



**US Army Corps
of Engineers®**
New England District
696 Virginia Road
Concord, MA 01742-2751

PUBLIC NOTICE

Comment Period Begins: January 30, 2018
Comment Period Ends: February 13, 2018
File Number: NAE-2017-01238
In Reply Refer To: Mr. Taylor Bell
Phone: (978) 318-8952
E-mail: taylor.m.bell@usace.army.mil

The District Engineer has received a permit application to conduct work in waters of the United States from Quonset Development Corporation. This work is proposed in Port of Davisville (Narragansett Bay) 95 Cripe Street, North Kingstown, Rhode Island. The site coordinates are: Latitude 41.615172°N Longitude 071.40455°W

The work involves installing a pile-supported pier extension at the north-east corner of Pier 2, as well as removing and replacing the existing pier wall with a new sheet pile wall system, in front of the existing cellular cofferdam. The new sheet pile wall system will replace the current wall. The sheet pile wall system will be set approximately 7' outward of the existing wall, and the sealed off void will be back filled with concrete resulting in 15,800 square feet of fill. The temporary work area will extend out approximately 42' from the existing wall, and 10'-15' from the footprint of the new pier extension. The new pier will be supported by 24" closed end steel pipe-piles and will measure 124' by 232' (28,000 square feet) which will allow Roll-On/Roll-Off cargo vessels to be received, and will create an additional full-berth to the Port of Davisville. Repairs are necessary to support and maintain current operations in the Port of Davisville and allow for future growth. A turbidity curtain will be installed around Pier 2 prior to all work taking place. All fill will be placed below the high tide line, and all structures will extend beyond the mean high water.

The applicant has stated that they have avoided and minimized impacts to the maximum extent practicable and no compensatory mitigation will not be proposed for the project. The Corps has not verified the adequacy of the applicant's avoidance and minimization statement at this time.

The work is shown on the attached plans entitled "Pier 2 Infrastructure Improvements" on 35 sheets, dated "May 8, 2017" and revised "10-4-2017".

AUTHORITY

Permits are required pursuant to:

- Section 10 of the Rivers and Harbors Act of 1899
 Section 404 of the Clean Water Act
 Section 103 of the Marine Protection, Research and Sanctuaries Act.

The decision whether to issue a permit will be based on an evaluation of the probable impact of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which may reasonably accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are: conservation, economics, aesthetics, general environmental concerns, wetlands, cultural value, fish and wildlife values, flood hazards, flood plain value, land

use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and, in general, the needs and welfare of the people.

The U.S. Army Corps of Engineers, New England District (Corps), is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. The Corps will consider all comments received to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

ESSENTIAL FISH HABITAT

The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), requires all federal agencies to consult with the National Marine Fisheries Service on all actions, or proposed actions, permitted, funded, or undertaken by the agency, that may adversely affect Essential Fish Habitat (EFH). Essential Fish Habitat describes waters and substrate necessary for fish for spawning, breeding, feeding or growth to maturity.

This project will impact 0.36 acres of Essential Fish Habitat (*EFH*). This habitat consists of silt and sand substrate. Loss of this habitat may adversely affect species that use these waters and substrate. However, the District Engineer has made a preliminary determination that the site-specific adverse effect will not be substantial. Further consultation with the National Marine Fisheries Service regarding EFH conservation recommendations is being conducted and will be concluded prior to the final decision.

NATIONAL HISTORIC PRESERVATION ACT

Based on his initial review, the District Engineer has determined that ~~little~~ likelihood exists for the proposed work to impinge upon properties with cultural or Native American significance, or listed in, or eligible for listing in, the National Register of Historic Places. Therefore, no further consideration of the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended, is necessary. This determination is based upon one or more of the following:

- a. The permit area has been extensively modified by previous work.
- b. The permit area has been recently created.
- c. The proposed activity is of limited nature and scope.

ENDANGERED SPECIES CONSULTATION

The Corps is reviewing the application for the potential impact on Federally-listed threatened or endangered species and their designated critical habitat pursuant to section 7 of the Endangered Species Act as amended. Our review will be concluded prior to the final decision.

The Corps has reviewed the application for the potential impact on Federally-listed threatened or endangered species and their designated critical habitat pursuant to section 7 of the Endangered Species Act as amended. It is our preliminary determination that the proposed activity for which authorization is being sought is designed, situated or will be operated/used in such a manner that it is not likely to adversely affect a listed species or their critical habitat. We are coordinating with the NMFS and/or U.S. Fish and Wildlife Service on listed species under their jurisdiction and the ESA consultation will be concluded prior to the final decision.

OTHER GOVERNMENT AUTHORIZATIONS

The states of Connecticut, Maine, Massachusetts, New Hampshire and Rhode Island have approved Coastal Zone Management Programs. Where applicable, the applicant states that any proposed activity will comply with and will be conducted in a manner that is consistent with the approved Coastal Zone Management Program. By this Public Notice, we are requesting the State concurrence or objection to the applicant's consistency statement.

The following authorizations have been applied for, or have been, or will be obtained:

- (X) Permit, license or assent from State.
- () Permit from local wetland agency or conservation commission.
- (X) Water Quality Certification in accordance with Section 401 of the Clean Water Act.

COMMENTS

In order to properly evaluate the proposal, we are seeking public comment. Anyone wishing to comment is encouraged to do so. Comments should be submitted in writing by the above date. If you have any questions, please contact Mr. Taylor Bell at (978) 318-8952, (800) 343-4789 or (800) 362-4367, if calling from within Massachusetts.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider the application. Requests for a public hearing shall specifically state the reasons for holding a public hearing. The Corps holds public hearings for the purpose of obtaining public comments when that is the best means for understanding a wide variety of concerns from a diverse segment of the public.

The initial determinations made herein will be reviewed in light of facts submitted in response to this notice. All comments will be considered a matter of public record. Copies of letters of objection will be forwarded to the applicant who will normally be requested to contact objectors directly in an effort to reach an understanding.

THIS NOTICE IS NOT AN AUTHORIZATION TO DO ANY WORK.



**Diane Ray
Chief, Permits and Enforcement Branch
Regulatory Division**

If you would prefer not to continue receiving Public Notices by email, please contact Ms. Tina Chaisson at (978) 318-8058 or e-mail her at bettina.m.chaisson@usace.army.mil. You may also check here () and return this portion of the Public Notice to: Bettina Chaisson, Regulatory Division, U.S. Army Corps of Engineers, 696 Virginia Road, Concord, MA 01742-2751.

NAME: _____

ADDRESS: _____

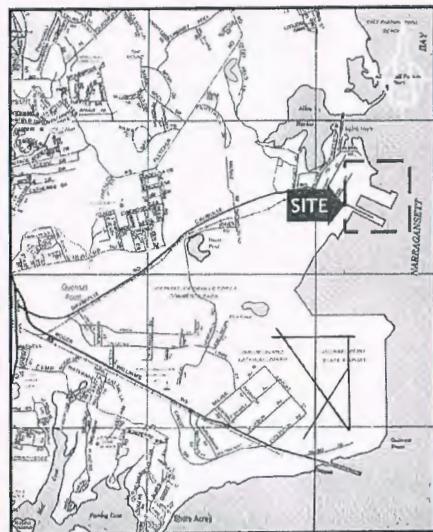
PHONE: _____

PIER 2 INFRASTRUCTURE IMPROVEMENTS

QUONSET DEVELOPMENT CORPORATION

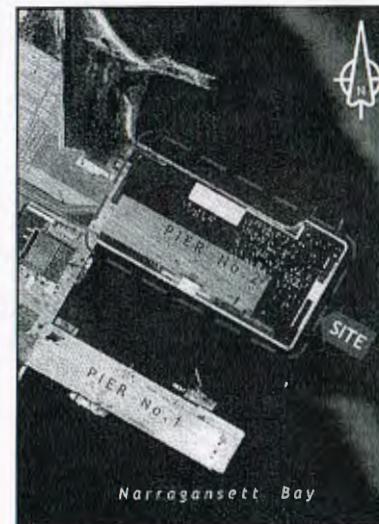
NORTH KINGSTOWN, RHODE ISLAND

A.P. 193, LOT 4

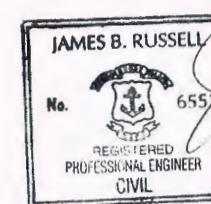


SITE VICINITY MAP

CATEGORY	NO.	SHEET	TITLE
GENERAL	1	G-1	TITLE, INDEX OF DRAWINGS, LOCATION AND VICINITY MAPS
	2	G-2	LEGEND AND ABBREVIATIONS
	3	G-3	GENERAL NOTES
CIVIL	4	C-1	OVERALL SITE PLAN
	5	C-2	GENERAL SITE PLAN - 1 (EXISTING CONDITIONS)
	6	C-3	GENERAL SITE PLAN - 2 (EXISTING CONDITIONS)
	7	C-4	GENERAL SITE PLAN - 3 (EXISTING CONDITIONS)
	8	C-5	GENERAL SITE PLAN - 4 (EXISTING CONDITIONS) △
	9	C-6	DEMOLITION AND REMOVAL PLAN - 1
	10	C-7	DEMOLITION AND REMOVAL PLAN - 2
	11	C-8	DEMOLITION AND REMOVAL PLAN - 3
	12	C-9	DEMOLITION AND REMOVAL PLAN - 4 △ △
	13	C-10	OVERALL IMPROVEMENTS PLAN △
	14	C-11	PIER IMPROVEMENTS PLAN - 1
	15	C-12	PIER IMPROVEMENTS PLAN - 2
	16	C-13	PIER IMPROVEMENTS PLAN - 3
	17	C-14	PIER IMPROVEMENTS PLAN - 4 △
	18	C-15	PIER IMPROVEMENTS PLAN - 5 △
	19	C-16	SUGGESTED PHASING PLAN - 1 △
	20	C-17	SUGGESTED PHASING PLAN - 2 △
	21	C-18	SUGGESTED PHASING PLAN - 3 △
	22	C-19	SUGGESTED PHASING PLAN - 4 △
	23	C-20	SUGGESTED PHASING PLAN - 5 △
SECTIONS	24	S-1	TYPICAL EXISTING CELLULAR COFFERDAM SECTION
	25	S-2	TYPICAL DEMOLITION AND REMOVAL SECTION
	26	S-3	PROPOSED IMPROVEMENTS SECTION
	27	S-4	PROPOSED NORTH FACE REVETMENT SECTION △
	28	S-5	PROPOSED PIER EXTENSION ELEVATION AND SECTION
	29	S-6	TEMPORARY WORK PLATFORM SECTION
DETAILS	30	D-1	EROSION AND SEDIMENTATION CONTROL DETAILS
	31	D-2	MISCELLANEOUS DETAILS
	32	D-3	LOAD LIMITATION DIAGRAM
SUPP. SHEETS	32A	SS-1	APPROXIMATE TEMPORARY AND PERMANENT IMPACTS DUE TO CONSTRUCTION △
	32B	SS-2	REVISED FENDER AND IMPROVEMENT SECTION △
	32C	SS-3	PERMITTING STRUCTURAL PERIMETER △



SITE LOCATION MAP



PERMIT SUBMISSION
NOT FOR CONSTRUCTION
THIS DRAWING IS HALF SIZE

QUONSET
DEVELOPMENT CORPORATION

Development Services
95 Oliva Street
North Kingstown, RI 02852
Tel: (401) 295-2044
Fax: (401) 288-9885

RT Group, Inc.
Engineered from the Ground Up™
70 Romance Vineyard Way, Suite 134
Providence, Rhode Island 02806
T 401 438 2100 F 401 794 9805
SAFETY INTEGRITY ENVIRONMENTAL QUALITY
SUSTAINABILITY INNOVATION INTEGRITY

45 BUILD FIELD MEASUREMENTS	EL. 05-15-17
RELOCATES TO PUBLIC PROPERTY	EL. 05-15-17
RELOCATES TO PUBLIC PROPERTY	EL. 05-15-17
RELOCATES TO PUBLIC PROPERTY	EL. 05-15-17
NO. REVISIONS	DATE APPROVED
DESIGNED BY: JBR	
DRAWN BY: JBR	
CHECKED BY: JBR	
ENGINEERED BY: JBR	
SCALE: AS SHOWN	
PROJECT NO.: 17100.00	
CONTRACT NO.: 2016-029	
FILE NAME: Pier Infrastructure Improvement Drawing Set 01	
APPROVED: <i>David J. Russell, Jr.</i>	
Edward Spilard, Jr., P.E. Q.D.C. DEVELOPMENT DIRECTOR	
DATE: MAY 4, 2017	
DRAWING TITLE: Pier 2 Infrastructure Improvement	
TITLE, INDEX OF DRAWINGS, LOCATION AND VICINITY MAPS	
Quonset Business Park	
SHEET NO.	DRAWING NO.
G-1	26607
1 OF 12 SHEETS	

CIVIL LEGEND

ABBREVIATIONS

AC	ACRES
APPROX.	APPROXIMATE
BLDG.	BUILDING
C.J.	CONSTRUCTION JOINT
CONT. J.	CONTRACTION JOINT
COND.	CONCRETE
DIA.	DIAMETER
EXP. JT.	EXPANSION JOINT
EL.	ELEVATION
E.O.P.	EDGE OF PAVEMENT
EX.	EXISTING
FT	FEET
F&I	FURNISH AND INSTALL
GALV.	GALVANIZED
HORIZ.	HORIZONTAL
LF	LINEAR FEET
LOD	LIMITS OF DISTURBANCE
MAX.	MAXIMUM
MIN.	MINIMUM
MHHW	MEAN HIGHER HIGH WATER
MHW	MEAN HIGH WATER
MLW	MEAN LOW WATER
MLLW	MEAN LOWER LOW WATER
MPH	MILES PER HOUR
NAD 83	NORTH AMERICAN DATUM OF 1983
NADD 88	NORTH AMERICAN HORIZONTAL DATUM
NGVD 29	NATIONAL GEODETIC VERTICAL DATUM
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
O.C.	ON CENTER
O.C.E.W.	ON CENTER EACH WAY
PROB.	PROPOSED
PT	PRESSURE TREATED
QVD	QUIONSET VERTICAL DATUM
REQD	REQUIRED
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND REINSTALL
R&S	REMOVE AND STOCKPILE
TBD	TO BE DETERMINED
TEMP.	TEMPORARY
TYP.	Typical
VFRT	VERTICAL

VERTICAL DATUM NOTE

1. THE TIDAL DATA SHOWN WAS TAKEN FROM THE U.S. DEPARTMENT OF COMMERCE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) ONLINE VERTICAL DATUM TRANSFORMATION PROGRAM, DETERMINED AT THE FOLLOWING LOCATION:
LOCATION: Quonset, Rhode Island
LATITUDE: 41.614 N
LONGITUDE: 41.705 W
 2. REFERENCE TO QVD WAS OBTAINED FROM A PLAN TITLED "SURVEY CONTROL PLAN FOR RHODE ISLAND ECONOMIC DEVELOPMENT CORPORATION" PREPARED BY FOSTER SURVEY COMPANY OF WARWICK, RI AND LAST REVISED JULY 23, 2008.

	<u>NAVD 88</u>	<u>GVD</u>	<u>2017 MLW</u>
VHHW	1.88	4.93	4.06
NHW	1.63	4.68	3.81
VAVD 88	- 0.00	3.05	2.18
VLW	- 2.16	0.87	0.00
VLLW	- 2.33	0.72	0.15
VRVD	- 3.05	0.00	- 0.87
VERTICAL DATUM CONVERSION DIAGRAM			

25/05/2014

SECTION/DETAIL NUMBER OR LETTER



A
2-C-1

DRAWING WHERE SECTION WAS
CUT/CALLED OUT
SECTION NUMBER OR LETTER

PERMIT SUBMISSION
NOT FOR CONSTRUCTION
THIS DRAWING IS HALF SIZE

QUONSET
DEVELOPMENT CORPORATION

Development Services
95 Cripe Street
North Kingstown, RI 02852
Tel: (401) 245-0044
Fax: (401) 268-0885

RT Group, Inc.
Engineered from the Ground UpSM
70 Romano Vineyard Way, Suite 1
North Kingstown, Rhode Island 02848
T 401 438 3100 F 401 294 9805
DAM SAFETY • WATER TREATMENT • CONSTRUCTION ENGINEERING • TEST TECHNOLOGY

REVISION		DATE	APP
SIGN BY: JBR	CHECKED BY: JBR		
KNOW BY: DJA/GJC	ENGINEER: JBR		
ALL AS SHOWN	PROJECT NO. 1710.00		
TRACT NO.: 2016-020			
NAME: Pier 2 Infrastructure Improvements Drawing Set, sub			
PROVED: <i>Edward S. Karpinski Jr., P.E.</i> <i>James D. Gandy, P.E.</i>			
E.D.C. DEVELOPMENT SERVICES DIRECTOR			
MAY 8, 2017			

PIER 2 INFRASTRUCTURE
IMPROVEMENTS

LEGEND AND ABBREVIATIONS

Quonset Business Park

SHEET NO. 1 OF 10 DRAWING NO. 26607

GENERAL NOTES:

1. THE UTILITY LOCATIONS SHOWN ON THESE DRAWINGS ARE CONSIDERED APPROXIMATE AND WERE PROVIDED BY THE QUONSET DEVELOPMENT CORPORATION (QDC). THE ACTUAL LOCATION OF UTILITIES MAY VARY FROM THAT SHOWN AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATIONS OF ALL UTILITIES, GRADES, AND DIMENSIONS PRIOR TO STARTING WORK.

2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT DIG SAFE (1-888-DIG-SAFE) AND THE QDC A MINIMUM OF 5-BUSINESS DAYS PRIOR TO COMMENCING ANY EXCAVATION, PILE DRIVING, AND/OR DRILLING RELATED WORK, IN ORDER THAT ALL AFFECTED UTILITY COMPANIES ARE NOTIFIED PRIOR TO STARTING WORK.

3. RIGHT-OF-WAY LINES, LEASE LINES, AND EASEMENT LINES, WHICH SHOWN ON THESE DRAWINGS, ARE CONSIDERED APPROXIMATE AND WERE OBTAINED FROM THE QDC.

4. CONSTRUCTION LIMITS COINCIDE WITH PROPERTY LINE AND/OR LEASE LIMITS AS SHOWN ON THE DRAWINGS.

5. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS OF THE JOB SITE, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY DURING THE PERFORMANCE OF THE WORK. SAFETY PROVISIONS SHALL COMPLY WITH OSHA AND OTHER APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS. THESE REQUIREMENTS SHALL APPLY CONTINUOUSLY AND SHALL NOT BE LIMITED TO THE DRAWINGS.

6. STANDARD SPECIFICATIONS, WHEN REFERENCED IN THESE DRAWINGS, SHALL MEAN THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARDS SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (CURRENT ED.). PARTS OF THE STANDARD SPECIFICATIONS THAT ARE NOT REFERENCED IN THESE DRAWINGS ARE NOT PART OF THE DRAWINGS AS THROUGH STATED HEREIN IN FULL. IN CASE OF DISCREPANCY BETWEEN THE STANDARD SPECIFICATIONS AND THE REQUIREMENTS STATED WITHIN THE DRAWINGS, THE REQUIREMENTS STATED WITHIN THE DRAWINGS SHALL PREVAIL.

7. THIS PROJECT IS PRIVATELY OWNED AND FUNDED. THEREFORE SOME OF THE REFERENCES AND TERMINOLOGY OF THE STANDARD SPECIFICATIONS MAY NOT BE OUT OF PLACE. THE OWNER IS THE QDC. THE PROGRAM MANAGER FOR THIS PROJECT IS RT GROUP, INC. (RTG). THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION IS NOT A PARTY TO THE PROJECT.

8. RTG HAS PREPARED THESE DRAWINGS ON BEHALF OF THE QDC IN ORDER TO OBTAIN THE NECESSARY PERMITS FOR CONSTRUCTION. THE DESIGN ENGINEER FOR THIS PROJECT HAS YET TO BE SELECTED BY THE QDC, AND WILL BE RESPONSIBLE FOR FINAL DESIGN.

9. THE WORK SHALL BE CONDUCTED IN A MANNER THAT WILL MINIMIZE INTERRUPTIONS TO THE DAILY OPERATIONS OF PIERS 1 AND 2. THE CONTRACTOR'S OPERATIONS SHALL CONSIDER AND MAINTAIN NAVIGATION, BERTHING, AND OFF-LOADING AT PIERS 1 AND 2.

10. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS IN THE FIELD PRIOR TO COMMENCING ANY WORK. IF THE CONTRACTOR IS UNABLE TO PERFORM ANY WORK, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING, OF ANY CONDITIONS OR DIMENSIONS WHICH VARY FROM THOSE SHOWN IN THE DRAWINGS AND INCORPORATE SUCH VARIATIONS IN THE CONSTRUCTION AS APPROVED BY THE ENGINEER.

11. THE PROPOSED WORK LOCATED INBOARD OF PIER 2 IS WITHIN A TEMA WE FLOOD ZONE (I.E., COASTAL FLOOD ZONE) AND THE PROPOSED WORK LOCATED OUTBOARD OF PIER 2 IS WITHIN A FEMA VE FLOOD ZONE (I.E., COASTAL FLOOD ZONE WITH VELOCITY HAZARD (WAVE ACTION)). BOTH AREAS WILL BE INUNDATED DURING THE 100 YEAR FLOOD. THE 100 YEAR FLOOD ELEVATION INBOARD OF THE PIER IS ESTIMATED AT ABOUT 16 FEET QVD (13 FEET NAVD 88) AND THE 100 YEAR FLOOD ELEVATION OUTBOARD OF PIER 2 IS ESTIMATED AT ABOUT 18 FEET QVD (15 FEET NAVD 88) AS SHOWN ON THE WASHINGTON COUNTY, RHODE ISLAND FLOOD INSURANCE RATE MAP NUMBER 44009CD106.1, PANEL 106 OF 368, DATED OCTOBER 16, 2013 AND MAP NUMBER 44009CD107.3, PANEL 107 OF 368, DATED OCTOBER 16, 2013.

LOAD LIMITATIONS:

1. THE CONTRACTOR SHALL LIMIT LOADS ON PIER 2 IN ACCORDANCE WITH THE LOAD LIMITATION DIAGRAM PROVIDED ON THE DRAWINGS.

2. SHOULD THE CONTRACTOR ELECT TO OPERATE HEAVY EQUIPMENT ON THE DECK OF PIER 2, IT SHALL HAVE RUBBER TIRES. CRAWLER CRANES OR EQUIPMENT WITH STEEL TRACKS SHALL NOT OPERATE ON THE PIER TO AVOID DAMAGING THE EXISTING CONCRETE AND/OR ASPHALT SURFACES.

