

CONSTRUCTION DRAWINGS

CITY OF DAYTONA BEACH BETHUNE POINT PARK OBSERVATION PIER REPAIR SEPTEMBER 21, 2018



CITY COMMISSION

DERRICK L. HENRY	MAYOR
RUTH TRAGER	ZONE 1
AARON DELGADO	ZONE 2
KELLY WHITE	ZONE 3
ROBERT A. GILLILAND	ZONE 4
DANNETTE HENRY	ZONE 5
PAULA R. REED	ZONE 6



REPRODUCTION SCALE:
THESE PLANS ARE SCALED TO ACCURATELY BE REPRODUCED ON 11X17 SIZED SHEETS. ALL OTHER SHEET SIZES ARE NOT TO SCALE.

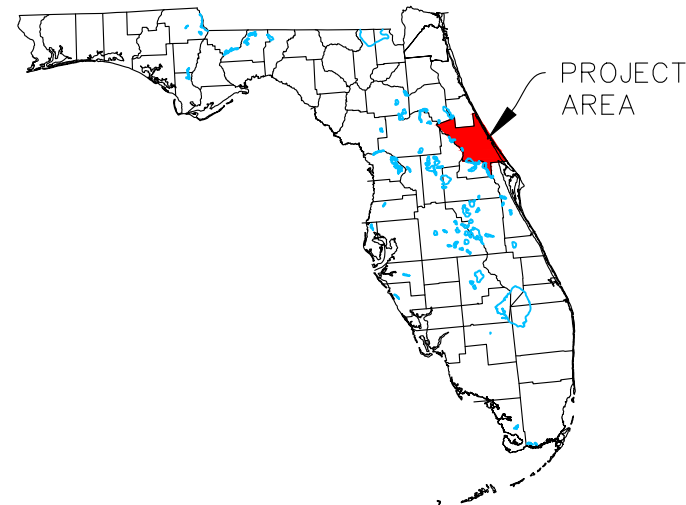
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LOCATION MAP



FLORIDA



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NOTE TO CONTRACTOR:

THESE DRAWINGS AND THE PROJECT SPECIFICATIONS ARE COMPLEMENTARY, AND ANY REQUIREMENT OF ONE SHALL BE A REQUIREMENT OF THE OTHER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE THE DRAWINGS AND SPECIFICATIONS AND TO COMPARE THE REQUIREMENTS OF EACH DIVISION AND ENSURE THAT EACH TRADE OR SUBCONTRACTOR IS MAKING THE ALLOWANCES NECESSARY TO PROVIDE THE OWNER A COMPLETE FACILITY, OPERATIONAL IN ALL RESPECTS, UNLESS OTHERWISE SPECIFICALLY STATED IN THE DRAWINGS OR PROJECT MANUAL.

IT IS ALSO THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER OF ANY DEFICIENCIES OR DISCREPANCIES AMONG THE DIVISIONS OF THE DRAWING AND SPECIFICATIONS PRIOR TO THE BID DATE. NEITHER THE OWNER OR ENGINEER WILL BE RESPONSIBLE FOR ANY DEFICIENCIES OR DISCREPANCIES RAISED AFTER THE BID OPENING. ACCORDINGLY, IN LIGHT OF THESE OBLIGATIONS, THE ENGINEER IS OBLIGATED TO INTERPRET THE DRAWINGS SPECIFICATIONS IN A MANNER THAT WILL PROVIDE THE OWNER WITH A COMPLETE, FUNCTIONING FACILITY FOR THE BID PRICE.

ENGINEER CERTIFICATION:

I HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF FLORIDA PRACTICING WITH DMC, DREDGING & MARINE CONSULTANTS LLC, A CORPORATION, AUTHORIZED TO OPERATE AS AN ENGINEERING BUSINESS, CERTIFICATE OF AUTHORIZATION # 9410, BY THE STATE OF FLORIDA DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION, AND THAT I, OR OTHERS UNDER MY DIRECT SUPERVISION, HAVE PREPARED OR APPROVED THE EVALUATIONS, FINDINGS, OPINIONS, CALCULATIONS, CONCLUSIONS OR TECHNICAL ADVICE HEREBY REPRESENTED BY THESE DRAWINGS.

STEPHEN J. KUHN, P.E.
FLORIDA LICENSE No. 67486

Drawing Name: D:\DattoDrive\DMC Projects\006 - City of Daytona Beach\18-006-33 Bethune Point Park Observation Pier Repair\Drawings\Bethune Obs Pier.dwg By: Ankeet, Tab: exist, 9/28/2018



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DMC, 04-13-2018



DMC, 04-13-2018

DRAWING: EXISTING CONDITIONS	
DMC JOB NO.	18-006-33
DRAWN	AR CAD RMO
CHECKED	SKP SCALE AS SHOWN
APPROVED	SJK DATE 09-21-2018
SHEET NO. C-01	

