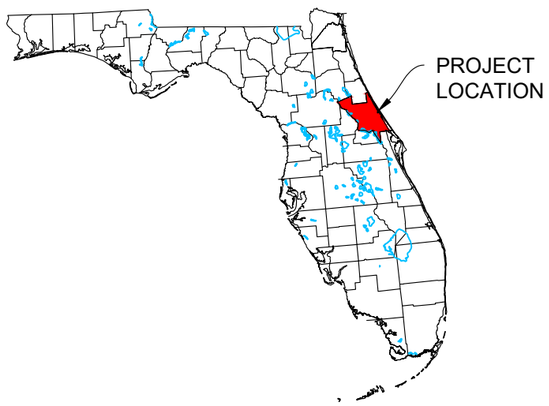
CONSTRUCTION DRAWINGS

CITY OF DAYTONA BEACH
MANATEE ISLAND
DAY DOCK REPAIR
OCTOBER 12, 2018

FLORIDA



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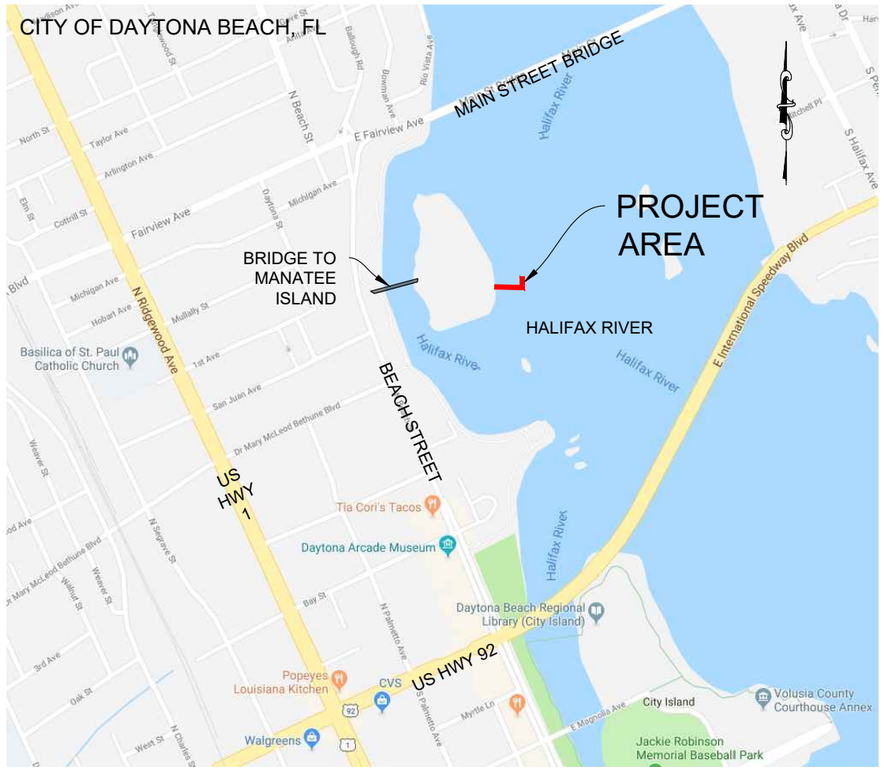
PROJECT LOCATION MAP



THE CITY OF DAYTONA BEACH INCORPORATED JULY 1876

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

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

811 Know what's **below.** **Call** before you dig.

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

Dredging & Marine Consultants
DMC
ENGINEERS • SCIENTISTS
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Port Orange, FL 32129
Phone:(386) 304-6505
Fax:(386) 304-6506
www.dmces.com

DMC, 4/30/2018

DMC, 4/30/2018

DMC, 4/30/2018

DMC, 4/30/2018

DRAWING: EXISTING CONDITIONS

DMC JOB NO. 18-006-35

DRAWN AR | CAD 2019 C3D | SHEET NO. C-01

CHECKED SJK | SCALE AS SHOWN

APPROVED SKP | DATE 10-12-2018

PROJECT NAME: MANATEE ISLAND DAY DOCK REPAIR

CLIENT: CITY OF DAYTONA BEACH

STEVEN J KUHN
FLORIDA LICENSE No. 67486

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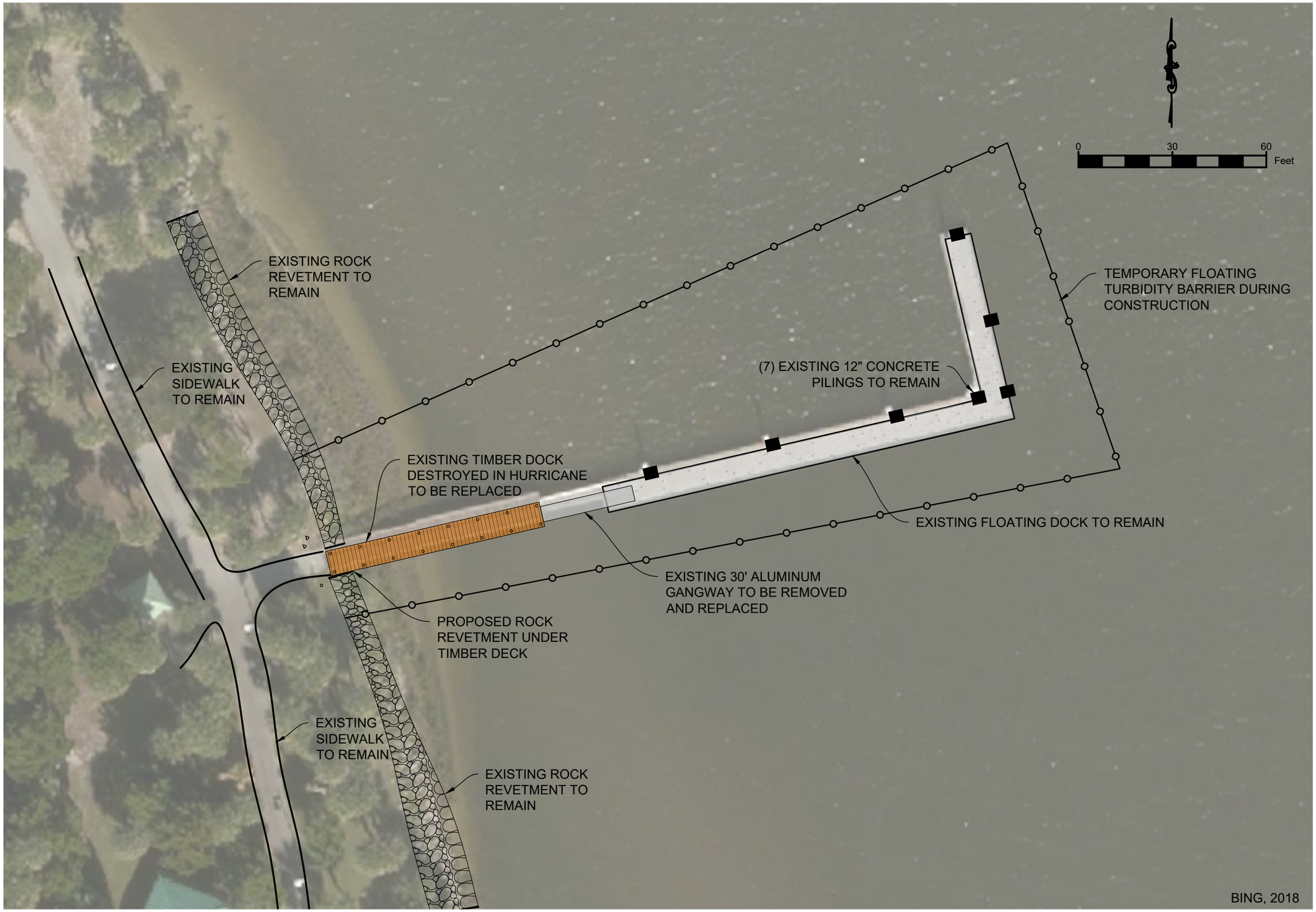
THE CITY OF DAYTONA BEACH FLORIDA INCORPORATED JULY 1, 1926

