

**Project Manual
And
Contract Documents**

for

**45th to 52nd Avenue Drainage Improvements
City of Isle of Palms, SC**

**City of Isle of Palms
P.O. Box 508
Isle of Palms, SC 29451
843-886-6428**

45th to 52nd AVENUE DRAINAGE IMPROVEMENTS SCOPE OF PROJECT

The project is a drainage improvement project which shall include the scope detailed on construction plans to include the installation of approximately 7650 linear feet of concrete pipe, 60 drainage structures of various types, all necessary associated appurtenances and utility relocations as outlined in the Construction Documents.

As part of project, work shall include, but is not limited to, the installation and maintenance of all sediment and erosion control necessary for compliance with all applicable regulations; the adjustment of any and all existing utilities conflicting with the proposed drainage installations; the restoration of any and all elements of existing golf course, landscaping, existing driveways, sidewalks, bollards, and any and all other existing facilities disturbed during construction work; cleanup and restoration of all work areas and temporary accesses; any and all traffic control necessary for completion of project.

The construction area is comprised of the roadway right of way areas of 45th Avenue through 52nd Avenue and portions of Palm Blvd. between these roadways, areas within the Wild Dunes Resort including crossings of golf course fairways and tee box areas, and the replacement of an existing tidal flap gate located in the Wild Dunes Marina at Morgan Creek. Construction of the project will begin at the downstream end at Morgan Creek and proceed through the Wild Dunes Resort out to Palm Blvd and then down Palm Blvd and the specified Avenues.

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City of Isle of Palms, SC

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Invitation for Construction Bids

PROJECT NAME: 45th to 52nd Avenue Drainage Improvements

In compliance with the City's Procurement Ordinance, the City of Isle of Palms, South Carolina is seeking proposals and probable costs for installation of drainage improvements for 45th Avenue through 52nd Avenue to include the installation of new and the replacement of portions of existing drainage facilities. The request will be bid and awarded pursuant to the City's procurement ordinance. The City reserves the right to reject any and all proposals and to waive irregularities.

DESCRIPTION OF PROJECT: The project consists of the installation of a drainage system consisting of concrete pipe drainage lines, drainage structures, and outfall control structures as outlined in Construction Documents. As part of this installation, work shall include the removal and replacement of existing drainage lines, the installation and maintenance of all sediment and erosion control and traffic control measures necessary for completion of the project, the resolution of any and all utility conflicts with the proposed drainage system, the restoration of any and all landscaping, existing driveways, sidewalks, bollards, and any and all other existing appurtenances disturbed during construction of the project. The construction area comprises areas between 52nd Avenue and 45th Avenue, Palm Blvd., and areas within Wild Dunes as indicated on the Construction Documents.

BID SECURITY REQUIRED?	Yes
PERFORMANCE BOND REQUIRED?	Yes
PAYMENT BOND REQUIRED?	Yes

QUALIFICATIONS OF BIDDERS: Bidders must be General Contractors registered in the State of South Carolina with a minimum of five years in business and five successful projects of the construction type and magnitude. The City may make such investigations as it deems necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish to the City in a timely manner all such information and data for this purpose as the City may request. The City reserves the right to reject any bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the City of the Bidder's qualifications to complete the project. The City of Isle of Palms retains the right to reject any or all bids and to waive any informalities in bidding.

A/E NAME: Civil Site Environmental, Inc.
A/E ADDRESS: 668 Marina Drive, Suite B-1, Charleston, SC 29492
A/E CONTACT: Jason Milner, PE Phone: (843) 849-8945 E-mail: jmilner@civilsiteenv.com
Fax: (843) 849-8974

PLANS MAY BE OBTAINED FROM: Duncan Parnell
3150 Montague Ave. Charleston, SC 29418
Phone: 843-747-6033

BID DOCUMENTS: Plans will be available on or after June 9, 2017. Plans can be purchased from Duncan Parnell at cost and additional related information may be found at www.dpbidroom.com; Bid Documents shall also be available online at <http://www.iop.net/requests-for-bids-proposals>

PRE-BID CONFERENCE (MANDATORY): 3:00, Monday June 19th, 2017
LOCATION: Council Chambers, City Hall, City of Isle of Palms; 1207 Palm Blvd.

BID OPENING: 1:00 pm, Monday July 10th, 2017
LOCATION: Council Chambers, City Hall, City of Isle of Palms; 1207 Palm Blvd.

BID DELIVERY ADDRESS: Proposals should be submitted to the following: Linda Lovvorn Tucker, City Administrator, City of Isle of Palms, 1207 Palm Boulevard, Post Office Box 508, Isle of Palms, South Carolina 29451

City of Isle of Palms
Instructions to Bidders

DEFINED TERMS

Terms used in these Instructions to Bidders have the meanings indicated below which are applicable to both the singular and plural thereof:

- A. Bidder - The individual or entity who submits a Bid directly to OWNER.
- B. Issuing Office - The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.
- C. Successful Bidder - The lowest responsible Bidder submitting a responsive Bid to whom OWNER (on the basis of OWNER's evaluation as hereinafter provided) makes an award.

1. RECEIPT AND OPENING OF BIDS

The deadline for submission is **1:00pm, Monday July 10th, 2017**. Submissions must be received at 1207 Palm Boulevard, Isle of Palms, South Carolina 29451 in a sealed envelope, where they will be opened and read aloud. Sealed envelopes must be clearly marked **RFP 2017.03 "45TH to 52ND Avenue Drainage Improvements"** and include one (1) hard copy and one (1) electronic copy saved to a compact disc (CD). The city accepts no responsibility for electronic submissions, and it will be the responsibility of the proposers to verify receipt by the City. Proposals may be delivered by hand or by mail, but no proposal shall be considered which is not actually received by the City at the place, date and time appointed by the City and the City shall not be responsible for any failure, misdirection, delay or error resulting from the selection by any bidder of any particular means of delivery of bids.

2. PREPARATION OF BID

Bids must be submitted in writing on the attached Bid Form in whole dollar amounts. All blank spaces for bid prices must be filled in, in ink or typewritten, and the form must be fully completed and executed when submitted. Failure to provide all requested information as part of the submitted bid may be justification to deem the bid non-responsive, resulting in the rejection of the bid.

Bidders acknowledge and agree that the City will not be liable for any costs, expensed, losses, damages (including damages for loss of anticipated profit) or liabilities incurred by the respondent or any member of the respondent's organization as a result of, or arising out of, submitting a bid, negotiating changes to such bid, or due to the City's acceptance or non-acceptance of the bid or the rejection of any and all bids. Respondents are responsible for submission of accurate, adequate and clear descriptions of the information requested. Neither issuance of the RFP, preparation and submission of a response, nor the subsequent receipt and evaluation of any response by the City of Isle of Palms will commit the City to award a contract to any respondent even if all the requirements in the RFP have been met.

Complete sets of Bidding Documents must be used in preparing Bids; neither OWNER nor ENGINEER assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

OWNER and ENGINEER in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

Bids shall adhere to the following:

- A. A Bid by a corporation shall be executed in the corporate name by the president or a vice president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature.
- B. A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown below the signature.
- C. A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown below the signature.
- D. A Bid by an individual shall show the Bidder's name and official address.
- E. A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid form. The official address of the joint venture must be shown below the signature.
- F. All names shall be typed or printed in ink below the signatures.
- G. The Bid shall contain an acknowledgement of receipt of all Addenda, the numbers of which shall be filled in on the Bid form.
- H. The address and telephone number for communications regarding the Bid shall be shown.
- I. The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the Contract. Bidder's state contractor license number for the state of the project, if any, shall also be shown on the Bid form.

3. **PRE-BID CONFERENCE (if scheduled)**

A mandatory PRE-BID Conference will be held at **3:00pm, Monday June 19th, 2017** in the Council Chambers at the City of Isle of Palms City Hall; 1207 Palm Blvd. Only those prospective Bidders that are represented and are listed on the sign-in sheet will be allowed to submit bids.

4. **SUBCONTRACTS**

The Bidder is specifically advised that any person, firm or other party to whom it proposes to award a subcontract under this contract must be acceptable to the Owner. The Bidder must perform a minimum of 30% of the work with its own forces.

5. **QUALIFICATIONS OF BIDDER**

Bidders must be General Contractors registered in the State of South Carolina with a minimum of five years in business and five successful projects of this construction type and magnitude. The Owner may make such investigations as it deems necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish to the Owner in a timely manner all such information and data for this purpose as the Owner may request. The owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the Owner of the Bidder's qualifications to complete the project. The Owner retains the right to reject any or all bids and to waive any informalities in bidding.

6. BID SECURITY

- A. A Bid must be accompanied by Bid security made payable to OWNER in an amount of five percent (5%) of *Bidder's Total Base Bid Lump Sum Price* and in the form of a certified check or bank check or a Bid Bond (AIA Document A310) issued by a surety meeting requirements of City of Isle of Palms.
- B. The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 5 days after the Notice of Award, OWNER may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security of other Bidders whom OWNER believes to have a reasonable chance of receiving the award may be retained by OWNER until the earlier of seven days after the Effective Date of the Agreement or 30 days after the Bid opening, whereupon Bid security furnished by such Bidders will be returned.
- C. Bid security of other Bidders whom OWNER believes do not have a reasonable chance of receiving the award will be returned within seven days after the Bid opening.

7. FAILURE TO ENTER INTO CONTRACT

Firms considering submission under this RFP will be expected to have read and be prepared to enter into the attached contract, which is part of this RFP. The City of Isle of Palms reserves the right to reject any and all bids and to waive irregularities. Failure of the Bidder to execute and deliver the contract within ten (10) days after bid opening or failure to provide Performance and Payment Bonds and Certificate of Insurance within ten (10) days of receipt of a Notice of Award from the Owner, shall entitle the Owner to consider the Bidder non-responsive and to declare the Bid Security forfeited.

8. DATE OF COMMENCEMENT, COMPLETION AND LIQUIDATED DAMAGES

Bidder must agree to commence work on the date specified in a Notice to Proceed from the Owner and to complete all Base Bid Work, and any awarded Bid Alternates, within the number of consecutive calendar days, each measured from the date of the initial Notice to Proceed, as outlined in the agreement. In addition, Bidder must also agree to pay as liquidated damages the sum of \$1,000.00 for each consecutive calendar day thereafter that the indicated Project item fails to reach Completion within the time allowed. Where more than one item has not reached completion, the maximum sum for liquidated damages shall remain \$1,000.00.

9. ADDENDA AND INTERPRETATIONS

No oral interpretation of the meaning of the plans, specifications or other pre-bid documents will be made. Requests for clarification should be made in writing to the A/E of PM identified in the invitation for Construction Bids and to be given consideration must be received no later than **12:00pm, Wednesday, June 28th, 2017**. Any interpretations, corrections or changes will be issued in the form of written addenda and will be transmitted to all who are known to have received a complete set of bidding documents by telephone, fax or other appropriate means with immediate follow-up with written addenda. Failure of any Bidder to receive any such addendum or interpretation shall not relieve such Bidder from any obligation under its bid as submitted. All addenda so issued shall become part of the contract documents.

10. LAWS AND REGULATIONS

All applicable State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full.

11. COMPLIANCE WITH S.C. ILLEGAL IMMIGRATION REFORM ACT

By signing its bid or proposal, Bidder certifies that it will comply with the applicable requirements of Title 8, Chapter 14 of the South Carolina Code of Laws and agrees to provide to the City upon request any documentation required to establish either: (a) that Title 8, Chapter 14 is inapplicable both to Bidder and its subcontractors or sub-subcontractors; or (b) that Bidder and its subcontractors or sub-subcontractors are in compliance with Title 8, Chapter 14. Pursuant to Section 8-14-60, "A person who knowingly makes or files any false, fictitious, or fraudulent document, statement, or report pursuant to this chapter is guilty of a felony and, upon conviction, must be fined within the discretion of the court or imprisoned for not more than five years, or both." Bidder agrees to include in any contracts with its subcontractors language requiring its subcontractors to (a) comply with the applicable requirements of Title 8, Chapter 14, and (b) include in their contracts with the sub-subcontractors language requiring the sub-subcontractors to comply with the applicable requirements of Title 8, Chapter 14.

12. INTENT TO AWARD/EVALUATION OF BID ALTERNATES

- A. It is the intent of the Owner to award a Contract to the lowest responsive and responsible Bidder, contingent upon availability of funding. When bidding documents include Bid Alternates, the Owner shall have the right to award the contract to the apparent low bidder based on ANY COMBINATION of the BASE BID plus Bid Alternates or with no Bid Alternates, unless otherwise specifically provided in the Bid Documents. The Owner reserves the right to apply these Alternate prices in any combination or order for the overall benefit of the project as defined by the Owner. All requested Alternates must bid.
- B. OWNER reserves the right to reject any or all Bids, including without limitation, nonconforming, non-responsive, unbalanced, or conditional Bids. OWNER further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to be non-responsive. OWNER may also reject the Bid of any Bidder if OWNER believes that it would not be in the best interest of the Project to make any award to that Bidder. OWNER also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.
- C. More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.
- D. In evaluating Bids, OWNER will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- E. In evaluating Bidders, OWNER will consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.
- F. OWNER may conduct such investigations as OWNER deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Supplies, individuals, or entities to perform the Work in accordance with the Contract Documents.

- G. If the Contract is to be awarded, OWNER will award the Contract to the Bidder whose Bid is in the best interests of the Project.

13. OBLIGATION OF BIDDER

At the time of the opening bids, each Bidder will be presumed to have inspected the site and the conditions relating to construction of the project, and to have read and become thoroughly familiar with the plans and contract documents, including all addenda. The failure or omission of any Bidder to visit the site or to examine any form, instrument or document shall in no way relieve any Bidder from any obligation with respect to his bid.

It is the responsibility of each Bidder before submitting a Bid to:

- A. examine and carefully study the Bidding Documents, including any Addenda and the other related data identified in the Bidding Documents;
- B. visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
- C. become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, or performance of the Work;
- D. obtain and carefully study (or assume responsibility for doing to) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto;
- E. agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times and in accordance with the other terms and conditions of the Bidding Documents;
- F. become aware of the general nature of the work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Bidding Documents;
- G. correlate the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;
- H. promptly give ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by ENGINEER is acceptable to Bidder; and
- I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

14. LICENSES

Respondents must have or be able to procure an Isle of Palms Business License. Bidder must also be licensed under the laws of the State of South Carolina for the specific category of work to be performed.

15. SITE AND OTHER AREAS

The site is identified in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by CONTRACTOR.

Private property Owners within the project area have granted the City of Isle of Palms by agreement general Easements over and on real property for the purposes of completing the project. Contractor, as a representative of the City of Isle of Palms, will be responsible for meeting the applicable terms of the easement agreements, copies of which are included in the Project Manual.

16. **MODIFICATION AND WITHDRAWAL OF BID**

A Bid may be modified or withdrawn by an appropriate document duly executed in the manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.

If within 72 hours after Bids are opened, any Bidder files a duly signed written notice with OWNER and promptly thereafter demonstrates to the reasonable satisfaction of OWNER that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

17. **SIGNING OF AGREEMENT**

When OWNER gives a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement with the other Contract Documents which are identified in the Agreement as attached thereto. Within 10 days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to OWNER. Within ten days thereafter, OWNER shall deliver one fully signed counterpart to Successful Bidder with a complete set of Drawings with appropriate identification.

END OF INSTRUCTIONS TO BIDDERS

City of Isle of Palms Bid Form

BID SUBMITTED BY: Name:
 Address:

FOR PROJECT: 45th to 52nd Avenue Drainage Improvements

OFFER

1. In response to the response to the *Invitation for Construction Bids*, and in compliance with the *Instructions to Bidders* for the above-named Project, the undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into a Contract with the City of Isle of Palms ("Owner") in the form included in the Bidding Documents, and to perform all Work as specified or indicated in the Bidding Documents, for the prices and within the time frames indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.
2. BIDDER has submitted Bid Security as follows in the amount and form requested by the Bidding Documents:

___ Bid Bond with Power of Attorney ___ Cashier's Check
3. BIDDER, by submitting this Bid, affirms that it has carefully examined the Bidding Documents and the other related data identified in the Bidding Documents, has visited the actual location of the Work, has satisfied itself as to all conditions and understands that, in signing this Bid Form it waives all rights to plead any misunderstanding regarding same and agrees to be bound by the provisions of said Bidding Documents and all statements made therein.
4. BIDDER acknowledges the receipt of the following Addenda to the Bidding Documents and has incorporated the effects of said Addenda into its Bid:
ADDENDUM No.(s) _____
5. BIDDER accepts all terms and conditions of the Invitation for Construction Bids, including, without limitation, those dealing with the dispositions of Bid Security. BIDDER agrees that this Bid, including all Bid Alternates, if any, may not be revoked or withdrawn after the opening of bids, and shall remain open for acceptance for a period of 60 days following the Bid Date, or for such longer period of time that BIDDER may agree to in writing upon request from the OWNER. BIDDER understands that Bid Alternates that are not accepted in an initial award shall remain open for acceptance for the entire period set above and for such longer period as requested by OWNER and agreed to by BIDDER.

**Project Name: 45th to 52nd Avenue Drainage Improvements
City of Isle of Palms, SC**

6. BIDDER herewith submits its offer to provide all labor, materials, equipment, tools of trades and labor, accessories, appliances, warranties and guarantees, and to pay all royalties, fees, permits, licenses and applicable taxes necessary to complete the construction work in accordance with the Bidding Documents.

6.1 BASE BID: \$ _____ Written: _____

6.2 ALLOWANCES (as indicated in the Bidding Documents and generally described as follows):
The Base Bid indicated above includes the total sum for Allowances as described in Division 1 Section "Allowances" and applicable Sections of the Project Manual. Should installed cost Vary from the Allowances listed, the Contract Sum shall be adjusted based on the actual Installed cost.

6.3 UNIT PRICE WORK

BIDDER offers for the Owner's consideration and use the following UNIT PRICES. The UNIT PRICES offered by BIDDER indicate the amount to be added to or deducted from the Contract Sum for each item-unit combination. UNIT PRICES include all costs to the Owner, including those for materials, labor, equipment, tools of trade, fees, taxes, insurance, bonding, overhead, profit, etc. The Owner reserves the right to include or not to include any of the following UNIT PRICES in the Contract and to negotiate the UNIT PRICES with BIDDER.

NO.	ITEM	QUANTITY	UNIT	UNIT PRICE
Storm Drainage Pipe				
1	18" RCP		LF	
2	24" RCP		LF	
3	30" RCP		LF	
4	36" RCP		LF	
5	48" RCP		LF	
6	54" RCP		LF	
Drainage Structures				
7	SCDOT Type 16 Curb Inlet		EA	
8	Junction Box		EA	
9	Grate Inlet		EA	
Water & Sewer				
10	10" Waterline Deflection		EA	
11	8" Waterline Deflection		EA	
12	6" Waterline Deflection		EA	
13	10" Forcemain Deflection		EA	
14	8" Forcemain Deflection		EA	
15	6" Forcemain Deflection		EA	
16	4" Forcemain Deflection		EA	
Miscellaneous				
17	Siltfence		LF	
18	Asphalt Pavement Patch		SQ YD	
19	Concrete Curb		LF	
20	Asphalt Sidewalk		SQ YD	
21	Concrete Sidewalk		SQ YD	
22	Pavement Mill/Overlay		SQ YD	

Note:

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- 1) All installed items will include any dewatering/well pointing, surveying, testing, traffic control and any other costs associated with installation.
- 2) Payment will be based on installed items.

AGREEMENTS

By submitting this Bid, BIDDER hereby agrees to the following terms and conditions:

1. An incomplete Bid or information not requested that is written on or attached to this Bid Form that could be considered a qualification of the Bid, may be cause for rejection of the Bid.
2. Unless otherwise provided in the Bidding Documents, BIDDER will provide Performance and Payment Bonds, each in the amount equal to 100% of the Contract Award, as a condition of execution of the Contract. Failure to supply such bonds as required by the Contract Documents shall result in forfeiture of the Bid Bond.
3. BIDDER agrees to provide all information requested by the OWNER to support the OWNER'S evaluation and determination of the BIDDER'S responsibility. Failure by BIDDER to supply requested information with respect to responsibility may be grounds for a determination of non-responsibility.
4. The BIDDER certifies that it will provide a "Drug-Free Workplace" as that term is defined in Section 44-107-30 of the SC Code of Laws, and shall comply with the requirements set forth in Title 44, Chapter 107.
5. The BIDDER certifies that it will comply with the applicable requirements of the SC Illegal Immigration Reform Act in Title 8, Chapter 14 of the SC Code of Laws.
6. At any time prior to the issuance of the Notice to Proceed for this Project, this Contract may be cancelled for the convenience of the Owner.
7. Neither the Owner nor any of its employees or agents shall be responsible for any bid preparation costs, or any costs or charges of any type, should all bids be rejected or the Project cancelled for any reason prior to the issuance of the Notice to Proceed.

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City of Isle of Palms, SC**

BIDDER'S TAXPAYER IDENTIFICATION

FEDERAL EMPLOYER'S IDENTIFICATION NUMBER: _____

OR

SOCIAL SECURITY NUMBER: _____

CONTRACTOR'S CLASSIFICATIONS AND SUBCLASSIFICATIONS WITH LIMITATIONS

(Classification) *(Subclassification)* *(Limitations)*

(SC Contractor's License Number)

SIGNATURE

(Legal Name of Person, Firm or Corporation Submitting Bid)

BY *(Signature)* _____ *(Date)* _____

(Title) *(Phone)* _____

 **AIA[®] Document A101[™] – 2007**

Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

AGREEMENT made as of the <xx> day of <xxxxx>
in the year <xxxx>
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

City of Isle of Palms
P.O. Box 508
Isle of Palms, SC 29451

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

AIA Document A201[™]-2007, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

and the Contractor:
(Name, legal status, address and other information)

To Be Determined
To Be Determined
To Be Determined

for the following Project:
(Name, location and detailed description)

45th to 52nd Avenue Drainage Improvements
45th to 52nd Avenue - City of Isle of Palms, SC

The Architect:
(Name, legal status, address and other information)

Civil Site Environmental
668 Marina Drive, Suite B-1
Charleston, SC 29492

The Owner and Contractor agree as follows.

Init.

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2	THE WORK OF THIS CONTRACT
3	DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
4	CONTRACT SUM
5	PAYMENTS
6	DISPUTE RESOLUTION
7	TERMINATION OR SUSPENSION
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ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be the date of this Agreement unless a different date is stated below or provision is made for the date to be fixed in a notice to proceed issued by the Owner.

(Insert the date of commencement if it differs from the date of this Agreement or, if applicable, state that the date will be fixed in a notice to proceed.)

Date of commencement will be fixed in a notice to proceed issued by the Owner.

If, prior to the commencement of the Work, the Owner requires time to file mortgages and other security interests, the Owner's time requirement shall be as follows:

§ 3.2 The Contract Time shall be measured from the date of commencement.

§ 3.3 The Contractor shall achieve Substantial Completion of the entire Work not later than one hundred and eighty (180) days from the date of commencement, or as follows: *(Insert number of calendar days. Alternatively, a calendar date may be used when coordinated with the date of commencement. If appropriate, insert requirements for earlier Substantial Completion of certain portions of the Work.)*

Portion of the Work

Substantial Completion Date

, subject to adjustments of this Contract Time as provided in the Contract Documents. *(Insert provisions, if any, for liquidated damages relating to failure to achieve Substantial Completion on time or for bonus payments for early completion of the Work.)*

Liquidated Damages:

The Contractor and the Contractor's surety, if any, shall be liable for and shall pay the Owner liquidated damages in the amount of a total of \$1,000.00 for each calendar day of delay after the date established for Substantial Completion in the Contract Documents until the Work is substantially complete.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be

<xxxxxx> Dollars

(\$ <xxxxxx>), subject to additions and deductions as provided in the Contract Documents.

§ 4.2 The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:

(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)

No alternates.

§ 4.3 Unit prices, if any:

(Identify and state the unit price; state quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit (\$0.00)
Unit prices as indicated on Bid Form will apply.		

§ 4.4 Allowances included in the Contract Sum, if any:
(Identify allowance and state exclusions, if any, from the allowance price.)

Item	Price (\$0.00)
<XXXXXX>	

ARTICLE 5 PAYMENTS

§ 5.1 PROGRESS PAYMENTS

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

Applications for Payment shall conform to Section 012900 Payment Procedures of the Project Manual.

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the twenty fifth (25th) day of a month, the Owner shall make payment of the certified amount to the Contractor not later than the twenty fifth (25th) day of the following month. If an Application for Payment is received by the Architect after the application date fixed above, payment shall be made by the Owner not later than thirty (30) days after the Architect receives the Application for Payment.
(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 Subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

- .1 Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum allocated to that portion of the Work in the schedule of values, less retainage of ten percent (10%). Pending final determination of cost to the Owner of changes in the Work, amounts not in dispute shall be included as provided in Section 7.3.9 of AIA Document A201™-2007, General Conditions of the Contract for Construction;
- .2 Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing), less retainage of ten percent (10%);
- .3 Subtract the aggregate of previous payments made by the Owner; and
- .4 Subtract amounts, if any, for which the Architect has withheld or nullified a Certificate for Payment as provided in Section 9.5 of AIA Document A201-2007.

§ 5.1.7 The progress payment amount determined in accordance with Section 5.1.6 shall be further modified under the following circumstances:

- .1 Add, upon Substantial Completion of the Work, a sum sufficient to increase the total payments to the full amount of the Contract Sum, less such amounts as the Architect shall determine for incomplete Work, retainage applicable to such work and unsettled claims; and
(Section 9.8.5 of AIA Document A201–2007 requires release of applicable retainage upon Substantial Completion of Work with consent of surety, if any.)
- .2 Add, if final completion of the Work is thereafter materially delayed through no fault of the Contractor, any additional amounts payable in accordance with Section 9.10.3 of AIA Document A201–2007.

§ 5.1.8 Reduction or limitation of retainage, if any, shall be as follows:

(If it is intended, prior to Substantial Completion of the entire Work, to reduce or limit the retainage resulting from the percentages inserted in Sections 5.1.6.1 and 5.1.6.2 above, and this is not explained elsewhere in the Contract Documents, insert here provisions for such reduction or limitation.)

No reduction or limitation of retainage.

§ 5.1.9 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 FINAL PAYMENT

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Section 12.2.2 of AIA Document A201–2007, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment has been issued by the Architect.

§ 5.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 INITIAL DECISION MAKER

The Architect will serve as Initial Decision Maker pursuant to Section 15.2 of AIA Document A201–2007, unless the parties appoint below another individual, not a party to this Agreement, to serve as Initial Decision Maker.

(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

§ 6.2 BINDING DISPUTE RESOLUTION

For any Claim subject to, but not resolved by, mediation pursuant to Section 15.3 of AIA Document A201–2007, the method of binding dispute resolution shall be as follows:

(Check the appropriate box. If the Owner and Contractor do not select a method of binding dispute resolution below, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.)

Arbitration pursuant to Section 15.4 of AIA Document A201–2007

Litigation in a court of competent jurisdiction

Other: *(Specify)*

Binding Arbitration pursuant to South Carolina Code Section 15-48-10, et seq., as amended, as provided for in Section 15.4 of the Supplementary Conditions - A201.

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2007.

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2007.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2007 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.
(Insert rate of interest agreed upon, if any.)

§ 8.3 The Owner's representative:
(Name, address and other information)

Linda Lovvorn Tucker

City of Isle of Palms

P.O. Box 508

Isle of Palms, SC 29451

Phone: 843-886-6428

§ 8.4 The Contractor's representative:
(Name, address and other information)

§ 8.5 Neither the Owner's nor the Contractor's representative shall be changed without ten days written notice to the other party.

§ 8.6 Other provisions:

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 The Contract Documents, except for Modifications issued after execution of this Agreement, are enumerated in the sections below.

§ 9.1.1 The Agreement is this executed AIA Document A101–2007, Standard Form of Agreement Between Owner and Contractor.

§ 9.1.2 The General Conditions are AIA Document A201–2007, General Conditions of the Contract for Construction.

§ 9.1.3 The Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
	Supplementary Conditions - A101	May 30, 2017	1
	Supplementary Conditions - A201	May 30, 2017	14

§ 9.1.4 The Specifications:

(Either list the Specifications here or refer to an exhibit attached to this Agreement.)

The Specifications are those listed in "EXHIBIT A - SPECIFICATIONS" attached to this agreement

Section	Title	Date	Pages
---------	-------	------	-------

Init.

§ 9.1.5 The Drawings:

(Either list the Drawings here or refer to an exhibit attached to this Agreement.)

The Drawings are those listed in "EXHIBIT B - LIST OF DRAWINGS" attached to this agreement.

Number	Title	Date
--------	-------	------

§ 9.1.6 The Addenda, if any:

Number	Date	Pages
--------	------	-------

Portions of Addenda relating to bidding requirements are not part of the Contract Documents unless the bidding requirements are also enumerated in this Article 9.

§ 9.1.7 Additional documents, if any, forming part of the Contract Documents:

.1 AIA Document E201™–2007, Digital Data Protocol Exhibit, if completed by the parties, or the following:

.2 Other documents, if any, listed below:

(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201–2007 provides that bidding requirements such as advertisement or invitation to bid, Instructions to Bidders, sample forms and the Contractor's bid are not part of the Contract Documents unless enumerated in this Agreement. They should be listed here only if intended to be part of the Contract Documents.)

Invitation to Bid, Instructions to Bidders, and Contractor's bid are part of the Contract Documents.

Also part of Contract Documents are:

SCDOT Encroachment Permit # 174207

Charleston County Department of Public Works Project #2014-03-03-257

SCDHEC Permit SCR10S691 (File No. 10-13-08-18)

On Site Pollution Prevention Plan (OS-SWPPP) for Construction Activities

ARTICLE 10 INSURANCE AND BONDS

The Contractor shall purchase and maintain insurance and provide bonds as set forth in Article 11 of AIA Document A201-2007.

(State bonding requirements, if any, and limits of liability for insurance required in Article 11 of AIA Document A201-2007.)

Type of Insurance or Bond

Limit of Liability or Bond Amount (\$0.00)

The bonding requirements and limits of liability for insurance required in Article 11 of AIA Document A201-2007 are provided for in the Supplementary Conditions - A201

This Agreement entered into as of the day and year first written above.

OWNER *(Signature)*

CONTRACTOR *(Signature)*

(Printed name and title)

(Printed name and title)

SUPPLEMENTARY CONDITIONS – A101

The following supplementary conditions modify and supersede the “Standard Form of Agreement Between Owner and Contractor,” AIA Document A101-2007. Where a portion of a section of the Agreement is modified or deleted by these Supplementary Conditions, the unaltered portions of the Agreement shall remain in effect.

ARTICLE 5 – PAYMENTS

5.1. PROGRESS PAYMENTS

1. Subparagraph §5.1.7.1 is hereby deleted and replaced with the following new §5.1.7.1:

“For the purposes of §5.1.6, Owner shall be entitled to withhold retainage of ten percent (10%) from all sums requisitioned by Contractor which retainage shall be released as part of the Final Payment to Contractor pursuant to §5.2.”