3. THE CONTRACTOR SHALL UTILIZE CRANE MATS AND/OR CERRING AS REQUIRED TO ADEQUATELY DISTRIBUTE THE ANTICIPATED CRANE OUTRIGGER LOADS AND TO AVOID DAMAGING THE EXISTING CONCRETE AND/OR ASPHALT SURFACES.

DESIGN CRITERIA:

NEW ENCLOSURE SYSTEM (HZ-M WALL)

1. THE NEW HZ-M WALL SHALL BE DESIGNED FOR THE LATERAL EARTH AND GROUNDWATER PRESSURE, H_z , THAT IS GENERATED DURING A MEAN LOW WATER CONDITION IN COMBINATION WITH A 2 FOOT MIN. TIDAL LAG BETWEEN THE BACK AND FRONT OF THE NEW HZ-M WALL.

2. THE LATENT EARTH AND GROUNDWATER PRESSURE SHALL BE BASED ON A FINAL GRADE EL. OF +12.0 FEET (QVD) BEHIND THE NEW HZ-M WALL AND A FUTURE DREDGE DEPTH EL. OF -41.13 FEET (QVD) (-42.0 FEET 2017 ALV), WHICH INCLUDES A 2-FOOT OVERDREDGE ALLOWANCE.

3. THE NEW HZ-M WALL SHALL BE DESIGNED FOR A MAXIMUM UNIFORM VERTICAL LIVE LOAD, L_v , OF 1,000 PSF.

4. BASIC LOAD COMBINATIONS SHALL BE EVALUATED IN ACCORDANCE WITH ASCE 7-10 AND THE CONTROLLING LOAD CASES SHALL BE UTILIZED TO DESIGN THE NEW HZ-M WALL, DRILLED STRAND ANCHOR SYSTEMS, AND WALES.

5. IN ADDITION TO THE ABOVE, THE NEW HZ-M WALL SHALL BE EVALUATED WITH RESPECT

TO INUNDATION EFFECTS IN ACCORDANCE WITH DEPARTMENT OF DEFENSE HANDBOOK MIL-HDBK 1025A FOR THE EXHAUSTIVE CONDITION, WHICH SHALL ASSUME THAT THE BACKFILL BEHIND THE NEW HZ-M WALL IS SATURATED TO FINAL GRADE, A 50% OVERSTRESS ABOVE ALLOWABLE IS ACCEPTABLE.

PIER EXTENSION

1. THE NEW PIER EXTENSION SHALL BE DESIGNED FOR THE GREATER OF A MAXIMUM UNIFORM VERTICAL LIVE LOAD, L_{v1} , OF 1,000 PSF; OR THE LOAD INDUCED BY A 175 METRIC TON CAPACITY VESSEL RAMP OVER THE TRIBUTARY CONTACT AREA OF THE RAMP ON THE PIER EXTENSION.

HEAVY LIFT PLATFORM

1. THE NEW HEAVY LIFT PLATFORM SHALL BE DESIGNED FOR THE GREATER OF A MAXIMUM UNIFORM VERTICAL LIVE LOAD, L_{v2} , OF 2,000 PSF; OR THE LOAD INDUCED BY A 500 METRIC TON CAPACITY VESSEL RAMP OVER THE TRIBUTARY CONTACT AREA OF THE RAMP ON THE PIER EXTENSION.

CLEATS AND BOLLARDS

1. THE NEW CLEATS AND BOLLARDS SHALL BE DESIGNED TO RESIST THE ANTICIPATED MOORING LINE LOADS PRODUCED BY A 40 MPH MIN. DESIGN WIND EVENT ACTING ON THE DESIGN VESSEL, IN ACCORDANCE WITH THE PROCEDURES OUTLINED IN ASCE 7-10.

2. THE EFFECTS OF THE DESIGN WIND EVENT SHALL BE EVALUATED FOR WIND DIRECTIONS OCCURRING AT A RANGE OF ANGLES RELATIVE TO THE CENTERLINE AXIS OF THE DESIGN VESSEL IN ORDER TO PRODUCE THE WORST-CASE MOORING LINE LOADS.

PILE-SUPPORTED FENDER SYSTEMS

1. THE NEW PILE SUPPORTED FENDER SYSTEMS SHALL BE DESIGNED FOR THE ANTICIPATED BERTHING ENERGIES PRODUCED BY THE DESIGN VESSEL UNDER A 3-POINT BERTHING CONFIGURATION. SEE DESIGN VESSEL FOR SUGGESTED DESIGN CRITERIA.

DESIGN VESSEL

VESSEL NAME: M/S IRIS LEADER
LENGTH OVERALL (L): 656 FT. (200 M)
BEAM: 114.1 FT. (34.8 M)

LOADED DRAFT: 34.8 FT (10.6 M)

ESTIMATED DISPLACEMENT AT LOADED DRAFT: 36,148t. METRIC TONNES

BERTHING VELOCITY: 0.3 FT/SEC (MAX) 1/2 POINT

BERTHING ANGLE (a): 10° (MAX)

2. THE DESIGN BERTHING PLANE SHALL BE LOCATED A MINIMUM OF 1.65 FEET AND A MAXIMUM OF 6.25 FEET FROM THE OUTBOARD EDGE OF THE PROPOSED ENCAPSULATION IMPROVEMENTS AND THE PIER EXTENSION.

LAYOUT:

1. THE HORIZONTAL CONTROL DATUM FOR THIS PROJECT IS NAD 83.

2. THE VERTICAL CONTROL DATUM FOR THIS PROJECT IS QVD (QUONSET VERTICAL DATUM).

3. LANDSIDE CONTOURS AND SPOT ELEVATIONS SHOWN ON THESE DRAWINGS ARE REFERENCED TO QVD, UNLESS NOTED OTHERWISE. WATERSIDE CONTOURS SHOWN ON THESE DRAWINGS ARE REFERENCED TO 2017 ALV.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING ALL LAYOUT WORK FROM THE CONTROL MONUMENTATION PROVIDED.

DREDGING:

1. THE PROPOSED DREDGING, WHERE REFERENCED ON THESE DRAWINGS, IS ANTICIPATED TO BE PERFORMED UNDER A SEPARATE RICRAC/USACE PERMIT. THE QDC EXPECTS TO SUBMIT THE DREDGING PERMIT APPLICATIONS UNDER SEPARATE COVER.

AVAILABLE SUBSURFACE INFORMATION:

1. GEOTECHNICAL INFORMATION, AS INCLUDED AND SHOWN IN THE CONTRACT DOCUMENTS, WAS OBTAINED FROM SOIL BORINGS AND TEST PITS COMPLETED BY THE U.S. NAVY AND THE QDC BETWEEN 1953 AND 2017, FOR USE IN THE COLLECTION OF GENERAL SITE INFORMATION RELATIVE TO SUBSURFACE CONDITIONS.

2. IT IS INTENDED THAT SUBSURFACE INFORMATION, AS NOTED ABOVE, BE USED ONLY AS AN INDICATION OF POSSIBLE SUBSURFACE CONDITIONS, AND THAT UPON THE CONTRACTOR'S REVIEW, FURTHER SUBSURFACE EXPLORATIONS MAY BE WARRANTED. SUCH EXPLORATIONS SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE.

3. THE LOCATIONS OF THE SOIL BORINGS AND TEST PITS SHOWN ARE CONSIDERED APPROXIMATE.

4. THE CONTRACTOR SHALL USE THE INFORMATION PROVIDED AT ITS OWN RISK AND SHALL COMPLETELY HOLD HARMLESS THE QDC AND RTG FROM ALL CONSEQUENCES AND/OR FAULT ARISING FROM ITS USE.

DEMOLITION AND REMOVAL:

1. COORDINATE WITH THESE DRAWINGS AND SECTION 02050, DEMOLITION AND REAOVAL.

2. THE FOLLOWING DEMOLITION AND REMOVAL ACTIVITIES MAY BE COMPLETED FROM THE LAND SIDE OF THE EXISTING PIER:

a. PHASED DEMOLITION AND REMOVAL OF THE EXISTING CONCRETE DECK, ASPHALT PAVEMENT (WHERE REQUIRED), CLEATS, BOLLARDS, AND DECK SUPPORT PILES AS SHOWN ON THESE DRAWINGS.

b. DEMOLITION AND REMOVAL OF ABANDONED UTILITIES THAT INHIBIT CONSTRUCTION.

3. ALL OTHER DEMOLITION AND REMOVAL ACTIVITIES SHALL BE COMPLETED FROM THE WATER SIDE OF THE EXISTING PIER. SUCH ACTIVITIES ARE EXPECTED TO INCLUDE, BUT

WOULD NOT BE LIMITED TO THE FOLLOWING:

a. THE DEMOLITION AND REMOVAL OF THE EXISTING FENDER SYSTEMS.
b. THE DEMOLITION AND REMOVAL OF OBSTRUCTIONS.

4. IT IS SUGGESTED THAT THE DEMOLITION AND REMOVAL OF THE EXISTING DECK BE COMPLETED IN ACCORDANCE WITH THE SUGGESTED PHASING PLAN SHOWN ON THESE DRAWINGS IN ORDER TO HELP MAINTAIN THE INTEGRITY OF THE EXISTING COFFERDAM CELLS.

EARTHWORK:

1. COORDINATE WITH THESE DRAWINGS AND SECTION 02100, EARTHWORK.

2. THE FINAL SLOPE GEOMETRY AND THE PROTECTION OF EXISTING STRUCTURES AND UTILITIES IS THE CONTRACTOR'S RESPONSIBILITY.

STOCKPILE MANAGEMENT:

1. EXCAVATED MATERIAL GENERATED DURING THE EXECUTION OF THIS WORK SHALL BE TEMPORARILY STOCKPILED.

2. THE CONTRACTOR SHALL MAINTAIN THE STOCKPILES AND THE AREAS AROUND THEM SO THEY ARE GRADED TO DRAIN. THE CONTRACTOR SHALL ALSO TAKE ALL NECESSARY PRECAUTIONS TO MINIMIZE EROSION FROM THE STOCKPILES INCLUDING, BUT NOT LIMITED TO, THE INSTALLATION OF HYDRAULIC SILT FENCES.

3. EXCESS MATERIAL THAT DOES NOT MEET THE SPECIFIED GRADATION REQUIREMENTS AND/OR EXCAVATED MATERIAL IN EXCESS OF THAT REQUIRED FOR COMPLETING THIS PROJECT SHALL BE STOCKPILED AT THE QDC'S ACTIVE MATERIAL/STORAGE STOCKPILE AREA.

4. EXCESS MATERIAL, INCLUDING DEMOLITION DEBRIS, THAT IS VISIBLY OR OLFACTORY CONTAMINATED SHALL BE STOCKPILED AT THE QDC'S DESIGNATED CONTAMINATED SOIL STOCKPILE AREA.

5. MATERIAL THAT IS VISIBLY OR OLFACTORY CONTAMINATED SHALL BE PLACED ON 10 MIL PLASTIC TARPS AND THE STOCKPILED MATERIAL COVERED WITH 10 MIL PLASTIC TARPS TO PROTECT IT FROM THE ELEMENTS.

EROSION AND SEDIMENT CONTROL:

1. COORDINATE WITH THESE DRAWINGS AND SECTION 02270, EROSION AND SEDIMENT CONTROL.

2. TURBIDITY BARRIERS SHALL BE DEPLOYED DURING DEMOLITION AND REMOVAL ACTIVITIES THAT COULD RESULT IN CONSTRUCTION DEBRIS AND/OR SEDIMENT ENTERING THE BAY AND/OR THE EXISTING MUDDLINE BEING DISTURBED (E.G., OBSTRUCTION REMOVAL). TURBIDITY BARRIERS ARE NOT EXPECTED TO BE REQUIRED DURING HZ-M WALL AND/OR PILE INSTALLATION.

DEWATERING:

1. COORDINATE WITH THESE DRAWINGS AND SECTION 02140, DEWATERING, CONTROL, AND DIVERSION OF WATER.

2. WATER ELEVATIONS AT THE SITE ARE TIDAL AND WILL VARY. SUMPS AND PUMPS ARE EXPECTED TO BE ADJUSTED TO CONTROL INFLOWS AND/OR THE ACCUMULATION OF PONDED WATER DUE TO SURFACE WATER RUN OFF.

3. THE CONTRACTOR SHALL ROUTE ALL PUMPED WATER TO DEWATERING BASINS OR OTHER SUITABLE DEVICES (E.G., DEWATERING BAGS) PRIOR TO ALLOWING THE PUMPED WATER TO FLOW OVER LAND.

NEW HZ-M WALL AND ANCHOR SYSTEM:

1. COORDINATE WITH THESE DRAWINGS AND SECTION 02367, HZ-M WALL AND ANCHOR SYSTEMS.

2. HZ-M WALL INSTALLATION, INCLUDING THE DRILLED STRAND ANCHOR SYSTEM AND WALES, SHALL BE COMPLETED FROM THE WATER SIDE OF THE EXISTING PIER. ALL REMAINING WORK MAY BE COMPLETED FROM THE LAND SIDE OR WATER SIDE AT THE CONTRACTOR'S DISCRETION.

3. THE CONTRACTOR SHALL STORE ALL MATERIALS ONLY WITHIN ITS DESIGNATED STAGING AREA AND/OR ON MATERIALS BARGES AT ITS DISCRETION.

4. HZ-M WALL SECTIONS, INCLUDING FABRICATED CONNECTIONS, SHALL BE THE CONTINUOUSLY INTERLOCKING TYPE. STEEL SHEET PILES SHALL BE HOT-ROLLED AND HAVE THE MINIMUM STRUCTURAL CHARACTERISTICS SHOWN IN SECTION 02367, HZ-M WALL AND ANCHOR SYSTEMS.

5. THE ALIGNMENT SHOWN FOR LAYOUT SHALL BE TAKEN AS THE INSIDE FLANGE OF THE HZ-M WALL. LAYOUT IS BASED ON A SKYLINE STEEL HZ 1080H D (SOLUTION 12) HZ-M WALL UTILIZING AZ-26-700 SHEET PILES. THE LAYOUT SHOWN IS FOR GENERAL LOCATION. THE FINAL LAYOUT SHALL BE ADJUSTED BASED ON THE FINAL SHEET PILE SELECTED BY THE ENGINEER. THE MAXIMUM DISTANCE SHOWN SEAWARD FROM OF THE EXISTING PIER SHALL NOT BE EXCEEDED.

6. SHOULD THE CONTRACTOR PROPOSE, AND THE QDC APPROVE, AN ALTERNATE HZ-M OR Z-PILE WALL TYPE FROM THAT SHOWN ON THESE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE WALL ALIGNMENT, THE SELECTED ANCHOR SYSTEM, AND CAP AS REQUIRED TO ACCOMMODATE THE SELECTED WALL TYPE.

END SEALS:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINAL DESIGN OF THE END SEALS. THE CONTRACTOR SHALL PROVIDE PLANS, SECTIONS, AND DETAILS, INCLUDING SUPPORTING CALCULATIONS, STAMPED BY A RHODE ISLAND REGISTERED PROFESSIONAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO STARTING WORK.

FENDER SYSTEMS:

1. COORDINATE WITH THESE DRAWINGS AND SECTION 02168, FENDER SYSTEMS.

BOLLARDS AND CLEATS:

1. COORDINATE WITH THESE DRAWINGS AND SECTION 02999, BOLLARDS AND CLEATS.

CONCRETE:

1. COORDINATE WITH THESE DRAWINGS AND SECTION 03200, REINFORCING STEEL AND SECTION 00310, CONCRETE.

COATINGS:

1. COORDINATE WITH THESE DRAWINGS AND SECTION 09900, COATINGS.

2. COATINGS DAMAGED DURING INSTALLATION SHALL BE REPAIRED AND APPLIED IN A MANNER THAT WILL PRESENT A UNIFORM TEXTURE AND COLOR-MATCHED APPEARANCE. MANUFACTURER SUPPLIED FILM REPAIR KITS SHALL BE UTILIZED WHEN AVAILABLE.

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NO.	REVISION	DATE APP.
DESIGN BY:	JHR	CHECKED BY:
DRAWN BY:	DJA/GJC	ENGINEER:
SCALE:	AS SHOWN	PROJECT NO.:
CONTRACT NO.:	2014-002	FILE NAME:
APPROVED:	<i>Edward Speriale, Jr., P.E.</i> Edward Speriale, Jr., P.E. Q.D.C. DEVELOPMENT SERVICES DIRECTOR DATE: MAY 8, 2017	DRAWING TITLE:

PIER 2 INFRASTRUCTURE IMPROVEMENTS

GENERAL NOTES

Quonset Business Park,

SHEET NO.	DRAWING NO.
G-3	26607

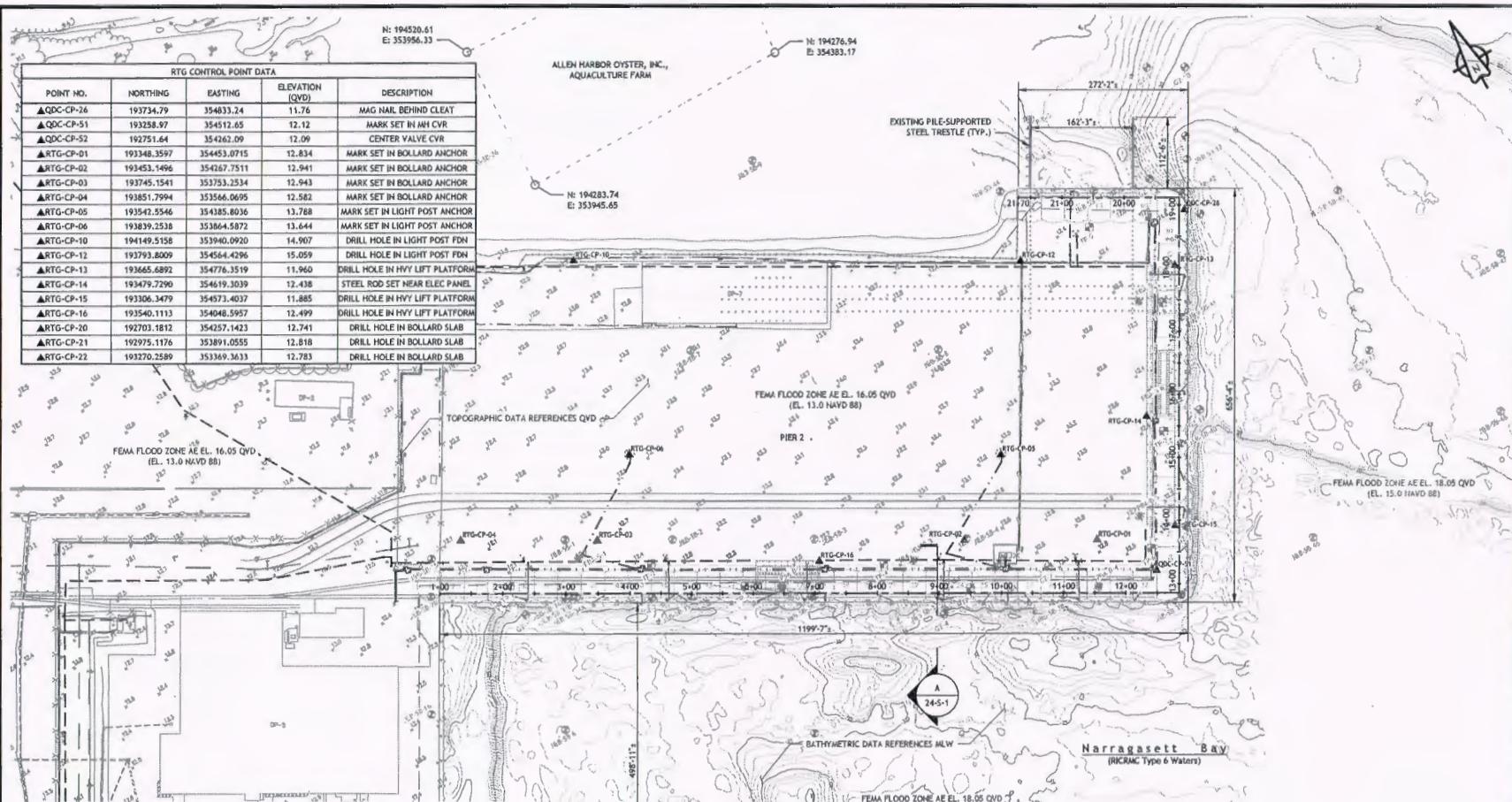
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3 of 32 SHEETS

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DESIGN BY:	JAR		
DRAWN BY:	BJANGU	CHECKED BY:	JAR
SCALE:	AS SHOWN	PROJECT NO.:	17100.00
CONTRACT NO.:	2016-020		
FILE NAME:	PIER 2 Infrastructure Improvements Drawing Set.dwg		

APPROVED: *Edward S. Samuels Jr.*
Edward S. Samuels, Jr., P.E.
Q.D.C. DEVELOPMENT SERVICES DIRECTOR
DATE: MAY 8, 2017