Drawing Name: D:\DattoDrive\DMC Projects\006 - City of Daytona Beach\18-006-35 Manatee Island Day Docks Repair\Drawings\Manatee Island.dwg By: Ankeet Tab: EXIST 10/19/2018



DRAWING: AERIAL
DMC JOB NO. 18-006-35
DRAWN AR | CAD 2019 C3D | SHEET NO. C-02
CHECKED SJK | SCALE AS SHOWN
APPROVED SKP | DATE 10-12-2018

PROJECT NAME:
MANATEE ISLAND
DAY DOCK REPAIR

CLIENT: CITY OF DAYTONA BEACH

STEVEN J KUHN
FLORIDA LICENSE No. 67486

Dredging & Marine Consultants
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THE CITY OF DAYTONA BEACH SINCE 1926 INCORPORATED JULY 1, 1926

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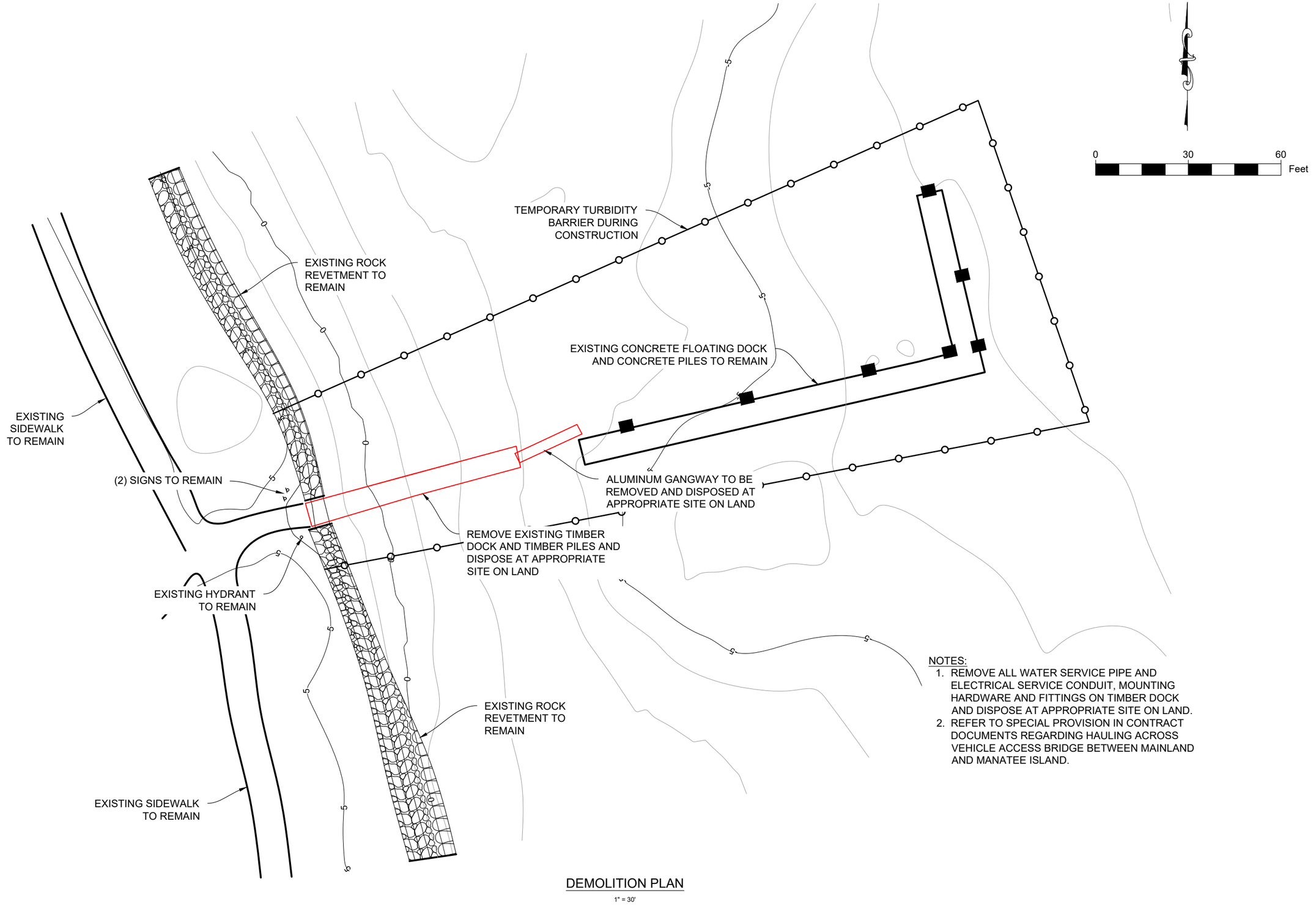

DEMOLITION PLAN

1" = 30'

NOTES:

1. REMOVE ALL WATER SERVICE PIPE AND ELECTRICAL SERVICE CONDUIT, MOUNTING HARDWARE AND FITTINGS ON TIMBER DOCK AND DISPOSE AT APPROPRIATE SITE ON LAND.
2. REFER TO SPECIAL PROVISION IN CONTRACT DOCUMENTS REGARDING HAULING ACROSS VEHICLE ACCESS BRIDGE BETWEEN MAINLAND AND MANATEE ISLAND.