EXHIBIT A – SPECIFICATIONS

The Specifications are those contained in the Project Manual and Contract Documents for the project entitled 45th to 52nd Avenue Drainage Improvements, City of Isle of Palms, SC, and are as follows:

Title Page
Scope of Project
Contents

DIVISION 00 – PROCUREMENTS AND CONTRACTING REQUIREMENTS

Invitation to Bid
Instructions to Bidders
Bid Form
AIA Document A101-2007 Standard Form of Agreement Between Owner and Contractor
Supplementary Conditions – A101
Exhibit A – Specifications
Exhibit B – List of Drawings
AIA Document A201-2007 General Conditions of the Contract for Construction
Supplementary Conditions – A201
Bid Bond
Performance Bond & Payment Bond

DIVISION 01 – GENERAL REQUIREMENTS

011000 Summary
012200 Unit Prices
012600 Contract Modification Procedures
012900 Payment Procedures
013100 Project Management and Coordination
013200 Construction Progress Documentation
013300 Submittal Procedures
014000 Quality Requirements
015000 Temporary Facilities and Controls
015639 Temporary Tree and Plant Protection
016000 Product Requirements
017300 Execution
017700 Closeout Procedures
017839 Project Record Documents

DIVISION 31 - EARTHWORK

311000 Site Clearing and Erosion Control

DIVISION 32 – EXTERIOR IMPROVEMENTS

329200 Turf and Grasses

DIVISION 33 – UTILITIES

334100 Storm Utility Drainage Piping

APPENDIX

Golf Course Restoration Guidelines/Specifications
List of Approved Golf Course Restoration Contractors
Golf Course Restoration Contractor Golf Course Restoration Bid Form
IOPWSC Water Distribution System Specifications
IOPWSC Wastewater Collection System Specifications
SCDOT Permit
SCDHEC Permit
On-Site Stormwater Pollution Prevention Plan
Agreement and Grant of Temporary Drainage Easement - Lowe Wild Dunes
Agreement and Grant of Temporary Drainage Easement - Lowe Wild Dunes II

Agreement and Grant of Drainage Easement - Morgan Creek Harbor Association
Agreement and Grant of Drainage Easement - Wild Dunes Community Association
Agreement and Grant of Drainage Easement - IOP Water and Sewer Commission
Agreement and Grant of Temporary Golf Cart Path Easement - YCMCMA
Agreement and Grant of Temporary Golf Cart Path Easement - Kelley
Agreement and Grant of Temporary Golf Cart Path Easement - Tharp Rentals

EXHIBIT B – LIST OF DRAWINGS

The Drawings for the Project are titled “45th to 52nd Avenue Drainage Improvements” by Civil Site Environmental dated 6-28-13 and revised 5-31-17 and consist of the following:

Sheet Number	Sheet Name	Revision Date
C000	Cover Sheet	5-31-17
SWP	General Project Notes & SWPPP	5-31-17
C100	Limits of Disturbance	5-31-17
C100A	Limits of Disturbance	5-31-17
C101	Existing Conditions	5-31-17
C102	Existing Conditions	5-31-17
C103	Existing Conditions	5-31-17
C104	Existing Conditions	5-31-17
C105	Existing Conditions	5-31-17
C106	Existing Conditions	5-31-17
C107	Existing Conditions	5-31-17
C200	Pipe & Structure Charts & Drainage Notes	5-31-17
C201	Drainage & Erosion Control Plan	5-31-17
C202	Drainage & Erosion Control Plan	5-31-17
C203	Drainage & Erosion Control Plan	5-31-17
C204	Drainage & Erosion Control Plan	5-31-17
C205	Drainage & Erosion Control Plan	5-31-17
C206	Drainage & Erosion Control Plan	5-31-17
C207	Drainage & Erosion Control Plan	5-31-17
C300	Pipe Profiles	5-31-17
C301	Pipe Profiles	5-31-17
C302	Pipe Profiles	5-31-17
C400	Sundial Circle Easement Tree Removal	5-31-17
C401	Summary Sheet of Existing Pond Impacts	5-31-17
CD-1	Construction Details	5-31-17
CD-2	Construction Details	5-31-17
CD-3	Construction Details - Water & Sewer Details	5-31-17
L101	Planting Plan	5-25-17
L102	Plant Schedule, Notes, and Details	5-25-17

AIA[®] Document A201[™] – 2007

General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

45th to 52nd Avenue Drainage Improvements
45th to 52nd Avenue - City of Isle of Palms, SC

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

THE OWNER:

(Name, legal status and address)

City of Isle of Palms
P.O. Box 508
Isle of Palms, SC 29451

THE ARCHITECT:

(Name, legal status and address)

Civil Site Environmental
668 Marina Drive, Suite B-1
Charleston, SC 29492

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 BASIC DEFINITIONS

§ 1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding requirements.

§ 1.1.2 THE CONTRACT

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

§ 1.1.3 THE WORK

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

§ 1.1.4 THE PROJECT

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by separate contractors.

§ 1.1.5 THE DRAWINGS

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

§ 1.1.6 THE SPECIFICATIONS

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

§ 1.1.7 INSTRUMENTS OF SERVICE

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 INITIAL DECISION MAKER

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2 and certify termination of the Agreement under Section 14.2.2.

§ 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.3 CAPITALIZATION

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 INTERPRETATION

In the interest of brevity the Contract Documents frequently omit modifying words such as “all” and “any” and articles such as “the” and “an,” but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

§ 1.5.1 The Architect and the Architect’s consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and will retain all common law, statutory and other reserved rights, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect’s or Architect’s consultants’ reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect’s consultants.

§ 1.6 TRANSMISSION OF DATA IN DIGITAL FORM

If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Agreement or the Contract Documents.

ARTICLE 2 OWNER

§ 2.1 GENERAL

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner’s approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term “Owner” means the Owner or the Owner’s authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of or enforce mechanic’s lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner’s interest therein.

§ 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

§ 2.2.1 Prior to commencement of the Work, the Contractor may request in writing that the Owner provide reasonable evidence that the Owner has made financial arrangements to fulfill the Owner’s obligations under the Contract. Thereafter, the Contractor may only request such evidence if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) a change in the Work materially changes the Contract Sum; or (3) the Contractor identifies in writing a reasonable concern regarding the Owner’s ability to make payment when due. The Owner shall furnish such evidence as a condition precedent to commencement or continuation of the Work or the portion of the Work affected by a material change. After the Owner furnishes the evidence, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.2 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.2.3 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.2.4 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.2.5 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.3 OWNER'S RIGHT TO STOP THE WORK

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect or failure. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

ARTICLE 3 CONTRACTOR

§ 3.1 GENERAL

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.2.3, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall make Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Architect and shall not proceed with that portion of the Work without further written instructions from the Architect. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any loss or damage arising solely from those Owner-required means, methods, techniques, sequences or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 LABOR AND MATERIALS

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Except in the case of minor changes in the Work authorized by the Architect in accordance with Sections 3.12.8 or 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 WARRANTY

The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.6 TAXES

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 PERMITS, FEES, NOTICES AND COMPLIANCE WITH LAWS

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 CONCEALED OR UNKNOWN CONDITIONS

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 21 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor in writing, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may proceed as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 ALLOWANCES

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents:

- .1 Allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 Whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 SUPERINTENDENT

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the name and qualifications of a proposed superintendent. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to the proposed superintendent or (2) that the Architect requires additional time to review. Failure of the Architect to reply within the 14 day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

§ 3.10.2 The Contractor shall prepare a submittal schedule, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, and shall submit the schedule(s) for the Architect's approval. The Architect's approval shall not unreasonably be delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

§ 3.11 DOCUMENTS AND SAMPLES AT THE SITE

The Contractor shall maintain at the site for the Owner one copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and one copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Architect and shall be delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is to demonstrate the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such written notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled

to rely upon the adequacy, accuracy and completeness of the services, certifications and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review, approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Contractor shall not be responsible for the adequacy of the performance and design criteria specified in the Contract Documents.

§ 3.13 USE OF SITE

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.14 CUTTING AND PATCHING

§ 3.14.1 The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting and patching shall be restored to the condition existing prior to the cutting, fitting and patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

§ 3.15 CLEANING UP

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 ACCESS TO WORK

The Contractor shall provide the Owner and Architect access to the Work in preparation and progress wherever located.

§ 3.17 ROYALTIES, PATENTS AND COPYRIGHTS

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect.

§ 3.18 INDEMNIFICATION

§ 3.18.1 To the fullest extent permitted by law the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce

other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

ARTICLE 4 ARCHITECT

§ 4.1 GENERAL

§ 4.1.1 The Owner shall retain an architect lawfully licensed to practice architecture or an entity lawfully practicing architecture in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 4.1.2 Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner, Contractor and Architect. Consent shall not be unreasonably withheld.

§ 4.1.3 If the employment of the Architect is terminated, the Owner shall employ a successor architect as to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

§ 4.2 ADMINISTRATION OF THE CONTRACT

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION

Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Architect about matters arising out of or relating to the Contract. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the

Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more project representatives to assist in carrying out the Architect's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 DEFINITIONS

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

§ 5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to any such proposed person or entity or (2) that the Architect requires additional time for review. Failure of the Owner or Architect to reply within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person or entity previously selected if the Owner or Architect makes reasonable objection to such substitution.

§ 5.3 SUBCONTRACTUAL RELATIONS

By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon such assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Article 15.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces, the Owner shall be deemed to be subject to the same obligations and to have the same rights that apply to the Contractor under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6 and Articles 10, 11 and 12.

§ 6.2 MUTUAL RESPONSIBILITY

§ 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a separate contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a separate contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or separate contractors as provided in Section 10.2.5.

§ 6.2.5 The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 OWNER'S RIGHT TO CLEAN UP

If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 GENERAL

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor and Architect; a Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

§ 7.2 CHANGE ORDERS

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor and Architect stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

§ 7.3 CONSTRUCTION CHANGE DIRECTIVES

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

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.7.

§ 7.3.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 7.3.5 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.6 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.7 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.7 shall be limited to the following:

- .1 Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;
- .2 Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and
- .5 Additional costs of supervision and field office personnel directly attributable to the change.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 MINOR CHANGES IN THE WORK

The Architect has authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes will be effected by written order signed by the Architect and shall be binding on the Owner and Contractor.

ARTICLE 8 TIME

§ 8.1 DEFINITIONS

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 PROGRESS AND COMPLETION

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be

furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 DELAYS AND EXTENSIONS OF TIME

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner; or by changes ordered in the Work; or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control; or by delay authorized by the Owner pending mediation and arbitration; or by other causes that the Architect determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 CONTRACT SUM

The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.2 SCHEDULE OF VALUES

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit to the Architect, before the first Application for Payment, a schedule of values allocating the entire Contract Sum to the various portions of the Work and prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 9.3 APPLICATIONS FOR PAYMENT

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the

Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

§ 9.4 CERTIFICATES FOR PAYMENT

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data comprising the Application for Payment, that, to the best of the Architect's knowledge, information and belief, the Work has progressed to the point indicated and that the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 DECISIONS TO WITHHOLD CERTIFICATION

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a separate contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.3 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or material or equipment suppliers to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Architect will reflect such payment on the next Certificate for Payment.

§ 9.6 PROGRESS PAYMENTS

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor no later than seven days after receipt of payment from the Owner the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and material and equipment suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.

§ 9.6.5 Contractor payments to material and equipment suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors and suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, shall create any fiduciary liability or tort liability on the part of the Contractor for breach of trust or shall entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.7 FAILURE OF PAYMENT

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 SUBSTANTIAL COMPLETION

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 PARTIAL OCCUPANCY OR USE

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer as required under Section 11.3.1.5 and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 FINAL COMPLETION AND FINAL PAYMENT

§ 9.10.1 Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, Claims, security interests or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents; or
- .3 terms of special warranties required by the Contract Documents.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 SAFETY PRECAUTIONS AND PROGRAMS

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 SAFETY OF PERSONS AND PROPERTY

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

§ 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 INJURY OR DAMAGE TO PERSON OR PROPERTY

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 HAZARDOUS MATERIALS

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing.

§ 10.3.2 Upon receipt of the Contractor's written notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shut-down, delay and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall indemnify the Owner for the cost and expense the Owner incurs (1) for remediation of a material or substance the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all cost and expense thereby incurred.

§ 10.4 EMERGENCIES

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 CONTRACTOR'S LIABILITY INSURANCE

§ 11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- .1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;
- .2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- .4 Claims for damages insured by usual personal injury liability coverage;
- .5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- .6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
- .7 Claims for bodily injury or property damage arising out of completed operations; and
- .8 Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18.

§ 11.1.2 The insurance required by Section 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

§ 11.1.3 Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work and thereafter upon renewal or replacement of each required policy of insurance. These certificates and the insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

§ 11.1.4 The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations.

§ 11.2 OWNER'S LIABILITY INSURANCE

The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

§ 11.3 PROPERTY INSURANCE

§ 11.3.1 Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's

risk “all-risk” or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.3 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project.

§ 11.3.1.1 Property insurance shall be on an “all-risk” or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect’s and Contractor’s services and expenses required as a result of such insured loss.

§ 11.3.1.2 If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then effect insurance that will protect the interests of the Contractor, Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor in writing, then the Owner shall bear all reasonable costs properly attributable thereto.

§ 11.3.1.3 If the property insurance requires deductibles, the Owner shall pay costs not covered because of such deductibles.

§ 11.3.1.4 This property insurance shall cover portions of the Work stored off the site, and also portions of the Work in transit.

§ 11.3.1.5 Partial occupancy or use in accordance with Section 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

§ 11.3.2 BOILER AND MACHINERY INSURANCE

The Owner shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds.

§ 11.3.3 LOSS OF USE INSURANCE

The Owner, at the Owner’s option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner’s property due to fire or other hazards, however caused. The Owner waives all rights of action against the Contractor for loss of use of the Owner’s property, including consequential losses due to fire or other hazards however caused.

§ 11.3.4 If the Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.

§ 11.3.5 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, the Owner shall waive all rights in accordance with the terms of Section 11.3.7 for damages caused by fire or other causes of loss covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.

§ 11.3.6 Before an exposure to loss may occur, the Owner shall file with the Contractor a copy of each policy that includes insurance coverages required by this Section 11.3. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 days' prior written notice has been given to the Contractor.

§ 11.3.7 WAIVERS OF SUBROGATION

The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors described in Article 6, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to this Section 11.3 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

§ 11.3.8 A loss insured under the Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.3.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.

§ 11.3.9 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or as determined in accordance with the method of binding dispute resolution selected in the Agreement between the Owner and Contractor. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.

§ 11.3.10 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection is made, the dispute shall be resolved in the manner selected by the Owner and Contractor as the method of binding dispute resolution in the Agreement. If the Owner and Contractor have selected arbitration as the method of binding dispute resolution, the Owner as fiduciary shall make settlement with insurers or, in the case of a dispute over distribution of insurance proceeds, in accordance with the directions of the arbitrators.

§ 11.4 PERFORMANCE BOND AND PAYMENT BOND

§ 11.4.1 The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.

§ 11.4.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 UNCOVERING OF WORK

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, such costs and the cost of correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

§ 12.2 CORRECTION OF WORK

§ 12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 AFTER SUBSTANTIAL COMPLETION

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.4.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 ACCEPTANCE OF NONCONFORMING WORK

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 GOVERNING LAW

The Contract shall be governed by the law of the place where the Project is located except that, if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

§ 13.2 SUCCESSORS AND ASSIGNS

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to covenants, agreements and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

§ 13.3 WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person to the individual, to a member of the firm or entity, or to an officer of the corporation for which it was intended; or if delivered at, or sent by registered or certified mail or by courier service providing proof of delivery to, the last business address known to the party giving notice.

§ 13.4 RIGHTS AND REMEDIES

§ 13.4.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

§ 13.4.2 No action or failure to act by the Owner, Architect or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach there under, except as may be specifically agreed in writing.

§ 13.5 TESTS AND INSPECTIONS

§ 13.5.1 Tests, inspections and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.

§ 13.5.2 If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.

§ 13.5.3 If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's services and expenses shall be at the Contractor's expense.

§ 13.5.4 Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.5.5 If the Architect is to observe tests, inspections or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.6 INTEREST

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at such rate as the parties may agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

§ 13.7 TIME LIMITS ON CLAIMS

The Owner and Contractor shall commence all claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in the Agreement within the time period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all claims and causes of action not commenced in accordance with this Section 13.7.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 TERMINATION BY THE CONTRACTOR

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor promptly, upon the Contractor's request, reasonable evidence as required by Section 2.2.1.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, repeated suspensions, delays or interruptions of the entire Work by the Owner as described in Section 14.3 constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, including reasonable overhead and profit, costs incurred by reason of such termination, and damages.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 TERMINATION BY THE OWNER FOR CAUSE

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the above reasons exist, the Owner, upon certification by the Initial Decision Maker that sufficient cause exists to justify such action, may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay or interruption as described in Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- .1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 CLAIMS

§ 15.1.1 DEFINITION

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim.

§ 15.1.2 NOTICE OF CLAIMS

Claims by either the Owner or Contractor must be initiated by written notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker.

Claims by either party must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3 CONTINUING CONTRACT PERFORMANCE

Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents. The Architect will prepare Change Orders and issue Certificates for Payment in accordance with the decisions of the Initial Decision Maker.

§ 15.1.4 CLAIMS FOR ADDITIONAL COST

If the Contractor wishes to make a Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.5 CLAIMS FOR ADDITIONAL TIME

§ 15.1.5.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.5.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction.

§ 15.1.6 CLAIMS FOR CONSEQUENTIAL DAMAGES

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.6 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 INITIAL DECISION

§ 15.2.1 Claims, excluding those arising under Sections 10.3, 10.4, 11.3.9, and 11.3.10, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim arising prior to the date final payment is due, unless 30 days have passed after the Claim has been referred to the Initial Decision Maker with no decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of such request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of an initial decision, demand in writing that the other party file for mediation within 60 days of the initial decision. If such a demand is made and the party receiving the demand fails to file for mediation within the time required, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 MEDIATION

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.6 shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 ARBITRATION

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 CONSOLIDATION OR JOINDER

§ 15.4.4.1 Either party, at its sole discretion, may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Either party, at its sole discretion, may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as the Owner and Contractor under this Agreement.

SUPPLEMENTARY CONDITIONS - A201

The following supplementary conditions modify and supersede the “General Conditions of the Contract for Construction,” AIA Document A201-2007. Where a portion of a section of the General Conditions is modified or deleted by these Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect.

ARTICLE 1 – GENERAL PROVISIONS

1.1 BASIC DEFINITIONS

1. Add the following sentence at the end of Subparagraph 1.1.1:

“The executed Contract Documents signed by the Owner and Contractor shall prevail in case of an inconsistency with subsequent versions made through manipulatable electronic operations involving computers.”

2. Add the following Subparagraph 1.1.9 to Paragraph 1.1:

“1.1.9 NOMENCLATURE

Any use of or reference to the term “Architect” in the Contract Documents shall mean “Engineer.”

ARTICLE 2 –OWNER

2.1 GENERAL

1. Add the following Clause 2.1.1.1 to Subparagraph 2.1.1:

“2.1.1.1 The legal name of the Owner of the Work is:

City of Isle of Palms
1207 Palm Blvd.
P.O. Box 508
Isle of Palms, SC 29451”

2. Delete Paragraph 2.1.2 and replace it with the following:

“2.1.2 The Owner shall furnish to the Contractor within 15 days after receipt of the written request, a correct statement of the record legal title to the property on which the project is located, usually referred to as the site, and the Owner’s interest therein.”

2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

1. Delete Subparagraph 2.2.5 and substitute the following:

“2.2.5 The Contractor will be furnished free of charge one copy of the Contract

Documents. Additional sets will be furnished at the cost of reproduction, postage and handling.”

ARTICLE 3 – CONTRACTOR

3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

1. Add the following sentence to Subparagraph 3.2.1:

“**3.2.1** Extra payment will not be authorized for work that could have been determined by careful examination of the site and conditions.”

3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

1. Delete the last two sentences of Subparagraph 3.3.1 and insert in lieu thereof the following:

“If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give advance written notice to the Owner and Architect, informing the Owner and Architect of the alternate means, methods, techniques, sequences or procedures that the Contractor intends to utilize in the performance of the work, and, unless the Owner or Architect take exception to the proposed means, methods, techniques, sequences or procedures, the Contractor shall proceed with the Work.”

3.4 LABOR AND MATERIALS

1. Add the following Subparagraphs 3.4.4 and 3.4.5:

“**3.4.4** The Contractor shall disclose the existence and extent of financial interest, whether direct or in direct, that Contractor has in subcontractors or material suppliers which Contractor may propose for the project.

3.4.5 Products are generally specified by ASTM or other referenced standards, or by manufacturer’s name and model number or trade name. When specified only by reference standard, the Contractor may select any product meeting the standard, by any manufacturer. When several products by manufacturer are specified as being equally acceptable, the Contractor has the option of using any product and manufacturer combination listed. When only one product and manufacturer is specified, there shall be no substitution or exception.”

3.5 WARRANTY

1. Add the following sentence at the end of Paragraph 3.5:

“Should the abuse, modification, insufficient or improper maintenance, improper operation or other cause of damage be by the Contractor, it shall be the Contractor’s responsibility to correct the Work.”

3.7 PERMITS, FEES, NOTICES AND COMPLIANCE WITH LAWS

1. Delete Subparagraph 3.7.1 and substitute the following:

“**3.7.1** The Contractor shall apply for, secure, and pay for the Building Permit as well as for other permits, fees, licenses and inspections necessary for proper execution and completion of the Work.”

2. Add the following Clause 3.7.1.1 to Subparagraph 3.7.1:

“**3.7.1.1** Building Permits are issued through the City of Isle of Palms Building Department.”

3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

1. Add Subparagraph 3.12.11 to Paragraph 3.12:

“**3.12.11** The Architect’s review of Contractor’s submittals will be limited to examination of an initial submittal and one resubmittal. The Architect’s review of additional submittals will be made only with the consent of the Owner after notification by the Architect. The Owner shall be entitled to deduct from the Contract Sum amounts paid to the Architect for evaluation of such additional resubmittals.”

ARTICLE 4 – ARCHITECT

4.1 GENERAL

1. Delete Subparagraph 4.1.1 and replace it with the following:

“The person or entity identified as the Architect in the Agreement is the Engineer. Any use of or reference to the term “Architect” in the Contract Documents shall mean “Engineer.”

4.2 ADMINISTRATION OF THE CONTRACT

1. Add Clause 4.2.2.1 to Subparagraph 4.2.2:

“**4.2.2.1** The Contractor shall reimburse the Owner for compensation paid to the Architect for additional site visits made necessary by the fault, neglect or request of the Contractor.”

ARTICLE 7 – CHANGES IN THE WORK

7.3 CONSTRUCTION CHANGE DIRECTIVES

1. In the first sentence of Subparagraph 7.3.7, delete the words “an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount” and substitute “an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, in accordance with Subparagraph 7.3.11.”

2. Add the following Subparagraph 7.3.11 to 7.3:

“7.3.11 The allowance for the combined overhead and profit included in the total cost to the Owner for Change Orders and Change Directives shall be based on the following schedule:

.1 For the Contractor, for Work performed by the Contractor’s own forces, 15 percent of the cost.

.2 For the Contractor, for Work performed by the Contractor’s Subcontractor, 10 percent of the amount due the Subcontractor.

.3 For each Subcontractor or Sub-subcontractor involved, for work performed by that Subcontractor’s or Sub-subcontractor’s own forces, 10 percent of the cost.

.4 For each Subcontractor, for the Work performed by the Subcontractor’s Sub-subcontractors, 10 percent of the amount due the Sub-subcontractor.

.5 For work deleted, which would have been completed by the Contractor or Subcontractor, 5 percent of the cost deleted shall be credited to the Owner as the allowance for unearned profit.

(Example)	Labor	\$500.00
	Material	<u>500.00</u>
	Cost	\$1,000.00

5% unearned profit	<u>50.00</u>
Credit to Owner	\$1,050.00

.6 Cost to which overhead and profit is to be applied shall be determined in accordance with Subparagraph 7.3.7.

.7 In order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs

including labor, materials and Subcontracts. Labor and material shall be itemized in the manner prescribed above. Where major cost items are Subcontracts, they shall be itemized also. In no case will changes involving over \$500 be approved without such itemization.”

ARTICLE 9 - PAYMENTS AND COMPLETION

9.3 APPLICATIONS FOR PAYMENT

1. Delete Subparagraph 9.3.1 and Clauses 9.3.1.1 and 9.3.1.2 in their entireties and substitute the following:

“**9.3.1** Applications for payment shall be made at approximately 30 day intervals in accordance with the dates established in the Standard Form of Agreement Between Owner and Contractor. At least 30 days before each progress payment falls due, the Contractor shall submit to the Architect, an itemized Application for Payment, supported by such data substantiating the Contractor's right to payment as the Owner or the Architect may require. The form of Application for Payment shall be AIA Document G702 (1992) - Application and Certificate for Payment, supported by AIA Document G703 (1992) - Continuation Sheet.

9.3.1.1 Such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives but not yet included in Change Orders.

9.3.1.2 Contractor shall submit with each monthly Application for Payment 1) an Affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the previous Application, was submitted and the Owner or his property might in any way be responsible, have been paid or otherwise satisfied, and 2) release or waivers of liens arising out of the Contract from each Subcontractor, material supplier, and laborer of the Contractor.”

2. Add the following Clause 9.3.1.3 to Subparagraph 9.3.1:

“**9.3.1.3** Until Final Completion, retainage shall be 10 percent of the amount due the Contractor on account of progress payments.”

3. Add the following sentence and Clauses 9.3.2.1 through 9.3.2.7 to Subparagraph 9.3.2:

“Payment to Contractor for materials stored off site is discouraged. Where circumstances indicate that the Owner's best interest is served by off-site storage, the Contractor shall make written request to the Architect for approval to include such material costs in his next progress payment. The Contractor's request shall include the following information:

.1 A list of the fabricated materials consigned to the project (which shall be clearly identified), giving the place of storage, together with copies of invoices and reasons why materials cannot be delivered to the site.

.2 Certification that items have been tagged for delivery to the project and that they will not be used for another purpose.

.3 A letter from the Bonding Company indicating agreement to the arrangements and that payment to the Contractor shall not relieve either party or their responsibility to complete the facility.

.4 Evidence of adequate insurance covering the material in storage, which shall name the Owner as additionally insured.

.5 Costs incurred by the Architect to inspect material in off-site storage shall be paid by the Contractor.

.6 Subsequent pay requests shall itemize the materials and their cost that were approved on previous pay requests and remain in off-site storage.

.7 When a partial payment is allowed on account of material delivered on the site of the Work or in the vicinity thereof or under possession and control of the Contractor but not yet incorporated therein, such material shall become the property of the Owner, but if such material is stolen, destroyed or damaged by casualty before being used, the Contractor will be required to replace it at his own expense.

9.8 SUBSTANTIAL COMPLETION

1. Add the following Clause 9.8.3.1 to Subparagraph 9.8.3

“**9.8.3.1** Except with the consent of the Owner, the Architect will perform no more than two inspections to determine whether the Work or a designated portion thereof has attained Substantial Completion in accordance with the Contract Documents. The Owner shall be entitled to deduct from the Contract Sum amounts paid to the Architect for any additional inspections.”

2. Delete the second and third sentences of Subparagraph 9.8.5.

9.10 FINAL COMPLETION AND FINAL PAYMENT

1. Add the following Clause 9.10.1.1 to Subparagraph 9.10.1

“**9.10.1.1** Except with the consent of the Owner, the Architect will perform no more than one inspection to determine whether the Work or a designated portion thereof has attained Final Completion in accordance with the Contract Documents. The Owner shall be entitled to deduct from the Contract Sum amounts paid to the Architect for any additional inspections.”

2. Delete Subparagraph 9.10.2 in its entirety and substitute the following:

"§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees."

9.11 LIQUIDATED DAMAGES

1. Add the following Paragraph 9.11 and Subparagraph 9.11.1 to Article 9:

"9.11 LIQUIDATED DAMAGES

9.11.1 The Contractor and the Contractor's surety, if any, shall be liable for and shall pay the Owner liquidated damages in the amount of a total of \$1,000.00 for each calendar day of delay after the date established for Substantial Completion in the Contract Documents until the Work is substantially complete."

ARTICLE 10- PROTECTION OF PERSONS AND PROPERTY

1. Modify Subparagraph 10.2.8 by changing "21 days" to "45 days" in line 3 of this Subparagraph.
2. Delete Subparagraph 10.3.3 in its entirety.
3. Delete Subparagraph 10.3.4 in its entirety.
4. Delete Subparagraph 10.3.6 in its entirety.

ARTICLE 11 – INSURANCE AND BONDS

11.1 CONTRACTOR'S LIABILITY INSURANCE

1. Delete the semicolon at the end of Clause 11.1.1.1 and add the following:

“including private entities performing Work at the site and exempt from the coverage on account of number of employees or occupation, which entities shall maintain voluntary compensation coverage at the same limits specified for mandatory coverage or as required by the Contract Documents for the duration of the Project;”

2. Delete the semicolon at the end of Clause 11.1.1.2 and add the following:

“or persons or entities excluded by statute from the requirements of Clause 11.1.1.1 but required by the Contract Documents to provide the insurance required by that clause;”

3. Add the Following Clause 11.1.1.9 to Subparagraph 11.1.1:

“.9 Liability Insurance shall include all major division of coverage and be on a comprehensive basis including:

- .1 Premises Operations (including X, C and U coverages as applicable).
- .2 Independent Contractors’ Protective.
- .3 Products-Completed Operations.
- .4 Personal Injury Liability with Employment Exclusion deleted.
- .5 Contractual, including specified provision for Contractor’s obligation under paragraph 3.18.
- .6 Owned, non-owned and hired motor vehicles.
- .7 Broad Form Property Damage including Completed Operations

4. Add the following Clauses 11.1.2.1 through 11.1.2.4 to Subparagraph 11.1.2:

“**11.1.2.1** The limits for Worker’s Compensation and Employers’ Liability insurance shall meet statutory limits mandated by State and Federal Laws. If (1) limits in excess of those required by statute are to be provided or (2) the employer is not statutorily bound to obtain such insurance coverage or (3) additional coverages are required, additional coverages and limits for such insurance shall be as follows:

\$1,000,000 Each Accident
\$1,000,000 Disease, Each
Employee \$1,000,000
Disease, Policy Limit

11.1.2.2 The Limits for Commercial General Liability insurance including coverage for Premises-Operations, Independent Contractors’ Protective, Products-Completed Operations, Contractual Liability, Personal Injury and Broad Form Property Damage (including coverage for Explosion, Collapse and Underground hazards) shall be as follows:

\$1,000,000 Each Occurrence
\$1,000,000 Damage to Rented Premises (Each Occurrence)

\$1,000,000 Medical Expenses (Any One Person)
\$1,000,000 Personal and Advertising Injury
\$2,000,000 General Aggregate
\$1,000,000 Products-Completed Operations Aggregate

.1 The policy shall be endorsed to have the General Aggregate apply to this Project only.

.2 The Contractual Liability insurance shall include coverage sufficient to meet the obligations under Paragraph 3.18.

.3 Products and Completed Operations insurance shall be maintained for a minimum period of at least 2 years after either 90 days following Substantial Completion or final payment, whichever is earlier.

.4 Owner shall be listed as an additional insured on all liability insurance policies carried by Contractor.

11.1.2.3 Automobile Liability insurance (owned, non-owned, and hired vehicles) for bodily injury and property damage:

\$1,000,000 Combined Single Limit (Each
Accident) \$1,000,000 Bodily Injury (Per
Person)
\$1,000,000 Bodily Injury (Per Accident)
\$1,000,000 Property Damage (Per Accident)

11.1.2.4 Umbrella or Excess Liability coverage:

\$1,000,000 Each
Occurrence
\$1,000,000
Aggregate

5. Delete Subparagraph 11.1.3 in its entirety and substitute the following:

"§ 11.1.3 Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work and thereafter upon renewal or replacement of each required policy of insurance. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness. The Contractor shall provide written notification to the Owner of the cancellation or expiration of any insurance required by Section 11.1. The Contractor shall provide such written notice within five (5) business days of the date

the Contractor is first aware of the cancellation or expiration, or is first aware that the cancellation or expiration is threatened or otherwise may occur, whichever comes first. If this insurance is written on a Commercial General Liability policy form, the certificates shall be ACORD form 25-S.”

11.2 OWNER’S LIABILITY INSURANCE

1. Delete Paragraph 11.2 and substitute the following in lieu thereof:

“**11.2** The Contractor shall purchase and maintain insurance covering the Owner’s contingent liability for claims which may arise from operations under the Contract.”

2. Add the following Subparagraph 11.2.1 to Paragraph 11.2.

11.2.1 The insurance required by 11.2 shall be provided by the Contractor and shall be written for not less than the following limits:

\$1,000,000.00 General Liability.”

11.3 PROPERTY INSURANCE

1. Modify the first sentence of Subparagraph 11.3.1 as follows: Delete “Unless otherwise provided, the Owner” and substitute “The Contractor.” Add the following sentence:

“If the Owner is damaged by the failure of the Contractor to purchase and maintain such insurance without so notifying the Owner in writing, then the Contractor shall bear all reasonable costs attributable thereto.”

2. Delete Clause 11.3.1.2 in its entirety.
3. Modify Clause 11.3.1.3 by substituting “Contractor” for “Owner.”

11.3.2 BOILER AND MACHINERY INSURANCE

1. Delete Subparagraph 11.3.2 in its entirety.

11.3.3 LOSS OF USE INSURANCE

1. Delete Subparagraph 11.3.3 in its entirety.
2. Delete Subparagraph 11.3.4 in its entirety.
3. Delete Subparagraph 11.3.6 in its entirety and substitute the following:

"§ 11.3.6 Before an exposure to loss may occur, the Contractor shall file with the Owner a copy of each policy that includes insurance coverages required by this Section 11.3. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. The Contractor shall provide written notification to the Owner of the cancellation or expiration of any insurance required by Section 11.3. The Contractor shall provide such written notice within five (5) business days of the date the Contractor is first aware of the cancellation or expiration, or is first aware that the cancellation or expiration is threatened or otherwise may occur, whichever comes first."

11.3.7 WAIVERS OF SUBROGATION

1. Modify Subparagraph 11.3.7 by adding "and paid" after the word "covered" in the fourth line.
2. Modify Subparagraph 11.3.7 by substituting "Contractor" for "Owner" at the end of the first Sentence.
3. Modify Subparagraph 11.3.8 by substituting "Contractor" for "Owner"; except that at the first reference to "Owner" in the first sentence, the word "this" should be substituted for "Owner's."
4. Modify Subparagraph 11.3.9 by substituting "Contractor" for "Owner" each time the latter word appears except the last sentence.
5. Modify Subparagraph 11.3.10 by substituting "Contractor" for "Owner" each time the latter word appears, except for the last reference to "Owner" in the first sentence and the first reference to "Owner" in the second sentence.

11.4 PERFORMANCE BOND AND PAYMENT BOND

1. Delete Subparagraph 11.4.1 in its entirety and replace it with the following:

11.4.1 The Contractor shall furnish to the Owner a performance bond and a separate labor and materials payment bond, underwritten by a surety authorized to do business in South Carolina, each in an amount equal to 100 percent of the Contract Sum for each bond. The bond shall guarantee Contractor's faithful performance of the Contract. The bonds shall remain in force until the Work has been completed and accepted by the Owner, the provisions of all guarantees have been fulfilled, and for correction if Work in Article 12, or the period for filing mechanics liens has expired, whichever shall occur latest, after which time the bonds shall lapse. The Contractor shall bear all costs in connection with the bonds as a part of the contract. Bonds shall be attached to each document prior to the execution of the contract documents by the Owner.