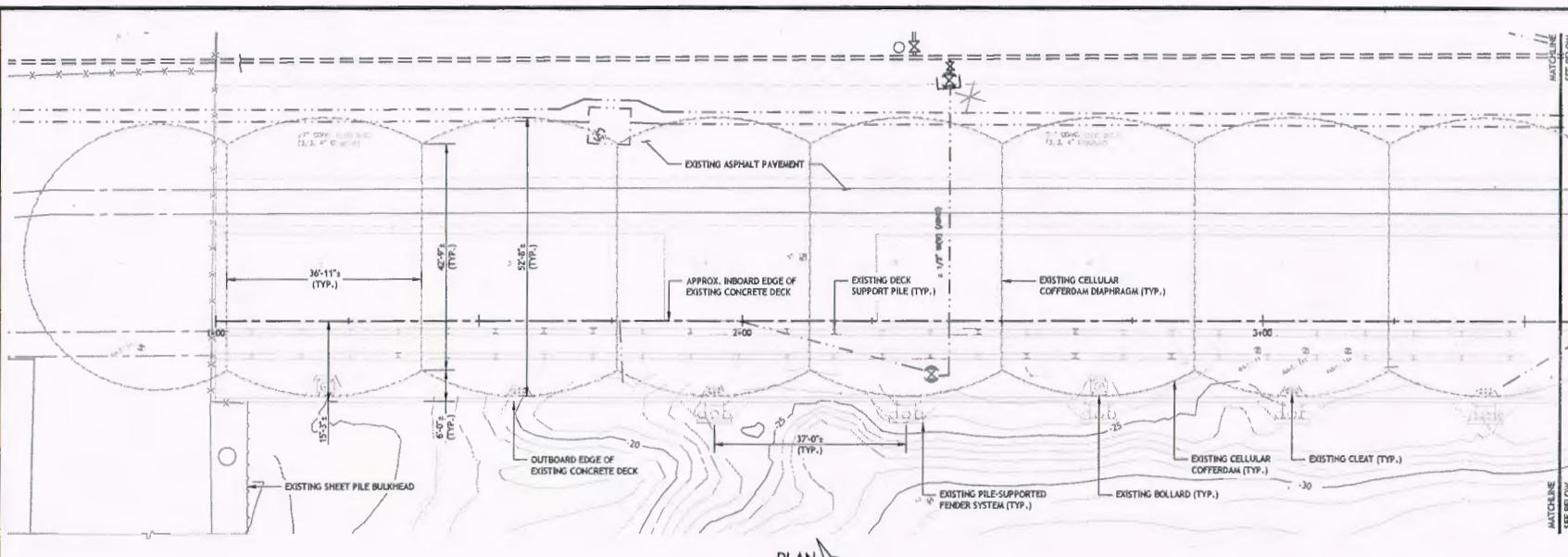
PIER 2 INFRASTRUCTURE IMPROVEMENTS

OVERALL SITE PLAN

Quonset Business Park,

SHEET NO.	DRAWING NO.
C-1	26607

+ 32 SHEETS



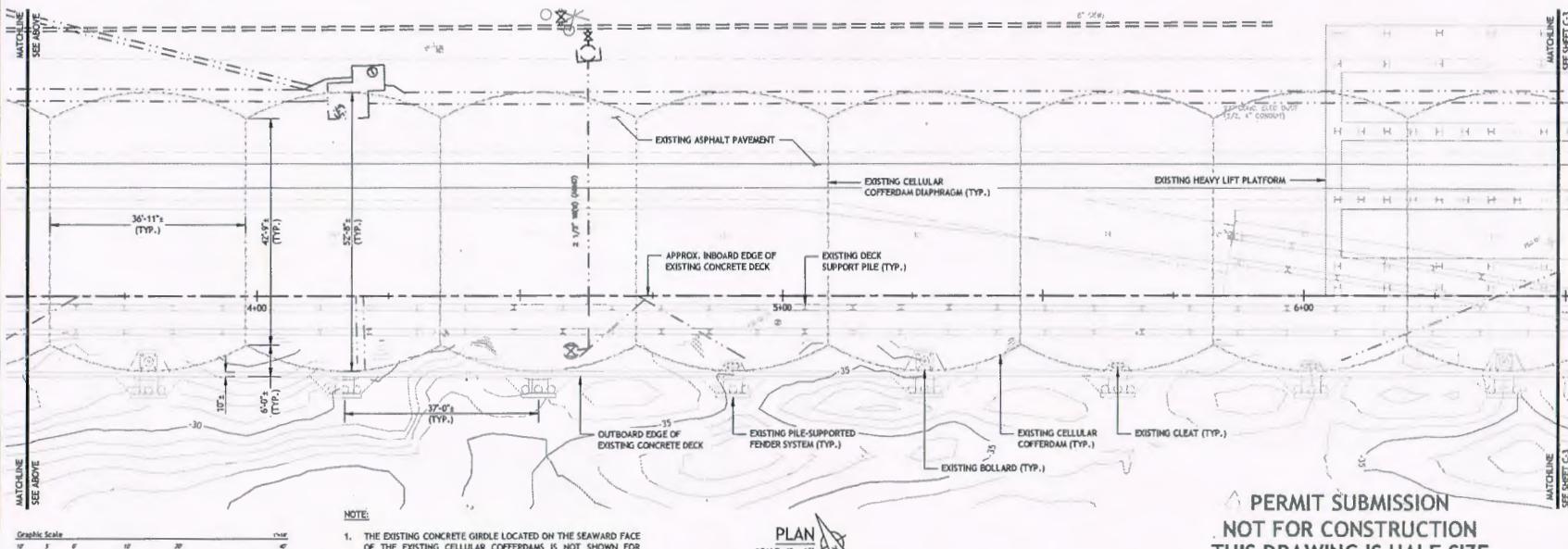
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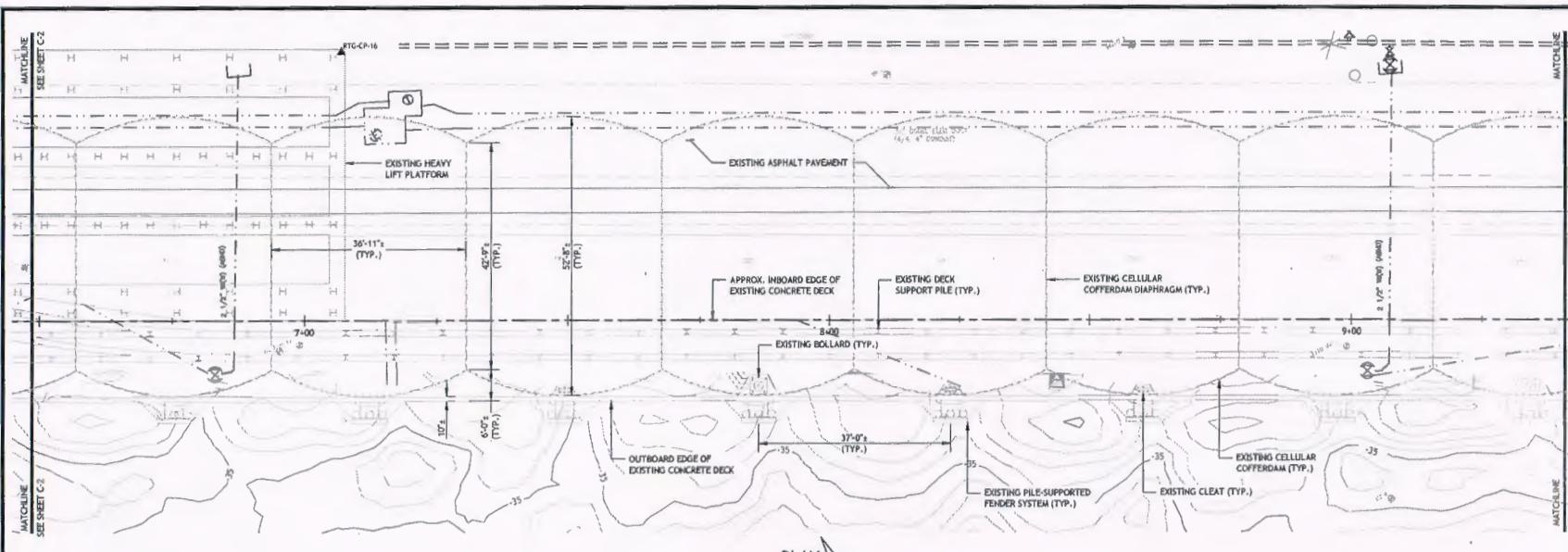


**PIER 2 INFRASTRUCTURE
IMPROVEMENTS**

GENERAL SITE PLAN - 1
(EXISTING CONDITIONS)

Quonset Business Park,

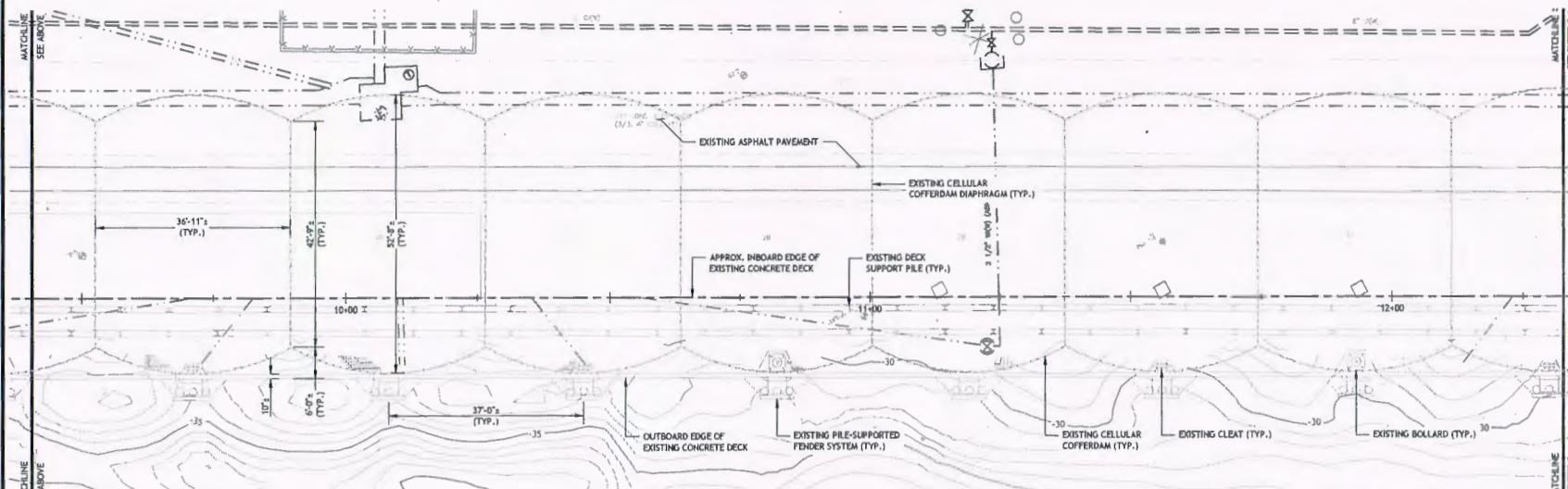
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NO.	REVISION	DATE	APP.
DESIGN BY:	JBR	CHECKED BY:	JBR
DRAWN BY:	BAB/GLC	ENGINEER:	JBR
SCALE:	AS SHOWN	PROJECT NO.:	17100.00

FILE NAME: Pier 2 Infrastructure Improvements Drawing Set.dwg

APPROVED: Edward J. Spinard Jr., P.E.
Q.D.C. DEVELOPMENT SERVICES DIRECTOR
DATE: MAY 8, 2012

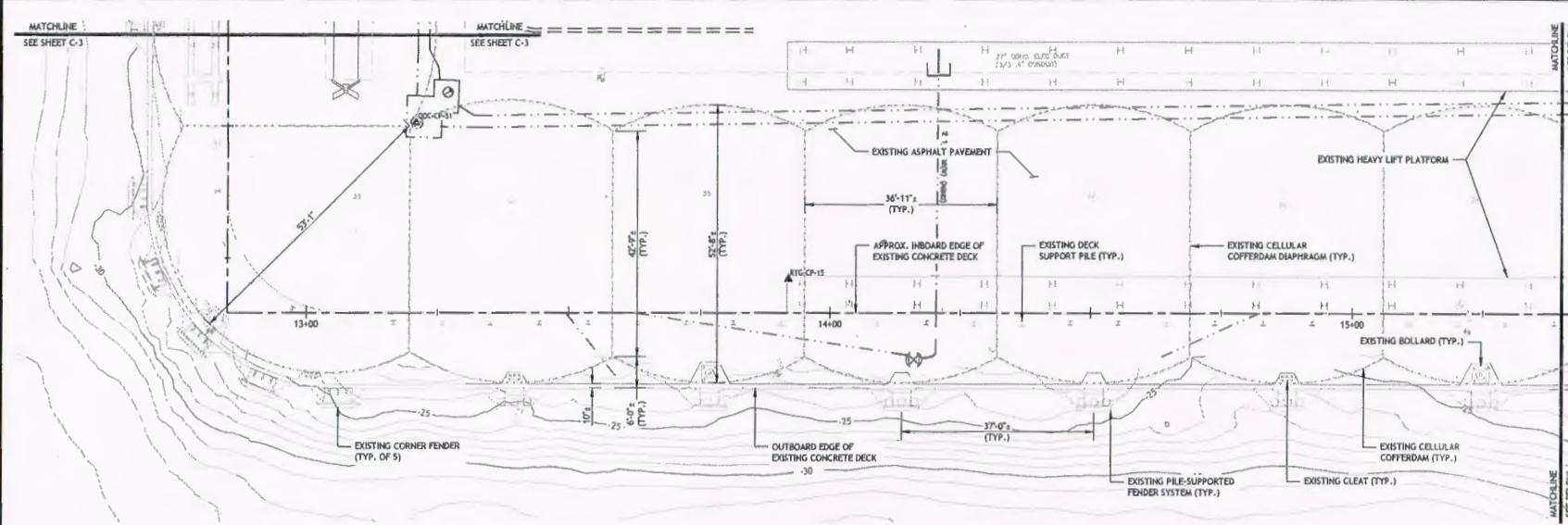
PIER 2 INFRASTRUCTURE IMPROVEMENTS

GENERAL SITE PLAN - 2 (EXISTING CONDITIONS)

Quonset Business Park,

SHEET NO. **C-3** DRAWING NO. **26607**

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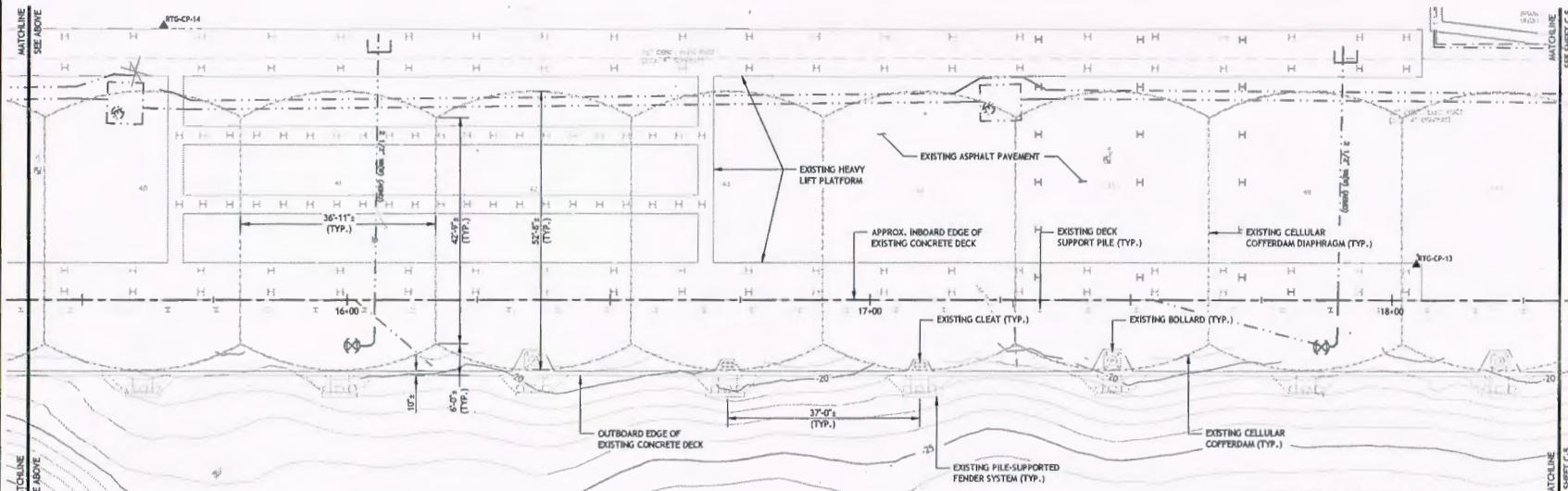


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PIER 2 INFRASTRUCTURE IMPROVEMENTS

**GENERAL SITE PLAN - 3
(EXISTING CONDITIONS)**

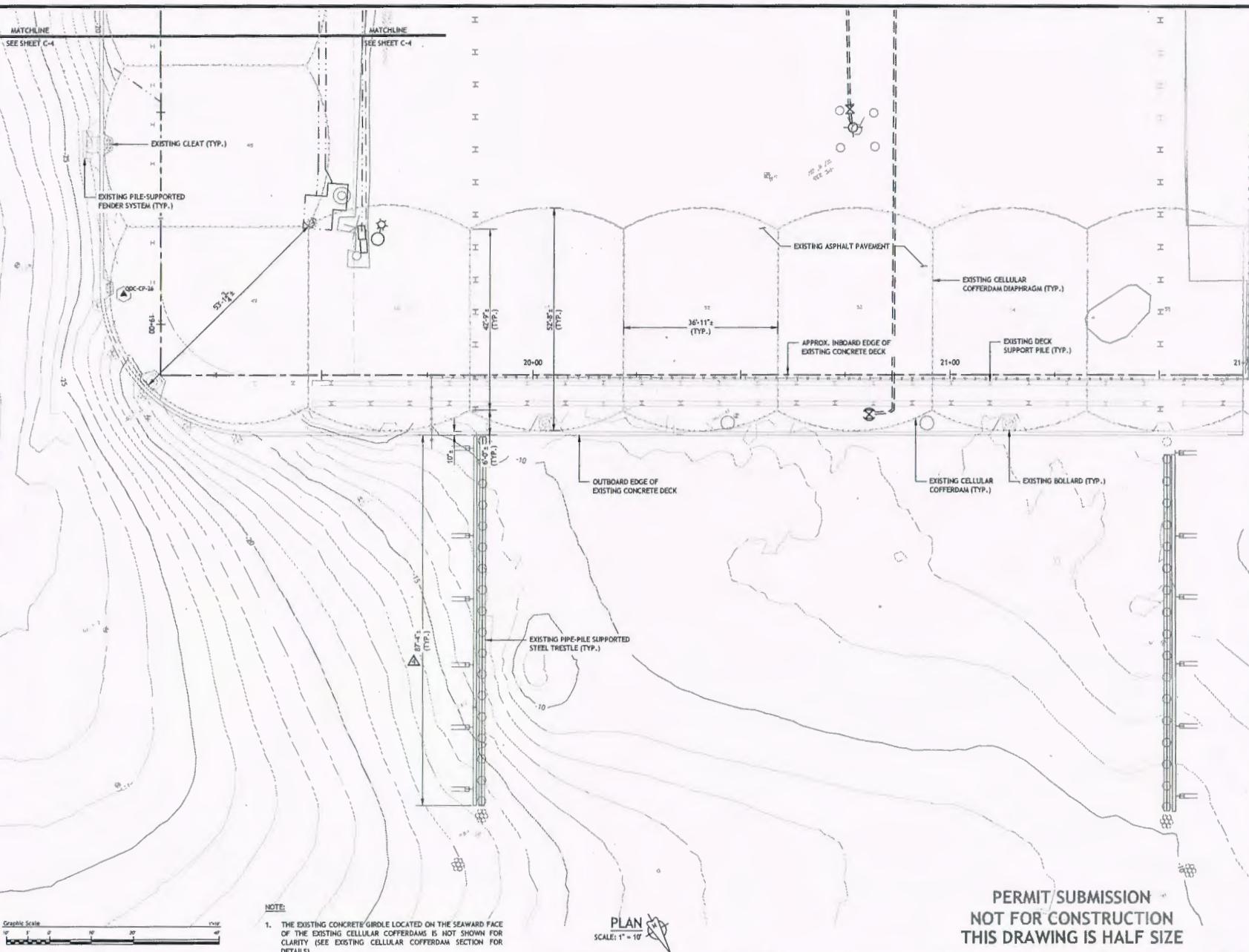
Quonset Business Park,

NO.

WING NO.

NOTE:

1. THE EXISTING CONCRETE GIRDLE LOCATED ON THE SEAWARD FACE OF THE EXISTING CELLULAR COFFERDAMS IS NOT SHOWN FOR CLARITY (SEE EXISTING CELLULAR COFFERDAM SECTION FOR DETAILS).



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	AS-BUILT FIELD MEASUREMENTS	BY 20-17	ES APP.
2.	REVISION	DATE	APR.

DESIGN BY: JBR CHECKED BY: JBR

DRAWN BY: DJA/GJC ENGINEER: JBR

SCALE: AS SHOWN	PROJECT NO.: 17100.00
-----------------	-----------------------

CONTINUED FROM PAGE ONE

APPROVED:

APPROVED: Edward J. Sparer Jr.

Edward Spinard, Jr., P.E.
D.D.C. DEVELOPMENT SERVICES DIRECTOR

DATE: MAY 8, 2017

DRAWING TITLE:

PIER 2 INFRASTRUCTURE

PIER 2 INFRASTRUCTURE IMPROVEMENTS

IMPROVEMENTS

For more information about the study, please contact Dr. Michael J. Hwang at (319) 356-4000 or email at mhwang@uiowa.edu.

GENERAL SUPERVISION 1

(EXISTING CONDITIONS)

Quonset Business Park,

SHEET NO. DRAWING NO.

