



Board of County Commissioners • Escambia County, Florida

Paul R. Nobles/Purchasing Manager
Office of Purchasing

August 1, 2018

To: All Known Prospective Bidders

ADDENDUM NUMBER 1:

Re: PD 17-18.074 Congestion Management Plan Phase II Sheriff's Parking Lot

All:

Your firm recently received an Invitation to Bid on the above-mentioned specification.

This Addendum Number 1 provides a copy of the drawings for the project that are easier to read than the copy submitted with the solicitation. These drawings, however, are not signed and sealed, but Volkert has confirmed that the drawings are equivalent to the signed, sealed version. Please see below for the full set of drawings.

This Addendum Number 1 is furnished to all known prospective bidders. Please sign and return one copy of this Addendum, with original signature, with your bid as an acknowledgement of your having received same. You may photo copy this form for your records.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeffrey Lovinood".

Jeffrey Lovinood
Purchasing Specialist

Acknowledgement of Receipt of Addendum:

SIGNED: _____

COMPANY: _____

JDL



BOARD OF COUNTY COMMISSIONERS
ESCAMBIA COUNTY, FLORIDA
PUBLIC WORKS DEPARTMENT
TRANSPORTATION & TRAFFIC OPERATIONS DIVISION

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PLANS PROPOSED FOR
PENSACOLA BEACH
CONGESTION MANAGEMENT
PLAN-PHASE II
CASINO BEACH PARKING LOT

PD 15-16.007/PO 161017
 VOLKERT PROJECT #635501.WR

100% SUBMITTAL
 RELEASED FOR CONSTRUCTION
 MAY 2018

PLANS PREPARED BY:



Engineers • Surveyors • Planners
 6601 N. DAVIS HWY. SUITE 102
 PENSACOLA, FL. 32504
 Telephone (850) 477-7485
 www.volkert.com

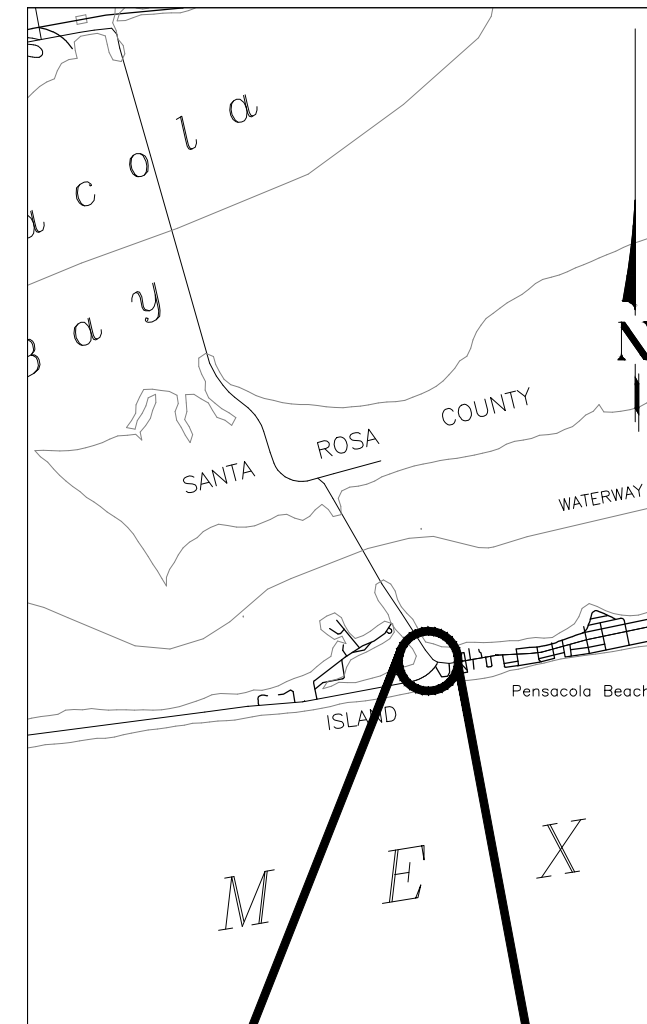
THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH THE LATEST ESCAMBIA COUNTY TECHNICAL SPECIFICATIONS.

ANY REFERENCE TO FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, DIVISION 1, GENERAL REQUIREMENTS AND COVENANTS, SHALL BE EXCLUDED AND NOT APPLICABLE TO ANY SPECIFICATION REFERED HEREIN OR OTHERWISE LISTED IN THESE PLANS OR RELATED DOCUMENTS OR THE ESCAMBIA COUNTY TECHNICAL SPECIFICATIONS.

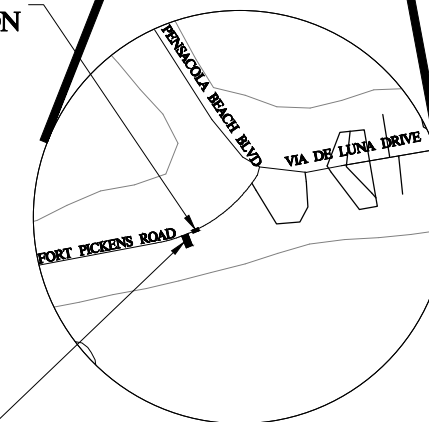
NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO REPRODUCTION.

COMMISSIONERS

- | | |
|----------------|--------------------------|
| DISTRICT ONE | JEFF BERGOSH, CHAIRMAN |
| DISTRICT TWO | DOUG UNDERHILL |
| DISTRICT THREE | LUMON MAY, VICE CHAIRMAN |
| DISTRICT FOUR | GROVER C. ROBINSON IV |
| DISTRICT FIVE | STEVEN BARRY |



FORT PICKENS ROAD CROSSWALK LIGHTING LOCATION



CASINO BEACH PARKING LOT LOCATION

VICINITY MAP
NOT TO SCALE

PROJECT MANAGER: DAVID FORTE	
SECTION / TOWNSHIP / RANGE: 28 / 2S / 26	DISTRICT: 4
PROJECT ENGINEER: MIKE WARNKE	REG FLA ENG NO: 64091
SIGNATURE:	DATE:

GENERAL NOTES:

- THE CONTRACTORS SHALL NOTIFY THE COUNTY DESIGN ENGINEER OR DESIGNEE 48 HOURS PRIOR TO CONSTRUCTION.
- ALL CONDITIONS AND STIPULATIONS OF THE CONSTRUCTION PERMITS AND THE APPROVALS ISSUED BY THE ESCAMBIA COUNTY ENGINEER SHALL BE COMPLIED WITHIN EVERY DETAIL.
- ALL ROADS DAMAGED BY CONSTRUCTION OPERATIONS ARE TO BE PATCHED OR RECONSTRUCTED AS DIRECTED BY THE COUNTY ENGINEER OR DESIGNEE.
- THE CONTRACTOR SHALL TAKE STEPS NECESSARY TO PREVENT EROSION AND ANY OFF SITE SEDIMENT TRANSPORT RESULTING FROM INCREASED RUNOFF DURING CONSTRUCTION BY PROVIDING SILT FENCE AND/OR STAKED HAY BALES AS REQUIRED BY FDOT INDEX 102, THE FLORIDA STORMWATER, EROSION, AND SEDIMENT CONTROL INSPECTOR'S MANUAL, 2000 EDITION, OR AS INDICATED ON THE PLANS. ALL EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL ASSOCIATED DISTURBED AREAS ARE STABILIZED AS TO REDUCE SEDIMENT RUNOFF, UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR DESIGNEE.
- ANY NECESSARY PERMITS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. ESCAMBIA COUNTY OR ITS DESIGNEE WILL ASSIST CONTRACTOR WITH REQUIRED PERMITS.
- THE CONTRACTOR IS CAUTIONED TO VISIT THE SITE AND FAMILIARIZE HIMSELF WITH THE PROJECT PRIOR TO BIDDING AND/OR CONSTRUCTION.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PRESERVE OR RELOCATE ALL BENCHMARKS (VERTICAL CONTROL) AS NEEDED DURING CONSTRUCTION. ALL PUBLIC OR PRIVATE CORNER MONUMENTATION SHALL BE PROTECTED. IF A PUBLIC OR PRIVATE CORNER MONUMENTATION IS IN DANGER OF BEING DESTROYED AND HAS NOT BEEN PROPERLY REFERENCED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR DESIGNEE IMMEDIATELY. ANY ESCAMBIA COUNTY HARN/GPS NETWORK MONUMENTS OR BUREAU OF SURVEY AND MAPPING GPS NETWORK MONUMENTS WITHIN THE LIMITS OF CONSTRUCTION SHALL BE PROTECTED. IF A HARN/GPS NETWORK MONUMENTS OR BUREAU OF SURVEY AND MAPPING GPS NETWORK MONUMENTS ARE DISTURBED OR DESTROYED THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF THE MONUMENTS AND HAVE THE MONUMENTS POSITION DETERMINED BY A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER USING GUIDELINES AS ESTABLISHED BY NATIONAL GEODETIC SURVEY FOR BLUE BOOKING AND APPROVAL.
- EXISTING DRAINAGE FEATURES WITHIN CONSTRUCTION LIMITS SHALL REMAIN UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL MATCH EXISTING CONDITIONS AT THE BEGINNING AND END OF CONSTRUCTION AS DIRECTED BY THE COUNTY ENGINEER OR DESIGNEE.
- ALL ROADWAY CONSTRUCTION SHALL COMPLY WITH THE ESCAMBIA COUNTY TECHNICAL SPECIFICATIONS, LATEST EDITION.
- ALL MATERIALS, TESTING AND CONSTRUCTION METHODS SHALL CONFORM TO THE ESCAMBIA COUNTY TECHNICAL SPECIFICATIONS, LATEST EDITION.
- ANY REFERENCE TO FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, DIVISION 1, GENERAL REQUIREMENTS AND COVENANTS, SHALL BE EXCLUDED AND NOT APPLICABLE TO ANY SPECIFICATION REFERRED HEREIN OR OTHERWISE LISTED IN THESE PLANS OR RELATED DOCUMENTS OR THE ESCAMBIA COUNTY TECHNICAL SPECIFICATIONS.
- EXISTING STREET AND ROAD NAME SIGNS ON THE PROJECT SHALL BE KEPT VISIBLE AT ALL TIMES FOR THE FACILITATION OF ACCESS BY EMERGENCY VEHICLES. ALL OTHER EXISTING SIGNS THAT CONFLICT WITH CONSTRUCTION OPERATIONS SHALL BE TAKEN DOWN AND STOCKPILED WITHIN THE R/W LIMITS BY THE CONTRACTOR AS DIRECTED BY THE COUNTY ENGINEER OR DESIGNEE. ANY EXISTING SIGNS THAT ARE TO BE RELOCATED AND ARE DAMAGED BEYOND USE BY THE CONTRACTOR SHALL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE.
- CONTRACTOR SHALL COMPLY WITH ALL F.D.E.P. AND ARMY CORP. OF ENGINEERS REQUIREMENTS.
- ONLY ACCESS TO THE ROAD R/W AS SHOWN IS GUARANTEED BY THE COUNTY. PRIVATE R/W REQUIRED BY THE CONTRACTOR TO FACILITATE CONSTRUCTION SHALL BE ACQUIRED BY THE CONTRACTOR WITH NO ADDITIONAL COMPENSATION OR ASSISTANCE FROM THE COUNTY.
- IN THE EVENT THAT SURVEY MONUMENTATION OR REFERENCE POINTS ARE MISSING OR HAVE BEEN DESTROYED, PLEASE CONTACT:

JOE BARRET ESCAMBIA COUNTY 3363 WEST PARK PLACE PENSACOLA, FL 32505 PH: (850)595-3427	WESLEY BUMPERS, P.L.S. VOLKERT, INC. 3809 MOFFETT ROAD MOBILE, AL 36618 PH:(251)342-1070
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- VEGETATION ON R/W AND EASEMENTS SHALL BE RESTORED TO ORIGINAL CONDITION UNLESS OTHERWISE NOTED ON THE PLAN SHEETS. COST OF SAID RESTORATION SHALL BE CONSIDERED INCIDENTAL TO OTHER PAY ITEMS.
- ALL TREES WITHIN LIMITS OF CONSTRUCTION SHALL BE REMOVED UNLESS OTHERWISE NOTED IN PLANS.
- ALL COMPACTED FILL SHALL BE PLACED IN 4" LIFTS FOR HAND POWERED TAMPERS AND 8" LIFTS FOR HEAVY EQUIPMENT OPERATED TAMPERS.
- MAINTENANCE OF TRAFFIC AS PER FDOT INDEX 600.

GENERAL NOTES CONT.:

- THE CONTRACTOR SHALL, AT A MINIMUM, MATCH EXISTING SIGNING AND PAVEMENT MARKINGS. ALL SIGNING AND PAVEMENT MARKINGS SHALL BE PLACED IN ACCORDANCE WITH THE LATEST FDOT DESIGN STANDARDS. THE CONTRACTOR SHALL CONTACT THE COUNTY TRAFFIC DEPARTMENT PRIOR TO INSTALLATION OF ANY SIGNING AND PAVEMENT MARKINGS.
- WHERE UNSUITABLE MATERIAL, AS DEFINED BY THE COUNTY SPECIFICATIONS SECTION 02300, 1.3(j), IS ENCOUNTERED IN THE AREAS PROPOSED FOR PAVING, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE COUNTY ENGINEER OR DESIGNEE PRIOR TO ANY EXCAVATION.
- PIPE LENGTHS SHOWN IN THE PLANS DO NOT INCLUDE THE LENGTH OF PIPE THAT MUST BE INSTALLED WITH THE MITERED END SECTION. THEREFORE, ALL PIPES LENGTHS ASSOCIATED WITH MITERED END SECTIONS SHALL BE PAID FOR IN THE UNIT COST OF THE MITERED END SECTION.
- ALL CONTRACTORS, COUNTY REPRESENTATIVES, AND UTILITY COMPANIES ARE RESPONSIBLE FOR THEIR RESPECTIVE SURVEYING AND LAYOUT. ANY SURVEYING MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE REPLACED UPON COMPLETION OF THE WORK BY A REGISTERED LAND SURVEYOR IN THE STATE OF FLORIDA.
- IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXISTING SITE CONDITIONS, INCLUDING SOIL CONDITIONS PRIOR TO BIDDING ON THE PROJECT. A COPY OF THE GEOTECHNICAL REPORT IS INCLUDED IN THE CONTRACT DOCUMENTS FOR THE CONTRACTORS REFERENCE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE REQUIRED TESTING TO ENSURE THAT PROPER COMPACTION HAS BEEN ACHIEVED ON THE SUBGRADE, BASE AND ALL OTHER PERTINENT AREAS THAT HAVE BEEN COMPLETED. THE CONTRACTOR SHALL BEAR ALL COSTS OF TESTING AND RETESTING AS REQUIRED AND SHALL PROVIDE THE COUNTY WITH COPIES OF CERTIFIED TESTING REPORTS.
- THE LOCATION OF ALL EXISTING UTILITIES AND STORM DRAINAGE SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY. IT IS THE CONTRACTORS RESPONSIBILITY PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES TO NOTIFY THE VARIOUS UTILITIES AND TO MAKE ANY REQUIRED ARRANGEMENTS FOR ANY RELOCATIONS OF THESE UTILITIES WITH THE OWNER OF SAID UTILITY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING UNDERGROUND UTILITIES, WHETHER SHOWN ON THE PLAN OR LOCATION BY THE UTILITY. ANY UTILITIES THAT INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL TO BROUGHT TO THE ATTENTION OF THE ENGINEER. ANY FEES ASSOCIATED WITH UTILITY RELOCATIONS SHALL BE BORNE IN ACCORDANCE WITH RESPECTIVE UTILITY COMPANY STANDARDS. ANY DELAY OR INCONVENIENCE CAUSED TO THE CONTRACTOR BY THE RELOCATION OF ANY UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED.
- THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE COUNTY, ENGINEER OF RECORD, UTILITY COMPANIES AND CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A UTILITY PERMIT FROM THE COUNTY ROAD DEPARTMENT PRIOR TO COMMENCING ANY WORK WITHIN THE R/W.
- THE CONTRACTOR SHALL MAINTAIN A CURRENT SET OF CONSTRUCTION PLANS AND ALL PERMITS ON THE JOB SITE AT ALL TIMES.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT NO CONSTRUCTION ACTIVITIES TAKE PLACE OUTSIDE OF THE EXISTING R/W OR EASEMENTS SHOWN ON THE PLANS. ANY ON-SITE OR OFFSITE AREAS THAT ARE DISTURBED SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO SAFETY BARRICADE ALL EXCAVATIONS AND OTHER HAZARDS.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY CONFLICTS BETWEEN THE CONTRACT DOCUMENTS AND EXISTING CONDITIONS. THE DRAWINGS REPRESENT KNOWN STRUCTURES AND UTILITIES LOCATED WITHIN THE PROJECT AREA, THE CONTRACTOR IS CAUTIONED THAT OTHER STRUCTURES AND UTILITIES, ABOVE OR BELOW GROUND, MAY BE ENCOUNTERED DURING THE COURSE OF CONSTRUCTION.
- ALL MATERIALS AND CONSTRUCTION TO BE IN ACCORDANCE WITH THE COUNTY'S LATEST CONSTRUCTION SPECIFICATIONS. ALL MATERIALS STORAGE AREAS SHALL BE CLEARLY IDENTIFIED AND SECURED BY THE CONTRACTOR. STOCKPILES ON THE ISLAND ARE LIMITED AND REQUIRE PRIOR APPROVAL.
- ALL NEW CONCRETE FOR THE PROJECT SHALL ACHIEVE A 28 DAY STRENGTH OF 3000 PSI (MIN.), UNLESS OTHERWISE NOTED.
- ALL TREES IN THE PROJECT AREA ARE TO REMAIN UNDAMAGED UNLESS OTHERWISE NOTED FOR REMOVAL.
- THE CONTRACTOR IS TO REPLACE TO EXISTING CONDITION OR BETTER ANY FENCES, SPRINKLER SYSTEMS, TREES, SHRUBS, FLOWER BEDS, OR OTHER EXISTING IMPROVEMENTS IMPACTED DURING CONSTRUCTION, WHETHER DEPICTED ON THE PLANS OR NOT.
- ALL EXISTING MAILBOXES INTERFERING WITH NEW CONSTRUCTION SHALL BE RELOCATED OR REPLACED BY THE CONTRACTOR IN ACCORDANCE WITH POSTAL REQUIREMENTS AND IN ACCORDANCE WITH ESCAMBIA COUNTY TECHNICAL SPECIFICATION, FDOT DESIGN STANDARDS AND UNITED POSTAL REQUIREMENTS. ALL EXISTING BRICK MAILBOXES WITHIN LIMITS OF CONSTRUCTION OR COUNTY RIGHT OF WAY SHALL BE REMOVED AND PLACED ON THE PROPERTY LINE OF THE OWNER. CONTRACTOR SHALL REPLACE EXISTING BRICK MAILBOX WITH APPROVED PLASTIC BREAK AWAY MAILBOX.