11.4.1.1 Contractor shall provide such bonds to Owner in the "standard form of performance bond and labor and materials payment bond", AIA DA312 latest addition.

2. Add Clause 11.4.1.2 and 11.4.1.3 to Subparagraph 11.4.1.

“**11.4.1.2** The Contractor shall deliver the required bonds to the Owner not later than three days following the date the Agreement is entered into, or if the Work is to be commenced prior thereto in response to a letter of intent, the Contractor shall, prior to the commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished.”

“**11.4.1.3** The Contractor shall require the attorney-in-fact who executes the required bonds on behalf of the surety to provide a current copy of its power of attorney.”

ARTICLE 13 – MISCELLANEOUS PROVISIONS

13.1 GOVERNING LAW

1. Delete the phrase “the Federal Arbitration Act shall govern Section 15.4” and replace it with “the South Carolina Uniform Arbitration Act in Section 15-48-10, et seq., of the South Carolina Code (1976), as amended, shall govern Section 15.4.”

13.8 POLICIES OF EMPLOYMENT

1. Add Paragraph 13.8 and Subparagraphs 13.8.1 and 13.8.2:

“13.8 POLICIES OF EMPLOYMENT

13.8.1 The Contractor and Subcontractors shall not discriminate against employee or applicant for employment because of race, religion, color, sex, or national origin. The Contractor shall take affirmative action to insure that applicants are employed, and that employees are treated during employment without regard to their race, religion, color, sex or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the policies of nondiscrimination.

13.8.2 The Contractor and Subcontractors shall, in solicitations or advertisements for employees placed by them or on their behalf, state that qualified applicants will receive consideration for employment without regard to race, religion, color, sex or national origin.”

ARTICLE 15 – CLAIMS AND DISPUTES

15.1 CLAIMS

1. Modify Subparagraph 15.1.2 by changing “21 days” to “45 days” in lines 3 & 4 of this Sub-paragraph.

2. Add the following Clauses 15.1.5.3 and 15.1.5.4 to Subparagraph 15.1.5:

“15.1.5.3 Claims for increase in the Contract Time shall set forth in detail the circumstances that form the basis for the Claim, the date upon which each cause of delay began to affect the progress of the Work and the number of days’ increase in the Contract Time claimed as a consequence of each such cause of delay. The Contractor shall provide such supporting documentation as the Owner may require including, where appropriate, a revised construction schedule indicating all the activities affected by the circumstances forming the basis of the claim.

15.1.5.4 The Contractor shall not be entitled to a separate increase in Contract Time for each one of the number of causes of delay which may have concurrent or interrelated effects on the progress of the Work, or for concurrent delays due to the fault of the Contractor.”

3. Delete in its entirety Subparagraph 15.1.6 entitled “Claims for Consequential Damages.”

15.2 INITIAL DECISION

1. Modify Subparagraph 15.2.5 by deleting the phrase “to binding dispute resolution” at the end of the last sentence and replace it with “to binding arbitration as provided in Section 15.4.”
2. Modify Subparagraph 15.2.6 by deleting the phrase “subject to the terms of Section 15.2.6.1” at the end of the sentence.
3. Delete Subparagraph 15.2.6.1 in its entirety.

15.3 MEDIATION

1. Delete Paragraph 15.3, Mediation, in its entirety and replace it with the following.

“Mediation. Any claim, dispute, or controversy arising under or in connection with this Agreement shall be subject to mediation as a condition precedent to binding arbitration in Section 15.4. A request for mediation shall be made in writing, delivered to the other party to the Agreement, and filed with the proposed mediator. Mediation shall be conducted in Charleston County, South Carolina. The mediator shall be a member of the South Carolina Bar and shall be selected by mutual consent and agreement of the parties. If a party fails to object to the mediator proposed by the party requesting mediation within 30 days of the initial request for mediation, the mediator shall be deemed selected as proposed. If the parties fail to agree upon a mutually acceptable mediator within 60 days of the initial request for mediation, the mediator shall be selected

from the official roster of active certified mediators in Charleston County, as provided by the South Carolina Supreme Court's Commission on Alternative Dispute Resolution and Board of Arbitrator and Mediator Certification, by choosing in alphabetical order the first available circuit court mediator from the roster. The parties shall equally divide the mediator's fee and any filing fees. Agreements reached in mediation shall be enforceable as settlement agreements in any court of competent jurisdiction. Nothing contained in Article 15 or the Contract Documents shall preclude either party from seeking enforcement of the terms of mediation pursuant to this Section 15.3 through a court of competent jurisdiction, and the prevailing party shall also be entitled to reimbursement by the losing party for all reasonable fees and costs, including attorney's fees, incurred in the proceedings seeking enforcement of this Section 15.3."

15.4 ARBITRATION

1. Delete Paragraph 15.4, Arbitration, in its entirety and replace it with the following:

"Binding Arbitration. Any dispute or controversy arising under or in connection with this Agreement shall be submitted to binding arbitration in accordance with the requirements of the South Carolina Uniform Arbitration Act as then in effect ("SCUAA"). All arbitration proceedings shall be conducted in Charleston County, South Carolina. The arbitrators shall be selected as provided in the SCUAA, and the arbitrators shall render a decision on any dispute within ninety (90) days after the last of the arbitrators has been selected. If any party to this Agreement fails to select an arbitrator with regard to any dispute submitted to arbitration under this Section within thirty (30) days after receiving notice of the submission to arbitration of such dispute, then the other party or parties shall select an arbitrator for such non-selecting party, and the decision of the arbitrators shall be final and binding upon all the parties to the dispute, their personal representatives, legal representatives, heirs, successors and assigns. The prevailing party in any such proceeding shall be entitled to reimbursement by the losing party, in addition to any damages awarded, for all reasonable costs and expenses, including attorney's fees, incurred in any such proceeding, including all trial and appellate levels. Nothing contained in this Section shall preclude either party from seeking injunctive relief through a court of competent jurisdiction in connection with the Arbitration, and the prevailing party shall also be entitled to reimbursement by the losing party for all reasonable fees and costs, including attorney's fees, incurred in the proceedings seeking injunctive relief."

15.4.4 CONSOLIDATION OR JOINDER

1. Modify the first sentence of Subparagraph 15.4.4.1 by deleting the phrase "at its sole discretion" and replacing it with "by mutual consent and agreement."
2. Modify the first sentence of Subparagraph 15.4.4.2 by deleting the phrase "at its sole discretion" and replacing it with "by mutual consent and agreement."

**45th to 52nd Avenue Drainage Improvements
City of Isle of Palms, SC**

Bid Bond

The Bid Bond submitted by the Contractor shall become part of the Contract Documents.



AIA Document A310™ – 2010

Bid Bond

CONTRACTOR:

(Name, legal status and address)

SURETY:

(Name, legal status and principal place of business)

OWNER:

(Name, legal status and address)

BOND AMOUNT:

PROJECT:

(Name, location or address, and Project number, if any)

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this _____ day of _____

_____	_____	_____
<i>(Witness)</i>	<i>(Contractor as Principal)</i>	<i>(Seal)</i>
_____	_____	_____
	<i>(Title)</i>	
_____	_____	_____
<i>(Witness)</i>	<i>(Surety)</i>	<i>(Seal)</i>
_____	_____	_____
	<i>(Title)</i>	

CAUTION: You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.

Init.

**45th to 52nd Avenue Drainage Improvements
City of Isle of Palms, SC**

Performance Bond & Payment Bond

The Performance Bond & Payment Bond submitted by the Contractor shall become part of the Contract Documents.

 **AIA** Document A312™ – 2010

Performance Bond

CONTRACTOR:

(Name, legal status and address)

SURETY:

(Name, legal status and principal place of business)

OWNER:

(Name, legal status and address)

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONSTRUCTION CONTRACT

Date:

Amount:

Description:

(Name and location)

BOND

Date:

(Not earlier than Construction Contract Date)

Amount:

Modifications to this Bond: None See Section 16

CONTRACTOR AS PRINCIPAL

Company: *(Corporate Seal)*

SURETY

Company: *(Corporate Seal)*

Signature: _____

Name and Title:

(Any additional signatures appear on the last page of this Performance Bond.)

Signature: _____

Name and Title:

(FOR INFORMATION ONLY — Name, address and telephone)

AGENT or BROKER:

OWNER'S REPRESENTATIVE:

(Architect, Engineer or other party.)

§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

§ 2 If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Section 3.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after

- .1 the Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Section 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;
- .2 the Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
- .3 the Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

§ 4 Failure on the part of the Owner to comply with the notice requirement in Section 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

§ 5 When the Owner has satisfied the conditions of Section 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

§ 5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

§ 5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

§ 5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Section 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

§ 5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

- .1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
- .2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

§ 6 If the Surety does not proceed as provided in Section 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Section 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

§ 7 If the Surety elects to act under Section 5.1, 5.2 or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication, for

- .1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
- .2 additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Section 5; and
- .3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

§ 8 If the Surety elects to act under Section 5.1, 5.3 or 5.4, the Surety's liability is limited to the amount of this Bond.

§ 9 The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors and assigns.

§ 10 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 11 Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 12 Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

§ 13 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

§ 14 Definitions

§ 14.1 **Balance of the Contract Price.** The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

§ 14.2 **Construction Contract.** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

§ 14.3 **Contractor Default.** Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

§ 14.4 **Owner Default.** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 14.5 **Contract Documents.** All the documents that comprise the agreement between the Owner and Contractor.

§ 15 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 16 Modifications to this bond are as follows:

Sample

(Space is provided below for *additional* signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL	SURETY
Company: _____	Company: _____
<i>(Corporate Seal)</i>	<i>(Corporate Seal)</i>

Signature: _____
Name and Title: _____
Address _____

Signature: _____
Name and Title: _____
Address _____



AIA Document A312™ – 2010

Payment Bond

CONTRACTOR:

(Name, legal status and address)

SURETY:

(Name, legal status and principal place of business)

OWNER:

(Name, legal status and address)

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONSTRUCTION CONTRACT

Date:

Amount:

Description:

(Name and location)

BOND

Date:

(Not earlier than Construction Contract Date)

Amount:

Modifications to this Bond: None See Section 18

CONTRACTOR AS PRINCIPAL

Company: *(Corporate Seal)*

SURETY

Company: *(Corporate Seal)*

Signature: _____

Name and Title:

(Any additional signatures appear on the last page of this Payment Bond.)

Signature: _____

Name and Title:

(FOR INFORMATION ONLY — Name, address and telephone)

AGENT or BROKER:

OWNER'S REPRESENTATIVE:

(Architect, Engineer or other party:)

§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

§ 2 If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Section 13) of claims, demands, liens or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety.

§ 4 When the Owner has satisfied the conditions in Section 3, the Surety shall promptly and at the Surety's expense defend, indemnify and hold harmless the Owner against a duly tendered claim, demand, lien or suit.

§ 5 The Surety's obligations to a Claimant under this Bond shall arise after the following:

§ 5.1 Claimants, who do not have a direct contract with the Contractor,

- .1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
- .2 have sent a Claim to the Surety (at the address described in Section 13)

§ 5.2 Claimants, who are employed by or have a direct contract with the Contractor, have sent a Claim to the Surety (at the address described in Section 13).

§ 6 If a notice of non-payment required by Section 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Section 5.1.1.

§ 7 When a Claimant has satisfied the conditions of Sections 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

§ 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

§ 7.2 Pay or arrange for payment of any undisputed amounts.

§ 7.3 The Surety's failure to discharge its obligations under Section 7.1 or Section 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Section 7.1 or Section 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

§ 8 The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Section 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

§ 9 Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

§ 10 The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to, or give notice on behalf of, Claimants or otherwise have any obligations to Claimants under this Bond.

§ 11 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 12 No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Section 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 13 Notice and Claims to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.

§ 14 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

§ 15 Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

§ 16 Definitions

§ 16.1 Claim. A written statement by the Claimant including at a minimum:

- .1 the name of the Claimant;
- .2 the name of the person for whom the labor was done, or materials or equipment furnished;
- .3 a copy of the agreement or purchase order pursuant to which labor, materials or equipment was furnished for use in the performance of the Construction Contract;
- .4 a brief description of the labor, materials or equipment furnished;
- .5 the date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
- .6 the total amount earned by the Claimant for labor, materials or equipment furnished as of the date of the Claim;
- .7 the total amount of previous payments received by the Claimant; and
- .8 the total amount due and unpaid to the Claimant for labor, materials or equipment furnished as of the date of the Claim.

§ 16.2 Claimant. An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

§ 16.3 Construction Contract. The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

§ 16.4 Owner Default. Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 16.5 Contract Documents. All the documents that comprise the agreement between the Owner and Contractor.

§ 17 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 18 Modifications to this bond are as follows:

Sample

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL

SURETY

Company:

(Corporate Seal)

Company:

(Corporate Seal)

Signature: _____

Name and Title:

Address

Signature: _____

Name and Title:

Address

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Project Identification: 45th to 52nd Avenue Drainage Improvements.
 - 1. Project Location: Isle of Palms, SC.
- B. Owner: City of Isle of Palms, 1207 Palm Boulevard, Isle of Palms, SC 29451.
 - 1. Owner's Representative: Linda Lovvorn Tucker – 843-886-6428
- C. Engineer: Civil Site Environmental, Inc., 668 Marina Drive Suite B1, Charleston, SC 29492,
Phone: 843-849-8945
- D. Contractor: **<Insert name and contact information for Contractor>** has been engaged as Contractor for this Project.
- E. Construction Manager: Civil Site Environmental, Inc.,
 - 1. Construction Manager has been engaged for this Project to serve as an advisor to Owner and to provide assistance in administering the Contract for Construction between Owner and Contractor, according to a separate contract between Owner and Construction Manager.
- F. Construction Surveying: Contractor shall provide construction surveying and stakeout using personnel meeting the Land Surveyor Qualifications set forth in the Division 1 Section "Execution".
- G. SWPPP Compliance: Contractor shall be responsible for maintaining OS-SWPPP in accordance with contract documents. Contractor shall be responsible for periodic inspections as outlined in project SWPPP. Inspections for SWPPP compliance shall be done by qualified personnel meeting the SWPPP Inspector Qualifications set forth in the Division 1 Section "Execution".

1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents and consists of but is not limited to the following:

45th to 52nd Avenue Drainage Improvements
City of Isle of Palms, SC

1. Installation of storm drainage lines and structures including the removal and replacement of existing storm drainage components, any and all necessary surveying, excavation, fill, relocation of conflicting existing utilities, restoration of disturbed areas, testing, traffic control, and any other improvements or repairs necessary to complete work as indicated on Construction Drawings and in Contract Documents.

B. Type of Contract:

1. Project will be constructed under a single prime contract.
 - a. 45th to 52nd Avenue Drainage Improvements.

1.4 STAGED CONSTRUCTION

A. The Work shall be conducted in three (3) stages:

1. Stage 1: **Morgan Creek Outfall to Lake 3** – That work required to install outfall from Morgan Creek to control structure in upstream lagoon "Lake 3" (designated as CS 76).
2. Stage 2: **Drainage Connections within Wild Dunes** – That work required to install all drainage within the Wild Dunes Resort Area up to Palm Blvd (JB16) as shown on Construction Drawings. Construction shall commence after completion of Stage 1.
3. Stage 3: **Balance of Remaining Drainage System**- That work required to install the remaining drainage lines from JB16 located on Palm Blvd as indicated on Construction Drawings. Construction shall commence after completion of Stages 1 & 2.

B. Before commencing Work of each phase, submit an updated copy of Contractor's construction schedule showing the sequence, commencement and completion dates for all phases of the Work.

1.5 ACCESS TO SITE

A. General: Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.

B. Use of Site: Limit use of Project site to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1. Limits: Confine construction operations to those areas indicated on construction plans.
2. Driveways, Walkways and Entrances: Keep driveways, roadways, public accesses and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

45th to 52nd Avenue Drainage Improvements
City of Isle of Palms, SC

- C. Environmentally Sensitive Areas: Encroachment into saltwater marshes, freshwater wetlands, buffers, and other environmental sensitive areas is prohibited except in areas where specifically indicated and permitted by authorities having jurisdiction.

1.6 COORDINATION WITH OCCUPANTS

- A. Full Owner Occupancy: Owner will occupy the site and existing adjacent building(s) and recreation areas (ie golf course) during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits unless otherwise indicated.

- 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and approval of authorities having jurisdiction.
- 2. Notify Owner not less than 72 hours in advance of activities that will affect Owner's operations.

- B. Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.

- 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
- 2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.

1.7 WORK RESTRICTIONS

- A. On-Site Work Hours: Work shall be generally performed during normal business working hours of 7:30 a.m. to 6:00 p.m., Monday through Friday, unless otherwise indicated.

- 1. Weekend Hours: 9:00 a.m. to 4:00 p.m. on Saturdays with no work allowed on Sunday.

- B. Noise Reduction Measures: Quiet pumps and sound baffling structures shall be required to limit noise related to construction activities.

- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated.

- 1. Notify Construction Manager and Owner not less than 72 hours in advance of proposed utility interruptions.
- 2. Do not proceed with utility interruptions without Owner's written permission.

1.8 SPECIFICATION FORMATS AND CONVENTIONS

A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
 - a. The words “shall”, “shall be”, or “shall comply with”, depending on the context, are implied where a colon (:) is used within a sentence or phrase.
2. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.

B. Specification Format: The Specifications are organized into Divisions and Sections using the 50-division format and CSI/CSC’s MasterFormat numbering system

1. Specification Identification: The Specifications use Section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however the sequence is incomplete because all available Section numbers are not used. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of Sections in the Contract Documents.
2. Division 01: Sections in Division 01 govern the execution of the Work of all Sections in the Specifications.

1.9 REGULATORY REQUIREMENTS

A. Authorities Having Jurisdiction: Conform to requirements of all authorities having jurisdiction.

1. Where conflicts exist between the requirements of the Contract Documents and those of authorities having jurisdiction, the higher quality or more restrictive requirement shall apply.
2. Submit copies of all permits and licenses, required by governing authorities having jurisdiction, to Owner and Architect.
3. Contractor shall be obligated to ensure permit compliance throughout construction.
4. No Notice to Proceed may be honored before all necessary permits are obtained.

PART 2 – PRODUCTS (Not Used)

45th to 52nd Avenue Drainage Improvements
City of Isle of Palms, SC

PART 3 – EXECUTION (Not Used)

END OF SECTION 011000

SECTION 012200 - UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for unit prices.
- B. Related Requirements:
 - 1. Section 012600 "Contract Modification Procedures" for procedures for submitting and handling Change Orders.
 - 2. Section 014000 "Quality Requirements" for general testing and inspecting requirements.
 - 3. Division 01 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders.
 - 4. Individual Specification Sections referenced in the List of Unit Prices included in Part 3.

1.3 DEFINITIONS

- A. Unit price is an amount incorporated in the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

A. Unit Prices No. 1 thru 6: Storm Drainage Pipe

1. Description: As described in Section titled "Storm Drainage System" and indicated on Drawings
2. Unit of Measurement: Linear feet (unit price to include all necessary dewatering, joint wrap, excavation, pipe bedding and any other measures or materials necessary for installation)

B. Unit Price No 7 thru 9: Drainage Structures

1. Description: As described in section titled "Storm Drainage System" and indicated on Drawings.
2. Unit of Measurement: Each

C. Unit Price No 10 thru 16: Waterline and Forcemain Adjustment

1. Description: Adjustment of existing water lines and sewer forcemains to avoid utility conflicts. As indicated on Drawings and as described in Appendix "Water Distribution System" and "Wastewater Collection System"
2. Unit of Measurement: Each (unit price should include full assembly as indicated on Drawings)

D. Unit Price No 17: Siltfence

1. Description: As described in Section "Site Clearing and Erosion Control"
2. Unit of Measurement: Linear feet

E. Unit Price No 18: Asphalt Pavement Patch

1. Description: As indicated on Drawings
2. Unit of Measurement: Square yard

F. Unit Price No 19: Concrete Curb

1. Description: As indicated on Drawings
2. Unit of Measurement: LF

G. Unit Price No 25 thru 26: Asphalt Sidewalk and Concrete Sidewalk Replacement

1. Description: As indicated on Drawings.

45th to 52nd Avenue Drainage Improvements
City of Isle of Palms, SC

- 2. Unit of Measurement: Square yards
- H. Unit Price No 27: Pavement Mill/Overlay
 - 1. Description: As indicated on Drawings
 - 2. Unit of Measurement: Square yards

END OF SECTION 012200

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.

1.3 MINOR CHANGES IN THE WORK

- A. Engineer will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions."

1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Construction Manager will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Work Change Proposal Requests issued by Construction Manager are not instructions either to stop work in progress or to execute the proposed change.
 - 2. Within 5 business days after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Construction Manager.
1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 4. Include costs of labor and supervision directly attributable to the change.
 5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 6. Comply with requirements in Section 012500 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.

1.5 ALLOWANCES

- A. Unit-Price Adjustment: See Section 012200 "Unit Prices" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect measured scope of unit-price work.

1.6 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Work Changes Proposal Request, Construction Manager will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

1.7 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

45th to 52nd Avenue Drainage Improvements
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PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.3 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.

- 1. Coordinate line items in the schedule of values with other required administrative forms and schedules, including the following:

- a. Application for Payment forms with continuation sheets.
- b. Submittal schedule.
- c. Items required to be indicated as separate activities in Contractor's construction schedule.

- 2. Submit the schedule of values to Architect at earliest possible date, but no later than seven days before the date scheduled for submittal of initial Applications for Payment.

- 3. Subschedules for Phased Work: Where the Work is separated into phases requiring separately phased payments, provide subschedules showing values coordinated with each phase of payment.

- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.

- 1. Identification: Include the following Project identification on the schedule of values:

- a. Project name and location.
- b. Name of Architect.
- c. Architect's project number.
- d. Contractor's name and address.
- e. Date of submittal.

- 2. Arrange schedule of values consistent with format of AIA Document G703.

3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with Project Manual table of contents. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.
4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
5. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site. If required, include evidence of insurance.
6. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
7. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
8. Each item in the schedule of values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
 - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at Contractor's option.
9. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.
 - a. Include each Change order or Construction Change Directive as a new line item on the Schedule of Values.

1.4 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
- C. Payment Application Times: Submit Application for Payment to Architect by the 25th of the month. The period covered by each Application for Payment is one month, ending on the last day of the month.

45th to 52nd Avenue Drainage Improvements
City of Isle of Palms, SC

- D. Application for Payment Forms: Use forms acceptable to Architect and Owner for Applications for Payment. Submit forms for approval with initial submittal of schedule of values.
- E. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
 - 1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
 - 2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
 - 3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- F. Transmittal: Submit three signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
 - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- G. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
 - 1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
 - 2. When an application shows completion of an item, submit conditional final or full waivers.
 - 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 - 4. Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.
 - 5. Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
- H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
 - 1. List of subcontractors.
 - 2. Schedule of values.
 - 3. Contractor's construction schedule (preliminary if not final).
 - 4. Products list (preliminary if not final).
 - 5. Schedule of unit prices.
 - 6. Submittal schedule (preliminary if not final).
 - 7. List of Contractor's staff assignments.
 - 8. List of Contractor's principal consultants.
 - 9. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.

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10. Initial progress report.
 11. Report of preconstruction conference.
 12. Certificates of insurance and insurance policies.
- I. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- J. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
 5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
 6. AIA Document G707, "Consent of Surety to Final Payment."
 7. Evidence that claims have been settled.
 8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
 9. Final liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. General coordination procedures.
 - 2. Requests for Information (RFIs).
 - 3. Project meetings.

1.3 DEFINITIONS

- A. RFI: Request from Contractor seeking interpretation or clarification of the Contract Documents.

1.4 GENERAL COORDINATION PROCEDURES

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
 - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts

and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's construction schedule.
2. Preparation of the schedule of values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences.
7. Project closeout activities.
8. Startup and adjustment of systems.

D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.

1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

1.5 PROJECT MEETINGS

A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner, Construction Manager, and Architect, within three days of the meeting.

B. Preconstruction Conference: Schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.

1. Attendees: Authorized representatives of Owner, Construction Manager, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing and long-lead items.
 - d. Procedures for processing field decisions and Change Orders.
 - e. Procedures for RFIs.

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- f. Procedures for testing and inspecting.
 - g. Procedures for processing Applications for Payment.
 - h. Distribution of the Contract Documents.
 - i. Submittal procedures.
 - j. Preparation of record documents.
 - k. Use of the premises.
 - l. Work restrictions.
 - m. Working hours.
 - n. Owner's occupancy requirements.
 - o. Responsibility for temporary facilities and controls.
 - p. Construction waste management and recycling.
 - q. Parking availability.
 - r. Office, work, and storage areas.
 - s. Equipment deliveries and priorities.
 - t. First aid.
 - u. Security.
 - v. Progress cleaning.
3. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.
- C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.
1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect and Construction Manager of scheduled meeting dates.
 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. Contract Documents.
 - b. Options.
 - c. Related RFIs.
 - d. Related Change Orders.
 - e. Purchases.
 - f. Deliveries.
 - g. Submittals.
 - h. Review of mockups.
 - i. Possible conflicts.
 - j. Compatibility requirements.
 - k. Time schedules.
 - l. Weather limitations.
 - m. Manufacturer's written instructions.
 - n. Warranty requirements.
 - o. Compatibility of materials.
 - p. Acceptability of substrates.
 - q. Temporary facilities and controls.
 - r. Space and access limitations.
 - s. Regulations of authorities having jurisdiction.
 - t. Testing and inspecting requirements.

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- u. Installation procedures.
 - v. Coordination with other work.
 - w. Required performance results.
 - x. Protection of adjacent work.
 - y. Protection of construction and personnel.
- 3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
 - 4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
 - 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to Owner and Architect, but no later than 30 days prior to the scheduled date of Substantial Completion.
- 1. Conduct the conference to review requirements and responsibilities related to Project closeout.
 - 2. Attendees: Authorized representatives of Owner, Construction Manager, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
 - a. Preparation of record documents.
 - b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
 - c. Submittal of written warranties.
 - d. Requirements for preparing operations and maintenance data.
 - e. Requirements for demonstration and training.
 - f. Preparation of Contractor's punch list.
 - g. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
 - h. Submittal procedures.
 - i. Coordination of separate contracts.
 - j. Owner's partial occupancy requirements.
 - k. Installation of Owner's furniture, fixtures, and equipment.
 - l. Responsibility for removing temporary facilities and controls.
 - 4. Minutes: Entity conducting meeting will record and distribute meeting minutes.
- E. Progress Meetings: Conduct progress meetings at weekly intervals.
- 1. Attendees: In addition to representatives of Owner, Construction Manager, and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities

shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.

2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - 1) Review schedule for next period.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.
 - 9) Progress cleaning.
 - 10) Quality and work standards.
 - 11) Status of correction of deficient items.
 - 12) Field observations.
 - 13) Status of RFIs.
 - 14) Status of proposal requests.
 - 15) Pending changes.
 - 16) Status of Change Orders.
 - 17) Pending claims and disputes.
 - 18) Documentation of information for payment requests.
3. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.
 - a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

1.6 REQUESTS FOR INFORMATION (RFIs)

- A. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project Meeting, prepare and submit an RFI in the form specified.

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1. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
 3. Insure that RFIs are not frivolous by carefully reviewing Contract Documents to confirm that the required information is not overlooked. Architect reserves the right to request compensation by Contractor for time spent responding to repeated submittals of RFIs for information clearly provided in the Contract Documents.
- B. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:
1. Project name.
 2. Date.
 3. Name of Contractor.
 4. Name of Architect.
 5. RFI number, numbered sequentially.
 6. Specification Section number and title and related paragraphs, as appropriate.
 7. Drawing number and detail references, as appropriate.
 8. Field dimensions and conditions, as appropriate.
 9. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 10. Contractor's signature.
 11. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.
 - a. Supplementary drawings prepared by Contractor shall include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments.
- C. Hard-Copy RFIs: AIA Document G716.
1. Identify each page of attachments with the RFI number and sequential page number.
- D. Software-Generated RFIs: Software-generated form with substantially the same content as indicated above.
1. Attachments shall be electronic files in Adobe Acrobat PDF format.
- E. Architect's Action: Architect will review each RFI, determine action required, and return it. Allow five working days for Architect's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.
1. The following RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for coordination information already indicated in the Contract Documents.
 - d. Requests for adjustments in the Contract Time or the Contract Sum.
 - e. Requests for interpretation of Architect's actions on submittals.

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- f. Incomplete RFIs or RFIs with numerous errors.
- 2. Architect's action may include a request for additional information, in which case Architect's time for response will start again.
- 3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 5 days of receipt of the RFI response.
- F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within 5 days if Contractor disagrees with response.
- G. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly or after each update, whichever is longer.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Contractor's construction schedule.
 - 2. Site condition reports.

1.3 SUBMITTALS

- A. Contractor's Construction Schedule: Submit two opaque copies of initial schedule, large enough to show entire schedule for entire construction period.
- B. Field Condition Reports: Submit two copies at time of discovery of differing conditions.

1.4 COORDINATION

- A. Coordinate Contractor's construction schedule with the schedule of values, submittal schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from entities involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Time Frame: Extend schedule from date established for commencement of the Work to date of final completion.
 - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal, Gantt-chart-type, Contractor's construction schedule within 15 days of date established for the Notice to Proceed. Base schedule on the startup construction schedule and additional information received since the start of Project.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
 - 1. For construction activities that require three months or longer to complete, indicate an estimated completion percentage in 10 percent increments within time bar.

2.3 REPORTS

- A. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information on AIA Form G716. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
 - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 - 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 - 3. As the Work progresses, indicate final completion percentage for each activity.
- B. Distribution: Distribute copies of approved schedule to Architect, Construction Manager, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
 - 1. Post copies in Project meeting rooms and temporary field offices.
 - 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 013200

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

1.4 ACTION SUBMITTALS

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.
 - 1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
 - 2. Initial Submittal: Submit concurrently with startup construction schedule. Include submittals required during the first 15 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 - 3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.
 - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
 - 4. Format: Arrange the following information in a tabular format:

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- a. Scheduled date for first submittal.
- b. Specification Section number and title.
- c. Submittal category: Action; informational.
- d. Name of subcontractor.
- e. Description of the Work covered.
- f. Scheduled date for Architect's and Construction Manager's final release or approval.
- g. Scheduled date of fabrication.
- h. Scheduled dates for purchasing.
- i. Scheduled dates for installation.
- j. Activity or event number.

1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. General: Electronic copies of CAD Drawings of the Contract Drawings will be provided by Architect for Contractor's use in preparing submittals, subject to the following terms:
 1. The computer generated CAD drawings are the property of the Architect and are protected by copyright. Contractor is granted a license to use the CAD Drawings for his personal, noncommercial use only. Contractor shall not reproduce, sell, distribute, publish, circulate, commercially exploit, or modify the CAD Drawings, or any portion thereof, without the written permission of Architect.
 2. Architect makes the CAD Drawings available to Contractor "as is" and makes no warranty, expressed or implied, with regard to the CAD Drawings. All implied warranties including the warranties of the merchantability and fitness for a particular use are hereby excluded. In no event shall Architect be liable for any lost profits, lost savings, or other consequential, special, or indirect damages, even if Architect has been advised of such losses or damages. In any event, the liability of Architect arising out of any legal claim (whether tort, contract, or otherwise) in connection of the CAD Drawings will not exceed fifty dollars.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 1. Coordinate each submittal with purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect and Construction Manager reserve the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Construction Manager's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

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1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Construction Manager will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow 15 days for review of each resubmittal.
 4. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 15 days for initial review of each submittal.
- D. Paper Submittals: Place a permanent label or title block on each submittal item for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
 2. Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect and Construction Manager.
 3. Include the following information for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Construction Manager.
 - e. Name of Contractor.
 - f. Name of subcontractor.
 - g. Name of supplier.
 - h. Name of manufacturer.
 - i. Other necessary identification.
 4. Transmittal for Paper Submittals: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect and Construction Manager will discard submittals received from sources other than Contractor.
 - a. Transmittal Form for Paper Submittals: Use AIA Document G810.
 - b. Transmittal Form for Paper Submittals: Provide locations on form for the following information:
 - 1) Project name.
 - 2) Date.
 - 3) Destination (To:).
 - 4) Source (From:).
 - 5) Name and address of Architect.
 - 6) Name of Construction Manager.
 - 7) Name of Contractor.
 - 8) Name of firm or entity that prepared submittal.
 - 9) Names of subcontractor, manufacturer, and supplier.
 - 10) Category and type of submittal.
 - 11) Submittal purpose and description.
 - 12) Drawing number and detail references, as appropriate.
 - 13) Indication of full or partial submittal.
 - 14) Transmittal number, numbered consecutively.

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- 15) Submittal and transmittal distribution record.
- 16) Remarks.
- 17) Signature of transmitter.

E. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:

1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
2. Name file with submittal number or other unique identifier, including revision identifier.
 - a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., LNHS-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., LNHS-061000.01.A).
3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
4. Transmittal Form for Electronic Submittals: Use electronic form acceptable to Owner, containing the following information:
 - a. Project name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name of Construction Manager.
 - e. Name of Contractor.
 - f. Name of firm or entity that prepared submittal.
 - g. Names of subcontractor, manufacturer, and supplier.
 - h. Category and type of submittal.
 - i. Submittal purpose and description.
 - j. Drawing number and detail references, as appropriate.
 - k. Location(s) where product is to be installed, as appropriate.
 - l. Related physical samples submitted directly.
 - m. Indication of full or partial submittal.
 - n. Transmittal number, numbered consecutively.
 - o. Submittal and transmittal distribution record.
 - p. Other necessary identification.
 - q. Remarks.
5. Metadata: Include the following information as keywords in the electronic submittal file metadata:
 - a. Project name.
 - b. Number and title of appropriate Specification Section.
 - c. Manufacturer name.
 - d. Product name.

F. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract

Documents, including minor variations and limitations. Include same identification information as related submittal.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 - 1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
 - 2. Mark each copy of each submittal to show which products and options are applicable.
 - 3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.
 - g. Notation of coordination requirements.
 - h. Availability and delivery time information.
 - 4. Submit Product Data before or concurrent with Samples.
- C. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
 - 1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 - 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of applicable Specification Section.
 - e. Specification paragraph number and generic name of each item.
 - 3. For projects where electronic submittals are required, provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record.

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- a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
- D. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
- E. Coordination Drawing Submittals: Comply with requirements specified in Section 013100 "Project Management and Coordination."
- F. Contractor's Construction Schedule: Comply with requirements specified in Section 013200 "Construction Progress Documentation."
- G. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Section 014000 "Quality Requirements."
- H. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- I. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- J. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- K. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- L. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- M. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

- A. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action, as follows:
 - 1. No Exception Taken: Where submittals are marked "No Exception Taken", the Architect does not object to proceeding with that part of Work covered by the submittal provided it complies with requirements of Contract Documents; final acceptance will depend upon that compliance.
 - 2. Make Corrections Noted: When submittals are marked "Make Corrections Noted", the Architect does not object to proceeding with that part of Work covered by the submittal provided it complies with notations or corrections on submittal and requirements of Contract Documents; final acceptance will depend on that compliance.
 - 3. Revise and Resubmit: When submittal is marked "Revise and Resubmit", do not proceed with that part of Work covered by submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare new submittal in accordance with notations; resubmit without delay. Repeat if necessary to obtain different action mark.
 - 4. Rejected: When submittal is marked "Rejected", do not proceed with that part of Work covered by submittal, including purchasing, fabrication, delivery, or other activity. Submittal was deemed nonresponsive, unacceptable, or inadequate to the extent that notations or corrections were not practical. Contact Architect for further instructions.
 - 5. Submit Specified Item: When submittal is marked "Submit Specified Item", do not proceed with that part of Work covered by submittal, including purchasing, fabrication, delivery or other activity. Resubmit, without delay, with additional information in accordance with notations. Repeat if necessary to obtain different action mark.
- B. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.

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- C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.
- D. Submittals not required by the Contract Documents may be returned by the Architect without action.

END OF SECTION 013300

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

1.3 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address, and telephone number of testing agency.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making tests and inspections.
 - 6. Description of the Work and test and inspection method.
 - 7. Identification of product and Specification Section.
 - 8. Complete test or inspection data.
 - 9. Test and inspection results and an interpretation of test results.
 - 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 - 12. Name and signature of laboratory inspector.
 - 13. Recommendations on retesting and reinspecting.
- B. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work. Contractor shall be obligated to ensure compliance with all terms and conditions of all permits at all times.

1.4 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
 - 1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.

1.5 QUALITY CONTROL

- A. Contractor Responsibilities: Tests and inspections required by regulating agencies not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
 - 1. These services shall be included as a component of the Contractor's overhead for Work defined by the Contract Documents and additional compensation will not be provided except for additional testing, as authorized by Change Orders.
 - 2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - 3. For those areas within South Carolina Department of Transportation (SCDOT) rights of way where SCDOT would provide or perform testing, Contractor shall be responsible for engaging a qualified testing agency to perform any testing required as part of conditions of SCDOT Encroachment Permit.
- B. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 013300 "Submittal Procedures."
- C. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

- D. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- E. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.6 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Conducted by a qualified testing agency as required by authorities having jurisdiction, as indicated in individual Specification Sections and as follows:
1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviews the completeness and adequacy of those procedures to perform the Work.
 2. Notifying Architect, Construction Manager, and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
 3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
 4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
 5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
 6. Retesting and reinspecting corrected work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:

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1. Date test or inspection was conducted.
 2. Description of the Work tested or inspected.
 3. Date test or inspection results were transmitted to Architect.
 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

1.3 USE CHARGES

- A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect testing agencies, and authorities having jurisdiction.
- B. Sewer Service: Pay sewer-service use charges for sewer usage by all entities for construction operations.
- C. Water Service: Pay water-service use charges for water used by all entities for construction operations.
- D. Electric Power Service: Pay electric-power-service use charges for electricity used by all entities for construction operations.

1.4 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- C. Accessible Temporary Egress: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.

PART 2 - PRODUCTS

2.1 TEMPORARY FACILITIES

- A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
 - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.
 - 1. Connect temporary sewers to municipal system or private system indicated as directed by authorities having jurisdiction.
- C. Water Service: Install water service and distribution piping in sizes and pressures adequate for construction.

3.3 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
- B. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations. Locate temporary roads and paved areas as indicated on Drawings.
 - 1. Provide dust-control treatment that is nonpolluting and nontracking. Reapply treatment as required to minimize dust.
- C. Temporary Use of Permanent Roads and Paved Areas: Locate temporary roads and paved areas in same location as permanent roads and paved areas. Construct and maintain temporary roads

and paved areas adequate for construction operations. Extend temporary roads and paved areas, within construction limits indicated, as necessary for construction operations.

- D. Traffic Controls: Comply with requirements of authorities having jurisdiction.
 - 1. Protect existing site improvements to remain including curbs, pavement, and utilities.
 - 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- E. Parking: Parking areas for construction personnel shall be in areas designated by owner.
- F. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
 - 1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties or endanger permanent Work or temporary facilities.
- G. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.
 - 1. Identification Signs: Provide Project identification signs as indicated on Drawings.
 - 2. Maintain and touchup signs so they are legible at all times.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
- B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
 - 1. Comply with work restrictions specified in Section 011000 "Summary."
- C. Temporary Erosion and Sedimentation Control: Comply with requirements of project Stormwater Pollution Prevention Plan (SWPPP) and 2012 South Carolina Construction General Permit, authorities having jurisdiction, and requirements specified in Section 311000 "Site Clearing."
- D. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings.
 - 1. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant- protection zones.
 - 2. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
 - 3. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from Project site during the course of Project.
 - 4. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

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- E. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- F. Tree and Plant Protection: Comply with requirements specified in Section 015639 "Temporary Tree and Plant Protection."
- G. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- H. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each work day.
- I. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.

END OF SECTION 015000

SECTION 015639 - TEMPORARY TREE AND PLANT PROTECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes general protection and pruning of existing trees and plants that are affected by execution of the Work, whether temporary or permanent construction.
- B. Related Sections:
 - 1. Section 015000 "Temporary Facilities and Controls" for temporary site fencing.
 - 2. Section 311000 "Site Clearing" for removing existing trees and shrubs.

1.3 DEFINITIONS

- A. Caliper: Diameter of a trunk measured by a diameter tape at 4 inches above the ground for trees up to, and including, 6-inch size.
- B. Plant-Protection Zone: Area surrounding individual trees, groups of trees, shrubs, or other vegetation to be protected during construction, and indicated on Drawings.
- C. Tree-Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction, and indicated on Drawings
- D. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Tree Pruning Schedule: Written schedule detailing scope and extent of pruning of trees to remain that interfere with or are affected by construction.
 - 1. Species and size of tree.
 - 2. Location on site plan. Include unique identifier for each.
 - 3. Reason for pruning.
 - 4. Description of pruning to be performed.
 - 5. Description of maintenance following pruning.
- C. Qualification Data: For qualified arborist and tree service firm.

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- D. Certification: From arborist, certifying that trees indicated to remain have been protected during construction according to recognized standards and that trees were promptly and properly treated and repaired when damaged.
- E. Maintenance Recommendations: From arborist, for care and protection of trees affected by construction during and after completing the Work.
- F. Existing Conditions: Documentation of existing trees and plantings indicated to remain, which establishes preconstruction conditions that might be misconstrued as damage caused by construction activities.
 - 1. Use sufficiently detailed photographs or videotape.
 - 2. Include plans and notations to indicate specific wounds and damage conditions of each tree or other plants designated to remain.

1.5 QUALITY ASSURANCE

- A. Arborist Qualifications: Certified Arborist as certified by ISA.
- B. Tree Service Firm Qualifications: An experienced tree service firm that has successfully completed temporary tree and plant protection work similar to that required for this Project and that will assign an experienced, qualified arborist to Project site during execution of the Work.
- C. Preinstallation Conference: Conduct conference at Project site.
 - 1. Review methods and procedures related to temporary tree and plant protection including, but not limited to, the following:
 - a. Construction schedule. Verify availability of materials, personnel, and equipment needed to make progress and avoid delays.
 - b. Enforcing requirements for protection zones.
 - c. Arborist's responsibilities.
 - d. Field quality control.

1.6 PROJECT CONDITIONS

- A. The following practices are prohibited within protection zones:
 - 1. Storage of construction materials, debris, or excavated material.
 - 2. Parking vehicles or equipment.
 - 3. Foot traffic.
 - 4. Erection of sheds or structures.
 - 5. Impoundment of water.
 - 6. Excavation or other digging unless otherwise indicated.
 - 7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.
- B. Do not direct vehicle or equipment exhaust toward protection zones.

- C. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones and organic mulch.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Topsoil: Natural or cultivated top layer of the soil profile or manufactured topsoil; containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 1 inch (25 mm) in diameter; and free of weeds, roots, and toxic and other nonsoil materials.
 - 1. Obtain topsoil only from well-drained sites where topsoil is 4 inches (100 mm) deep or more; do not obtain from bogs or marshes.
- B. Topsoil: Imported or manufactured topsoil complying with ASTM D 5268.
- C. Organic Mulch: Free from deleterious materials and suitable as a top dressing for trees and shrubs, consisting of one of the following:
 - 1. Type: To match that of existing conditions.
 - 2. Size Range: 3 inches (76 mm) maximum, 1/2 inch (13 mm) minimum.
 - 3. Color: Natural.
- D. Protection-Zone Fencing: Fencing fixed in position and meeting requirements of Contract documents.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Erosion and Sedimentation Control: Examine the site to verify that temporary erosion- and sedimentation-control measures are in place. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.
- B. For the record, prepare written report, endorsed by arborist, listing conditions detrimental to tree and plant protection.

3.2 PREPARATION

- A. Locate and clearly identify trees, shrubs, and other vegetation to remain and install tree protection in areas indicated or in areas where construction activities may damage existing vegetation.

- B. Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials. Protect root systems from ponding, eroding, or excessive wetting caused by dewatering operations.

3.3 TREE- AND PLANT-PROTECTION ZONES

- A. Protection-Zone Fencing: Install protection-zone fencing along edges of protection zones before materials or equipment are brought on the site and construction operations begin in a manner that will prevent people from easily entering protected area except by entrance gates. Construct fencing so as not to obstruct safe passage or visibility at vehicle intersections where fencing is located adjacent to pedestrian walkways or in close proximity to street intersections, drives, or other vehicular circulation.
 - 1. Chain-Link Fencing: Install to comply with ASTM F 567 and with manufacturer's written instructions.
 - 2. Posts: Set or drive posts into ground one-third the total height of the fence without concrete footings. Where a post is located on existing paving or concrete to remain, provide appropriate means of post support acceptable to Architect.
 - 3. Access Gates: Install where indicated; adjust to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.
- B. Maintain protection zones free of trash.
- C. Repair or replace trees, shrubs, and other vegetation, that are damaged by construction operations, in a manner and quality and quantity to match existing conditions approved by Architect.
- D. Maintain protection-zone fencing and signage in good condition as acceptable to Architect and remove when construction operations are complete and equipment has been removed from the site.
 - 1. Do not remove protection-zone fencing, even temporarily, to allow deliveries or equipment access through the protection zone.
 - 2. Temporary access is permitted subject to preapproval in writing by arborist if a root buffer effective against soil compaction is constructed as directed by arborist. Maintain root buffer so long as access is permitted.

3.4 EXCAVATION

- A. Trenching near Trees: Where utility trenches are required within protection zones, hand excavate under or around tree roots or tunnel under the roots by drilling, auger boring, or pipe jacking. Do not cut main lateral tree roots or taproots; cut only smaller roots that interfere with installation of utilities. Cut roots as required for root pruning.
- B. Redirect roots in backfill areas where possible. If encountering large, main lateral roots, expose roots beyond excavation limits as required to bend and redirect them without breaking. If encountered immediately adjacent to location of new construction and redirection is not

practical, cut roots approximately 3 inches (75 mm) back from new construction and as required for root pruning.

- C. Do not allow exposed roots to dry out before placing permanent backfill. Provide temporary earth cover or pack with peat moss and wrap with burlap. Water and maintain in a moist condition. Temporarily support and protect roots from damage until they are permanently relocated and covered with soil.

3.5 ROOT PRUNING

- A. Prune roots that are affected by temporary and permanent construction. Prune roots as follows:
 - 1. Cut roots manually by digging a trench and cutting exposed roots with sharp pruning instruments; do not break, tear, chop, or slant the cuts. Do not use a backhoe or other equipment that rips, tears, or pulls roots.
 - 2. Cut Ends: Treat cut root ends in manner acceptable to arborist.
 - 3. Temporarily support and protect roots from damage until they are permanently redirected and covered with soil.
 - 4. Cover exposed roots with burlap and water regularly.
 - 5. Backfill as soon as possible according to requirements in Section 312000 "Earth Moving."
- B. Root Pruning at Edge of Protection Zone: Prune roots 12 inches (300 mm) outside of the protection zone, by cleanly cutting all roots to the depth of the required excavation.
- C. Root Pruning within Protection Zone: Clear and excavate by hand to the depth of the required excavation to minimize damage to root systems. Use narrow-tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible.

3.6 REGRADING

- A. Lowering Grade: Where new finish grade is indicated below existing grade around trees, slope grade beyond the protection zone. Maintain existing grades within the protection zone.
- B. Lowering Grade within Protection Zone: Where new finish grade is indicated below existing grade around trees, slope grade away from trees as recommended by arborist unless otherwise indicated.
 - 1. Root Pruning: Prune tree roots exposed by lowering the grade. Do not cut main lateral roots or taproots; cut only smaller roots. Cut roots as required for root pruning.
- C. Raising Grade: Where new finish grade is indicated above existing grade around trees, slope grade beyond the protection zone. Maintain existing grades within the protection zone.
- D. Minor Fill within Protection Zone: Where existing grade is 2 inches (50 mm) or less below elevation of finish grade, fill with topsoil. Place topsoil in a single uncompacted layer and hand grade to required finish elevations.

3.7 FIELD QUALITY CONTROL

- A. Inspections: Engage a qualified arborist to direct plant-protection measures in the vicinity of trees, shrubs, and other vegetation indicated to remain and to prepare inspection reports.

3.8 REPAIR AND REPLACEMENT

- A. General: Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Architect.
 - 1. Submit details of proposed root cutting and tree and shrub repairs.
 - 2. Have arborist perform the root cutting, branch pruning, and damage repair of trees and shrubs.
 - 3. Treat damaged trunks, limbs, and roots according to arborist's written instructions.
 - 4. Perform repairs within 24 hours.
 - 5. Replace vegetation that cannot be repaired and restored to full-growth status, as determined by Architect.
- B. Trees: Remove and replace trees indicated to remain that are more than 66 percent dead or in an unhealthy condition or are damaged during construction operations that Architect determines are incapable of restoring to normal growth pattern.
 - 1. Provide new trees of same size and species as those being replaced
- C. Soil Aeration: Where directed by Architect, aerate surface soil compacted during construction. Aerate 10 feet (3 m) beyond drip line and no closer than 36 inches (900 mm) to tree trunk. Drill 2-inch- (50-mm) diameter holes a minimum of 12 inches (300 mm) deep at 24 inches (600 mm) o.c. Backfill holes with an equal mix of augered soil and sand.

3.9 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Remove excess excavated material, displaced trees, trash and debris, and legally dispose of them off Owner's property.

END OF SECTION 015639

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.

1.3 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.
- B. Authorities Having Jurisdiction: Conform to requirements of all authorities having jurisdiction.
 - 1. Where conflicts exist between the requirements of the Contract Documents and those of authorities having jurisdiction, the higher quality product shall be used.

1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
 - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - 4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.
- C. Storage:

1. Store products to allow for inspection and measurement of quantity or counting of units.
2. Store materials in a manner that will not endanger Project structure.
3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
4. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
5. Protect stored products from damage and liquids from freezing.

1.5 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
- B. Submittal Time: Comply with requirements in Section 017700 "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 4. Where products are accompanied by the term "as selected," Architect will make selection.
 5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
 6. Or Equal: For products specified by name and accompanied by the term "or equal," or "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.
- B. Product Selection Procedures:
 1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
 2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.

3. Products:

- a. Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered.

4. Manufacturers:

- a. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered.

5. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.

- C. Visual Matching Specification: Where Specifications require matching an established Sample, select a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.

- D. Visual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or similar phrase, select a product that complies with other specified requirements.

- a. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, or texture from manufacturer's product line that does not include premium items.

- b. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, or texture from manufacture's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

- A. Conditions for Consideration: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:

- 1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.

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2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
3. Evidence that proposed product provides specified warranty.
4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

SECTION 017300 - EXECUTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Field engineering and surveying.
 - 3. Installation of the Work.
 - 4. Cutting and patching.
 - 5. Coordination of Owner-installed products.
 - 6. Progress cleaning.
 - 7. Starting and adjusting.
 - 8. Protection of installed construction.
 - 9. Correction of the Work.

1.3 SUBMITTALS

- A. Qualification Data: For land surveyor and SWPPP Inspector.

1.4 QUALITY ASSURANCE

- A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.
- B. SWPPP Inspector Qualifications: "Qualified personnel" means a person knowledgeable in the principles and practice of erosion and sediment controls who possesses the skills to assess conditions at the construction site that could impact Stormwater quality and to assess the effectiveness of any BMPs selected to control the quality of Stormwater discharges from the construction site. This person must be either the preparer of the OS-SWPPP or an individual who is under the direct supervision of the preparer of the approved OS-SWPPP and who meets the requirements in this paragraph or an individual who has been certified through a Construction Site Inspector Certification Course that has been approved by the South Carolina Department of Health and Environmental Control. Inspections may also be conducted by a person with a registration equivalent to the registration of the preparer of the OS-SWPPP and who meets the qualifications of this

paragraph or an individual who is under the direct supervision of the person with an equivalent registration and who meets the requirements in this paragraph.

- C. Authorities Having Jurisdiction: Conform to requirements of all authorities having jurisdiction.
 - 1. Where conflicts exist between the requirements of the Contract Documents and those of authorities having jurisdiction, the higher quality or more restrictive requirement shall apply.

PART 2 - EXECUTION

2.1 EXAMINATION

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities.
 - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.
 - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
- C. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - 1. Description of the Work.
 - 2. List of detrimental conditions, including substrates.
 - 3. List of unacceptable installation tolerances.
 - 4. Recommended corrections.
- D. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of conditions.

2.2 PREPARATION

- A. Existing Utility Information: Furnish information to local utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before

fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

2.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.
- B. General: Engage a land surveyor to lay out the Work using accepted surveying practices.
 - 1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
 - 2. Establish limits on use of Project site.
 - 3. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
 - 4. Inform installers of lines and levels to which they must comply.
 - 5. Check the location, level and plumb, of every major element as the Work progresses.
 - 6. Notify Architect when deviations from required lines and levels exceed allowable tolerances.
 - 7. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.
- D. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

2.4 FIELD ENGINEERING

- A. Identification: Owner will identify existing benchmarks, control points, and property corners.
- B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
 - 1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect before proceeding.
 - 2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.

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- C. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
 - 1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
 - 2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
 - 3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.
- D. Certified Survey: On completion of major site improvements, and other work requiring field-engineering services, prepare a certified survey showing dimensions, locations, angles, and elevations of construction and sitework.

2.5 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.
- F. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
- I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- J. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

2.6 CUTTING AND PATCHING

- A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.
- C. Temporary Support: Provide temporary support of work to be cut.
- D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- E. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching according to requirements in Section 011000 "Summary."
- F. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 - 4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
 - 5. Proceed with patching after construction operations requiring cutting are complete.
- G. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

2.7 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.

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2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F (27 deg C).
 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
 - a. Use containers intended for holding waste materials of type to be stored.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
1. Remove liquid spills promptly.
 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways.
- F. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- G. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- H. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

2.8 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

END OF SECTION 017300

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures.
 - 2. Final completion procedures.
 - 3. Warranties.
 - 4. Final cleaning.
 - 5. Repair of the Work.

1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
 - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 - 2. Advise Owner of pending insurance changeover requirements.
 - 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 5. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs, damage or settlement surveys, property surveys, and similar final record information.
 - 6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacture's name and model number where applicable.
 - 7. Submit test results/records.
 - 8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 - 9. Complete final cleaning.
- B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection

or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for final completion.

1.4 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:

1. Submit a final Application for Payment according to Section 012900 "Payment Procedures."
2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
4. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.

B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction. Use CSI Form 14.1A.

1. Organize list of spaces in sequential order.
2. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Page number.

1.6 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
 - 1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (215-by-280-mm) paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property, that might damage finished surfaces, or that may contaminate or be carried off by stormwater runoff.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.

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- b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - f. Clean and remove debris and trash from all components of drainage system including but not limited to pipes, inlets, catch basins, gutters, etc.
- B. Construction Waste Disposal: Comply with waste disposal requirements in Section 015000 "Temporary Facilities and Controls." Insert an article on continuing inspections or consultations by Contractor if required.—Possibly insert a schedule of approximate times for inspections.

END OF SECTION 017700

SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for project record documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.
- B. Related Requirements:
 - 1. Section 017300 "Execution" for Land Surveyor qualifications.

1.3 CLOSEOUT SUBMITTALS

- A. As-Built Drawings: Comply with the following:
 - 1. Number of Copies: Submit copies of record Drawings as follows:
 - a. Initial Submittal:
 - 1) Submit two paper-copy set(s) of as-built drawings.
 - b. Final Submittal:
 - 1) Submit 3 paper-copy set(s) of as-built drawings.
 - 2) Submit record digital data files and one set(s) of record digital data file plots.

PART 2 - PRODUCTS

2.1 AS-BUILT DRAWINGS

- A. Record Prints: Drawings prepared by the Contractor's Surveyor depicting the actual location of installed drainage for each phase of the completed Work.

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1. Content: Types of items requiring marking include, but are not limited to, the following:
 - a. Locations of all pipes and structures
 - b. Top of structure elevations
 - c. Inlet rim elevations
 - d. Pipe sizes, materials, slopes, and inverts
2. Digital CAD file shall be placed in State Plane Coordinates

2.2 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.

2.3 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project.
- B. Maintenance of Record Documents and Samples: Store record documents and Samples in the field office apart from the Contract Documents used for construction. Do not use project record documents for construction purposes. Maintain record documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to project record documents for Architect's reference during normal working hours.

END OF SECTION 017839

SECTION 311000 - SITE CLEARING AND EROSION CONTROL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

1. Protecting existing vegetation to remain.
2. Removing existing vegetation.
3. Clearing and grubbing.
4. Stripping and stockpiling topsoil.
5. Removing above- and below-grade site improvements.
6. Disconnecting, capping or sealing, and removing site utilities.
7. Temporary erosion- and sedimentation-control measures.

1.3 DEFINITIONS

- A. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.
- B. Topsoil: Top layer of the soil profile consisting of existing native surface topsoil or existing in-place surface soil and is the zone where plant roots grow.
- C. Tree-Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction, and indicated on Drawings.
- D. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

1.4 MATERIAL OWNERSHIP

- A. Except for stripped topsoil and other materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.5 SUBMITTALS

- A. Existing Conditions: Documentation of existing trees and plantings, adjoining construction, and site improvements that establishes preconstruction conditions that might be misconstrued as damage caused by site clearing.

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1. Use sufficiently detailed photographs or videotape.
2. Include plans and notations to indicate specific wounds and damage conditions of each tree or other plants designated to remain.

1.6 QUALITY ASSURANCE

- A. Preinstallation Conference: Conduct conference at Project site.

1.7 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.
- B. Improvements on Adjoining Property: Authority for performing site clearing indicated on property adjoining Owner's property will be obtained by Owner before award of Contract.
1. Do not proceed with work on adjoining property until directed by Architect.
- C. Salvable Improvements: Carefully remove items indicated to be salvaged and store on Contractor's premises.
- D. Utility Locator Service: Notify Palmetto Utility Protection Service (PUPS) for area where Project is located before site clearing.
- E. Do not commence site clearing operations until temporary erosion- and sedimentation-control and plant-protection measures are in place.
- F. The following practices are prohibited within protection zones:
1. Storage of construction materials, debris, or excavated material.
 2. Parking vehicles or equipment.
 3. Foot traffic.
 4. Erection of sheds or structures.
 5. Excavation or other digging unless otherwise indicated.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Satisfactory Soil Material: Soil Classification Groups GW, GP, GM, SW, SP, and SM according to ASTM D 2487, Groups A-1, A-2-4, A-2-5, and A-3 according to AASHTO M 145, or a combination of these groups; free of rock or gravel larger than 3 inches

(75 mm) in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter

- B. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Locate and clearly identify trees, shrubs, and other vegetation to remain or to be relocated. Install tree protection barricade around each tree indicated for such protection and where necessary to prevent damage to trees.
- C. Protect existing site improvements to remain from damage during construction.
 - 1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion- and sedimentation-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings and requirements of authorities having jurisdiction.
- B. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.
- C. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
- D. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

3.3 TREE AND PLANT PROTECTION

- A. General: Protect trees and plants remaining on-site according to requirements in Construction Drawings
- B. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Architect.

3.4 EXISTING UTILITIES

- A. Interrupting Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify Architect not less than 72 hours in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Architect's written permission.
- B. Excavate for and remove underground utilities indicated to be removed.

3.5 CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.
 - 1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
 - 2. Cut minor roots and branches of trees indicated to remain in a clean and careful manner where such roots and branches obstruct installation of new construction.
 - 3. Completely remove stumps and roots greater than 1" in diameter, obstructions, and debris extending to a depth of 24 inches below exposed subgrade.
 - 4. Use only hand methods for grubbing within protection zones.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
 - 1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches (200 mm), and compact each layer to a density equal to adjacent original ground.

3.6 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.
 - 1. Remove subsoil and nonsoil materials from topsoil, including clay lumps, gravel, and other objects more than 2 inches (50 mm) in diameter; trash, debris, weeds, roots, and other waste materials.

3.7 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.
- B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.

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1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut along line of existing pavement to remain before removing adjacent existing pavement. Saw-cut faces vertically.

3.8 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.
- B. Separate recyclable materials produced during site clearing from other nonrecyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities. Do not interfere with other Project work.

END OF SECTION 311000

SECTION 329200 - TURF AND GRASSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Golf Course Restoration.

1.3 DEFINITIONS

- A. Finish Grade: Elevation of finished surface of planting soil.
- B. Subgrade: The surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.
- C. Golf Course: Those areas of the Harbor Course at Wild Dunes including but not limited to tee boxes, fairways, access paths and any associated facilities.

1.4 PRECONSTRUCTION MEETINGS

- A. Preconstruction Conference: Conduct conference onsite with Golf Course Superintendent and Golf Course staff. Coordinate location of all golf course utilities (irrigation, controls, lighting, etc) prior to any disturbance.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Final restoration of golf course facilities - including but not limited to tee boxes, fairways, etc - disturbed during project work shall be done by qualified contractor from list of Approved Golf Course Restoration Contractors.

PART 2 - PRODUCTS

2.1 SOD

- A. All sod utilized for restoration and/or replacement in Golf Course areas shall be certified 419 and Celebration Bermuda purchased from Greens Acres sod farm (Furman, SC) .
- B. All disturbed areas, not part of the Golf Course, with existing sod shall be restored to existing grades and sod restored with matching existing surrounding sod species.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas to be planted for compliance with requirements and other conditions affecting installation and performance of the Work with golf course personnel.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Architect and replace with new planting soil.

3.2 PREPARATION

- A. Protect structures; utilities; sidewalks; pavements; and other facilities, trees, shrubs, and plantings from damage caused by planting operations.
 - 1. Protect grade stakes set by others until directed to remove them.
- B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
- C. Restore grades to pre-construction grades unless otherwise indicated on plans. Areas should be rough shaped and level unless otherwise indicated.
- D. For areas on plans where elevation changes within the golf course are indicated, bring area to finished grade in maximum twelve (12) inch lifts with vibratory compaction equipment.
 - 1. Trench excavations and spoils may be permissible for fill in golf course restoration with coordination and acceptance of golf course superintendent prior to placement.
- E. Reinstall any irrigation components disturbed during project work with new pipe, wire, and heads. Replace any additional golf course components removed or damaged during project work.

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- F. Before final restoration and placement of sod in disturbed areas of the golf course, meet onsite with golf course personnel and Engineer five (5) days prior to golf course restoration for approval for repair and restoration of disturbed area; restore areas if eroded or otherwise disturbed.

3.3 TURF RENOVATION

- A. Renovate existing turf where indicated.
- B. Renovate turf damaged by Contractor's operations, such as storage of materials or equipment and movement of vehicles.
 - 1. Reestablish turf where settlement or washouts occur or where minor regrading is required.
 - 2. Install new planting soil as required.
- C. Remove waste and foreign materials, including weeds, soil cores, grass, vegetation, and turf, and legally dispose of them off Owner's property.
- D. Finished tee boxes are to be cored out to six (6) inch depth and amended with 80/20 sand peat mix.
- E. Coordinate placement of sod in golf course areas with Golf Course Superintendent after proper grades have been established and verified by golf course personnel.
- F. Coordinate watering of newly planted areas with Golf Course Superintendent.

3.4 CLEANUP AND PROTECTION

- A. Promptly remove soil and debris created by turf work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.
- C. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial maintenance period and remove after plantings are established. In golf course restoration areas, coordinate removal of barricades with golf course personnel.
- D. Remove nondegradable erosion-control measures after grass establishment period.

END OF SECTION 329200

SECTION 334100 - STORM UTILITY DRAINAGE PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Pipe culverts.
 - 2. Catch basins.
 - 3. Stormwater inlets.
 - 4. Stormwater detention structures.
 - 5. Pipe outlets.

1.3 DEFINITIONS

- A. Drainage Structures: Catch basins, curb inlets, junction boxes, weir inlets, pond outlet structures.

1.4 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Show pipe sizes, locations, and elevations. Show other piping in same trench and clearances from storm drainage system piping. Indicate interface and spatial relationship between manholes, piping, and proximate structures.
- B. Profile Drawings: Show system piping in elevation. Draw profiles at horizontal scale of not less than 1 inch equals 50 feet (1:50) and vertical scale of not less than 1 inch equals 5 feet (1:5). Indicate manholes and piping. Show types, sizes, materials, and elevations of other utilities crossing system piping.

1.5 QUALITY ASSURANCE

- A. Authorities having jurisdiction: Conform to requirement of all authorities having jurisdiction.
 - 1. Where conflicts exist between the requirements of the Contract Documents and those of authorities having jurisdiction, the higher quality or more restrictive requirement shall apply.
- B. Preconstruction Conference: Conduct preconstruction conference at location determined by Architect.

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1. Review methods and procedures related to storm drainage installation including, but not limited to, the following:
 - a. Review requirements of the authorities having jurisdiction
 - b. Review site conditions and preparatory work
 - c. Review requirements for protecting work.
 - d. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - e. Review inspection schedule and procedures required to monitor and document quality assurance.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Protect pipe, pipe fittings, and seals from dirt and damage.
- B. Handle manholes according to manufacturer's written rigging instructions.
- C. Handle pipes, catch basins and stormwater inlets according to manufacturer's written rigging instructions.

1.7 PROJECT CONDITIONS

- A. Interruption of Existing Storm Drainage Service: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary service according to requirements indicated:
 1. Notify Construction Manager no fewer than 72 hours in advance of proposed interruption of service.
 2. Do not proceed with interruption of service without Owner's written permission.

PART 2 - PRODUCTS

2.1 PIPE AND FITTINGS

- A. Pipe and joint materials specified below for storm drainage shall be strictly limited to the extent shown or allowed on the drawings or as specified in Part 3 hereinafter.
- B. Reinforced Concrete Pipe (RCP): Conforming to Section 714 of the South Carolina Department of Transportation Standard Specifications for Highway Construction
 1. Tongue-and-groove ends and gasketed joints with ASTM C 443 and AASHTO M-198.
 2. Pipe joints shall be wrapped with non-woven geotextile fabric.