DRAWING: DEMOLITION PLAN

DMC JOB NO. 18-006-35

SHEET NO. C-03

DRAWN	AR	CAD	2019 C3D
CHECKED	SJK	SCALE	AS SHOWN
APPROVED	SKP	DATE	10-12-2018

PROJECT NAME: MANATEE ISLAND DAY DOCK REPAIR

CLIENT: CITY OF DAYTONA BEACH

STEVEN J KUHN
FLORIDA LICENSE No. 67486

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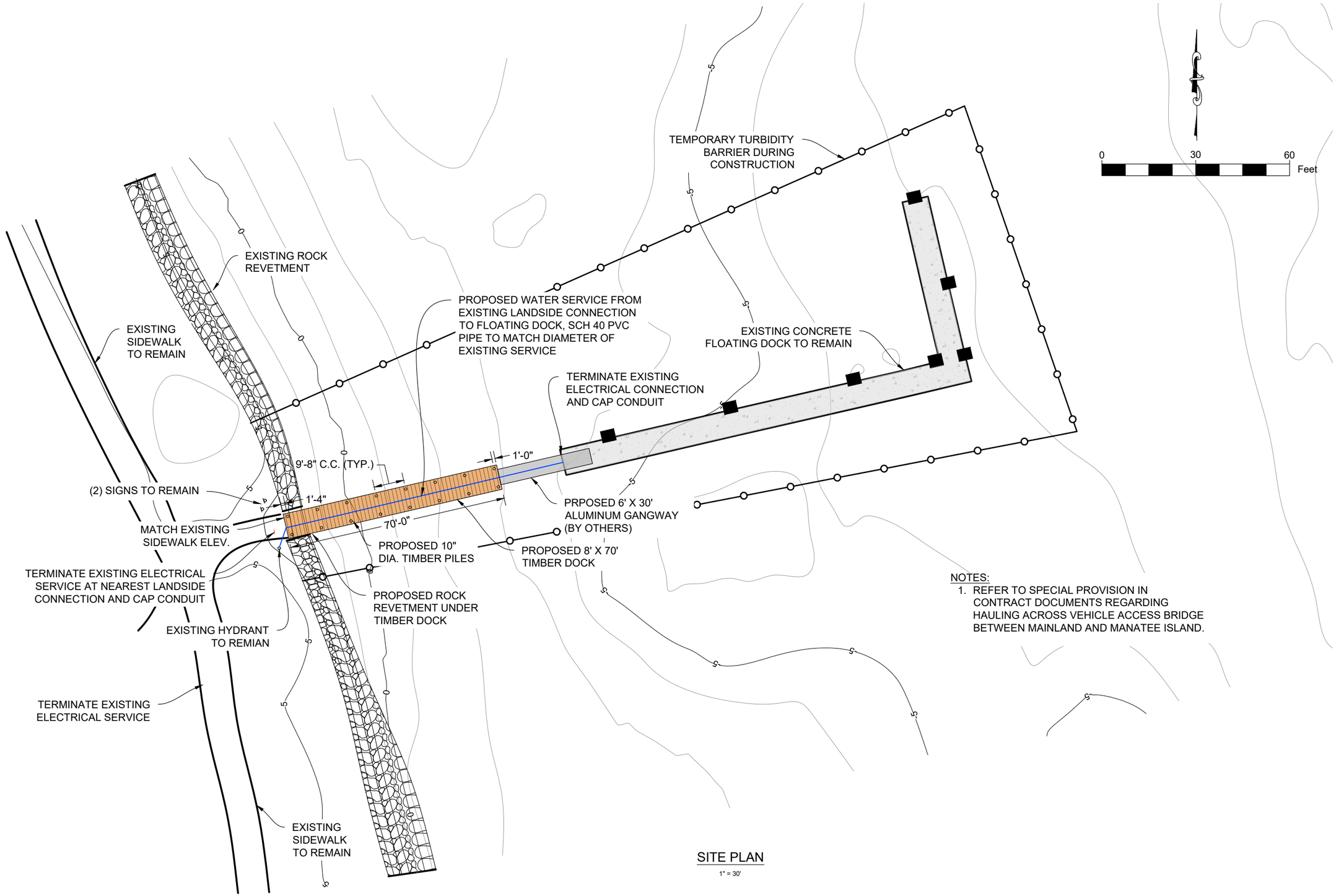
THE CITY OF DAYTONA BEACH BUILT TO LAST INCORPORATED MAY 1, 1876

Drawing Name: D:\DattoDrive\DMC Projects\006 - City of Daytona Beach\18-006-35 Manatee Island Day Docks Repair\Drawings\Manatee Island.dwg By: Ankeet Tab: demo 10/19/2018



SITE PLAN

1" = 30'

NOTES:

1. REFER TO SPECIAL PROVISION IN CONTRACT DOCUMENTS REGARDING HAULING ACROSS VEHICLE ACCESS BRIDGE BETWEEN MAINLAND AND MANATEE ISLAND.

DRAWING: SITE PLAN
DMC JOB NO. 18-006-35
SHEET NO. C-04
DRAWN AR | CAD 2019 C3D | SCALE AS SHOWN
CHECKED SJK | DATE 10-12-2018
APPROVED SKP

PROJECT NAME: MANATEE ISLAND DAY DOCK REPAIR

CLIENT: CITY OF DAYTONA BEACH

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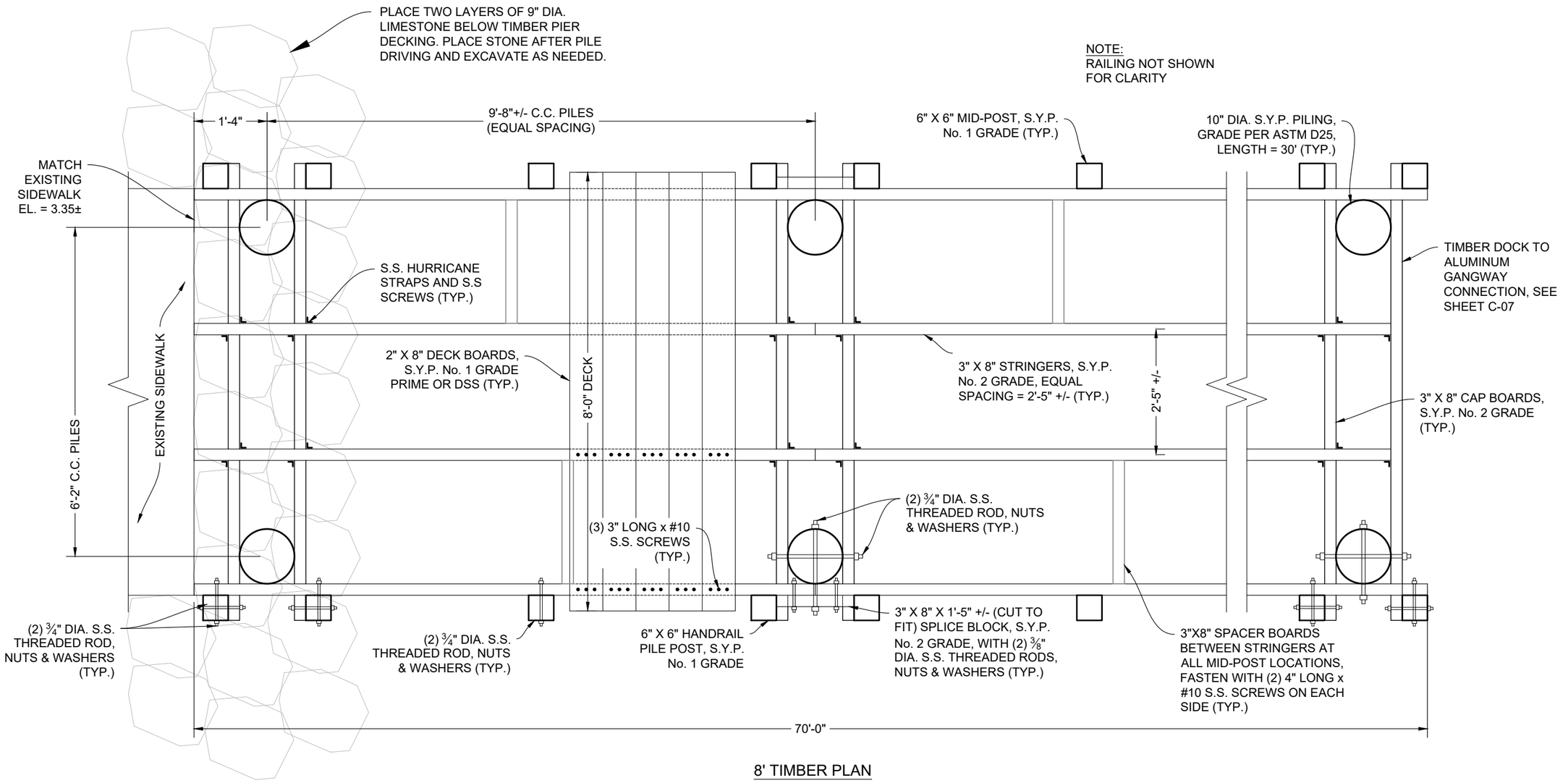
THE CITY OF DAYTONA BEACH INCORPORATED 1876