PROJECT NAME:	BETHUNE POINT PARK OBSERVATION PIER REPAIR
CLIENT:	CITY OF DAYTONA BEACH

STEVEN J. KUHN FLORIDA LICENSE No. 87486

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BING, 2018



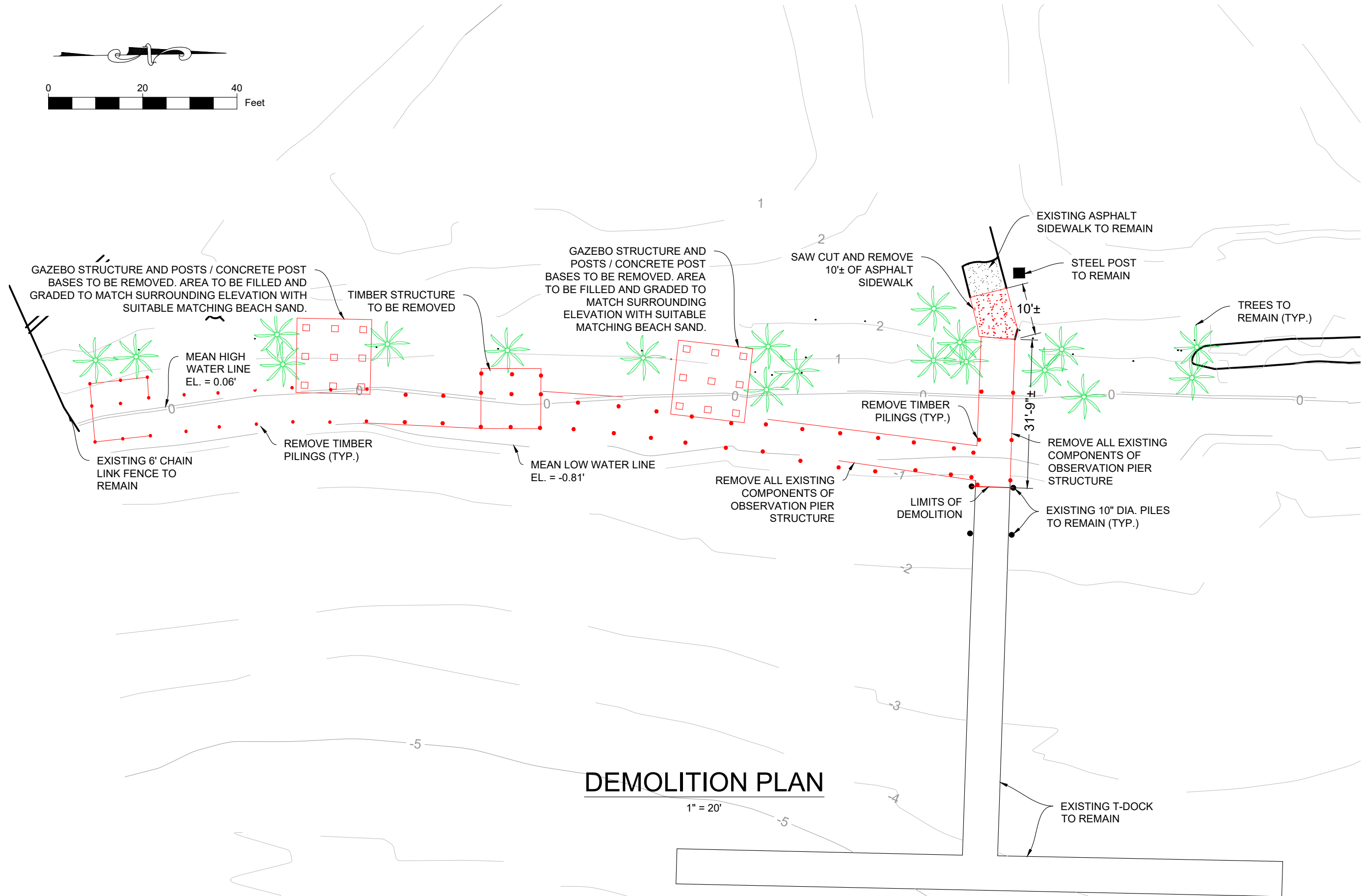
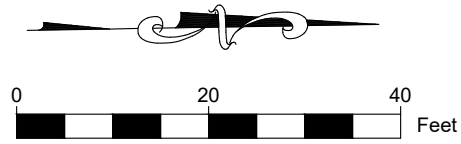
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PROJECT NAME:
**BETHUNE POINT PARK
OBSERVATION PIER REPAIR**
CLIENT: **CITY OF DAYTONA BEACH**

DRAWING: AERIAL	
DMC JOB NO. 18-006-33	SHEET NO. C-02
DRAWN AR	CAD RMD
CHECKED SKP	SCALE AS SHOWN
APPROVED SJK	DATE 09-21-2018

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DEMOLITION PLAN

1" = 20'

DRAWING: DEMOLITION PLAN	
DMC JOB NO. 18-006-33	SHEET NO. C-03
DRAWN: AR CAD: RMD	CHECKED: SKP SCALE AS SHOWN
APPROVED: SJK	DATE: 09-21-2018