GENERAL NOTES CONT.:

- DAMAGE TO ANY EXISTING ROADS DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR PRIOR TO FINAL "AS-BUILT" SIGN-OFF FROM THE COUNTY AT NO ADDITIONAL COST TO THE COUNTY.
 - SHOP DRAWINGS OF ALL MATERIALS BEING USED SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO ORDER, SHIPMENT, OR INSTALLATION.
 - THE CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS DURING CONSTRUCTION WHICH SHOW "AS-BUILT" CONDITIONS OR ALL WORK. RECORD DRAWINGS SHALL BE PROVIDED TO THE ENGINEER PRIOR TO REQUESTING A FINAL INSPECTION.
 - THE CONTRACTOR SHALL SCHEDULE WITH THE COUNTY A FINAL INSPECTION UPON COMPLETION OF ALL WORK AND ANY INTERMEDIATE INSPECTIONS AT 850-595-3472. AS-BUILT CERTIFICATION IS REQUIRED PRIOR TO REQUEST FOR FINAL INSPECTION.
 - ALL ASPECTS OF STORMWATER/DRAINAGE AND/OR TRANSPORTATION COMPONENTS SHALL BE COMPLETED PRIOR TO REQUESTING A FINAL INSPECTION.
 - NO DEVIATIONS OR REVISION FROM THE PLANS BY THE CONTRACTOR SHALL BE ALLOWED WITHOUT PRIOR APPROVAL FROM BOTH THE ENGINEER OF RECORD AND ESCAMBIA COUNTY. ANY DEVIATION MAY RESULT IN DELAYS IN THE COUNTY'S ACCEPTANCE OF IMPROVEMENTS.
 - IF ARCHAEOLOGICAL MATERIAL/PREHISTORIC ARTIFACTS SUCH AS POTTERY OR CERAMICS, STONE TOOLS OR METAL IMPLEMENTS, OR ANY OTHER PHYSICAL REMAINS THAT COULD BE ASSOCIATED WITH NATIVE AMERICAN CULTURES, OR EARLY COLONIAL OR AMERICAN SETTLEMENT ARE ENCOUNTERED AT ANY TIME, THE PROJECT SHOULD CEASE ALL ACTIVITIES INVOLVING SUBSURFACE DISTURBANCE IN THE IMMEDIATE VICINITY OF SUCH DISCOVERIES. THE APPLICANT/RECIPIENT, OR OTHER DESIGNEE, SHOULD CONTACT THE FLORIDA DEPARTMENT OF STATE, DIVISION OF HISTORICAL RESOURCES, THE STATE HISTORIC PRESERVATION OFFICER (SHPO) AND THE DSH/FEEMA REGION IV ENVIRONMENTAL OFFICER AND FDEM STATE ENVIRONMENTAL LIAISON OFFICER FOR FURTHER GUIDANCE. PROJECT ACTIVITIES SHOULD NOT RESUME WITHOUT VERBAL AND/OR WRITTEN AUTHORIZATION FROM THE THE DIVISION OF HISTORICAL RESOURCES.
 - IN THE EVENT THAT UNMARKED HUMAN REMAINS ARE ENCOUNTERED DURING PERMITTING ACTIVITIES, ALL WORK MUST STOP IMMEDIATELY AND THE PROPER AUTHORITIES NOTIFIED IN ACCORDANCE WITH SECTION 872.05, FLORIDA STATUTE.
 - ALL CONSTRUCTION SHALL MEET ALL REQUIREMENTS CONCERNING ADA STANDARDS, LATEST EDITION OF DESIGN STANDARDS AND PUBLIC RIGHTS-OF-WAYS ACCESSIBILITY GUIDELINES (PROWAG).
 - ALL MATERIALS BROUGHT ONTO PENSACOLA BEACH MUST MEET THE BARRIER ISLAND SAND PROVISIONS OF THE LAND DEVELOPMENT CODE AND DESIGN MANUAL.
- UTILITY NOTES:
- THE LOCATION SHOWN FOR EXISTING UNDERGROUND UTILITIES IS APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK IN EACH AREA. THE CONTRACTOR AGREES TO BE COMPLETELY RESPONSIBLE FOR ALL DAMAGES WHICH MIGHT OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ALL UTILITIES.
 - UTILITY OWNERS SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION SO THAT THE UTILITY OWNER CAN SPOT VERIFY AND/OR EXPOSE THEIR UTILITIES. KNOWN UTILITIES OWNERS INCLUDE:

SEWER/WATER - EMERALD COAST UTILITY AUTHORITY MR. BRANDON KNIGHT P.O. BOX 15311 PENSACOLA, FL. 32514 PH: (850) 698-4609	ELECTRIC - GULF POWER MR. CHAD SWAILS 5120 DOGWOOD DRIVE MILTON, FL. 32570 PH: (850) 549-1031
NATURAL GAS - ENERGY SERVICES OF PENSACOLA MR. CLINT SHEVAT 1625 ATWOOD DRIVE PENSACOLA, FL. 32514 PH: (850) 791-5285	CABLE - COX CABLE MR. TROY YOUNG 2421 EXECUTIVE PLAZA PENSACOLA, FL. 32504 PH: (850)232-5044
TELEPHONE - AT&T FLORIDA MR. BARRY POWELL 605 WEST GARDEN STREET PENSACOLA, FL. 32501 PH: (850) 436-1483	SUNSHINE STATE ONE-CALL 7200 LAKE ELLENOR DRIVE, SUITE 200 ORLANDO, FL. 32809 PH: (800) 432-4770

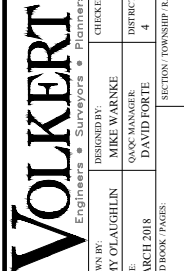
- AT&T FLORIDA WILL COMPLETE ALL WORK DURING THE HOURS OF 7:30 AM - 4:30 PM, MONDAY THRU FRIDAY, NO NIGHT OR WEEKEND WORK.
- ALL CABLE DAMAGE MUST BE REPORTED TO THE ATT FLORIDA REPAIR SERVICE DEPARTMENT AT 611 FROM A LAND LINE OR 877-737-2478 IF USING A CELL PHONE.
- CONTRACTOR IS TO USE CAUTION WHEN WORKING IN OR AROUND AREAS OF OVERHEAD TRANSMISSION LINES AND UNDERGROUND UTILITIES.
- UTILITIES TO REMAIN AND BE PROTECTED DURING CONSTRUCTION. NECESSARY REPAIRS SHALL BE CONSIDERED INCIDENTAL TO OTHER PAY ITEMS AND SHALL BE TO THE SATISFACTION OF UTILITY OWNERS.
- ADEQUATE PROVISIONS SHALL BE MADE FOR THE FLOW OF SEWERS, DRAINS, WATER COURSES AND OTHER UTILITIES ENCOUNTERED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL PROTECT ALL UTILITIES AND OTHER IMPROVEMENTS SHOWN AND NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR REPAIRS OF UTILITIES AND OTHER IMPROVEMENTS(SHOWN AND UN-SHOWN) DAMAGED DURING CONSTRUCTION AND SHALL MAINTAIN SUFFICIENT PROTECTION FOR ALL UTILITIES TO REMAIN. THE CONTRACTOR SHALL SUPPORT ALL EXISTING UTILITIES AS REQUIRED FOR THE INSTALLATION OF THE PROPOSED IMPROVEMENTS. ALL COSTS ASSOCIATED WITH PROTECTING, SUPPORTING, REPAIRING, AND OTHER ACTIVITIES RESULTING FROM CONTRACTOR DAMAGE TO THE UTILITIES OR PROTECTION OF THE UTILITIES SHALL BE THE CONTRACTORS RESPONSIBILITY AT NO ADDITIONAL COST TO THE COUNTY.

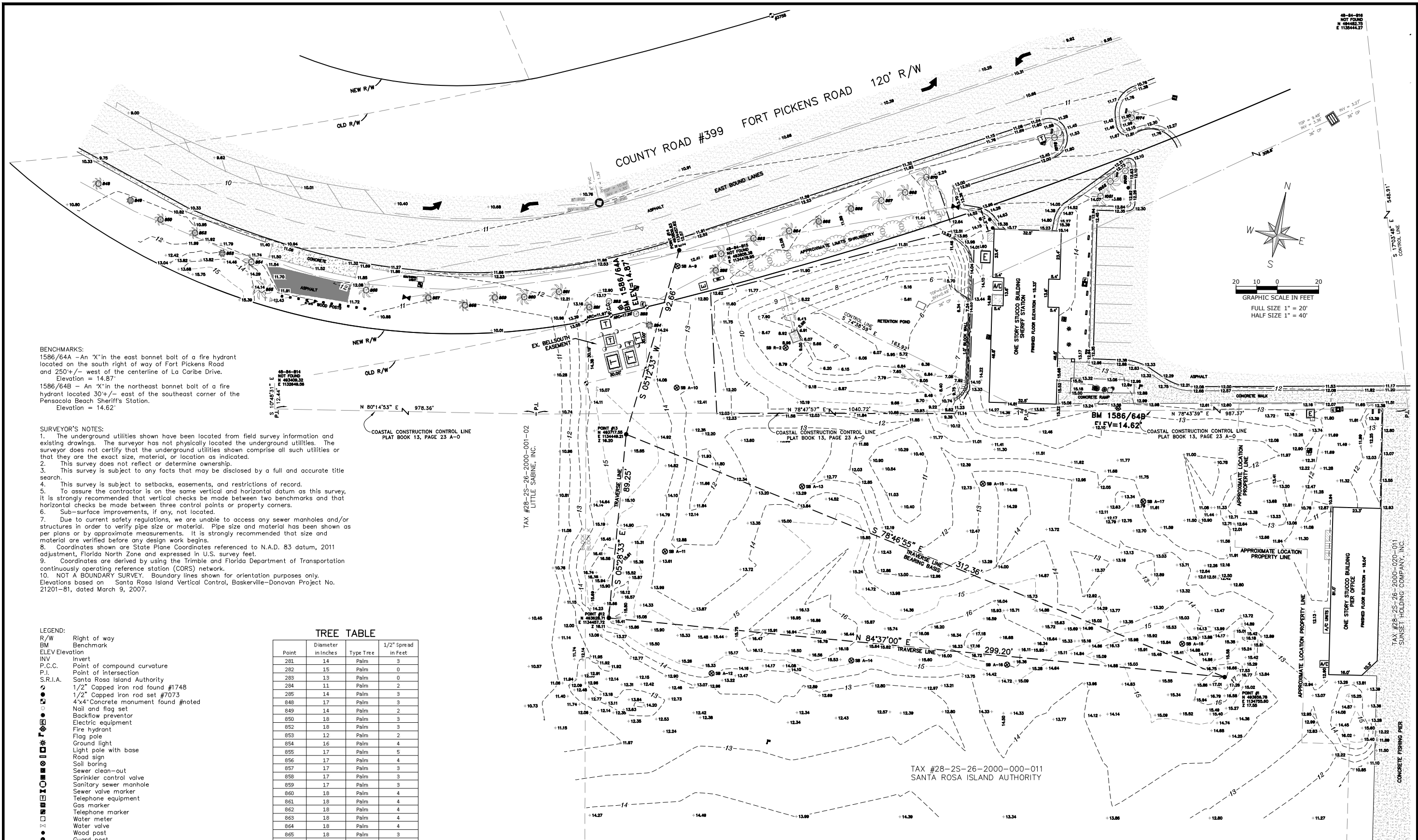
ENGINEERS ESTIMATED QUANTITIES, CASINO BEACH PARKING AREA			
Item	DESCRIPTION	UNIT	BID QUANTITY
1	Performance Bond	LS	1
2	Mobilization	LS	1
3	Clearing and Grubbing, per County Specifications 2230	AC	1
4	Remove Shrubs	EA	12
5	Remove Palm Trees	EA	15
6	Earthwork Excavate, Haul, and Install, On-site/Off-site	CY	1800
7	Earthwork Establishing Grade, County Specs 2300	SY	3674
8	Remove and Replace Unsuitable Materials	CY	100
9	Final grading and seal rolling prior to paving	SY	3674
10	1" County Spec 2500 Type SP 12.5 Asphalt Concrete Surface	SY	239
11	1 1/2" County Spec 2500 Type SP 12.5 Asphalt Concrete Surface	SY	3273
12	2" County Spec 2500 Type SP 12.5 Asphalt	SY	239
13	Remove Existing Asphalt, 2" Average Depth	SY	38
14	12" Stabilized Subgrade, County Spec 2300	SY	3674
15	6" Bahamian base	SY	3405
16	8" Bahamian base	SY	270
17	6" Pipe Bouldards, Per County Detail	EA	2
18	Thermoplastic 6" Solid Stripe, White or Yellow	LF	1479
19	Thermoplastic 6" Double Solid Stripe, White or Yellow	LF	25
20	Thermoplastic Stop Bar	LF	24
21	Thermoplastic Directional Arrow, Single Head (Turn Left/ Right) 16sf	EA	2
22	Thermoplastic Directional Arrow, Double Head (Straight Ahead W/Turn) 27sf	EA	1
23	Thermoplastic High Intensity Pedestrian Crosswalk	LF	25
24	Thermoplastic Handicap Parking Space with Symbol	EA	4
25	Thermoplastic "LEO ONLY" Pavement Message	EA	2
26	Stop Sign, R1-1	EA	2
27	Authorized Vehicles Only Sign	EA	4
28	Develop and provide an approved MOT traffic safety plan both map type and written type by a Certified Work Zone Safety Traffic Supervisor	EA	1
29	MOT	LS	1
30	FDOT Type F Curb And Gutter	LF	194
31	Concrete Bumper Guards	EA	83
32	Header Curb, Per County Detail	LF	1471
33	1' Ribbon Curb, Per County Detail	LF	82
34	5' Fiber Reinforced Concrete Sidewalk	LF	170
35	Construct Curb Ramp (Approved Mat, Color included)	EA	4
36	Saw cut Existing Concrete	LF	33
37	Remove Existing Concrete, 6" thick	SY	65
38	Remove Curb	LF	350
39	Remove Ex. 1' Wide Block Wall	LF	85
40	Misc. Concrete	CY	5
41	Street Print (Offset Brick, Terracotta or Brick color)	SY	805
42	Ditch Bottom Inlet, Type F	EA	3
43	Storm Manhole	EA	2
44	Remove Ditch Bottom Inlet (including top and bottom)	EA	2
45	Tie to Existing Inlets, Pipe, Manhole, R-Tank System	EA	6
46	18" RCP Pipe	LF	150
47	24" RCP Pipe	LF	2
48	R-Tank Stormwater System	LS	1
49	R- Tank Stormwater System Installation	LS	1
50	Silt Fence Type IV	LF	1200
51	Construct Stabilized Gravel Construction Entrance	EA	1
52	NPDES NOI and NOT Permit, including SWPPP and monitoring (for use only with disturbed areas over 1.0 Acre)	EA	1
53	Wood Split Rail Fence	LF	910
54	Split Rail Fence Gate	EA	1
55	Remove Existing Chain Link Fence	LF	390
56	Jobsite Board for posting project information, permits, etc.	EA	1
57	Lighting	LS	1
58	Landscaping & irrigation	LS	1

**PENSACOLA BEACH CONGESTION
 MANAGEMENT PLAN
 CASINO BEACH PARKING AREA**



215 FAIRPOINT DRIVE SUITE B GULF BREEZE, FL 32561 Telephone (850) 512-8935 REG. U.S. PAT. & TM. OFF. DATE: 6/4/91	CHECKED BY: DISSEMINATED BY: ENGINEER: MIKE WARNKE SURVEYOR: MIKE WARNKE PERMITTER: DAVID FORTE	DATE: MARCH 2018 FIELD BOOK PAGES: 4	SIGNATURE:	SECTION/TOWNSHIP/RANGE:
DATE APPROVED:	DATE:	NUMBER:	REVISIONS:	DRAWING NUMBER:
PROJECT NUMBER: 635501		SURVEY NUMBER:		
SHEET 2 OF 31				





BENCHMARKS:
 1586/64A - An "X" in the east bonnet bolt of a fire hydrant located on the south right of way of Fort Pickens Road and 250'+/- west of the centerline of La Caribe Drive.
 Elevation = 14.87'
 1586/64B - An "X" in the northeast bonnet bolt of a fire hydrant located 30'+/- east of the southeast corner of the Pensacola Beach Sheriff's Station.
 Elevation = 14.62'

SURVEYOR'S NOTES:
 1. The underground utilities shown have been located from field survey information and existing drawings. The surveyor has not physically located the underground utilities. The surveyor does not certify that the underground utilities shown comprise all such utilities or that they are the exact size, material, or location as indicated.
 2. This survey does not reflect or determine ownership.
 3. This survey is subject to any facts that may be disclosed by a full and accurate title search.
 4. This survey is subject to setbacks, easements, and restrictions of record.
 5. To assure the contractor is on the same vertical and horizontal datum as this survey, it is strongly recommended that vertical checks be made between two benchmarks and that horizontal checks be made between three control points or property corners.
 6. Sub-surface improvements, if any, not located.
 7. Due to current safety regulations, we are unable to access any sewer manholes and/or structures in order to verify pipe size or material. Pipe size and material has been shown as per plans or by approximate measurements. It is strongly recommended that size and material are verified before any design work begins.
 8. Coordinates shown are State Plane Coordinates referenced to N.A.D. 83 datum, 2011 adjustment, Florida North Zone and expressed in U.S. survey feet.
 9. Coordinates are derived by using the Trimble and Florida Department of Transportation continuously operating reference station (CORS) network.
 10. NOT A BOUNDARY SURVEY. Boundary lines shown for orientation purposes only.
 Elevations based on Santa Rosa Island Vertical Control, Baskerville-Donovan Project No. 21201-81, dated March 9, 2007.

- LEGEND:**
- R/W Right of way
 - BM Benchmark
 - ELEV Elevation
 - INV Invert
 - P.C.C. Point of compound curvature
 - P.I. Point of intersection
 - S.R.I.A. Santa Rosa Island Authority
 - 1/2" Capped iron rod found #1748
 - 1/2" Capped iron rod set #7073
 - 4"x4" Concrete monument found #noted
 - Nail and flag set
 - Backflow preventer
 - Electric equipment
 - Fire hydrant
 - Flag pole
 - Ground light
 - Light pole with base
 - Road sign
 - Soil boring
 - Sewer clean-out
 - Sprinkler control valve
 - Sanitary sewer manhole
 - Sewer valve marker
 - Telephone equipment
 - Gas marker
 - Telephone marker
 - Water meter
 - Water valve
 - Wood post
 - Guard post
 - Spot elevation
 - 12- Contour line
 - Gas line
 - Sanitary sewer line
 - Underground electric line
 - Waterline
 - Force main
 - Chain link fence
 - Palm tree

TREE TABLE

Point	Diameter in Inches	Type Tree	1/2" Spread in Feet
281	14	Palm	3
282	15	Palm	0
283	13	Palm	0
284	11	Palm	2
285	14	Palm	3
848	17	Palm	3
849	14	Palm	2
850	18	Palm	3
852	18	Palm	3
853	12	Palm	2
854	16	Palm	4
855	17	Palm	5
856	17	Palm	4
857	17	Palm	3
858	17	Palm	3
859	17	Palm	3
860	18	Palm	4
861	18	Palm	4
862	18	Palm	4
863	18	Palm	4
864	18	Palm	4
865	18	Palm	3
866	18	Palm	3
867	22	Palm	5
868	16	Palm	4
870	13	Palm	5
1050	9	Palm	6
1051	11	Palm	5
1052	10	Palm	5
1074	10	Palm	4
1078	14	Palm	5

Source of information PUBLIC RECORDS; RECORDED PLAT: 1ST ADDITION VILLA SABINE (P.B. 5, PAGE 75); SURVEYS BY THIS FIRM; FDOT MAP SECTION 4823-102; S.R.I.A. VERTICAL CONTROL, BASKERVILLE DONOVAN PROJECT #21201-81, MARCH 9, 2007. Measurements made in accordance with United States Standards.

Bearing Reference NORTH BASED ON TRAVERSE LINE AS S 78°46'55" E
 PER GPS OBSERVATION
 Ordered By MR. MIKE WARNKE Elevation Reference NAVD 88
 Encroachments N.A.