C-5

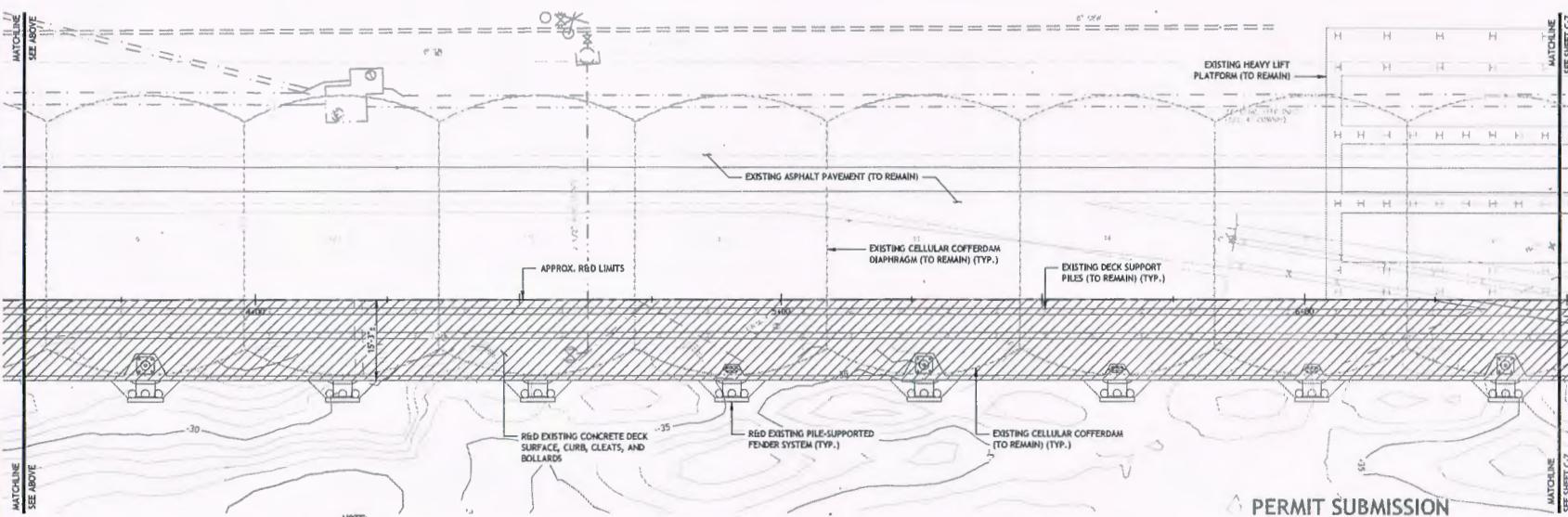
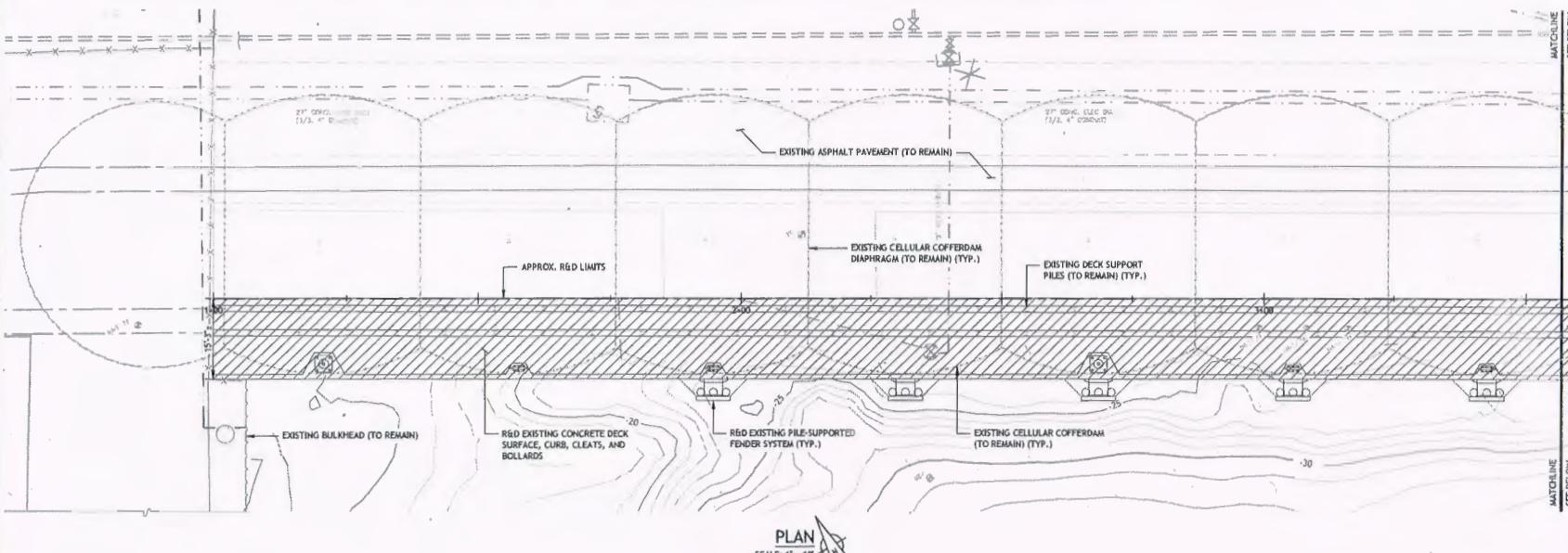
26607

II OF 32 SHEET

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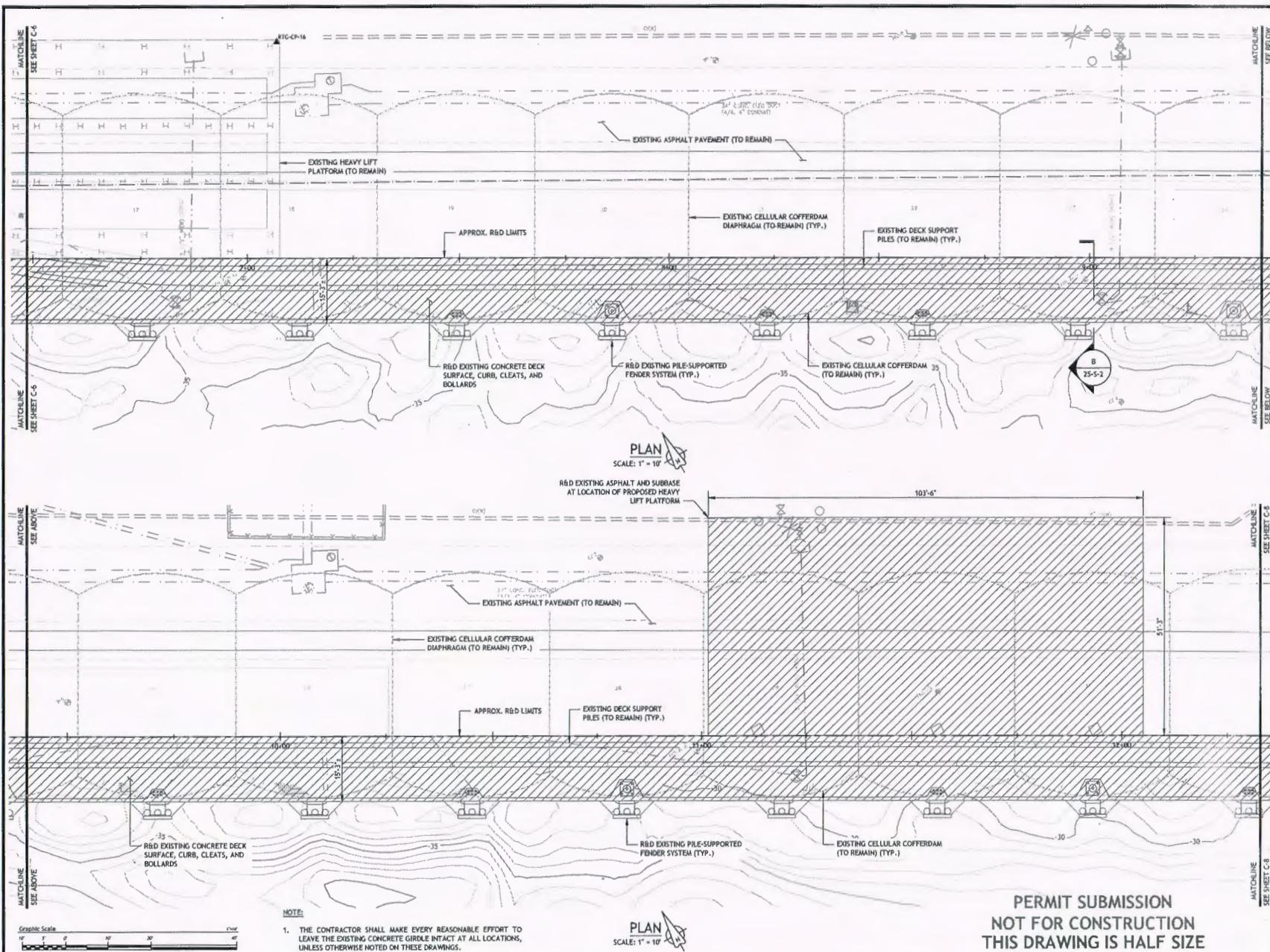


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HATCHING SEE ABOVE
HATCHING SEE BELOW
HATCHING SEE C7
HATCHING SEE C7

PIER 2 INFRASTRUCTURE IMPROVEMENTS
DEMOLITION AND REMOVAL PLAN - 1
Quonset Business Park_®
C-6
DRAWING NO. 26607
8 OF 32 SHEETS



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DRAWN BY: DJA/CJC	ENGINEER: JBR
SCALE: AS SHOWN	PROJECT NO.: 17100,00

CONTRACT NO.: 2016-020

APPROVED: *Edward Spinrad Jr.*
Edward Spinrad, Jr., P.E.
Q.D.C. DEVELOPMENT SERVICES DIRECTOR
DATE: MAY 8, 2017

PIER 2 INFRASTRUCTURE IMPROVEMENTS

DEMOLITION AND
REMOVAL PLAN - 2

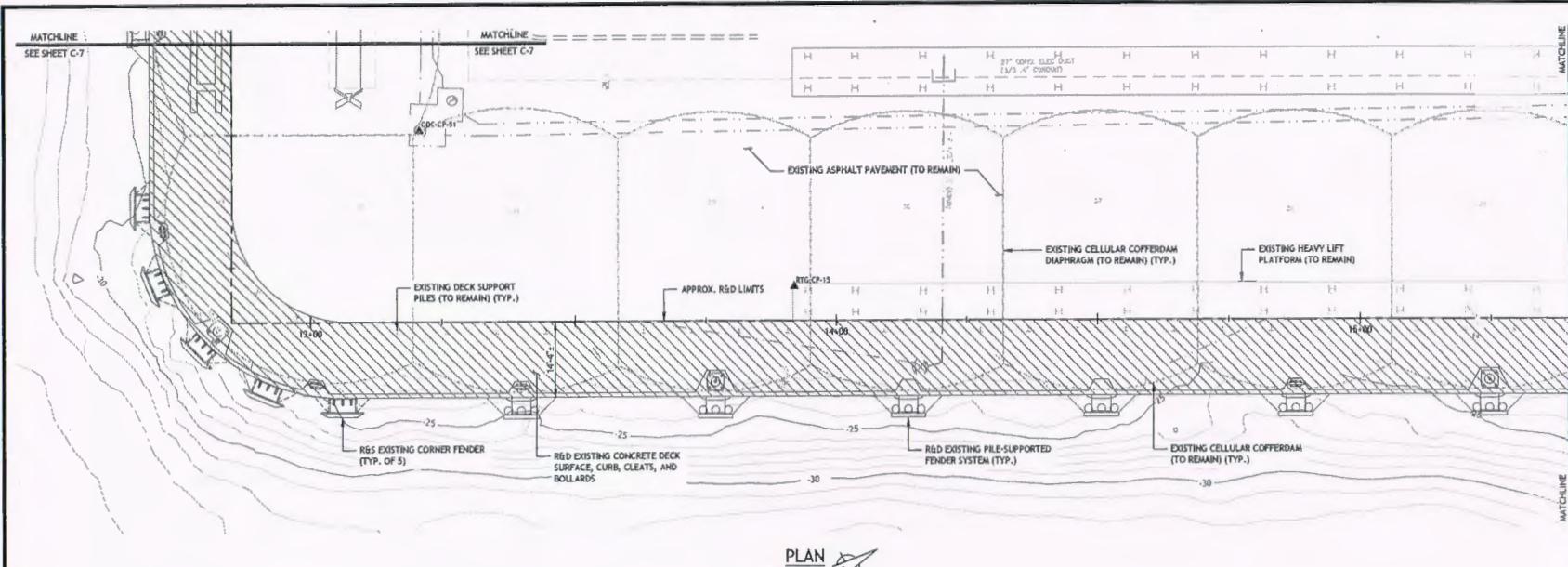
Quonset Business Park

SHEET NO.	DRAWING NO.
C-7	26607
10 OF 32 SHEETS	

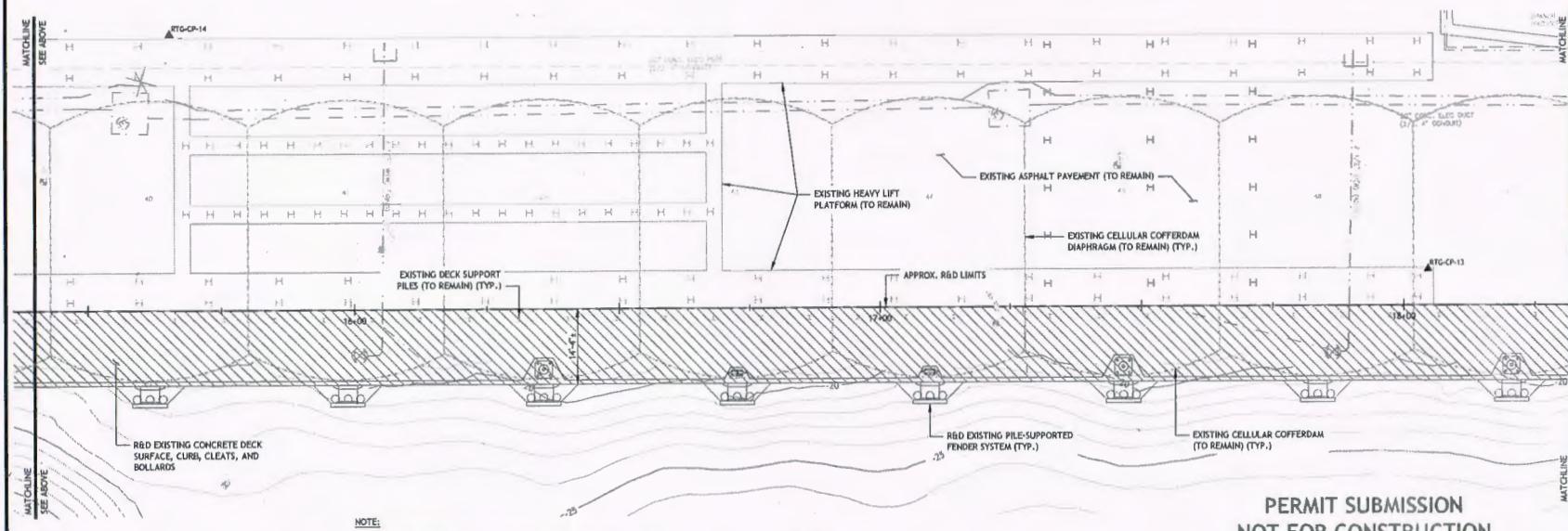
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PLAN
SCALE: 1' = 10'

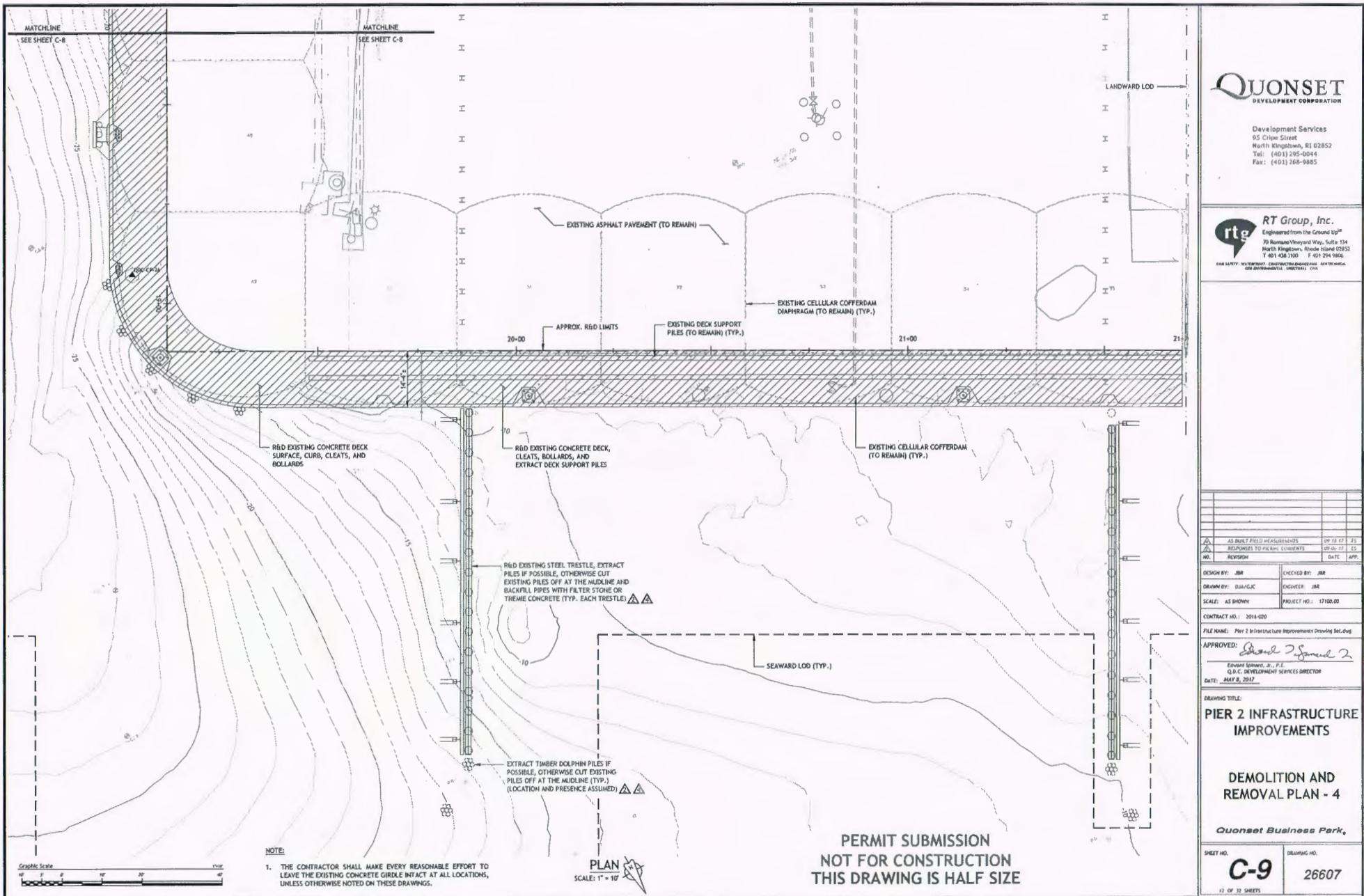


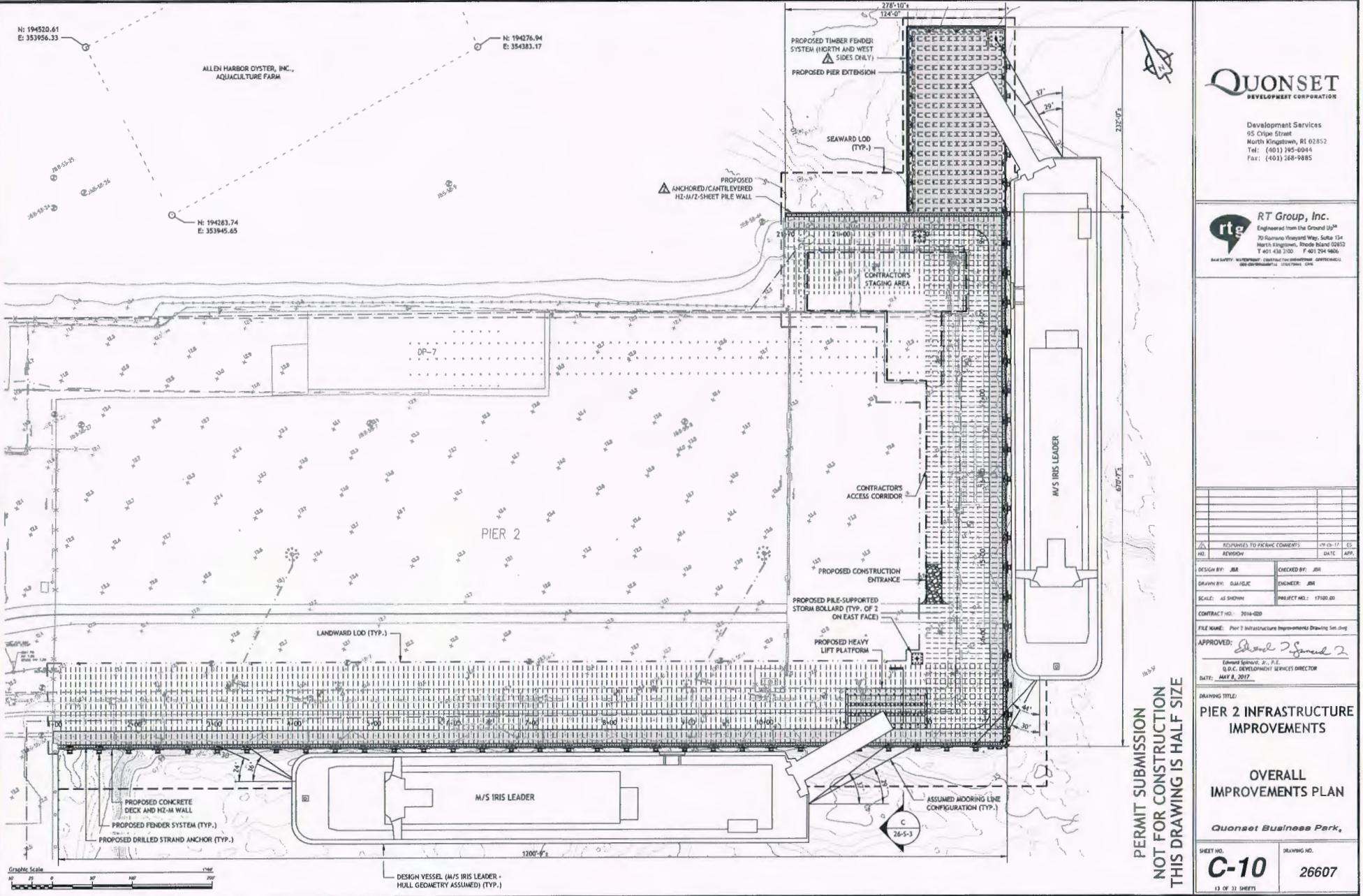
PLAN
SCALE: 1' = 10'

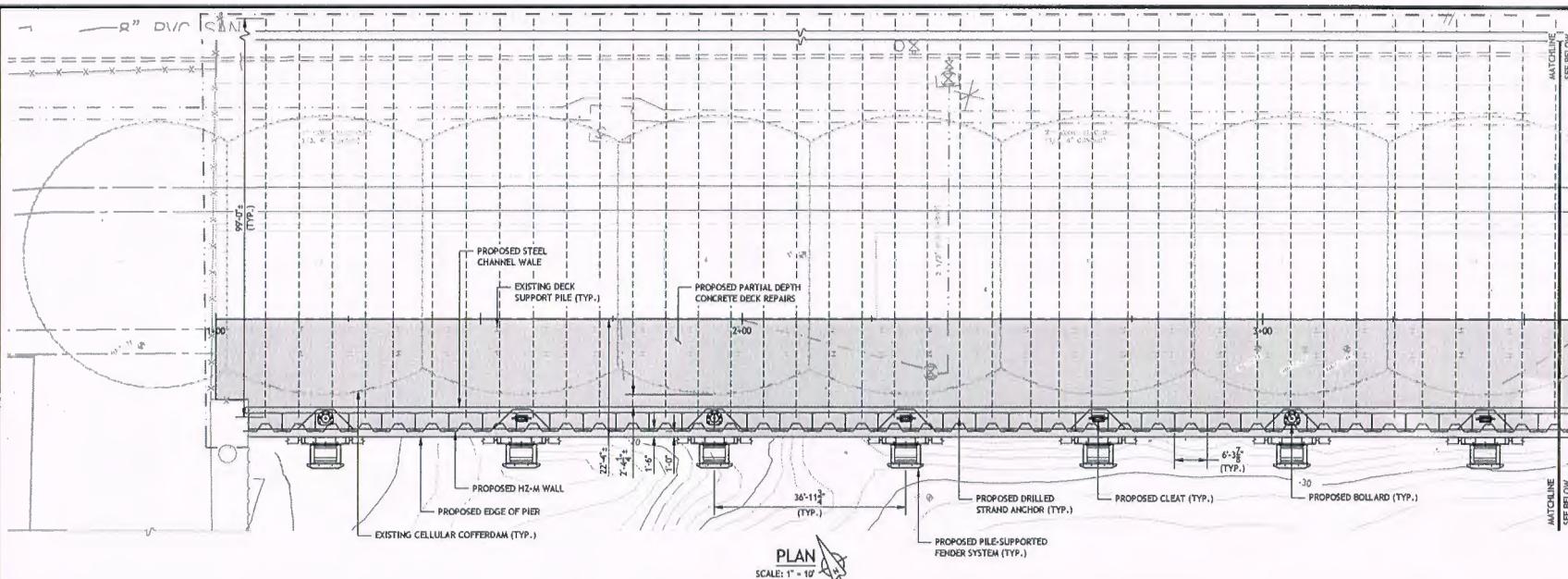
NOTE:
1. THE CONTRACTOR SHALL MAKE EVERY REASONABLE EFFORT TO LEAVE THE EXISTING CONCRETE GIRDERS INTACT AT ALL LOCATIONS, UNLESS OTHERWISE NOTED ON THESE DRAWINGS.