PROJECT NAME:	BETHUNE POINT PARK OBSERVATION PIER REPAIR
CLIENT:	CITY OF DAYTONA BEACH

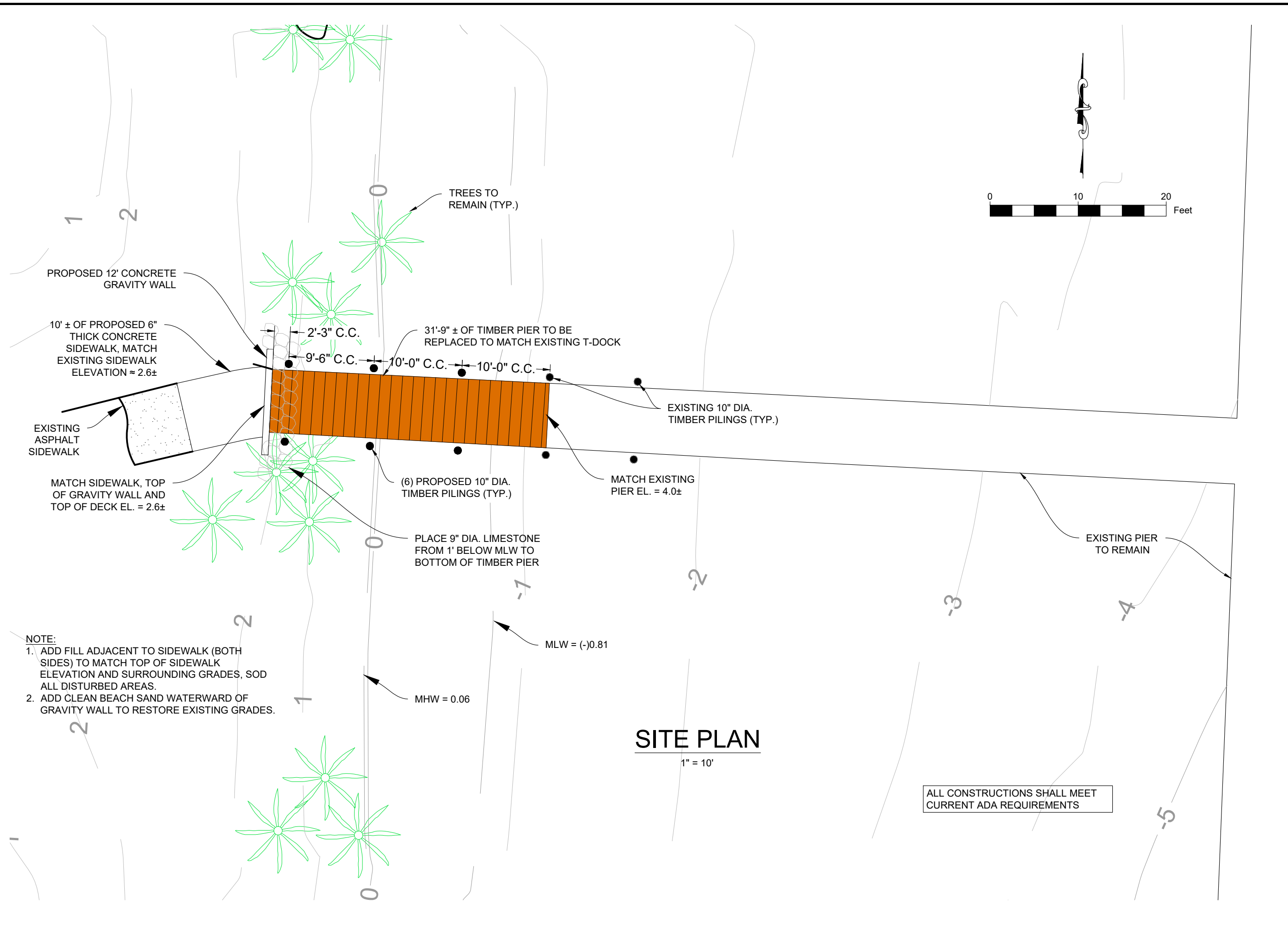
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- NOTE:**
1. ADD FILL ADJACENT TO SIDEWALK (BOTH SIDES) TO MATCH TOP OF SIDEWALK ELEVATION AND SURROUNDING GRADES, SOD ALL DISTURBED AREAS.
 2. ADD CLEAN BEACH SAND WATERWARD OF GRAVITY WALL TO RESTORE EXISTING GRADES.

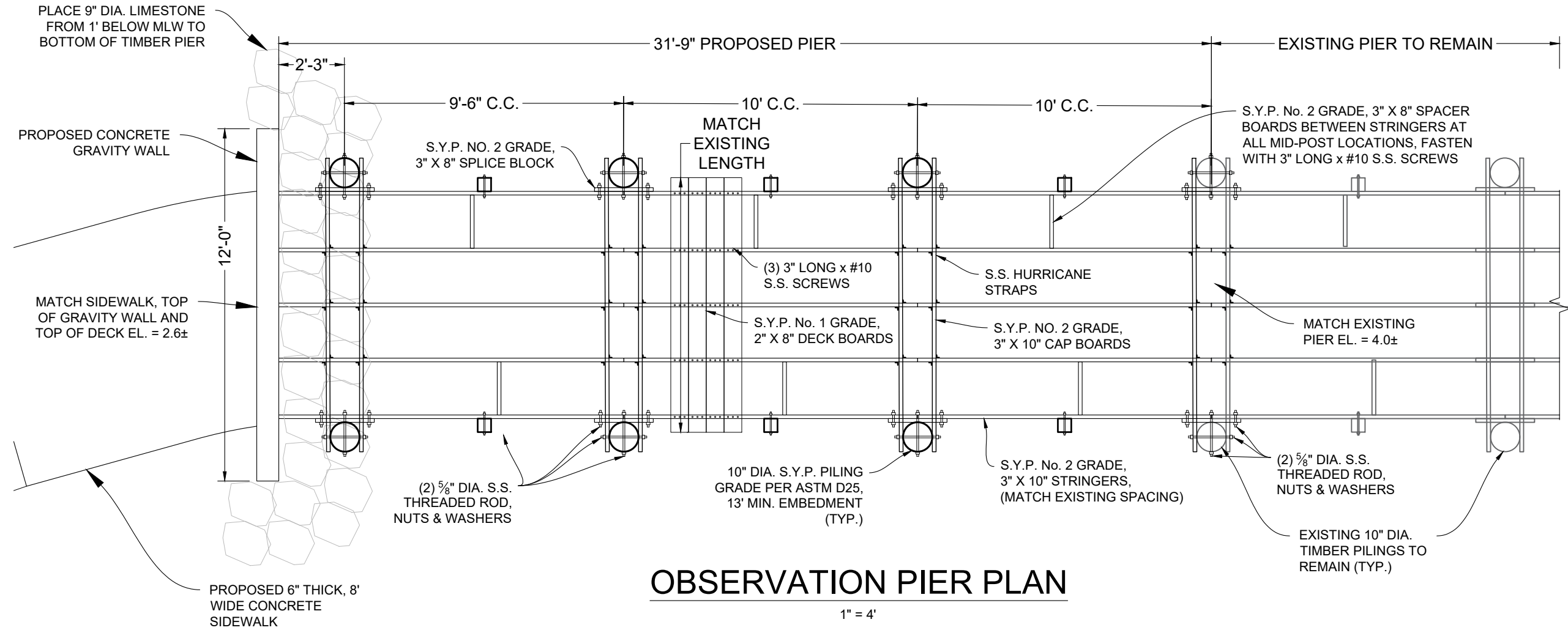
SITE PLAN

1" = 10'