A TOPOGRAPHIC SURVEY, LOCATION OF IMPROVEMENTS AND TREE LOCATION OF A PORTION OF BLOCK K, FIRST ADDITION TO VILLA SABINE, PLAT BOOK 5, PAGES 78 & 75A

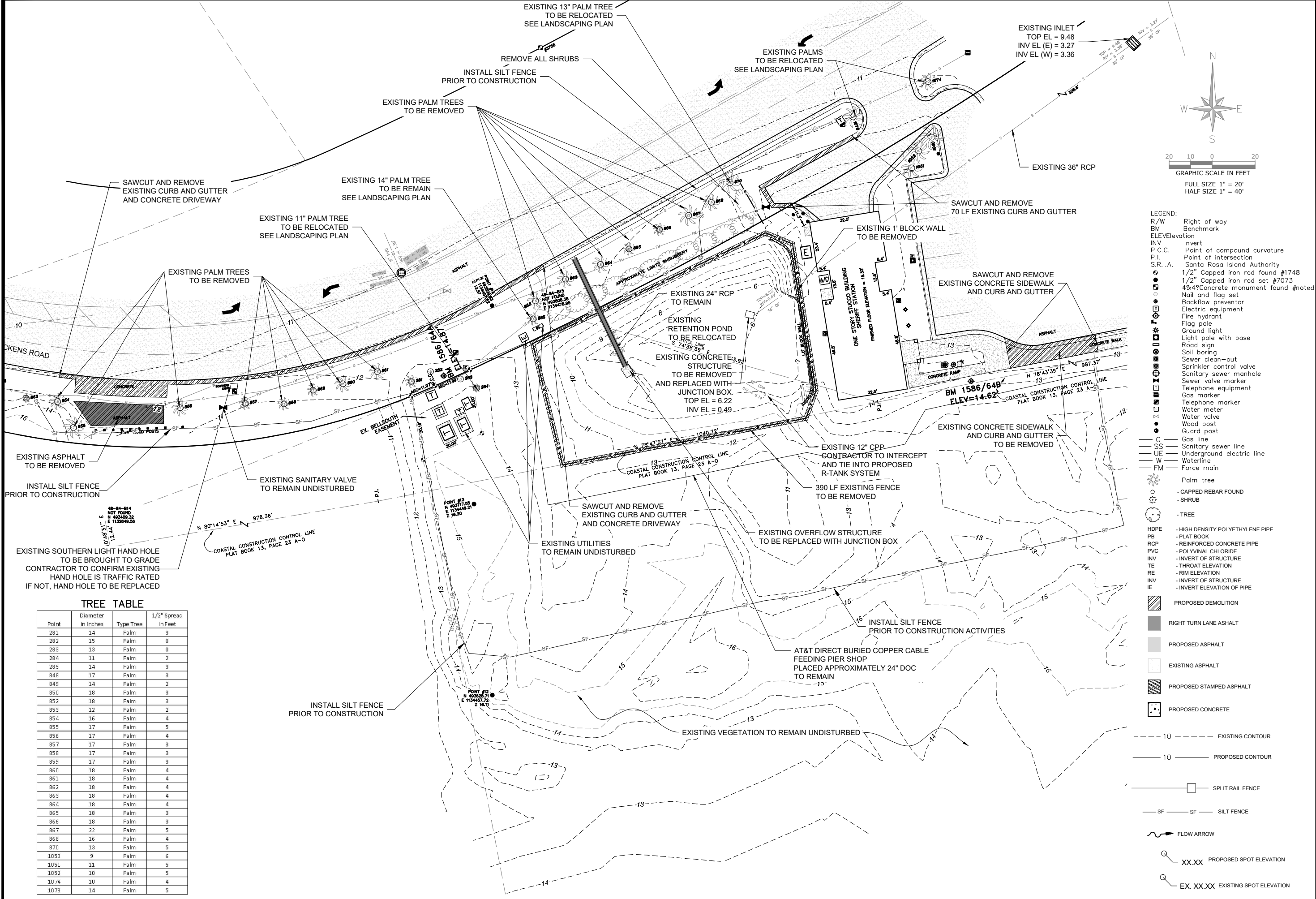
PG&A
PITTMAN, LAZE AND ASSOCIATES, INC.
 LAND SURVEYORS
 5700 N. DAVIS HIGHWAY, SUITE 3
 PENSACOLA, FL 32509
 Phone: (850) 434-6666 Fax: (850) 434-6661
 Email: pgsurvey@bellsouth.net

I hereby certify that this survey was made under my responsible charge and meets the Standards of Practice as set forth by the Florida Board of Professional Surveyors & Mappers in Chapter 5J-17.050, 5J-17.051 and 5J-17.052, pursuant to Section 472.027 Florida Statutes.

David D. Glaze
 PSM #5605

Walter J. Glaze
 PSM #6190

SHEET 1 OF 1
 JOB No. 37624-17
 Scale: 1" = 20'
 Date of Survey 9-28-2017
 Date of Plat 9-28-2017
 Date of Revision 12-5-2017
 FB_1586_pg.61-65_73
 Drawn by PMJ
 Checked by WJG



- LEGEND:**
- R/W Right of way
 - BM Benchmark
 - ELEV Elevation
 - INV Invert
 - P.C.C. Point of compound curvature
 - P.I. Point of intersection
 - S.R.I.A. Santa Rosa Island Authority
 - 1/2" Capped iron rod found #1748
 - 1/2" Capped iron rod set #7073
 - 4x4 Concrete monument found #noted
 - Nail and flag set
 - Backflow preventer
 - Electric equipment
 - Fire hydrant
 - Flag pole
 - Ground light
 - Light pole with base
 - Soil sign
 - Soil boring
 - Sewer clean-out
 - Sprinkler control valve
 - Sanitary sewer manhole
 - Sewer valve marker
 - Telephone equipment
 - Gas marker
 - Telephone marker
 - Water meter
 - Water valve
 - Wood post
 - Guard post
 - Force main
 - Gas line
 - Sanitary sewer line
 - Underground electric line
 - Waterline
 - Force main
 - Palm tree
 - CAPPED REBAR FOUND
 - SHRUB
 - TREE
 - HDPE - HIGH DENSITY POLYETHYLENE PIPE
 - PB - PLAT BOOK
 - RCP - REINFORCED CONCRETE PIPE
 - PVC - POLYVINYL CHLORIDE
 - INV - INVERT OF STRUCTURE
 - TE - THROAT ELEVATION
 - RE - RIM ELEVATION
 - INV - INVERT OF STRUCTURE
 - IE - INVERT ELEVATION OF PIPE
 - PROPOSED DEMOLITION
 - RIGHT TURN LANE ASPHALT
 - PROPOSED ASPHALT
 - EXISTING ASPHALT
 - PROPOSED STAMPED ASPHALT
 - PROPOSED CONCRETE
 - 10 - - - - - EXISTING CONTOUR
 - 10 - - - - - PROPOSED CONTOUR
 - SPLIT RAIL FENCE
 - SF - SF - SILT FENCE
 - FLOW ARROW
 - XX.XX PROPOSED SPOT ELEVATION
 - EX. XX.XX EXISTING SPOT ELEVATION

TREE TABLE

Point	Diameter in Inches	Type Tree	1/2" Spread in Feet
281	14	Palm	3
282	15	Palm	0
283	13	Palm	0
284	11	Palm	2
285	14	Palm	3
848	17	Palm	3
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850	18	Palm	3
852	18	Palm	3
853	12	Palm	2
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855	17	Palm	5
856	17	Palm	4
857	17	Palm	3
858	17	Palm	3
859	17	Palm	3
860	18	Palm	4
861	18	Palm	4
862	18	Palm	4
863	18	Palm	4
864	18	Palm	4
865	18	Palm	3
866	18	Palm	3
867	22	Palm	5
868	16	Palm	4
870	13	Palm	5
1050	9	Palm	6
1051	11	Palm	5
1052	10	Palm	5
1074	10	Palm	4
1078	14	Palm	5

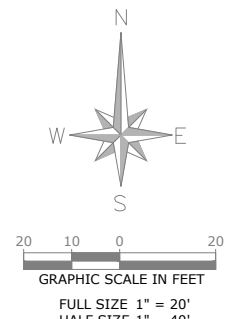
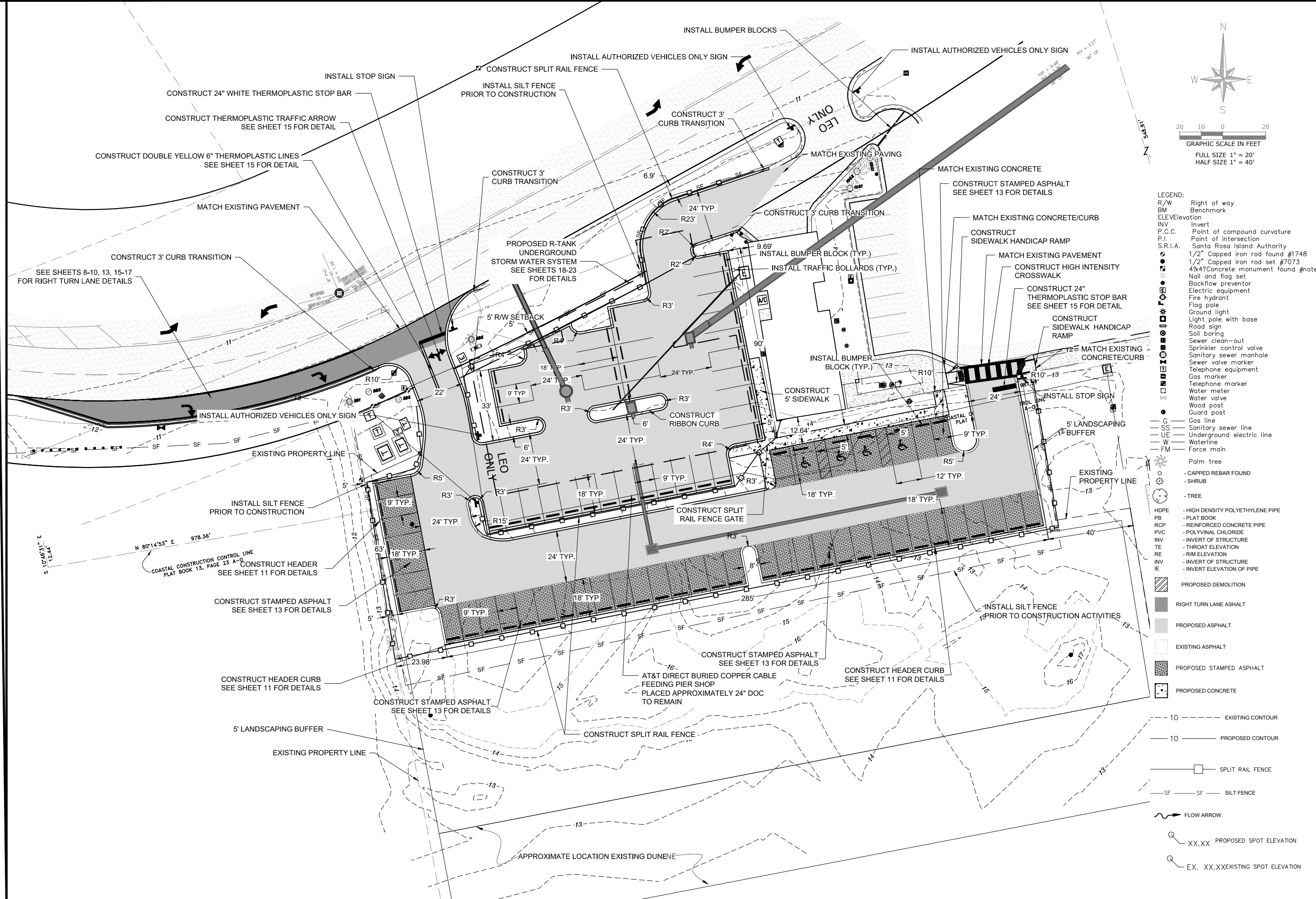
PENSACOLA BEACH CONGESTION MANAGEMENT PLAN
CASINO BEACH PARKING AREA



215 FAIRPOINT DRIVE
GULF BREEZE, FL 32561
Telephone: (850) 512-8355
64091

Volkert
Engineers • Surveyors • Planners
BRANDY BRUNSWYK
AMY O'LEIGHIN
MARCH 2018
MIRE WANNKE
DAVID FORTE
CHECKED BY:
DATE:
FIELD BOOK PAGES:

DATE	
REVISIONS	
NUMBER	
DRAWING NUMBER	
PROJECT NUMBER	635501
SURVEY NUMBER	
SHEET	4 OF 31



- LEGEND:**
- R/W Right of way
 - BM Benchmark
 - ELEV Elevation
 - INV Invert
 - P.C.C. Point of compound curvature
 - P.I. Point of intersection
 - S.R.I.A. Santa Rosa Island Authority
 - 1/2" Capped iron rod found #1748
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 - Sewer clean-out
 - Sprinkler control valve
 - Sanitary sewer manhole
 - Sewer valve marker
 - Telephone equipment
 - Gas marker
 - Telephone marker
 - Water meter
 - Water valve
 - Wood post
 - Guard post
 - G Gas line
 - SS Sanitary sewer line
 - UE Underground electric line
 - W Waterline
 - FM Force main
 - Palm tree
 - CAPPED REBAR FOUND
 - SHRUB
 - TREE
 - HDPE - HIGH DENSITY POLYETHYLENE PIPE
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 - PROPOSED DEMOLITION
 - RIGHT TURN LANE ASPHALT
 - PROPOSED ASPHALT
 - EXISTING ASPHALT
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 - 10 - - - - - EXISTING CONTOUR
 - 10 - - - - - PROPOSED CONTOUR
 - SPLIT RAIL FENCE
 - SF - SF - SILT FENCE
 - FLOW ARROW
 - XX.XX PROPOSED SPOT ELEVATION
 - EX. XX.XX EXISTING SPOT ELEVATION

PENSACOLA BEACH CONGESTION MANAGEMENT PLAN
CASINO BEACH PARKING AREA

PROPOSED CONSTRUCTION PLAN

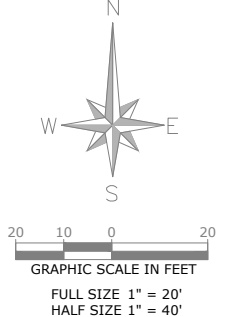
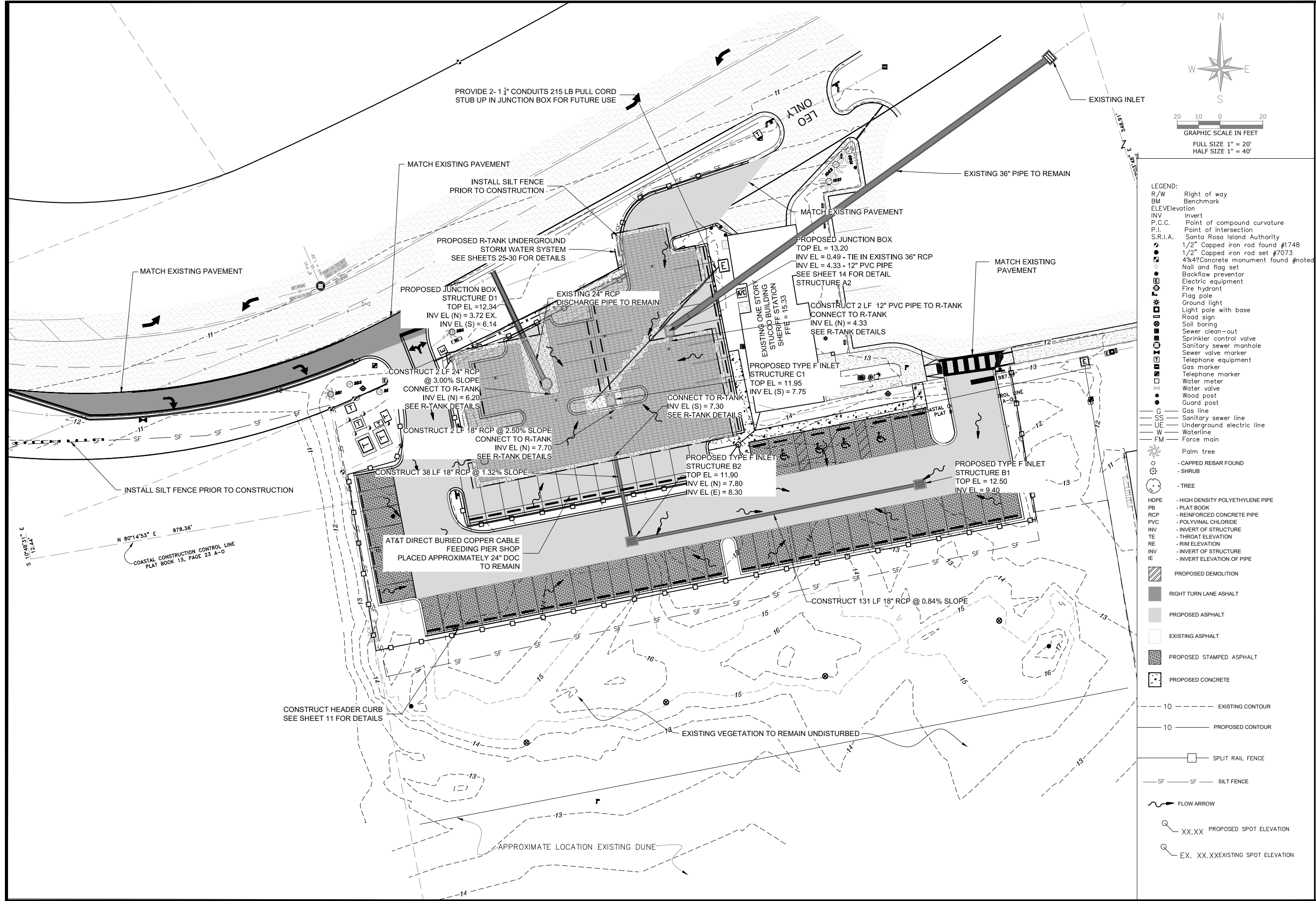
215 FAIRPOINT DRIVE	SUITE B	GULF BREEZE, FL 32561	DATE:
Telephone: (850) 512-8935	REG. I.A. NO.:	64091	SIGNATURE:

Volkert
Engineers • Surveyors • Planners

DRAWN BY: AMY O'LAUGHLIN	DESIGNED BY: MIKE WARKNE	CHECKED BY: DAVID FORTE	DISTRICT: 4
DATE: MARCH 2018	QC/MANAGER: DAVID FORTE	PROJECT NO.:	PROJECT NAME:

APPROVED:	DATE:	REVISIONS:	DRAWING NUMBER:

PROJECT NUMBER: **635501**
SURVEY NUMBER: **5** OF **31**



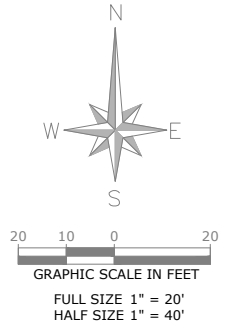
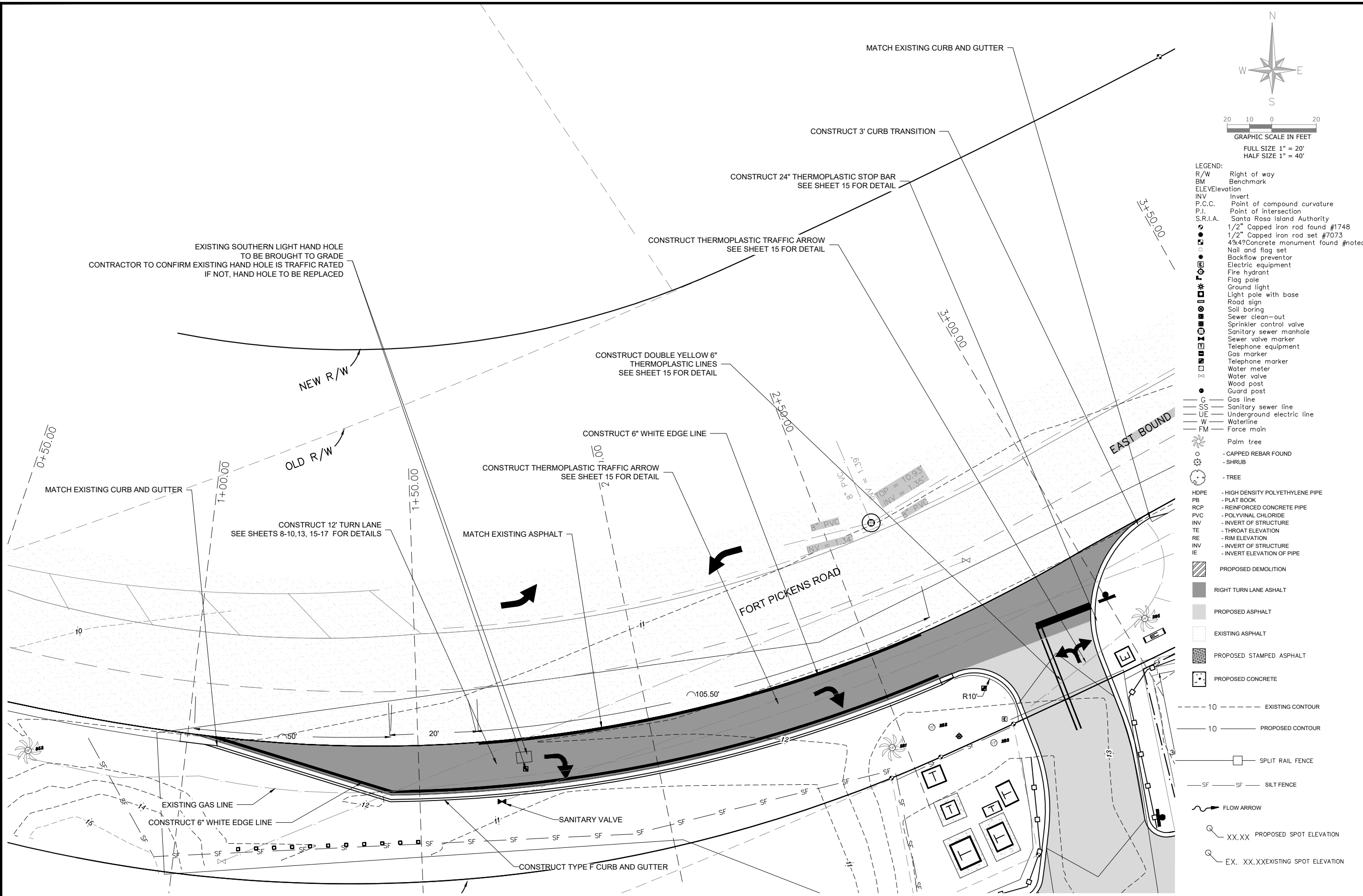
- LEGEND:
- R/W Right of way
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 - PROPOSED DEMOLITION
 - RIGHT TURN LANE ASHALT
 - PROPOSED ASPHALT
 - EXISTING ASPHALT
 - PROPOSED STAMPED ASPHALT
 - PROPOSED CONCRETE
 - 10 - - - - - EXISTING CONTOUR
 - 10 - - - - - PROPOSED CONTOUR
 - SPLIT RAIL FENCE
 - SF - SF - SILT FENCE
 - FLOW ARROW
 - XX.XX PROPOSED SPOT ELEVATION
 - EX. XX.XX EXISTING SPOT ELEVATION

