concrete subcontractor.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle steel reinforcement to prevent bending and damage.

PART 2 - PRODUCTS

2.1 FORM-FACING MATERIALS

A. Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.

1. Plywood, metal, or other approved panel materials.
2. Exterior-grade plywood panels, suitable for concrete forms, complying with DOC PS 1, and as follows:

    a. Structural 1, B-B, or better, mill oiled and edge sealed.

B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.

C. Forms for Cylindrical Columns, Pedestals, and Supports: Metal, glass-fiber-reinforced plastic, paper, or fiber tubes that will produce surfaces with gradual or abrupt irregularities not exceeding specified formwork surface class. Provide units with sufficient wall thickness to resist plastic concrete loads without detrimental deformation.

D. Pan-Type Forms: Glass-fiber-reinforced plastic or formed steel stiffened to resist plastic concrete loads without detrimental deformation.

E. Void Forms: Biodegradable paper surface, treated for moisture resistance, structurally sufficient to support weight of plastic concrete and other superimposed loads.

F. Chamfer Strips: Wood, metal, PVC, or rubber strips, 3/4 by 3/4 inch, minimum.

G. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.

    1. Formulate form-release agent with rust inhibitor for steel form-facing materials.

H. Form Ties: Factory-fabricated, removable or snap-off metal or glass-fiber-reinforced plastic form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.

    1. Furnish units that will leave no corrodible metal closer than 1.5 inch to the plane of the exposed concrete surface.
    2. Furnish ties that, when removed, will leave holes not larger than 1 inch in diameter in concrete surface.
    3. Furnish ties with integral water-barrier plates to walls indicated to receive damp proofing or waterproofing.

2.2 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A615, Grade 60, deformed.

B. Steel Reinforcement: ASTM A615, Grade 60, deformed bars.

C. Plain-Steel Wire: ASTM A82-07, as drawn.

D. Deformed-Steel Wire: ASTM A495-07.

E. Plain-Steel Welded Wire Fabric: ASTM A185-07, fabricated from as-drawn steel wire into flat sheets.

F. Deformed-Steel Welded Wire Fabric: ASTM A497-07, flat sheet.

2.3 REINFORCEMENT ACCESSORIES

A. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire fabric in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete or fiber-reinforced concrete of greater compressive strength than concrete, and as follows:

1. For concrete surfaces exposed to view where legs of wire bar supports contact forms, use CRSI Class 1 plastic-protected or CRSI Class 2 stainless-steel bar supports.

B. Joint Dowel Bars: Plain-steel bars, ASTM A615, Grade 60 . Cut bars true to length with ends square and free of burrs.

2.4 CONCRETE MATERIALS

A. Portland Cement: ASTM C150, Type I/II.

B. Blended Hydraulic Cement: ASTM C 595-21, Type IP, portland-pozzolan cement.

C. Blended Hydraulic Cement: ASTM C 595-21, Type I (SM), slag-modified portland cement.

D. Silica Fume: ASTM C1240-20, amorphous silica.

E. Normal-Weight Aggregate: ASTM C33-18, uniformly graded, and as follows:
1. Class: Moderate weathering region, but not less than 3M.
2. Nominal Maximum Aggregate Size: 3/4 inch .
3. Combined Aggregate Gradation: Well graded from coarsest to finest with not more than 18 percent and not less than 8 percent retained on an individual sieve, except that less than 8 percent may be retained on coarsest sieve and on No. 50 sieve, and less than 8 percent may be retained on sieves finer than No. 50.

F. Water: Potable and complying with ASTM C94-21b.

2.5 ADMIXTURES

A. General: Admixtures certified by manufacturer to contain not more than 0.1 percent water-soluble chloride ions by mass of cementitious material and to be compatible with other admixtures and cementitious materials. Do not use admixtures containing calcium chloride.

B. Water-Reducing Admixture: ASTM C 494-19, Type A.

C. High-Range, Water-Reducing Admixture: ASTM C 494-19, Type F.

D. Water-Reducing and Accelerating Admixture: ASTM C 494-19, Type E.

E. Corrosion-Inhibiting Admixture: Commercially formulated anodic inhibitor or mixed cathodic and anodic inhibitor; capable of forming a protective barrier and minimizing chloride reactions with steel reinforcement in concrete.

1. Available Products: Subject to compliance ASTM G180-21, products that may be incorporated into the Work include, but are not limited to, the following:
2. Products: Subject to compliance with requirements, provide one of the following:

    a. MCI 2000 or MCI 2005; Cortec Corporation.
    b. DCI or DCI-S; W. R. Grace & Co., Construction Products Div.
    c. Rheocrete 222+; Master Builders, Inc.
    d. FerroGard-901S; Sika Corporation.
    e. MasterLife CI222

2.6 VAPOR RETARDERS

A. Vapor Retarder: ASTM E 1745-17, Class B, five-ply, nylon- or polyester-cord-reinforced, high-density polyethylene sheet; 10 mils thick.

1. Available Product: Subject to compliance with requirements, a product that may be incorporated into the Work includes, but is not limited to, "Griffolyn T-85" by Reef Industries Inc.
2. Product: Subject to compliance with requirements, provide "Griffolyn T-85" by Reef Industries Inc.

2.7 FLOOR AND SLAB TREATMENTS

2.8 CURING MATERIALS

A. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd dry.

B. Moisture-Retaining Cover: ASTM C171-20, polyethylene film or white burlap-polyethylene sheet.

C. Water: Potable.

D. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:

2.9 RELATED MATERIALS

A. Joint-Filler Strips: ASTM D 1751-18, asphalt-saturated cellulosic fiber.

B. Bonding Agent: ASTM C 1059, Type II, non-redispersible, acrylic emulsion or styrene butadiene.

C. Epoxy-Bonding Adhesive: ASTM C 881-20a, two-component epoxy resin, capable of humid curing and bonding to damp surfaces, of class and grade to suit requirements, and as follows:

1. Type II, non-load bearing, for bonding freshly mixed concrete to hardened concrete.
2. Types I and II, non-load bearing, for bonding hardened or freshly mixed concrete to hardened concrete.
3. Types IV and V, load bearing, for bonding hardened or freshly mixed concrete to hardened concrete.

D. Reglets: Fabricate reglets of not less than 0.0217-inch- thick galvanized steel sheet. Temporarily fill or cover face opening of reglet to prevent intrusion of concrete or debris.

E. Dovetail Anchor Slots: Hot-dip galvanized steel sheet, not less than 0.0336 inch thick, with bent tab anchors. Temporarily fill or cover face opening of slots to prevent intrusion of concrete or debris.

2.10 REPAIR MATERIALS

A. Prepare design mixes for each type and strength of concrete determined by either laboratory trial mix or field test data bases, as follows:

1. Proportion normal-weight concrete according to ACI 211.1 and ACI 301.

B. Use a qualified independent testing agency for preparing and reporting proposed mix designs for the laboratory trial mix basis.

C. Pile Caps and beams: Proportion normal-weight concrete mix as follows:
1. Compressive Strength (28 Days): 4000 psi .
2. Maximum Slump: 4 inches .

3. Maximum Slump for Concrete Containing High-Range Water-Reducing Admixture: 8 inches after admixture is added to concrete with 2- to 4-inch slump.

D. Slab-on-Grade: Proportion normal-weight concrete mix as follows:
   1. Compressive Strength (28 Days): 4000 psi .
   2. Minimum Cementitious Materials Content: 470 lb/cu. yd..
   3. Maximum Slump: 4 inches .

E. Suspended Slabs: Proportion normal-weight concrete mix as follows:
   1. Compressive Strength (28 Days): 4000 psi .
   2. Maximum Slump: 4 inches .

F. Cementitious Materials: For concrete exposed to deicers, limit percentage, by weight, of cementitious materials other than portland cement according to ACI 301 requirements.

G. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:

   1. Fly Ash: 25 percent.
   2. Combined Fly Ash and Pozzolan: 25 percent.
   3. Ground Granulated Blast-Furnace Slag: 30 percent.
   4. Silica Fume: 10 percent.
   5. Combined Fly Ash or Pozzolans, Ground Granulated Blast-Furnace Slag, and Silica Fume: 40 percent portland cement minimum, with fly ash or pozzolans not exceeding 25 percent and silica fume not exceeding 10 percent.

H. Maximum Water-Cementitious Materials Ratio: 0.40 for corrosion protection of steel reinforcement in concrete exposed to chlorides from deicing chemicals, salt, saltwater, brackish water, seawater, or spray from these sources.

I. Do not air entrain concrete to trowel-finished interior floors and suspended slabs. Do not allow entrapped air content to exceed 3 percent.

J. Limit water-soluble, chloride-ion content in hardened concrete to 0.15 percent by weight of cement.

K. Admixtures: Use admixtures according to manufacturer's written instructions.

   1. Use water-reducing admixture or high-range water-reducing admixture (superplasticizer) in concrete, as required, for placement and workability.
   2. Use corrosion-inhibiting admixture in concrete mixes that complies with ASTM G 1800-21.

2.12 FABRICATING REINFORCEMENT

A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.13 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94-21b, and furnish batch ticket information.

B. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94-21b and ASTM C 1116-10a(2015), and furnish batch ticket information.

1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

C. Project-Site Mixing: Measure, batch, and mix concrete materials and concrete according to ASTM C 94. Mix concrete materials in appropriate drum-type batch machine mixer.

1. For mixer capacity of 1 cu. yd. or smaller, continue mixing at least one and one-half minutes, but not more than five minutes after ingredients are in mixer, before any part of batch is released.
2. For mixer capacity larger than 1 cu. yd. , increase mixing time by 15 seconds for each additional 1 cu. yd..
3. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mix type, mix time, quantity, and amount of water added. Record approximate location of final deposit in structure.

PART 3 - EXECUTION

3.1 FORMWORK

A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until concrete structure can support such loads.

B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.

C. Limit concrete surface irregularities, designated by ACI 347R as abrupt or gradual, as follows:
1. Class C, 1/2 inch.

D. Construct forms tight enough to prevent loss of concrete mortar.

E. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical. Kerf wood inserts for forming keyways, reglets, recesses, and the like, for easy removal.

1. Do not use rust-stained steel form-facing material.

F. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.

G. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.

H. Chamfer exterior corners and edges of permanently exposed concrete.

I. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.

J. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.

K. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.

L. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

3.2 EMBEDDED ITEMS

A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use Setting Drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

1. Install anchor bolts, accurately located, to elevations required.
2. Install reglets to receive top edge of foundation sheet waterproofing and to receive through-wall flashings in outer face of concrete frame at exterior walls, where flashing is shown at lintels, shelf angles, and other conditions.

3.3 REMOVING AND REUSING FORMS

A. General: Formwork, for sides of beams, walls, columns, and similar parts of the Work, that does not support weight of concrete may be removed after cumulatively curing at not less than 50 deg F for 24 hours after placing concrete provided concrete is hard enough to not be damaged by form-removal operations and provided curing and protection operations are maintained.