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NO.	REVISION	DATE APP.
DESIGN BY:	JAR	CHECKED BY: JAR
DRAWN BY: DAVIDC	ENGINEER: JAR	
SCALE: AS SHOWN	PROJECT NO.: 17100.00	
CONTRACT NO.: 2018-020		
FILE NAME: Pier 2 Infrastructure Improvements Drawing Set.dwg		
APPROVED: <i>Edward Sphar, Jr., P.E.</i> Edward Sphar, Jr., P.E. Q.D.C. DEVELOPMENT SERVICES DIRECTOR DATE: MAY 8, 2017		
DRAWING TITLE: PIER 2 INFRASTRUCTURE IMPROVEMENTS		
DEMOLITION AND REMOVAL PLAN - 3		
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SHEET NO.	DRAWING NO.	
C-8		26607
11 OF 32 SHEETS		







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DRAWN BY:	DJA/GJC	ENGINEER:	JBR
SCALE:	AS SHOWN	PROJECT NO.:	17100.00

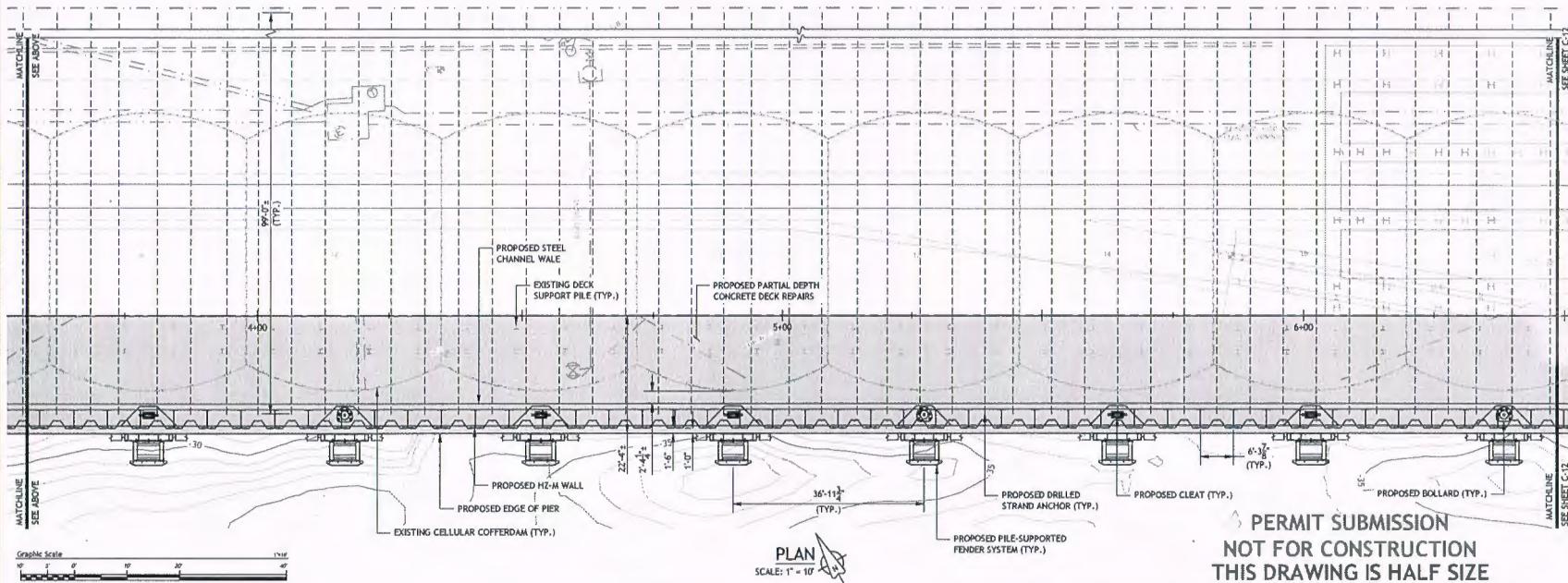
CONTRACT NO.: 2018-020
FILE NAME: Plan 2 Infrastructure Improvements Drawing Set.dwg
APPROVED: *Edward J. Spharad Jr.*
Edward Spharad, Jr., P.E.
Q.D.C. DEVELOPMENT SERVICES DIRECTOR
DATE: MAY 8, 2017

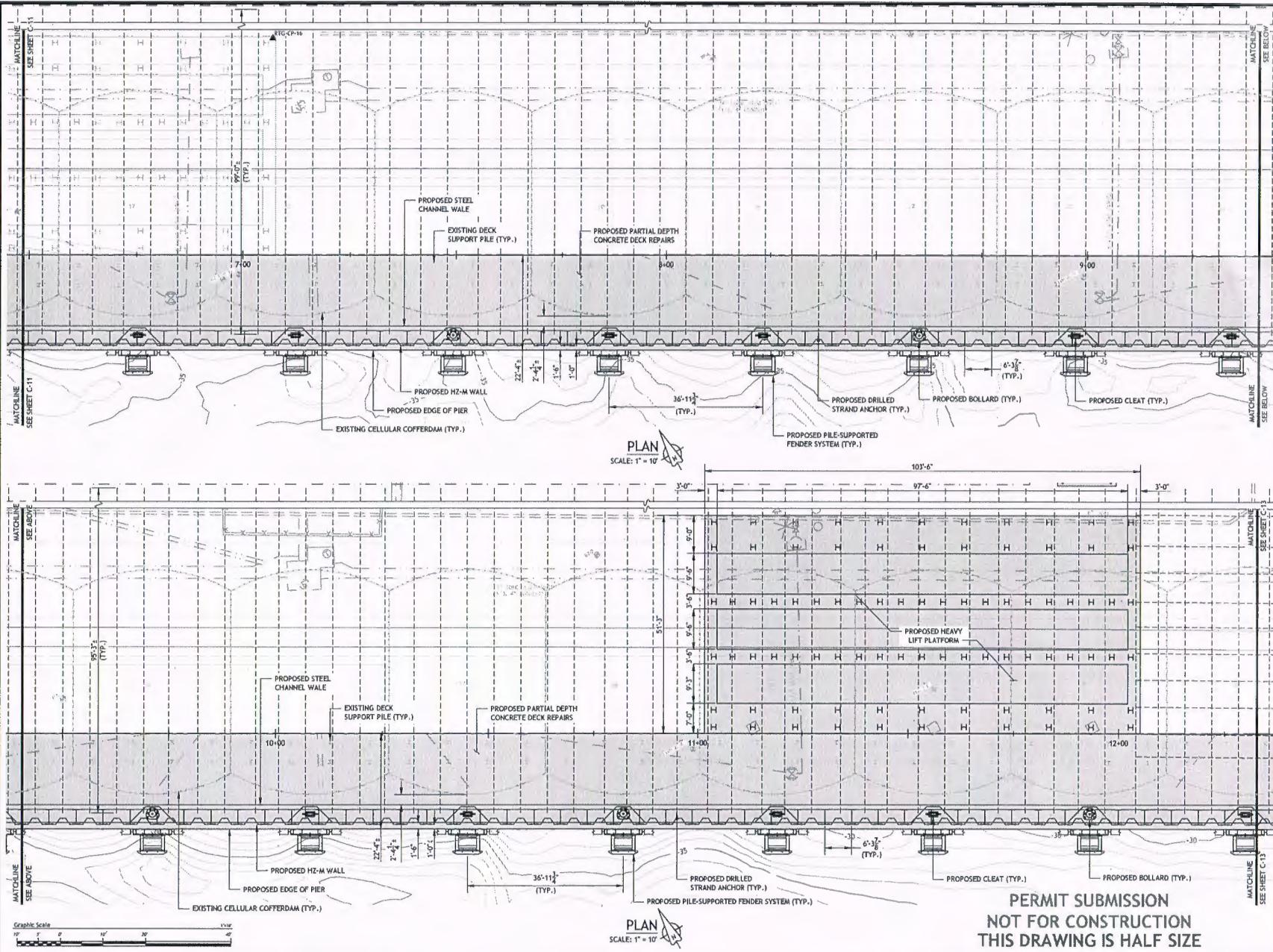
**PIER IMPROVEMENTS
PLAN - 1**

Quonset Business Park

SHEET NO. **C-11** DRAWING NO. **26607**

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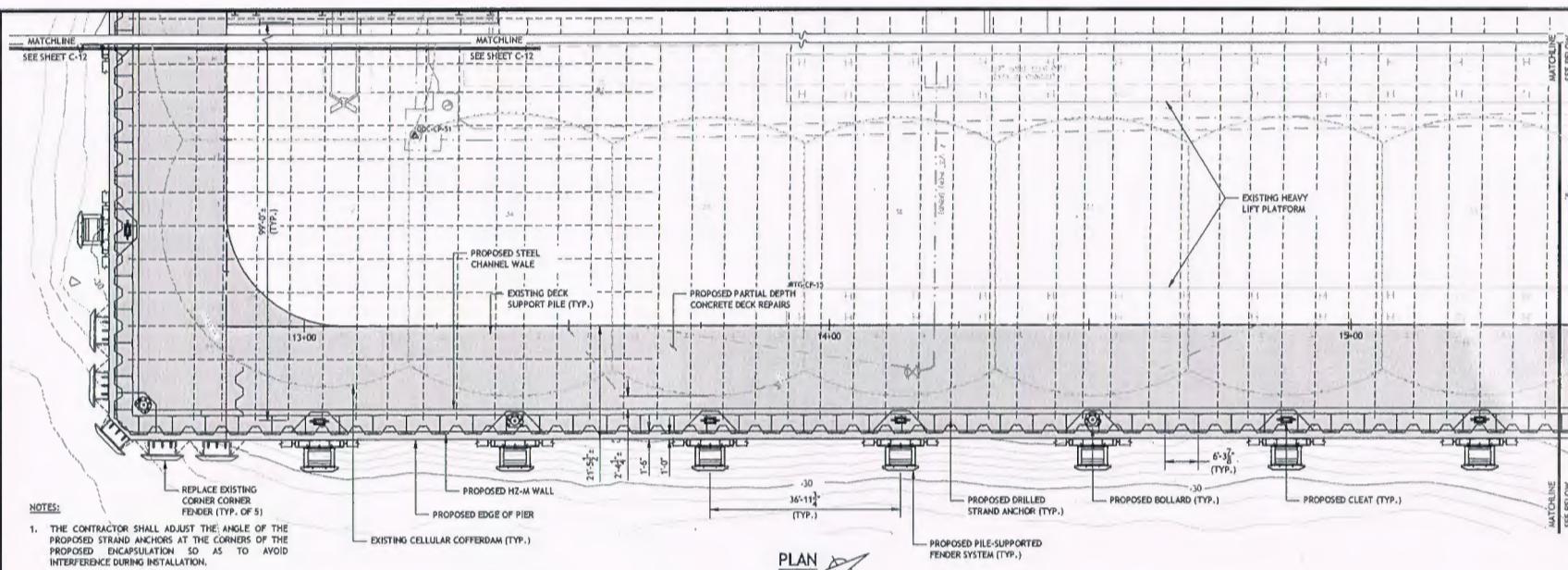
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DRAWN BY: DJA/QJC		ENGINERED BY: JBR
SCALE: AS SHOWN		PROJECT NO.: 17100.00
CONTRACT NO.: 2014-020		
FILE NAME: Pier 2 Infrastructure Improvements (Drawing Set, dwg)		
APPROVED: <i>Edward Schmidt, Jr., P.E.</i> <i>Engineering 2</i> Edward Schmidt, Jr., P.E. Q.D.C. DEVELOPMENT SERVICES DIRECTOR DATE: MAY 8, 2017		
DRAWING TITLE: PIER 2 INFRASTRUCTURE IMPROVEMENTS		
 PIER IMPROVEMENTS PLAN - 2		
 <i>Quonset Business Park,</i>		
SHEET NO. C-12		DRAWING NO. 26607
13 OF 31 SHEETS		



1. THE CONTRACTOR SHALL ADJUST THE ANGLE OF THE PROPOSED STRAND ANCHORS AT THE CORNERS OF THE PROPOSED ENCAPSULATION SO AS TO AVOID INTERFERENCE DURING INSTALLATION.

1. THE CONTRACTOR SHALL ADJUST THE ANGLE OF THE PROPOSED STRAND ANCHORS AT THE CORNERS OF THE PROPOSED ENCAPSULATION SO AS TO AVOID INTERFERENCE DURING INSTALLATION.

PLAN
SCALE: 1" = 10'

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<i>Quonset Business Park,</i>	
SHEET NO.	BUILDING NO.
C-13	26607
14 OF 22 SHEETS	

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DRAWN BY:	DJA/GJC	ENGINEER:	JBR
SCALE:	AS SHOWN	PROJECT NO.:	17100.00

CONTRACT NO.: 2016-020
FILE NAME: Pier 2 Infrastructure Improvements Drawing Set.dwg
APPROVED: Edward J. Spanard Jr.
Edward Spanard, Jr., P.E.
Q.D.C. DEVELOPMENT SERVICES DIRECTOR
DATE: MAY 8, 2017

PIER 2 INFRASTRUCTURE IMPROVEMENTS

**PIER IMPROVEMENTS
PLAN - 3**

Quonset Business Park.

SHEET NO. 1 OF 1 DRAWING NO. 1

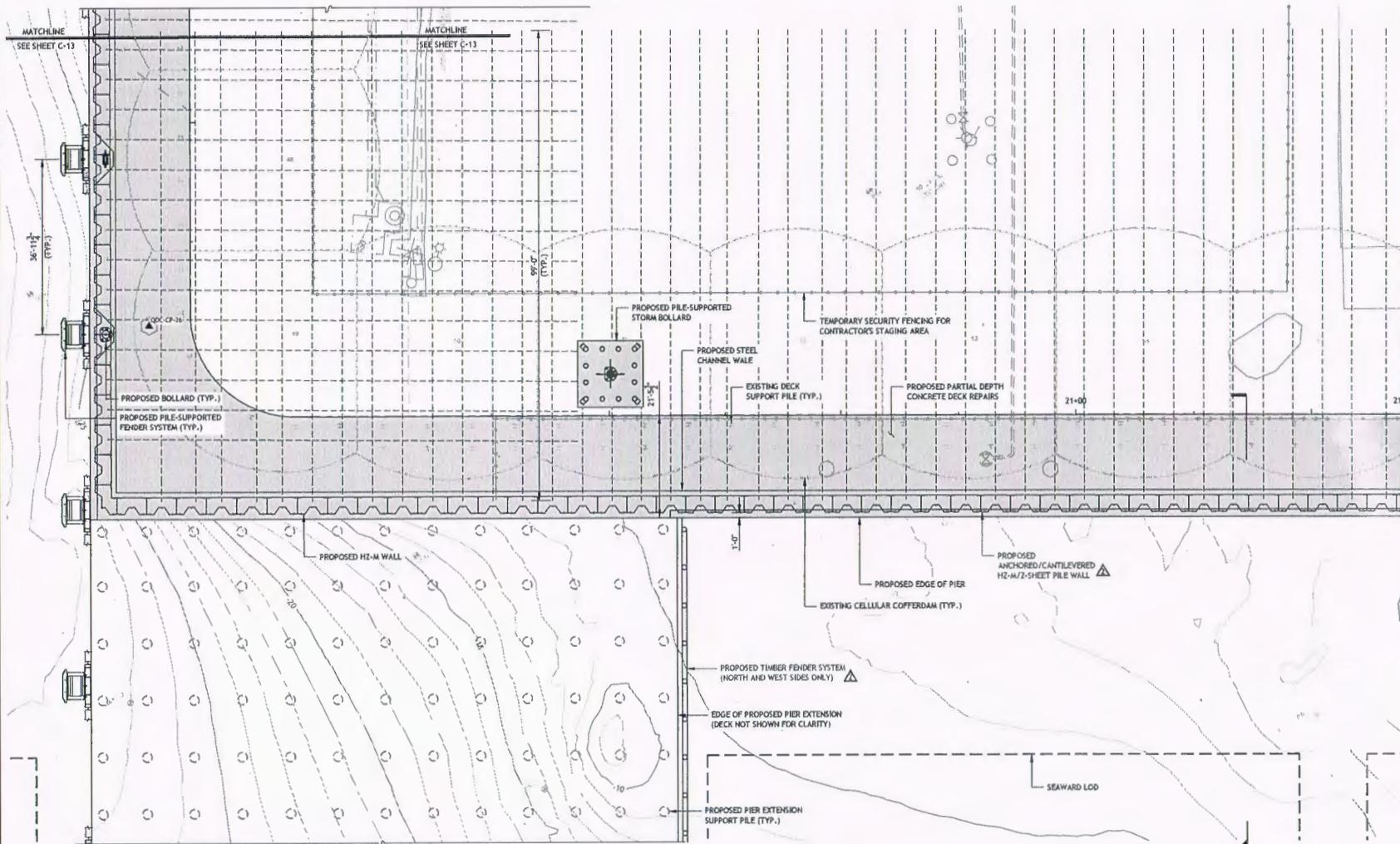
C-13 | 26607

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REVISION		DATE	APP.
DESIGN BY: JBR	CHECKED BY: JBR		
DRAWN BY: DAVID R.	ENGINEER: JBR		
SCALE: AS SHOWN	PROJECT NO.: 17100.00		
CONTRACT NO.: 2018-000			
FILE NAME: Pier 2 Infrastructure Improvements Drawing Set.dwg			
APPROVED: <i>David J. Smeal, Jr.</i> David J. Smeal, Jr., P.E. Q.D.C. DEVELOPMENT SERVICES DIRECTOR DATE: MAY 8, 2017			
DRAWING TITLE: PIER 2 INFRASTRUCTURE IMPROVEMENTS			
PIER IMPROVEMENTS PLAN - 4			
Quonset Business Park			
SHEET NO.	DRAWING NO.		
C-14	26607		
17 OF 33 SHEETS			



PLAN
SCALE: 1" = 10'

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04-01-17	E1
04	APP.

DESIGN BY: JBR CHECKED BY: JBR
DRAWN BY: DAW/CLC ENGINEER: JBR
SCALE: AS SHOWN PROJECT NO.: 1701.00

CONTRACT NO.: 2014-020

FILE NAME: Pier 2 Infrastructure Improvement Drawing Set.dwg

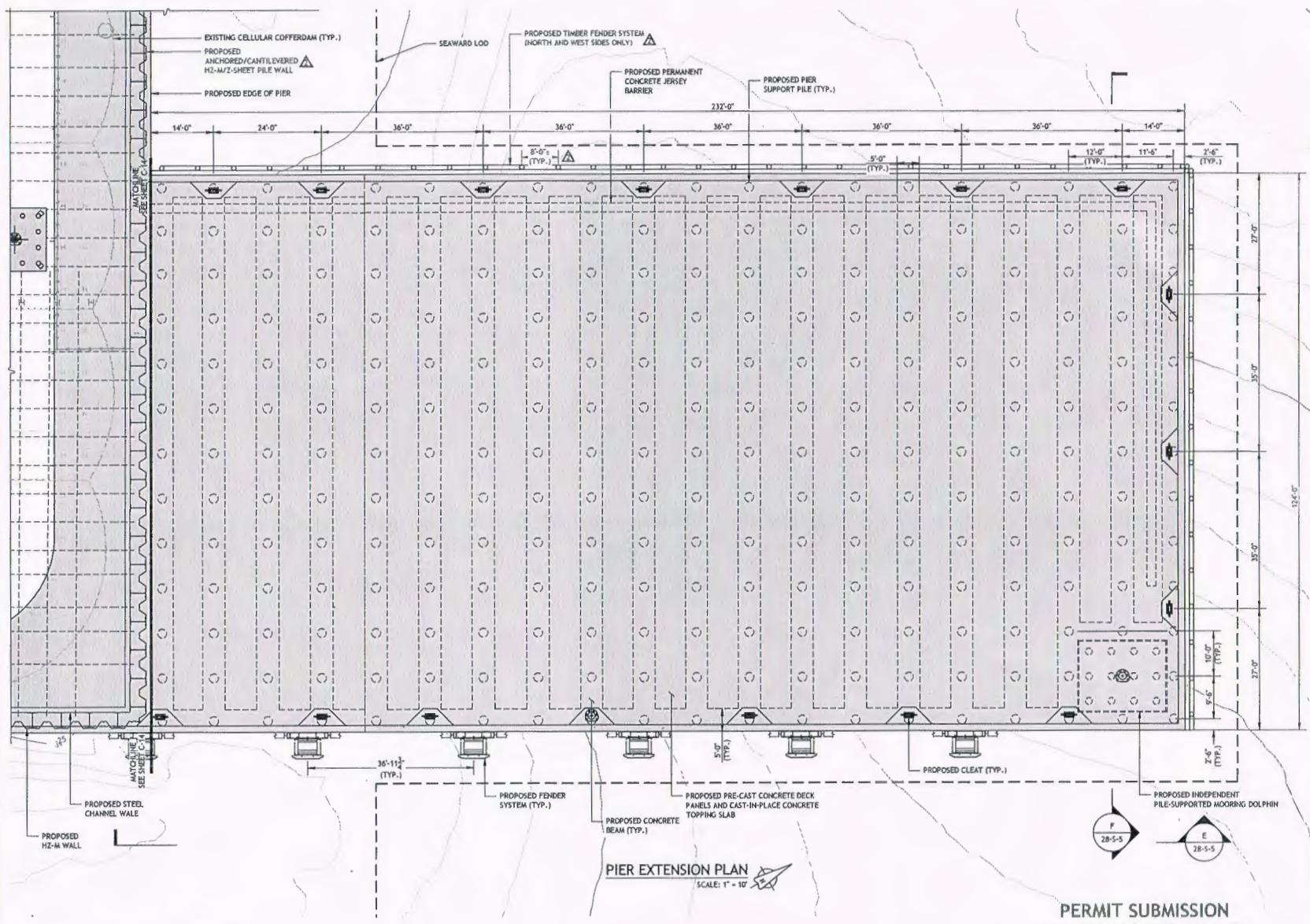
APPROVED: Edward S. General, Jr., P.E.
Edward S. General, Jr., P.E.
Q.C. DEVELOPMENT SERVICES DIRECTOR
DATE: MAY 8, 2017