ALL CONSTRUCTIONS SHALL MEET CURRENT ADA REQUIREMENTS



<p>DRAWING: SITE PLAN</p> <p>DMC JOB NO.: 18-006-33</p> <p>DRAWN: AR CAD RMO</p> <p>CHECKED: SKP SCALE AS SHOWN</p> <p>APPROVED: SJK DATE 09-21-2018</p>	<p>PROJECT NAME:</p> <p style="text-align: center;">BETHUNE POINT PARK OBSERVATION PIER REPAIR</p> <p>CLIENT: CITY OF DAYTONA BEACH</p>	<p>SHEET NO.: C-04</p>
<p>DMC ENGINEERS • SCIENTISTS</p> <p><small>Dredging & Marine Consultants 4643 S. Clyde Morris Blvd Unit 302 Port Orange, FL 32129 Phone: (386) 304-6505 Fax: (386) 304-6506 www.dmcsc.com</small></p>		

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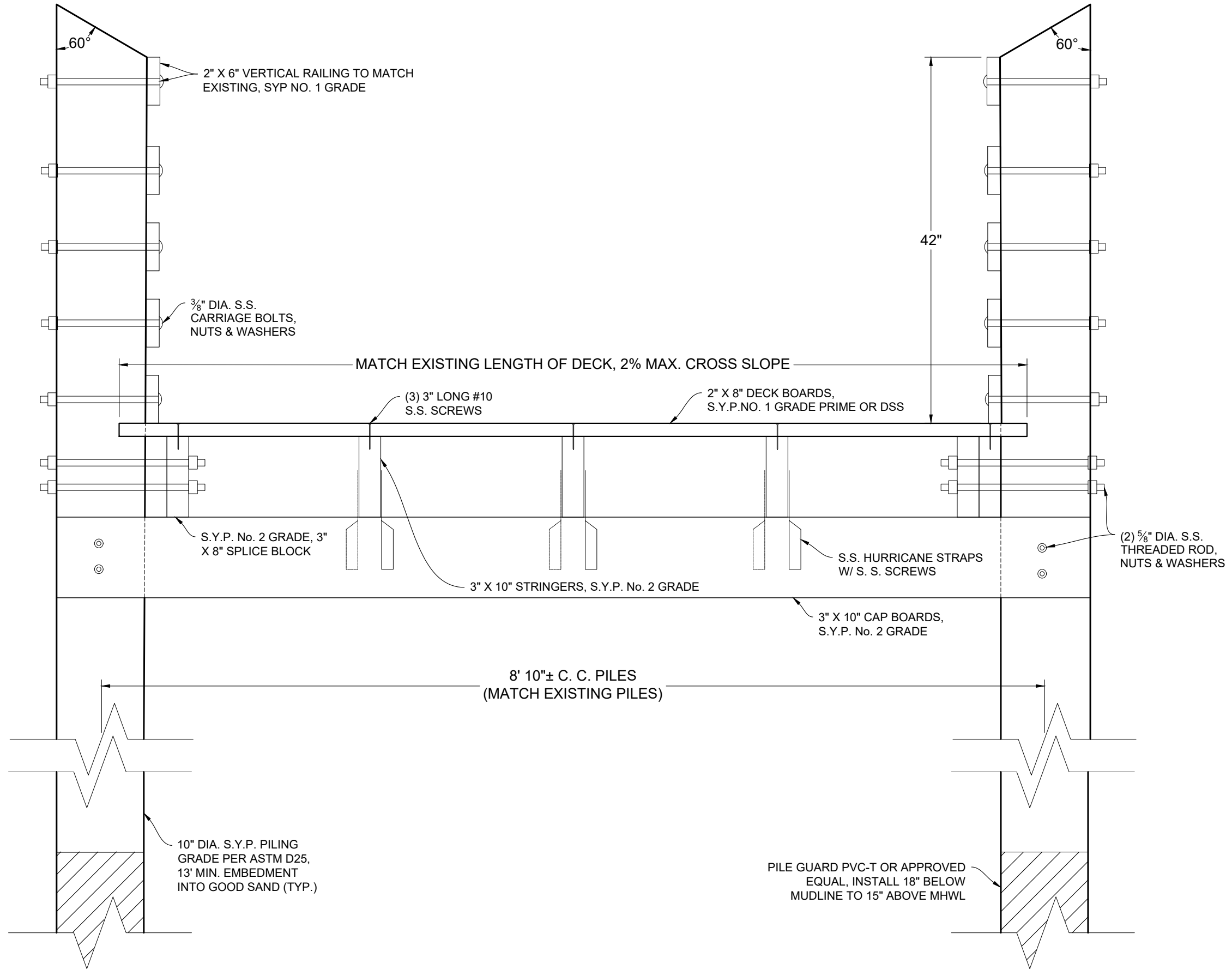


OBSERVATION PIER PLAN

1" = 4'

DRAWING: OBSERVATION PIER PLAN DMC JOB NO. 18-006-33 DRAWN: AR CAD RMD CHECKED: SKP SCALE AS SHOWN APPROVED: SJK DATE: 09-21-2018	PROJECT NAME: BETHUNE POINT PARK OBSERVATION PIER REPAIR	CLIENT: CITY OF DAYTONA BEACH	STEVEN J. KUHN FLORIDA LICENSE NO. 87486	4643 S. Clyde Morris Blvd Unit 302 Port Orange, FL 32129 Phone: (386) 304-6505 Fax: (386) 304-6506 www.dmcsc.com	 DMC ENGINEERS • SCIENTISTS	

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OBSERVATION PIER CROSS-SECTION

1" = 1'

DRAWING: OBSERVATION PIER CROSS-SECTION	
DMC JOB NO. 18-006-33	SHEET NO. C-06
DRAWN: AR CAD RMD	CHECKED: SKP SCALE AS SHOWN
APPROVED: SJK	DATE: 09-21-2018

PROJECT NAME: BETHUNE POINT PARK OBSERVATION PIER REPAIR

CLIENT: CITY OF DAYTONA BEACH

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IMPORTANT NOTES TO BIDDERS:

- The Contractor shall keep a pile driving log as specified in the plans and may not cut off piles until the Engineer has given approval to do so. The Contractor must provide advanced notification of a request to cut-off pilings so that the Engineer may make field observations, if necessary. The Engineer will not make a structure certification if the Contractor does not comply with this requirement. If a vibratory hammer or jetting equipment is used to install pilings, the time needed to hammer and/or jet each piling shall be recorded.
- The Contractor shall retain all material delivery tickets, material testing reports and cut-sheets/shop drawings for manufactured products for the project and provide copies to the Engineer on a weekly basis. The Engineer will not make a structure certification if the Contractor does not comply with this requirement.
- The Engineer must be under contract with the Owner, Developer or Contractor for construction observations in order to provide certification of the constructed project.
- The Engineer must be given advanced notice of any critical stages of construction such as: initial construction stakeout, first pile driving, framing timber, concrete, etc. The Engineer will not make a structure certification if the Contractor does not comply with this requirement.