B. Leave formwork, for beam soffits, joists, slabs, and other structural elements, that supports weight of concrete in place until concrete has achieved the following:
   1. At least 70 percent of 28-day design compressive strength.
   2. Determine compressive strength of in-place concrete by testing representative field- or laboratory-cured test specimens according to ACI 301.

C. Clean and repair surfaces of forms to be reused in the Work. Split, frayed, delaminated, or otherwise damaged form-facing material will not be acceptable for exposed surfaces. Apply new form-release agent.

D. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Architect.

3.4 SHORES AND RESHORES

A. Comply with ACI 318, ACI 301, and recommendations in ACI 347R for design, installation, and removal of shoring and reshoring.

B. Plan sequence of removal of shores and reshore to avoid damage to concrete. Locate and provide adequate reshoring to support construction without excessive stress or deflection.

3.5 VAPOR RETARDERS

A. Vapor Retarder: Place, protect, and repair vapor-retarder sheets according to ASTM E 1643-18 and manufacturer's written instructions.

   1. Place and compact a 1/2-inch- thick layer of fine-graded granular material over granular fill.

3.6 STEEL REINFORCEMENT

A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.

   1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials.

C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.

   1. Shop- or field-weld reinforcement according to AWS D1.4, where indicated.

D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.

E. Install welded wire fabric in longest practicable lengths on bar supports spaced to minimize sagging. Lap edges and ends of adjoining sheets at least one mesh spacing. Offset laps of adjoining sheet widths to prevent continuous laps in either direction. Lace overlaps with wire.

3.7 JOINTS

A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.

B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Engineer.

1. Place joints perpendicular to main reinforcement. Continue reinforcement across construction joints, unless otherwise indicated. Do not continue reinforcement through sides of strip placements of floors and slabs.
2. Form from preformed galvanized steel, plastic keyway-section forms, or bulkhead forms with keys, unless otherwise indicated. Embed keys at least 1-1/2 inches into concrete.
3. Locate joints for beams, slabs, joists, and girders in the middle third of spans. Offset joints in girders a minimum distance of twice the beam width from a beam-girder intersection.
4. Locate horizontal joints in walls and columns at underside of floors, slabs, beams, and girders and at the top of footings or floor slabs.
5. Space vertical joints in walls as indicated. Locate joints beside piers integral with walls, near corners, and in concealed locations where possible.
6. Use a bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
7. Use epoxy-bonding adhesive at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.

C. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness, as follows:

1. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.

D. Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.

1. Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface, unless otherwise indicated.

2. Terminate full-width joint-filler strips not less than 1/2 inch or more than 1 inch below finished concrete surface where joint sealants, specified in Division 7 Section "Joint Sealants," are indicated.
3. Install joint-filler strips in lengths as long as practicable. Where more than one length is required, lace or clip sections together.

E. Dowel Joints: Install dowel sleeves and dowels or dowel bar and support assemblies at joints where indicated.

1. Use dowel sleeves or lubricate or asphalt-coat one-half of dowel length to prevent concrete bonding to one side of joint.

3.8 WATERSTOPS

A. Flexible Waterstops: Install in construction joints as indicated to form a continuous diaphragm. Install in longest lengths practicable. Support and protect exposed waterstops during progress of Work. Field-fabricate joints in waterstops according to manufacturer's written instructions.

B. Self-Expanding Strip Waterstops: Install in construction joints and at other locations indicated, according to manufacturer's written instructions, bonding or mechanically fastening and firmly pressing into place. Install in longest lengths practicable.

3.9 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.

B. Do not add water to concrete during delivery, at Project site, or during placement, unless approved by Engineer.

C. Before placing concrete, water may be added at Project site, subject to limitations of ACI 301.

1. Do not add water to concrete after adding high-range water-reducing admixtures to mix.

D. Deposit concrete continuously or in layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as specified. Deposit concrete to avoid segregation.

E. Deposit concrete in forms in horizontal layers no deeper than 24 inches and in a manner to avoid inclined construction joints. Place each layer while preceding layer is still plastic, to avoid cold joints.

1. Consolidate placed concrete with mechanical vibrating equipment. Use equipment and procedures for consolidating concrete recommended by ACI 309R.
2. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations no farther than the visible effectiveness of the vibrator. Place vibrators to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mix constituents to segregate.

F. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.

1. Consolidate concrete during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
2. Maintain reinforcement in position on chairs during concrete placement.
3. Screed slab surfaces with a straightedge and strike off to correct elevations.
4. Slope surfaces uniformly to drains where required.
5. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, free of humps or hollows, before excess moisture or bleedwater appears on the surface. Do not further disturb slab surfaces before starting finishing operations.

G. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.

1. When air temperature has fallen to or is expected to fall below 40 deg F, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg F and not more than 80 deg F at point of placement.
2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators, unless otherwise specified and approved in mix designs.

H. Hot-Weather Placement: Place concrete according to recommendations in ACI 305R and as follows, when hot-weather conditions exist:

1. Cool ingredients before mixing to maintain concrete temperature below 90 deg F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
2. Cover steel reinforcement with water-soaked burlap so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.

3. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.

3.10 FINISHING FORMED SURFACES

A. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defective areas. Remove fins and other projections exceeding 1/8 inch in height.

1. Apply to concrete surfaces exposed to public view or to be covered with a coating or covering material applied directly to concrete, such as waterproofing, dampproofing, veneer plaster, or painting.
2. Do not apply rubbed finish to smooth-formed finish.

B. Rubbed Finish: Apply the following to smooth-formed finished concrete (top of beam closure concrete bollard - all surfaced):

1. Smooth-Rubbed Finish: Not later than one day after form removal, moisten concrete surfaces and rub with carborundum brick or another abrasive until producing a uniform color and texture. Do not apply cement grout other than that created by the rubbing process.

C. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

3.11 FINISHING FLOORS AND SLABS

A. General: Comply with recommendations in ACI 302.1R for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

B. Scratch Finish: While still plastic, texture concrete surface that has been screeded and bull-floated or darbied. Use stiff brushes, brooms, or rakes.

1. Apply scratch finish to surfaces indicated and to surfaces to receive concrete floor topping or mortar setting beds for ceramic or quarry tile, portland cement terrazzo, and other bonded cementitious floor finishes.

C. Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power driven floats. Restraighten, cut down high spots, and fill low spots. Repeat float passes and restraightening until surface is left with a uniform, smooth, granular texture.

1. Apply float finish to surfaces indicated, to surfaces to receive trowel finish, and to floor and slab surfaces to be covered with fluid-applied or sheet waterproofing, built-up or membrane roofing, or sand-bed terrazzo.

D. Trowel Finish: After applying float finish, apply first trowel finish and consolidate concrete by hand or power-driven trowel. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.

1. Finish and measure surface so gap at any point between concrete surface and an unleveled freestanding 10-foot- long straightedge, resting on two high spots and placed anywhere on the surface, does not exceed the following:

a. 1/4 inch .

E. Trowel and Fine-Broom Finish: Apply a partial trowel finish, stopping after second troweling, to surfaces indicated and to surfaces where ceramic or quarry tile is to be installed by either thickset or thin-set method. Immediately after second troweling, and when concrete is still plastic, slightly scarify surface with a fine broom.

F. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, and ramps, and elsewhere as indicated.

1. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route. Coordinate required final finish with Architect before application.

G. Slip-Resistive Aggregate Finish: Before final floating, apply slip-resistive aggregate finish where indicated and to concrete stair treads, platforms, and ramps. Apply according to manufacturer's written instructions and as follows:

1. Uniformly spread 25 lb/100 sq. ft. of dampened slip-resistive aggregate over surface in one or two applications. Tamp aggregate flush with surface, but do not force below surface.
2. After broadcasting and tamping, apply float finish.
3. After curing, lightly work surface with a steel wire brush or an abrasive stone, and water to expose slip-resistive aggregate.

H. Mineral Dry-Shake Floor Hardener Finish: After initial floating, apply mineral dry-shake materials to surfaces according to manufacturer's written instructions and as follows:

1. Uniformly apply mineral dry-shake materials at a rate of 100 lb/100 sq. ft., unless greater amount is recommended by manufacturer.
2. Uniformly distribute approximately two-thirds of mineral dry-shake materials over surface by hand or with mechanical spreader, and embed by power floating.

Follow power floating with a second mineral dry-shake application, uniformly distributing remainder of material, and embed by power floating.

3. After final floating, apply a trowel finish. Cure concrete with curing compound recommended by dry-shake material manufacturer and apply immediately after final finishing.

3.12 MISCELLANEOUS CONCRETE ITEMS

A. Filling In: Fill in holes and openings left in concrete structures, unless otherwise indicated, after work of other trades is in place. Mix, place, and cure concrete, as specified, to blend with in-place construction. Provide other miscellaneous concrete filling indicated or required to complete Work.

B. Curbs: Provide monolithic finish to interior curbs by stripping forms while concrete is still green and by steel-troweling surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.

C. Equipment Bases and Foundations: Provide machine and equipment bases and foundations as shown on Drawings. Set anchor bolts for machines and equipment at correct elevations, complying with diagrams or templates of manufacturer furnishing machines and equipment.

D. Steel Pan Stairs: Provide concrete fill for steel pan stair treads, landings, and associated items. Cast-in inserts and accessories as shown on Drawings. Screed, tamp, and trowel-finish concrete surfaces.

3.13 CONCRETE PROTECTION AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and with recommendations in ACI 305R for hot-weather protection during curing.

B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

C. Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces. If forms remain during curing period, moist cure after loosening forms. If removing forms before end of curing period, continue curing by one or a combination of the following methods:

D. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces, including floors and slabs, concrete floor toppings, and other surfaces, by one or a combination of the following methods:

1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:

    a. Continuous water-fog spray.
    b. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.

2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches , and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.

    a. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive floor coverings.
    b. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive penetrating liquid floor treatments.
    c. Cure concrete surfaces to receive floor coverings with either a moisture-retaining cover or a curing compound that the manufacturer recommends for use with floor coverings.

3.14 LIQUID FLOOR TREATMENTS

A. Penetrating Liquid Floor Treatment: Prepare, apply, and finish penetrating liquid floor treatment according to manufacturer's written instructions.

    1. Remove curing compounds, sealers, oil, dirt, laitance, and other contaminants and complete surface repairs.
    2. Do not apply to concrete that is less than seven days old.
    3. Apply liquid until surface is saturated, scrubbing into surface until a gel forms; rewet; and repeat brooming or scrubbing. Rinse with water; remove excess material until surface is dry. Apply a second coat in a similar manner if surface is rough or porous.

B. Sealing Coat: Uniformly apply a continuous sealing coat of curing and sealing compound to hardened concrete by power spray or roller according to manufacturer's written instructions.

3.15 JOINT FILLING

A. Prepare, clean, and install joint filler according to manufacturer's written instructions.

    1. Do not fill joints until construction traffic has permanently ceased.

B. Remove dirt, debris, saw cuttings, curing compounds, and sealers from joints; leave contact faces of joint clean and dry.