PIER 2 INFRASTRUCTURE IMPROVEMENTS

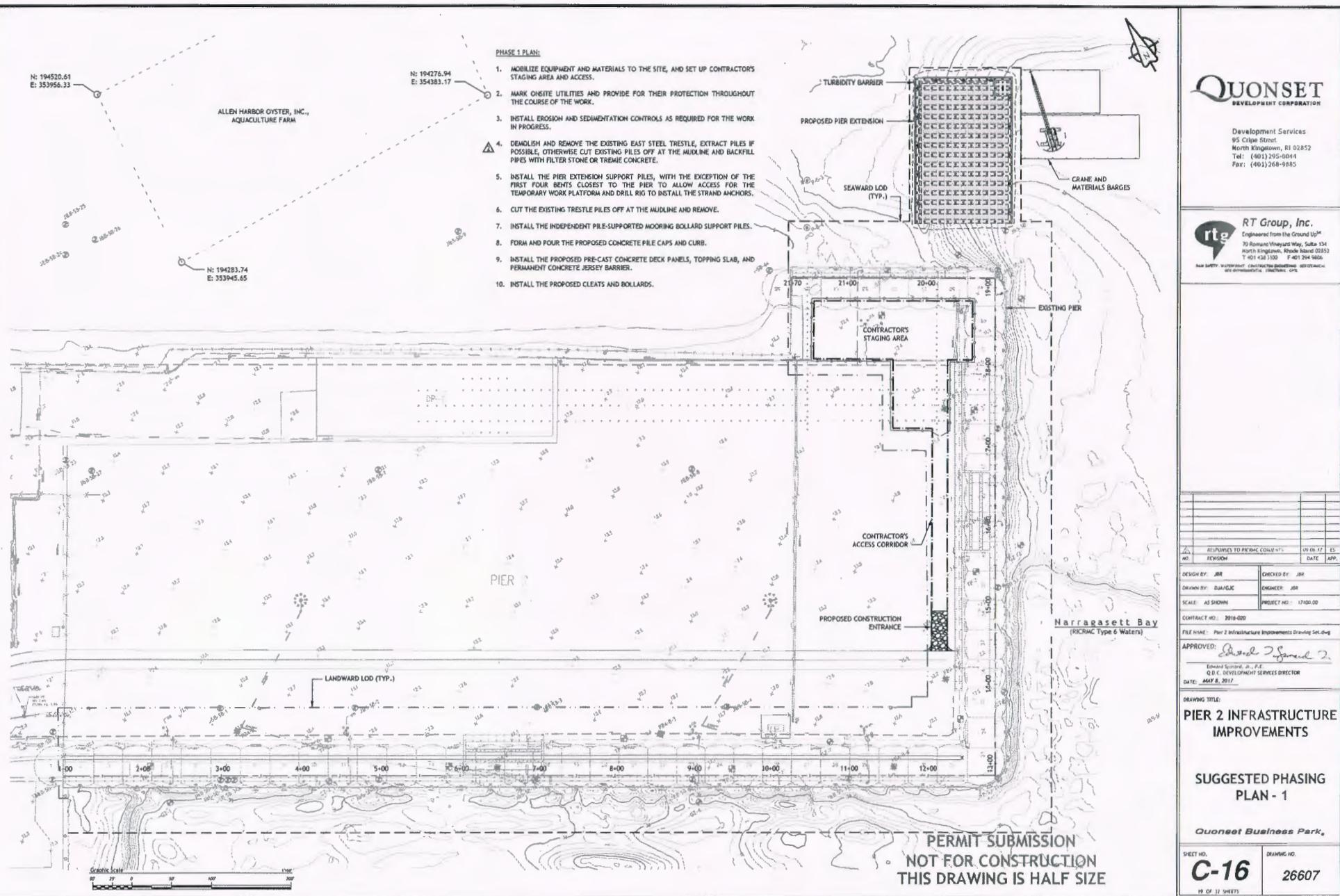
PIER IMPROVEMENTS PLAN - 5

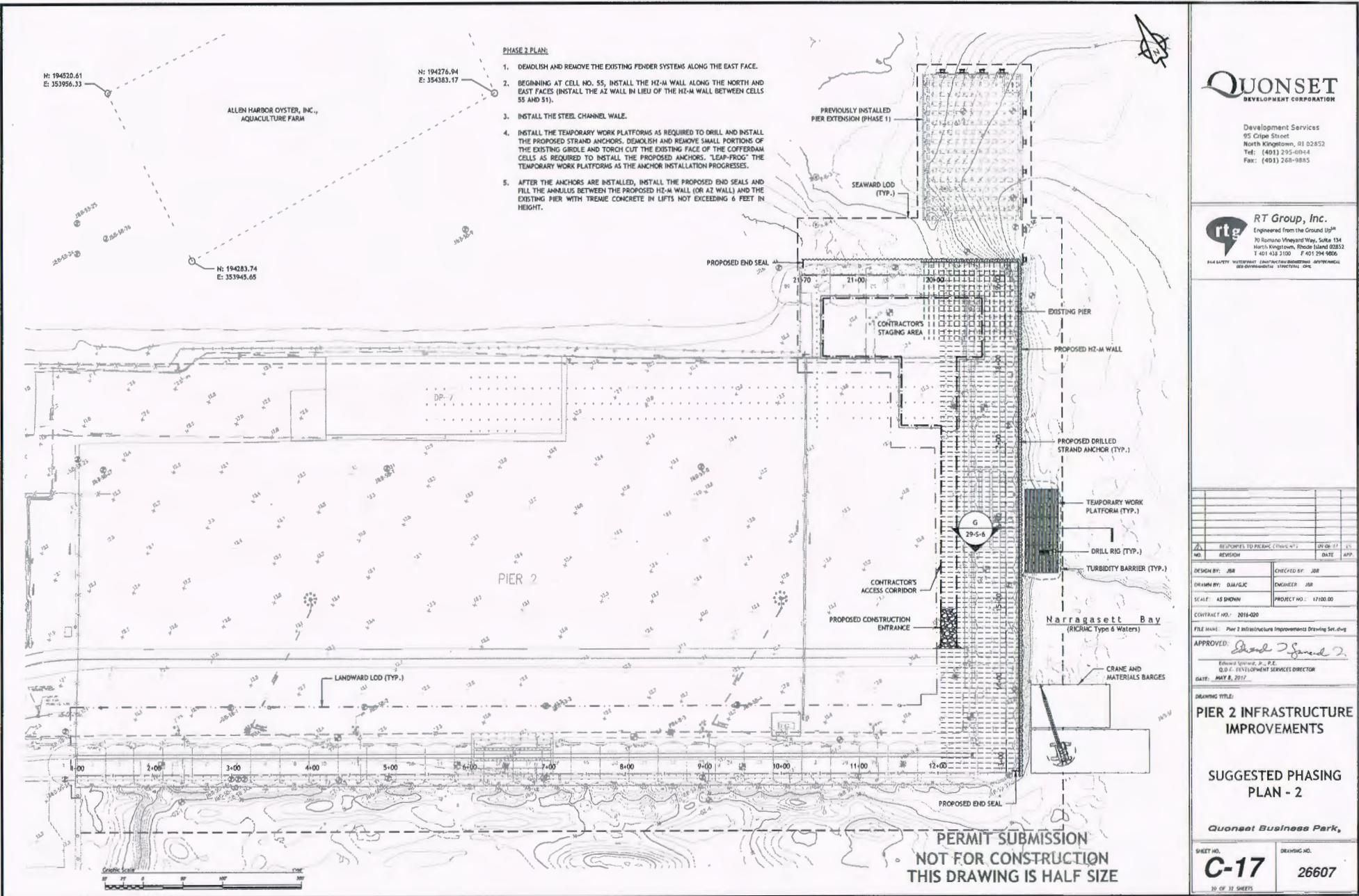
Quonset Business Park,

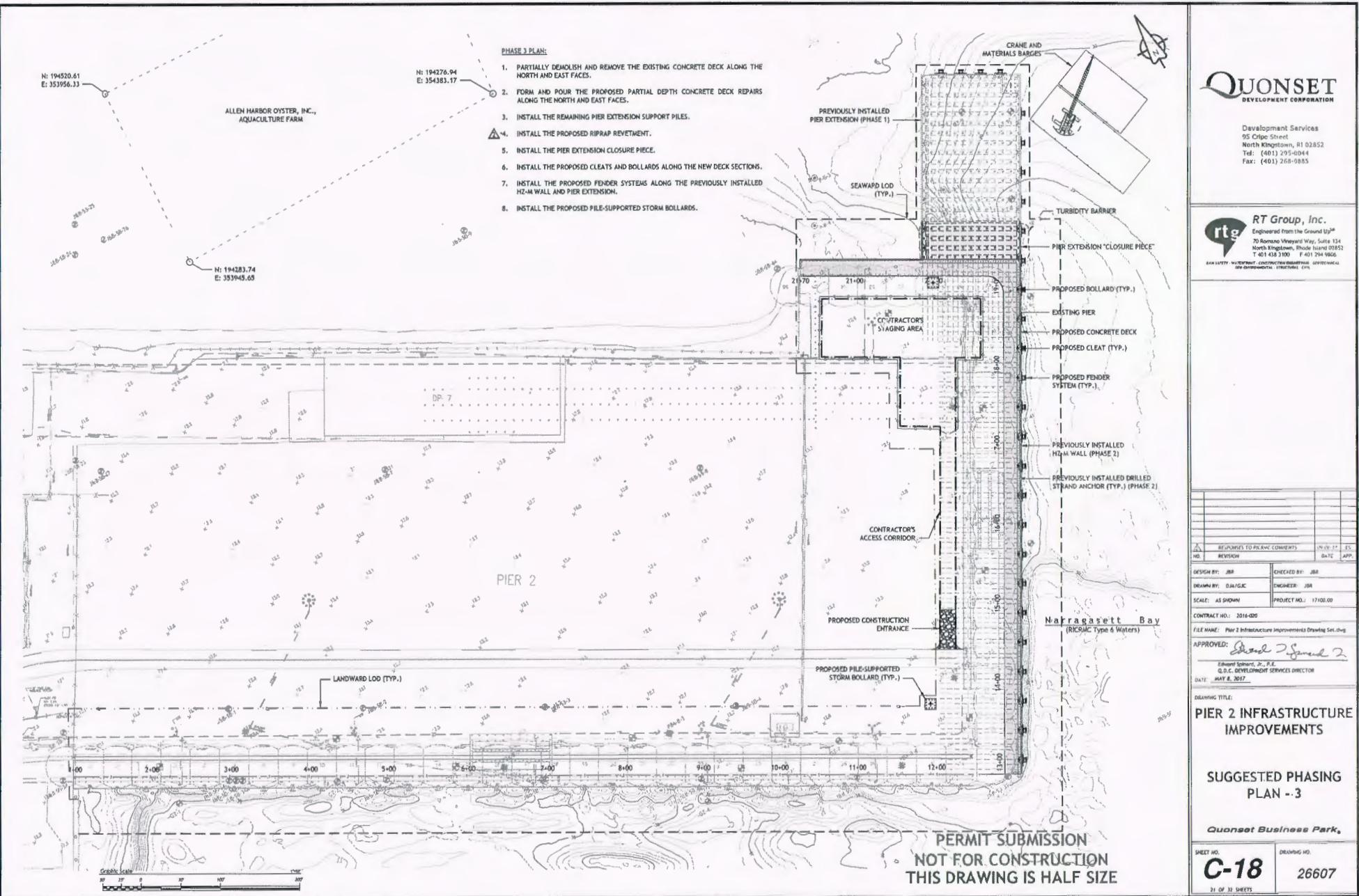
SHEET NO. C-15 DRAWING NO. 26607
18 OF 22 SHEETS

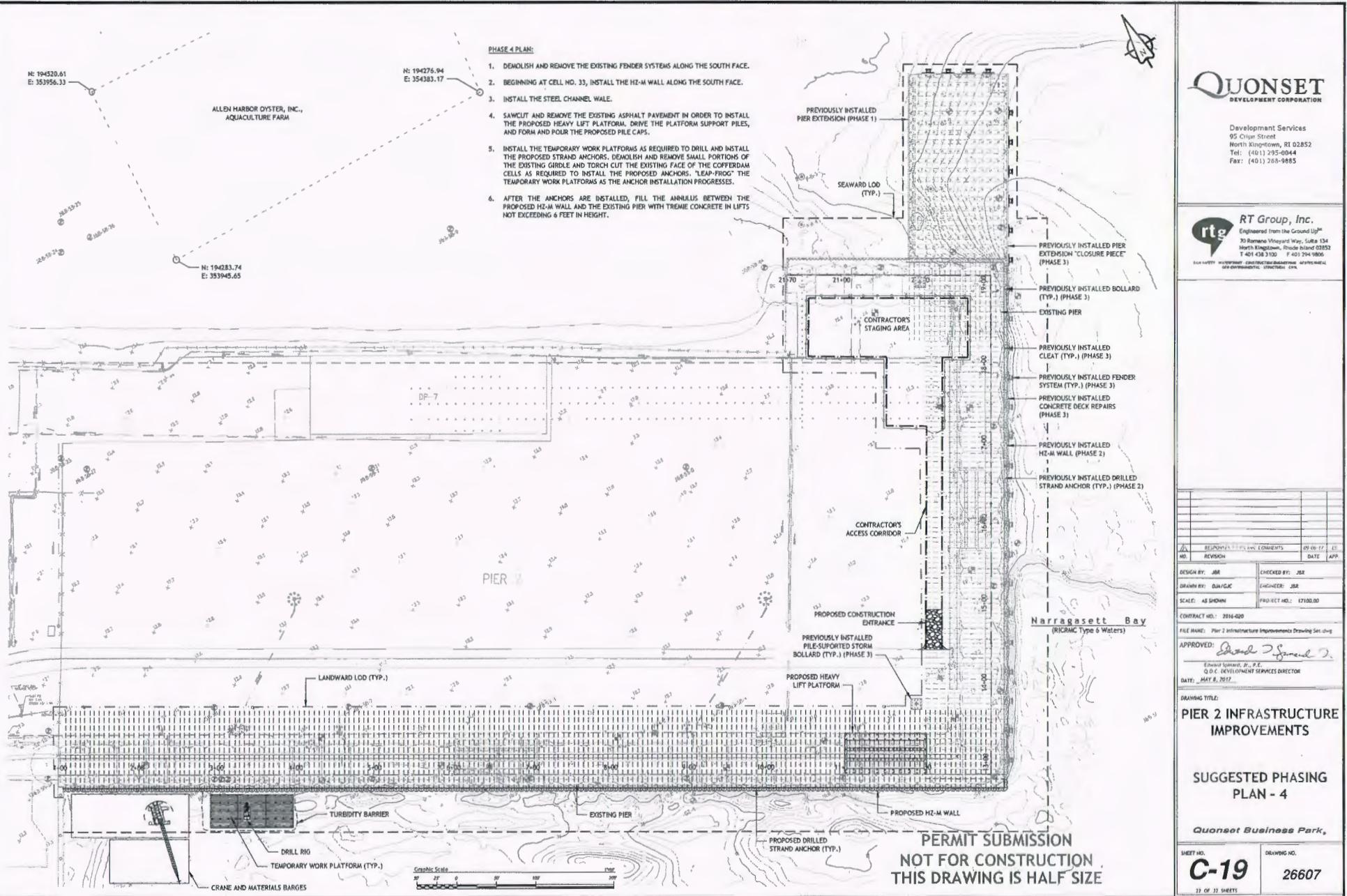


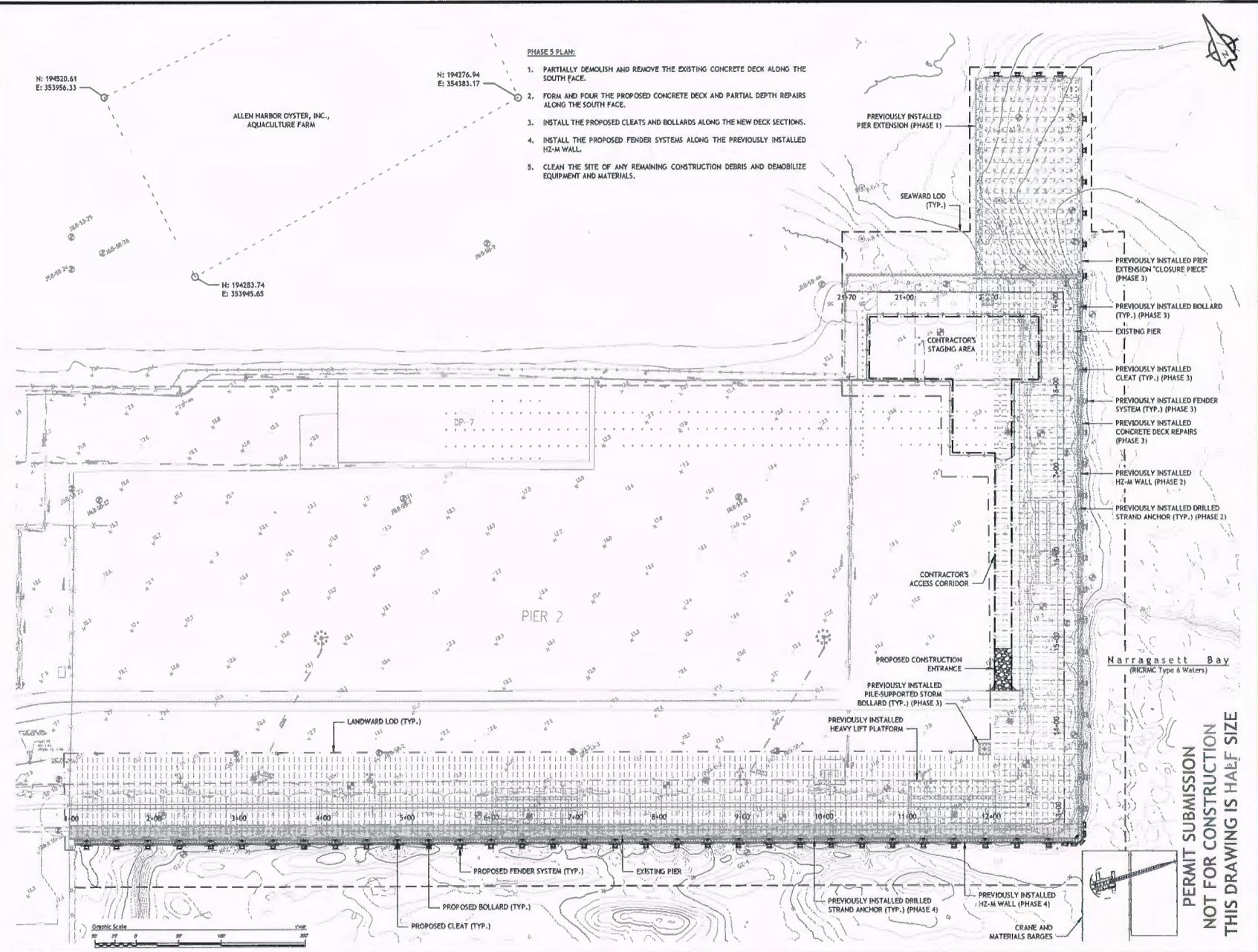
Graphic Scale
10' 5' 0' 5' 10' 15'











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DEVELOPMENT CORPORATION

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North Kingstown, RI 02852
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North Kingstown, Rhode Island 02852
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PARK SAFETY INTEGRITY CONSTRUCTION INNOVATION OFFSHORE
GEOPHYSICAL DEEP ENVIRONMENTAL STRUCTURAL ENGR

RESPONSES TO PUBLIC COMMENTS		REVISED	DATE APP.
NO.	REVISION		
DESIGN BY: JBR		CHECKED BY: JBR	
DRAWN BY: DIA/GJC		ENGINEER: JBR	
SCALE: AS SHOWN		PROJECT NO.: 17100.00	
CONTRACT NO.: 2016-020			
FILE NAME: Pier 2 Infrastructure Improvements Drawing Set.dwg			

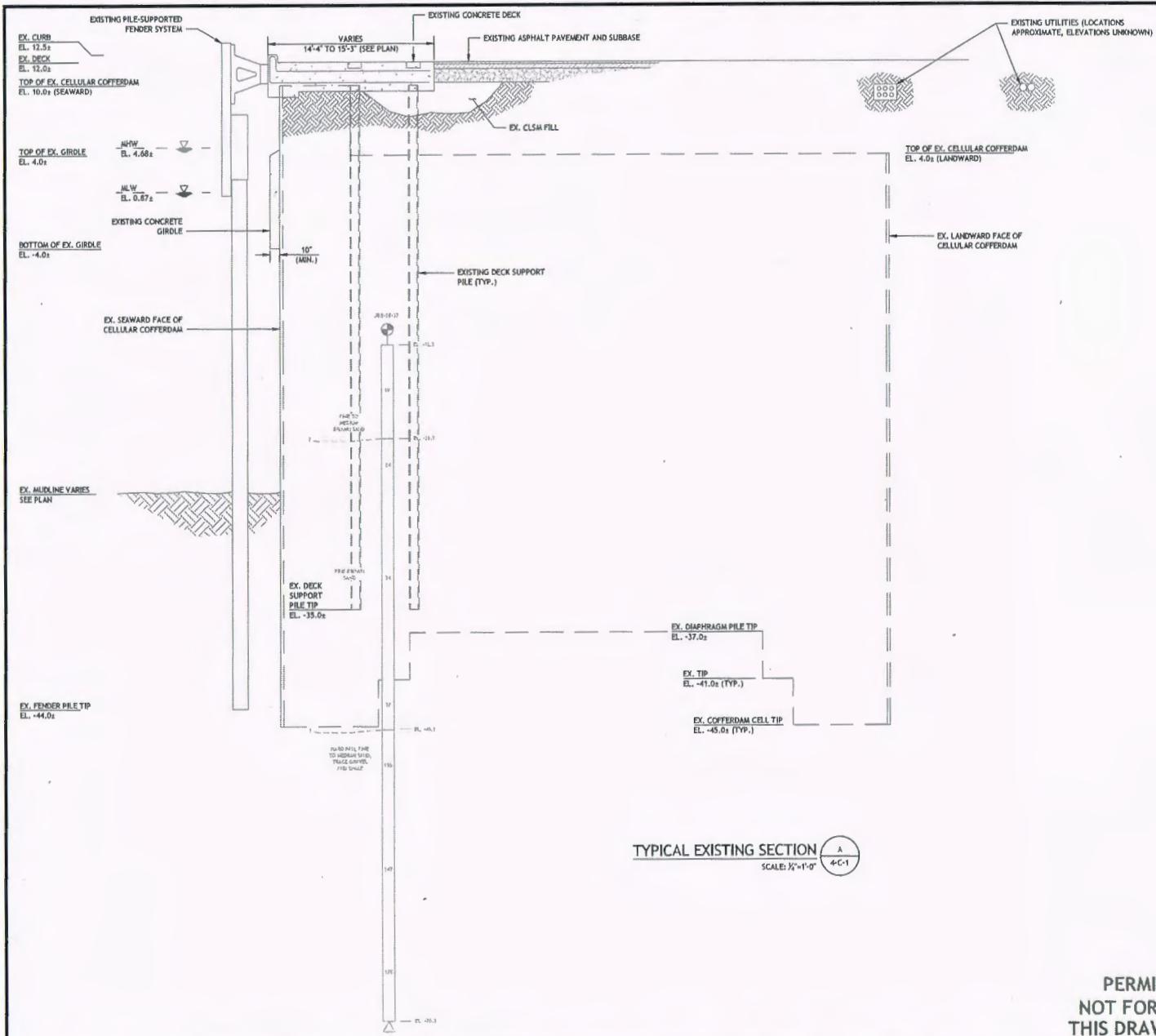
APPROVED: *[Signature]*
Edward Sparaco, Jr., P.E.
Q.D.C. DEVELOPMENT SERVICES DIRECTOR
DATE: MAY 8, 2017