PENSACOLA BEACH CONGESTION
MANAGEMENT PLAN
CASINO BEACH PARKING AREA
PROPOSED DRAINAGE PLAN



215 FAIRPOINT DRIVE
SUITE B
GULF BREEZE, FL 32561
Telephone (850) 512-8935
REG. I.A. NO. 64091
DATE: MARCH 2018
DRAWN BY: AMY O'LAUGHLIN
DESIGNED BY: MIKE WARNEKE
CHECKED BY: DAVID FORTE
DISTRICT: 4
SECTION/TOWNSHIP/RANGE:

APPROVED BY:	
DATE:	
REVISIONS:	
NUMBER:	
DRAWING NUMBER:	635501
PROJECT NUMBER:	
SURVEY NUMBER:	
SHEET	7 OF 31



- LEGEND:**
- R/W Right of way
 - BM Benchmark
 - ELEV Elevation
 - INV Invert
 - P.C.C. Point of compound curvature
 - P.I. Point of intersection
 - S.R.I.A. Santa Rosa Island Authority
 - 1/2" Capped iron rod found #1748
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 - Light pole with base
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 - Soil boring
 - Sewer clean-out
 - Sprinkler control valve
 - Sanitary sewer manhole
 - Sewer valve marker
 - Telephone equipment
 - Gas marker
 - Telephone marker
 - Water meter
 - Water valve
 - Wood post
 - Guard post
 - C Gas line
 - SS Sanitary sewer line
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 - PROPOSED CONCRETE
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 - FLOW ARROW
 - XX.XX PROPOSED SPOT ELEVATION
 - EX. XX.XX EXISTING SPOT ELEVATION

**PENSACOLA BEACH CONGESTION
MANAGEMENT PLAN
CASINO BEACH PARKING AREA
PROPOSED RIGHT TURN LANE
CONSTRUCTION PLAN**

215 FAIRPOINT DRIVE SUITE B GULF BREEZE, FL 32561 Telephone: (850) 512-8935	REG. P.L.A. NO. 64091 DATE: MARCH 2018	DESIGNED BY: Mike Warnke CHECKED BY: David Forté	DATE: MARCH 2018
DRAWN BY: Amy O'Laughlin		SECTION/TOWNSHIP/RANGE: 4	
DATE: APPROVED:	DATE: APPROVED:	DATE: APPROVED:	DATE: APPROVED:
REVISIONS:	REVISIONS:	REVISIONS:	REVISIONS:
DRAWING NUMBER:	635501		
PROJECT NUMBER:	635501		
SURVEY NUMBER:	8 OF 31		



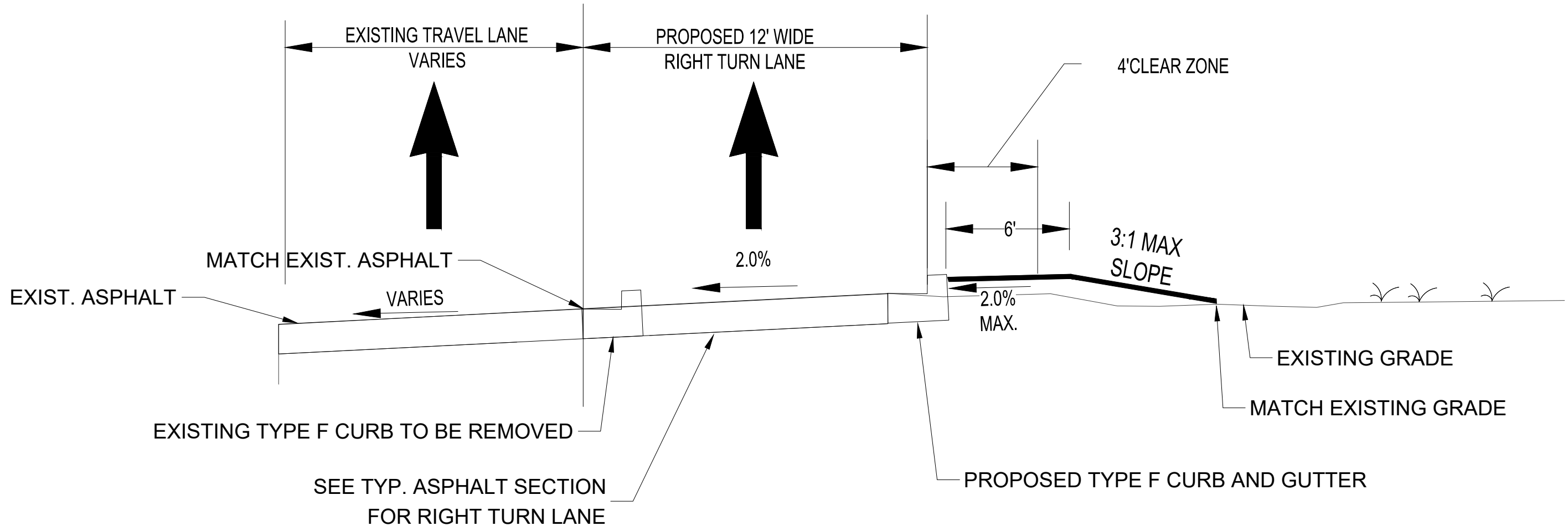
215 FAIRPOINT DRIVE
SUITE B
GULF BREEZE, FL 32561
Telephone (850) 512-8935
REG. IN FLA. NO. 64091
DATE: _____
SIGNATURE: _____

Volkert
Engineers • Surveyors • Planners
DISSEMINARY: _____
DRAWN BY: AMY O'LAUGHLIN
DATE: MARCH 2018
CHECKED BY: MIKE WARNEKE
DATE: _____
DESIGNED BY: _____
DATE: _____
PROJECT: _____
SECTION/TOWNSHIP/RANGE: _____

NO.	DATE	APPROVALS

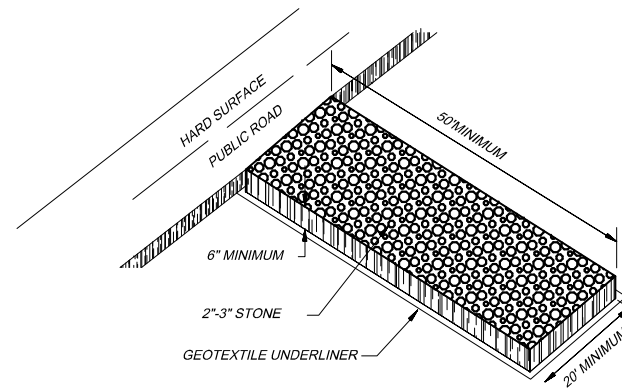
DRAWING NUMBER
PROJECT NUMBER 635501
SURVEY NUMBER
SHEET 9 OF 31

*SEE LANDSCAPING PLAN FOR REQUIRED PLANTING

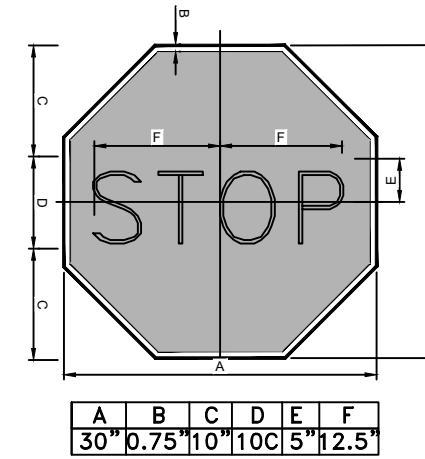


RIGHT TURN LANE TYPICAL CROSS SECTION

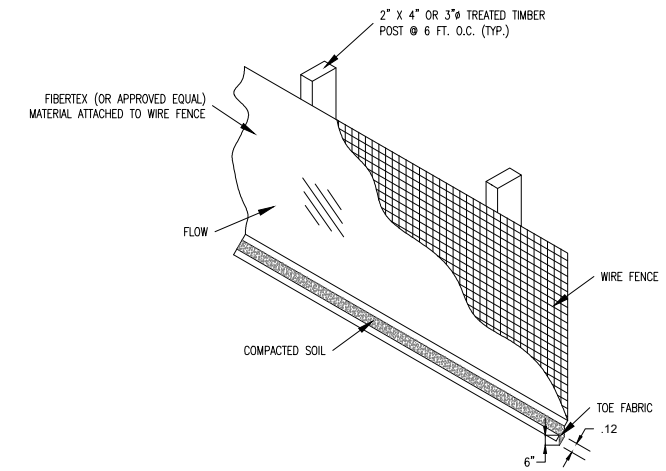
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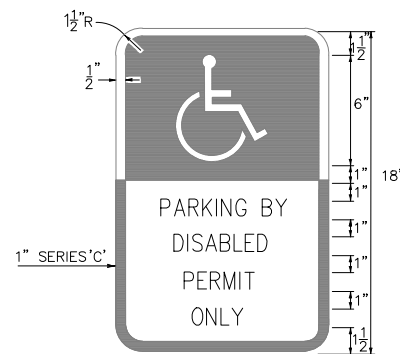
CONSTRUCTION ENTRANCE DETAIL
N.T.S.



R1-1 STOP SIGN DETAIL
N.T.S.



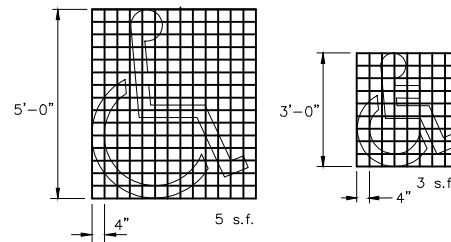
SILT FENCE DETAIL



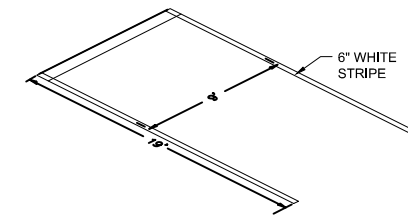
HANDICAP SIGN
N.T.S.

NOTES

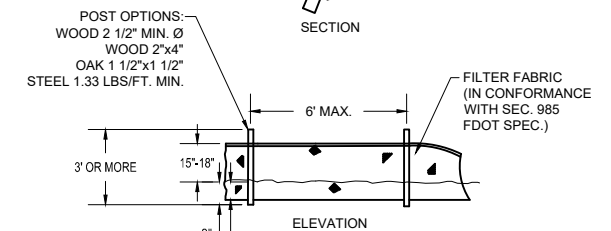
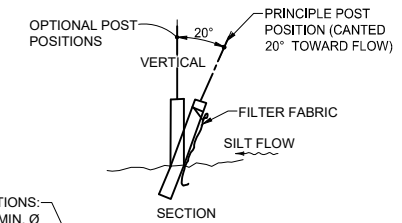
1. TOP PORTION OF R7-8 SHALL HAVE A REFLECTIVE BLUE BACKGROUND WITH WHITE REFLECTIVE SYMBOL AND BORDER.
2. BOTTOM PORTION SHALL HAVE A REFLECTIVE WHITE BACKGROUND WITH BLACK OPAQUE LEGEND AND BORDER.
3. R7-8 MAY BE FABRICATED ON ONE PANEL OR TWO.
4. SIGNS ARE TO BE MOUNTED AT STANDARD HEIGHT. (7' FROM PAVEMENT TO BOTTOM OF SIGN).



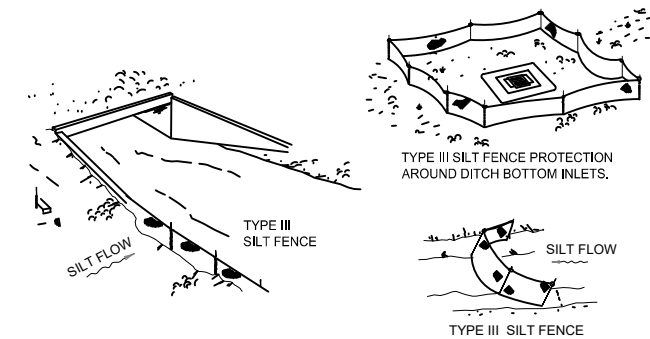
HANDICAPPED PAVEMENT SYMBOL
N.T.S.



TYPICAL PARKING SPACE
N.T.S.

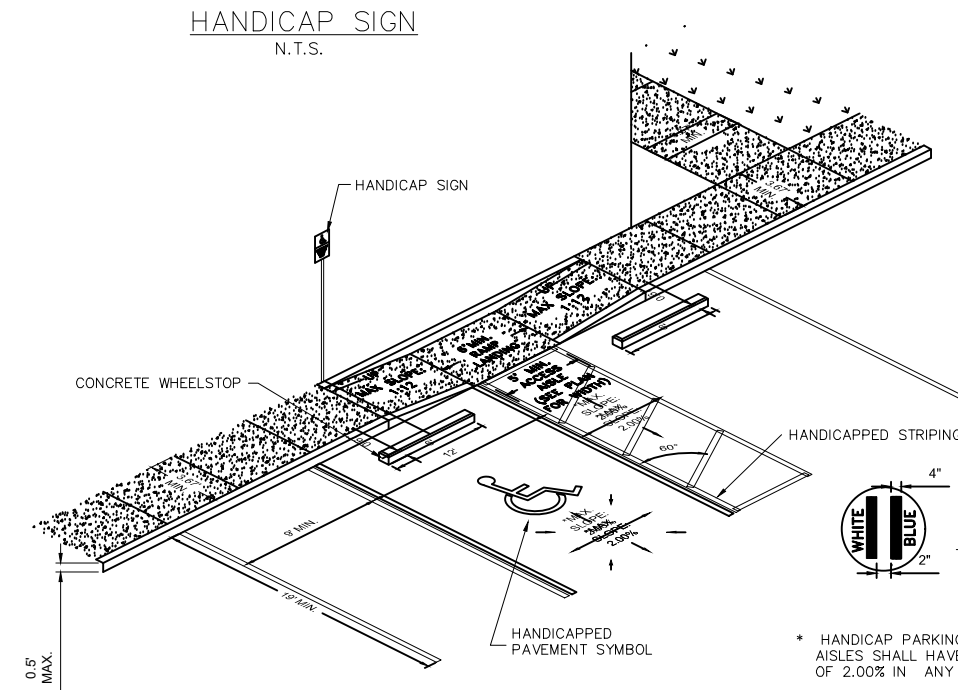


TYPE III SILT FENCE



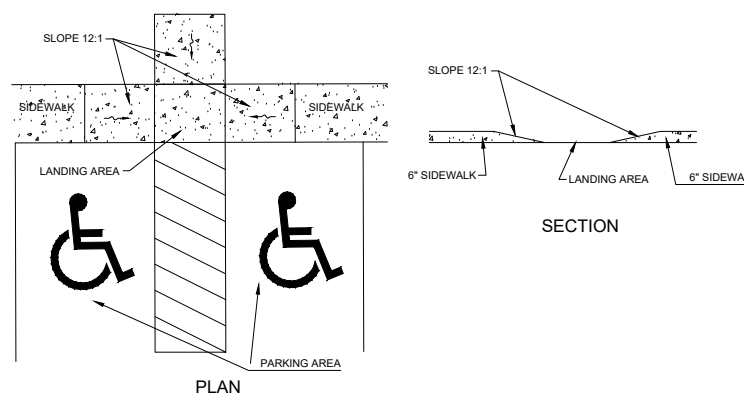
NOTE:
DO NOT DEPLOY IN A MANNER THAT SILT FENCES WILL ACT AS A DAM ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE USED AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.

SILT FENCE APPLICATIONS DETAIL
N.T.S.



HANDICAP DETAIL
N.T.S.

- * HANDICAP PARKING SPACES & ACCESS AISLES SHALL HAVE A MAXIMUM GRADIENT OF 2.00% IN ANY DIRECTION
- * ACCESS AISLE FOR VAN ACCESSIBLE HANDICAP PARKING SHALL BE 8' WIDE
- * SEE PLAN FOR WIDTH



HANDICAP RAMP DETAIL
N.T.S.

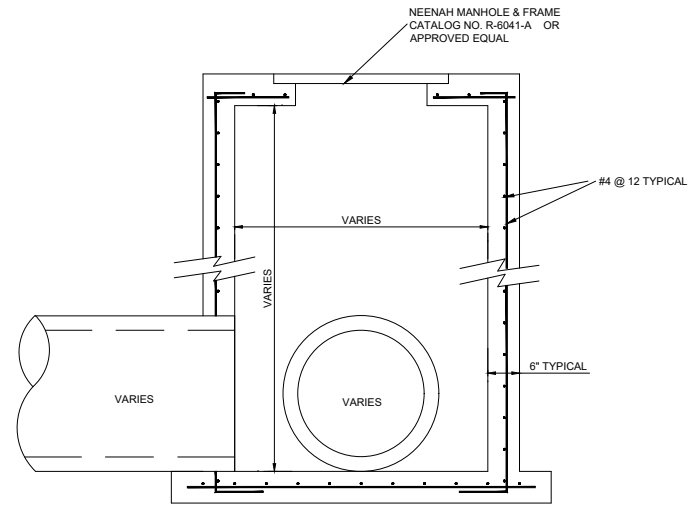


215 FAIRPOINT DRIVE
SUITE B
GULF BREEZE, FL 32561
Telephone (850) 512-8835
REG. LIC. NO. 64091
DATE: MARCH 2018
PROJECT: CASINO BEACH PARKING AREA
SHEET: 12 OF 31

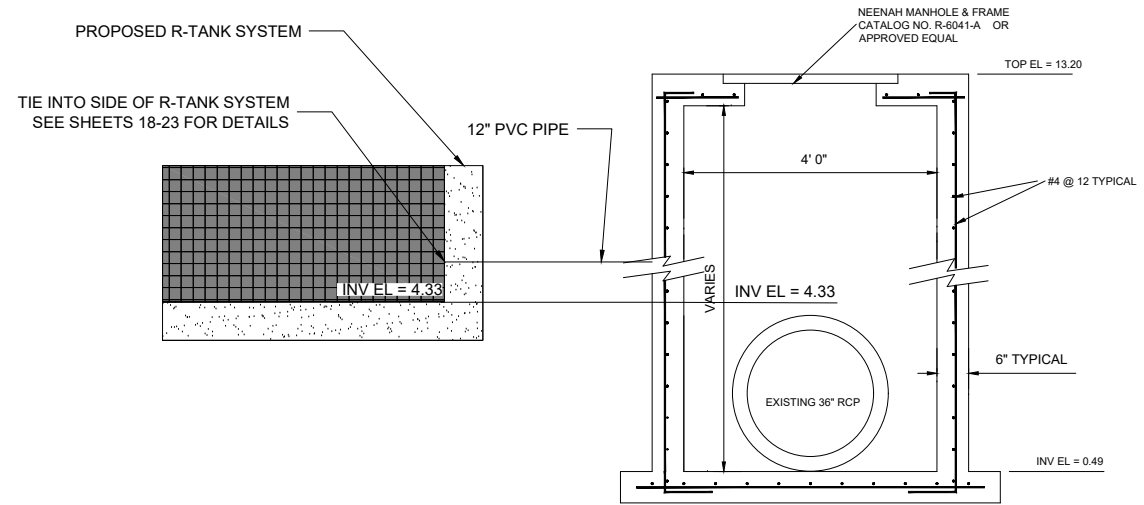
Volkert
Engineers • Surveyors • Planners
DRAWN BY: AMY O'LOUGHLIN
CHECKED BY: MIKE WARNEKE
DATE: MARCH 2018
PROJECT: CASINO BEACH PARKING AREA
SHEET: 12 OF 31

REVISIONS	DATE	APPROVED BY

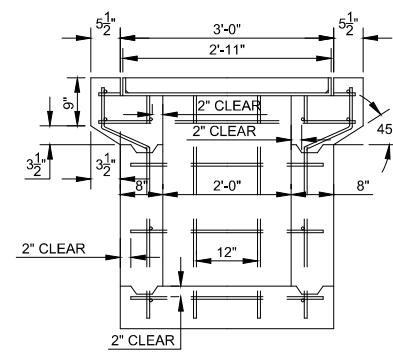
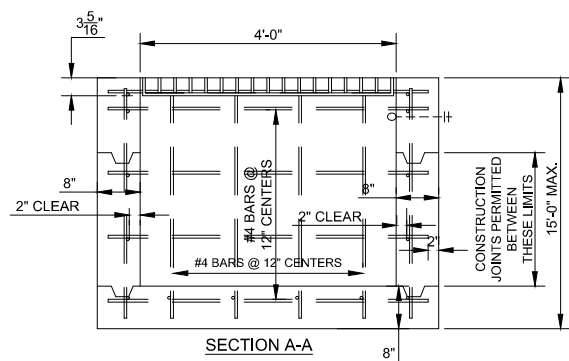
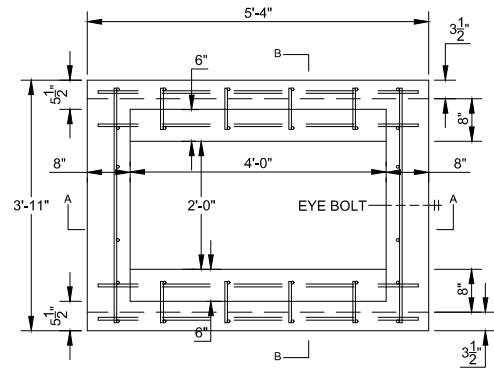
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PROJECT NUMBER 635501
SURVEY NUMBER



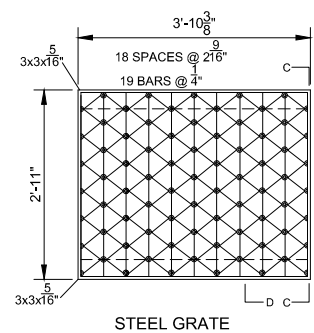
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N.T.S.