C. Install semirigid epoxy joint filler full depth in saw-cut joints and at least 2 inches deep in formed joints. Overfill joint and trim joint filler flush with top of joint after hardening.

3.16 CONCRETE SURFACE REPAIRS

A. Defective Concrete: Repair and patch defective areas when approved by Engineer. Remove and replace concrete that cannot be repaired and patched to Engineer's approval.

B. Patching Mortar: Mix dry-pack patching mortar, consisting of one part portland cement to two and one-half parts fine aggregate passing a No. 16 sieve, using only enough water for handling and placing.

C. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.

1. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than 1/2 inch in any dimension in solid concrete but not less than 1 inch in depth. Make edges of cuts perpendicular to concrete surface. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with patching mortar before bonding agent has dried. Fill form-tie voids with patching mortar or cone plugs secured in place with bonding agent.
2. Repair defects on surfaces exposed to view by blending white portland cement and standard portland cement so that, when dry, patching mortar will match surrounding color. Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.
3. Repair defects on concealed formed surfaces that affect concrete's durability and structural performance as determined by Engineer.

D. Repairing Unformed Surfaces: Test unformed surfaces, such as floors and slabs, for finish and verify surface tolerances specified for each surface. Correct low and high areas. Test surfaces sloped to drain for trueness of slope and smoothness; use a sloped template.

1. Repair finished surfaces containing defects. Surface defects include spalls, popouts, honeycombs, rock pockets, crazing and cracks in excess of 0.01 inch wide or that penetrate to reinforcement or completely through unreinforced sections regardless of width, and other objectionable conditions.
2. After concrete has cured at least 14 days, correct high areas by grinding.

3. Correct localized low areas during or immediately after completing surface finishing operations by cutting out low areas and replacing with patching mortar. Finish repaired areas to blend into adjacent concrete.
4. Correct other low areas scheduled to receive floor coverings with a repair underlayment. Prepare, mix, and apply repair underlayment and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface. Feather edges to match adjacent floor elevations.
5. Repair defective areas, except random cracks and single holes 1 inch or less in diameter, by cutting out and replacing with fresh concrete. Remove defective areas with clean, square cuts and expose steel reinforcement with at least 3/4 inch clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding agent. Mix patching concrete of same materials and mix as original concrete except without coarse aggregate. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.

E. Perform structural repairs of concrete, subject to Engineer's approval, using epoxy adhesive and patching mortar.

F. Repair materials and installation not specified above may be used, subject to Engineer's approval.

3.17 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified independent testing and inspecting agency to sample materials, perform tests, and submit test reports during concrete placement according to requirements specified in this Article.

B. Testing Services: Testing of composite samples of fresh concrete obtained according to ASTM C 172-17 shall be performed according to the following requirements:

1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mix exceeding 5 cu. yd. , but less than 25 cu. yd., plus one set for each additional 50 cu. yd. or fraction thereof.

    a. When frequency of testing will provide fewer than five compressive-strength tests for each concrete mix, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.

2. Slump: ASTM C 143-20; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mix. Perform additional tests when concrete consistency appears to change.
3. Concrete Temperature: ASTM C 1064-17; one test hourly when air temperature is 40 deg F and below and when 80 deg F and above, and one test for each composite sample.

4. Unit Weight: ASTM C 567-19, fresh unit weight of structural lightweight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mix.
5. Compression Test Specimens: ASTM C 31-21a; cast and laboratory cure one set of four standard cylinder specimens for each composite sample.

    a. Cast and field cure one set of four standard cylinder specimens for each composite sample.

6. Compressive-Strength Tests: ASTM C 39-21; test two laboratory-cured specimens at 7 days and two at 28 days.

    a. Test two field-cured specimens at 7 days and two at 28 days.
    b. A compressive-strength test shall be the average compressive strength from two specimens obtained from same composite sample and tested at age indicated.

D. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, Contractor shall evaluate operations and provide corrective procedures for protecting and curing in-place concrete.

E. Strength of each concrete mix will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.

F. Test results shall be reported in writing to Engineer, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mix proportions and materials, compressive breaking strength, and type of break for both 7-and 28-day tests.

G. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Engineer but will not be used as sole basis for approval or rejection of concrete.

H. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Engineer. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42-20 or by other methods as directed by Engineer.

END OF SECTION 03300

SECTION 03410 - PLANT-PRECAST STRUCTURAL CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes plant-precast structural concrete units, including the following:

1. Structural framing units.

B. Related Sections include the following:

1. Division 7 Section "Joint Sealants" for elastomeric joint sealants and sealant backings.

1.3 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide precast structural concrete units and connections capable of withstanding design loads within limits and under conditions indicated.

B. Structural Performance: Provide precast structural concrete units and connections capable of withstanding the following design loads within limits and under conditions indicated:

1. Dead Loads: Beam weight.
2. Construction Loads: 12” timber mat w/Link-Belt Crane model LS-218H using 36” wide tracks and 48” x 48” angle boom lifting 32,000 lb. Pile.
3. Live Loads: 200PSF for deck area (rail to rail).
4. Rail Loads: 50 PLF or 200 lbs at post, whichever is greater.
5. Wind Loads: 75 PSF of exposed area.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Design Mixes: For each concrete mix.

C. Shop Drawings: Detail fabrication and installation of precast structural concrete units. Indicate member locations, plans, elevations, dimensions, shapes, cross sections, openings, and types of reinforcement, including special reinforcement.

1. Indicate welded connections by AWS standard symbols. Detail loose and cast-in hardware, inserts, connections, and joints, including accessories.
2. Indicate locations and details of anchorage devices to be embedded in other construction.
3. Comprehensive engineering analysis signed and sealed by the qualified professional engineer responsible for its preparation.

D. Samples of bearing pads.

E. Welding Certificates: Copies of certificates for welding procedures and personnel.

F. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

G. Material Test Reports: From a qualified testing agency indicating and interpreting test results of the following for compliance with requirements indicated:

H. Material Certificates: Signed by manufacturers certifying that each of the following items complies with requirements:

1. Concrete materials.
2. Reinforcing materials and prestressing tendons.
3. Admixtures.
4. Bearing pads.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed precast structural concrete work similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

B. Fabricator Qualifications: A firm that complies with the following requirements and is experienced in manufacturing precast structural concrete units similar to those indicated for this Project and with a record of successful in-service performance.

1. Assumes responsibility for engineering precast structural concrete units to comply with performance requirements. This responsibility includes preparation of Shop Drawings and comprehensive engineering analysis by a qualified professional engineer.

2. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of precast structural concrete that are similar to those indicated for this Project in material, design, and extent.
3. Participates in PCI's Plant Certification program and is designated a PCI-certified plant for units that are required.
4. Has sufficient production capacity to produce required units without delaying the Work.

C. Testing Agency Qualifications: An independent testing agency**,** acceptable to authorities having jurisdiction**,** qualified according to ASTM C 1077 and ASTM E 329 to conduct the testing indicated, as documented according to ASTM E 548-94e1

D. Design Standards: Comply with ACI 318 and the design recommendations of PCI MNL 120, "PCI Design Handbook--Precast and Prestressed Concrete."

E. Quality-Control Standard: For manufacturing procedures and testing requirements, quality-control recommendations, and camber and dimensional tolerances for types of units required, comply with PCI MNL 116, "Manual for Quality Control for Plants and Production of Precast and Prestressed Concrete Products."

F. Product Options: Drawings indicate size, profiles, and dimensional requirements of precast concrete units and are based on the specific types of units indicated. Other fabricators' precast concrete units complying with requirements may be considered. Refer to Division 1 Section "Substitutions."

G. Welding: Qualify procedures and personnel according to AWS D1.1, "Structural Welding Code--Steel"; and AWS D1.4, "Structural Welding Code--Reinforcing Steel."

H. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Meetings."

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver precast structural concrete units to Project site in such quantities and at such times to ensure continuity of installation. Store units at Project site to prevent cracking, distorting, warping, staining, or other physical damage, and so markings are visible.

B. Lift and support units only at designated lifting and supporting points as shown on Shop Drawings.

1.7 SEQUENCING

A. Furnish anchorage items to be embedded in other construction without delaying the Work. Provide setting diagrams, templates, instructions, and directions, as required, for installation.

PART 2 - PRODUCTS

2.1 MOLD MATERIALS

A. Molds: Provide molds and, where required, form-facing materials of metal, plastic, wood, or another material that is nonreactive with concrete and dimensionally stable to produce continuous and true precast concrete surfaces within fabrication tolerances and suitable for required finishes.

2.2 REINFORCING MATERIALS

A. Reinforcing Bars: ASTM A 615, Grade 60, deformed.

B. Supports: Manufacturer's bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire fabric in place according to CRSI's "Manual of Standard Practice," PCI MNL 116, and as follows:

1. For uncoated reinforcement, use all-plastic or CRSI Class 2 stainless-steel bar supports.

2.3 PRESTRESSING TENDONS

A. Prestressing Strand: ASTM A 416-18, Grade 270, uncoated, 7-wire, low-relaxation strand.

2.4 CONCRETE MATERIALS

A. Portland Cement: ASTM C 150-21, Type I or Type III, of same type, brand, and source.

B. Normal-Weight Aggregates: Except as modified by PCI MNL 116, ASTM C 33-18, with coarse aggregates complying with Class 4S.

C. Lightweight Aggregates: N/A

D. Water: Potable; free from deleterious material that may affect color stability, setting, or strength of concrete and complying with chemical limits of PCI MNL 116.

E. Air-Entraining Admixture: ASTM C 260-10a(2016), certified by manufacturer to be compatible with other required admixtures.

F. Water-Reducing Admixture: ASTM C 494-19, Type A.

G. Retarding Admixture: ASTM C 494-19, Type B.

H. Water-Reducing and Retarding Admixture: ASTM C 494-19, Type D.

I. High-Range, Water-Reducing Admixture: ASTM C 494-19, Type F.

J. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494-19, Type G.

K. Plasticizing Admixture: ASTM C1017-13e1

L. Fly Ash Admixture: ASTM C 618 19 Class C or F

M. Silica Fume Admixture: ASTM C1249-20

N. Corrosion Inhibiting Admixture: ASTM G180-21

2.5 STEEL CONNECTION MATERIALS

A. Carbon-Steel Shapes and Plates: ASTM A 36-19.

B. Carbon-Steel Headed Studs: ASTM A 108-18, AISI 1018 through AISI 1020, cold finished; AWS D1.1, Type A or B, with arc shields.

C. Malleable Steel Castings: ASTM A 47-99(2018)e1.

D. Deformed-Steel Wire or Bar Anchors: ASTM A496-07 or A706-18

E. Carbon-Steel Bolts and Studs: ASTM A307-21, Grade A; carbon-steel, hex-head bolts and studs; carbon-steel nuts; and flat, unhardened steel washers.

F. High-Strength Bolts and Nuts: ASTM A325M-14, Type 3, heavy hex steel structural bolts, heavy hex carbon-steel nuts, and hardened carbon-steel washers.