DRAWING TITLE:
**PIER 2 INFRASTRUCTURE
IMPROVEMENTS**

SUGGESTED PHASING
PLAN - 5

Quonset Business Park

SHEET NO.	DRAWING NO.
C-20	26607
21 of 32 SHEETS	



PERMIT SUBMISSION
NOT FOR CONSTRUCTION
THIS DRAWING IS HALF SIZE



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NO.	REVISION	DATE	APP.
DESIGN BY: JBR		CHECKED BY: JBR	
DRAWN BY: DAW/JLC		ENGINEER: JBR	
SCALE: AS SHOWN		PROJECT NO.: 17100.00	

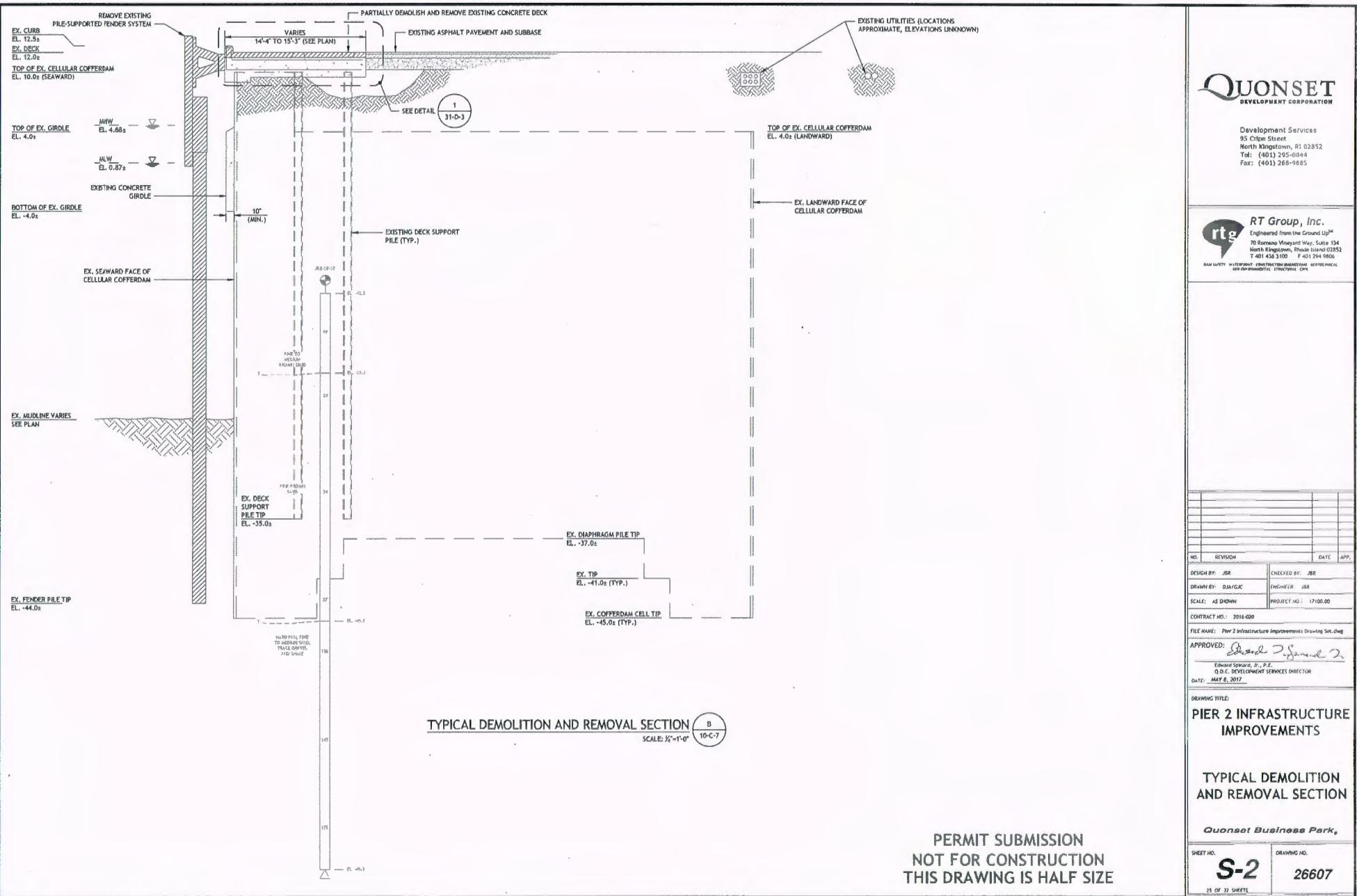
CONTRACT NO.: 2016-020
FILE NAME: Pier 2 Infrastructure Improvements Drawing Set.dwg
APPROVED: *Edward S. Seward Jr.*
Edward Seward, Jr., P.E.
Q.D.C. DEVELOPMENT SERVICES DIRECTOR
DATE: MAY 8, 2017

DRAWING TITLE:
**PIER 2 INFRASTRUCTURE
IMPROVEMENTS**

TYPICAL EXISTING CELLULAR COFFERDAM SECTION

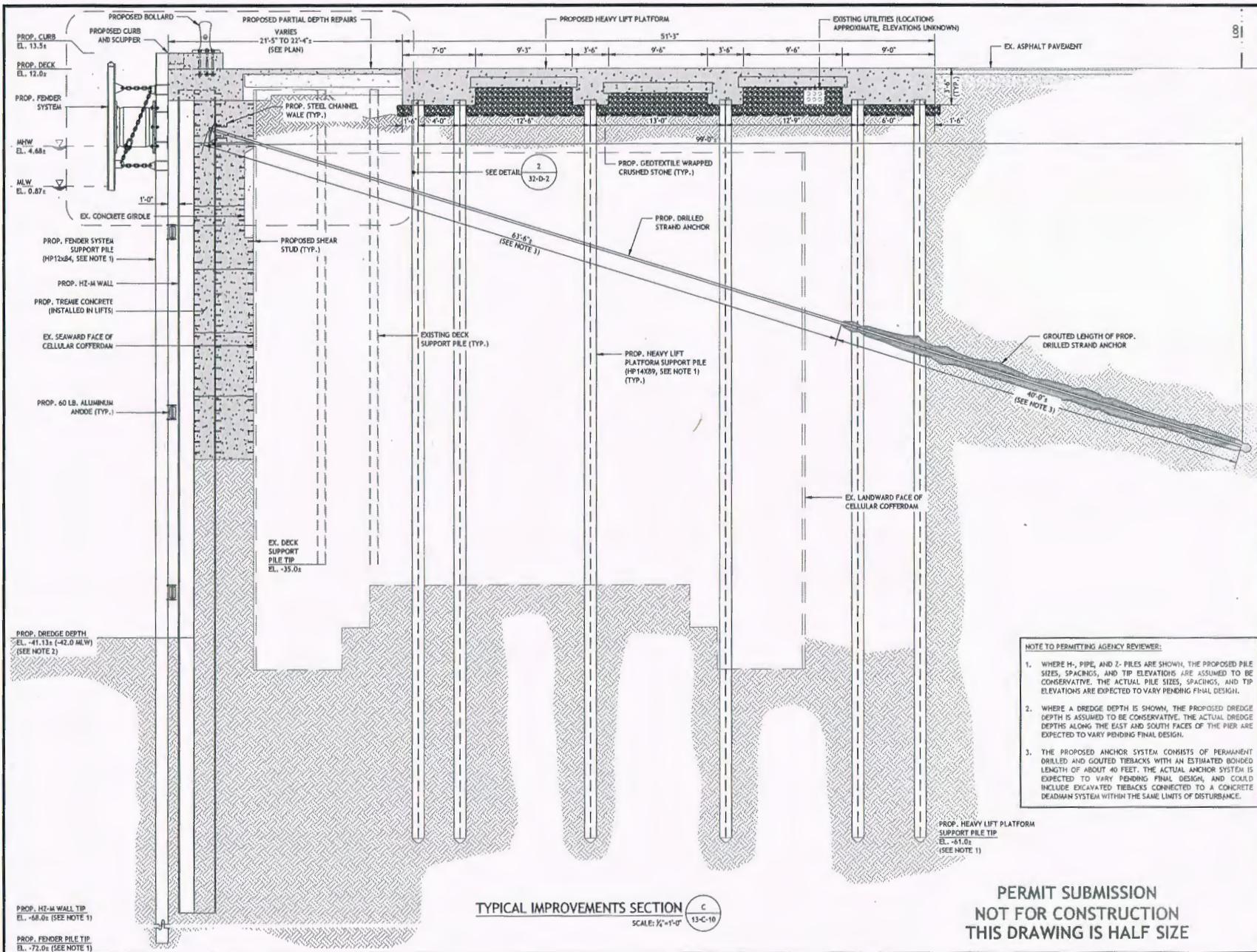
Quonset Business Park,

SHEET NO.	DRAWING NO.
S-1	26607
24 OF 32 SHEETS	



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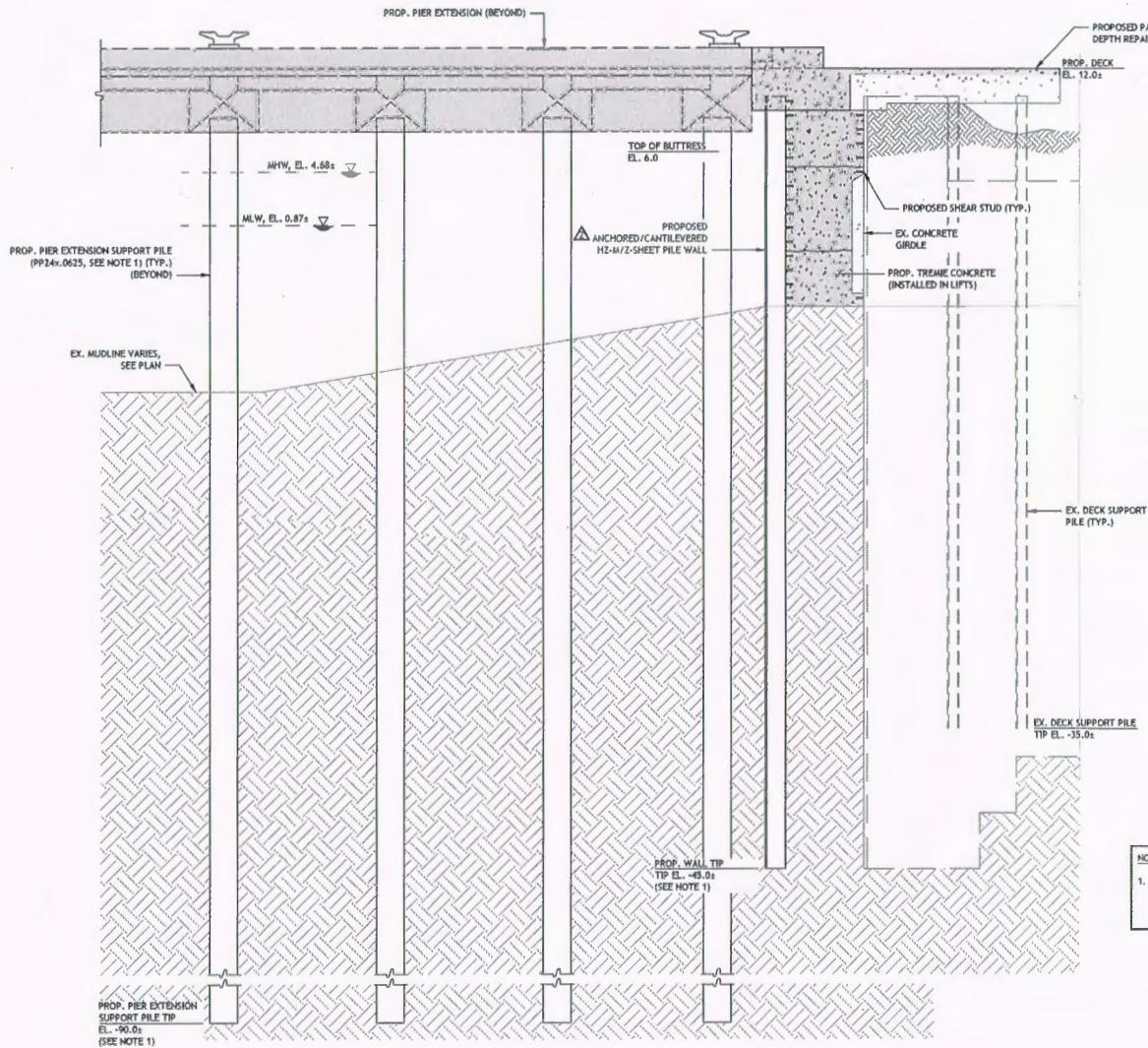
**PERMIT SUBMISSION
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SHEET NO. S-3	DRAWING NO. 26607
26 OF 32 SHEETS	

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RT Group, Inc.
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70 Romano Vineyard Way, Suite 134
North Kingstown, RI 02852
T 401.438.3100 F 401.294.9605
BAM SAFETY WATERPROOF CONSTRUCTION INNOVATION INTEGRITY ENVIRONMENTAL STRUCTURE CIVIL



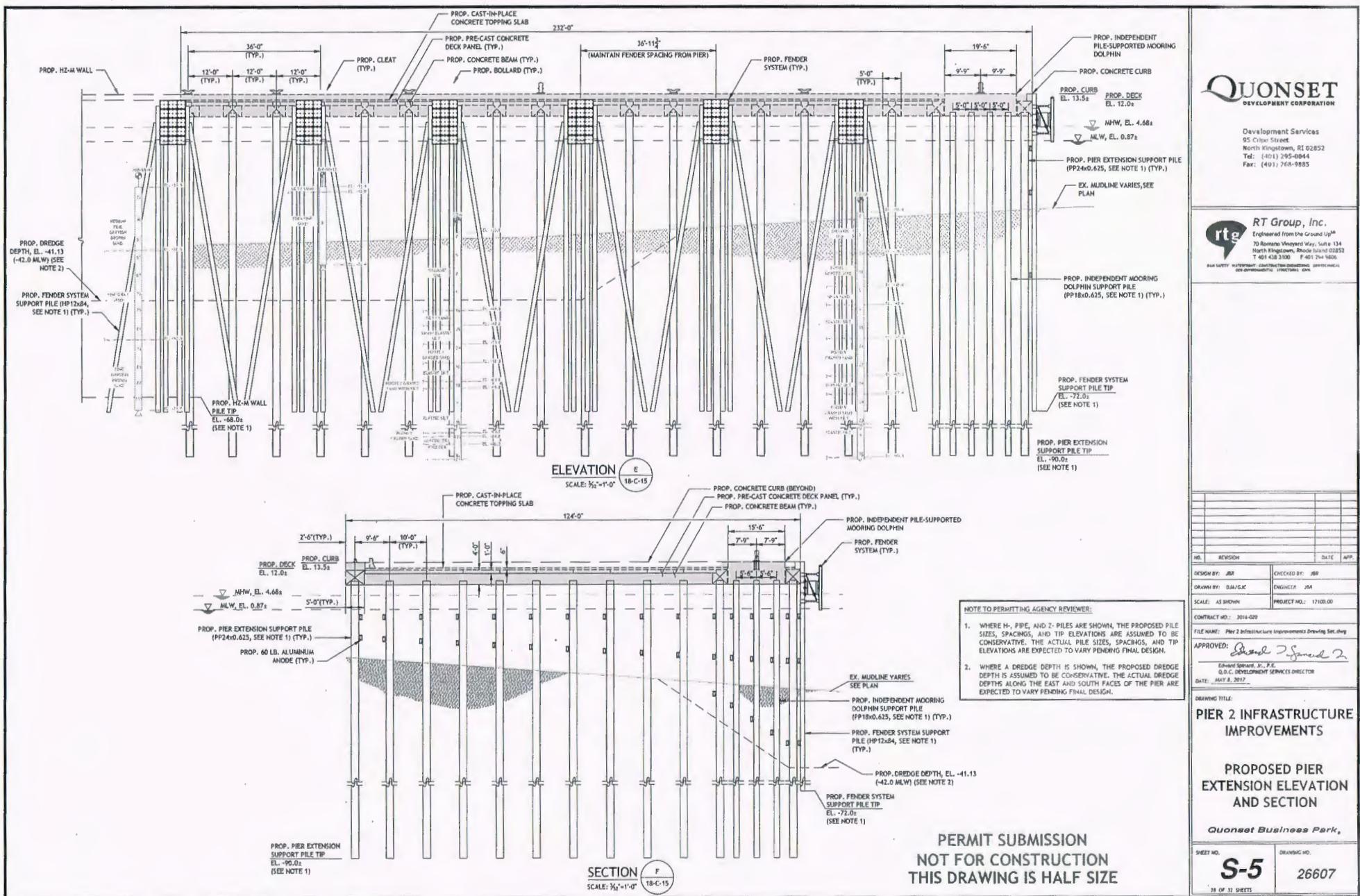
NOTE TO PERMITTING AGENCY REVIEWER:

1. WHERE H-, PIPE, AND Z- PILES ARE SHOWN, THE PROPOSED PILE SIZES, SPACINGS, AND TIP ELEVATIONS ARE ASSUMED TO BE CONSERVATIVE. THE ACTUAL PILE SIZES, SPACINGS, AND TIP ELEVATIONS ARE EXPECTED TO VARY PENDING FINAL DESIGN.

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THIS DRAWING IS HALF SIZE

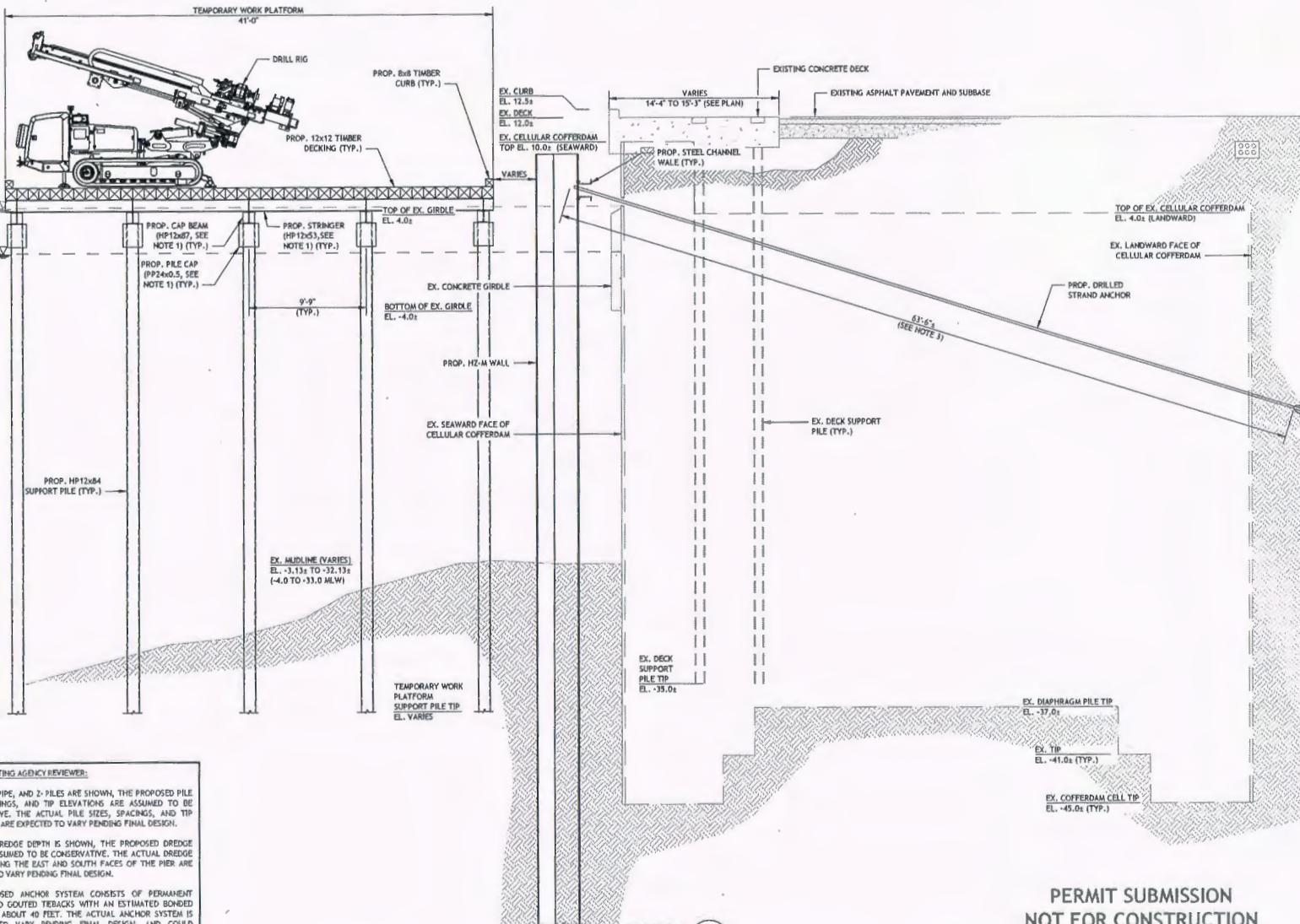
SECTION D
SCALE: 1/8"=1'-0"
17-C-14

Quonset Business Park,
SHEET NO. S-4 DRAWING NO. 26607
12 OF 32 SHEETS



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REV:	DATE:
DESIGN BY: JBR	CHECKED BY: JBR
DRAWN BY: DJA/GJC	ENGINEER: JBR
SCALE: AS SHOWN	PROJECT NO.: #7000.00
CONTRACT NO.: 2016-020	
FILE NAME: Pier 2 Infrastructure Improvements Drawing Set.dwg	
APPROVED: <i>Edward Seward, Jr., P.E.</i> Q.D.C. DEVELOPMENT SERVICES DIRECTOR DATE: MAY 8, 2017	
DRAWING TITLE: PIER 2 INFRASTRUCTURE IMPROVEMENTS	
TEMPORARY WORK PLATFORM SECTION	
Quonset Business Park,	
SHEET NO. S-6	DRAWING NO. 26607
39 OF 32 SHEETS	