GENERAL:

- All elevations in the project plans are referenced to feet N.A.V.D. 1988, except in-water elevations of river bottom which are referenced to Mean Low Water.
- Any deviation from these plans, notes or specifications must be approved in writing by the Owner, Owner's Representative or Engineer, or else the deviation will be considered construction non-compliant with the plans and specifications.
- Any discrepancies amongst the plans, notes, specifications and other bid documents must be resolved in writing by the Owner, Owner's Representative or Engineer prior to continuing the work in question.
- These plans, notes and specifications, along with the other components of the project bidding documents, constitute the only instructions to Bidders/Contractors, unless written addenda are issued.
- All construction, manufacturing, fabrication and testing of materials shall be performed under the guidelines set forth in applicable local, state and federal codes, and/or under recommendations provided in technical publications of respected professional or industry organizations. Material testing programs, where applicable, shall be presented to the Engineer for review and approval prior to construction.
- All products constructed or manufactured/supplied for the project shall be accompanied by industry acceptable warranties or guarantees.
- For the purpose of these specifications, "Project Completion" is defined as completion of an agreed upon list of punchlist items compiled in a planned project walkthrough held at a time the Contractor considers the project to be "Substantially Complete". The Contractor shall notify the Owner and Engineer at least 48 hours in advance of substantial completion and schedule a mutually agreeable walkthrough.

SHOP DRAWINGS:

Submit any "Shop Drawing" to the Engineer of Record for review and approval, in writing, prior to ordering and before construction. The "Shop Drawings" also include, but are not limited to, mark-up drawings, sketches, cut-sheets, product literature, additional specifications, photographs and letters.

Shop drawings list:

- Schedule for completion of work with tasks and durations defined.
- Shipping, Stockpile and Site Administration Plan (SSSAP).
- Maintenance of Traffic (MOT) plan for vehicles and pedestrians, including material deliveries, stockpile area(s), worker's parking and construction equipment.
- Site-specific safety plan shall be distributed and reviewed with all site workers prior to said workers commencing work on the project site. See "Site Safety" heading.
- Demolition methods, including existing piles. Strictly prohibit pile cut-offs. Any existing timber structures to be removed shall be disposed of at upland site. No debris or component shall be disposed of in the water.
- Changes, alternates or other methods different from project plans must be approved, in writing, via "Shop Drawings".
- After completing the punchlist in the field, the Contractor must submit a itemized punchlist, as-built survey and record drawings for final changes and the Engineer of Record approving in writing.

AS-BUILT SURVEY AND RECORD DRAWINGS:

- As-built survey and record drawings shall be submitted at the time of the punchlist review and shall be reviewed by the Engineer for completeness and correctness.
- The record drawings shall be a designated set of drawings maintained on site for the purpose of hand-making all changes and deviations from the original design, no matter how slight. Color markings are preferred.
- The record drawings shall also contain any and all field changed with respect to location, alignment, height, width, length, depth, materials, products, etc.

DESIGN SPECIFICATIONS:

- U.S.C.O.E. Engineering Manual, Design of Pile Foundations, EM 110-1-2906, 1991.
- Simplified Design of Structural Wood, Third edition, Harry Parker.
- Florida Building Code: Accessibility, Latest Edition.
- Florida Safety Code, Latest edition.
- Wind calculations per ASCE 7-10, "Other Standards", Section 29.5, Page 308.
- FDEP and USACE Permit Conditions.
- Florida Fire Prevention Code, 5th Edition.

DESIGN LOAD - LL, DL & WIND/LATERAL:

- Live Load: 60 psf
- Dead Load: 29 psf Total (SYP)
Piles, Railings, Stringers, Cap Boards and Decks.
- Wind Load: Upper Category 2, Surge 8 Feet, 110 mph
(including factors, coefficients, figures and tables).

MOBILIZATION AND DEMOBILIZATION:

- It is understood that this project will require work in and over water. Access to near water construction areas is required for material storing, hauling, erection and construction. All facilities, public or private, used for such purposes shall be repaired to their original condition following "Completion" of the project, including grade and topping (sod, tree/vegetation cover, established road, etc.)
- The Contractor shall present a Shipping, Stockpile and Site Administration Plan (SSSAP) to the Owner, Owner's Representative or Engineer for approval. The plan shall be specific to the project requirements for the particular materials to be delivered to the site, describing delivery points, stockpile areas, temporary debris/trash storage areas, temporary field office (incl. utilities maintained there), fencing, security and a statement of commitment and details for maintaining safety on the site.
- The Owner, Owner's Representative or Engineer shall have the right to exercise reasonable alterations or additions to the SSSAP.
- It is the Contractor's responsibility to coordinate, and pay for, necessary utilities to occupy the site and perform the work.
- The Contractor shall not demobilize until project completion.