G. Welding Electrodes: Comply with AWS standards.

H. Accessories: Provide clips, hangers, plastic shims, and other accessories required to install precast structural concrete units.

2.6 STAINLESS-STEEL CONNECTION MATERIALS

A. Stainless-Steel Plate: ASTM A666-15, Type 304, of grade suitable for application.

B. Stainless-Steel Bolts and Studs: ASTM F593-17, alloy 304 or 316, hex-head bolts and studs; stainless-steel nuts; and flat, stainless-steel washers.

C. Stainless-Steel Headed Studs: ASTM A276-17

2.7 BEARING PADS

A. Provide bearing pads for precast structural concrete units as follows:

1. Elastomeric Pads: AASHTO M 251, plain, vulcanized, 100 percent polychloroprene (neoprene) elastomer, molded to size or cut from a molded sheet, 70 Shore A durometer, minimum tensile strength 2250 psi per ASTM D412-16(2021)

2.8 GROUT MATERIALS

A. Sand-Cement Grout: Portland cement, ASTM C150-21, Type I, and clean, natural sand, ASTM C144-18. Mix at ratio of 1 part cement to 2-1/2 parts sand, by volume, with minimum water required for placement and hydration.

B. Epoxy Grout: ASTM C881-20a, 2-component epoxy resin, of type, grade, and class to suit requirements.

2.9 CONCRETE MIXES

A. Prepare design mixes for each type of concrete required.

1. Limit use of fly ash and silica fume to not exceed, in aggregate, 25 percent of portland cement by weight.

B. Design mixes may be prepared by a qualified independent testing agency or by qualified precast plant personnel at precast structural concrete fabricator's option.

C. Limit water-soluble chloride ions to the maximum percentage by weight of cement permitted by ACI 318 (ACI 318M).

D. Normal-Weight Concrete: Proportion mixes by either laboratory trial batch or field test data methods according to ACI 211.1, with materials to be used on Project, to provide normal-weight concrete with the following properties:

1. Compressive Strength (28 Days): 6000 psi**.**
2. Maximum Water-Cementitious Materials Ratio: 0.40.
3. Add air-entraining admixture at manufacturer's prescribed rate to result in normal-weight concrete at point of placement having an air content as follows, with a tolerance of plus or minus 1-1/2 percent:

a. Air Content: 2.5 to 4.5 percent.

E. Other Admixtures: Use water-reducing, high-range water-reducing, water-reducing and accelerating, or water-reducing and retarding admixtures according to manufacturer's written instructions.

F. Concrete Mix Adjustments: Concrete mix design adjustments may be proposed if characteristics of materials, Project conditions, weather, test results, or other circumstances warrant.

G. Corrosion Inhibiting Admixture: Use Corrosion Inhibiting Admixture satisfying ASTM G180-21

2.10 FABRICATION

A. Formwork: Accurately construct forms, mortar tight, of sufficient strength to withstand pressures due to concrete-placement operations and temperature changes and for pretensioning and detensioning operations. Maintain formwork to provide completed precast concrete units of shapes, lines, and dimensions indicated, within fabrication tolerances.

1. Coat surfaces of forms with bond-breaking compound before reinforcement is placed. Provide commercial-formula, form-coating compounds that will not bond with, stain, or adversely affect concrete surfaces and that will not impair subsequent treatments of concrete surfaces requiring bond or adhesion. Apply in compliance with manufacturer's written instructions.
2. Unless forms for precast, prestressed concrete units are stripped before detensioning, design forms so stresses are not induced in precast concrete units because of deformation or movement of concrete during detensioning.

B. Built-in Anchorages: Accurately position built-in anchorage devices and secure to formwork. Locate anchorages where they do not affect position of main reinforcement or concrete placement. Do not relocate bearing plates in units unless approved by Architect.

C. Cast-in openings larger than 10 inches (250 mm) in diameter or 10 inches (250 mm) square according to Shop Drawings. Smaller holes may be field cut by trades requiring them, as approved by Architect.

D. Reinforcement: Comply with recommendations in CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

1. Clean reinforcement of loose rust and mill scale, earth, and other materials that reduce or destroy the bond with concrete.
2. Accurately position, support, and secure reinforcement against displacement by formwork, construction, or concrete-placement operations. Locate and support reinforcement by metal chairs, runners, bolsters, spacers, and hangers, as required.

3. Place reinforcement to obtain at least the minimum coverage for concrete protection. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position while placing concrete. Set wire ties so ends are directed into concrete, not toward exposed concrete surfaces.
4. Install welded wire fabric in lengths as long as practicable. Lap adjoining pieces at least one full mesh and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.

E. Prestress tendons for precast structural concrete units by either pretensioning or posttensioning methods. Comply with PCI MNL 116.

1. Delay detensioning until concrete has reached at least 70 percent of its compressive strength as established by test cylinders cured under the same conditions as concrete.
2. If concrete has been heat cured, detension while concrete is still warm and moist to avoid dimensional changes that may cause cracking or undesirable stresses.
3. Detension pretensioned tendons either by gradually releasing tensioning jacks or by heat-cutting tendons, using a sequence and pattern to prevent shock or unbalanced loading.

F. Mix concrete according to PCI MNL 116 and requirements in this Section. After concrete batching, no additional water may be added.

G. Place concrete in a continuous operation to prevent seams or planes of weakness from forming in precast concrete units. Comply with requirements in PCI MNL 116 for measuring, mixing, transporting, and placing concrete.

H. Thoroughly consolidate placed concrete by internal and external vibration without dislocating or damaging reinforcement and built-in items. Use equipment and procedures complying with PCI MNL 116.

I. Comply with ACI 306.1 procedures for cold-weather concrete placement.

J. Comply with ACI 305R recommendations for hot-weather concrete placement.

K. Identify pickup points of precast concrete units and orientation in structure with permanent markings, complying with markings indicated on Shop Drawings. Imprint casting date on each precast concrete unit on a surface that will not show in finished structure.

L. Cure concrete, according to requirements in PCI MNL 116, by moisture retention without heat or by accelerated heat curing using low-pressure live steam or radiant heat and moisture.

M. Product Tolerances: Fabricate precast structural concrete units straight and true to size and shape with exposed edges and corners precise and true so each finished unit complies with PCI MNL 116 product tolerances.

N. Finish formed surfaces of precast structural concrete as indicated for each type of unit, and as follows:
   1. Grade B Finish: Fill air pockets and holes larger than 1/4 inch (6 mm) in diameter with sand-cement paste matching color of adjacent surfaces. Grind smooth form offsets or fins larger than 1/8 inch (3 mm).

O. Screed finish unformed surfaces. Strike off and consolidate concrete with vibrating screeds to a uniform finish. Hand screed at projections.

P. Smooth steel trowel finish unformed surfaces. Consolidate concrete, bring to proper level with straightedge, float, and trowel to a smooth, uniform finish.

   1. Apply scratch finish to precast concrete units that will receive concrete topping after installation. After initial strikeoff, transversely scarify surface to provide ridges approximately 1/4 inch (6 mm) deep.

Q. Recess prestressing tendons a minimum of 1/2 inch (13 mm), fill recesses with grout, and apply a sack finish to vertical ends of precast concrete units.

2.11 SOURCE QUALITY CONTROL

A. Owner will employ an independent testing agency to evaluate precast structural concrete fabricator's quality-control and testing methods.

   1. Allow Owner's testing agency access to material storage areas, concrete production equipment, concrete placement, and curing facilities. Cooperate with Owner's testing agency and provide samples of materials and concrete mixes as may be requested for additional testing and evaluation.

B. Quality-Control Testing: Test and inspect precast concrete according to PCI MNL 116 requirements.

C. Strength of precast concrete units will be considered deficient if units fail to comply with PCI MNL 116 requirements, including the following:

   1. Units fail to comply with compressive-strength test requirements.
   2. Reinforcement and prestressed tendons of units do not comply with fabrication requirements.
   3. Concrete curing and protection of units against extremes in temperature fail to comply with requirements.
   4. Units are damaged during handling and erecting.

D. Testing: If there is evidence that the strength of precast concrete units may be deficient or may not comply with PCI MNL 116 requirements, Owner will employ an independent testing agency to obtain, prepare, and test cores drilled from hardened concrete to determine compressive strength according to ASTM C42-20

1. A minimum of three representative cores will be taken from units of suspect strength, from locations directed by Architect.
2. Cores will be tested, after immersion in water, in a wet condition per ACI 301 if units will be wet under service conditions.
3. Cores will be tested in an air-dry condition per ACI 301 if units will be dry under service conditions.
4. Strength of concrete for each series of 3 cores will be considered satisfactory if the average compressive strength is equal to at least 85 percent of the 28-day design compressive strength and no single core is less than 75 percent of the 28-day design compressive strength.
5. Test results will be made in writing on the same day that tests are performed, with copies to Architect, Contractor, and precast concrete fabricator. Test reports will include the following:

    a. Project identification name and number.
    b. Date when tests were performed.
    c. Name of precast concrete fabricator.
    d. Name of concrete testing agency.
    e. Identification letter, name, and type of precast concrete unit or units represented by core tests; design compressive strength; type of break; compressive strength at break, corrected for length-diameter ratio; and direction of applied load to core in relation to horizontal plane of concrete as placed.

E. Patching: If core test results are satisfactory and precast concrete units comply with requirements, clean and dampen core holes and solidly fill with precast concrete mix that has no coarse aggregate, and finish to match adjacent precast concrete surfaces.

F. Dimensional Tolerances: Units with dimensions smaller or larger than required and not complying with tolerance limits may be subject to additional testing.

1. Precast concrete units with dimensions larger than required will be rejected if the appearance or function of the structure is adversely affected or if larger dimensions interfere with other construction. Repair or remove and replace rejected units, as required, to comply with construction conditions.

G. Defective Work: Precast concrete units that do not comply with requirements, including strength, manufacturing tolerances, and finishes, are unacceptable. Replace with precast concrete units that comply with requirements.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions for compliance with requirements for installation tolerances, true and level bearing surfaces, and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Bearing Pads: Install bearing pads as precast concrete units are being erected. Set pads on true, level, and uniform bearing surfaces and maintain in correct position until precast concrete units are placed.

B. Install precast structural concrete. Shore and brace precast concrete units to maintain location, stability, and alignment until permanent connections are installed.

C. Welding: Perform welding in compliance with AWS D1.1 and AWS D1.4, with qualified welders.

1. Protect precast concrete units and bearing pads from damage by field welding or cutting operations and provide noncombustible shields as required.
2. Repair damaged metal surfaces by cleaning and applying a coat of galvanized repair paint to galvanized surfaces.
3. Repair damaged metal surfaces by cleaning and repriming damaged painted surfaces.

D. Fasteners: Do not use drilled or powder-actuated fasteners for attaching accessory items to precast, prestressed concrete units unless approved by Architect.

E. Erection Tolerances: Install precast concrete units level, plumb, square, and true, without exceeding the recommended erection tolerances in PCI MNL 127, "Recommended Practice for Erection of Precast Concrete."