Drawing Name: D:\DatoDrive\DMC Projects\006 - City of Daytona Beach\18-006-35 Manatee Island Day Docks Repair\Drawings\Manatee Island.dwg By: Aniket Tab: site plan 10/19/2018



8' TIMBER PLAN

1' = 2'

DRAWING: TIMBER PLAN
DMC JOB NO. 18-006-35
SHEET NO. C-05
DRAWN AR | CAD 2019 C3D
CHECKED SJK | SCALE AS SHOWN
APPROVED SKP | DATE 10-12-2018

PROJECT NAME: MANATEE ISLAND DAY DOCK REPAIR

CLIENT: CITY OF DAYTONA BEACH

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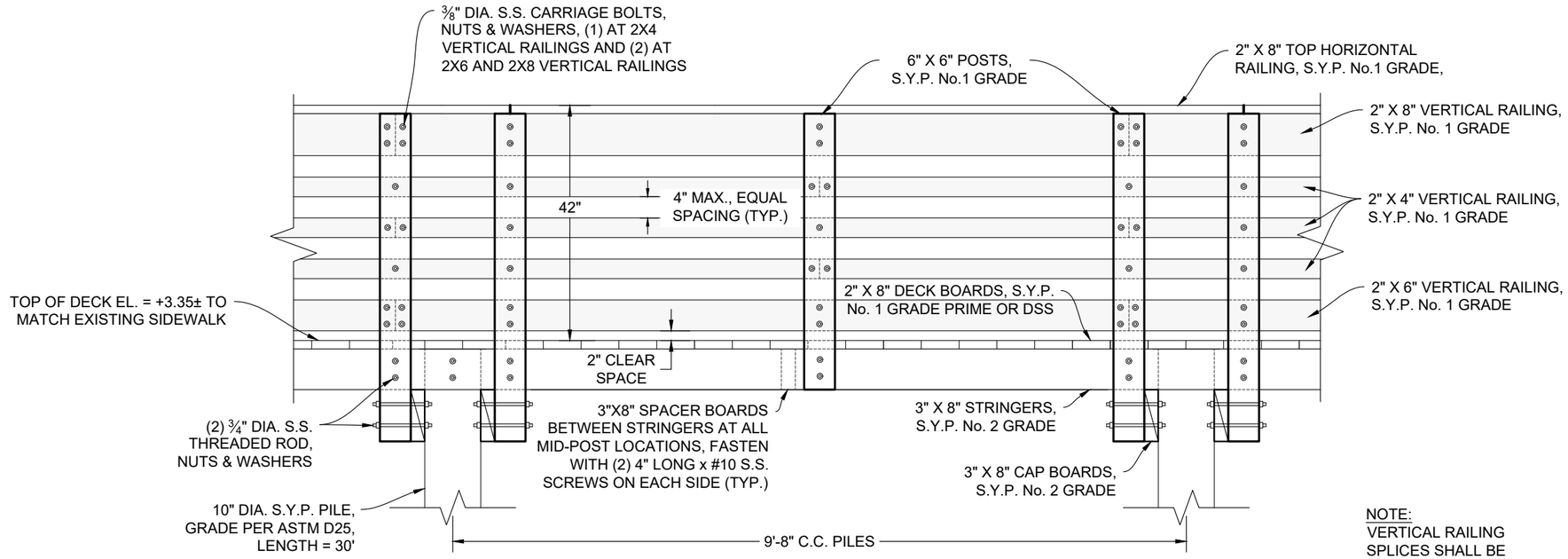
THE CITY OF DAYTONA BEACH INCORPORATED 1876

Drawing Name: D:\DattoDrive\DMC Projects\006 - City of Daytona Beach\18-006-35 Manatee Island Day Docks Repair\Drawings\Manatee Island.dwg By: Aniket Tab: timber plan 10/19/2018



TIMBER PROFILE

1' = 2'

NOTE:
VERTICAL RAILING SPLICES SHALL BE STAGGERED AS SHOWN

DRAWING: TIMBER PROFILE
DMC JOB NO.: 18-006-35
CAD: 2019 C3D
SHEET NO.: C-06
DRAWN: AR
CHECKED: SJK
APPROVED: SKP
SCALE AS SHOWN
DATE: 10-12-2018