2.2 GEOTEXTILES

- A. Subsurface Drainage Geotextile: Nonwoven needle-punched geotextile, manufactured for subsurface drainage applications, made from polyolefins or polyesters; with elongation greater

than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:

1. Width: Min 18" or sufficient to extend beyond the joint and base of pipe bell at least 6 inches on each side.
2. Length: One continuous piece of sufficient length to extend around the entire pipe circumference with a 12" overlap.
3. Survivability: Class 2; AASHTO M 288.
4. Grab Tensile Strength: 157 lbf (700 N); ASTM D 4632.
5. Sewn Seam Strength: 142 lbf (630 N); ASTM D 4632.
6. Tear Strength: 56 lbf (250 N); ASTM D 4533.
7. Puncture Strength: 56 lbf (250 N); ASTM D 4833.
8. Apparent Opening Size: [No. 40 (0.425-mm) sieve, maximum; ASTM D 4751.
9. Permittivity: 0.5 per second, minimum; ASTM D 4491.
10. UV Stability: 50 percent after 500 hours' exposure; ASTM D 4355.

2.3 CONCRETE

- A. General: Class 3000 concrete in accordance with Section 701 of the South Carolina Department of Transportation Standard Specifications for Highway Construction

2.4 DRAINAGE STRUCTURES

- A. Drainage Structure Boxes: Precast reinforced concrete in accordance with Section 719 of the South Carolina Department of Transportation Standard Specifications for Highway Construction.
- B. Catch Basins: Conforming to Section 719 of the South Carolina Department of Transportation Standard Specifications for Highway Construction.
- C. Junction Boxes: Conforming to Section 719 of the South Carolina Department of Transportation Standard Specifications for Highway Construction.
- D. Pond Outlet Structures: Conforming to Section 719 of the South Carolina Department of Transportation Standard Specifications for Highway Construction.

PART 3 - EXECUTION

3.1 EARTHWORK

- A. Excess excavated material resulting from installation of drainage pipes shall be removed from the site by the contractor. No trench excavations shall be stored, or disposed of, onsite.

3.2 PIPING INSTALLATION

- A. General Locations and Arrangements: Drawing plans and details indicate general location and arrangement of underground storm drainage piping. Location and arrangement of piping layout take into account design considerations. Install piping as indicated, to extent practical. Where specific installation is not indicated, follow piping manufacturer's written instructions.

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- B. Install piping beginning at low point, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install gaskets, seals, sleeves, and couplings according to manufacturer's written instructions for use of lubricants, cements, and other installation requirements.
- C. Install manholes for changes in direction unless fittings are indicated. Use fittings for branch connections unless direct tap into existing sewer is indicated.
- D. Install proper size increasers, reducers, and couplings where different sizes or materials of pipes and fittings are connected. Reducing size of piping in direction of flow is prohibited.
- E. When installing pipe under streets or other obstructions that cannot be disturbed, use pipe-jacking process of microtunneling.
- F. Install gravity-flow, nonpressure drainage piping according to the following:
 - 1. Install piping pitched down in direction of flow.
 - 2. Install piping with 12 inch minimum cover unless otherwise noted on plans.

3.3 DRAIN INSTALLATION

- A. Install type of drains in locations indicated.
 - 1. Use Heavy-Duty, top-loading classification drains in vehicle-traffic service areas.
- B. Fasten grates to drains if indicated.
- C. Set drain frames and covers with tops flush with pavement surface.

3.4 CATCH BASIN INSTALLATION

- A. Construct catch basins to sizes and shapes indicated.
- B. Set frames and grates to elevations indicated.

3.5 STORMWATER INLET AND OUTLET INSTALLATION

- A. Construct inlet head walls, aprons, and sides of reinforced concrete, as indicated.
- B. Construct riprap of broken stone, as indicated.
- C. Install outlets that spill onto grade, anchored with concrete, where indicated.
- D. Install outlets that spill onto grade, with flared end sections that match pipe, where indicated.

3.6 FIELD QUALITY CONTROL

- A. Inspect interior of piping to determine whether line displacement or other damage has occurred. Inspect after approximately 24 inches (610 mm) of backfill is in place, and again at completion of Project.
 - 1. Submit separate reports for each system inspection.
 - 2. Contractor shall be responsible for providing testing and video inspections in accordance with Section 714 of the South Carolina Department Standard Specifications for Highway Construction.
 - 3. Replace defective piping using new materials, and repeat inspections until defects are within allowances specified.
 - 4. Reinspect and repeat procedure until results are satisfactory.
- B. Test new piping systems, and parts of existing systems that have been altered, extended, or repaired, for leaks and defects.
 - 1. Do not enclose, cover, or put into service before inspection and approval. Test completed piping systems according to requirements of authorities having jurisdiction.
 - 2. Schedule tests and inspections by authorities having jurisdiction with at least 24 hours' advance notice.
 - 3. Submit separate report for each test.

3.7 CLEANING

- A. Clean interior of piping of dirt and superfluous materials.
- B. END OF SECTION 334100

Golf Course Restoration Guidelines/Specifications Harbor Golf Course, Wild Dunes Resort

Note: Quantities shown are approximate. Final restoration shall include all areas disturbed or damaged during installation of storm drainage in association with the 45th to 52nd Avenue Drainage Improvement Project. Golf Course restoration work shall be completed by Golf Course Restoration Subcontractor from List of Approved Golf Course Restoration Contractors.

Holes #4 and #14 Fairway Crossings (Pond connection)

- Total Length – Aprox. 400 linear feet
- Total disturbed area - Approx 12,000 sq. ft. (based on 30 ft. width)
- Notes : Drainage line will cross multiple irrigation and drainage lines, as well as city owned deep well lines.

Hole #14 – Tee complex

- Disturbance areas – Tee box – approx. 3,000 sq. ft., additional areas – 5,000 sq. ft
- Total disturbed area – 8,000 sq. ft.

Hole #13 – Tee complex

- Disturbance areas – Tee box – aprox. 3,000 sq. ft., additional areas – 2,500 sq. ft.
- Total disturbed area – 5,500 sq. ft.

Irrigation Disturbance – All areas

- A total of 5 irrigation rotors and adjoining pipe and control wires are expected to be affected and will need to be replaced at the tee complexes.
 - An approximate total of 280 ft. of 2 ½" PVC class 200 gasketed pipe, (5) SCH 80 1 ½" swing joints (NPT), (5) 2 ½"x1 ½" PVC service tees,
 - Underground sprinkler control wires –
 - 14 gauge – common(white) – approx. 300 ft.
 - 14 gauge – Station(red) – approx. 460 ft.
 - Any and all necessary fittings or repair couplings, end caps (PVC).
 - New sprinkler heads will be Toro 855 series, 1 ½" service.
-
- **All measurements are estimates based upon anticipated activities related to installation of drainage lines indicated on project plans for the 45th to 52nd Avenue Drainage Improvements project. Per plans and specifications for the project, contractor shall be responsible for restoration of any areas damaged or disturbed during project installation to their pre-construction condition therefore additional quantities may be necessary depending upon construction activity.**

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- **General Contractor Responsible for:**
 - Coordinating location of GC utilities with golf course rep, prior to any digging.
 - Compaction of all pipe trenches with vibratory compactor in maximum of 6 inch lifts, up to finish grade.
 - All restoration of disturbance areas to be left in acceptable condition for golf course sub-contractor. Rough shaped and level.
 - Trench excavation spoils disposed may be used onsite for leveling or elevation of tee boxes but must be suitable for use as determined by Golf Course personnel.
 - Restoration of all asphalt cart paths disturbed to be 8ft wide and 2 inches thick on top of compacted base material (as indicated on plans for project).

- **Golf Course Restoration Subcontractor Responsible for:**
 - All finished Tee boxes to be cored out to 6 inch depth and amended with 80/20, sand peat mix.
 - Tee Laser Leveling
 - All sod utilized for replacement will be certified 419 and Celebration Bermuda purchased from Greens Acres sod farm in Furman, SC.
 - All Irrigation components to be installed with new pipe, wire, and heads.

- Contractors interested in Bidding on this work will need to schedule an on-site visit with golf course personnel. Contact Scott Ferguson @ (843) 886-2314 or sferguson@destinationhotels.com to schedule appointment.

45th to 52nd Avenue Drainage Improvements
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List of Approved Golf Course Restoration Contractors

Environmental Landscaping Inc.

233 Oliver Lane

Abbeville, SC 29620

Contact: Mike Pitts

Office: (864) 223-8300

Moblle: (864) 992-1636

mike@eliturf.com

Southeastern Golf, Inc.

PO Box 7667

Tifton, GA 31793

Contact: Scott Veazey

Office: (229) 382-7107

Moblle: (229) 387-4187

sveazey@surfsouth.com

45th to 52nd Avenue Drainage Improvements
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**Golf Course Restoration Contractor
 Golf Course Restoration Bid Form
 Harbor Golf Course, Wild Dunes Resort**

Item	Unit	Quantity	Unit Cost (\$)	Total
Mobilization	LS	1		
Shaping/Coring	LS	1		
Tee Laser Leveling	SQ FT	6000		
Sod Installed (See Sod Specifications)	SQ FT	25,500		
Irrigation Allowance (See Specifications)	LS	1		
Contingency Allowance	LS	1		

Golf Course Restoration Total _____

See Plans and Specifications for additional information.

SECTION 02667

WATER DISTRIBUTION SYSTEM

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Piping
- B. Valves
- C. Fittings
- D. Connect to Existing System
- E. All necessary appurtenances to convey potable water from the existing system to the location shown on the plans.

1.2 RELATED SECTIONS

- A. Section 02110 - Site Clearing
- B. Section 02204 - Earthwork
- C. ~~Section 02560 - Flowable Fill~~

1.3 OPTIONS

- A. The bid form and specifications describe several pipe materials. The Owner will select the one to be used. Where manufacturers of material or equipment are named in the specifications, the Contractor may use equipment or materials of other manufacturers provided they are reviewed and accepted by the Engineer as meeting the specifications prior to ordering such equipment or materials.

1.4 REFERENCES

- A. ASTM D 3740 - Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
- B. ASTM E 329 - Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction.
- C. ANSI/AWWA C 153/A-21.53 - Ductile Iron Compact Fittings, 3 in. through 24 in. and 54 in. through 64 in., for Water Service.
- D. ANSI/AWWA C 110/A21.10 - Ductile Iron and Gray Iron Fittings, 3 in. through 48 in. for Water and Other Liquids.

Isle of Palms Water & Sewer Commission
Water Specifications

- E. ANSI/AWWA C 150/A-21.50 - Thickness Design of Ductile Iron Pipe.
- F. ANSI/AWWA C 151/A-21.51 - Ductile Iron Pipe, Centrifugally Cast, for Water or other liquids.
- G. ANSI/AWWA C 104/A-21.4 - Cement-Mortar Lining for Ductile Iron Pipe and Fittings for Water.
- H. ASTM D 1784 - Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride)(CPVC) Compounds.
- I. ASTM D 2241 - Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR - Series).
- J. ANSI/AWWA C 901 - Polyethylene Pressure Pipe and Tubing, ½ in. through 3 in., for Water Service.
- K. ASTM D 2737 - Polyethylene (PE) Plastic Tubing.
- L. ANSI/AWWA C 115/A21.15 - Flanged Ductile Iron Pipe with Ductile Iron or Gray Iron Threaded Flanges.
- M. ANSI/AWWA C 111/A21.11 - Rubber Gasket Joints for Ductile Iron Pressure Pipe and Fittings.
- N. ASTM D 3139 - Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals.
- O. ANSI/AWWA C 900 - Polyvinyl Chloride (PVC) Pressure Pipe, 4 in through 12 in., for Water Distribution.
- P. ANSI/AWWA C 500 - Metal-Seated Gate Valves for Water Supply Service.
- Q. ANSI/AWWA C 509 - Resilient-Seated Gate Valves for Water Supply Service.
- R. ANSI/AWWA C 502 - Dry-Barrel Fire Hydrants.
- S. ANSI/AWWA C 800 - Underground Service Line Valves and Fittings.
- T. ANSI/AWWA C 600 - Installation of Ductile Iron Water Mains and Their Appurtenances.
- U. ANSI/AWWA C 605 - Underground Installation of Polyvinyl Chloride (PVC) Pressure Pipe and Fittings for Water.
- V. ASTM D 2774 - Underground Installation of Thermoplastic Pressure Piping.
- W. UNI-Bell UNI-B-3 - Recommended Standard for the Installation of Polyvinyl Chloride (PVC) Pressure Pipe.
- X. ASTM D 1556 - Density and Unit Weight of Soil In Place By The Sand-Cone Method.

- Y. ASTM D 2922 - Density Of Soil and Soil Aggregate In Place By Nuclear Methods (Shallow Depth).
- Z. ANSI/AWWA C 651 - Disinfecting Water Mains.
- AA. ASTM D 1557 - Laboratory Compaction Characteristics of Soil Using Modified Effort.
- BB. ASTM D 2672 - Joints for IPS PVC Pipe Using Solvent Cement.
- CC. ANSI B-18.2.2 - Square and Hex Bolts and Screws.
- DD. ANSI B-18.2.2 - Square and Hex Nuts.

1.5 QUALITY ASSURANCE

- A. **Materials** - The Contractor will furnish the Engineer and Owner a description of all material before ordering. Contractor shall furnish Owner with a set of shop drawings in addition to the Engineer. The Engineer will review the Contractor's submittals and provide in writing an acceptance or rejection of material after receipt of comments from the Owner.
- B. **Manufacturer** - Material and equipment shall be the standard products of a manufacturer who has manufactured them for a minimum of 2 years and who provides published data on the quality and performance of the products.
- C. **Subcontractor** - A subcontractor for any part of the work must have experience on similar work and if required, furnish the Engineer with a list of projects and the Owners or Engineers who are familiar with his competence.
- D. **Design** - Devices, equipment, structures, and systems not designed by the Engineer that the Contractor wishes to furnish shall be designed by either a registered professional engineer or by someone the Engineer accepts as qualified. If required, complete design calculations and assumptions shall be furnished to the Engineer or Owner before acceptance.
- E. **Testing Agencies** - Soil testing shall be done by a testing laboratory which operates in accordance with ASTM D 3740 and E 329 latest revision and be acceptable to the Engineer prior to engagement. Mill certificates of tests on materials made by the manufacturers will be accepted provided the manufacturer maintains an adequate testing laboratory, makes regularly scheduled tests that are spot checked by an outside laboratory, and furnishes satisfactory certificates with the name of the one making the test.
- F. **Hydrostatic tests on pipe** shall be made by the Contractor with equipment qualified by the Engineer. The Engineer or his representative reserves the right to accept or reject testing equipment. Hydrostatic testing shall be conducted in the presence of the Engineer or his representative and a representative of the Isle of Palms Water & Sewer Commission.

- G. Lead Free Material – All pipe, solder and flux shall be lead free (less than 0.2 percent lead in solder and flux is less than 8.0 percent lead in pipes and fittings).
- H. Contractor shall be trained and approved to perform work on asbestos cement pipe and shall comply with all applicable Federal, State, Local, EPA, OSHA regulations pertaining to exposure to and handling, containment, transport, and disposal of asbestos material.

Contractor shall have a current group license issued by SCDHEC to complete work on asbestos cement pipe. A copy of the license shall be maintained onsite. For all individuals who will be performing work on asbestos cement pipe, each individual must be certified and must carry on them a current Class III O&M Pipe card. If requested by Engineer or Owner, license(s) and card(s) must be presented immediately for inspection.

If Contractor chooses to subcontract the connection work associated with the asbestos cement pipe, the subcontractor shall be held to the same requirements and shall be available during excavation of pipe for connection and/or to remove pipe that may be in line with the new connections. For no reason shall existing pipe be exposed prior to the arrival on site.

Contractor shall provide a list to the Owner and Engineer of trained personnel who will be completing connection work on the asbestos pipe a minimum of seven days prior to completing the connections.

- I. All pipe, fittings, packing, jointing materials, valves, and fire hydrants shall conform to Section C of the American Water Works Association (AWWA) Standards.
- J. All materials and products that contact potable water must be third party certified as meeting the specifications of ANSI/NSF Standard 61.

1.6 REQUIREMENTS OF REGULATORY AGENCIES

- A. Water mains shall be sterilized to meet the requirements of the appropriate Health Department. Sterilization shall be in accordance with AWWA Standards C-651, latest revision. Following disinfection, two (2) bacteriological samples shall be taken for each test section at least 24 hours apart and tested by a State approved laboratory. **Test results shall indicate at a minimum coliform growth, non-coliform growth (NCG) and chlorine residual at the time of sampling. Results shall properly describe the project and sample location and shall always show the date, location, time and chlorine residual.** The requirements and guidelines of the South Carolina Department of Health and Environmental Control shall be followed in all respects.

1.7 PRODUCT DELIVERY, STORAGE & HANDLING

- A. Material shall be unloaded in a manner that will avoid damage and shall be stored where it will be protected and will not be hazardous to traffic. The Contractor shall repair any damage caused by the storage. Material shall be examined before installation and neither damaged nor deteriorated material shall be used in the work. Owner and Engineer have the right to reject defective or damaged material.

1.8 SEQUENCING AND SCHEDULING

- A. The Contractor shall arrange his work so that sections of mains between valves are tested, sterilized, pavement replaced, and the section placed in service as soon as reasonable after it is placed.

1.9 ALTERNATIVES

- A. The intention of these specifications is to produce the best system for the Owner. If the Contractor suggests that alternative material, equipment or procedures will improve the results at no additional cost, the Engineer and the Owner will examine the suggestion and if it is accepted, it may be used. The basis upon which acceptance of an alternative will be given is its value to the Owner, and not for the convenience of the Contractor.

1.10 GUARANTEE

- A. The Contractor shall guarantee the quality of the materials, equipment, and workmanship for a period of **24** months after acceptance. Defects discovered during that period shall be repaired by the Contractor at no cost to the Owner. The Performance Bond shall reflect this guarantee.

1.11 EXISTING UTILITIES

- A. All known utility facilities are shown schematically on plans, and are not necessarily accurate in location as to plan or elevation. Utilities such as service lines or unknown facilities not shown on plans will not relieve the Contractor of his responsibility under this requirement. "Existing Utilities Facilities" means any utility that exists on the project in its original, relocated, or newly installed position. The Contractor will be held responsible for the cost of repairs to damaged underground facilities; even when such facilities are not shown on the plans. The Contractor shall contact all utility companies prior to beginning work and request an accurate field location of their respective utility lines.

1.12 CONNECT NEW MAIN TO EXISTING SYSTEM

- A. The Contractor shall furnish the necessary pipe and perform all excavation, dewatering, shoring, backfilling, etc., necessary to make the connection of a new main to the existing water system. The Contractor shall contact IOPWSC a minimum of 72 hours in advance of construction. The Contractor shall be responsible for coordinating his construction with the utility operator.

1.13 DAMAGE TO EXISTING WATER SYSTEM

- A. Damage to any part of the existing water system by the Contractor or Subcontractors, that is repaired by the Utility Owner's forces, shall be charged to the Contractor on the basis of time and material, plus 30% for overhead and administration.

1.14 WASTEWATER AND STORM DRAINAGE SYSTEM

Should work relate to the wastewater system, it shall be in accordance with current IOPWSC and SCDHEC standards. Likewise, if related to the storm drainage system, it shall be in accordance with SCDOT specifications.

1.15 MEASUREMENT AND PAYMENT

See Section 01025 – Measurement and Payment.

1.16 TESTING

- A. Laboratory tests for moisture density relationship for fill materials shall be in accordance with ASTM D 1557, (Modified Proctor).
- B. In place density tests in accordance with ASTM D 1556 or ASTM D 2922.
- C. Testing laboratory shall operate in accordance to ASTM D 3740 and E 329 and shall be accepted by the Engineer.
- D. The testing laboratory and Project Engineer/Project Representative shall be given a minimum of 48 hours notice prior to taking any of the tests.
- E. Testing shall be the responsibility of the Contractor and shall be performed at the Contractor's expense by a commercial testing laboratory that operates in accordance with subparagraph C above.
- F. Test results shall be furnished to the Engineer.

PART 2 - PRODUCTS

Products and materials used in the work shall conform to the following:

2.1 GENERAL REQUIREMENTS

- A. All material or products which come into contact with drinking water shall be third party certified as meeting the specifications of the American National Institute/National Sanitation Foundation Standard 61, Drinking Water System Components – Health Effects. The American National Standards Institute shall accredit the certifying party.

- B. All pipe, fittings, packing, jointing materials, valves, and fire hydrants shall conform to Section C of the AWWA Standards and shall be manufactured in the United States.

2.2 PIPE

- A. Ductile Iron Pipe - Shall conform to ANSI A21.5- (AWWA C-150) latest revisions and ANSI A21.51 (AWWA C-151) latest revision. All ductile iron pipe shall be Class 52 unless otherwise noted and shall be cement lined in accordance with ANSI A21.4 or AWWA C-104. All ductile iron pipe shall be wrapped with polyethylene encasement.

Only products of the American Cast Iron Pipe Co., Griffin Pipe Co., US Pipe Co., and McWane Cast Iron Pipe Co. shall be used. Ductile Iron Pipe is not allowed unless required by permitting agencies or in areas with less than thirty inches (30") of cover.

- B. PVC - Pipe four inches (4") through twelve inches (12") shall be PVC pipe, meeting AWWA C-900 requirements.

Pipe with diameter less than four inches (4") shall conform to all requirements of ASTM D-1784 and D-2241 (SDR 21). The pipe shall have a minimum pressure rating of 200 p.s.i. Certificates of conformance with the foregoing specifications shall be furnished with each lot of pipe supplied. All PVC pipe shall bear the National Sanitation Foundation Seal of Approval.

- C. Plastic Tubing - Tubing for house service lines shall be:

Polyethylene Tubing: CTS PE 3408 conforming to all requirements of AWWA C-901 and ASTM D-2737 (SDR9). The tubing shall be copper tubing size and rated for a minimum working pressure of 200 PSI (Blue Poly). Marking on the tubing shall include: nominal tubing pipe size; type of tubing material - PE 3408; SDR 9; pressure rating - 200 psi; ASTM D-2737; manufacturer's name and seal of the National Sanitation Foundation.

- D. Detection tape and tracer wire shall be provided over all PVC water mains and installed as specified in these specifications.
- E. Acceptance will be on the basis of the Engineer's inspection and the manufacturer's written certification that the pipe was manufactured and tested in accordance with the applicable standards, including the national Sanitation Foundation. Additionally, each piece of pipe shall be stamped "NSF Approved".

2.3 JOINTS

- A. Flanged Joints - Shall conform to ANSI A-21.15 (AWWA C-115). Bolts shall conform to ANSI B-18.2.1 and nuts shall conform to ANSI B-18.2.2. Gaskets shall be rubber, either ring or full face, and shall be 1/8 inch thick. Gaskets shall conform to the dimensions recommended by AWWA C-115 latest revision.

- B. Mechanical Joints -In ductile iron pipe shall conform to ANSI A-21.11 (AWWA C-111).
- C. Push-On-Joints - In ductile iron pipes shall conform to ANSI A-21.11 (AWWA C-111).
- D. Plastic Pipe - Joints in plastic pipe four inches (4") through twelve inches (12") shall meet all requirements of AWWA C-900. Joints in plastic pipe with a diameter less than four inches (4") shall conform to ASTM D-3139.
- E. Restrained Joints - Restrained joints for pipe, valves and fittings shall be mechanical joints with ductile iron retainer glands equivalent to "Megalug" or push-on type joints equivalent to "Lok-Ring," "TR Flex," or "Super Lock" and shall have a minimum rated working pressure of 250 psi for ductile iron pipe and 100 psi with a minimum safety factor of 2:1 for PVC pipe. The joints shall be in accordance with the applicable portions of AWWA C-111. The manufacturer of the joints shall furnish certification, witnessed by an independent laboratory, that the joints furnished have been tested without signs of leakage or failure. Restrained joints shall be capable of being deflected after assembly.
- F. Natural rubber or other material which will support microbiological growth may not be used for any gaskets, o-rings, and other products used for jointing pipes, setting meters and valves or other appurtenances which will expose such material to water.

2.4 FITTINGS

- A. Fittings for Ductile Iron or Plastic Pipe - Shall be ductile iron, manufactured in accordance with ANSI A-21.53 (AWWA C-153). They shall be cement lined in accordance with ANSI A-21.4 (AWWA C-104) with a minimum working pressure of 250 psi. Fittings shall be designed to accommodate the type of pipe used.
- B. Fittings for Flanged Pipe - Shall be manufactured in accordance with ANSI A-21.10 (AWWA C-110), Class 125 flanges.
- C. Fittings for Plastic Pipe - Less than four inches (4") shall be PVC with ring tite rubber joints conforming to ASTM D-3139 or solvent weld joints conforming to ASTM D-2672.

2.5 GATE VALVES, BUTTERFLY VALVES, AND VALVE BOXES

- A. Acceptable Manufacturers: Only products of the Mueller Company and American Darling Valve Company shall be used.
- B. General: Gate valves shall be standard on two-inch (2") through twelve-inch (12") installations.
- C. Gate valves twelve inches (12") and smaller shall conform to the following:
 - 1. Resilient seat type conforming to AWWA C509.

2. Epoxy coated inside and outside conforming to AWWA C550.
 3. Ends shall be mechanical joint conforming to ANSI/AWWA C111/A21.11.
 4. Rated for a 200 psi working pressure.
- D. Gate Valves fourteen inches (14") in diameter shall conform to the following:
1. Gate valves shall be double-disc type conforming to the requirements of AWWA C500. Valves shall be designed for 150 psi working pressure.
 2. Unless shown otherwise, valves shall be designed for vertical installation.
 3. Valve ends shall be mechanical joint type except where flanged or restrained joint ends are shown. Flanged joints shall meet the requirements of ANSI B16.1, Class 125.
 4. Buried valves shall be equipped with valve boxes.
 5. Manually operated, double disc gate valves shall be non-rising stem type having O-ring seals.
- E. Tapping valves twelve inches (12") and smaller shall conform to the following:
1. Resilient seat type conforming to AWWA C509.
 2. Epoxy coated inside and outside conforming to AWWA C550.
 3. Ends shall be flanged by mechanical joint conforming to ANSI B 16.1, Class 125 and ANSI/AWWA C111/A21.11 respectively.
 4. Rated for a 200 psi working pressure.
- F. Tapping valves fourteen inches (14") and larger shall conform to the following:
1. Bronze seat, double disk type conforming to AWWA C 500.
 2. Asphaltic coated inside and out conforming to AWWA C550.
 3. Equipped with four-inch (4") by-pass valves.
 4. Ends shall be flanged by mechanical joint conforming to ANSI B16.1, Class 125 and ANSI/AWWA C111/A21.11 respectively.
 5. Allow full port opening cutters up to twenty-four inches (24").
 6. Rated for a 150 psi working pressure.
- G. Butterfly valves sixteen inches (16") and larger shall conform to the following:
1. Resilient seat type conforming to AWWA C504.

2. Epoxy coated inside and asphaltic coated outside conforming to AWWA C550.
 3. Ends shall be flanged conforming to ANSI B16.1, Class 125.
 4. Rated for a 150 psi working pressure.
- H. Other requirements:
1. All valves shall have Grade B cast iron bodies conforming to ASTM A126.
 2. All valves shall have a two-inch (2") square operating nut for buried service.
 3. All valves shall have open left operation.
 4. All valves shall be equipped with a non-rising stem.
 5. All valves shall be constructed with zinc plated steel bolts and nuts.
 6. Shall be in conformance with the latest revision of all referenced standards of AWWA, or ANSI shall prevail.
 7. Valve boxes with drop covers will be of cast iron.
 8. All valve boxes will have concrete collars as detailed on the plans except those already located in concrete.
- I. Valve Box: Valve boxes shall be full cast iron with cast iron covers suitable for heavy traffic use and conform to ASTM A-48, Class 20 Specifications. Valve boxes shall be screw type and have a 5 1/4-inch inside shaft diameter. All parts shall have an asphaltic coating inside and outside with a minimum of 1 mil thickness.
- Products of Tyler Pipe/Utility Division #6850 Series and Bingham and Taylor #4905 of U.S. manufacture or equivalent.
- J. Reduced Pressure Backflow Preventer or Double Check Valve Assembly: Any water supply project involving the use of a reduced pressure backflow preventer or double check valve assembly, will not be given final approval for operation until the backflow prevention devices have been tested by a certified tester approved by the Commission.

2.6 FIRE HYDRANTS

- A. Only the following companies and products shall be used:
1. Mueller Company (Centurion)
 2. US Pipe Co. (Metropolitan/M-94)

- B. Fire hydrants shall be compression type, opening against pressure and closing with the pressure and conform to:
- AWWA C505 - Dry-Barrel Fire Hydrants
- C. Interior shall be two part thermosetting epoxy coated holiday free to a minimum of 4 mils thick conforming to:
- AWWA C550 - Protective Interior Coatings for Valves and Hydrants
- D. Exterior coating shall be as follows:
1. **Hydrant will be painted Tnemec reflective yellow paint (2 coats minimum).**
 2. **Weather cap, operating nut, and nozzle caps will be painted with Tnemec reflective yellow paint (2 coats minimum).**
 3. Hydrant parts below ground will be asphaltic coated.
 4. An all bronze seat ring shall thread directly into an all bronze drain ring or heavy bronze busing located between the lower hydrant barrel and shoe securely retained in this position, or it may be threaded into a heavy bronze busing in the hydrant shoe. Drain rings cast into iron body is not acceptable.
 5. All bronze or brass internal working parts in contact with service water to be low in zinc content.
- E. Connections between the hydrant and the water main shall be mechanical joints with retained glands and conforming to:
- ANSI/AWWA Rubber Gasket Joints for Grey-Iron and
C111/A21.11 Ductile Iron Pressure Pipe and Fittings
- F. Hydrants shall be wrapped in accordance with:
- ANSI/AWWA C105/A21.5 Polyethylene Encasement for Ductile Iron Piping for
Water and Other Liquids
- Thickness: 8 Mils
- G. Hydrants shall have a six inches (6") mechanical joint connection with 5 1/4" main valve.
- H. Hydrant shall have two 2 1/2" hose nozzles and one 4 1/2" pumper nozzle with mechanical removal feature, set screws, lock rings, etc., and shall conform to existing national standard specifications and ANSI B26.
- I. Barrel lengths shall generally be for 3 1/2' bury.

- J. Hydrants shall open left.
- K. Hydrants shall have a 150 psi working pressure.
- L. Hydrants shall be traffic designed.
- M. Retaining bolts of shoe to lower barrel shall be stainless steel.
- N. Upper assembly shall be provided with a grease or oil reservoir that automatically lubricates all operating stem threads and bearing surfaces each time of operation. The system shall be completely sealed from the waterway and external contaminants. The reservoir is to have an external filler point that does not require dismantling any portion of the hydrant during regular maintenance.
- O. Casting shall indicate type, design and date of manufacturer.
- P. All fire hydrants shall be tested to 300 psi test pressure before shipping.
- Q. All fire hydrant leads shall include a six-inch (6") mechanical joint gate valve attached to the six-inch (6") side outlet of the mainline tee by means of an anchoring coupling with a laying length of twelve inches (12").

2.7 SERVICE CONNECTIONS

- A. Taps in pipe larger than three inches (3") shall be made with a tapping machine. A corporation stop shall be installed at the connection to the main. The corporation stop shall be brass manufactured in conformance with AWWA C-800. Inlet and outlet threads shall conform to AWWA C-800.

The key and body seating surfaces shall be accurately machined and fit to a taper of 1-3/4-inches per foot. The stem and retaining nut shall be so designed that failure from over tightening of the retaining nut results in thread stripping rather than stem fracture. Corporation stops shall be:

- ¾" Ford F1000-3-G - CC Thread by grip joint
- 1" Ford F1000-4-G - CC Thread by grip joint
- 1 ¼" Ford F1000-45-G - CC Thread by grip joint
- 1 ½" Ford FB1000-6-G - CC Thread by grip joint
- 2" Ford FB1000-7-G - CC Thread by grip joint

Service saddles shall be Romac 202S nylon coated saddles with two (2) stainless steel straps. Contractor shall adhere to pipe manufacturer's recommendations on maximum tap sizes for each main size.

- B. Where connections to larger service pipes are required, multiple taps shall be made and connected by branch. Taps for house services in PVC pipe two inches (2") and smaller shall be made with a Dresser Style 294 "Qwik Tap" or a PVC Tee. The connection shall be capable of withstanding internal water pressure continuously at 150 p.s.i. House service lines will be one-inch (1") polyethylene tubing with a curb stop at the property line. The end of the service lateral at the property line shall be marked according to the details. The depth of the pipe shall

be marked on the back of the stake. Location of service line must appear on the "as-built" information and record drawings.

2.8 TAPPING SLEEVES/CROSSES

- A. Shall be Mechanical Joint Type sized to fit the intercepted pipe. They shall have duck-tipped end gaskets and shall be equal to Mueller H-615/715 with a tapping valve attached. The outlet end of the valve shall have a joint suitable for the type of pipe to be used in the new branch. The Sleeve/Cross shall be sized to fit the intercepted pipe without leaking.