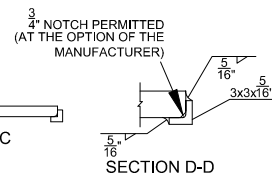
JUNCTION BOX - STRUCTURE A2
N.T.S.



SECTION B-B



STEEL GRATE



SECTION D-D

TYPE "F" INLET
N.T.S.

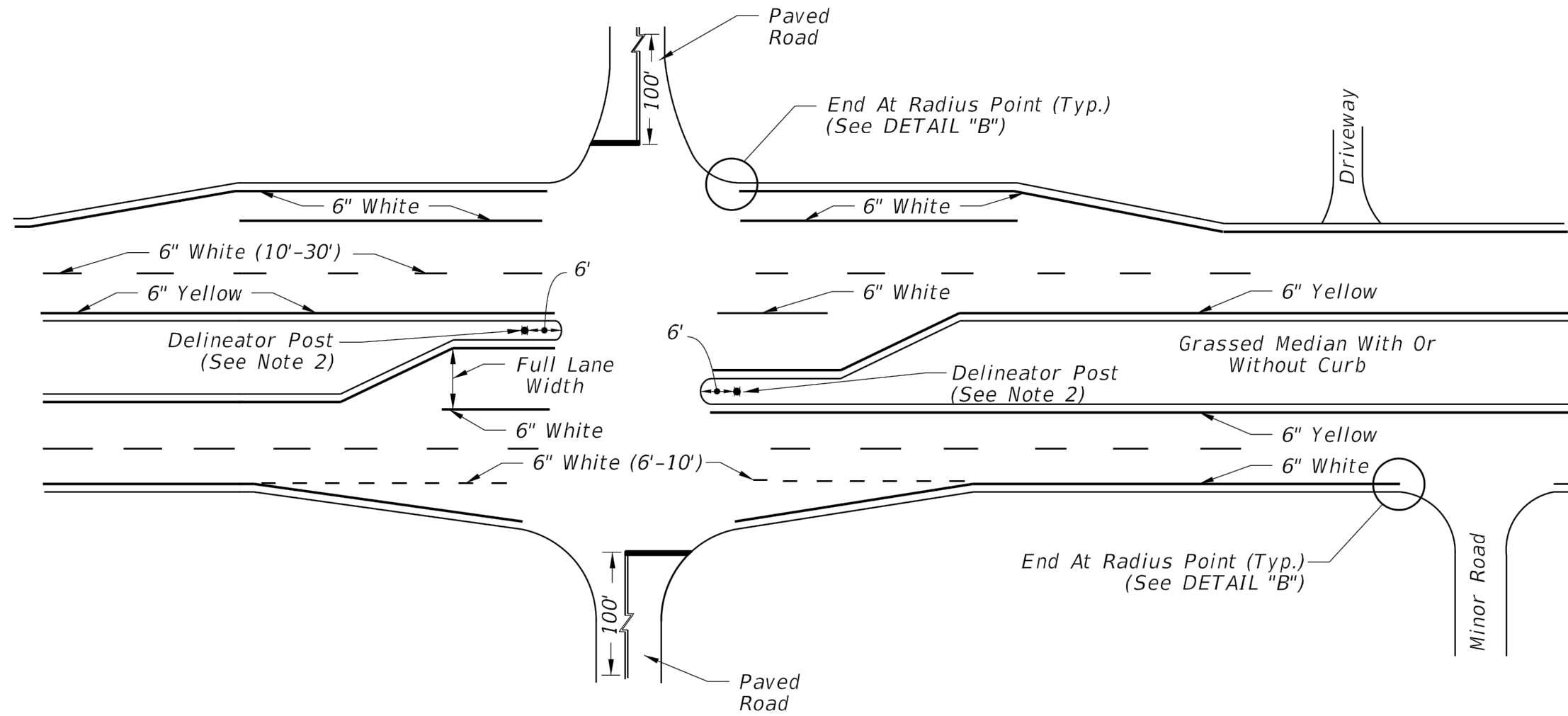


215 FAIRPOINT DRIVE
SUITE B
GULF BREEZE, FL 32561
Telephone (850) 512-8935
REG. LIC. NO. 64091
DATE: MARCH 2018
FIELD BOOK / PAGES: 4

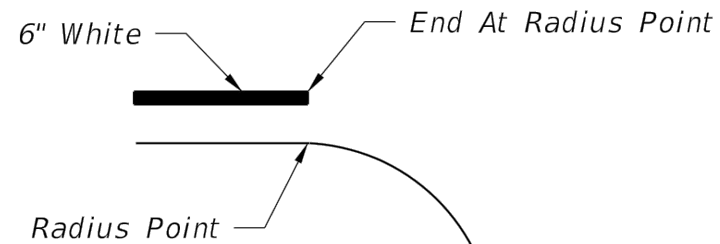
Volkert
Engineers • Surveyors • Planners
DRAWN BY: AMY O'LAUGHLIN
CHECKED BY: MIKE WARNEKE
DATE: MARCH 2018
PROJECT: CASINO BEACH PARKING AREA
SECTION/TOWNSHIP/RANGE: 4

REVISIONS	DATE	APPROVED BY

DRAWING NUMBER: 635501
PROJECT NUMBER: 635501
SURVEY NUMBER: 635501



PAVEMENT MARKINGS FOR INTERSECTIONS WITH MAJOR AND MINOR ROADS



DETAIL "B"

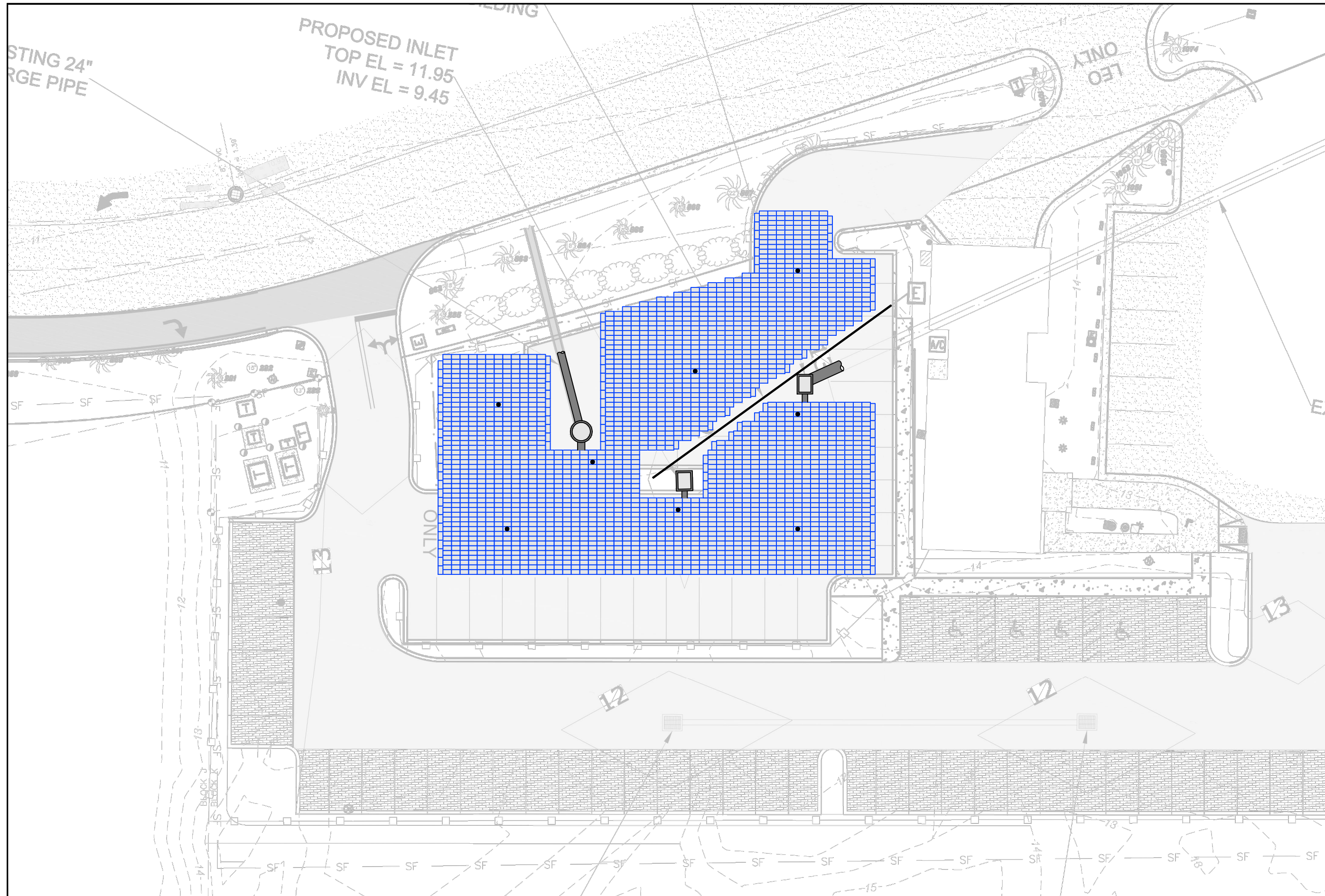


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Volkert
Engineers • Surveyors • Planners
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FIELD BOOK PAGES: 4

REVISIONS	DATE	APPROVED BY

DRAWING NUMBER
PROJECT NUMBER 635501
SURVEY NUMBER
SHEET 16 OF 31



R-TANK^{HD} SYSTEM OVERLAY
SCALE: 1" = 25'

NOTE: ENGINEER OF RECORD TO REVIEW, APPROVE AND ENDORSE FINAL SITE SPECIFIC DESIGN.



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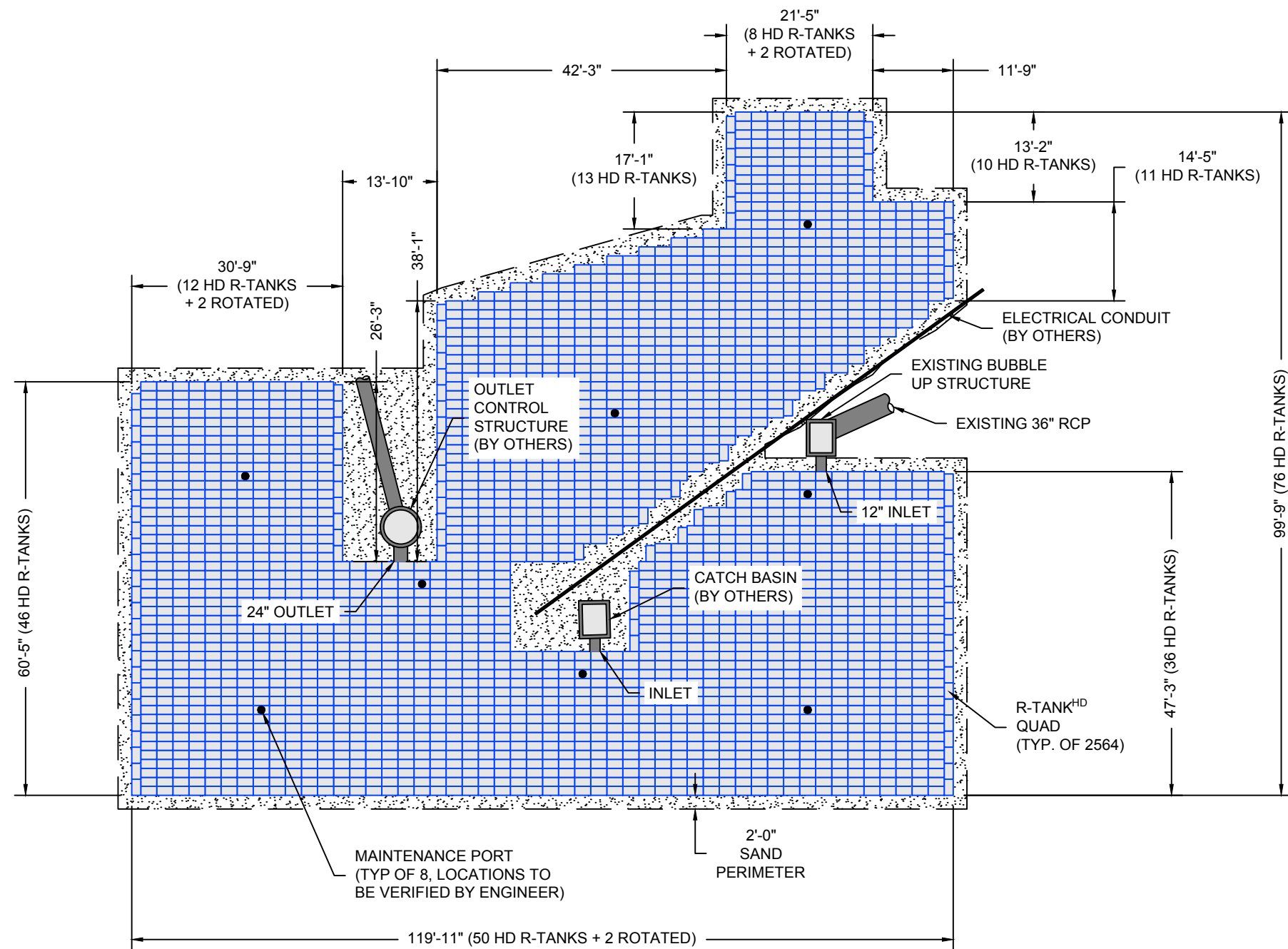
R-TANK^{HD} SYSTEM LAYOUT
CASINO BEACH PARKING AREA
ESCAMBIA, FL
SITE DESIGNATION: INFILTRATION SYSTEM
ACF ENVIRONMENTAL, 1-800-448-3636, www.acfenvironmental.com

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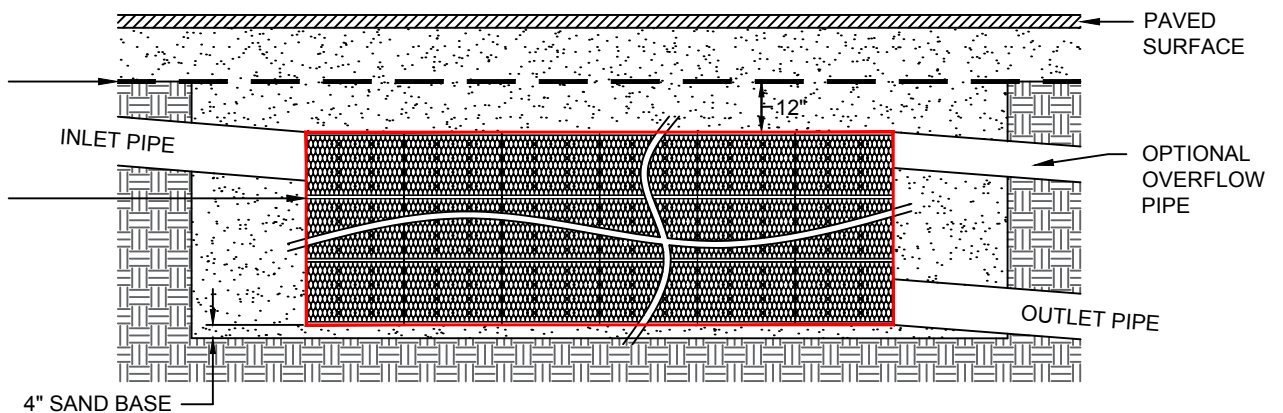


- NOTES:
1. STORAGE VOLUME FROM 4.33 TO 9.40 = 38,014 CF
 2. MAXIMUM WATER SURFACE ELEVATION FOR STORAGE VOLUMES = 9.48.

LAYOUT SCALE	1" = 20'
R-TANK ^{HD} MODULE TYPE	QUAD
TRAFFIC LOAD	HS-20
# OF QUAD R-TANKS	2,564
R-TANK STORAGE VOLUME	38,614 CF
TANK INVERT	4.33
INVERT OF SAND BASE (4")	4.00
TOP OF R-TANK ELEV.	9.91
TOP OF COVER SAND ELEV. (12")	10.91
ACF BX-12 GEOGRID ELEV.	10.91
MIN. SAND PERIMETER WIDTH	2.0 FT
SEE SHEETS 3 - 6 FOR DETAILS AND ADDITIONAL INFORMATION	

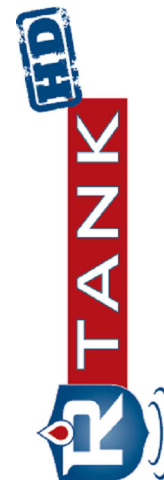
GEOGRID (ACF BX-12) PLACED 12" ABOVE THE R-TANK^{HD} SYSTEM. OVERLAP ADJACENT PANELS BY 18" MIN. GEOGRID SHOULD EXTEND 3' BEYOND THE EXCAVATION FOOTPRINT.