SITE MAINTENANCE:

- The Contractor shall maintain a clean and neat site, void of loose debris, trash, remnant parts or materials.
- Trash receptacles and removal service shall be maintained by the Contractor specifically for this project. Pre-existing trash/debris facilities shall not be used to maintain the project.
- Temporary debris piles shall be limited in number as much as practical and contained in designated areas until removal. Debris and trash shall not be scattered in areas outside the limited designated areas at anytime.
- Removal of trash/debris shall be scheduled as appropriate to not allow piles to reach five feet in height or greater than ten feet in diameter. Debris individually larger than these dimensions shall be removed from the site within five working days. Receptacles shall not overflow at any time.
- Where necessary, the Contractor shall employ a Maintenance of Traffic (MOT) plan for vehicles and pedestrians, including material deliveries, stockpile area(s), worker parking and construction equipment. The plan must be in writing, including sketches or drawings, and must be submitted to the Owner, Owner's Representative or Engineer for review and approval before commencement of any work.
- The Contractor shall follow all applicable local, state and federal codes regarding site maintenance.

SITE SAFETY:

- The Contractor shall prepare and adhere to a Site-Specific Safety Plan. The contents of the plan are:
- Identification of potential hazards and injuries pertaining to the specific site and project.
 - Location nearest hospital.
 - Assure availability of at least one working cell phone and one vehicle on site at all times.
 - Emergency contacts within the subcontractor's organization and at the prime Contractor's organization.
 - All field personnel wear appropriate safety attire and utilize appropriate personal protection equipment for a given task/operations such as safety glasses/goggles, masks, shields, gloves, harnesses, hard hats, steel-toed boots, etc.
 - Safety kit available onsite at all times with materials for potential hazards and injuries.
 - The Site-Specific Safety Plan shall be distributed and reviewed with all site workers prior to said workers commencing work on the project site.
 - The Contractor shall follow all applicable local, state, and federal codes regarding site safety.

DEMOLITION, CLEARING AND RESTORATION:



- Demolition or clearing may require permits. The Contractor shall acquire all necessary building permits from the local municipality prior to commencing work.
- Clearing and removal of vegetation, rocks and debris will be required within the project structure footprint.
- Demolition or removal of objects, debris, or material specified or obstructing construction shall take place only to the extent necessary.
- Any permitted demolition or removal from submerged lands or adjacent uplands shall be fully contained within siltation devices such that permit turbidity requirements and state water quality standards are met.
- The site shall be restored by removing and finishing all evidence of construction including temporary haul roads, vehicle ruts, stockpile areas, shoreline slopes and vegetation, sod and areas subject to project work.

CONSTRUCTION SURVEYING:

- Stake-out survey of the project is the responsibility of the Contractor. Beginning and end points will be provided by the Owner, Owner's Representative or Engineer either by stakes in the field or in the project drawings.
- The staked project must be approved by the Engineer prior to commencing construction. The Engineer reserves the right to make alignment changes based on conditions portrayed by the initial stakeout.
- Methods and frequency of continuing stake-out during construction shall be submitted to the Engineer for approval prior to beginning construction.
- The Contractor must perform an independent construction record survey (as-built survey) as a check for compliance at the end of the project. The record survey must be signed and sealed by a State of Florida licensed Professional Surveyor. The record survey must be referenced to feet N.A.V.D. 1988.
- The Prime Contractor is advised that certification of the project elevations and alignment is required by the Engineer for final acceptance of work.

ENVIRONMENTAL AND PERMITS:

- The U.S. Army Corps of Engineers (USACE), Florida Department of Environmental Protection (FDEP), regional Water Management District (WMD) and the local city or county may exert jurisdiction over construction of the project. The Contractor shall be responsible to understand and comply with all applicable permit conditions imposed by the jurisdictional agencies, if permits are necessary. If not, the Contractor must at least comply with general state water quality standards for siltation and guidelines for encounters with threatened and endangered species, including, but not limited to, the state manatee guidelines.
- All building and construction-related permits from the local (city or county) or state authorities are the responsibility of the Contractor.
- National Marine Fisheries Services has special conditions for sea turtles, smalltooth sawfish and manatees. See details.

DRAWING: GENERAL NOTES	DWG. JOB NO.	18-006-33	SHEET NO.	C-08
	DRAWN	AR	CAD	RMD
PROJECT NAME:	BETHUNE POINT PARK OBSERVATION PIER REPAIR		CHECKED	SKP
	CITY OF DAYTONA BEACH		APPROVED	SJK
CLIENT:		CITY OF DAYTONA BEACH		
Dredging & Marine Consultants		4643 S. Clyde Morris Blvd Unit 302 Port Orange, FL 32129 Phone:(386) 304-6505 Fax:(386) 304-6506 www.dmcsc.com		
 DMC ENGINEERS • SCIENTISTS		 THE CITY OF DAYTONA BEACH INCORPORATED 1915		
STEVEN J. KUHN		FLORIDA LICENSE NO. 87486		

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TIMBER:

- Southern Yellow Pine (SYP) Lumber:
Decking - SYP No. 1 Grade Prime or DSS Grade
Railings and Posts - SYP No. 1 Grade
Stringers and Cap Boards - SYP No. 2 Grade
Southern Pine Treated Round Timber:
Pile grade in accordance with ASTM D25.
- All ramps established within the wooden dock sections should be established to ADA requirements. Slopes must not exceed 1:12 (V:H) and handrails must be established on both sides of the ramp according to the typical section found in plans. Transition of the wooden access ramps should be flush with the deck and a minimum clearance of 36" of space should be between handrails.
- All stringers, pile cap boards or other timber components not within the walkways shall be SYP No. 2 Grade.
- Treatment of timber shall be as follows: Handrails and decking -0.25 PCF CCA (Copper Chromium Arsenate), stringers, pile cap boards and other components except pilings -0.6 CCA, pilings/posts -2.5 CCA. If required by the owner or local agency, treatment shall be equivalent levels of ACQ (Alkaline Copper Quaternary). Refer to timber supplier for equivalent ACQ levels of protection.
- All timber, lumber and pilings shall be marine grade and identified by the grade and treatment mark of a recognized organization or independent agency certified by the American Lumber Standards Committee.
- Decking shall be placed with 1/4 inch gaps between boards.
- One layer of roofing felt shall be placed between deck (each one) and stringers.
- All boards for decking shall be installed crown down.