F. Grouting Connections and Joints: After precast concrete units have been placed and secured, grout open spaces at keyways, connections, and joints as follows:

1. Provide forms or other approved method to retain grout in place until hard enough to support itself. Pack spaces with stiff grout material, tamping until voids are completely filled. Place grout to finish smooth, level, and plumb with adjacent concrete surfaces. Keep grouted joints damp for not less than 24 hours after initial set. Promptly remove grout material from exposed surfaces before it hardens.

3.3 FIELD QUALITY CONTROL

A. Testing: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections.

B. Field welds and connections using high-strength bolts will be subject to tests and inspections.

C. Testing agency will report test results promptly and in writing to Contractor and Architect.

D. Remove and replace work that does not comply with specified requirements.

E. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of corrected work with specified requirements.

3.4 CLEANING

A. Clean exposed surfaces of precast concrete units after erection to remove weld marks, other markings, dirt, and stains.

1. Wash and rinse according to precast concrete fabricator's written recommendations. Protect other work from staining or damage due to cleaning operations.
2. Do not use cleaning materials or processes that could change the appearance of exposed concrete finishes.

END OF SECTION 03410

SECTION 05720 - ORNAMENTAL HANDRAILS AND RAILINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Aluminum ornamental handrails and railings.

1.3 PERFORMANCE REQUIREMENTS

A. General: In engineering handrails and railings to withstand structural loads indicated, determine allowable design working stresses of materials based on the following:

1. Aluminum: AA 30, "Specifications for Aluminum Structures."
2. Stainless Steel: ASCE 8, "Specification for the Design of Cold-Formed Stainless Steel Structural Members."

B. Structural Performance of Handrails and Railings: Comply with requirements of ASTM E 985 for structural performance based on testing performed according to ASTM E 894 and ASTM E 935.

C. Structural Performance of Handrails and Railings: Provide handrails and railings capable of withstanding structural loads required by ASCE 7 without exceeding allowable design working stress of materials for handrails, railings, anchors, and connections.

1. Handrails Not Serving As Top Rails: Capable of withstanding the following loads applied as indicated:

a. Concentrated load of 200 lbf (890 N) applied at any point and in any direction.
b. Uniform load of 50 lbf/ft. (730 N/m) applied in any direction.
c. Concentrated and uniform loads above need not be assumed to act concurrently.

D. Thermal Movements: Provide handrails and railings that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

E. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

1.4 SUBMITTALS

A. Product Data: For manufacturer's product lines of handrails and railings assembled from standard components.

1. Include Product Data for grout, anchoring cement, and paint products.

B. Shop Drawings: Show fabrication and installation of handrails and railings. Include plans, elevations, sections, details, and attachments to other Work.

1. For installed handrails and railings indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
2. For illuminated handrails and railings, include wiring diagrams and roughing-in details.

C. Samples for Initial Selection: Manufacturer's color charts showing the full range of colors available for products with factory-applied color finishes.

D. Samples for Initial Selection: Short sections of railing or flat sheet metal Samples showing available mechanical finishes.

E. Samples for Verification: For each type of exposed finish required, prepared on components indicated below and of same thickness and metal indicated for the Work. If finishes involve normal color and texture variations, include sample sets showing the full range of variations expected.

1. 6-inch- (150-mm-) long sections of each different linear railing member, including handrails, top rails, posts, and balusters.
2. Fittings and brackets.
3. Welded connections.
4. Brazed connections.

5. Assembled Samples of railings, made from full-size components, including top rail, post, handrail, and infill. Show method of finishing members at intersections. Samples need not be full height.

F. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

G. Product Test Reports: Indicating products comply with requirements, based on comprehensive testing of current products.

H. Product Test Reports: Indicating handrails and railings comply with ASTM E 985, based on comprehensive testing of current products.

1.5 QUALITY ASSURANCE

A. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of handrails and railings that are similar to those indicated for this Project in material, design, and extent.

B. Testing Agency Qualifications: An independent testing agency with the experience and capability to conduct the testing indicated, as documented according to ASTM E 548.

C. Source Limitations: Obtain each type of railing through one source from a single manufacturer.

1.6 STORAGE

A. Store handrails and railings in a dry, well-ventilated, weathertight place.

1.7 PROJECT CONDITIONS

A. Field Measurements: Verify handrail and railing dimensions by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating handrails and railings without field measurements. Coordinate construction to ensure that actual dimensions correspond to established dimensions.

1.8 COORDINATION

A. Coordinate installation of anchorages for handrails and railings. Furnish Setting Drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

1.9 SCHEDULING

A. Schedule installation so handrails and railings are mounted only on completed walls. Do not support temporarily by any means that do not satisfy structural performance requirements.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

2.2 METALS

A. General: Provide metal free from pitting, seam marks, roller marks, stains, discolorations, and other imperfections where exposed to view on finished units.

B. Aluminum: Alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with not less than strength and durability properties of alloy and temper designated below for each aluminum form required.

1. Extruded Bar and Tube: ASTM B 221 (ASTM B 221M), alloy 6063-T5/T52.
2. Extruded Structural Pipe and Tube: ASTM B 429, alloy 6063-T6.
3. Drawn Seamless Tube: ASTM B 210 (ASTM B 210M), alloy 6063-T832.
4. Plate and Sheet: ASTM B 209 (ASTM B 209M), alloy 6061-T6.
5. Die and Hand Forgings: ASTM B 247 (ASTM B 247M), alloy 6061-T6.
6. Castings: ASTM B 26/B 26M, alloy A356-T6.

C. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails, unless otherwise indicated.

1. Provide cast brackets with flange tapped for concealed anchorage to threaded hanger bolt.
2. Provide formed or cast brackets with predrilled hole for exposed bolt anchorage.
3. Provide formed steel brackets with predrilled hole for bolted anchorage and with snap-on cover that matches rail finish and conceals bracket base and bolt head.

4. Provide brackets with interlocking pieces that conceal anchorage. Locate set screws on bottom of bracket.

2.3 FASTENERS

A. Fasteners for Anchoring Handrails and Railings to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring handrails and railings to other types of construction indicated and capable of withstanding design loads.

1. For aluminum handrails and railings, use fasteners fabricated from Type 316 stainless steel.

B. Fasteners for Interconnecting Handrail and Railing Components: Use fasteners fabricated from same basic metal as fastened metal, unless otherwise indicated. Do not use metals that are corrosive or incompatible with materials joined.

1. Provide concealed fasteners for interconnecting railing components and for attaching them to other Work, unless otherwise indicated.
2. Provide concealed fasteners for interconnecting railing components and for attaching them to other Work, unless exposed fasteners are unavoidable or are standard fastening method for handrail and railing indicated.
3. Provide Phillips flat-head machine screws for exposed fasteners, unless otherwise indicated.

C. Cast-in-Place and Postinstalled Anchors: Anchors of type indicated below, fabricated from corrosion-resistant materials with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry and equal to four times the load imposed when installed in concrete, as determined by testing per ASTM E 488 conducted by a qualified independent testing agency.

1. Cast-in-place anchors.
2. Chemical anchors.
3. Expansion anchors.

2.4 FABRICATION

A. Assemble handrails and railings in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation. Use connections that maintain structural value of joined pieces.

B. Form changes in direction of railing members as follows:

1. As detailed.
2. By bending.

3. By flush radius bends.
4. By radius bends of radius indicated.
5. By mitering at elbow bends.
6. By inserting prefabricated flush elbow fittings.
7. By any method indicated above, applicable to change in direction involved.

C. Form simple and compound curves by bending members in jigs to produce uniform curvature for each repetitive configuration required; maintain profile of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of handrail and railing components.

D. Welded Connections: Fabricate handrails and railings for connecting members by welding. Cope components at perpendicular and skew connections to provide close fit, or use fittings designed for this purpose. Weld connections continuously to comply with the following:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove flux immediately.
4. At exposed connections, finish exposed surfaces smooth and blended so no roughness shows after finishing and welded surface matches contours of adjoining surfaces.

E. Mechanical Connections: Fabricate handrails and railings by connecting members with railing manufacturer's standard concealed mechanical fasteners and fittings, unless otherwise indicated. Fabricate members and fittings to produce flush, smooth, rigid, hairline joints.

1. Fabricate splice joints for field connection using epoxy structural adhesive where this is manufacturer's standard splicing method.

F. Brackets, Flanges, Fittings, and Anchors: Provide manufacturer's standard wall brackets, flanges, miscellaneous fittings, and anchors to connect handrail and railing members to other construction.

G. Provide inserts and other anchorage devices to connect handrails and railings to concrete or masonry. Fabricate anchorage devices capable of withstanding loads imposed by handrails and railings. Coordinate anchorage devices with supporting structure.

H. For railing posts set in concrete, provide preset sleeves of steel not less than 6 inches (150 mm) long with inside dimensions not less than 1/2 inch (12 mm) larger than outside dimensions of post, and steel plate forming bottom closure.

I. For removable railing posts, fabricate slip-fit sockets from steel tube whose ID is sized for a close fit with posts; limit movement of post without lateral load, measured at top,

to not more than one-fortieth of post height. Provide socket covers designed and fabricated to resist being dislodged.

1. Provide chain with eye, snap hook, and staple across gaps formed by removable railing sections at locations indicated. Fabricate from same metal as railings.

J. Shear and punch metals cleanly and accurately. Remove burrs from exposed cut edges.

K. Ease exposed edges to a radius of approximately 1/32 inch (1 mm), unless otherwise indicated. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing the Work.

L. Cut, reinforce, drill, and tap components, as indicated, to receive finish hardware, screws, and similar items.

M. Provide weep holes or another means to drain entrapped water in hollow sections of railing members that are exposed to exterior or to moisture from condensation or other sources.

N. Fabricate joints that will be exposed to weather in a watertight manner.

O. Close exposed ends of railing members with prefabricated end fittings.

P. Provide wall returns at ends of wall-mounted handrails, unless otherwise indicated. Close ends of returns, unless clearance between end of railing and wall is 1/4 inch (6 mm) or less.

Q. Toe Boards: Where indicated, provide toe boards at railings around openings and at edge of open-sided floors and platforms. Fabricate to dimensions and details indicated.

R. Fillers: Provide fillers made from steel plate, or other suitably crush-resistant material, where needed to transfer wall bracket loads through wall finishes to structural supports. Size fillers to suit wall finish thicknesses and to produce adequate bearing area to prevent bracket rotation and overstressing of substrate.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine plaster and gypsum board assemblies, where reinforced to receive anchors, to verify that locations of concealed reinforcements have been clearly marked for Installer. Locate reinforcements and mark locations if not already done.

3.2 INSTALLATION, GENERAL

A. Fit exposed connections together to form tight, hairline joints.

B. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing handrails and railings. Set handrails and railings accurately in location, alignment, and elevation, measured from established lines and levels and free from rack.