PROJECT NAME: MANATEE ISLAND DAY DOCK REPAIR

CLIENT: CITY OF DAYTONA BEACH

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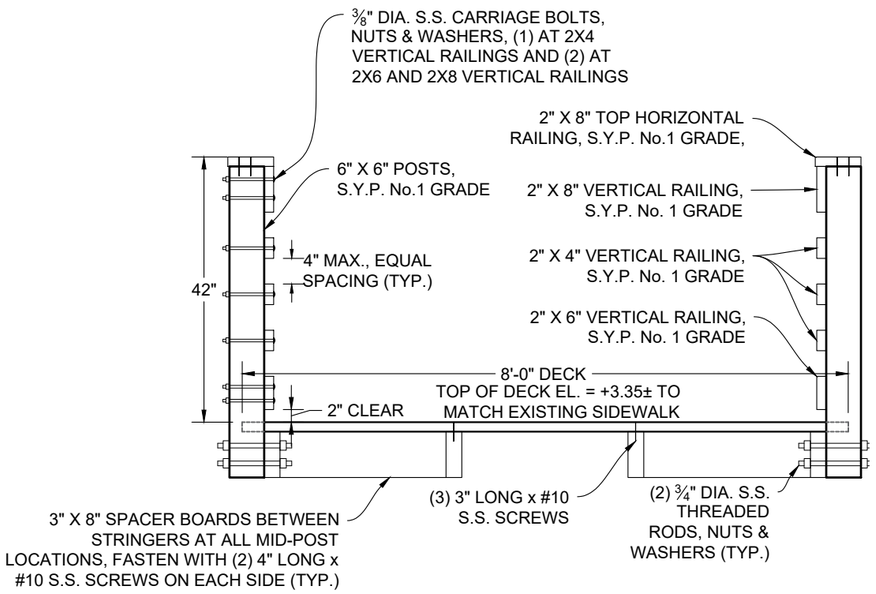
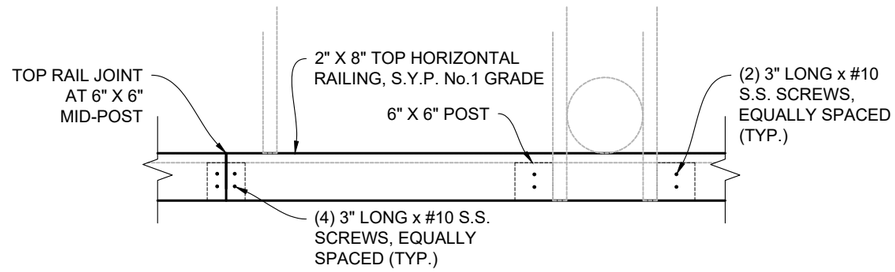
THE CITY OF DAYTONA BEACH SUNRISE CITY INCORPORATED JULY 1, 1926

Drawing Name: D:\DattoDrive\DMC Projects\006 - City of Daytona Beach\18-006-35 Manatee Island Day Docks Repair\Drawings\Manatee Island.dwg By: Ankeet Tab: timber profile 10/19/2018



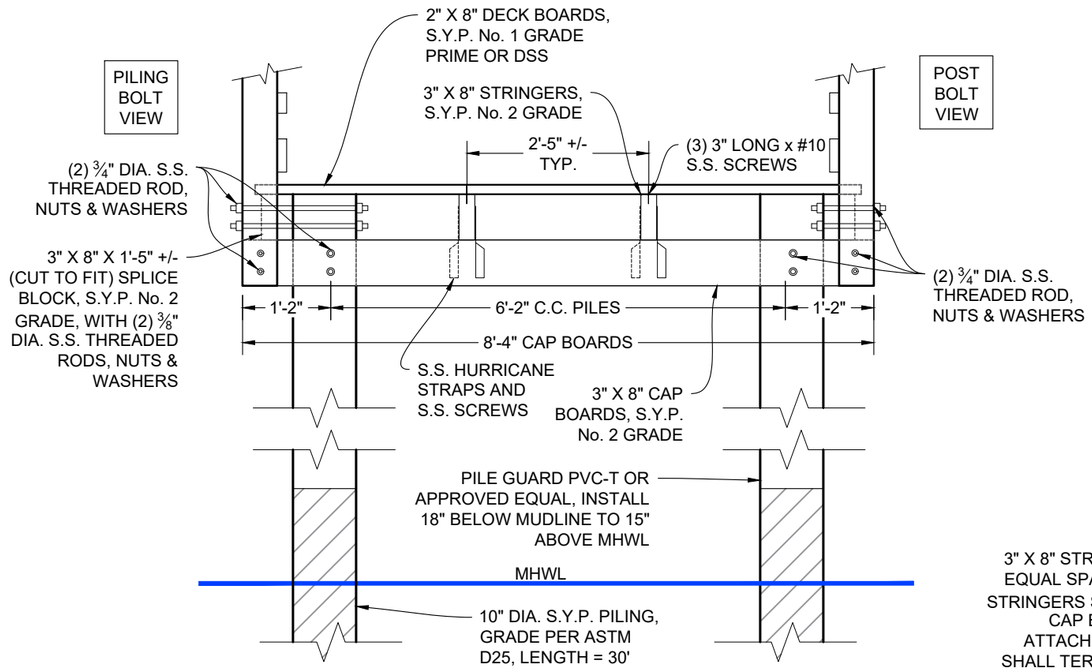
TYPICAL TIMBER DOCK CROSS-SECTION - NO PILING

1"=6"



TOP RAILING DETAIL

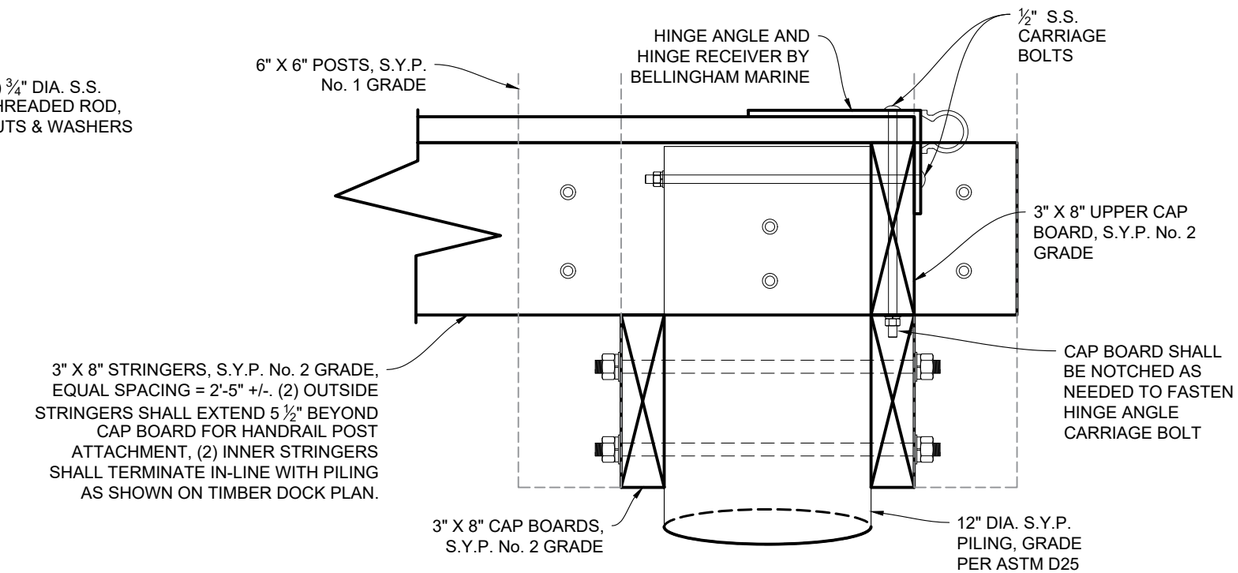
1"=6"



TYPICAL TIMBER DOCK CROSS-SECTION - PILING

1"=6"

TIMBER PILINGS:
10" DIA. S.Y.P. PILES, GRADE PER ASTM D25
LENGTH = 30' (LATERAL GOVERNED)
EMBEDMENT LENGTH = MIN. 15.5'
TOP EL. = +3.23
TIP EL. = (-)26.77



TYPICAL TIMBER DOCK TO GANGWAY CONNECTION

N.T.S.