2.9 CURB STOPS

- A. At the end of the service line, where the meter is to be installed, a curb stop shall be installed. The curb stop size shall be verified by the Contractor and selected from the following list:

- ¾" Ford B43-332W-G – w/lock wing – Grip joint by meter coupling
 - 1" Ford B43-444W-G – w/lock wing – Grip joint by meter coupling
 - 1 ½" Ford B44-666W-G – w/lock wing – Grip joint by meter coupling
 - 1x ¾" Ford B43-342W-G – w/lock wing - Grip joint by meter coupling.
 - 2" Ford B44-777W-G – w/lock wing – Grip joint by meter coupling

2.10 METAL DETECTOR TAPE

- A. Will be used over all pipe. The tape shall consist of 0.35 mils thick solid foil core encased in a protective plastic jacket that is resistant to alkalis, acids, and other destructive elements found in the soil. The lamination bond shall be strong enough that the layers cannot be separated by hand. Total composite thickness to be 5.0 mils. Foil core to be visible from unprinted side to ensure continuity. The tape shall have a minimum three inches (3") width and a tensile strength of 84 lbs. per three inch (3") wide strip.

A continuous warning message indicating "potable water" repeated every sixteen to thirty-six inches (16-36") shall be imprinted on the tape surface. The tape shall contain an opaque color concentrate designating the color code appropriate to the line being buried (Water Systems - Safety Precaution Blue).

2.11 TRACING WIRE

- A. Tracing wire shall be #12 gauge insulated single strand copper wire.

2.12 BOLTS, NUTS, AND ALL-THREAD ROD

- A. Bolts, nuts and all-thread rod shall be made of either high-strength cast iron containing a minimum of 0.50 percent copper, or high-strength low-carbon steel per ASTM A307, specifications for carbon steel externally threaded standard features, Grade B, having a minimum yield strength of 45,000 psi.
- B. Stainless steel materials shall contain sufficient chromium to resist corrosion, oxidation, and rust.

- C. Materials shall be sound, clean, and coated with a rust resistant lubricant.
- D. Threads shall be in accordance with ANSI B1.1, Unified Inch Screw Threads, and with B1.2, Screw Threads, Gages, and Gaging, conforming to the coarse thread series (UNC) Unified Chords, with threads Class 2A internal and Class 2B external.
- E. Bolts 3/4" and smaller shall be furnished with heavy hex heads conforming to ANSI B18.2.1.
- F. Bolts larger than 3/4" may have either standard or heavy hex heads conforming to ANSI B18.2.1.

2.13 POLYETHYLENE ENCASEMENT

- A. Conforms to ANSI 21.5 (AWWA C105).
- B. 8 mil Polyethylene Tube

2.14 BEDDING AND BACKFILL MATERIAL

- A. Crushed stone and gravel conforming to American Society for Testing and Materials C33, Gradation 67 (3/4" to No. 4).
- B. Clean, well-graded Class II and/or Class III soils. Class IV and Class V materials are not allowed. See the following table for a description of classes:

DESCRIPTION OF BEDDING AND BACKFILL MATERIAL CLASSIFICATIONS

SOIL CLASS	SOIL TYPE	DESCRIPTION OF MATERIAL CLASSIFICATION
Class I Soils*		Manufactured, angular material, 1/4 to 1 1/2 inches (6 to 40 mm) size, including materials having regional significance such as crushed stone or rock, broken coral, crushed slag, cinders, or crushed shells.
Class II Soils**	GW	Well graded gravel and gravel-sand mixtures, little or no fines. 50% or more retained on No. 4 sieve. More than 95% retained on No. 200 sieve. Clean.
	GP	Poorly graded gravel and gravel-sand mixtures, little or no fines. 50% or more retained on No. 4 sieve. More than 95% retained on No. 200 sieve. Clean.
	SW	Well-graded sands and gravelly sands, little or no fines. More than 50% passes No. 4 sieve. More than 95% retained on No. 200 sieve. Clean.
	SP	Poorly graded sands and gravelly sands, little or no fines. More than 50% passes No. 4 sieve. More than 95% retained on No. 200 Sieve. Clean.
Class III Soils ***	GM	Silty Gravel, gravel-sand-silt mixtures, 50% or more retained on No. 4 sieve. More than 50% retained on No. 200 sieve.
	GC	Clayey gravel, gravel-sand-clay mixtures. 50% or more retained on No. 4 sieve. More than 50% retained on No. 200 sieve.

SOIL CLASS	SOIL TYPE	DESCRIPTION OF MATERIAL CLASSIFICATION
	SM	Silty sands, sand-silt mixtures. More than 50% passes No. 4 sieve. More than 50% retained on No. 200 sieve.
	SC	Clayey sands, sand-clay mixtures. More than 50% passes No. 4 sieve. More than 50% retained on No. 200 sieve.

* Solids defined as Class I materials are not defined in ASTM D2487.

** In accordance with ASTM D2487, less than 5% pass No. 200 sieve.

*** In accordance with ASTM D2487, more than 12% pass No. 200 sieve. Soils with 5% to 12% pass No. 200 sieve fall in borderline classification, e.g. GP-GC.

2.15 STEEL CASING FOR HIGHWAY CROSSING

- A. ASTM A139, Grade B steel pipes primed and coated with a hot coal tar enamel a minimum of 3/32 inches thick. Only new primed and coated pipe shall be used.
- B. The pipe shall have a minimum inside diameter and a minimum wall thickness as specified by the Engineer. The Engineer shall be responsible for determining if the minimum sizes and thicknesses shown on the approved drawings are adequate for placing the casing under the highway and for installing the carrier pipe.

2.16 PRODUCT REVIEW

- A. The Contractor shall provide the Engineer with a complete description of all products before ordering. The Engineer will review all products before they are ordered.

PART 3 - EXECUTION

3.1 ON-SITE OBSERVATION

- A. The Engineer shall have the right to require that any portion of the work be done in his presence and if any work is covered up after such instruction, it shall be exposed by the Contractor for observation. However, if the Contractor notifies the Engineer that such work is scheduled and the Engineer fails to appear within 48 hours, the Contractor may proceed without him. All work done and materials furnished shall be subject to review by the Engineer or Project Representative. All improper work shall be reconstructed and all materials which do not conform to the requirements of the specifications shall be removed from the work upon notice being received from the Engineer for the rejection of such materials. The Engineer shall have the right to mark rejected materials so as to distinguish them as such.

The Contractor shall give the Project Engineer or Project Representative a minimum of 72 hours notice for all required observations or tests.

It will also be required of the Contractor to keep accurate, legible records of the location of all water lines, service laterals, valves, fittings, and appurtenances.

These records will be prepared in accordance with the paragraph on "Record Data" in the Supplementary Conditions. Final payment to the Contractor will be withheld until all such information is received and accepted.

3.2 INSTALLATION

- A. Ductile iron pipe shall be laid in accordance with AWWA C-600 and all ductile iron pipe shall be wrapped with polyethylene encasement; Plastic pipe shall be laid in accordance with AWWA C 605, ASTM D 2774, UNI-Bell UNI-B 3 and the pipe manufacturer's recommendations. The standards are supplemented as follows:
1. Depth of Pipe - The Contractor shall perform excavation of whatever substances are encountered to a depth that will provide a minimum cover over the top of the pipe of thirty-six inches (36") from the existing or proposed finished grade, unless pipe material is steel, concrete, ductile iron, or other approved material, and if exposed, should be insulated to prevent freezing.
 2. Alignment and Grade - The water mains shall be laid and maintained to lines and grades established by the plans and specifications, with fittings, valves, and hydrants at the required locations unless otherwise accepted by the Owner. Valve-operating stems shall be oriented in a manner to allow proper operation. Hydrants shall be installed plumb.
 - a) Prior Investigation - Prior to excavation, investigation shall be made to the extent necessary to determine the location of existing underground structures and conflicts. Care shall be exercised by the contractor during excavation to avoid damage to existing structures. The pipe manufacturer's recommendations shall be used when the water main being installed is adjacent to a facility that is cathodically protected.
 - b) Unforeseen Obstructions - When obstructions that are not shown on the plans are encountered during the progress of work and interfere so that an alteration of the plans is required, the Owner will alter the plans, or order a deviation in line and grade, or arrange for removal, relocation, or reconstruction of the obstructions.
 - c) Clearance - When crossing existing pipelines or other structures, alignment and grade shall be adjusted as necessary, with the acceptance of the owner, to provide clearance as required by federal, state, and local regulations or as deemed necessary by the Owner to prevent future damage or contamination of either structure.
 3. Trench Construction - The trench shall be excavated to the alignment, depth, and width specified or shown on the plans and shall be in conformance with all federal, state, and local regulations for the protection of the workers.

4. Joint Restraint - All bends, plugs, valves, caps and tees on two-inch (2") pipe and larger, shall be provided with stainless steel tie rods or joint restraints equivalent to Megalugs. Additional restraint shall be as indicated on the drawings.
5. Anchorage for Hydrants - A concrete block 1' x 1' x 2' shall be poured between the back of the hydrant and undisturbed earth of the trench side without covering weep holes and bolts. Joint restraints equivalent to Megalugs manufactured by EBAA Iron may be used in lieu of concrete blocking.
6. Hydrostatic and Leakage Tests - The pipe shall be tested in accordance with AWWA Standard C 600, Section 4 - Hydrostatic Testing. Allowable leakage shall not exceed that determined by the formula $L = [ND(P)^{1/2}] \div 7,400$, in which L is the allowable leakage in gallons per hour; N is the number of joints in pipeline being tested; D is the nominal diameter of the pipe in inches; and P is the average test pressure during the leakage test in pounds per square inch gage. All visible leaks shall be repaired regardless of the leakage amount. The test shall be conducted for at least two (2) hours and a pressure of 150 psi or 1.5 times the maximum working pressure, whichever is greater, shall be maintained during the test. Fire lines shall be tested at 200 psi.

Should any test of the pipe laid disclose leakage greater than the above specified, the Contractor shall at his own expense, locate and repair the defective joints until leakage is within the specified allowance. The Contractor is responsible for notifying the Engineer 48 hours (minimum) prior to applying pressure for testing. Pressure test will be witnessed by the Engineer or his authorized representative.

7. Bedding, Backfilling, and Compaction – Continuous and uniform bedding shall be provided for all buried pipe. All trenches and excavation shall be backfilled immediately after the pipes are laid therein, unless other protection of the pipe line is directed. The backfilling material shall be selected and deposited with special reference to the future safety of the pipes. The material shall be completely void of rocks, stones, bricks, roots, sticks, or any other debris that might cause damage to the pipe and tubing or that might prevent proper compaction of the backfill. Except where special methods of bedding and tamping are provided for, clean earth or sand shall be solidly tamped about the pipe up to a level at least two feet (2') above the top of the pipes, and shall be carefully deposited to uniform layers, each layer solidly tamped or rammed with proper tools so as not to injure or disturb the pipeline. The remainder of the backfilling of the trench shall be carried on simultaneously on both sides of the pipe in such manner that injurious side pressure does not occur. The material used shall be selected from excavated material anywhere on the work if any of the material is suitable. Stones, other than crushed bedding, shall not come in contact with the pipe and shall not be within six inches (6") of the pipe.

Under traffic areas, the top twenty-four inches (24") of backfill material shall be compacted to a density of not less than ninety-eight percent (98%) of maximum laboratory density at optimum moisture as determined by ASTM D 1556 or D 2922. Below the twenty-four-inch 24" line to, and including the area around the pipe, the density shall not be less than ninety-five percent (95%) of maximum laboratory density, at optimum moisture. In areas other than traffic areas, the backfill shall be compacted to ninety-five percent (95%) of maximum laboratory density at optimum moisture.

Whenever the trenches have not been properly filled, or if settlement occurs, they shall be refilled, smoothed off and finally made to conform to the surface of the ground. Backfilling shall be carefully performed, and the original surface restored to the full satisfaction of the Engineer immediately after installation.

Where thermoplastic (PVC) pipe is installed, the Contractor shall take precautions, in accordance with ASTM D-2321, during the backfill operations so as not to create excessive side pressures, or horizontal or vertical deflection of the pipe, nor impair flow capacity.

8. New Service Connections - The Contractor shall tap the main and install a service connection to each lot or as directed by the Engineer in accordance with the detail shown on the plans for Water Service Connections. Plastic tubing for service lines shall be installed in a manner that will prevent abrupt changes or bends in any direction. The Contractor shall exercise extreme caution to prevent crimping of the tubing during handling, storage and installation. The tubing shall have an absolute positive connection to the water main to prevent leakage. Taps shall be made perpendicular to the main. A water service connection shall be marked on the curb with a "W." The mark shall be made with a branding iron on the vertical face of the curb and shall be a minimum of 1/4-inch in depth.
9. Detection Tape - Detection tape will be used over all pipe and tubing. The tape shall be laid eighteen inches (18") below finished grade.
10. Tracing Wire - Tracing wire will be installed on all water mains and water service laterals directly on top of the water line. The wire shall be secured to the pipe with tape or other acceptable methods at a spacing of no more than thirty-six inches (36") apart. Where water service laterals connect to water mains, the wire insulation shall be stripped so the bare wires can and shall be jointed securely together and wrapped with a rubberized insulation tape. The insulated wire must maintain electrical continuity. The tracing wire shall also be stubbed up into each valve box and at each fire hydrant. Stub up connections shall be stripped, joined and wrapped as previously described for water service laterals. This tracing wire system shall be checked and tested by the contractor, in the presence of the Engineer or water department, prior to acceptance of the water main installation. All equipment, meters, detectors, etc., needed for testing shall be furnished by the Contractor.

11. Lubricants – Lubricate pipe before jointing per manufacturer's recommendations using approved lubricants. Lubricants which will support microbiological growth shall not be used. Vegetable shortening shall not be used to lubricate joints.
12. Hydrant drains shall not be connected to or located within ten feet (10') of sanitary sewers. No flushing device shall be directly connected to any sewer.

3.3 CONNECTIONS OF WATER MAINS

- A. Any physical connection of untested water mains with existing water mains is prohibited except when acceptable backflow prevention devices have been installed and checked by Engineer or Engineer Representative
 1. Any new water main to be tested must be capped and restrained with retaining glands or thrust blocks to prevent blow out or leakage during the pressure testing.
 2. Water for filling or flushing the new water main will be obtained through a Temporary Jumper Connection to the existing main. Appropriate taps of sufficient size must be made at the end of the new system to allow air to escape during the filling sequence.
 3. This physical tie-in with the existing system must be physically disconnected after sufficient water for hydrostatic testing and disinfection has been obtained.
 4. Once the new water system has demonstrated adequate hydrostatic testing and has been chlorinated in accordance with paragraph 3.4, the new system must be flushed using the filling method described therein. The system or main will then be subjected to bacteriological testing.
 5. The permanent connection to the new system must be made with clean materials. The connection may be made with either solid or split ductile iron sleeves. Any connection with stainless steel or similar metal full circle clamps is prohibited. Once the connection has been made, the new system must be flushed using water from the existing system to insure adequate flow and velocity into the new water system.
 6. Connections to existing water mains comprised of asbestos cement shall be completed by personnel properly trained in handling asbestos cement pipe. Refer to paragraph 1.5, part H for requirements associated with documentation.

Contractor shall provide a list to the Owner and Engineer of trained personnel who will be completing the connection work on the asbestos pipe a minimum of seven days prior to completing the connections.

3.4 DISINFECTION

- A. After the hydrostatic and leakage tests have been completed the lines shall be pigged a minimum of three times with a water line pig having a diameter one inch (1") larger than the diameter of the pipe before disinfection begins to remove any debris. Contractor shall have a minimum of two water line pigs available prior to commencement of the pigging activities. Water pipes shall be disinfected in accordance with AWWA C 651 and the Regulations of the local Health Department. If the Contractor requests to pig the water line more than the minimum stated above, the Contractor shall pay for water associated with the additional pigging activity. The basis for the cost of water is provided below.

All new mains and repaired portions of, or existing mains shall be thoroughly flushed then chlorinated with not less than fifty parts per million (50 ppm) of available chlorine. Chlorine gas or seventy percent high-test calcium hypochlorite can be used. Water from the existing distribution system or other source of supply should be controlled so as to flow slowly into the newly laid pipeline during the application of chlorine. The solution shall be retained in the pipeline for not less than twenty-four (24) hours and a chlorine residual of twenty-five parts per million (25 ppm) shall be available at this time. Then the system shall be flushed with potable water and the sampling program started. Prior to sampling, the chlorine residual must be reduced to normal system residual levels or be non-detectable in those systems not chlorinating. Normal system residual should be between 0.2 and 0.8 PPM. The chlorine residual shall be measured and reported.

If the membrane filter method of analysis is used for the coliform analysis, non-coliform growth must also be reported. If the non-coliform growth is greater than eighty (80) colonies per one hundred (100) milliliters, the sample result is invalid and must be repeated.

A minimum of two (2) samples from each sampling site shall be collected for total coliform analysis. The number of sites depends on the amount of new construction but must include all dead end lines, be representative of the water in the newly constructed mains, and shall be collected a minimum of every 1,000 linear feet. Each set of samples shall be taken at least 24 hours apart after disinfection and tested by a State approved lab and shall indicate bacteriological satisfactory water. The Contractor shall submit the results to the Engineer. **Contractor shall use Trident Laboratory or Owner approved laboratory for sample analysis.**

All sampling shall occur between Monday thru Thursday. Contractor shall notify Owner and Engineer a minimum of 72 hours in advance of sampling activities.

Contractor shall limit the amount of water used for sampling. Flushing of sample points shall be completed during normal business hours. Sample points shall not be flowed overnight or over weekends unless approved and coordinated in advance with the Owner. If any test fails twice, Contractor shall pay for water used during subsequent testing. The cost for the water used in subsequent flushing shall be calculated based on a rate of \$3 per 1,000 gallons used. One flushing volume is equal to the volume of the total length of new water main.

3.5 ACCEPTANCE OF PORTIONS OF THE WORK

- A. The Owner reserves the right to accept and use any portion of the work whenever it is considered to his interest to do so. The Engineer shall have power to direct on what line the Contractor shall work and the order thereof.

3.6 GRASSING

- A. Grassing of areas disturbed during construction shall be in accordance with the standard SCDOT specifications.

3.7 SEPARATION BETWEEN WATER AND SANITARY SEWER

A. Parallel Installation:

1. Water mains shall be laid at least ten feet (10') horizontally from any existing or proposed sanitary sewer, storm sewer, or sewer manhole. The distance shall be measured edge-to-edge.
2. When local conditions prevent a horizontal separation of ten feet (10'), the water main may be laid closer to a sewer (on a case-by-case basis) provided the water main is laid in a separate trench or on an undisturbed earth shelf located on one side of the sewer at such an elevation that the bottom of the water main is at least eighteen inches (18") above the top of the sewer. It is advised that the sewer be constructed of materials and with joints that are equivalent to water main standards of construction and be pressure tested to assure water-tightness prior to backfilling.

B. Crossing:

1. Water mains crossing house sewers, storm sewers, or sanitary sewers shall be laid to provide a separation of at least eighteen inches (18") between the bottom of the water main and the top of the sewer. At the crossings, one full length of water pipe shall be so located that both joints will be as far from the sewer as possible. Special structural support for the water and sewer pipes may be required.
2. When local conditions prevent a vertical separation of eighteen inches (18"), the sewer passing over or under water mains shall be constructed of materials and with joints that are equivalent to water main standards of construction and shall be pressure tested to assure water-tightness prior to backfilling.
3. When water mains cross under sewers, additional measures shall be taken by providing:
 - a. a vertical separation of at least eighteen inches (18") between the bottom of the sewer and the top of the water main;

- b. adequate structural support for the sewers to prevent excessive deflection of joints and settling on and breaking the water mains;
- c. that the length of water pipe be centered at the point of crossing so that the joints will be equidistant and as far as possible from the sewer; and
- d. both the sewer and the water main must be ductile iron.

3.8 REMOVE AND REPLACE PAVEMENT

- A. Pavement shall only be removed after prior written authorization by the Owner. Pavement removed and replaced shall be constructed in accordance with the latest specifications of the State Department of Transportation. Traffic shall be maintained and controlled by means of flagmen.

The edges of the pavement shall be cut to a neat straight line with a masonry saw. The backfill shall be compacted and tested per requirements identified below. A temporary wearing surface may be used provided it presents a smooth surface. The final wearing surface shall be as shown in the details. Work shall be completed per SCDOT requirements.

3.9 FIELD QUALITY CONTROL

- A. Soil and density tests shall be made by a testing laboratory approved by the Engineer and shall be made at the Contractor's expense. Laboratory tests of the soil shall be made in accordance with ASTM D 1557. In-place density tests shall be made in accordance with ASTM D 1556 or ASTM D 2922. Results of the tests shall be furnished to the Engineer.

The minimum number of tests required shall be:

Backfill over pipe
in traffic areas. 1 per 100 lf or less for each 4 feet of depth or portion thereof.

Backfill over pipe
in non-traffic areas. 1 per 300 lf or less for each 4 feet of depth or portion thereof.

The minimum percent of compaction of the backfill material (in accordance to ASTM D 1557) shall be the following:

In traffic Areas. 98% of maximum laboratory density (modified proctor).

In non-traffic Areas 90% of maximum laboratory density (modified proctor).

END OF SECTION

SECTION 02731

WASTEWATER COLLECTION SYSTEM

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Sewer Pipes.
- B. Manholes.
- C. Connect to existing system.
- D. All necessary appurtenances to collect the wastewater and deliver it to the existing system.
- E. Force Main.

1.2 RELATED SECTIONS

- A. Section 02204 - Earthwork.
- B. Section 02667 - Water Distribution System.

1.3 OPTIONS

- A. The specifications describe several materials. The Owner will select the ones to be used. Where manufacturers and models of equipment are named in the specifications, it is intended that these are to describe the quality and function required. The Contractor may use equipment or materials of other manufacturers provided they are reviewed and accepted by the Engineer and the Owner as equivalent to those specified.

1.4 REFERENCES

- A. ASTM D 3740-01 – Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
- B. ASTM E 329-00b – Agencies Engaged in the Testing and/or Inspection of Materials as Used in Construction.
- C. ASTM D 3034-00 – Type PSM Poly (Vinyl Chloride) PVC Sewer Pipe and Fittings.
- D. ASTM D 2321-00 – Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Installations.
- E. ANSI/AWWA C 150/A 21.50-96 – Thickness Design of Ductile Iron Pipe.

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- F. ANSI/AWWA C 151/A 21.51-96 – Ductile Iron Pipe, Centrifugally Cast, for Water or Other Liquids.
- G. ASTM A 746-99 – Ductile Iron Gravity Sewer Pipe.
- H. ASTM D 3212-96a – Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals.
- I. ASTM F 477-99 – Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
- J. ASTM D 2241-00 – Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series).
- K. ASTM D 3139-98 – Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals.
- L. ASTM A 139-00 – Electric-Fusion (Arc) Welded Steel Pipe (NPS 4 and Over).
- M. ASTM C 478-97 – Precast Reinforced Concrete Manhole Sections.
- N. ASTM C 443-98 – Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets.
- O. ACI 318 (latest revision) – Building Code Requirements for Reinforced Concrete.
- P. ASTM C 39/C 39M-01 – Compressive Strength of Cylindrical Concrete Specimens
- Q. ASTM C 890-91 (1999) e1 – Minimum Structural Design Loading for Monolithic or Sectional Precast Concrete Water and Wastewater Structures.
- R. ASTM C 891-90 (1997) – Installation of Underground Precast Concrete Utility Structures.
- S. ASTM C 913-98 – Precast Concrete Water and Wastewater Structures.
- T. ASTM A 615/A 615 M-01a – Deformed and Plain Billet - Steel Bars for Concrete Reinforcement.
- U. ANSI/AWWA C-500-93 – Metal-Seated Gate Valves for Water Supply Service.
- V. ANSI/AWWA C-509-94 – Resilient-Seated Gate Valves for Water Supply Service.

- W. ASTM D-2922-96e1 – Test Methods For Density Of Soil and Soil Aggregate In Place By Nuclear Methods (Shallow Depth).
- X. ASTM D-1557-00 – Laboratory Compaction Characteristics of Soil Using Modified Effort.
- Y. ASTM D 1556-00 – Density and Unit Weight of Soil In Place By The Sand-Cone Method.
- Z. ASTM D 714-87 (2000) – Evaluating Degree of Blistering of Paints.
- AA. ASTM D 2794-93 (1999) e1 – Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
- BB. ASTM E 96-00 – Water Vapor Transmission of Materials.
- CC. ASTM G 154-00a – Operating Fluorescent Light Apparatus (for UV) Exposure of Nonmetallic Materials.
- DD. ANSI/AWWA C 111/A 21.11-00 – Rubber-Gasket Joints for Ductile Iron Pressure Pipe and Fittings.
- EE. ASTM A 377-99 – Index of Specifications for Ductile Iron Pressure Pipe.
- FF. ANSI/AWWA C 600-99 – Installation of Ductile Iron Water Mains and their appurtenances.
- GG. ANSI/AWWA C115/A21.15-99 – Flanged Ductile Iron Pipe with Ductile Iron or Gray Iron Threaded Flanges.
- HH. ASTM C 828-98 – Low-Pressure Air Test of Vitrified Clay Pipe Lines.
- II. ASTM C 924-89 (1997) – Practice for Testing Concrete Pipe Sewer Lines by Low-Pressure Air Test Method.
- JJ. ASTM F 1417-92 (1998) – Acceptance of Plastic Gravity Sewer Lines Using Low-Pressure Air.

1.5 MEASUREMENT AND PAYMENT

See Section 01025 – Measurement and Payment

1.6 QUALITY ASSURANCE

- A. Contractor will furnish the Engineer and Owner a description of all material before ordering. Engineer will review the Contractor's submittals and provide in writing an acceptance or rejection of material after receipt of comments from Owner.
- B. Where ductile iron pipe is indicated on the plans, or required by the Engineer, it shall be used.

- C. Material and equipment shall be the standard products of a manufacturer who has manufactured them for a minimum of two (2) years and provides published data on their quality and performance.
- D. A subcontractor for any part of the work must have experience on similar work, and if required, furnish the Engineer with a list of projects and the Owners or Engineers who are familiar with his competence.
- E. Devices, equipment, structures, and systems not designed by the Engineer and the Contractor wishes to furnish, shall be designed by either a Registered Professional Engineer or by someone the Engineer approves as qualified. If required, complete design calculations and assumptions shall be furnished to the Engineer or Owner before acceptance.
- F. Testing shall be by a testing laboratory which operates in accordance to ASTM D 3740 or E 329 and shall be accepted by the Engineer prior to engagement. Mill certificates of tests on materials made by manufacturers will be accepted provided the manufacturer maintains an adequate testing laboratory, makes regularly scheduled tests, spot checked by an outside laboratory, and furnishes satisfactory certificates with the name of the one making the test.
- G. Infiltration, line and grade of sewer, pump performance, and hydrostatic tests on force mains, mandrell pulls and low pressure air tests shall be made by the Contractor with equipment qualified by the Engineer and in the presence of the Engineer. The Engineer or his representative reserves the right to accept or reject testing equipment.

1.7 PRODUCT DELIVERY, STORAGE & HANDLING

- A. Material shall be unloaded in a manner avoiding damage and shall be stored where it will be protected and will not be hazardous to traffic. If stored on private property, the Contractor shall obtain permission from the property owner and shall repair any damage caused by the storage. Material shall be examined before installation. Neither damaged nor deteriorated material shall be used in the work.

1.8 JOB CONDITIONS

- A. Installation of the wastewater collection system must be coordinated with other work on site. Generally, wastewater pipes will be installed first and shall be backfilled and protected so subsequent excavating and backfilling of other utilities does not disturb them. The Contractor shall replace or repair any damaged pipe or structure.

1.9 SEQUENCING AND SCHEDULING

- A. Contractor shall arrange the work so sections of sewers between manholes are backfilled and tested, lateral sewers connected, pavement replaced, and the section placed in service as soon as reasonable after installation.

1.10 ALTERNATIVES

- A. The intention of these specifications is to produce the best system for the Owner. If the Contractor suggests alternate material, equipment or procedures will improve the results at no additional cost, the Engineer and Owner will examine the suggestion, and if accepted, it may be used. The basis upon which acceptance of an alternate will be given is its value to the Owner, and not for the Contractor's convenience.

1.11 GUARANTEE

- A. Contractor shall guarantee the quality of materials, equipment, and workmanship for twelve (12) months after acceptance of the completed Project. Defects discovered during this period shall be repaired by the Contractor at no cost to the Owner. The Performance Bond shall reflect this guarantee.

1.12 EXISTING UTILITIES

- A. All known utility facilities are shown schematically on the construction drawings, and are not necessarily accurate in location as to plan or elevation. Utilities such as service lines or unknown facilities not shown, will not relieve the Contractor of his responsibility under this requirement. "Existing Utilities Facilities" means any utility existing on the project in its original, relocated or newly installed position. Contractor will be held responsible for the cost of repairs to damaged underground facilities; even when such facilities are not shown on the drawings.
- B. The Contractor shall call for underground utility locations before starting work. Underground utilities location service can be contacted at 1-888-721-7877 (SC).

1.13 TESTING

- A. Laboratory tests for moisture density relationship for fill materials shall be in accordance with ASTM D 1557, (Modified Proctor).
- B. In place density tests in accordance with ASTM D 1556 or ASTM D 2922.
- C. Testing laboratory shall operate in accordance to ASTM D 3740 and E 329 and shall be accepted by the Engineer.
- D. Testing laboratory and Project Engineer/Project Representative shall be given a minimum of 48 hours notice prior to taking any tests.
- E. Testing shall be Contractor's responsibility and shall be performed at the Contractor's expense by a commercial testing laboratory operating in accordance with subparagraph C above.
- F. Test results shall be furnished to the Engineer within 72 hours.

PART 2 – PRODUCTS

Materials used in the work shall be those named in the Bid Form. In multiple type bids, the selection of the type of material will be at the opinion of the Owner. Materials and products used in the work shall conform to one of the following:

2.1 SEWER PIPE

- A. PVC Pipe - Shall be polyvinyl chloride plastic (PVC) and shall meet all requirements of ASTM D 3034 SDR 26, except for depths less than three feet (3') where ductile iron pipe must be installed. PVC pipe shall be installed in accordance with ASTM D 2321. All pipe shall be suitable for use as a gravity sewer conduit. Provisions must be made for contraction and expansion at each joint with a rubber ring. Pipe sizes and dimensions shall be as shown in the table shown in this specification. Standard lengths shall be 12.5 feet (± 1 -inch). Fittings shall meet the same specification requirements as the pipe.

Nom. Size	Outside Diameter		Min. Wall Thickness SDR-26
	Average	Tolerance	
4	4.215	± 0.009	.162
6	6.275	± 0.011	.241
8	8.400	± 0.012	.323
10	10.500	± 0.015	.404
12	12.500	± 0.018	.481

Tests on PVC Pipe - Pipe shall be designed to pass all tests at 73 ° F. ($\pm 3^{\circ}$ F.).

On depths greater than twelve feet (12'), use PVC SDR-18. All pipes shall have a minimum of one foot (1') of stone over the top of the pipe. On depths greater than eighteen feet (18') or less than three feet (3'), use ductile iron pipe.

- B. Ductile Iron - Shall conform to ANSI A 21.50 (AWWA C 150), ANSI A 21.51 (AWWA C 151) and ASTM A 746. All pipe shall be Pressure Class 350 unless otherwise noted. All ductile iron pipes and fittings shall be bituminous coated on the outside and lined with Protecto 401 Ceramic Epoxy or equivalent on the inside.
1. Coating on the outside shall be an asphaltic coating approximately 1 mil thick. The finished coating shall be continuous, smooth, neither brittle when cold or sticky when exposed to the sun, and shall be strongly adherent to the iron.
 2. Protecto 401 Ceramic Epoxy or equivalent interior lining shall conform to ASTM E 96, ASTM D 714, ASTM D 2794 and ASTM G 53. The interior of the pipe shall receive 40 mils nominal dry film thickness of the epoxy. Lining application, inspection, certification, handling and surface preparation of the area to receive the protective coating shall be in accordance with the manufacturer's specifications and requirements.

2.2 JOINTS - GRAVITY SYSTEM

- A. Joints for Ductile Iron Pipe - Shall be slip-on rubber equivalent to "Fastite," "All-tite," or "Tyton."
- B. Joints for PVC Pipe - Shall be integral wall bell and spigot with a rubber ring gasket. The joints shall conform to ASTM D 3212 and the gaskets shall conform to ASTM F 477.

2.3 FORCE MAIN

- A. Plastic pipe shall be P.V.C. Class 160, SDR 26, conforming to ASTM D 2241 and installed in accordance with these specifications and with ASTM D 2321. Joints shall be in accordance with ASTM D 3139.
- B. Ductile Iron pipe shall be in accordance with Paragraph 2.1-B and conform to ASTM A 377. Push-on-Joints shall be slip-on rubber equivalent to "Fastite," "All-tite," or "Tyton." Flanged joints shall conform to AWWA C 115. Gaskets shall conform to AWWA C 111.
- C. Thrust blocking shall be sized as detailed on the construction drawings of 3,000 psi concrete. Blocking shall be provided at all bends deflecting 11-1/4° degrees or more and bear directly against the undisturbed trench wall.
- D. Restrained Joints - Restrained joints for pipe, valves and fittings shall be mechanical joints with ductile iron retainer glands equivalent to "Megalug" or push-on type joints equivalent to "Lok-Ring," "TR Flex," or "Super Lock" and shall have a minimum rated working pressure equal to the item restrained with a minimum safety factor of 2:1. The joints shall be in accordance with the applicable portions of AWWA C-111. The manufacturer of the joints shall furnish certification, witnessed by an independent laboratory, that the joints furnished have been tested without signs of leakage or failure. Restrained joints shall be capable of being deflected after assembly.