1. Do not weld, cut, or abrade surfaces of railing components that have been coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
2. Set posts plumb within a tolerance of 1/16 inch in 3 feet (2 mm in 1 m).
3. Align rails so variations from level for horizontal members and from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet (5 mm in 3 m).

C. Corrosion Protection: Coat concealed surfaces of aluminum and copper alloys that will be in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.

D. Adjust handrails and railings before anchoring to ensure alignment at abutting joints. Space posts at interval indicated, but not less than that required by structural loads.

E. Fastening to In-Place Construction: Use anchorage devices and fasteners where necessary for securing handrails and railings and for properly transferring loads to in-place construction.

3.3 RAILING CONNECTIONS

A. Nonwelded Connections: Use mechanical or adhesive joints for permanently connecting railing components. Use wood blocks and padding to prevent damage to railing members and fittings. Seal recessed holes of exposed locking screws using plastic cement filler colored to match finish of handrails and railings.

B. Welded Connections: Use fully welded joints for permanently connecting railing components. Comply with requirements for welded connections in "Fabrication" Article whether welding is performed in shop or in field.

C. Expansion Joints: Install expansion joints at locations indicated but not further apart than required to accommodate thermal movement. Provide slip-joint internal sleeve extending 2 inches (50 mm) beyond joint on either side; fasten internal sleeve securely to one side; locate joint within 6 inches (150 mm) of post.

3.4 ATTACHING HANDRAILS TO WALLS

A. Attach handrails to wall with wall brackets. Provide bracket with 1-1/2-inch (38-mm) clearance from inside face of handrail and finished wall surface.

B. Locate brackets as indicated or, if not indicated, at spacing required to support structural loads.

C. Secure wall brackets to building construction as follows:

1. For concrete and solid masonry anchorage, use drilled-in expansion shields and hanger or lag bolts.
2. For hollow masonry anchorage, use toggle bolts.
3. For wood stud partitions, use hanger or lag bolts set into wood backing between studs. Coordinate with carpentry work to locate backing members.
4. For steel-framed gypsum board assemblies, use hanger or lag bolts set into wood backing between studs. Coordinate with stud installation to locate backing members.
5. For steel-framed gypsum board assemblies, fasten brackets directly to steel framing or concealed reinforcements using self-tapping screws of size and type required to support structural loads.

END OF SECTION 05720

SECTION 06100 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Framing with dimension lumber.
2. Wood furring, grounds, nailers, and blocking.
3. Wood deck panels.

1.3 DEFINITIONS

A. Rough Carpentry: Carpentry work not specified in other Sections and not exposed, unless otherwise specified.

B. Exposed Framing: Dimension lumber not concealed by other construction and indicated to receive a stained or natural finish.

1.4 SUBMITTALS

A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.

B. Product Data for the following products:

1. Stainless Steel Hardware

C. Material certificates for dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the American Lumber Standards Committee's (ALSC) Board of Review.

D. Wood treatment data as follows, including chemical treatment manufacturer's instructions for handling, storing, installing, and finishing treated materials:

1. For each type of preservative-treated wood product, include certification by treating plant stating type of preservative solution and pressure process used, net amount of preservative retained, and compliance with applicable standards.
2. For waterborne-treated products, include statement that moisture content of treated materials was reduced to levels indicated before shipment to Project site.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Keep materials under cover and dry. Protect from weather and contact with damp or wet surfaces. Stack lumber, plywood, and other panels. Provide for air circulation within and around stacks and under temporary coverings.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Wood-Preservative-Treated Materials:

    a. Hickson Corp.
    b. Hoover Treated Wood Products, Inc.
    c. Osmose Wood Preserving, Inc.

2. Top Handrail:

    a. Trex or equal

2.2 LUMBER, GENERAL

A. Lumber Standards: Comply with DOC PS 20, "American Softwood Lumber Standard," and with applicable grading rules of inspection agencies certified by ALSC's Board of Review.

B. Inspection Agencies: Inspection agencies, and the abbreviations used to reference them, include the following:

1. SPIB - Southern Pine Inspection Bureau.

C. Grade Stamps: Provide lumber with each piece factory marked with grade stamp of inspection agency evidencing compliance with grading rule requirements and identifying grading agency, grade, species, moisture content at time of surfacing, and mill.

1. For exposed lumber, furnish pieces with grade stamps applied to ends or back of each piece, or omit grade stamps and provide grade-compliance certificates issued by inspection agency.

D. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.

1. Provide dressed lumber, S4S, unless otherwise indicated.
2. Provide lumber with 15 percent maximum moisture content at time of dressing for 2-inch nominal (38-mm actual) thickness or less, unless otherwise indicated.

2.3 WOOD-PRESERVATIVE-TREATED MATERIALS

A. General: Where lumber or plywood is indicated as preservative treated or is specified to be treated, comply with applicable requirements of AWPA C2 (lumber). Mark each treated item with the Quality Mark Requirements of an inspection agency approved by ALSC's Board of Review.

1. Do not use chemicals containing chromium or arsenic.

B. Pressure treat aboveground items with waterborne preservatives to a minimum retention of 0.40 lb/cu. ft. (4.0 kg/cu. m). After treatment, kiln-dry lumber and plywood to a maximum moisture content of 19 and 15 percent, respectively. Treat indicated items and the following:

1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
3. Wood framing members less than 18 inches (460 mm) above grade.

C. Complete fabrication of treated items before treatment, where possible. If cut after treatment, apply field treatment complying with AWPA M4 to cut surfaces. Inspect each piece of lumber or plywood after drying and discard damaged or defective pieces.

2.4 DIMENSION LUMBER

A. General: Provide dimension lumber of grades indicated according to the ALSC National Grading Rule (NGR) provisions of the inspection agency indicated.

B. Wood Deck Panels and handrails: Provide framing of the following grade and species:

1. Grade: No. 1.
2. Species: Southern pine; SPIB.

2.5 MISCELLANEOUS LUMBER

A. General: Provide lumber for support or attachment of other construction, including cant strips, bucks, nailers, blocking, furring, grounds, stripping, and similar members.

B. Fabricate miscellaneous lumber from dimension lumber of sizes indicated and into shapes shown.

C. Grade: For dimension lumber sizes, provide No. 3 or Standard grade lumber per ALSC's NGRs of any species. For board-size lumber, provide No. 2 grade per SPIB.

2.6 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.

1. For all rough carpentry, provide fasteners with a Type 316 stainless steel.

B. Nails, Wire, Brads, and Staples: FS FF-N-105.

C. Power-Driven Fasteners: CABO NER-272.

D. Wood Screws: ASME B18.6.1.

E. Lag Bolts: ASME B18.2.1. (ASME B18.2.3.8M)

F. Bolts: Stainless steel bolts complying with ASTM F 593 with ASTM F 594 hex nuts and, where indicated, flat washers.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Discard units of material with defects that impair quality of rough carpentry and that are too small to use with minimum number of joints or optimum joint arrangement.

B. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted.

C. Fit rough carpentry to other construction; scribe and cope as required for accurate fit. Correlate location of furring, nailers, blocking, grounds, and similar supports to allow attachment of other construction.

D. Apply field treatment complying with AWPA M4 to cut surfaces of preservative-treated lumber and plywood.

E. Use stainless-steel nails for all carpentry.

3.2 WOOD FRAMING, GENERAL

A. Framing Standard: Comply with AFPA's "Manual for Wood Frame Construction," unless otherwise indicated.

B. Install framing members of size and at spacing indicated.

C. Do not splice structural members between supports.

END OF SECTION 06100

SECTION 06192 - METAL-PLATE-CONNECTED WOOD TRUSSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Triangular-pitched roof trusses.
2. Truss accessories.

B. Related Sections: The following Sections contain requirements that relate to this Section:

1. Division 6 Section "Rough Carpentry" for roof and floor sheathing of structural-use panels and dimension lumber for supplementary framing and permanent bracing.

1.3 DEFINITIONS

A. Metal-plate-connected wood trusses include planar structural units consisting of metal-plate-connected members fabricated from dimension lumber and cut and assembled before delivery to Project site.

1.4 PERFORMANCE REQUIREMENTS

A. Structural Performance: Engineer, fabricate, and erect metal-plate-connected wood trusses to withstand design loads within limits and under conditions required.

1. Design Loads: As indicated.
2. Design trusses to withstand design loads without deflections greater than the following:

a. Roof Trusses: Vertical deflection of 1/360 of span due to total load.

B. Engineering Responsibility: Engage a fabricator who uses a qualified professional engineer to prepare calculations, Shop Drawings, and other structural data for metal-plate-connected wood trusses.

1.5 SUBMITTALS

A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.

B. Product Data for lumber, metal-plate connectors, metal framing connectors, and fasteners.

C. Shop Drawings detailing location, pitch, span, camber, configuration, and spacing for each type of truss required; species, sizes, and stress grades of lumber to be used; splice details; type, size, material, finish, design values, and orientation and location of metal connector plates; and bearing details.

1. To the extent truss design considerations are indicated as fabricator's responsibility, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
2. Include truss Shop Drawings signed and sealed by the qualified professional engineer responsible for their preparation.

D. Product certificates signed by officer of truss fabricating firm certifying that metal-plate-connected wood trusses supplied for Project comply with specified requirements and Shop Drawings.

E. Qualification data for firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

F. Material test reports from a qualified independent testing agency indicating and interpreting test results relative to compliance of fire-retardant-treated wood products with requirements indicated.

G. Warranty of chemical treatment manufacturer for each type of treatment.

H. Material certificates for dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the American Lumber Standards Committee (ALSC) Board of Review.

I. Wood treatment data as follows, including chemical treatment manufacturer's instructions for handling, storing, installing, and finishing treated materials:

1. For each type of preservative-treated wood product, include certification by treating plant stating type of preservative solution and pressure process used, net amount of preservative retained, and compliance with applicable standards.
2. For waterborne-treated products, include statement that moisture content of treated materials was reduced to levels indicated before shipment to truss fabricator.

J. Research or evaluation reports of the model code organization acceptable to authorities having jurisdiction that evidence the following products' compliance with building code in effect for Project.

1. Metal-plate connectors.
2. Metal framing connectors.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced Installer who has completed wood truss installation similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.

B. Fabricator's Qualifications: Engage a firm that complies with the following requirements for quality control and is experienced in fabricating metal-plate-connected wood trusses similar to those indicated for this Project and with a record of successful in-service performance:

1. Fabricator participates in a recognized quality-assurance program that involves inspection by SPIB; Timber Products Inspection, Inc.; Truss Plate Institute (TPI); or other independent inspecting and testing agency acceptable to Architect and authorities having jurisdiction.

C. Comply with applicable requirements and recommendations of the following publications:

1. ANSI/TP1 1, "National Design Standard for Metal-Plate-Connected Wood Truss Construction."
2. TPI HIB "Commentary and Recommendations for Handling Installing & Bracing Metal Plate Connected Wood Trusses."
3. TPI DSB "Recommended Design Specification for Temporary Bracing of Metal Plate Connected Wood Trusses."