DRAWING: TIMBER CROSS-SECTIONS
DMC JOB NO. 18-006-35
SHEET NO. C-07
DRAWN AR | CAD 2019 C3D | SCALE AS SHOWN
CHECKED SJK | DATE 10-12-2018
APPROVED SKP

PROJECT NAME: MANATEE ISLAND DAY DOCK REPAIR

CLIENT: CITY OF DAYTONA BEACH

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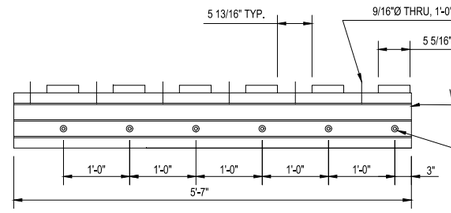
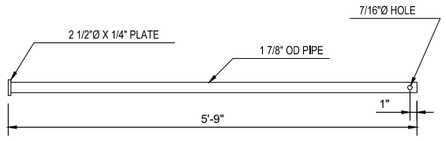
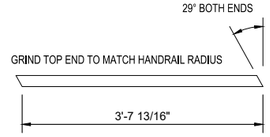


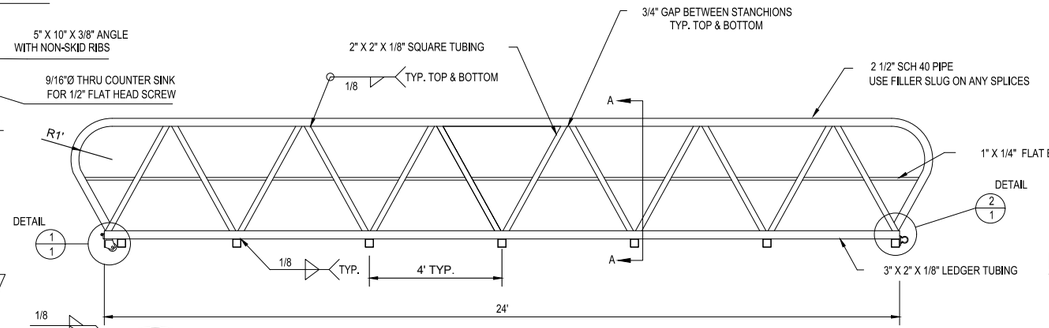
HINGE ANGLE N.T.S.



HINGE PIN N.T.S.

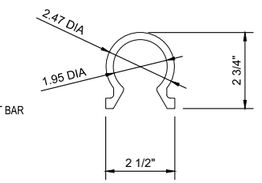


STANCHION FOR 4' TRUSS

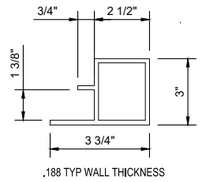


SIDE ELEVATION

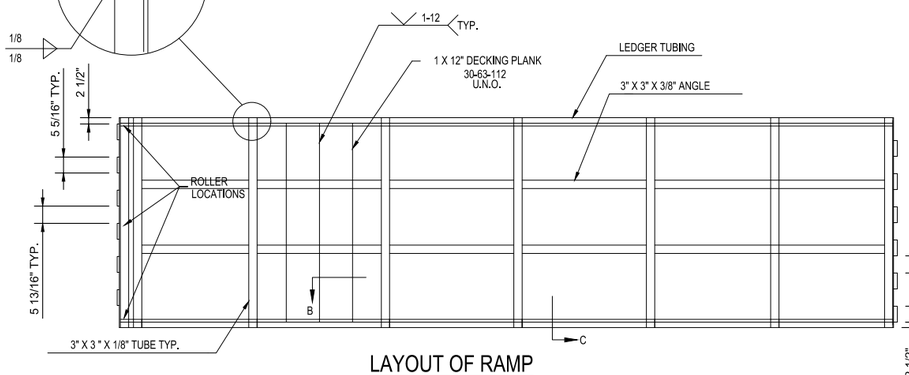
NOTES:
1. MANUFACTURE FROM 6061-T6 ALUMINUM.
2. BREAK ALL EDGES ABOVE DECK LEVEL.
3. BRUSH FINISH PIPE RAIL AFTER ASSEMBLY.



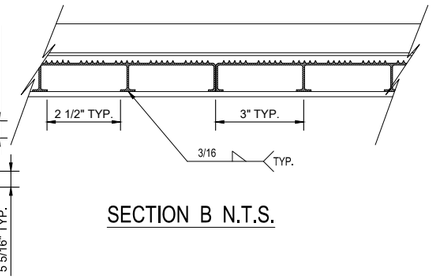
HINGE RECEIVER SECTION



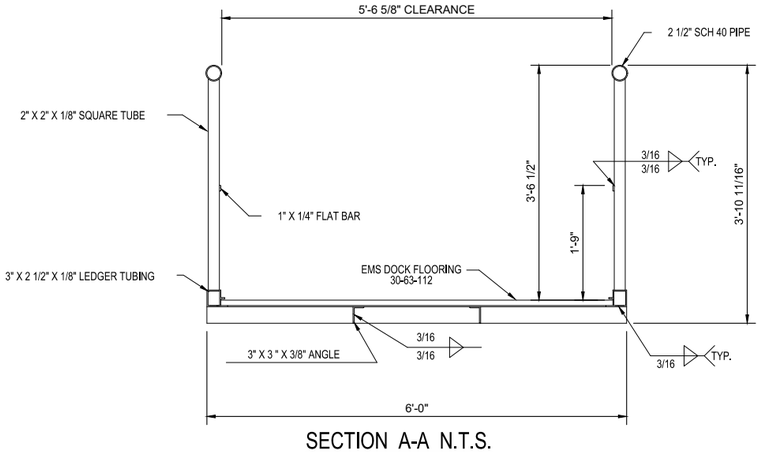
SECTION C N.T.S.



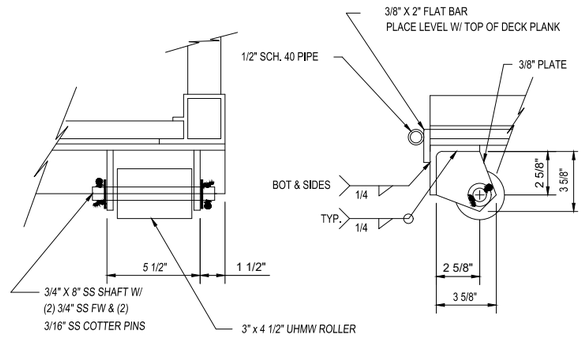
LAYOUT OF RAMP



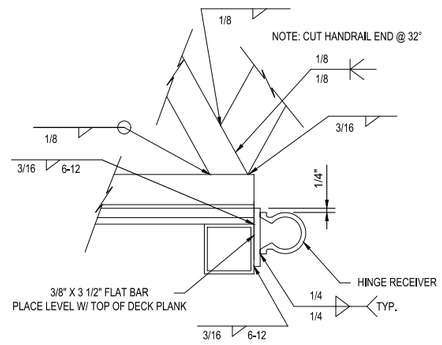
SECTION B N.T.S.