PILINGS:

- The minimum tip elevations are based on the penetration required to establish lateral stability of the foundation.
- The minimum tip elevations are based on preventing the piles from tipping just above any soft silt or clay layers indicated in the boring logs.
- No jetting of piles. Contractor shall coordinate with the Engineer of record to obtain written approval prior to jetting.
- Twin jetting or multiple jetting with manifold to maximum length.
- Due to soil variabilities in borings, blow counts for each piling driven shall be recorded and verified by the Engineer of Record. If a vibratory hammer or jetting equipment is used to install pilings, the time needed to hammer and/or jet each piling shall be recorded.
- The pilings shall be of the size and length shown in the plans.
- All pilings shall be setted full length with top elevation as shown in plans. Cut-offs are not allowed except for minimal required (max. 6") to remove tops damaged by the pile-driver.
- The pile-setting equipment used must be of proper size, set-up and maintenance as to not cause excessive damage to pilings. Damaged piles must be removed, discarded and replaced at the Contractor's expense. The Contractor shall provide information regarded the model and operating specifications if the pile-driving equipment to be used on the job for approval by the Engineer prior to commencing pile-driving.
- If solid rock, debris or refusal is encountered prior to achieving the minimum penetration, then the pile shall be tool-punched at least two feet into the strata. A minimum of 2/3 of the total embedment requirement must be achieved. No additional payment will be made for pile driving where this work is required.
- For whatever reason, if piling cut-off is requested, the piling must remain "in place-as is" and the engineer must be given 72 hours advanced notice to make observations and recommendations.
- Contractor shall keep a pile driving log on the site at all times which shall include the following information: date, time, weather conditions, equipment used, pile location designation, blows per foot over entire driving sequence, total length of pile (after driving and cut-off, if cut-off allowed), amount of jetting or punching (if requested and approved), unusual pile behavior, damage and re-driving. This log shall be available to the Engineer or Owner's Representative at any time during the job. Updated copies of log pages shall be provided to the Engineer at least weekly throughout the project. If a vibratory hammer or jetting equipment is used to install pilings, the time needed to hammer and/or jet each piling shall be recorded.
- Proper care shall be taken for aligning piles. Rail posts are to be centered on piles.

GRAVITY WALL CONCRETE:

- Strict adherence to concrete cover, water-cement (w/c) ratio, admixture additions, handling and curing will provide the optimum chance to achieve the longest service life possible for the project cast-in-place or pre-cast concrete components.
- All mix designs by the concrete supplier or contractor must be submitted to the Engineer for approval prior to submitting order and/or mixing.
- All cast-in-place cap concrete shall be of the same mix design as follows:
 - Compressive Strength = 6,000 psi min.
 - Water-cement ratio \leq 0.40.
 - Air entrainment = min. 2 to 3%.
 - Potable water, no chlorides.
 - Type I Cement.
 - 6% addition of microsilica per weight of binders.
 - Large and small aggregates washed and free of chlorides or reactive chemicals. No pea gravel.
 - Retarders or accelerators not allowed unless justified to the Engineer prior to their use.
- Concrete cover from all exterior faces shall be 4" clear to outermost face of any reinforcement including stirrups.
- No greater than 45 minutes may transpire between individual castings. Trucks may not sit on site for greater than 45 minutes. Trucks sitting full on site for greater than 45 minutes shall be rejected at the contractor's expense. Delays in casting a given form greater than 45 minutes shall be rejected unless an acceptable construction joint can be made.
- A working concrete vibrator must be on site prior to delivery of first concrete. The Owner, Owner's Representative or Engineer shall not allow concrete to be cast otherwise.
- Vibrate concrete fully, particularly at corners and edges, in a continuous vertical plunging motion, never allowing the vibrator to become motionless in the concrete. Concrete with substantial voids or honeycombing will be rejected.
- Continually wet water cure horizontal surfaces for at least three days and all exposed concrete surfaces after concrete is set. For the purpose of this specification "set" is when the concrete surface is hard enough so that when "knocked" with the knuckles the concrete is not dented. The Contractor is responsible for arranging a water source for curing purposes prior to commencing casting of concrete.
- Use non-metallic chairs and spacers in reinforcement placing, or for any other necessary in-form attachments or alignments.
- Apply Master Builders/BASF "ConFilm" or Euclid Chemical "Euco-bar" product immediately after first float and then after final finish. Refer to manufacturer's recommendations for mixing and application.
- The final alignment of the concrete wall to be straight and level per elevations and plans provided.
- Concrete materials testing per acceptable ASTM methods and intervals. A material testing program must be prepared by the Contractor and/or Manufacturer for review and approval by the Engineer. At least one set of four cylinders shall be cast for any one day's work, or work between construction joints, or more if prescribed by ASTM.

BOLTS & SCREWS:

- All fasteners, including nails, screws, threaded rods, bolts, nuts, washers, plates, lags, etc. shall be grade 316 stainless steel (SS). Washers used with single-bolted or double bolted connections (for example: stringer to piling connection, cap board connections or cross-bracing) shall be minimum 3-inch diameter "dock washers". Standard Washers for Splice Block and Railings.
- Bolts shall extend fully through the nuts but not extend beyond the nut more than 1/2 inch.
- Stainless Steel (SS) screws as shown in plans.

HURRICANE STRAPS:


- Simpson Strong Tie Twist Straps (stainless steel hurricane straps), HTSQ20SS-SDS.
- Eight (8) total screws, half stringers and half cap boards. Screws shall be Simpson Strong Tie 1/4" x 1 1/2" SDS, Stainless Steel.