D. Metal-Plate Connector Manufacturer's Qualifications: A manufacturer that is a member of TPI and that complies with TPI quality-control procedures for manufacture of connector plates published in ANSI/TPI 1.

E. Single-Source Responsibility for Connector Plates: Provide metal connector plates from one source and by a single manufacturer.

F. Wood Structural Design Standard: Comply with applicable requirements of AFPA's "National Design Specification for Wood Construction" and its "Supplement."

G. Single-Source Engineering Responsibility: Provide trusses engineered by metal-plate connector manufacturer to support superimposed dead and live loads indicated, with design approved and certified by a qualified professional engineer.

H. Professional Engineer Qualifications: A professional engineer who is legally authorized to practice in the jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated that have resulted in installing metal-plate-connected wood trusses similar to those indicated for this Project and with a record of successful in-service performance.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Handle and store trusses with care and comply with manufacturer's written instructions and TPI recommendations to avoid damage and lateral bending.

B. Inspect trusses showing discoloration, corrosion, or other evidence of deterioration. Discard and replace trusses that are damaged or defective.

1.8 SEQUENCING AND SCHEDULING

A. Time delivery and erection of trusses to avoid extended on-site storage and to avoid delaying progress of other trades whose work must follow erection of trusses.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Metal Connector Plates:

    a. Alpine Engineered Products, Inc.
    b. Computrus, Inc.
    c. Mitek Industries, Inc.
    d. Robbins Manufacturing Company.
    e. Tee-Lok Corporation.
    f. Truswal Systems Corporation.

2. Metal Framing Anchors:

a. Cleveland Steel Specialty Co.
b. Harlen Metal Products, Inc.
c. Silver Metal Products, Inc.
d. Simpson Strong-Tie Company, Inc.
e. Southeastern Metals Manufacturing Co., Inc.
f. United Steel Products Co.

2.2 DIMENSION LUMBER

A. Lumber Standards: Comply with DOC PS 20, "American Softwood Lumber Standard," and with applicable grading rules of inspection agencies certified by ALSC's Board of Review.

B. Inspection Agencies: Inspection agencies, and the abbreviations used to reference them, include the following:
   1. SPIB - Southern Pine Inspection Bureau.

C. Grade Stamps: Provide lumber with each piece factory marked with grade stamp of inspection agency evidencing compliance with grading rule requirements and identifying grading agency, grade, species, moisture content at time of surfacing, and mill.

D. Provide dressed lumber, S4S, manufactured to actual sizes required by DOC PS 20 for moisture content specified, to comply with requirements indicated below:

   1. Provide dry lumber with 19 percent maximum moisture content at time of dressing.

E. Grade and Species: Provide dimension lumber of any species for truss chord and web members, graded visually or mechanically, and capable of supporting required loads without exceeding allowable design values according to AFPA's "National Design Specification for Wood Construction" and its "Supplement."

2.3 WOOD-PRESERVATIVE-TREATED MATERIALS

A. General: All lumber used in truss construction shall be pressure treated. Comply with applicable requirements of AWPA C2 (lumber). Mark each treated item with the Quality Mark Requirements of an inspection agency approved by ALSC's Board of Review.

B. Pressure treat aboveground items with waterborne preservatives to a minimum retention of 0.25 lb/cu. ft. (4 kg/cu. m). After treatment, kiln-dry lumber to a maximum moisture content of 19 percent.

C. Complete fabrication of treated items before treatment, where possible. If cut after treatment, apply field treatment complying with AWPA M4 to cut surfaces. Inspect each piece of lumber after drying and discard damaged or defective pieces.

2.4 METAL CONNECTOR PLATES

A. General: Fabricate connector plates from metal complying with requirements indicated below.

B. Stainless-Steel Sheet: ASTM A 666, Type 304 or 316, chromium nickel steel sheet; 33,000-psi (230-MPa) minimum yield strength and not less than 0.035 inch (0.89 mm) thick.

2.5 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified below for material and manufacture.

1. Provide fasteners of stainless steel, Type 304 or 316.

B. Nails, Wire, Brads, and Staples: FS FF-N-105.

2.6 METAL FRAMING ANCHORS

A. General: Provide metal framing anchors of structural capacity, type, size, metal, and finish indicated that comply with requirements specified, including the following:

1. Research or Evaluation Reports: Provide products for which model code research or evaluation reports exist that are acceptable to authorities having jurisdiction and that evidence compliance of metal framing anchors for application indicated with building code in effect for this Project.
2. Allowable Design Loads: Provide products with allowable design loads, as published by manufacturer, that meet or exceed those indicated. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis, and demonstrated by comprehensive testing performed by a qualified independent testing agency.

B. Stainless-Steel Sheet: ASTM A 666, Type 304 or 316, chromium nickel steel sheet; 33,000-psi (230-MPa) minimum yield strength.

2.7 FABRICATION

A. Cut truss members to accurate lengths, angles, and sizes to produce close-fitting joints.

B. Fabricate metal connector plates to size, configuration, thickness, and anchorage details required to withstand design loadings for types of joint designs indicated.

C. Assemble truss members in design configuration indicated using jigs or other means to ensure uniformity and accuracy of assembly with joints closely fitted to comply with tolerances of ANSI/TPI 1. Position members to produce design camber indicated.

1. Fabricate wood trusses within manufacturing tolerances of ANSI/TPI 1.

D. Connect truss members by metal connector plates located and securely embedded simultaneously into both sides of wood members by air or hydraulic press.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Do not install wood trusses until supporting construction is in place and is braced and secured.

B. Before installing, splice trusses delivered to Project site in more than one piece.

C. Hoist trusses in place by lifting equipment suited to sizes and types of trusses required, exercising care not to damage truss members or joints by out-of-plane bending or other causes.

D. Install and brace trusses according to recommendations of TPI and as indicated.

E. Install trusses plumb, square, and true to line and securely fasten to supporting construction.

F. Space, adjust, and align trusses in location before permanently fastening and as follows:

1. Truss Spacing: 24 inches o.c.

G. Anchor trusses securely at all bearing points using metal framing anchors. Install fasteners through each fastener hole in metal framing anchor according to manufacturer's fastening schedules and written instructions.

H. Securely connect each truss ply required for forming built-up girder trusses.

1. Anchor trusses to girder trusses as indicated.

I. Install and fasten permanent bracing during truss erection and before construction loads are applied. Anchor ends of permanent bracing where terminating at walls or beams.

J. Install wood trusses within installation tolerances of ANSI/TPI 1.

K. Do not cut or remove truss members.

L. Return wood trusses that are damaged or do not meet requirements to fabricator and replace with trusses that do meet requirements.

1. Do not alter trusses in the field.

END OF SECTION 06192

SECTION 07600 - FLASHING, SHEET METAL AND UNDERLAYMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Metal base flashing
2. Metal counter flashing
3. Metal drip flashing
4. Miscellaneous exposed metal flashings
5. Membrane underlayment

PART 2 - PRODUCTS

2.1 ASSEMBLY PERFORMANCE REQUIREMENTS AND PRODUCTS

A. Sheet Metal Flashings

1. Sheet Aluminum: ASTM B 209, alloy 3003, temper H14, baked enamel finish; 0.040-inch thick except as otherwise indicated. Color to match existing structure as defined by Owner.

B. Miscellaneous Materials and Accessories:

1. Fasteners: Same metal as flashing/sheet metal or other non- corrosive metal as recommended by sheet manufacturer. Match finish of exposed heads with material being fastened.
2. Bituminous Coating: SSPC - Paint 12, solvent-type bituminous mastic, nominally free of sulfur, compounded for 15-mil dry film thickness per coat.
3. Elastomeric Sealant: Generic type recommended by manufacturer of metal and fabricator of components being sealed and complying with requirements for joint sealants as specified in Division 7 Section "Joint Sealers."

4. Epoxy Seam Sealer: 2-part noncorrosive metal seam cementing compound,

recommended by metal manufacturer for exterior/interior nonmoving joints including riveted joints.

5. Reglets: Metal or plastic units of type and profile indicated, compatible with flashing indicated, noncorrosive.
6. Metal Accessories: Provide sheet metal clips, straps, anchoring devices, and similar accessory units as required for installation of work, matching or compatible with material being installed, noncorrosive, size and gage required for performance.
7. Roofing Cement: ASTM D 2822, asphaltic.
8. Separations: Provide for separation of metal from noncompatible metal or corrosive substrates by coating concealed surfaces at locations of contact, with bituminous coating or other permanent separation as recommended by manufacturer/fabricator.
9. Shop Applied, Baked Enamel Finish: AA-C12C42R1x (Chemical Finish: Cleaned with inhibited chemicals; Chemical Finish: Chemical conversion coating, acid chromate-fluoride-phosphate pretreatment; Organic Coating: As specified below). Apply baked enamel in compliance with paint manufacturer's specifications for cleaning, conversion coating, and painting.

    a. Organic Coating: Thermosetting modified acrylic enamel primer/topcoat system complying with AAMA 603.8 except with minimum dry film thickness of .8 mils, medium gloss.
    b. Color: To match existing.

C. Self-Adhering, Self-Sealing Membrane

1. Install 60 mil self-adhering, self-sealing underlayment as per manufacturers recommendations over entire surface of the roof.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Comply with manufacturers written instructions to prepare substrate to receive single-ply membrane system, and for installation of system.

1. Verify that penetrations expansion joints, and blocking are in place and secured.

B. Clean substrate of dust, debris, and other substances detrimental to single-ply system installation. Remove sharp projections.

C. Membrane Underlayment:

1. Install ice and water shield in all valleys. At valleys, center full-width roll and press in place, working from the center of the valley outward in each direction.

Apply membrane starting at the low point and working upwards.

2. Side laps shall be minimum of 3-1/2" and end laps 6".

D. Install flashing, terminating at reglets, at all wood columns and other such members that may abut the roofing.

END OF SECTION 07600

SECTION 07901 - JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes joint sealants for the following locations:

1. Exterior Sight-Exposed Joint Applications:

a. Metal-to-Metal expansion and control joints - 2-part polyurethane or 1 part silicone
b. Masonry-to-Masonry expansion and control joints - 2 part polyurethane or 1 part silicone
c. Connections between dissimilar materials (e.g., metal-to-masonry) - 2 part polyurethane or 1 part silicone
d. Perimeters of roof and wall openings - 2-part polyurethane or 1 part silicone with primer suitable for galvanized metals
e. Horizontal paving and traffic bearing joints - 2-part polyurethane
f. Pipe, duct, and vent openings - 1 part polyurethane

2. Interior Sight-Exposed Joint Applications:

a. Perimeters of doors and fixed windows - acrylic latex
b. Exposed masonry control joints - acrylic latex
c. Joints and recesses between metal frames and interior masonry - acrylic latex
d. Interior construction joints - acrylic latex
e. Joints at interior masonry that adjoin columns, pilasters, or exterior walls - acrylic latex

3. Interior Concealed Applications:

a. Joints in interior walls - acrylic latex or butyl based
b. Concealed masonry-to-floor structure joints - acrylic latex or butyl based
c. Exterior and interior metal thresholds, saddles, and sills - acrylic
d. Joints and recesses between access panels, electrical panels, piping, and

pipe sleeves - 1 part silicone

e. Fire Stops - acrylic latex with manufacturers fire blocking
f. Between metal frames and masonry substrates - acrylic latex

B. Related Sections: The following Sections contain requirements that relate to this Section:

1. Division 7 Section "Flashing, Sheet Metal and Underlayment" for sealing joints related to flashing and sheet metal for roofing.
2. Division 7 Section "Firestopping" at fire rated construction.