2.4 CASING

- A. Casing pipe shall be steel conforming to ASTM A 139, yield point of 35,000 psi, of the diameter shown on the drawings at each crossing. The minimum wall thickness shall be 0.25 inches.
- B. Casing pipe to be a minimum of two inches (2") larger than the largest outside diameter of the carrier pipe (joints and couplings) if the carrier pipe is less than six inches (6") in diameter. If the diameter of the carrier pipe is six inches (6") or larger, the diameter of the casing pipe shall be a minimum of four inches (4") larger than the largest outside diameter of the carrier pipe (joints and couplings).
- C. Provide ends suitable for field welding.

D. Minimum wall thickness as follows:

<u>Diameter</u> (inches)	<u>Minimum Wall Thickness</u> (inches)
6 thru 14	1/4
16 and 18	5/16
20 and 22	3/8
24 and 26	7/16
28 thru 32	2
34 thru 42	9/16
44 thru 48	5/8
50 thru 54	3/4

E. Pipeline casing spacers:

1. Provide pipeline-casing spacers for piping installed in casing.
2. Provide a minimum of one spacer per ten linear feet of pipe.
3. Provide spacer with shell of 14 gauge Type 316 stainless steel.
4. Provide shell liner of .090" thick PVC, 85-90 durometer.
5. Provide 5/16" stainless steel connecting bolts and lock nuts, minimum three (3) per flange.
6. Runners from two inches (2") wide ultra high molecular weight polymer with a high resistance to abrasion and a coefficient of friction of 0.11-0.13 in accordance with ASTM D-1894.
7. Support runners on 14 gauge reinforced Type 316 stainless steel risers welded to shell.
8. All metal surfaces to be fully passivated.
9. The diameter as measured over the runners shall exceed the pipeline bell or coupling outside diameter.
10. Acceptable product: Cascade manufacturing of approved equal.

F. End seals:

1. Provide 1/4" thick rubber end seal to seal each end of the casing.
2. Secure to casing and carrier pipe with Type 316 stainless steel bands.
3. Acceptable product: Cascade Manufacturing or approved equal.

2.5 MANHOLES

- A. Masonry - Shall be new whole brick of good quality laid in masonry mortar or cement mortar made of 1 part portland cement and two (2) parts clean sharp sand. Every brick shall be fully bedded in mortar. Manholes shall conform to the locations and details shown on the plans.
- B. Precast Concrete - Shall be reinforced concrete constructed in accordance with ASTM C 478 and the details shown on the plans "Precast Concrete Manholes." The joints shall be tongue and groove sealed with flexible gaskets or mastic sealant. Gaskets shall be O-Ring or equivalent to Type A or B "Tylox" conforming to ASTM C 443. Mastic shall be equivalent to "Ram-nek" with primer. The primer shall be applied to all contact surfaces of the manhole joint at the factory in accordance with the manufacturer's instructions.

C. Frames and Covers

Shall be cast iron equivalent to the following:

U. S. Foundry USF 480 Ring and RA –SSG cover

Coat frames and covers with two (2) shop coats of bitumastic paint. Provide rubber gasket between frame and cover with two (2) pulls for removing manhole cover spread at 180 degrees.

D. Frames shall rest on and be cemented to the cone manhole section. No more than twelve inches (12") of manhole height may be made up with three to four inches (3-4") recast concrete riser rings under the manhole frame. Brick will not be accepted as appropriate filler between section and manhole ring. At no time will an overall distance between the manhole cover rim and the first manhole step is greater than three feet (3').

E. Manhole Steps - Shall be equivalent to M.A. Industries, Type PS-1 or PS-2-PF or IMCO Reinforced Plastics, Inc. Model F.R.P. The steps shall be installed at the manhole factory and in accordance with the recommendations of the step manufacturer. Manholes will not be acceptable if steps are not installed accordingly.

F. Pipe Connections - Shall have flexible watertight joints at the point of entry of any sewer main into the manhole. The joint shall be wedged rubber shape equivalent to "Press Wedge II," or a rubber sleeve equivalent to "Kor-N-Seal" or "Lock Joint." All pipe connections to manholes shall be cast or core drilled.

G. Coatings – New manholes requiring a force main tie-in shall have all interior surfaces coated with a factory applied coal tar epoxy. The coating shall be Ruff Stuff 2100 manufactured by Induron Protective Coatings, Bitumastic Super Service Black manufactured by Kop-Coat, Inc. or an accepted equivalent. The coating shall be applied in two coats to achieve a dry film thickness of at least 10 mils per coat in accordance with the manufacturer's recommendations. Surfaces shall be cleaned of all dust, form oils, curing compounds and other foreign matter prior to the coating application. Add Raven Linings, AquataPoxy A-6 for lining manholes and remove coal tar epoxy. If coal tar to remain as coating, than add that manholes will be water blasted clean to remove deteriorating concrete and built back up using concrete containing calcium aluminate (Quadex).

Existing manholes requiring a force main tie-in shall also be coated. The interior surfaces shall be cleaned and prepared according to the paint manufacturer's recommendations. Paint type, thickness and applications shall conform to the above mentioned specifications. Same coating as above.

H. The minimum wall thickness of the manhole riser sections shall be:

- 4' diameter manhole 5" minimum wall thickness
- 5' diameter manhole 5" minimum wall thickness
- 6' diameter manhole 6" minimum wall thickness
- Cone sections shall have a minimum wall thickness of 8" at their top.

I. Monolithic base slab with walls. Bottoms cast with invert and bench are acceptable.

- Minimum thickness of bottom:
6" – 4' diameter
8" – 5' and 6' diameter

J. Flat slab top sections: HS-20 traffic loadings.

2.6 TEES

A. Tees shall be six inches (6") and the same diameter as the run of the pipe. They shall be of the same material as the sewer main.

2.7 LATERALS

A. Shall be Ductile Iron Pipe conforming to paragraph 2.1-B, with push-on joints or Polyvinyl Chloride pipe with bells and natural rubber rings for jointing, conforming to Paragraph 2.1-A, PVC Pipe.

2.8 STONE BACKFILL

A. Shall be provided by the contractor and shall be graded crushed granite #57 stone.

2.9 SAND BACKFILL

A. Shall be clean sand free from clay and organic material. Not more than ten percent (10%) shall pass the No. 100 sieve.

2.10 BORROW

A. Where it is determined sufficient suitable material is not available from the site to satisfactorily backfill the pipe to at least two feet (2') above the top of the pipe, the Contractor shall furnish suitable sandy borrow material to accomplish the requirements. The material shall not have more than sixty percent (60%) passing the No. 100 sieve, nor more than twenty percent (20%) passing the No. 200 sieve.

2.11 METAL DETECTOR TAPE

A. Will be used over all pipe lines. The tape will be electronically or magnetically detectable tape and shall be at least two inches (2") wide and boldly labeled every eighteen to thirty-two inches (32"). Tape shall have a tensile strength of not less than 120 grams per 1.5 mils of thickness. Material of the tape shall last as long as the pipe it marks, even in adverse soils.

2.12 PRODUCT REVIEW

- A. Contractor shall provide the Engineer with a complete description of all products before ordering. Engineer will review all products before they are ordered by Contractor.

PART 3 - EXECUTION

3.1 CONSTRUCTION OBSERVATION

- A. The line, grade, deflection and infiltration of sewers shall be tested by the Contractor under the direction of the Engineer. The Engineer will have the right to require any portion of the work be completed in his presence and if the work is covered up after such instruction, it shall be exposed by the Contractor for observation. However, if the Contractor notifies the Engineer such work is scheduled and the Engineer fails to appear within 48 hours, the Contractor may proceed without him. All work completed and materials furnished shall be subject to review by the Engineer or Project Representative. All improper work shall be reconstructed. All materials which do not conform to the requirements of the specifications shall be removed from the work upon notice being received from the Engineer for the rejection of such materials. Engineer shall have the right to mark rejected materials so as to distinguish them as such.

Contractor shall give the Project Engineer or Project Representative a minimum of 48 hours notice for all required observations or tests.

It will also be required of the Contractor to keep accurate, legible records of the location of all sanitary lines, service laterals, manholes, and appurtenances. These records will be prepared in accordance with the "Record Data and Drawings" paragraph in the Special Conditions. Final payment to the Contractor will be withheld until all such information is received and accepted.

3.2 LOCATION AND GRADE

- A. The line and grade of sewers and position of all manholes and other structures are shown on the drawings. The grade line as given on the profile or mentioned in these specifications means the invert or bottom of the pipe inside and the price for trenching shall include the trench for the depth below this line necessary to lay the sewer to this grade, but measurements for payment will be made only to the grade line. Master control lines and bench marks have been provided by the Engineer. The Contractor shall be responsible for the proper locations and grades of sewers.

3.3 SEWER EXCAVATION

- A. The Contractor shall perform all excavations of every description and of whatever substance encountered to the depth shown on the plans or specified for all sewers, manholes, and other appurtenances. All excavations shall be properly dewatered before installations are made, by the use of well points, pumping, or other methods accepted by the Engineer. Trenches shall be excavated in

conformance with the Occupational and Safety Health Administration's (OSHA) Regulations.

Where the character of the soil is unsuitable for pipe bedding as determined by the Engineer or testing laboratory, an additional foot of excavation will be authorized and the trench backfilled with sand backfill. The unsuitable material shall be disposed of at the Contractor's expense in a proper manner. The bottom of all trenches shall be rounded to conform to the bottom of the pipe, to afford full bearing on the pipe barrel. Excavation in excess of the depths and widths required for sewers, manholes, and other structures shall be corrected by pouring subfoundations of 3,000 psi concrete and half cradle at the Contractor's expense.

- B. Trenches shall not be excavated more than four hundred feet (400') in advance of pipe laying.

3.4 TRENCH WALL SUPPORT

- A. Bracing and Sheeting - The sides of all trenches shall be securely held by stay bracing, or by skeleton or solid sheeting and bracing, as required by the soil conditions encountered, to protect the adjoining property and for safety. Where shown on the drawings or where directed by the Engineer, the Contractor must install solid sheeting to protect adjacent property and utilities. The sheeting shall be steel or timber and the Contractor shall submit design data, including the section modulus of the members and the arrangement for bracing at various depths, to the Engineer for review before installing the sheeting. It shall penetrate at least three feet (3') below the pipe invert. Contractor shall ensure support of the pipe and its embedment is maintained throughout installation and ensure sheeting is sufficiently tight to prevent washing out of the trench wall from behind the sheeting.
- B. Sheeting Removal - Sheeting shall be removed in units and only removed when the backfilling elevation has reached the level necessary to protect the pipe, adjoining property, personnel, and utilities. Removal of sheeting or shoring shall be accomplished in a manner to preclude loss of foundation support and embedment materials. Fill voids left on removal of sheeting or shoring and compact all materials to required densities.
- C. Movable Trench Wall Supports - Do not disturb the installed pipe and its embedment when using movable trench boxes and shields. Movable supports should not be used below the top of the pipe zone unless approved methods are used for maintaining the integrity of embedment material. Before moving supports, place and compact embedment to sufficient depths to ensure protection of the pipe. As supports are moved, finish placing and compacting embedment.
- D. When sheeting or shoring cannot be safely removed, it shall be left in place. Sheeting left in place shall be cut off at least two feet (2') below the surface. No separate payment shall be made for bracing and sheeting except where shown on the drawings or authorized by the Engineer.

3.5 LAYING PIPE

- A. All sewer pipe shall be laid upgrade with spigots pointing downgrade. The pipe shall be laid in a ditch prepared in accordance with Paragraph 3.3 "Sewer Excavation." When the sewer is complete, the interior surface shall conform on the bottom accurately to the grades and alignment fixed or given by the Engineer. Special care shall be taken to provide a firm bedding in good material, select borrow, stone backfill or 3,000 psi concrete, as authorized, for the length of each joint and 1/2 of the circumference. Holes shall be provided to relieve bells from bedding strain, but not so large to allow separation of the bell from the barrel by settlement after backfilling. All pipe shall be cleaned out, and left clean. Every third joint shall be filled around immediately after being properly placed.
- B. Jointing - Comply with manufacturer's recommendations for assembly of joint components, lubrication, and making joints. When pipe laying is interrupted, secure piping against movement and seal open ends to prevent the entrance of water, mud, or foreign material.
- C. Placing and Compacting Pipe Embedment - Place embedment materials by methods that will not disturb or damage the pipe. Work in and tamp the haunching material in the area between the bedding and the underside of the pipe before placing and compacting the remainder of the embedment in the pipe zone. Do not permit compaction equipment to contact and damage the pipe. Use compaction equipment and techniques compatible with materials used and location in the trench. Before using heavy compaction or construction equipment directly over the pipe, place sufficient backfill to prevent damage, excessive deflections, or other disturbance of the pipe.
- D. Rock or Unyielding Materials in Trench Bottom - If ledge rock, hard pan, shale, or other unyielding material, cobbles, rubble, debris, boulders, or stones larger than 1.5 in. are encountered in the trench bottom, excavate a minimum depth of six inches (6") below the pipe bottom and replace with proper embedment material.
- E. Vertical Risers - Provide support for vertical risers as commonly found at service connections, cleanouts, and drop manholes to preclude vertical or lateral movement. Prevent the direct transfer of thrust due to surface loads and settlement, and ensure adequate support at points of connection to main lines.
- F. Exposing Pipe for Making Service Line Connections - When excavating for a service line connection, excavate material from above the top of the main line before removing material from the sides of the pipe. Materials and density of service line embedment shall conform to specifications for the main line.
- G. Manhole Connections - Use flexible water stops, resilient connectors, or other flexible systems approved by the Engineer to make watertight connections to manholes and other structures.
- H. Jacking and Boring - Steel casing of diameter shown on the plans shall be jacked and bored in location indicated. Joints between sections of the steel casing shall be of a continuous weld made by a certified welder. Jacking and boring shall be in accordance with South Carolina DOT Standard Specifications. Carrier pipe shall be installed as shown on the detail. After carrier pipe has been installed,

ends of the casing shall be sealed using a rubber enclosure and stainless steel straps or brick and mortar.

Where work involves a highway, the Resident Engineer of the State Department of Transportation shall be notified three (3) days before crossing is started. Where the work involves a railroad, the work shall conform to requirements of AREA specifications. Division Superintendent of the Railroad shall be notified three (3) days prior to beginning work. Before commencing work within the right-of-way of railroads or highways, Contractor shall verify the Owner has obtained required permits.

3.6 SEPARATION BETWEEN WATER & SANITARY SEWER

A. Parallel Installation:

1. Water mains shall be laid at least ten feet (10') horizontally from any existing or proposed sanitary sewer, storm sewer, or sewer manhole. The distance shall be measured edge-to-edge.
2. When conditions prevent a horizontal separation of ten feet (10'), the water main may be laid closer to a sewer (on a case-by-case basis) provided the water main is laid in a separate trench or on an undisturbed earth shelf located on one side of the sewer at such an elevation where the bottom of the water main is at least eighteen inches (18") above the top of the sewer. It is advised the sewer be constructed of materials and with joints equivalent to water main standards of construction and be pressure tested to assure water-tightness prior to backfilling.

B. Crossing:

1. Water mains crossing house sewers, storm sewers, or sanitary sewers shall be laid to provide a separation of at least eighteen inches (18") between the bottom of the water main and the top of the sewer. At the crossings, one full length of water pipe shall be located so both joints will be as far from the sewer as possible. Special structural support for the water and sewer pipes may be required.
2. When conditions prevent a vertical separation of eighteen inches (18"), the sewer passing over or under water mains shall be constructed of materials and with joints equivalent to water main standards of construction and shall be pressure tested to assure water-tightness prior to backfilling.
3. When water mains cross under sewers, additional measures shall be taken by providing:
 - a. a vertical separation of at least eighteen inches (18") between the bottom of the sewer and the top of the water main;
 - b. adequate structural support for the sewers to prevent excessive deflection of joints settling on and breaking the water mains;

- c. the length of water pipe be centered at the point of crossing so the joints will be equidistant and as far as possible from the sewer; and
- d. both the sewer and water main shall be constructed of water pipe and subjected to hydrostatic tests, as prescribed in this document. Encasement of the water pipe in concrete shall also be considered.
- e. Crossings shall conform to South Carolina Department of Health and Environmental Control's Bureau of Water Standards for Wastewater Facility Construction: Regulation 61-67.

3.7 BACKFILLING

- A. All trenches and excavation shall be backfilled immediately after the pipes are laid therein, unless other protection of the pipe line is directed. The backfilling material shall be selected and deposited with special reference to the future safety of the pipes. Except where special methods of bedding and tamping are provided for, clean earth or sand shall be solidly tamped about the pipe up to a level at least two feet (2') above the top of the pipes, and shall be carefully deposited to uniform layers, each layer solidly tamped or rammed with proper tools so not to injure or disturb the pipeline. The remainder of the trench backfilling shall be carried on simultaneously on both sides of the pipe in such a manner preventing injurious side pressure. The material used shall be selected from excavated material anywhere on the work if any of this material is suitable. Backfill material shall be clean and free of rock, organic and other deleterious matter.

Under traffic areas, the top twenty-four inches (24") of backfill material shall be compacted to a density of not less than ninety-eight percent (98%) of maximum laboratory density at optimum moisture. Below the twenty-four-inch (24") line and to and including the area around the pipe the density shall not be less than ninety-five percent (95%) of maximum laboratory density at optimum moisture. In non-traffic areas, the backfill material shall be compacted to a density of not less than ninety percent (90%) of maximum laboratory density at optimum moisture unless otherwise approved by the Engineer. Compaction tests shall be conducted in accordance with ASTM D 1556 or ASTM D 2922 by an independent testing laboratory. Tests are to be taken at the direction of the Engineer.

Whenever trenches have not been properly backfilled, or if settlement occurs, they shall be refilled, smoothed off and finally made to conform to the ground surface. Backfilling shall be carefully performed, and original surface restored to the full satisfaction of the Engineer immediately after installation.

Where thermoplastic (PVC) pipe is installed, the Contractor shall take precautions in accordance with ASTM D 2321, during backfilling operations so not to create excessive side pressures, or vertical or horizontal deflection of the pipe nor impair flow capacity.

3.8 MANHOLES

- A. Manholes shall be constructed where shown on the drawings or where directed by the Engineer. The channel in the bottom of the manholes shall be smooth and

properly rounded. Special care must be exercised in laying the channel and adjacent pipes to grade. Manhole top elevations shall be greater than or equal to the fifty (50) year flood elevation, unless watertight covers are provided. The tops of manholes outside of roads shall be built to grades one inch (1") above the ground surface in developed areas and six inches (6") above the ground surface in undeveloped areas unless otherwise shown on the plans. Manholes in roads shall be built to grades designated by the Engineer. Manhole sections with either honeycomb defects; exposed reinforcing; broken/fractured tongue or groove; or cracked walls will be subject to rejection by the Engineer for use on the project. When mastic sealant is used, improperly applied primer will also be cause for rejection.

No leaks in any manhole will be acceptable. All repairs made from inside the manhole shall be made with mortar composed of one part portland cement and two parts clean sand. The mixing liquid shall be straight bonding agent equivalent to "Acryl 60."

3.9 STONE BEDDING

- A. The Contractor shall remove the unsuitable material 6" deep and furnish and place stone backfill in the trench to stabilize the subgrade. The pipe shall be carefully bedded in the stone as specified, or in accordance with the manufacturer's recommendations.

3.10 SAND BACKFILL

- A. Where, in the Engineer's opinion, the character of the soil is unsuitable for pipe bedding, even though dewatered, an additional foot of excavation shall be made and replaced with clean sand furnished by the Contractor.

3.11 DEFLECTION

- A. It is the Contractor's responsibility to assure backfill is sufficient to limit pipe deflection to no more than five percent (5%). When flexible pipe is used, a deflection test shall be made by the Contractor on the entire length of installed pipeline, not less than thirty (30) days after completion of all work including leakage test, backfill, and placement of any fill, grading, paving, concrete, or superimposed loads. Deflection shall be determined by use of a deflection device or by use of a spherical, spheroidal, or elliptical ball, a cylinder, or circular sections fused to a common shaft. The ball, cylinder, or circular sections shall have a diameter, or minor diameter as applicable, of 92.5 percent of the inside pipe diameter. The ball, cylinder, or circular sections shall be of a homogeneous material throughout, shall have a density greater than 1.0 as related to water at 39.2 degrees F, and shall have a surface brinell hardness of not less than 150. The device shall be center bored and through bolted with a 1/4 inch minimum diameter steel shaft having a yield strength of 70,000 psi or more, with eyes at each end for attaching pulling cables. The eye shall be suitably backed with flange or heavy washer; a pull exerted on the opposite end of the shaft shall produce compression throughout the remote end of the ball, cylinder or circular section. Circular sections shall be spaced so the distance from the external faces of the front and back sections shall equal or exceed the diameter of the circular section. Failure of the ball, cylinder, or circular section to pass freely through a pipe run,

either by being pulled through by hand or by being flushed through with water, shall be cause for rejection of that run. When a deflection device is used for the test in lieu of the ball, cylinder, or circular sections described, such device shall be approved prior to use. The device shall be sensitive to 1.0 percent of the diameter of the pipe being measured and shall be accurate to 1.0 percent of the indicated dimension. Installed pipe showing deflections greater than 5 percent of the normal diameter of the pipe shall be retested by a run from the opposite direction. If the retest also fails, the suspect pipe shall be repaired or replaced at no cost to the Owner.

3.12 LEAKAGE

- A. In no stretch of sewer between any two (2) adjoining manholes shall infiltration/exfiltration exceed 25 gallons/day/inch of pipe diameter per mile of pipe. In case leakage exceeds this amount, the sewer shall not be accepted until such repairs and replacements are made to comply with the above requirements. Such corrections will be made at the Contractor's expense. All visible leaks shall be repaired, regardless of the amount of leakage.
- B. Lines shall be tested for leakage by low pressure air testing, infiltration tests, or exfiltration tests, as appropriate. Low pressure air testing for PVC pipe shall be as prescribed in ASTM F 1417. Low pressure air testing procedures for other pipe materials shall use the pressures and testing times prescribed in ASTM C 828 and ASTM C 924, after consultation with the pipe manufacturer. Prior to infiltration or exfiltration tests, the trench shall be backfilled up to at least the lower half of the pipe. If required, sufficient additional backfill shall be placed to prevent pipe movement during testing, leaving the joints uncovered to permit inspection. Visible leaks encountered shall be corrected regardless of leakage test results. When the water table is two feet (2') or more above the top of the pipe at the upper end of the pipeline section to be tested, infiltration shall be measured using a suitable weir or other device acceptable to the Engineer and as per ASTM C109 or C969. When the Engineer determines infiltration cannot be properly tested, an exfiltration test shall be made by filling the line to be tested with water so a head of at least two feet (2') is provided above both the water table and the top of the pipe at the upper end of the pipeline to be tested. The filled line shall be allowed to stand until the pipe has reached its maximum absorption, but not less than four (4) hours. After absorption, the head shall be re-established. The amount of water required to maintain this water level during a two (2) hour test period shall be measured. Leakage as measured by either the infiltration test or exfiltration test shall not exceed 25 gallons per inch diameter per mile of pipeline per day. When leakage exceeds the maximum amount specified, satisfactory correction shall be made and retesting accomplished. Testing, correction, and retesting shall be made at no additional cost to the Owner.
- C. The Contractor shall furnish equipment and plugs and subject the force mains to hydrostatic tests at 100 psi for a period of two (2) hours. Any leaks shall be located and repaired. Each section tested shall be slowly filled with water, care being taken to expel all air from the pipes. No pipe installation will be accepted until the leakage during the pressure test is less than the number of gallons listed for each 1,000 feet of pipe tested:



6" & less – 0.9 gallons	12" - 1.80 gallons
8" - 1.20 gallons	14" - 2.10 gallons
10" - 1.50 gallons	16" - 2.40 gallons

3.13 CLEANING AND ACCEPTANCE

- A. Before acceptance of the sewer system, it shall be tested and cleaned to the satisfaction of the Engineer. Where any obstruction is met, the Contractor will be required to clean the sewers by means of rod and swabs or other instruments. The pipe line shall be straight and show a uniform grade between the manholes. The Engineer shall check lines by lamping or other methods to determine final acceptance.

3.14 CLOSING PIPE

- A. When the work or pipe installation is suspended, either for the night or at other times, the end of the sewer must be closed with a tight cover. The Contractor will be held responsible for keeping the sewer free from obstruction.

3.15 PARTIAL ACCEPTANCE OF THE WORK

- A. The Owner reserves the right to accept and use any part of the work. The Engineer shall have power to direct on what line the Contractor shall work and the order thereof.

3.16 RECORD DATA

- A. It will be required of the Contractor to keep accurate, legible records, locating all sewers, force mains, tees and laterals. These records will be made available to the Engineer before his final review for incorporation into the Engineer's Record Drawings. Final payment to the Contractor will be withheld until all such information is received and accepted.

3.17 REMOVE AND REPLACE PAVEMENT

- A. Pavement shall only be removed after prior written authorization by the Owner. Pavement removed and replaced shall be constructed in accordance with the latest specifications of the State Department of Transportation. Traffic shall be maintained and controlled by means of flagmen.

The edges of the pavement shall be cut to a neat straight line with a masonry saw. The backfill shall be compacted and tested and a concrete base course of 5,000 psi placed on the fill as shown on the details. The concrete base shall be placed within 24 hours after the pipeline is installed. A temporary wearing surface may be used provided it presents a smooth surface. The final wearing surface shall be two-inch (2") asphaltic concrete.

3.18 METALLIC DETECTOR TAPE

- A. The Contractor shall place metallic detector tape, suitably coded, directly over all installed pipes at a depth of eighteen inches (18") below the finished surface.

3.19 CONNECT SEWERS TO EXISTING STRUCTURES

- A. The Contractor shall connect the system to the existing structure where indicated. For brick structures, a hole not more than four inches (4") larger than the outside diameter of the new pipe shall be cut neatly in the structure, the new pipe laid so it is flush with the inside face of the structure, and the annular space around the pipe filled with a damp, expanding mortar or grout to make a watertight seal. For precast structures, core proper size hole in structure for pipe being connected, attach flexible sleeve into cored hole and connect new pipe into flexible sleeve with a stainless steel band.

3.20 FIELD QUALITY CONTROL

- A. Soil and density tests shall be made by a testing laboratory approved by the Engineer and shall be made at the Contractor's expense. Laboratory tests of the soil shall be made in accordance with ASTM D 1557. In-place density tests shall be made in accordance with ASTM D 1556 or ASTM D 2922. Results of the tests shall be furnished to the Engineer.

The minimum number of tests required shall be:

Backfill over sewer in traffic areas.	1 per 100 lf or less for each 4 feet of depth or portion thereof.
Backfill over sewer in non-traffic areas.	1 per 500 lf or less for each 6 feet of depth or portion thereof.

3.21 FORCE MAIN

- A. Ductile Iron Force Main shall be installed in accordance with AWWA C 600.
- B. Crossings with water mains shall conform to South Carolina Department of Health and Environmental Control's Bureau of Water Standards for Wastewater Facility Construction: Regulation 61-67.
- C. Connecting to existing force mains. Specify type of tapping saddles, valves, checkvalves used.

3.22 BYPASSING

- A. Bypassing of raw wastewater onto the ground or into a receiving stream is prohibited.
- B. Bypassing shall be accomplished with pumping equipment sufficient to maintain the flow of wastewater. Contractor shall provide pump, hoses, materials, and labor to operate and maintain the bypassing operation. A backup pump shall also be made available by the Contractor. Bypassing operations shall be reviewed and approved by the sewer system operator before being implemented.

END OF SECTION

200 00 3822

Application for Encroachment Permit

174207

S.C. Department of Transportation
Form 637 (Rev 08/2013)

Form Use Instructions

Contact Information

Applicant: City of Isle of Palms
Street: PO Drawer 508
City: Isle of Palms
State: SC
Phone: (843) 886-6428
Email: jmilner@civilsiteenv.com
Contact: Jason Milner

REQUEST FOR EXTENSION OF TIME
TO COMPLETE WORK PERMITTED
UNDER ENCROACHMENT PERMITTED NO.
174207 APPROVED
TIME EXTENDED TO 05/30/2017
[Signature]
RES. MAINT. ENGR

REQUEST FOR EXTENSION OF TIME
TO COMPLETE WORK PERMITTED
UNDER ENCROACHMENT PERMITTED NO.
174207 APPROVED
TIME EXTENDED TO 5/30/18
[Signature]
RES. MAINT. ENGR.

Project Location

Primary County: Charleston

County	Road Name/Route	
Charleston	PALM BLVD	Delete
Charleston	46 TH AVENUE	Delete
Charleston	51ST AVE.	Delete
Charleston	52ND AVENUE	Delete
Add Road	Charleston 45th AVE	
	Charleston 49th AVE	
	Charleston 50th AVE	

- Type of Encroachment: DRAINAGE
Installation of drainage lines
- Description of Location:
Palm Blvd at 45th Avenue to 52nd Avenue

REQUEST FOR EXTENSION OF TIME
TO COMPLETE WORK PERMITTED
UNDER ENCROACHMENT PERMITTED NO.
174207 APPROVED
TIME EXTENDED TO 11/30/16
[Signature]
RES. MAINT. ENGR.
ASST. DIST.

(Attach sketch indicating roadway features such as: pavement width, shoulder width, sidewalk and curb and gutter location, significant drainage structure; north arrow, right of way width, and location of the proposed encroachment with respect to the roadway centerline and the nearest

Intersecting road on the State system.)

3. The undersigned applicant hereby requests the SCDOT to permit encroachment on the SCDOT right of way as described herein. It is expressly understood that the encroachment, if and when constructed, shall be installed in accordance with the sketch attached hereto and made a part hereof. The applicant agrees to comply with and be bound by the SCDOT's "A Policy for Accommodating Utilities on Highways Rights of way", "Standard Specifications for Highway Construction", the "General Provisions" and "Special Provisions", attached hereto or made a part hereof by reference, during the installation, operation and maintenance of said encroachment within the SCDOT's Right of Way.

DISCHARGES OF STORM WATER AND NON-STORM WATER: Work within State Highway right-of-way shall be conducted in compliance with all applicable requirements of the National Pollutant Discharge Elimination System (NPDES) permit(s) issued to the Department of Transportation (Department), to govern the discharge of storm water and non-storm water from its properties. Work shall also be in compliance with all other applicable Federal, State and Local laws and regulations, and with the Department's Encroachment Permits Manual and encroachment permit. The encroachment permit will not be issued until the applicant has received an NPDES construction permit from SC Department of Health and Environmental Control.

The applicant agrees to comply with all current SCDOT Standards Specifications for Highway Construction including all Supplemental Technical Specifications. The applicant hereby further agrees, and binds his/her/its heirs, personal representatives, successors, assigns, to assume any and all liability for accidents or injuries to persons, or damage to property, including the highway, that may be caused by the construction, maintenance, use, moving or removing of the physical appurtenances contemplated herein, and the applicant agrees to indemnify and hold SCDOT harmless from and against any and all claims for personal injury and/or property damage which may be sustained by person by reason of the construction, maintenance or existence of said encroachment on the SCDOT's right of way.

Applicant's Name: City of Isle of Palms, SC Date: 10/11/2013

Applicant's Sig: [Signature] Title: City Administrator

For Office Use Only

In accordance with your request and subject to all the provisions, terms, conditions, and restrictions stated in the application and the general and special provisions attached hereto, the SCDOT hereby approves your application for an

encroachment permit. This permit shall become null and void unless the work contemplated herein shall have been completed prior to: **Oct. 8, 2015**

See Attached Special Provision and/or Permit Requirements

NPDES Permit Nbr: **SCR105691**

(Date received by Res. Maint. Engr.)