BACKFILL SOIL AND SURFACE TREATMENT:

- Backfill material shall be from an upland source and shall be clean, construction-quality sand, free from organics, oils, grease and debris. The source company shall provide a sieve analysis to the engineer for approval prior to shipping material.
- Backfill material shall be placed in maximum 12-inch lifts and compacted to minimum 98 percent optimum proctor moisture content and density. The bottom, middle and top of backfill shall be tested, at the expense of the Contractor, by a qualified independent testing company. The testing company name, qualifications and contact information shall be provided to the Owner, Owner's Representative or Engineer for approval prior to commencing soil testing.
- Backfilling shall not be performed until after the concrete has sufficiently cured to design strength.
- The backfilling and compaction should be performed with the smallest practical equipment to reduce surcharge on the structure during the operation. Heavy equipment shall not be operated within 20 feet of the wall. The contractor shall review backfilling procedure with the engineer prior to commencing.

INSPECTION COORDINATION:

- The Engineer will be conducting routine observations and observations at critical stages of construction. A minimum of 72 hours notice shall be given to the Engineer prior to commencing the critical stages of construction. In general, critical stages are the initial work on the major structure components. Examples of critical stages of construction are: completion of construction stakeout, wall framing, concrete forming and rebar placement prior to casting concrete, first section of concrete casting and finishing, first section of backfilling and compaction, etc.
- The local city or county may perform their own construction observations in addition to the Engineer. No observers other than the Engineer or his/her designated representative shall have the authority to determine compliance with plans and specifications.
- Other observers may relay information to the Engineer, but it will be the Contractor's ultimate responsibility to maintain contact and resolve disputes, questions, field changes, payment requests, etc. directly with the Owner, Owner's Representative or Engineer.

DRAWING: GENERAL NOTES	DMC JOB NO. 18-006-33	SHEET NO. C-09
	DRAWN: AR	
PROJECT NAME: BETHUNE POINT PARK OBSERVATION PIER REPAIR	CHECKED: SKP	SCALE AS SHOWN
CLIENT: CITY OF DAYTONA BEACH	APPROVED: SJK	DATE: 09-21-2018
Dredging & Marine Consultants DMC ENGINEERS • SCIENTISTS		4643 S. Clyde Morris Blvd Unit 302 Port Orange, FL 32129 Phone: (386) 304-6505 Fax: (386) 304-6506 www.dmcsc.com
		STEVEN J. KUHN FLORIDA LICENSE NO. 87466



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
 Southeast Regional Office
 263 13th Avenue South
 St. Petersburg, FL 33701

STANDARD MANATEE CONDITIONS FOR IN-WATER WORK
 2011

SEA TURTLE AND SMALLTOOTH SAWFISH CONSTRUCTION CONDITIONS

The permittee shall comply with the following protected species construction conditions:

- a. The permittee shall instruct all personnel associated with the project of the potential presence of these species and the need to avoid collisions with sea turtles and smalltooth sawfish. All construction personnel are responsible for observing water-related activities for the presence of these species.
- b. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing sea turtles or smalltooth sawfish, which are protected under the Endangered Species Act of 1973.
- c. Siltation barriers shall be made of material in which a sea turtle or smalltooth sawfish cannot become entangled, be properly secured, and be regularly monitored to avoid protected species entrapment. Barriers may not block sea turtle or smalltooth sawfish entry to or exit from designated critical habitat without prior agreement from the National Marine Fisheries Service's Protected Resources Division, St. Petersburg, Florida.
- d. All vessels associated with the construction project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water depths where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will preferentially follow deep-water routes (e.g., marked channels) whenever possible.
- e. If a sea turtle or smalltooth sawfish is seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure its protection. These precautions shall include cessation of operation of any moving equipment closer than 50 feet of a sea turtle or smalltooth sawfish. Operation of any mechanical construction equipment shall cease immediately if a sea turtle or smalltooth sawfish is seen within a 50-ft radius of the equipment. Activities may not resume until the protected species has departed the project area of its own volition.
- f. Any collision with and/or injury to a sea turtle or smalltooth sawfish shall be reported immediately to the National Marine Fisheries Service's Protected Resources Division (727-824-5312) and the local authorized sea turtle stranding/rescue organization.
- g. Any special construction conditions, required of your specific project, outside these general conditions, if applicable, will be addressed in the primary consultation.

The permittee shall comply with the following conditions intended to protect manatees from direct project effects:

- a. All personnel associated with the project shall be instructed about the presence of manatees and manatee speed zones, and the need to avoid collisions with and injury to manatees. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act, the Endangered Species Act, and the Florida Manatee Sanctuary Act.
- b. All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
- c. Siltation or turbidity barriers shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee movement.
- d. All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shutdown if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.
- e. Any collision with or injury to a manatee shall be reported immediately to the Florida Fish and Wildlife Conservation Commission (FWC) Hotline at 1-888-404-3922. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-731-3336) for north Florida or Vero Beach (1-772-562-3909) for south Florida, and to FWC at ImperiledSpecies@myFWC.com
- f. Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs are to be removed by the permittee upon completion of the project. Temporary signs that have already been approved for this use by the FWC must be used. One sign which reads *Caution: Boaters* must be posted. A second sign measuring at least 8 1/2" by 11" explaining the requirements for "Idle Speed/No Wake" and the shut down of in-water operations must be posted in a location prominently visible to all personnel engaged in water-related activities. These signs can be viewed at MyFWC.com/manatee. Questions concerning these signs can be sent to the email address listed above.

Revised: March 23, 2006

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DRAWING: ENVIRONMENTAL NOTES	DWG. JOB NO.	18-006-33	SHEET NO. C-10
	DRAWN	AR	
PROJECT NAME: BETHUNE POINT PARK OBSERVATION PIER REPAIR	CHECKED	SKP	SCALE AS SHOWN
	APPROVED	SJK	DATE: 09-21-2018
CLIENT: CITY OF DAYTONA BEACH		STEVEN J. KUHN FLORIDA LICENSE NO. 87486	
Dredging & Marine Consultants DMC ENGINEERS • SCIENTISTS			
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Drawing Name: D:\DattoDrive\DMC Projects\006 - City of Daytona Beach\18-006-33 Bethune Point Park Observation Pier Repair\Drawings\Bethune Obs Pier.dwg, By: Ankeet, Tab: envr, 9/28/2018