SECTION A-A N.T.S.



DETAIL 1 / N.T.S.



DETAIL 2 / N.T.S.

ALL ALUMINUM GANGWAY AND CONCRETE FLOATING SYSTEM COMPONENTS BY BELLINGHAM MARINE. THESE COMPONENTS DEPICTED ARE FOR INFORMATION AND BIDDING PURPOSES ONLY. SHOP DRAWINGS TO BE SUBMITTED TO PROJECT ENGINEER PRIOR TO ORDERING COMPONENTS.

NOTE:
FLEX CONNECTION SHALL BE PROVIDED AT ALL APPLICABLE UTILITY LINES.

DRAWING: GANGWAY DETAILS
DMC JOB NO. 18-006-35
SHEET NO. C-08
DRAWN AR | CAD 2019 C3D
CHECKED SJK | SCALE AS SHOWN
APPROVED SKP | DATE 10-12-2018

PROJECT NAME:
MANATEE ISLAND
DAY DOCK REPAIR

CLIENT: CITY OF DAYTONA BEACH

STEVEN J KUHN
FLORIDA LICENSE No. 67486

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IMPORTANT NOTES TO BIDDERS:

1. 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.
2. The Contractor shall retain all material delivery tickets, material testing reports an 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.
3. The Engineer must be under contract with the Owner, Developer or Contractor for construction observations in order to provide certification of the constructed project.
4. The Engineer must be given advanced notice of any critical stages of construction such as: initial construction stakeout, first pile driving, framing timber, etc. The Engineer will not make a structure certification if the contractor does not comply with this requirement.
5. A Pre-Construction meeting must be scheduled before start of construction and all parties are to attend including: Owner or Owner's Representative, Engineer, Prime Contractor, Sub-Contractor(s), Surveyor, Applicable Tradesmen, etc. The Engineer will lead the meeting and provide a list of critical items to discuss.

GENERAL:

1. 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 N.A.V.D.
2. 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.
3. 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.
4. 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.
5. 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.
6. All products constructed or manufactured/supplied for the project shall be accompanied by industry acceptable warranties or guarantees.
7. 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 includes, but not limited to, mark-up drawings, sketches, cut-sheets, product literature, additional specifications, photographs and letters.

Shop drawings list:

1. Schedule for completion of work with tasks and durations defined.
2. Shipping, stockpile and site administration plan (SSSAP).
3. Maintenance of Traffic Plan (MOTP) for vehicles and pedestrians, including material deliveries, stockpile area(s), worker's parking and construction equipment.
4. 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.
5. 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.
6. Changes, alternates or other methods different from project plans must be approved, in writing, via "Shop Drawings".
7. 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

1. 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.
2. 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.
3. 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:

1. U.S.C.O.E. Coastal Engineering Manual, EM 1110-2-1100, Latest edition.
2. U.S.C.O.E. Engineering Manual, Design of Pile Foundations, EM 110-1-2906, 1991.
3. Simplified Design of Structural Wood, Third edition, Harry Parker.
4. Florida Building Code: Accessibility, Latest Edition.
5. Florida Safety Code, Latest edition.
6. Wind calculations per ASCE 7-10, "Other Standards", Section 29.5, Page 308.

MOBILIZATION AND DEMOBILIZATION:

1. 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.)
2. 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.
3. The Owner, Owner's Representative or Engineer shall have the right to exercise reasonable alterations or additions to the SSSAP.
4. It is the contractor's responsibility to coordinate, and pay for, necessary utilities to occupy the site and perform the work.
5. The Contractor shall not demobilize until "Project Completion" and all parties have agreed and signed off in writing.

SITE MAINTENANCE:

1. The Contractor shall maintain a clean and neat site, void of loose debris, trash, remnant parts or materials.
2. 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.
3. 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.
4. 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.
5. Where necessary, the Contractor shall employ a Maintenance of Traffic Plan (MOTP) 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.
6. 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:

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

DEMOLITION, CLEARING AND RESTORATION:

1. Demolition or clearing may require permits. The contractor shall acquire all necessary building permits from the local municipality prior to commencing work.
2. Clearing and removal of vegetation, rocks and debris will be required within the project structure footprint.
3. Demolition or removal of objects, debris, or material specified or obstructing construction shall take place only to the extent necessary.
4. 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.
5. 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:

1. 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.
2. 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.
3. Methods and frequency of continuing stake-out during construction shall be submitted to the Engineer for approval prior to beginning construction.
4. 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.
5. 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:

1. 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.
2. All building and construction-related permits from the local (city or county) or state authorities are the responsibility of the Contractor.
3. National Marine Fisheries Services has special conditions for sea turtles, smalltooth sawfish and manatees. See details.

TIMBER:

1. Southern Yellow Pine (SYP) Lumber:
   Decking - SYP No. 1 Prime or DSS Grade
   Picnic Tables, Railing and Post - SYP No. 1 Grade
   Stringers, Pavilions, Cap Boards, and Cross Bracing - SYP No. 2 Grade
   Southern Pine Treated Round Timber:
   Pile grade in accordance with ASTM D25.
2. 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.
3. All stringers, pile cap boards or other timber components not within the walkways shall be SYP No. 2 Grade.
4. 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.
5. 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.
6. Timber Pilings:
   10" dia. S.Y.P. piles, grade per ASTM D25
   Length = 30' (lateral governed)
   Embedment length = min. 15.5'
   Top el. = +3.23
   Tip el. = (-)26.77
7. All top horizontal railing have eased edge at walkway and flush with the vertical handrail.
8. Decking shall be placed with 1/4 inch gaps between boards.
9. One layer of roofing felt shall be placed between deck (each one) and stringers. All boards for decking shall be installed crown down.

WATER AND ELECTRICAL SERVICE:

1. Water service shall be provided from existing landside connection to floating dock and provide water to hydrants on the floating dock. Pipe diameter shall match existing.
2. Water service line shall be secured under timber dock to stringers using stainless steel straps and stainless steel screws every 5'.
3. A flex connection shall be provided at aluminum gangway for water line.
4. Electrical service supplying the existing floating dock shall be terminated at the landside connection and conduit shall be capped off. Electrical conduit at floating dock shall be terminated and capped off.

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CHECKED SJK | SCALE AS SHOWN
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PROJECT NAME: MANATEE ISLAND DAY DOCK REPAIR

CLIENT: CITY OF DAYTONA BEACH

STEVEN J KUHN
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HURRICANE STRAP:

6. Simpson Strong Tie Twist Straps (stainless steel hurricane straps), HTSQ20SS-SDS.
7. Eight (8) total screws, half stringers and half cap boards. Screws shall be Simpson Strong Tie ¼" x 1 ½" SDS, Stainless Steel.