R-TANK^{HD} UNITS WRAPPED IN 8 OZ. NONWOVEN GEOTEXTILE (OR EQUAL)



R-TANK^{HD} TANK WRAP & EXCAVATION LINER DETAIL

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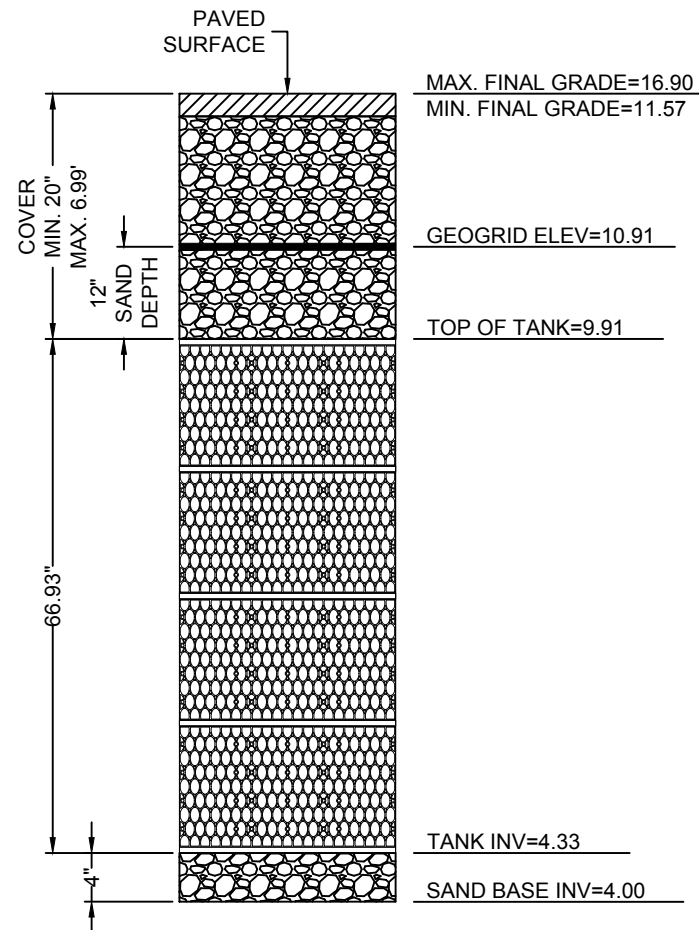
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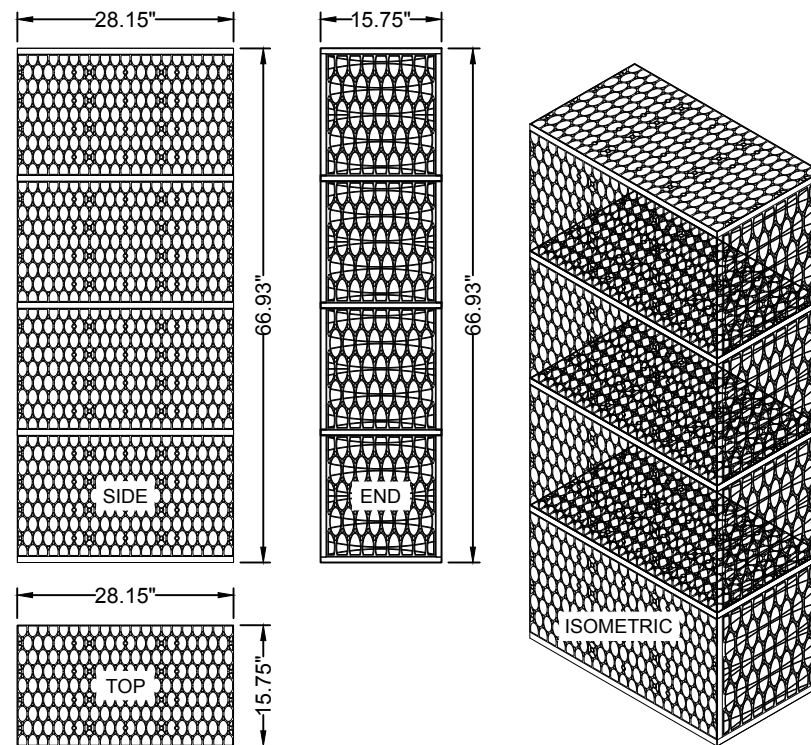


R-TANK^{HD} SYSTEM LAYOUT
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QUAD R-TANK^{HD} - ELEVATION



MODULE DATA

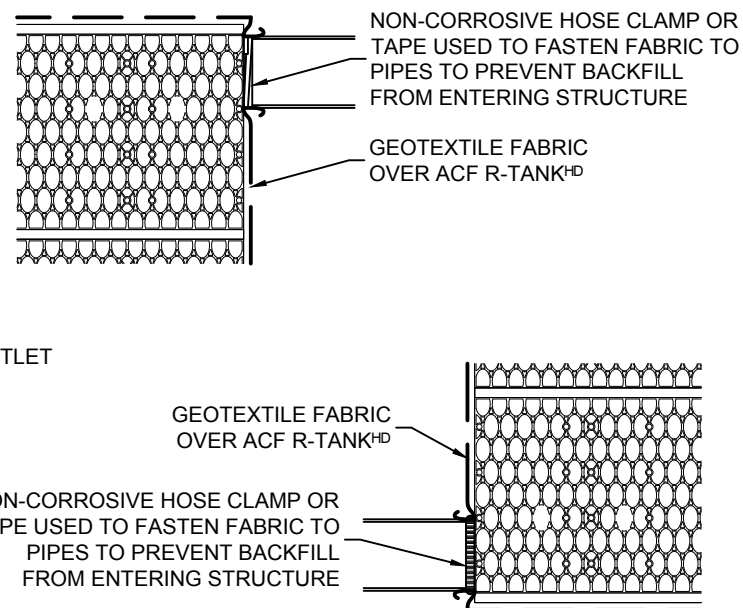
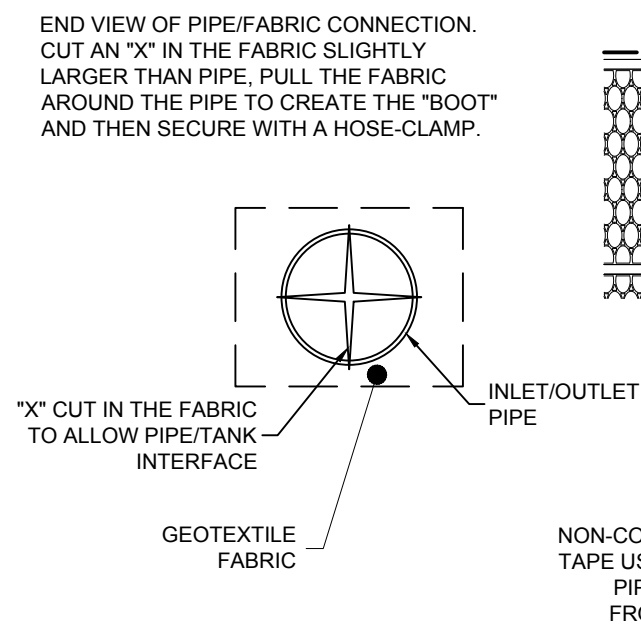
GEOMETRY:	LOAD RATING:
LENGTH = 28.15 IN. (715 MM)	33.4 PSI, (MODULE ONLY)
WIDTH = 15.75 IN. (400 MM)	HS20, (WITH ACF COVER SYSTEM)
HEIGHT = 66.93 IN. (1700 MM)	MATERIAL:
TANK VOLUME = 17.17 CF	100% RECYCLED POLYPROPYLENE
STORAGE VOLUME = 16.31 CF	SMALL PLATES PER
VOID INTERNAL VOLUME: 95%	SEGMENT/TOTAL:
VOID SURFACE AREA: 90%	5/20

QUAD R-TANK^{HD} - MODULE DETAIL

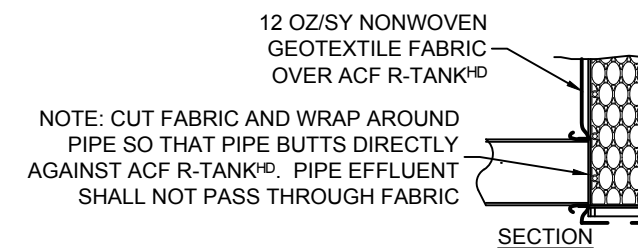
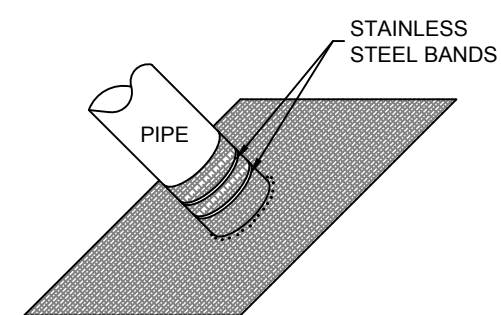
R-TANK^{HD} QUANTITIES

R-TANK ^{HD} MODULE TYPE	QUAD
# OF QUAD R-TANKS	2,564
R-TANK STORAGE VOLUME	38,614 CF
SAND BED FOOTPRINT	9,649 SF
SAND QUANTITY	809 CY
8 OZ. NON-WOVEN GEOTEXTILE TANK WRAP	22,480 SF (2,498 SY)
ACF BX-12 GEOGRID	12,819 SF (1,424 SY)
12" MAINTENANCE PORTS	8
PIPE BOOTS (UNKNOWN SIZE)	1
12" PIPE BOOTS	1
24" PIPE BOOTS	1

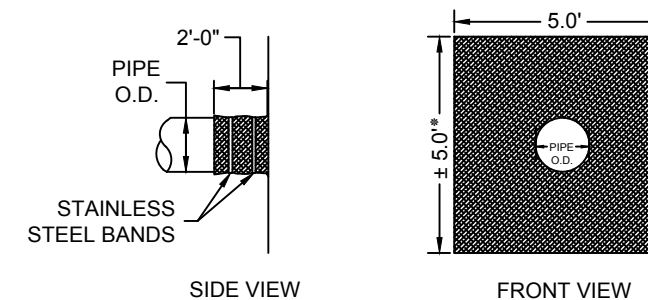
NOTE: SAND QUANTITY INCLUDES 12" OF COVER AND 4" OF BASE.
NOTE: GEOTEXTILE / LINER QUANTITIES INCLUDE A 15% WASTE FACTOR.



R-TANK^{HD} TYPICAL TANK INLET/OUTLET DETAIL



- 12 OZ/SY NONWOVEN GEOTEXTILE
- FABRIC COLLAR TO FIT OUTSIDE DIAMETER OF INLET/OUTLET PIPE
- * TRIM AS NEEDED



GEOTEXTILE PIPE BOOT FOR R-TANK^{HD}

NOTE: ENGINEER OF RECORD TO REVIEW, APPROVE AND ENDORSE FINAL SITE SPECIFIC DESIGN.



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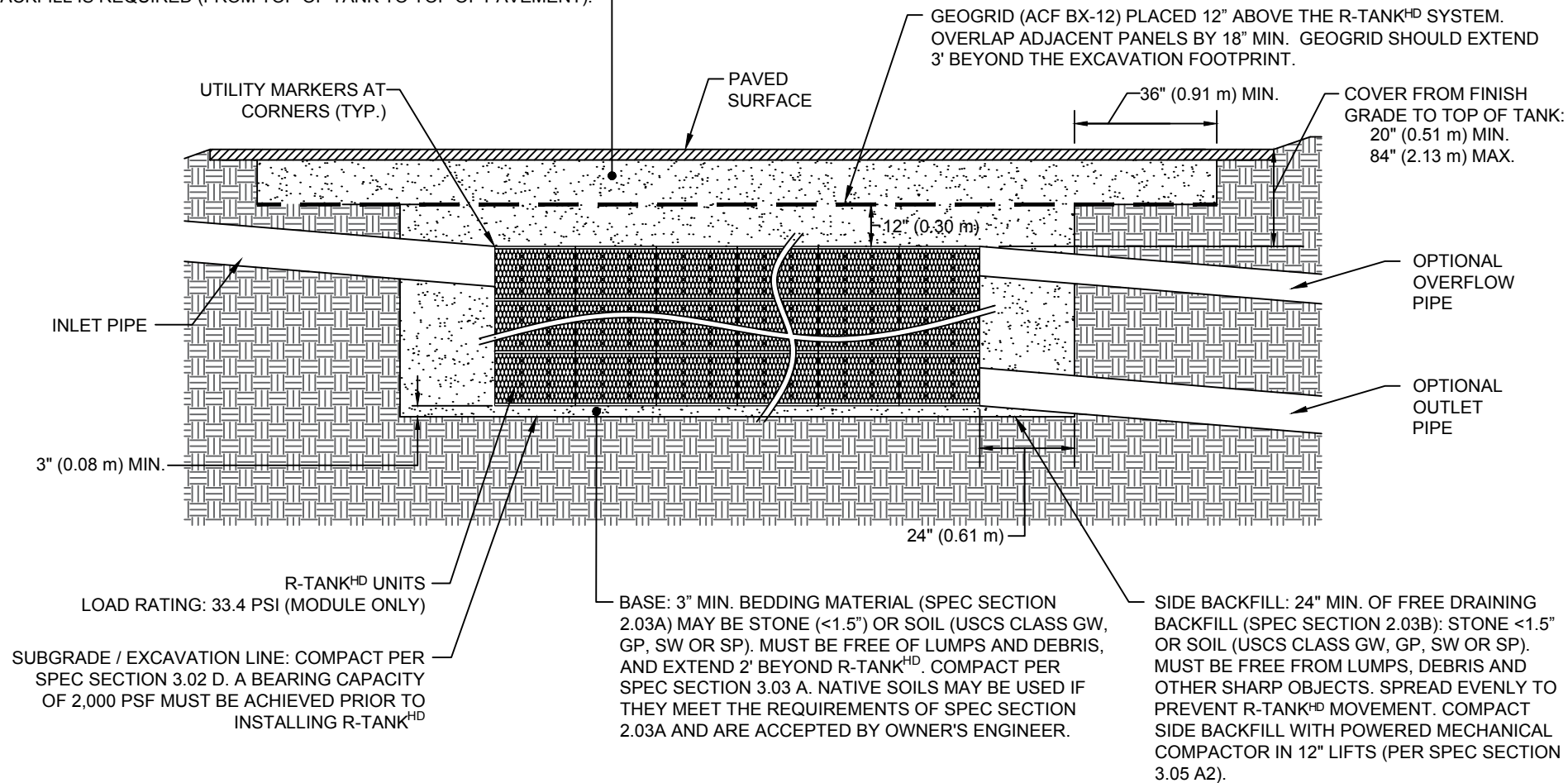
R-TANK^{HD} SYSTEM DETAILS
CASINO BEACH PARKING AREA
ESCAMBIA, FL
SITE DESIGNATION: INFILTRATION SYSTEM
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TOTAL COVER: 20" MINIMUM AND 84" MAXIMUM. FIRST 12" MUST BE FREE DRAINING BACKFILL (SPEC SECTION 2.03B): STONE <1.5" OR SOIL (USCS CLASS GW, GP, SW OR SP). ADDITIONAL FILL MAY BE STRUCTURAL FILL (SPEC SECTION 2.03C): STONE OR SOIL (USCS CLASS SM, SP, SW, GM, GP OR GW) WITH MAX CLAY CONTENT <10%, MAX 25% PASSING NO. 200 SIEVE, AND MAX PLASTICITY INDEX OF 4. A MIN. 12" COVER MUST BE MAINTAINED BETWEEN BACKFILL EQUIPMENT AND THE TOP OF THE R-TANK™ SYSTEM AT ALL TIMES. TOTAL HEIGHT OF TOP BACKFILL SHOULD NOT EXCEED 7'. CONTACT ACF ENVIRONMENTAL IF MORE THAN 7' OR LESS THAN 20" OF TOP BACKFILL IS REQUIRED (FROM TOP OF TANK TO TOP OF PAVEMENT).

NOTES:

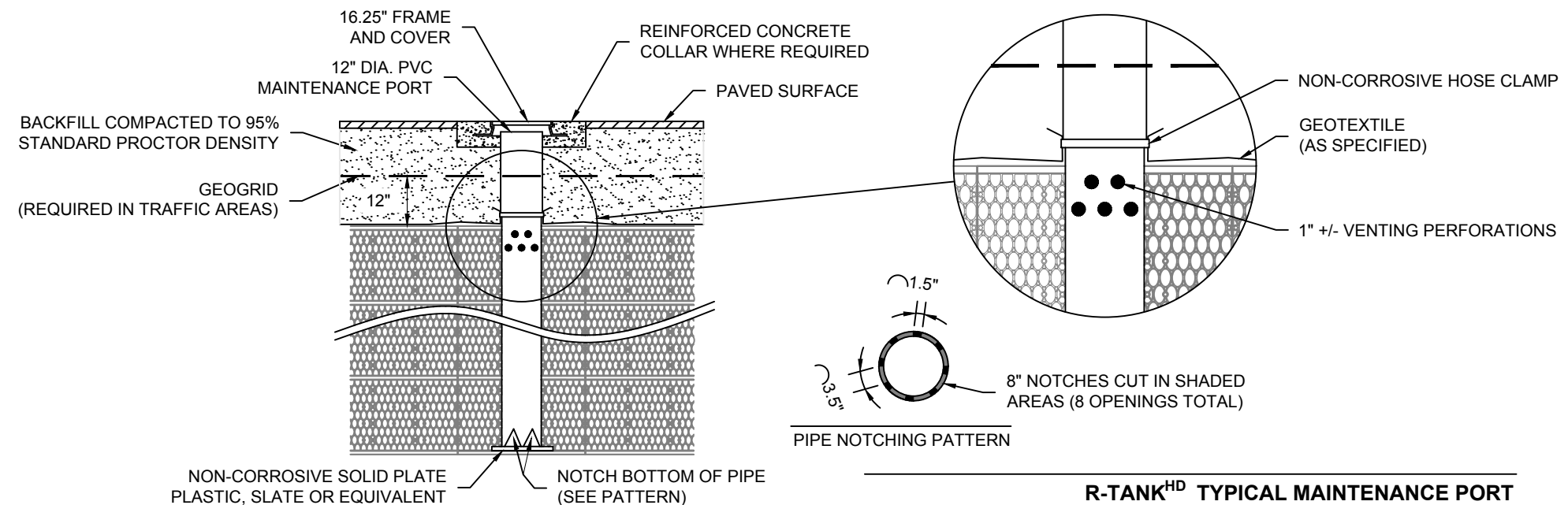
1. FOR COMPLETE MODULE DATA, SEE APPROPRIATE R-TANK^{HD} MODULE SHEET.
2. INSTALLATIONS PER THIS DETAIL MEET GUIDELINES OF HL-93 LOADING PER THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, CUSTOMARY U.S. UNITS, 7TH EDITION, 2014 WITH 2015 AND 2016 INTERIM REVISIONS.
3. PRE-TREATMENT STRUCTURES NOT SHOWN.
4. FOR INFILTRATION APPLICATIONS, GEOTEXTILE ENVELOPING R-TANK SHALL BE ACF M200 (PER SPEC SECTION 2.02A) AND BASE SHALL BE 4" MIN. UNCOMPACTED FREE DRAINING BACKFILL (SPEC SECTION 2.03A) TO PROVIDE A LEVEL BASE. SURFACE MUST BE SMOOTH, FREE OF LUMPS OR DEBRIS, AND EXTEND 2' BEYOND R-TANK^{HD} FOOTPRINT.



R-TANK^{HD} & H-20 LOADS - SECTION VIEW

NOTES

1. THIS PORT IS USED TO PUMP WATER INTO THE SYSTEM AND RE-SUSPEND ACCUMULATED SEDIMENT SO THAT IT MAY BE PUMPED OUT.
2. MINIMUM REQUIRED MAINTENANCE INCLUDES A QUARTERLY INSPECTION DURING THE FIRST YEAR OF OPERATION AND A YEARLY INSPECTION THEREAFTER. FLUSH AS NEEDED.
3. ONLY R-TANK^{HD} AND R-TANK^{SD} MAY BE USED IN TRAFFIC APPLICATIONS.
4. SEE TRAFFIC LOADING DETAIL FOR MINIMUM & MAXIMUM COVER REQUIREMENTS.



R-TANK^{HD} TYPICAL MAINTENANCE PORT

NOTE: ENGINEER OF RECORD TO REVIEW, APPROVE AND ENDORSE FINAL SITE SPECIFIC DESIGN.