1.3 SYSTEM PERFORMANCE REQUIREMENTS

A. Provide elastomeric joint sealants that have been produced and installed to establish and to maintain watertight and airtight continuous seals without causing staining or deterioration of joint substrates.

1.4 SUBMITTALS

A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.

B. Product data from manufacturers for each joint sealant product required.

C. Samples for initial selection purposes in form of manufacturer's standard bead samples, consisting of strips of actual products showing full range of colors available, for each product exposed to view. Color range must have available colors to match brick and mortar.

D. Certificates from manufacturers of joint sealants attesting that their products comply with specification requirements and are suitable for the use indicated.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced Installer who has completed joint sealant applications similar in material, design, and extent to that indicated for Project that have resulted in construction with a record of successful in-service performance.

B. Single Source Responsibility for Joint Sealant Materials: Obtain joint sealant materials from a single manufacturer for each different product required.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration period for use, pot life, curing time, and mixing instructions for multicomponent materials.

B. Store and handle materials in compliance with manufacturer's recommendations to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

1.7 PROJECT CONDITIONS

A. Environmental Conditions: Do not proceed with installation of joint sealants under the following conditions:

1. When ambient and substrate temperature conditions are outside the limits permitted by joint sealant manufacturer.
2. When joint substrates are wet.

B. Joint Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than allowed by joint sealant manufacturer for application indicated.

C. Joint Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with their adhesion are removed from joint substrates.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Compatibility: Provide joint sealants, joint fillers, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.

B. Colors: Provide color of exposed joint sealants to comply with the following:

1. Provide selections made by Architect from manufacturer's full range of standard colors for products of type indicated.

C. Acceptable Manufacturers:

1. Pecora Corp.

2. Tremco.
3. Sonneborn.
4. Dow Corning.

2.2 ELASTOMERIC JOINT SEALANTS

A. Elastomeric Sealant Standard: Provide manufacturer's standard chemically curing elastomeric sealants that comply with ASTM C 920 and other requirements indicated on each Elastomeric Joint Sealant Data Sheet at end of this Section, including those requirements referencing ASTM C 920 classifications for Type, Grade, Class, and Uses.

1. Additional Movement Capability: Where additional movement capability is specified in Elastomeric Joint Sealant Data Sheet, provide products with the capability, when tested for adhesion and cohesion under maximum cyclic movement per ASTM C 719, to withstand the specified percentage change in the joint width existing at time of installation and remain in compliance with other requirements of ASTM C 920 for Uses indicated.

B. Products: Subject to compliance with requirements, provide one of the products specified in each Elastomeric Joint Sealant Data Sheet. Products listed are for use as example only. Contractor may provide products by the following manufacturers listed above that correspond to the same content and function as those listed below.

1. "Dynatrol II" - 2 part polyurethane: Pecora Corp.
2. "864 Silicone" - 1 part neutral curing: Pecora Corp.
3. "NR 200" - 2 part, self leveling polyurethane traffic grade sealant: Pecora Corp.

2.3 SOLVENT-RELEASE-CURING JOINT SEALANTS

A. Acrylic Sealant: Manufacturer's standard one-part, nonsag, solvent-release-curing acrylic terpolymer sealant complying with AAMA 808.3 or FS TT-S-00230 or both, with capability when tested for adhesion and cohesion under maximum cyclic movement per ASTM C 719, to withstand the following percentage change in joint width existing at time of application and remain adhered to joint substrates indicated for Project without failing cohesively:

1. 12-1/2 percent movement in both extension and compression for a total of 25 percent.

B. Pigmented Narrow Joint Sealant: Manufacturer's standard, solvent-release-curing, pigmented synthetic rubber sealant complying with AAMA 803.3 and formulated for sealing joints 3/16 inch (5 mm) or smaller in width.

C. Products: Subject to compliance with requirements, provide one of the following:

1. Acrylic Sealant:
   a. "60+Unicrylic," Pecora Corp.

2. Pigmented Narrow Joint Sealant:

   a. "PTI 200," Protective Treatments, Inc.

2.4 LATEX JOINT SEALANTS

A. General: Provide manufacturer's standard one-part, nonsag, mildew-resistant, paintable latex sealant of formulation indicated that is recommended for exposed applications on interior and protected exterior locations and that accommodates indicated percentage change in joint width existing at time of installation without failing either adhesively or cohesively.

B. Acrylic-Emulsion Sealant: Provide product complying with ASTM C 834 that accommodates joint movement of not more than 5 percent in both extension and compression for a total of 10 percent.

C. Available Products: Subject to compliance with requirements, latex joint sealants that may be incorporated in the Work include, but are not limited to, the following:

D. Products: Subject to compliance with requirements, provide one of the following:

1. Acrylic-Emulsion Sealant:

   a. "AC-20," Pecora Corp.

2.5 JOINT SEALANT BACKING

A. General: Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

1. Proprietary, reticulated, closed-cell polymeric foam, nonoutgassing, with a density of 2.5 pcf (40 kg/cu. m) and tensile strength of 35 psi (240 kPa) per ASTM D 1623, and with water absorption less than 0.02 g/cc per ASTM C 1083.

B. Elastomeric Tubing Joint Fillers: Neoprene, butyl, EPDM, or silicone tubing complying with ASTM D 1056, nonabsorbent to water and gas, capable of remaining resilient at temperatures down to -26 deg F (-32 deg C). Provide products with low compression set and of size and shape to provide a secondary seal, to control sealant depth, and otherwise contribute to optimum sealant performance.

C. Bond-Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.6 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming in any way joint substrates and adjacent nonporous surfaces, and formulated to promote optimum adhesion of sealants with joint substrates.

C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint sealant performance. Do not proceed with installation of joint sealants until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with recommendations of joint sealant manufacturer and the following requirements:

1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
2. Clean concrete, masonry, unglazed surfaces of ceramic tile, and similar porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical

abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.

3. Remove laitance and form release agents from concrete.
4. Clean metal, glass, porcelain enamel, glazed surfaces of ceramic tile, and other nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

B. Joint Priming: Prime joint substrates where indicated or where recommended by joint sealant manufacturer based on preconstruction joint sealant-substrate tests or prior experience. Apply primer to comply with joint sealant manufacturer's recommendations. Confine primers to areas of joint sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint sealant manufacturer's printed installation instructions applicable to products and applications indicated, except where more stringent requirements apply.

B. Sealant Installation Standard: Comply with recommendations of ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Installation of Sealant Backings: Install sealant backings to comply with the following requirements:

1. Install joint fillers of type indicated to provide support of sealants during application and at position required to produce the cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

    a. Do not leave gaps between ends of joint fillers.
    b. Do not stretch, twist, puncture, or tear joint fillers.
    c. Remove absorbent joint fillers that have become wet prior to sealant application and replace with dry material.

D. Installation of Sealants: Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration, and providing uniform, cross-sectional shapes and

depths relative to joint widths that allow optimum sealant movement capability. Install sealants at the same time sealant backings are installed.

E. Tooling of Nonsag Sealants: Immediately after sealant application and prior to time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated, to eliminate air pockets, and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants from surfaces adjacent to joint. Do not use tooling agents that discolor sealants or adjacent surfaces or are not approved by sealant manufacturer.

    1. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.

3.4 CLEANING

A. Clean off excess sealants or sealant smears adjacent to joints as work progresses by methods and with cleaning materials approved by manufacturers of joint sealants and of products in which joints occur.

3.5 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so that they are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so that and installations with repaired areas are indistinguishable from original work.

END OF SECTION 07901

SECTION 10425 - SIGNS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following types of signs:

1. Panel signs.

1.3 SUBMITTALS

A. General: Submit the following according to the Conditions of the Contract and Division 1 Specification Sections.

B. Product data for each type of sign specified, including details of construction relative to materials, dimensions of individual components, profiles, and finishes.

1.4 QUALITY ASSURANCE

A. Sign Fabricator Qualifications: Firm experienced in producing signs similar to those indicated for this Project, with a record of successful in-service performance, and sufficient production capacity to produce sign units required without causing delay in the Work.

B. Single-Source Responsibility: For each separate sign type required, obtain signs from one source of a single manufacturer.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the

following:

1. Manufacturers of Panel Signs:

    a. ABC Architectural Signing System.
    b. Allenite.
    c. American Signage.
    d. Andco Industries Corp.
    e. APCO Graphics, Inc.
    f. ASI Sign Systems, Inc.
    g. Best Manufacturing Company.
    h. Charleston Industries, Inc.
    i. DGS Corp.
    j. Diskey Sign Corp.
    k. Environmental Graphic Systems, Inc.
    l. Modulex.
    m. Mohawk Sign Systems.
    n. Poblocki & Sons, Inc.
    o. Spanjer Brothers, Inc.
    p. The Supersine Company.
    q. Vomar Products, Inc.

2.2 MATERIALS

A. Plastic Laminate: Provide high-pressure plastic laminate engraving stock with face and core plies in contrasting colors, in finishes and color combinations indicated.

2.3 PANEL SIGNS

A. Panel Signs: Comply with requirements indicated for materials, thicknesses, finishes, colors, designs, shapes, sizes, and details of construction.

1. Produce smooth, even, level sign panel surfaces, constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch measured diagonally.

B. Laminated Sign Panels: Permanently laminate face panels to backing sheets of material and thickness indicated using the manufacturer's standard process.

C. Graphic Content and Style: Provide sign copy that complies with the requirements indicated for size, style, spacing, content, position, material, finishes, and colors of letters, numbers, and other graphic devices.

D. Sign Schedule:

1. S-1: Women, with handicap symbol and braille.
2. S-2: Men, with handicap symbol and braille.
3. Colors: White on blue background.
4. Size: 8" x 8" minimum size, with 1-inch letters.
5. Conform to all ADA requirements.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Locate sign units and accessories where indicated, using mounting methods of the type described and in compliance with the manufacturer's instructions.

1. Install signs level, plumb, and at the height required by ADA, with sign surfaces free from distortion or other defects in appearance.

B. Wall-Mounted Panel Signs: Attach panel signs to wall surfaces using the methods indicated below:

1. Silicone-Adhesive Mounting: Use liquid silicone adhesive recommended by the sign manufacturer to attach sign units. Use double-sided vinyl tape where recommended by the sign manufacturer to hold the sign in place until the adhesive has fully cured.

3.2 CLEANING AND PROTECTION

A. After installation, clean soiled sign surfaces according to the manufacturer's instructions. Protect units from damage until acceptance by the Owner.

END OF SECTION 10425