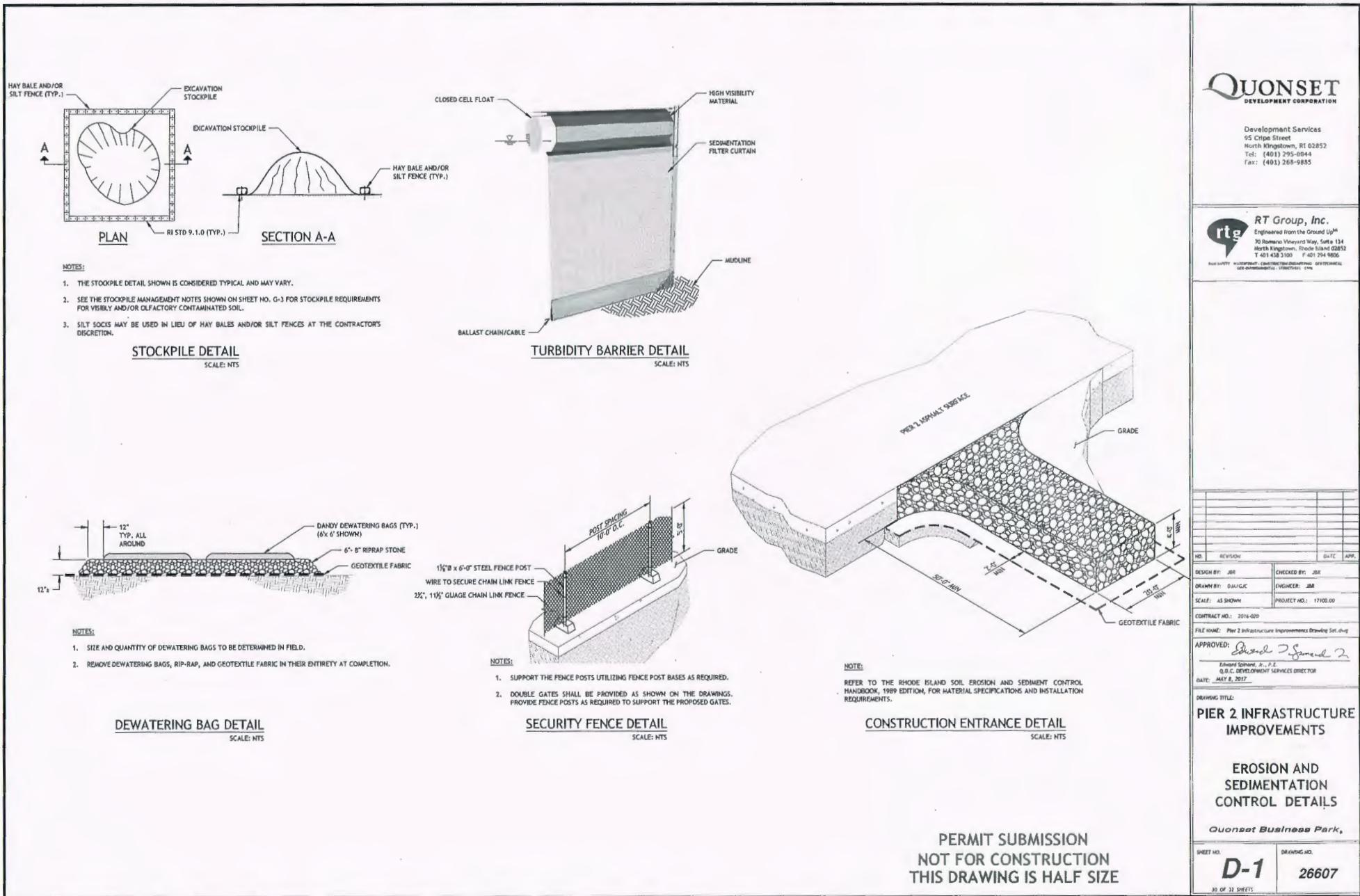


NOTE TO PERMITTING AGENCY REVIEWER:

- WHERE H-, PIPE, AND Z-PILES ARE SHOWN, THE PROPOSED PILE SIZES, SPACINGS, AND TIP ELEVATIONS ARE ASSUMED TO BE CONSERVATIVE. THE ACTUAL PILE SIZES, SPACINGS, AND TIP ELEVATIONS ARE EXPECTED TO VARY PENDING FINAL DESIGN.
- WHERE A DREDGE DIPPER IS SHOWN, THE PROPOSED DREDGE DEPTH IS ASSUMED TO BE CONSERVATIVE. THE ACTUAL DREDGE DEPTH ALONG THE EXISTING SOUTH FACES OF THE PIER ARE EXPECTED TO VARY PENDING FINAL DESIGN.
- THE PROPOSED ANCHOR SYSTEM CONSISTS OF PERMANENT DRILLED AND GROUTED TRACKS WITH AN ESTIMATED BONDED LENGTH OF ABOUT 40 FEET. THE ACTUAL ANCHOR SYSTEM IS EXPECTED TO VARY PENDING FINAL DESIGN, AND COULD INCLUDE EXCAVATED TIEBACKS CONNECTED TO A CONCRETE DEADMAN SYSTEM WITHIN THE SAME LIMITS OF DISTURBANCE.

SECTION G
SCALE: 1/2"-1'-0"
20-G-17

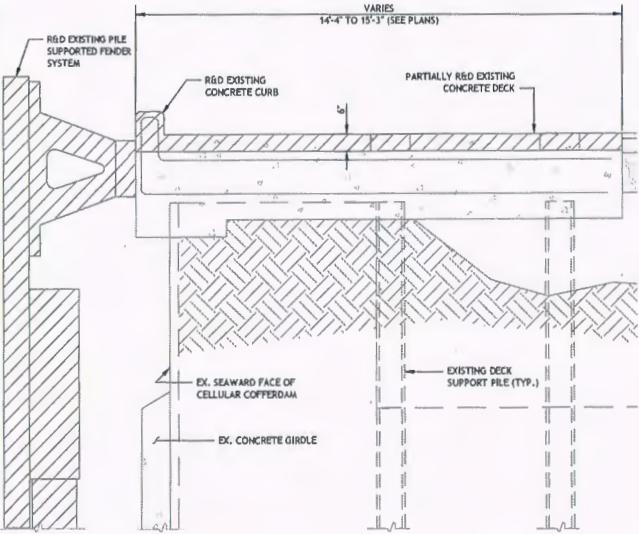
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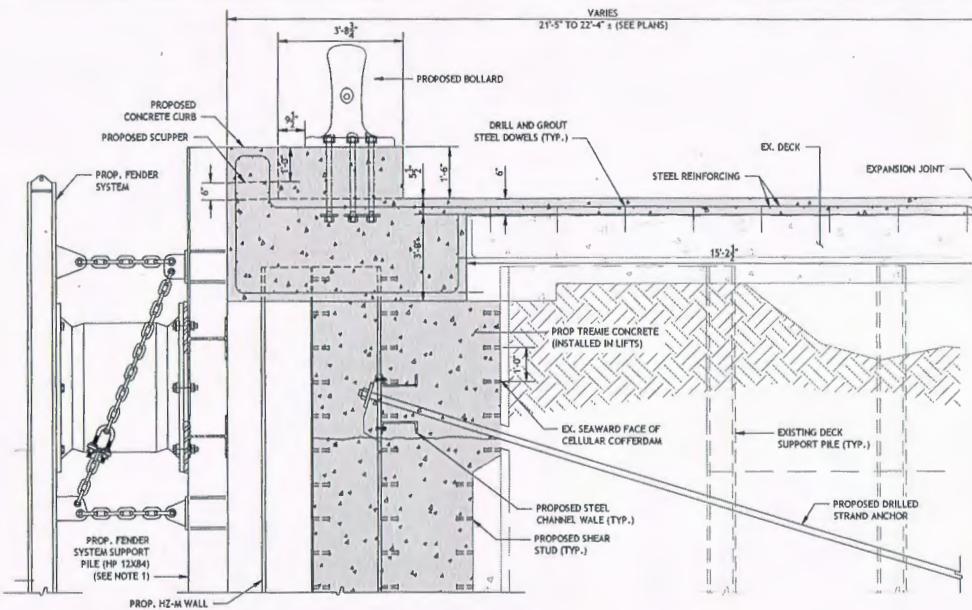
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North Kingstown, Rhode Island 02852
T 401.439.5100 F 401.794.0800
www.rtgroup.com info@rtgroup.com
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PARTIAL DEPTH DEMOLITION AND REMOVAL DETAIL

SCALE: 1' = 20'

1
26-5-02



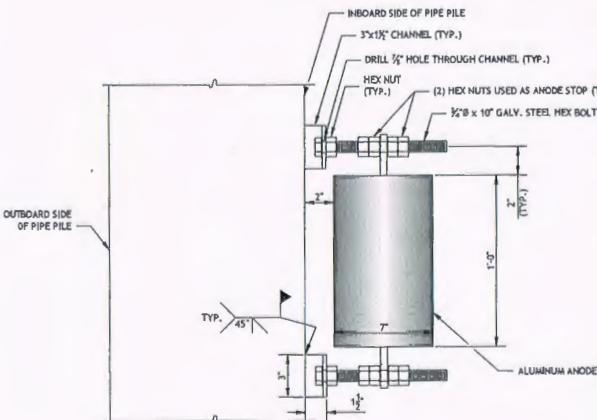
PARTIAL DEPTH REPAIRS AND IMPROVEMENTS DETAIL

SCALE: 1' = 20'

2
27-5-03

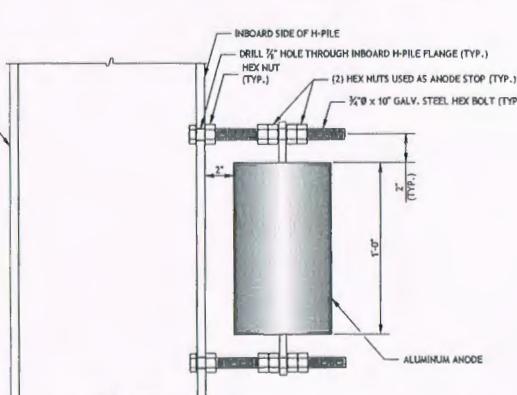
NOTE TO PERMITTING AGENCY REVIEWER:

- WHERE H-, PIPE, AND Z- FILES ARE SHOWN, THE PROPOSED PILE SIZES, SPACINGS, AND TIP ELEVATIONS ARE ASSUMED TO BE CONSERVATIVE. THE ACTUAL PILE SIZES, SPACINGS, AND TIP ELEVATIONS ARE EXPECTED TO VARY PENDING FINAL DESIGN.



ANODE MOUNTING DETAIL (PIPE PILE)

SCALE: 3" = 1'-0"



ANODE MOUNTING DETAIL (H-PILE)

SCALE: 3" = 1'-0"

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NOT FOR CONSTRUCTION
THIS DRAWING IS HALF SIZE

NO.	REVISION	DATE	APP.
DESIGN BY:	JDR	CHECKED BY:	JDR
DRAWN BY:	DRAGIE	ENGINEER:	JDR
SCALE:	AS SHOWN	PROJECT NO.:	17100.00
CONTRACT NO.:	2018-020		
FILE NAME:	Pier 2 Infrastructure Improvements Drawing Set.dwg		

APPROVED:
Edward Sparaco, Jr., P.E.
Q.D.C. DEVELOPMENT SERVICES DIRECTOR
DATE: MAY 8, 2012

DRAWING TITLE:
**PIER 2 INFRASTRUCTURE
IMPROVEMENTS**

MISCELLANEOUS
DETAILS

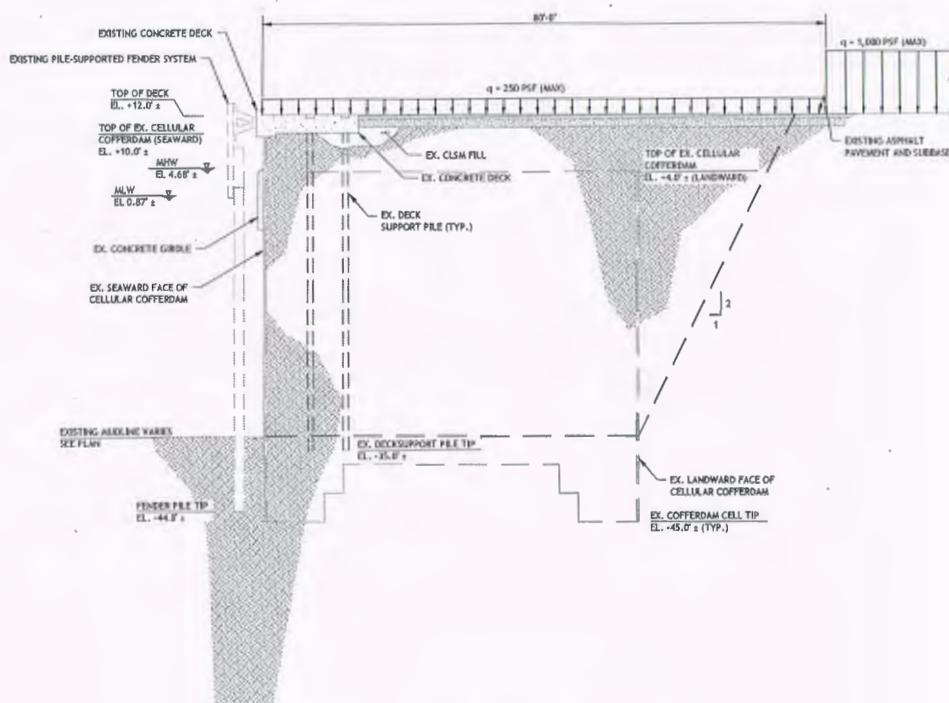
Quonset Business Park,

SHEET NO.	D-2	DRAWING NO.	26607
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31 of 32 SHEETS

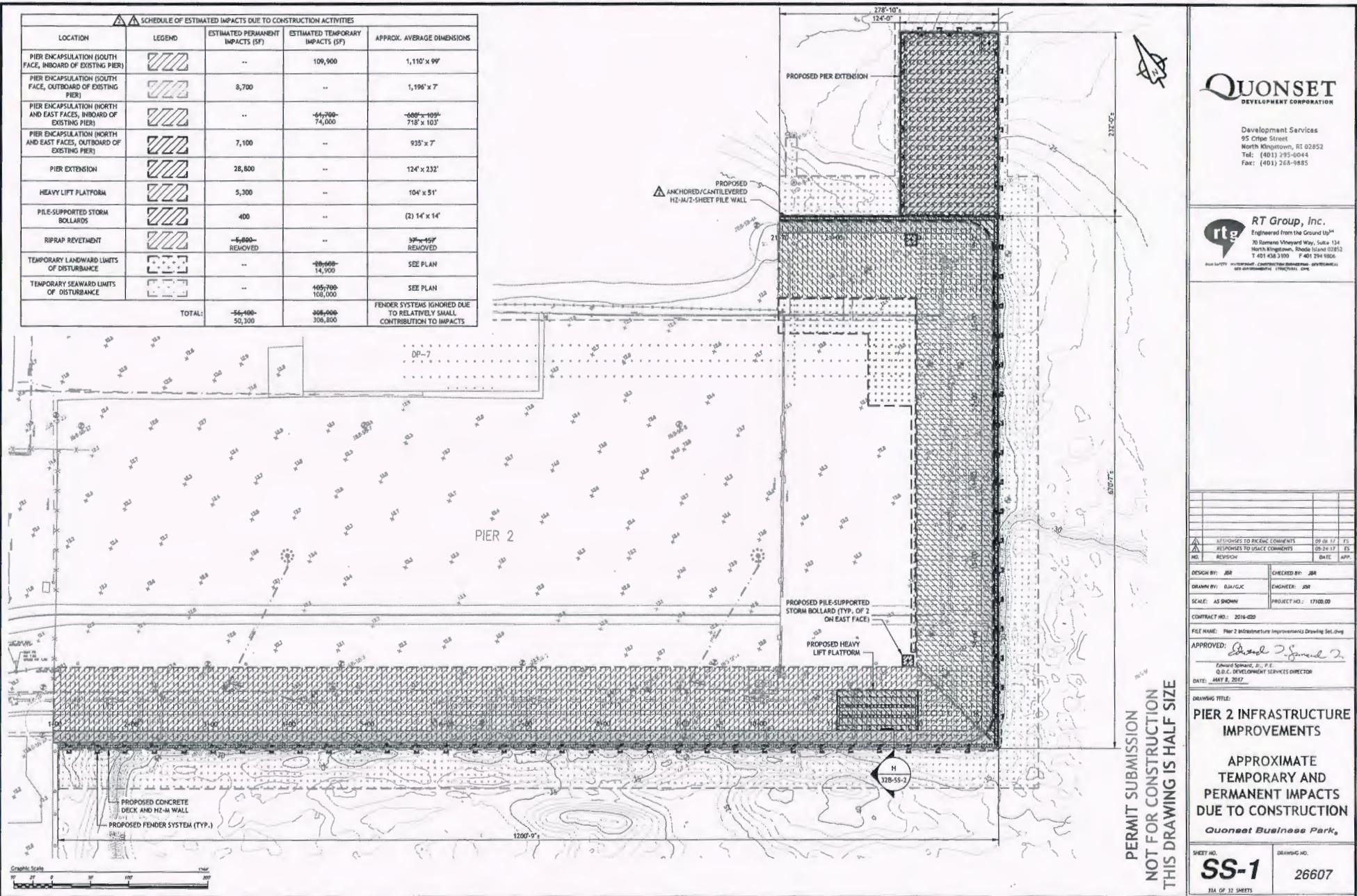
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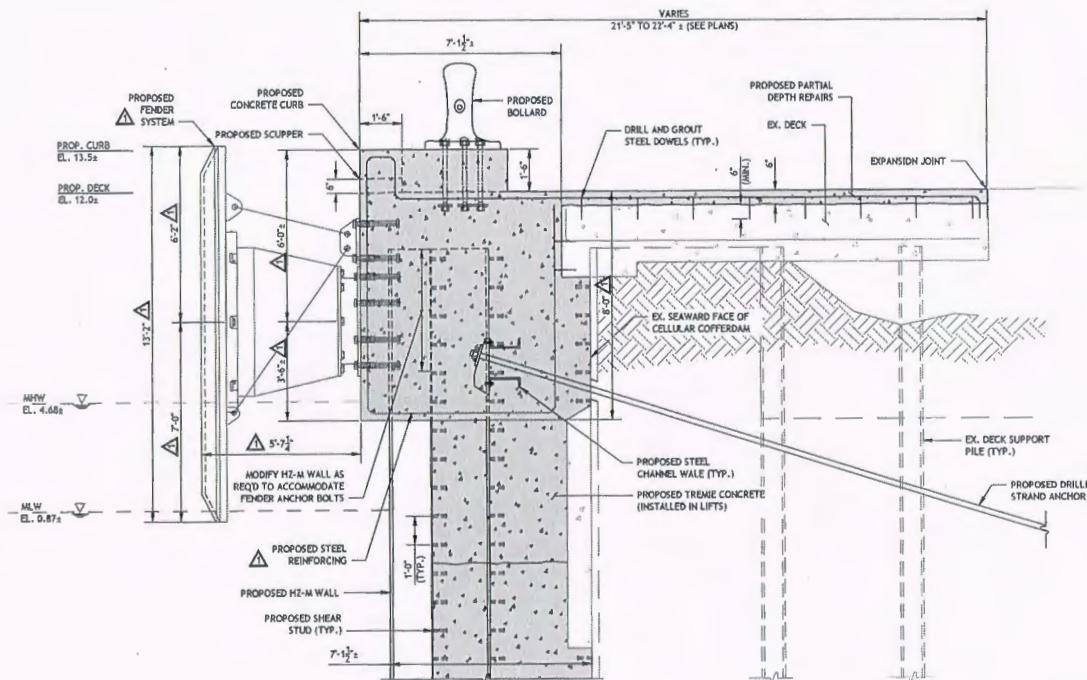
NO.	REVISION	DATE	APP.
DESIGN BY:	JBR	CHECKED BY:	JBR
DRAWN BY:	DAIGLE	ENGINEER:	JBR
SCALE:	AS SHOWN	PROJECT NO.	17100.00
CONTRACT NO.: 2016-020			
FILE NAME: Pier 2 Infrastructure Improvements Drawing Set.dwg			
APPROVED: <i>Edward Spaulding Jr., P.E.</i>			
Edward Spaulding, Jr., P.E. Q.D.C. DEVELOPMENT SERVICES DIRECTOR DATE: MAY 8, 2017			
DRAWING TITLE: PIER 2 INFRASTRUCTURE IMPROVEMENTS			
LOAD LIMITATION DIAGRAM			
Quonset Business Park,			
SHEET NO.	D-3	DRAWING NO.	26607
33 OF 22 SHEETS			



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REVISED FENDER AND IMPROVEMENTS SECTION

SCALE: $\frac{1}{2}'' = 1'-0''$ 32A-55-1

NOTE TO PERMITTING AGENCY REVIEWER:

- THE PROPOSED FENDER SPACING MAY VARY FROM 40- TO 44 FEET ON-CENTER.

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REVISION	RESPONSES TO USACE COMMENTS	05/24/17	ES
REVISOR	DATE APP.		

DESIGN BY: JBR	CHECKED BY: JBR
DRAWN BY: DAI/GJC	ENGINEER: JBR
SCALE: AS SHOWN	PROJECT NO.: 17100.00

CONTRACT NO.: 2016-020

FILE NAME: Pier 2 Infrastructure Improvement Drawing Set.cwg

APPROVED: *Edward S. Farwell, Jr., P.E.*
Edward S. Farwell, Jr., P.E.
Q.D.C. DEVELOPMENT SERVICES DIRECTOR
DATE: MAY 8, 2017

**PIER 2 INFRASTRUCTURE
IMPROVEMENTS**

**REVISED FENDER AND
IMPROVEMENTS
SECTION**

Quonset Business Park

SHEET NO.	DRAWING NO.
SS-2	26607
37 OF 32 SHEETS	



MATERIALS & METHODS

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PIER 2 INFRASTRUCTURE IMPROVEMENTS

PERMITTING
STRUCTURAL
PERIMETER

Quonset Business Park

SS-3 26607
CBAHNG, MO.

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