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R-TANK^{HD} SYSTEM DETAILS
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SITE DESIGNATION: INFILTRATION SYSTEM
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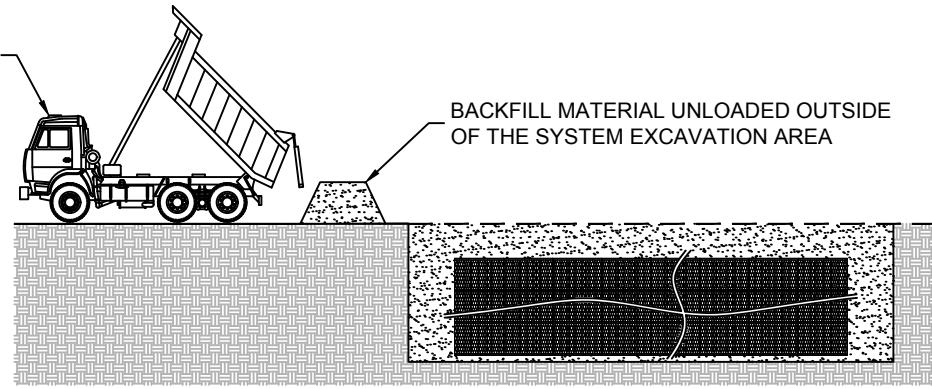
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DUMP TRUCKS AND PANS SHALL NOT OPERATE OVER THE SYSTEM EXCAVATION AREA

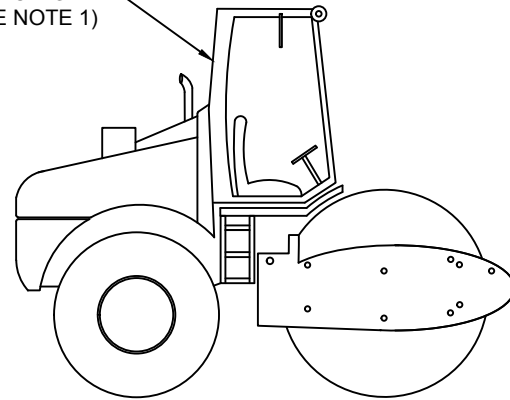


DUMP TRUCK DETAIL (SEE NOTE 3)

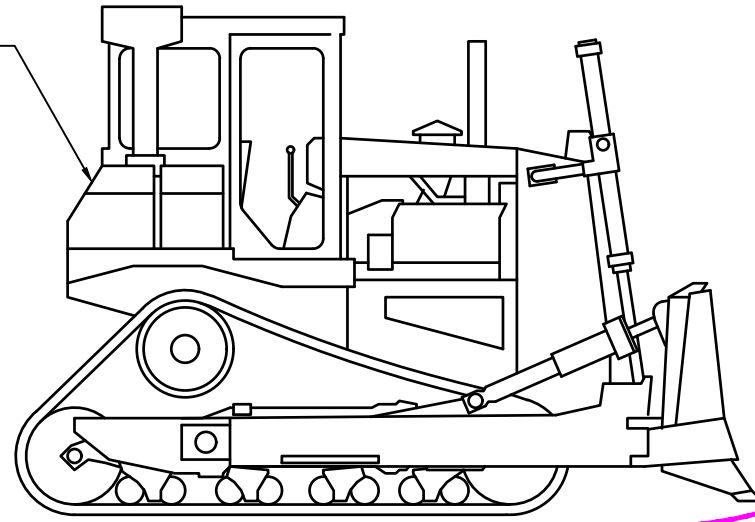
NOTES:

1. FOLLOWING PLACEMENT OF SIDE BACKFILL, A UNIFORM 12" LIFT OF THE FREELY DRAINING MATERIAL (SPEC SECTION 2.03 B) SHALL BE PLACED OVER THE R-TANK AND LIGHTLY COMPACTED USING A WALK-BEHIND TRENCH ROLLER. ALTERNATELY, A ROLLER (MAXIMUM GROSS VEHICLE WEIGHT OF 6 TONS) MAY BE USED. ROLLER MUST REMAIN IN STATIC MODE UNTIL A MINIMUM OF 24" OF COVER HAS BEEN PLACED OVER THE MODULES. SHEEP FOOT ROLLERS SHOULD NOT BE USED. **SPEC SECTION 3.05 A**
2. ONLY LOW PRESSURE TIRE OR TRACK VEHICLES (LESS THAN 7 PSI AND OPERATING WEIGHT OF LESS THAN 20,000 LBS) SHALL BE OPERATED OVER THE R-TANK SYSTEM DURING CONSTRUCTION. **SPEC SECTION 3.05 B**
3. DUMP TRUCKS AND PANS SHALL NOT BE OPERATED WITHIN THE R-TANK SYSTEM AT ANY TIME. WHERE NECESSARY, THE HEAVY EQUIPMENT SHOULD UNLOAD IN AN AREA ADJACENT TO THE R-TANK SYSTEM AND THE MATERIAL SHOULD BE MOVED OVER THE SYSTEM WITH TRACKED EQUIPMENT. **SPEC SECTION 3.05 B**
4. ENSURE THAT ALL UNRELATED CONSTRUCTION TRAFFIC IS KEPT AWAY FROM THE LIMITS OF EXCAVATION UNTIL THE PROJECT IS COMPLETE AND FINAL SURFACE MATERIALS ARE IN PLACE. NO NON-INSTALLATION RELATED LOADING SHOULD BE ALLOWED OVER THE R-TANK SYSTEM UNTIL THE FINAL DESIGN SECTION HAS BEEN CONSTRUCTED (INCLUDING PAVEMENT). **SPEC SECTION 3.05 C**
5. SEE R-TANK INSTALLATION GUIDE OR CONTACT YOUR LOCAL ACF REPRESENTATIVE FOR ADDITIONAL INFORMATION.

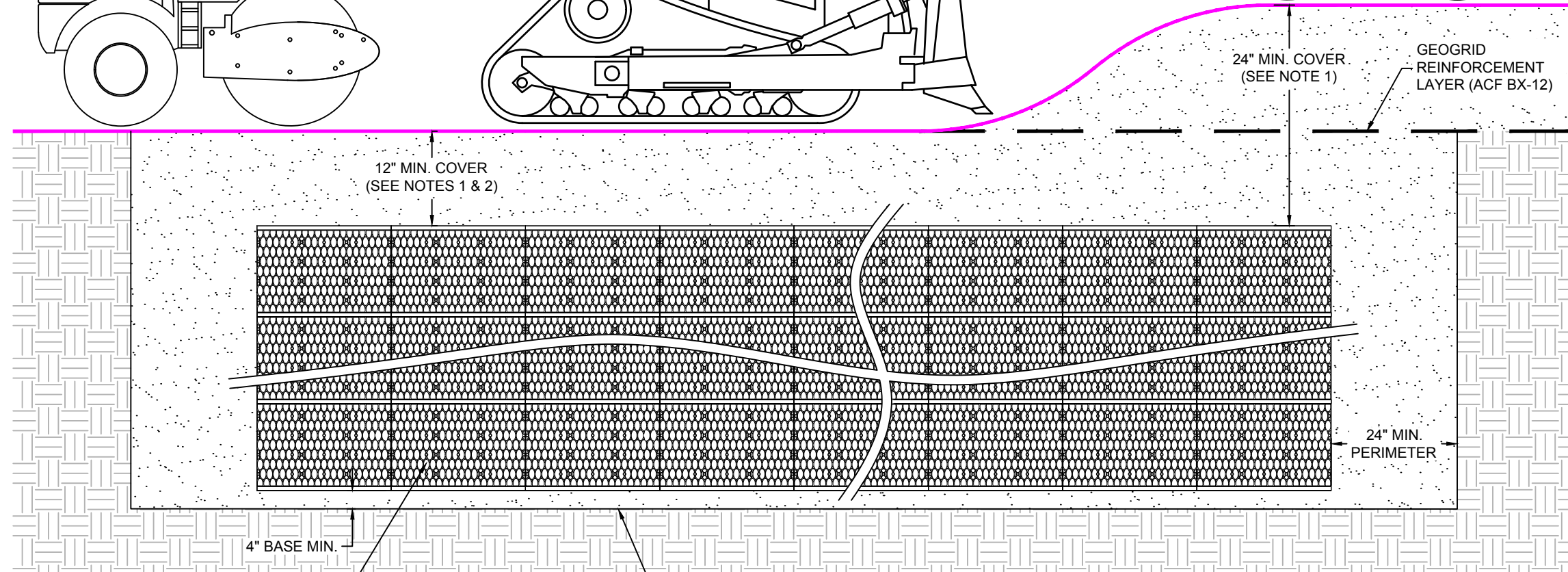
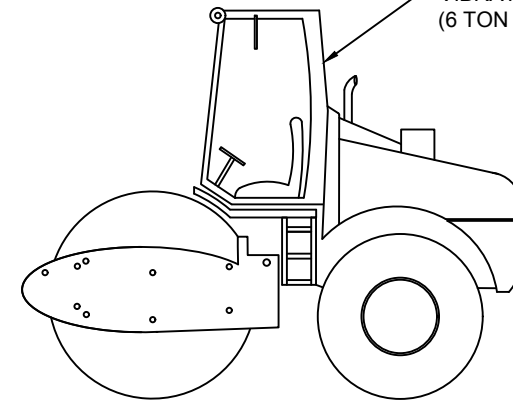
SMOOTH DRUM ROLLER STATIC MODE (6 TON MAX, SEE NOTE 1)



LOW GROUND PRESSURE DOZER (10 TON MAX, SEE NOTE 2)

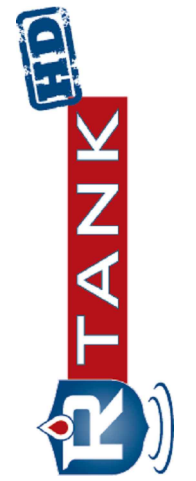


SMOOTH DRUM ROLLER VIBRATORY MODE (6 TON MAX, SEE NOTE 1)



R-TANK^{HD} OR R-TANK^{SD} UNITS
 HD: LOAD RATING: 33.4 PSI (MODULE ONLY)
 SD: LOAD RATING: 40 PSI (MODULE ONLY)

SUBGRADE / EXCAVATION LINE: COMPACT PER SPEC SECTION 3.02 D. A BEARING CAPACITY OF 2,000 PSF MUST BE ACHIEVED PRIOR TO INSTALLING R-TANK^{HD} OR R-TANK^{SD}



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R-TANK^{HD} CONSTRUCTION EQUIPMENT COVER DETAIL
 CASINO BEACH PARKING AREA
 ESCAMBIA, FL
 SITE DESIGNATION: INFILTRATION SYSTEM
 ACF ENVIRONMENTAL, 1-800-448-3636, www.acfenvironmental.com

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R-TANK SPECIFICATION

PART 1 - GENERAL

1.01 Related Documents

- A. Drawings, technical specification and general provisions of the Contract as modified herein apply to this section.

1.02 Description of Work Included

- A. Provide excavation and base preparation per geotechnical engineer's recommendations and/or as shown on the design drawings, to provide adequate support for project design loads and safety from excavation sidewall collapse. Excavations shall be in accordance with the owner's and OSHA requirements.
- B. Provide and install R-Tank, R-TankHD, or R-TankSD system (hereafter called R-Tank) and all related products including fill materials, geotextiles, geogrids, inlet and outlet pipe with connections per the manufacturer's installation guidelines provided in this section.
- C. Provide and construct the cover of the R-Tank system including; stone backfill, structural fill cover, and pavement section as specified.
- D. Protect R-Tank system from construction traffic after installation until completion of all construction activity in the installation area.

1.03 Quality Control

- A. All materials shall be manufactured in ISO certified facilities.
- B. Installation Contractor shall demonstrate the following experience:
1. A minimum of three R-Tank or equivalent projects completed within 2 years; and,
 2. A minimum of 25,000 cubic feet of storage volume completed within 2 years.
- C. Contractor experience requirement may be waived if the manufacturer's representative provides on-site training and review during construction.
- C. Installation Personnel: Performed only by skilled workers with satisfactory record of performance on bulk earthworks, pipe, chamber, or pond/landfill construction projects of comparable size and quality.
- D. Contractor must have manufacturer's representative available for site review if requested by Owner.

1.04 Submittals

- A. Submit proposed R-Tank layout drawings. Drawings shall include typical section details as well as the required base elevation of stone and tanks, minimum cover requirements and tank configuration.
- B. Submit manufacturer's product data, including compressive strength and unit weight.
- C. Submit manufacturer's installation instructions.
- D. Submit R-Tank sample for review. Reviewed and accepted samples will be returned to the Contractor.
- E. Submit material certificates for geotextile, geogrid, base course and backfill materials.
- F. Submit required experience and personnel requirements as specified in Section 1.03.
- G. Any proposed equal alternative product substitution to this specification must be submitted for review and approved prior to bid opening. Review package should include third party reviewed performance data that meets or exceeds criteria in Table 2.01 B.

1.05 Delivery, Storage, and Handling

- A. Protect R-Tank and other materials from damage during delivery, and store UV sensitive materials under tarp to protect from sunlight when time from delivery to installation exceeds two weeks. Storage of materials should be on smooth surfaces, free from dirt, mud and debris.
- B. Handling is to be performed with equipment appropriate to the materials and site conditions, and may include hand, handcart, forklifts, extension lifts, etc.
- C. Cold weather:
1. Care must be taken when handling plastics when air temperature is 40 degrees or below as plastic becomes brittle.
 2. Do not use frozen materials or materials mixed or coated with ice or frost.
 3. Do not build on frozen ground or wet, saturated or muddy subgrade.

1.06 Preinstallation Conference.

- A. Prior to the start of the installation, a preinstallation conference shall occur with the representatives from the design team, the general contractor, the excavation contractor, the R-Tank installation contractor, and the manufacturer's representative.

1.07 Project Conditions

- A. Coordinate installation for the R-Tank system with other on-site activities to eliminate all non-installation related construction traffic over the completed R-Tank system. No loads heavier than the design loads shall be allowed over the system, and in no case shall loads higher than a standard AASHTO HS20 (or HS25, depending on design criteria) load be allowed on the system at any time.
- B. Protect adjacent work from damage during R-Tank system installation.
- C. All pre-treatment systems to remove debris and heavy sediments must be in place and functional prior to operation of the R-Tank system. Additional pretreatment measures may be needed if unit is operational during construction due to increased sediment loads.
- D. Contractor is responsible for any damage to the system during construction.

PART 2 - PRODUCTS

2.01 R-Tank Units

- A. R -Tank - Injection molded plastic tank plates assembled to form a 95% void modular structure of predesigned height (custom for each project).
- B. R-Tank units shall meet the following Physical & Chemical Characteristics:

PROPERTY	DESCRIPTION	R-Tank ^{HD} VALUE	R-Tank ^{SD} VALUE	R-Tank ^{SD} VALUE
Void Area	Volume available for water storage	95%	95%	95%
Surface Void Area	Percentage of exterior available for infiltration	90%	90%	90%
Compressive Strength	ASTM D 2412 / ASTM F 2418	30.0 psi	33.4 psi	42.9 psi
HS-20 Minimum Cover	Cover required to support HS-20 loads	N/A	20"	18"
HS-25 Minimum Cover	Cover required to support HS-25 loads	N/A	24"	19"
Maximum Cover	Maximum allowable cover depth	3 feet	< 7 feet	< 10 feet
Unit Weight	Weight of plastic per cubic foot of tank	3.29 lbs / cf	3.62 lbs/cf	3.96 lbs / cf
Rib Thickness	Thickness of load-bearing members	0.18 inches	0.18 inches	0.18 inches
Service Temperature	Safe temperature range for use	-14 – 167° F	-14 – 167° F	-14 – 167° F

2.02 Geosynthetics

- A. Geotextile. A geotextile envelope is required to prevent backfill material from entering the R-Tank modules.
1. Standard Application: The standard geotextile shall be an 8 oz per square yard nonwoven geotextile (ACF N080 or equivalent).
 2. Infiltration Applications: When water must infiltrate/exfiltrate through the geotextile as a function of the system design, a woven monofilament (ACF M200 or equivalent) shall be used.
- B. Geogrid. For installations subject to traffic loads and/or when required by project plans, install geogrid (ACF BX12 or equivalent) to reinforce backfill above the R-Tank system. Geogrid is often not required for non-traffic load applications.

2.03 Backfill & Cover Materials

- A. Bedding Materials: Stone (smaller than 1.5" in diameter) or soil (GW, GP, SW, or SP as classified by the Unified Soil Classification System) shall be used below the R-Tank system (3" minimum). Material must be free from lumps, debris, and any sharp objects that could cut the geotextile. Material shall be within 3 percent of the optimum moisture content as determined by ASTM D698 at the time of installation. For infiltration applications bedding material shall be free draining.
- B. Side and Top Backfill: Free draining stone (smaller than 1.5" in diameter) or soil (GW, GP, SW, or SP as classified by the Unified Soil Classification System) shall be used adjacent to (24" minimum) and above (for the first 12") the R-Tank system. Material must be free from lumps, debris and any sharp objects that could cut the geotextile. Material shall be within 3 percent of the optimum moisture content as determined by ASTM D698 at the time of installation.
- C. Additional Cover Materials: Structural Fill shall consist of granular materials meeting the gradational requirements of SM, SP, SW, GM, GP or GW as classified by the Unified Soil Classification System. Structural fill shall have a maximum of 25 percent passing the No. 200 sieve, shall have a maximum clay content of 10 percent and a maximum Plasticity Index of 4. Material shall be within 3 percent of the optimum moisture content as determined by ASTM D698 at the time of installation.

2.04 Other Materials

- A. Utility Marker: Install metallic tape at corners of R-Tank system to mark the area for future utility detection.

PART 3 - EXECUTION

3.01 Assembly of R-Tank Units

- A. On-site assembly of tanks shall be performed in accordance with the R-Tank Installation Manual, Section 2.

3.02 Layout and Excavation

- A. Installer shall stake out, excavate, and prepare the subgrade area to the required plan grades and dimensions, ensuring that the excavation is at least 2 feet greater than R-Tank dimensions in each direction allowing for installation of geotextile filter fabric, R-Tank modules, and free draining backfill materials.
- B. All excavations must be prepared with OSHA approved excavated sides and sufficient working space.
- C. Protect partially completed installation against damage from other construction traffic by establishing a perimeter with high visibility construction tape, fencing, barricades, or other means until construction is complete.
- D. Base of the excavation shall be uniform, level, and free of lumps or debris and soft or yielding subgrade areas. A minimum 2,000 pounds per square foot bearing capacity is required.
1. Standard Applications: Compact subgrade to a minimum of 95% of Standard Proctor (ASTM D698) density or as required by the Owner's engineer.
 2. Infiltration Applications: Subgrade shall be prepared in accordance with the contract documents. Compaction of subgrade should not be performed in infiltration applications.
- E. Unsuitable Soils or Conditions: All questions about the base of the excavation shall be directed to the owner's engineer, who will approve the subgrade conditions prior to placement of stone. The owner's engineer shall determine the required bearing capacity of the R-Tank subgrade; however in no case shall a bearing capacity of less than 2,000 pounds per square foot be provided.
1. If unsuitable soils are encountered at the subgrade, or if the subgrade is pumping or appears excessively soft, repair the area in accordance with contract documents and/or as directed by the owner's engineer.
 2. If indications of the water table are observed during excavation, the engineer shall be contacted to provide recommendations.
 3. Do not start installation of the R-Tank system until unsatisfactory subgrade conditions are corrected and the subgrade conditions are accepted by the owner's engineer.

3.03 Preparation of Base

- A. Place a thin layer (3" unless otherwise specified) of bedding material (Section 2.03 A), over the subgrade to establish a level working platform for the R-Tank modules. Level to within 1/2" (+/- 1/4") or as shown on the plans. Native subgrade soils or other materials may be used if determined to meet the requirements of 2.03 A and are accepted by the owner's engineer.
1. Standard Applications: Static roll or otherwise compact bedding materials until they are firm and unyielding.
 2. Infiltration Applications: Bedding materials shall be prepared in accordance with the contract documents.
- B. Outline the footprint of the R-Tank system on the excavation floor using spray paint or chalk line to ensure a 2' perimeter is available around the R-Tank system for proper installation and compaction of backfill.