TIMBER AND PRE-STRESSED CONCRETE PILINGS:

1. The minimum tip elevations are based on the penetration required to establish lateral stability of the foundation.
2. 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.
3. No jetting of piles.
4. Due to soil variabilities in borings, blow counts for each piling driven shall be recorded and verified by the engineer of record.
5. The pilings shall be timber of the size and length shown in the plans.
6. 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.
7. 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.
8. 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.
9. Contractor must have a third party inspector from a Geotechnical Engineering & Testing company with valid licenses in the State of Florida. The inspector shall keep a pile driving log on the site at all times which shall include the following information: date, time, weather conditions, equipment and weight of hammer 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.
10. Proper care shall be taken for aligning piles. Rail post are to be centered on piles.

BOLTS & SCREWS:

1. 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.
2. Bolts shall extend fully through the nuts but not extend beyond the nut more than ½ inch.
3. One bolt centered or two bolts equally spaced.
4. Stainless Steel (SS) screws as shown in plans.

STEEL/MISCELLANEOUS:

All Structural steel and miscellaneous metal items (other than aluminum) shall be in accordance with structural steel, Grade 316 Stainless Steel or ASTM A36 Steel.

ALUMINUM GANGWAY:

1. The gangways may, or may not be, provided by the floating dock manufacturer, at the manufacturer's and/or contractor's preference. Gangway ramps shall be of length and width shown on the plans. Gangway ramps shall be constructed of Aluminum Alloy 6061-T6 and designed to carry its own dead load plus a live load of 50 pounds per square foot (psf). Gangway handrails shall be 42 inches in height and designed for 50 pounds per linear foot (plf) applied horizontally along the top rail and a point load of 200 pounds applied on the top rail mid-way between posts. The decking shall be a non-skid surface to prevent slippage when wet at maximum angle. The deck material shall be aluminum planking unless otherwise directed by the owner/developer. Gangway hardware shall be aluminum or stainless steel. The fixed hinge shall be at the top of the ramp and shall freely rotate over the entire range of design water level fluctuations.
2. The gangway railing shall be a fixed design.
3. A flex connection shall be provided for all applicable utility lines.

INSPECTION COORDINATION:

1. 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 completion of construction stakeout, initial sheet piling installation, framing, concrete forming and rebar placement prior to casting concrete, first section of concrete casting and finishing, first section of backfilling and compaction, etc.
2. 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.
3. 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.

CONTRACTOR REQUIREMENTS FOR SITE CLEARING, GRADING AND EROSION DESIGN AND CONSTRUCTION NOTES:

The following measures represent minimum standards to be adhered to by the Contractor throughout the construction of this project. The regulatory agencies reserve the right to require additional measures to be employed when warranted by extreme conditions, and/or the failure of the contractor to employ appropriate erosion control best management practices. Failure to comply with these provisions shall result in the issuance of a "stop work order".

1. It shall be the responsibility of the Contractor to have all protective vegetation barricades and erosion control structures and measures in place prior to the commencement of any earthwork, including preliminary grubbing. These measures include, but are not limited to; temporary construction fences, hay bales, silt fences, and floating turbidity barriers. Further, it shall be the responsibility of the Contractor to maintain all erosion control devices throughout the duration of the entire project. Maintenance shall include periodic inspection and removal of debris abutting erosion control devices.
2. Prior to the installation of any fill materials on subject site, silt fences shall be installed: (1). along subject site boundary and property lines; (2). at the edge of conservation easements and wetlands; (3). adjacent to natural landscape buffers; (4). around the perimeter of existing storm water treatment facilities, and; (5). at any additional areas that the city deems in need of protection from potential erosion impacts during construction. These conditions shall apply in all instances where fill material is being installed within 25 feet of any of the aforementioned locations. While these items represent the minimum requirements, the City, ACOE and FDEP reserve the right to impose additional protective measures, as determined during actual site visits conducted throughout project construction.
3. At a minimum, the contractor shall seed and mulch all disturbed areas. Sufficient grass coverage is to be established within thirty days.
4. Absolutely no burying of cleared materials is permitted.
5. A signed, dated, and sealed letter from a soils engineer or the engineer of record certifying that the areas to be filled have been stripped of organic materials, must be submitted to the city prior to filling.
6. Fill material is to be placed in one foot lifts and compacted to the appropriate density (98% for paved areas and 95% for building pads and all other areas as per AASHTO T-180).
7. If any muck material is discovered, it shall be ~~required to be~~ removed and replaced with a suitable material that is properly backfilled, compacted and tested using AASHTO T-180 modified proctor method.
8. Stockpiling is not generally permitted. When allowed, stockpiles shall not exceed six feet in height measured from the original grade. At a minimum, stock piles that will remain in place in excess of twenty days should be seeded and mulched immediately upon placement of the final lift.
9. Soils are to be stabilized by water or other means during construction. This is intended to reduce soil erosion and the impact to neighboring communities. Adequate watering methods should be employed to allow daily coverage of the entire limits of all areas that do not have an established vegetative cover. Methods to be employed include, but are not limited to, water trucks, permanent irrigation systems, temporary sprinkler systems operated by pumping units connected to wet retention ponds, water cannons, temporary irrigation systems mounted atop stockpile areas, and other methods as deemed necessary by the county.
10. All fill materials located beneath the berms shall consist of clean granular sand free from organics and similar material that could decompose.

TECHNICAL SPECIFICATIONS FOR SITE PLAN TESTING:

1. MATERIAL

The inspection and testing of materials and finished articles to be incorporated in the work shall be made by bureaus, laboratories, or agencies approved by the Engineer of Record. The Contractor shall submit such samples, or such special or test pieces of materials as the engineer of record may require. The Contractor shall not incorporate any material or finished article into the work until the results of the inspections or tests are known and the Contractor has been notified by the Engineer of Record that the material or finished article is accepted. All materials must be of the specified quality and be equal to the approved sample if a sample has been submitted. Certified copies of all tests made shall be submitted to the engineer of record as well as to the county's designated site inspector. the county's designated site inspector must receive copies of all testing reports and certificates prior to the Engineer of Record requesting a final project inspection from the county.

2. LABORATORY CONTROL AND CERTIFICATES

a. SPECIFICATIONS:

Sampling, testing, and laboratory methods shall be in accordance with the standard specifications of the AASHTO or ASTM. Where AASHTO or ASTM specifications are used, the reference shall be construed to be the most recent standard specifications or tentative specifications of the AASHTO or ASTM in force on the date of the test.

b. TEST AND CERTIFICATES:

The Contractor shall engage an approved testing laboratory to provide the following tests and certifications signed by a registered engineer of the state of Florida. All technicians performing the tests shall be state certified for the testing performed. Additional tests that may be required by either the engineer of record or the county shall also be provided by the Contractor, and the following shall not be taken as a complete and exhaustive list of the Contractor's testing responsibilities.

- Soil analysis for structural fill material prior to installation.
- Proctor densities, moisture content, compacted field densities and Atterberg limits.

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PROJECT NAME: MANATEE ISLAND DAY DOCK REPAIR

CLIENT: CITY OF DAYTONA BEACH

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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

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.

Revised: March 23, 2006
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STANDARD MANATEE CONDITIONS FOR IN-WATER WORK
2011

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 ½" 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.

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