3.04 Installation of the R-Tanks

- A. Where a geotextile wrap is specified on the stone base, cut strips to length and install in excavation, removing wrinkles so material lays flat. Overlap geotextile a minimum 12" or as recommended by manufacturer.
- B. Where an impervious liner (for containment) is specified, install the liner per manufacturer's recommendations and the contract documents. The R-Tank units shall be separated from impervious liner by a non-woven geotextile fabric installed accordance with Section 3.04A.
- C. Install R-Tank modules by placing side by side, in accordance with the design drawings. No lateral connections are required. It is advisable to use a string line to form square corners and straight edges along the perimeter of the R-Tank system. The modules are to be oriented as per the design drawing (15.75" x 28.15") with required depth as shown on plans. The large side plate of the tank should be placed on the perimeter of the system. This will typically require that the two ends of the tank area will have a row of tanks placed perpendicular to all other tanks. If this is not shown in the construction drawings, it is a simple field adjustment that will have minimal effect on the overall system footprint. Refer to R-Tank Installation Guide for more details.
- D. Wrap the R-Tank top and sides in specified geotextile. Cut strips of geotextile so that it will cover the sides and top, encapsulating the entire system to prevent soil entry into the system. Overlap geotextile 12" or as recommended by manufacturer. Take great care to avoid damage to geotextile (and, if specified, impervious liner) during placement.
- E. Identify locations of inlet, outlet and any other penetrations of the geotextile (and optional liner). These connections should be installed flush (buted up to the R-Tank) and the geotextile fabric shall be cut to enable hydraulic continuity between the connections and the R-Tank units. These connections shall be secured using pipe boots with stainless steel pipe clamps. Support pipe in trenches during backfill operations to prevent pipe from settling and damaging the geotextile, impervious liner (if specified) or pipe. Connecting pipes at 90 degree angles facilitates construction, unless otherwise specified. Ensure end of pipe is installed snug against R-Tank system.
- F. Install Inspection and Maintenance Ports in locations noted on plans. At a minimum one maintenance port shall be installed within 10' of each inlet & outlet connection, and with a maximum spacing of one maintenance port for every 2,500 square feet. Install all ports as noted in the R-Tank Installation Guide.
- G. If required, install ventilation pipes and vents as specified on drawings to provide ventilation for proper hydraulic performance. The number of pipes and vents will depend on the size of the system. Vents are often installed using a 90 degree elbow with PVC pipe into a landscaped area with 'U' bend or venting bollard to inhibit the ingress of debris. A ground level concrete or steel cover can be used.

3.05 Backfilling of the R-Tank Units

- A. Backfill and fill with recommended materials as follows:
1. Place freely draining backfill materials (Section 2.03 B) around the perimeter in lifts with a maximum thickness of 12". Each lift shall be placed around the entire perimeter such that each lift is no more than 24" higher than the side backfill along any other location on the perimeter of the R-Tank system. No fill shall be placed over top of tanks until the side backfill has been completed.
 2. Each lift shall be compacted at the specified moisture content to a minimum of 95% of the Standard Proctor Density until no further densification is observed (for self-compacting stone materials). The side lifts must be compacted with walk behind compaction equipment. Even when "self-compacting" backfill materials are selected, a walk behind vibratory compactor must be used.
 3. Take care to ensure that the compaction process does not allow the machinery to come into contact with the modules due to the potential for damage to the geotextile and R-Tank units.
 4. No compaction equipment is permissible to operate directly on the R-Tank modules.
 5. Following placement of side backfill, a uniform 12" lift of the freely draining material (Section 2.03 B) shall be placed over the R-Tank and lightly compacted using a walk-behind trench roller. Alternately, a roller (maximum gross vehicle weight of 6 tons) may be used. Roller must remain in static mode until a minimum of 24" of cover has been placed over the modules. Sheep foot rollers should not be used.
 6. Install a geogrid (required for traffic applications) over the initial 12" lift of backfill. Geogrid shall extend a minimum of 3 feet beyond the limits of the excavation wall.
 7. Following placement and compaction of the initial cover, subsequent lifts of structural fill (Section 2.03 C) shall be placed at the specified moisture content and compacted to a minimum of 95% of the Standard Proctor Density and shall cover the entire footprint of the R-Tank system. During placement of fill above the system, unless otherwise specified, a uniform elevation of fill shall be maintained to within 12" across the footprint of the R-Tank system. Do not exceed maximum cover depths listed in Table 2.01 B.
 8. Place additional layers of geotextile and/or geogrid at elevations as specified in the design details. Each layer of geosynthetic reinforcement placed above the R-Tank system shall extend a minimum of 3 feet beyond the limits of the excavation wall.
- B. Only low pressure tire or track vehicles shall be operated over the R-Tank system during construction. No machinery should drive on top of the tank until a minimum of 18" of backfill and compaction is achieved. Dump Trucks and Pans shall not be operated within the R-Tank system footprint at any time. Where necessary the heavy equipment should unload in an area adjacent to the R-Tank system and the material should be moved over the system with tracked equipment.
- C. Ensure that all unrelated construction traffic is kept away from the limits of excavation until the project is complete and final surface materials are in place. No non-installation related loading should be allowed over the R-Tank system until the final design section has been constructed (including pavement).
- D. Place surfacing materials, such as groundcovers (no large trees), or paving materials over the structure with care to avoid displacement of cover fill and damage to surrounding areas.
- E. Backfill depth over R-Tank system must be within the limitations shown in the table in Section 2.01 B. If the total backfill depth does not comply with this table, contact engineer or manufacturer's representative for assistance.

PART 4 - USING THE SYSTEM

4.01 Maintenance Requirements

- A. A routine maintenance effort is required to ensure proper performance of the R-Tank system. The Maintenance program should be focused on pretreatment systems. Ensuring these structures are clean and functioning properly will reduce the risk of contamination of the R-Tank system and stormwater released from the site. Pre-treatment systems shall be inspected yearly, or as directed by the regulatory agency and by the manufacturer (for proprietary systems). Maintain as needed using acceptable practices or following manufacturer's guidelines (for proprietary systems).
- B. Inspection and/or Maintenance Ports in the R-Tank system will need to be inspected for accumulation of sediments at least quarterly through the first year of operation and at least yearly thereafter. This is done by removing the cap of the port and using a measuring device long enough to reach the bottom of the R-Tank system and stiff enough to push through the loose sediments, allowing a depth measurement.
- C. If sediment has accumulated to the level noted in the R-Tank Maintenance Guide or beyond a level acceptable to the Owner's engineer, the R-Tank system should be flushed.
- D. A flushing event consists of pumping water into the Maintenance Port and/or adjacent structure, allowing the turbulent flows through the R-Tank system to re-suspend the fine sediments. If multiple Maintenance Ports have been installed, water should be pumped into each port to maximize flushing efficiency. Sediment-laden water can be filtered through a Dirtbag or approved equivalent if permitted by the locality.



DATE	REVISION

FOR ADDITIONAL INFORMATION PLEASE CONTACT:
ACF ENVIRONMENTAL 1-800-448-3636
www.acfenvironmental.com



R-TANK SPECIFICATION
CASINO BEACH PARKING AREA
ESCAMBIA, FL
SITE DESIGNATION: INFILTRATION SYSTEM
ACF ENVIRONMENTAL, 1-800-448-3636, www.acfenvironmental.com

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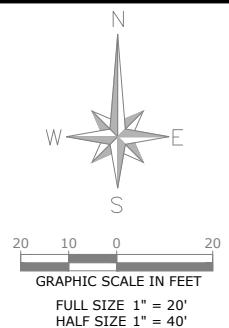
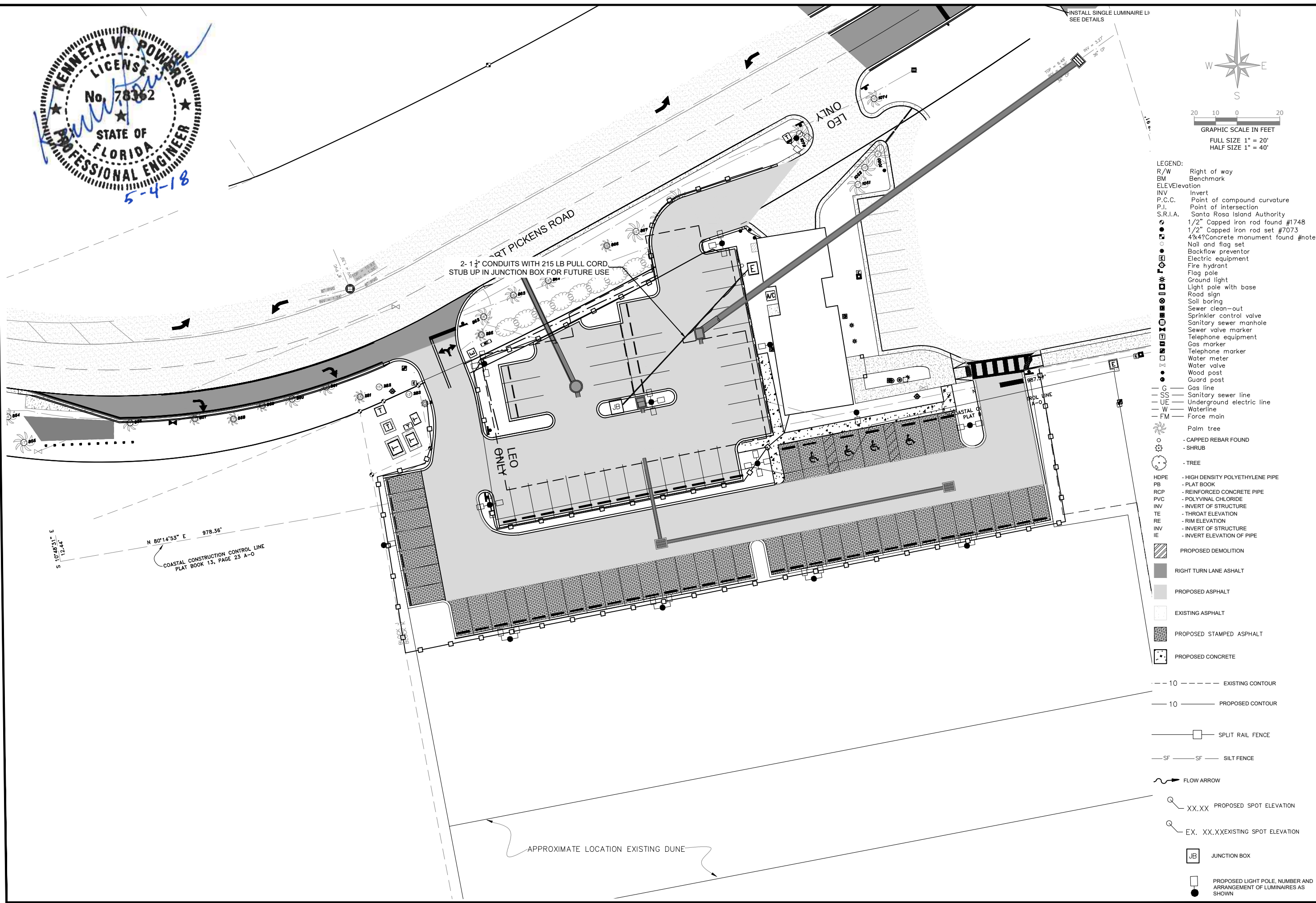
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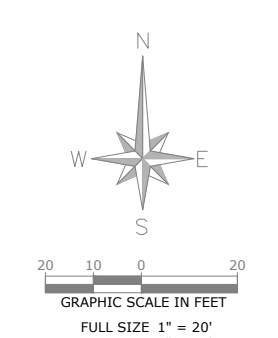
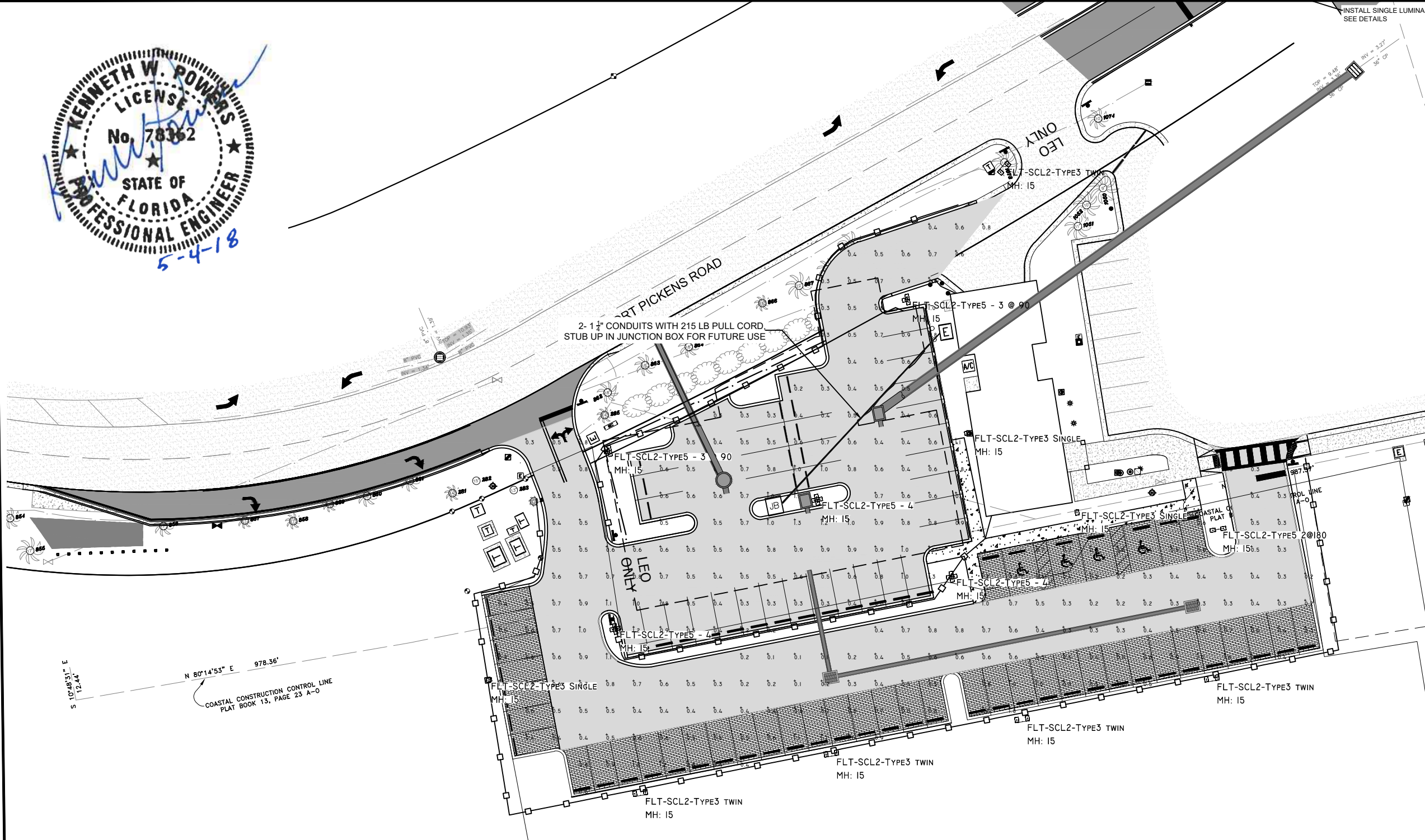
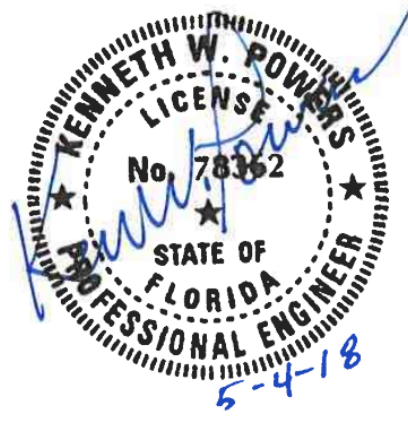
- LEGEND:
- R/W Right of way
 - BM Benchmark
 - ELEV Elevation
 - INV Invert
 - P.C.C. Point of compound curvature
 - P.I. Point of intersection
 - S.R.I.A. Santa Rosa Island Authority
 - 1/2" Capped iron rod found #1748
 - 1/2" Capped iron rod set #7073
 - 4x4 Concrete monument found #noted
 - Nail and flag set
 - Backflow preventer
 - Electric equipment
 - Fire hydrant
 - Flag pole
 - Ground light
 - Light pole with base
 - Road sign
 - Soil boring
 - Sewer clean-out
 - Sprinkler control valve
 - Sanitary sewer manhole
 - Sewer valve marker
 - Telephone equipment
 - Gas marker
 - Telephone marker
 - Water meter
 - Water valve
 - Wood post
 - Guard post
 - Gas line
 - Sanitary sewer line
 - Underground electric line
 - Waterline
 - Force main
 - Palm tree
 - CAPPED REBAR FOUND
 - SHRUB
 - TREE
 - HDPE - HIGH DENSITY POLYETHYLENE PIPE
 - PB - PLAT BOOK
 - RCP - REINFORCED CONCRETE PIPE
 - PVC - POLYVINYL CHLORIDE
 - INV - INVERT OF STRUCTURE
 - TE - THROAT ELEVATION
 - RE - RIM ELEVATION
 - INV - INVERT OF STRUCTURE
 - IE - INVERT ELEVATION OF PIPE
 - PROPOSED DEMOLITION
 - RIGHT TURN LANE ASPHALT
 - PROPOSED ASPHALT
 - EXISTING ASPHALT
 - PROPOSED STAMPED ASPHALT
 - PROPOSED CONCRETE
 - 10 - - - - EXISTING CONTOUR
 - 10 - - - - PROPOSED CONTOUR
 - SPLIT RAIL FENCE
 - SF - SF - SILT FENCE
 - FLOW ARROW
 - XX.XX PROPOSED SPOT ELEVATION
 - EX. XX.XX EXISTING SPOT ELEVATION
 - JB JUNCTION BOX
 - PROPOSED LIGHT POLE, NUMBER AND ARRANGEMENT OF LUMINAIRES AS SHOWN

PENSACOLA BEACH CONGESTION MANAGEMENT PLAN
CASINO BEACH PARKING AREA
PROPOSED LIGHTING PLAN

<p>Volkert Engineers • Surveyors • Planners</p> <p>215 FAIRPOINT DRIVE SUITE B GULF BREEZE, FL 32561 Telephone (850) 512-8935</p> <p>REG. P.E. NO. 78362 DATE: 5-4-18</p>	<p>CHECKED BY: _____ DESIGNED BY: _____ DRAWN BY: AMY O'LAUGHLIN DATE: MAY 2018 FIELD BOOK / PAGES: _____</p> <p>Q.A.C. MANAGER: DAVID FORTE DISTRICT: 4 SECTION / TOWNSHIP / RANGE: _____</p>
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DATE	APPROVED BY	REVISIONS	NUMBER	DRAWING NUMBER	PROJECT NUMBER
					635501

SHEET 24 OF 31



- LEGEND:
- R/W Right of way
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Symbol	Qty	Label	Arrangement	LLF	Description	Filename
[Symbol]	3	FLT-SCL2	4 @ 90 DEGREES	0.370	SCL2 Series MOD#_ SCL2-SPMS-WH-T5	FLT-SCL2-Type5 2.1.ies
[Symbol]	5	FLT-SCL2	TWIN	0.370	SCL2 Series MOD#_ SCL2-SPMS-WH-T3	FLT-SCL2-Type3 3.1.ies
[Symbol]	2	FLT-SCL2	3 @ 90 DEGREES	0.370	SCL2 Series MOD#_ SCL2-SPMS-WH-T5	FLT-SCL2-Type5 2.1.ies
[Symbol]	1	FLT-SCL2	2 @ 180 DEGREES	0.370	SCL2 Series MOD#_ SCL2-SPMS-WH-T5	FLT-SCL2-Type5 2.1.ies
[Symbol]	3	FLT-SCL2	SINGLE	0.370	SCL2 Series MOD#_ SCL2-SPMS-WH-T3	FLT-SCL2-Type3 3.1.ies

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
PARKING	Illuminance	Fc	0.60	1.8	0.1	6.00	18.00
Driveway	Illuminance	Fc	0.47	1.1	0.1	4.70	11.00
South Parking	Illuminance	Fc	0.77	1.8	0.3	2.57	6.00
West Parking	Illuminance	Fc	0.60	1.1	0.4	1.50	2.75

PENSACOLA BEACH CONGESTION
MANAGEMENT PLAN
CASINO BEACH PARKING AREA
PROPOSED PHOTOMETRIC PLAN



215 FAIRPOINT DRIVE
SUITE B
GULF BREEZE, FL 32561
Telephone (850) 512-8935

REG. P.E. NO. 78362
DATE: 5-4-18

DESIGNED BY: KEN POWERS, PE
CHECKED BY: AMY O'LAUGHLIN
DATE: MAY 2018

DISTRICT: 4
SECTION/TOWNSHIP/RANGE

DATE	APPROVED BY	REVISIONS

DRAWING NUMBER: 635501
PROJECT NUMBER: 635501
SURVEY NUMBER:

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