[Signature]
(SCDOT Approval)

10/8/14
(Date)

Resident Maintenance Engineer
District Engineering Administrator

Deputy Secretary for Engineering
District Maint./Constr. Engineer

Application for Encroachment Permit General Provisions

- DEFINITIONS:** The word "Permittee" used herein shall mean the name of the person, firm, or corporation to whom this permit is addressed, his, her, its, heirs, personal representatives, successors and assigns. The word "DEPARTMENT" shall mean the South Carolina Department of Transportation.
- NOTICE PRIOR TO STARTING WORK:** Before starting the work contemplated herein within the limits of the highway right of way, the Department's Resident Maintenance Engineer in the county in which the proposed work is located shall be notified 24 hours in advance so that he may be present while the work is under way.
- PERMIT SUBJECT TO INSPECTION:** This permit shall be kept at the site of the work at all times while said work is under way and must be shown to any representative of the Department or law enforcement officer on demand.
- PROTECTION OF HIGHWAY TRAFFIC:** The applicant shall be responsible for the protection of the highway traffic at all times during the construction, maintenance, removing or moving of the encroachment permitted herein. Detours, barricades, warning signs and flagmen, as necessary, shall be provided by and at the expense of the Permittee and shall be in accordance with the "Manual on Uniform Traffic Control Devices" (MUTCD). The work shall be planned and carried out so that there will be the least possible inconvenience to the motoring public. The Permittee agrees to observe all rules and regulations of the Department while carrying on the work contemplated herein and take all other precautions that circumstances warrant.
- STANDARDS OF CONSTRUCTION:** All work shall conform to the Department's standards of construction and shall be performed in a workman-like manner. The applicant shall make adequate provisions for maintaining the proper drainage of the highway as it may be affected by the encroachment permitted herein. All work shall be subject to the supervision and satisfaction of the Department.
- FUTURE MOVING OF PHYSICAL APPURTENANCES:** If, in the opinion of the State Highway Engineer, it should ever become necessary to move or remove the

- physical appurtenances, or any part thereof contemplated herein, on account of change in location of the highway, widening of the highway, or for any other sufficient reason, such moving shall be done on demand of the Department at the expense of the Permittee.
7. **RESTORATION OF HIGHWAY FACILITIES UPON MOVING OR REMOVING OF PHYSICAL APPURTENANCES:** If, and when, the physical appurtenances contemplated herein shall be moved or removed, either on the demand of the Department or at the option of the Permittee, the highway and facilities shall immediately be restored to their original condition at the expense of the Permittee.
8. **COSTS:** All work in connection with the construction, maintenance, moving or removing of the physical appurtenances contemplated herein shall be done by and at the expense of the Permittee.
9. **ADDITIONAL PERMISSIONS:**
- (a) It is distinctly understood that this permit does not in any way grant or release any rights lawfully possessed by the abutting property owners. The Permittee shall secure any such rights, as necessary, from said abutting property owners.
 - (b) The Permittee shall be responsible for obtaining all other approvals or permits necessary for installation of the encroachment from other government entities.
 - (c) There shall be no excavation of soil nearer than two feet to any public utility line or appurtenant facility except with the consent of the owner thereof, or except upon special permission of this Department after an opportunity to be heard is given the owner of such line or appurtenant facility.
10. **ADDITIONAL WORK PERFORMANCE:**
- (a) All crossings over the highway shall be constructed in accordance with "Specifications for Overhead Crossings of Light and Power Transmission Lines and Telegraph Lines over each other and over Highway Rights of Way in South Carolina," as approved by the Public Service Commission of South Carolina and effective as of date of this permit.
 - (b) All tunneling, boring, or jacking shall be done in such a way as not to disturb the highway surfacing.
 - (c) No pavement shall be cut unless specifically authorized herein.
 - (d) No excavation shall be nearer than three feet to the edge of pavement unless specifically authorized herein.
 - (e) Underground facilities will be located at minimum depths as defined in the "Utility Accommodations Manual" for the transmittant, generally as follows: 4 feet minimum for hazardous or dangerous transmittant, 3 feet minimum for other lines. The Department may approve shallower depths if adequate protection is provided. Such approval must be obtained in writing.
 - (f) Service and other small diameter pipes shall be jacked, driven, or otherwise forced underneath the pavements on any surfaced road without disturbing the pavement. The section under the highway pavement and within a distance of three (3) feet on either side shall be continuous without joints.
11. **ACCESS:**
- (a) Permittee is responsible for maintaining reasonable access to private driveways during construction.
 - (b) It is expressly provided that, with respect to any limited access highway, the Permittee shall not have or gain access from the main traveled way of the highway, or the on or off ramps to such facility, except upon approval by the Department.
12. **DRIVEWAYS:**
- (a) The existing crown of the highway shall be continued to the outside shoulder line of the highway.
 - (b) If the driveway or approach is concrete pavement, the pavement shall be constructed at least 6 inches thick and with a minimum of class 2500

concrete. There shall be a bituminous expansion joint, not less than 3/4 inches in thickness, placed between the highway paving and the paving of the approach for the full width of the approach.

13. BEAUTIFICATION:

- (a) All trees, plants, flowers, etc. shall be placed in accordance with the provisions specifically stipulated herein.
- (b) All trees, plants, flowers, etc. shall be maintained by, and at the expense of, the Permittee and the provisions of this permit shall become null and void, if and when said Permittee ceases to maintain said trees, plants, flowers, etc.

14. AS-BUILT PLANS:

- (a) The applicant shall provide the Department with survey-quality as-built plans in accordance with the requirements set forth in the Department's "A Policy for Accommodating Utilities on Highway Rights of Way".

**SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
Encroachment Permit**

Permit No : 174207
Permit Decision Date : 10/8/2014
Expiration Date : 10/8/2015

Type
Permit :DRAINAGE

Location:

<u>District</u>	<u>Work County</u>	<u>Type</u>	<u>Route</u>	<u>Aux</u>	<u>Begin MP</u>	<u>End MP</u>
6	Charleston	S-	699	None	1.320	2.135
6	Charleston	S-	699	None	2.155	2.155
6	Charleston	S-	1549	None	0.030	0.030
6	Charleston	S-	1549	None	0.027	0.027

Contact Information

Applicant: CityofIsleofPalms
Contact: Jason Milner
Address: PO Drawer 508,
City: Isle of Palms

Phone: 8438866428

State: SC

Zip: 29451

Comments

Palm Blvd at 45th Avenue to 52nd Avenue

Special Provisions:

9999 - See Attached for Additional Special Provisions

0004 - SCDOT SHALL BE NOTIFIED WHEN WORK DEFINED IN THE PERMIT STARTS AS WELL AS WHEN THE WORK IS COMPLETED. REFERENCE SHALL BE MADE BY PERMIT NUMBER.

0005 - APPLICANT SHALL PROVIDE TO THE DEPARTMENT THE OPPORTUNITY OF ATTENDING ANY PRE-CONSTRUCTION MEETING PRIOR TO THE BEGINNING OF WORK.

0101 - SHOULDER SOD DESTROYED BY THIS INSTALLATION TO BE REPLACED FOR THE ENTIRE AREA. THE AREA SHALL BE RE-SHAPED AND ROLLED TO THE CROSS SECTION EXISTING PRIOR TO THIS WORK.

0120 - RESTORATION OF PAVEMENT, SHOULDERS, DITCHES, ETC., TO BE PERFORMED AS SOON AS POSSIBLE AFTER CONSTRUCTION, OR SCHEDULED SO THAT THE CONSTRUCTION IS NO FURTHER THAN 2,000 L.F. AHEAD OF COMPLETE RESTORATION.

0125 - ALL CROSSLINE PIPES ARE TO BE LOCATED AND FLAGGED PRIOR TO BEGINNING OPERATION.

0209 - DISTURBED VEGETATION SHALL BE RESEEDDED ACCORDING TO THE SPECIFICAION FOR HIGHWAY CONSTRUCTION.

0301 - THE DITCHES AND/OR SHOULDERS DISTURBED DURING THE INSTALLATION SHALL BE RE-ESTABLISHED TO PROPER GRADE, ORIGINAL CROSS SECTION, STABILIZED, AND ALL DRAIN PIPES CLEARED.

0302 - NO EXCAVATION SHALL BE LEFT OPEN ALONG HIGHWAY.

0304 - PAVEMENT MARKINGS ALTERED DURING THIS INSTALLATION SHALL BE RESTORED BY THE APPLICANT.

0305 - FLASHING ARROW BOARDS SHALL BE USED FOR ALL LANE CLOSURES ON PRIMARY ROUTES AND/OR ROADS WITH HIGH TRAFFIC VOLUMES.

0306 - TRAFFIC CONTROL, LIGHTS, SIGNS AND FLAG-MEN WILL BE FURNISHED BY APPLICANT AND WILL CONFORM TO PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

0310 - FIELD CHANGES, IF NECESSARY, MUST BE APPROVED IN WRITING BEFORE ACTUAL CONSTRUCTION OF PROPOSED CHANGES.

0311 - SEDIMENT AND EROSION CONTROL DEVICES SHALL BE USED TO MINIMIZE THE MOVEMENT OF SEDIMENT.

0312 - THE PERMITTEE SHALL HOLD THE DEPARTMENT HARMLESS FOR DAMAGES TO BOTH UPSTREAM AND DOWNSTREAM PROPERTIES.



South Carolina
Department of Transportation

October 8, 2014

Ms. Linda Tucker (City of Isle of Palms) - *via Email Transmission*

RE: SCDOT Permit #174207
S-10-699 (Palm Blvd.) – Drainage Improvements

Dear Permittee:

The attached permit has the following stipulations:

1. The South Carolina Department of Transportation (SCDOT) shall be given the opportunity to attend any pre-construction conferences. Complete and submit attached Permit Construction Notification within outlined time frame.
2. Permittee must obtain written approval by SCDOT for any field changes affecting referenced permit.
3. In the event of a hurricane evacuation, either voluntary or mandated, all operations shall cease and all equipment shall be removed from the SCDOT right of way. Work may resume at this location once the State Government has given an all-clear to return to the affected areas.
4. Permittee to notify the Department when work has been completed so that a final inspection can be schedule so permit can be closed out and accepted.
5. This permit **expires October 8, 2015**. Upon written request by Permittee, a permit extension is allowed, if permit is currently under construction, for a period of one year from the initial expiration date. If the permit has expired prior to construction commencing a new full permit package submittal will be required for review and approval.

Also, please note all provisions attached to or written on the approved permit, as well as the requirements outline on the back of the permit. *Failure to comply with any of these provisions may result in stoppage of work, the permit being revoked, and or the removal of all materials placed within the right of way at full responsibility of the permittee.* Your cooperation is appreciated in this matter so that costly corrections may be avoided in maintaining the integrity of our transportation infrastructure. If you have any questions, please contact us at 843-740-1655.

Respectfully,

Kirk Richards, P.E.
Assistant District Maintenance Engineer



Permit Construction Notification

Submit To: Joel Smith, EIT - Associate Engineer
SCDOT Charleston Encroachment Permit Office
Email: smithjj@scdot.org Fax: 843-740-6169

This notification is to inform the Department of the upcoming construction commencement of following permitted work:

Permit #: _____

Road Name/No.: _____

Name of Permittee: _____

Project Name/Description: _____

Utility Locate Reference No. & Date _____

Site Work Contractor Name & No.: _____

Proposed Start Date: _____

Estimated Completion Date: _____

Lane Closure Date & Time: _____

Attached Drawings: _____

NOTES:

- *This form shall be submitted at least 48 business hours prior to construction activities after Utility Locate has been performed.*
- *Upon completion of all work, you must contact the SCDOT Charleston Maintenance Permit Office (843)745-7462 to schedule a final inspection.*
- *Once work has been satisfactorily completed SCDOT will issue a Letter of Acceptance.*

cc: File/Charleston Maintenance





South Carolina
Department of Transportation

Additional Permit Requirements – Permit 174207

The following are general requirements that this permitted project will need to comply with:

- **The Permittee shall be responsible for the maintenance of any drainage structures for areas within the rights-of-ways of State maintained facilities in perpetuity.**
- The permittee will submit traffic plans for review and approval prior to commencing work. Traffic control plans shall be developed from the latest SCDOT Standard Drawings or Manual of Uniform Traffic Control Devices (MUTCD) as necessary.
- Permittee will have certified traffic control supervisor on site during traffic control operations.
- **Prior to the commencement of any digging, excavating, trenching, boring, etc., within 500 feet of a signalized intersection, the permittee will be responsible for contacting the SCDOT Traffic Signal Shop at 843-740-1668.**
- Construction shall meet the regulations of the current *DOT's ADA guidelines for Transportation Facilities*, SCDOT Standard Drawings for Road Construction, *SCDOT Standard Specifications for Highway Construction*, Supplemental Specifications and *SCDOT Utilities Accommodations Manual*.
- All "Permanent" pavement markings altered will be replaced with thermoplastic materials meeting the requirements of the current SCDOT Standard Specifications. If raised pavement markers are damaged or disrupted, it is the responsibility of the Permittee to replace.
- Prior to commencement of work, the permittee will have a pre-construction conference with all appropriate parties to discuss the project requirements. Items to be discussed and forwarded to SCDOT shall include at a minimum:
 - Work schedule that shows the start and end dates for work within **SCDOT rights-of-way**.
 - Contact list that include names and phone numbers of Permittee and Superintendent in charge of daily activities
- The permittee will follow the latest SCDOT materials testing and sampling requirements as set forth in the SCDOT Construction Manual http://www.scdot.org/doing/construction_Manual.aspx and provide SCDOT staff with copies of all testing and inspection reports during construction.
- Permittee will provide competent project management staff that has authority to make decisions on site during construction.
- **Permittee is required to obtain written approval by SCDOT for any design or field changes that impact SCDOT or SCDOT right-of-way prior to implementation in field.**



Additional Permit Requirements

Permit # 173207

- Permittee will provide competent CEPSCI certified inspector to perform weekly Erosion Control Inspections as necessary.
- Permittee is required to follow all SCDOT Department Safety Standards and Guidelines when working on State Roads.
- Construction signs are to be placed for all construction activities on State routes unless otherwise approved by SCDOT and shall be placed in accordance with appropriate traffic control plan of the current SCDOT Standard Drawings for Road Design.
- Once work commences and/or construction signs are placed on the road, the Permittee and/or Permittee's contractor is responsible for all road maintenance and liability.
- At the completion of the project, the permittee will be responsible for insuring positive drainage associated with the project. Any ponding of water within the travel way noted will be the responsibility of the permittee to address.
- **The Permittee will schedule a final inspection with SCDOT personnel upon completion of the project.**
- **This permit does not include approval for new utility connections or utility relocations within SCDOT right-of-way (r w). Utility work associated with this project must be submitted separately for review and approval by the Utility Company.**
- **Any review of information associated with the application for the subject permit by the South Carolina Department of Transportation (SCDOT) is completed for conformance with generally accepted policies and standards. The SCDOT reviews do not in any way absolve the Permittee of the responsibility for providing complete and accurate construction documents and practicing proper construction practices. Review and subsequent approval of the subject permit by the SCDOT does not establish any liability by the Department for errors or omissions identified at a later date. If at any time the permitted project is found to be delinquent in standard or performance the Permittee will be responsible for taking all necessary steps to correct issues to the satisfaction of the SCDOT.**



200 00 3822

Application for Encroachment Permit

174 207

S.C. Department of Transportation
Form 637 (Rev 05/2013)

Form Use Instructions

Contact Information

Applicant: City of Isle of Palms
Street: PO Drawer 508

City: Isle of Palms
State: SC **Zip Code:** 29451
Phone: (843) 886-6428 **Fax:** (843) 886-8005
Email: jmilner@civillsiteenv.com
Contact: Jason Milner

Project Location

Primary County: Charleston

Street Finder

County	Road Name/Route	
Charleston	PALM BLVD	Delete
Charleston	46 TH AVENUE	Delete
Charleston	51ST AVE.	Delete
Charleston	52ND AVENUE	Delete
Add Road Charleston	45th AVE	
Charleston	49th AVE	
Charleston	50th AVE	

1. Type of Encroachment: DRAINAGE

Installation of drainage lines

2. Description of Location:

Palm Blvd at 45th Avenue to 52nd Avenue

(Attach sketch indicating roadway features such as: pavement width, shoulder width, sidewalk and curb and gutter location, significant drainage structure, north arrow, right of way width, and location of the proposed encroachment with respect to the roadway centerline and the nearest

intersecting road on the State system.)

3. The undersigned applicant hereby requests the SCDOT to permit encroachment on the SCDOT right of way as described herein. It is expressly understood that the encroachment, if and when constructed, shall be installed in accordance with the sketch attached hereto and made a part hereof. The applicant agrees to comply with and be bound by the SCDOT's "A Policy for Accommodating Utilities on Highways Rights of way", "Standard Specifications for Highway Construction", the "General Provisions" and "Special Provisions", attached hereto or made a part hereof by reference, during the installation, operation and maintenance of said encroachment within the SCDOT's Right of Way.

DISCHARGES OF STORM WATER AND NON-STORM WATER: Work within State Highway right-of-way shall be conducted in compliance with all applicable requirements of the National Pollutant Discharge Elimination System (NPDES) permit(s) issued to the Department of Transportation (Department), to govern the discharge of storm water and non-storm water from its properties. Work shall also be in compliance with all other applicable Federal, State and Local laws and regulations, and with the Department's Encroachment Permits Manual and encroachment permit. The encroachment permit will not be issued until the applicant has received an NPDES construction permit from SC Department of Health and Environmental Control.

The applicant agrees to comply with all current SCDOT Standards Specifications for Highway Construction including all Supplemental Technical Specifications. The applicant hereby further agrees, and binds his/her/its heirs, personal representatives, successors, assigns, to assume any and all liability for accidents or injuries to persons, or damage to property, including the highway, that may be caused by the construction, maintenance, use, moving or removing of the physical appurtenances contemplated herein, and the applicant agrees to indemnify and hold SCDOT harmless from and against any and all claims for personal injury and/or property damage which may be sustained by person by reason of the construction, maintenance or existence of said encroachment on the SCDOT's right of way.

Applicant's Name: City of Isle of Palms, SC Date: 10/11/2013

Applicant's Sig: [Signature] (Please print or type) Title: City Administrator

For Office Use Only

In accordance with your request and subject to all the provisions, terms, conditions, and restrictions stated in the application and the general and special provisions attached hereto, the SCDOT hereby approves your application for an

encroachment permit. This permit shall become null and void unless the work contemplated herein shall have been completed prior to: **Oct. 8, 2015**

See Attached Special Provision and/or Permit Requirements

NPDES Permit
Nbr:

SCR105691

Robert Richards
(SCDOT Approval)

10/8/14
(Date)

(Date received by Res. Maint. Engr.)

Resident Maintenance Engineer
 District Engineering Administrator

Deputy Secretary for Engineering
 District Maint./Constr. Engineer

Application for Encroachment Permit General Provisions

1. **DEFINITIONS:** The word "Permittee" used herein shall mean the name of the person, firm, or corporation to whom this permit is addressed, his, her, its, heirs, personal representatives, successors and assigns. The word "DEPARTMENT" shall mean the South Carolina Department of Transportation.
2. **NOTICE PRIOR TO STARTING WORK:** Before starting the work contemplated herein within the limits of the highway right of way, the Department's Resident Maintenance Engineer in the county in which the proposed work is located shall be notified 24 hours in advance so that he may be present while the work is under way.
3. **PERMIT SUBJECT TO INSPECTION:** This permit shall be kept at the site of the work at all times while said work is under way and must be shown to any representative of the Department or law enforcement officer on demand.
4. **PROTECTION OF HIGHWAY TRAFFIC:** The applicant shall be responsible for the protection of the highway traffic at all times during the construction, maintenance, removing or moving of the encroachment permitted herein. Detours, barricades, warning signs and flagmen, as necessary, shall be provided by and at the expense of the Permittee and shall be in accordance with the "Manual on Uniform Traffic Control Devices" (MUTCD). The work shall be planned and carried out so that there will be the least possible inconvenience to the motoring public. The Permittee agrees to observe all rules and regulations of the Department while carrying on the work contemplated herein and take all other precautions that circumstances warrant.
5. **STANDARDS OF CONSTRUCTION:** All work shall conform to the Department's standards of construction and shall be performed in a workman-like manner. The applicant shall make adequate provisions for maintaining the proper drainage of the highway as it may be affected by the encroachment permitted herein. All work shall be subject to the supervision and satisfaction of the Department.
6. **FUTURE MOVING OF PHYSICAL APPURTENANCES:** If, in the opinion of the State Highway Engineer, it should ever become necessary to move or remove the

physical appurtenances, or any part thereof contemplated herein, on account of change in location of the highway, widening of the highway, or for any other sufficient reason, such moving shall be done on demand of the Department at the expense of the Permittee.

7. **RESTORATION OF HIGHWAY FACILITIES UPON MOVING OR REMOVING OF PHYSICAL APPURTENANCES:** If, and when, the physical appurtenances contemplated herein shall be moved or removed, either on the demand of the Department or at the option of the Permittee, the highway and facilities shall immediately be restored to their original condition at the expense of the Permittee.
8. **COSTS:** All work in connection with the construction, maintenance, moving or removing of the physical appurtenances contemplated herein shall be done by and at the expense of the Permittee.
9. **ADDITIONAL PERMISSIONS:**
 - (a) It is distinctly understood that this permit does not in any way grant or release any rights lawfully possessed by the abutting property owners. The Permittee shall secure any such rights, as necessary, from said abutting property owners.
 - (b) The Permittee shall be responsible for obtaining all other approvals or permits necessary for installation of the encroachment from other government entities.
 - (c) There shall be no excavation of soil nearer than two feet to any public utility line or appurtenant facility except with the consent of the owner thereof, or except upon special permission of this Department after an opportunity to be heard is given the owner of such line or appurtenant facility.
10. **ADDITIONAL WORK PERFORMANCE:**
 - (a) All crossings over the highway shall be constructed in accordance with "Specifications for Overhead Crossings of Light and Power Transmission Lines and Telegraph Lines over each other and over Highway Rights of Way in South Carolina," as approved by the Public Service Commission of South Carolina and effective as of date of this permit.
 - (b) All tunneling, boring, or jacking shall be done in such a way as not to disturb the highway surfacing.
 - (c) No pavement shall be cut unless specifically authorized herein.
 - (d) No excavation shall be nearer than three feet to the edge of pavement unless specifically authorized herein.
 - (e) Underground facilities will be located at minimum depths as defined in the "Utility Accommodations Manual" for the transmittant, generally as follows: 4 feet minimum for hazardous or dangerous transmittant, 3 feet minimum for other lines. The Department may approve shallower depths if adequate protection is provided. Such approval must be obtained in writing.
 - (f) Service and other small diameter pipes shall be jacked, driven, or otherwise forced underneath the pavements on any surfaced road without disturbing the pavement. The section under the highway pavement and within a distance of three (3) feet on either side shall be continuous without joints.
11. **ACCESS:**
 - (a) Permittee is responsible for maintaining reasonable access to private driveways during construction.
 - (b) It is expressly provided that, with respect to any limited access highway, the Permittee shall not have or gain access from the main traveled way of the highway, or the on or off ramps to such facility, except upon approval by the Department.
12. **DRIVEWAYS:**
 - (a) The existing crown of the highway shall be continued to the outside shoulder line of the highway.
 - (b) If the driveway or approach is concrete pavement, the pavement shall be constructed at least 6 inches thick and with a minimum of class 2500

concrete. There shall be a bituminous expansion joint, not less than 3/4 inches in thickness, placed between the highway paving and the paving of the approach for the full width of the approach.

13. **BEAUTIFICATION:**

(a) All trees, plants, flowers, etc. shall be placed in accordance with the provisions specifically stipulated herein.

(b) All trees, plants, flowers, etc. shall be maintained by, and at the expense of, the Permittee and the provisions of this permit shall become null and void, if and when said Permittee ceases to maintain aid trees, plants, flowers, etc.

14. **AS-BUILT PLANS:**

(a) The applicant shall provide the Department with survey-quality as-built plans in accordance with the requirements set forth in the Department's "A Policy for Accommodating Utilities on Highway Rights of Way".



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

September 29, 2014

LINDA TUCKER
CITY OF ISLE OF PALMS
PO BOX 508
ISLE OF PALMS SC 29451

RE: 45TH TO 52ND AVENUE DRAINAGE IMPROVEMENTS, Charleston County
File number: 10-13-08-18
NPDES Coverage Number: SCR10S691

Dear Linda Tucker:

The Department of Health and Environmental Control (Department or DHEC) has received approval from **Charleston County** for the 1.2 acre portion of the above-referenced project within the Charleston County MS4 and DHEC has approved the Stormwater Pollution Prevention Plan (SWPPP) for the rest of the project. Based on your submission of this documentation and in accordance with the NPDES General Permit for Stormwater Discharges from Construction Activities SCR100000 (CGP), this project has been granted coverage under the CGP on **September 29, 2014**. This project's general permit coverage number is **SCR10S691**. The total disturbed area for this site is **3.9 acres**.

See attached DHEC Office of Ocean and Coastal Resource Management (DHEC-OCRM) certification approved 09/13/2013 for additional conditions related to the Coastal Zone Consistency determination.

An as-built survey(s), signed and sealed by a S.C. Licensed Land Surveyor, should be submitted to **CHARLESTON COUNTY** for any detention structure(s) on this site that are within the county's MS4. The survey(s) should show grades, contours, and depths for all structure(s) and should include the elevations and dimensions of all outlet structures, including but not limited to pipes, orifices, risers, weirs, and emergency spillways. A statement signed by the project's S.C. Registered Engineer indicating that the structure(s) was installed and is operating as shown on approved plans and in approved calculations is required. If the elevations or dimensions of the structures listed above do not match those used in the approved plans, provide a certification statement signed by the project's S.C. Registered Engineer indicating that the structure, as built, will function as shown in approved calculations. A new analysis of the structure (routing) may be necessary.

The CGP can be downloaded at the following website:

<http://www.scdhec.gov/environment/water/swater/docs/CGP-permit.pdf> or you may request a copy from us via email (stormwatercgp@dhec.sc.gov). You are responsible for ensuring your contractor(s) complies with the approved SWPPP and the minimum requirements of the CGP. Also, you are responsible for overall compliance with the Storm Water Management and Sediment Reduction Act of 1991 (1991 Act), SC Pollution Control Act, and the Federal Clean Water Act (CWA). Failure to comply with the approved SWPPP or applicable statutes and regulations may result in enforcement actions.

You must notify this DHEC EQC Regional Office prior to starting any land-disturbing activity. The address and telephone number of the EQC office are as follows:

Charleston EQC Office
1362 MCMILLAN AVE STE 300
CHARLESTON SC 29405-2048
843-953-0150

Inspections of this site must be performed by qualified personnel as described in Section 4.2.E of the CGP.

You should be aware that this approval is only applicable for the Stormwater Pollution Prevention Plan (SWPPP) that was submitted for this project. Any additional construction or land disturbing activity beyond the scope of the approved plans is not authorized. Any future work for this project not shown on the stamped, approved plans will require that you submit another site plan for review and approval. All major modifications require review and approval by **CHARLESTON COUNTY MS4**; the Department must be notified in writing by **CHARLESTON COUNTY MS4** of the approval of major modifications if the disturbed area changes. Minor modifications to the approved SWPPP may be made by the SWPPP preparer and do not require review and approval by the Department; these changes should be signed and dated by the SWPPP preparer. If you have a question about whether a modification is major or minor, contact the Coastal Stormwater Permitting Section at (843) 953-0200.

A copy of the stamped, approved SWPPP (including a copy the CGP, contractor certifications, inspection records, rainfall data, etc), NOI, and CGP coverage letter from DHEC must be retained and available at the construction site (or accessible within 30 minutes during normal business hours) from the date of commencement of construction activities to the date of final stabilization. If an on-site location is unavailable to store the SWPPP when no personnel are present, notice of the plan's location must be posted near the main entrance at the construction site.

All contractors who will conduct land-disturbing activities at the site must complete a Contractor Certification Form. Annual Blanket Utility Providers must provide a copy of their annual blanket registration information. You are also responsible for listing all contractors in the SWPPP and for holding a pre-construction conference with each contractor before they can conduct land-disturbing activity at the site.

The Department may conduct periodic inspections of your site. Any violations found during these inspections may result in enforcement action.

This NPDES coverage should be terminated by the permittee when one of the conditions listed in Section 5.1 of the CGP has been met. You must submit a Notice of Termination (NOT) to cancel your NPDES coverage under the CGP. Please see section 5.1 of the CGP for additional information required to be submitted with the NOT.

You are responsible for obtaining any other federal, state, or local permit that may be required for this project. In particular, any permits through the U.S. Army Corps of Engineers for the placement of fill material in Waters of the United States. Please note we have not sent a copy of this letter to any county or city building official. You must send a copy of this letter to these agencies, if necessary.

If material excavated during construction activities leaves the site, a mine operating permit may be needed. You are responsible for contacting the Mining and Reclamation Section to determine if a mining permit is required for the site. The Mining and Reclamation Section can be reached at (803)896-4261 or via e-mail at AskMines@dhec.sc.gov.

Please see the enclosed "Notice of Appeal Procedure" document for information about the procedures for appealing this NPDES coverage.

If you have any questions or cannot access the referenced websites, please call me at 843-953-0238.

Sincerely,



Richard V Geer, Engineer Associate
EQC Bureau of Water, Coastal Stormwater Permitting
1362 McMillan Ave, Suite 400, Charleston SC 29405

cc: F D Stevens—CIVIL SITE ENVIRONMENTAL INC
cc: Neil J Desai PE—CHARLESTON COUNTY MS4

of the Mining and Reclamation Section

of the Mining and Reclamation Section



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

South Carolina Board of Health and Environmental Control
Guide to Board Review
Pursuant to S.C. Code Ann. § 44-1-60
Effective April 1, 2013

The decision of the South Carolina Department of Health and Environmental Control (Department) becomes the final agency decision fifteen (15) calendar days after notice of the decision has been mailed to the applicant, permittee, licensee and affected persons who have requested in writing to be notified, unless a written request for final review accompanied by a filing fee in the amount of \$100 is filed with Department by the applicant, permittee, licensee or affected person.

Applicants, permittees, licensees, and affected parties are encouraged to engage in mediation during the final review process.

If the Board declines in writing to schedule a final review conference, the Department's decision becomes the final agency decision and an applicant, permittee, licensee, or affected person may request a contested case hearing before the Administrative Law Court within thirty (30) calendar days after notice is mailed that the Board declined to hold a final review conference.

I. Filing of Request for Final Review

1. A written Request for Final Review (RFR) and the required filing fee of one hundred dollars (\$100) must be received by Clerk of the Board within fifteen (15) calendar days after notice of the staff decision has been mailed to the applicant, permittee, licensee, or affected persons. If the 15th day occurs on a weekend or State holiday, the RFR must be received by the Clerk on the next working day. RFRs will not be accepted after 5:00 p.m.
2. RFRs shall be in writing and should include, at a minimum, the following information:
 - The grounds for amending, modifying, or rescinding the staff decision;
 - a statement of any significant issues or factors the Board should consider in deciding how to handle the matter;
 - the relief requested; and
 - a copy of the decision for which review is requested.
3. RFRs should be filed in person or by mail at the following address:

South Carolina Board of Health and Environmental Control
Attention: Clerk of the Board
2600 Bull Street
Columbia, South Carolina 29201

Alternatively, RFR's may be filed with the Clerk by facsimile (803-898-3393) or by electronic mail (boardclerk@dhec.sc.gov).

4. The filing fee may be paid by cash, certified check or credit card. If a RFR is filed by facsimile or electronic mail, the filing fee may be mailed to the Clerk of the Board and the envelope must be postmarked within the time allowed for filing a RFR.
5. If there is any perceived discrepancy in compliance with this RFR filing procedure, the Clerk should consult with the Chairman or, if the Chairman is unavailable, the Vice-Chairman. The Chairman or the Vice-Chairman will determine whether the RFR is timely and properly filed and direct the Clerk to (1) process the RFR for consideration by the Board or (2) return the RFR and filing fee to the requestor with a cover letter explaining why the RFR was not timely or properly filed. Processing an RFR for consideration by the Board shall not be interpreted as a waiver of any claim or defense by the agency in subsequent proceedings concerning the RFR.
6. If the RFR will be processed for Board consideration, the Clerk will send an Acknowledgement of RFR to the Requestor and the applicant, permittee, or licensee, if other than the Requestor.
7. The Clerk will email the RFR to all Board members for review, and all Board members will confirm receipt of the RFR to the Clerk by email. If a Board member does not confirm receipt of the RFR within twenty-four (24) hour period, the Clerk will contact the Board member and confirm receipt. If a Board member believes the RFR should be considered by the RFR Committee, he or she will respond to the Clerk's email within forty-eight (48) hours and will request further review. If no Board member requests further review of the RFR within the forty-eight (48) hour period, the Clerk will send a letter by certified mail to the Requestor, with copy by regular mail to the applicant,

permittee, or licensee, if not the Requestor, stating the Board will not hold a Final Review Conference. A copy of the Notice of Appeal Procedure will be included with the letter.

NOTE: If the time periods described above end on a weekend or State holiday, the time is automatically extended to 5:00 p.m. on the next business day.

8. If the RFR is to be considered by the RFR Committee, the Clerk will forward a copy of the RFR to Department staff and Office of General Counsel. A Department response to the RFR should be provided by Department staff to the Clerk within eight (8) working days after the RFR is forwarded.

II. Final Review Conference Scheduling

1. If a Conference will be held, the Clerk will send a letter by certified mail to the Requestor, with copy by regular mail to the applicant, permittee, or licensee, if not the Requestor, informing the Requestor of the determination.
2. The Clerk will request Department staff provide the Administrative Record.
3. The Clerk will send Notice of Final Review Conference to the parties at least ten (10) days before the Conference. The Conference will be publically noticed and should:
 - include the place, date and time of the Conference;
 - state the presentation times allowed in the Conference;
 - state evidence may be presented at the Conference;
 - if the conference will be held by committee, include a copy of the Chairman's order appointing the committee; and
 - inform the Requestor of his or her right to request a transcript of the proceedings of the Conference prepared at Requestor's expense.
4. If a party requests a transcript of the proceedings of the Conference and agrees to pay all related costs in writing, including costs for the transcript, the Clerk will schedule a court reporter for the Conference.

III. Final Review Conference and Decision

1. The order of presentation in the Conference will, subject to the presiding officer's discretion, be as follows:
 - Department staff will provide an overview of the staff decision and the applicable law to include [10 minutes]:
 - Type of decision (permit, enforcement, etc.) and description of the program.
 - Parties
 - Description of facility/site
 - Applicable statutes and regulations.
 - Decision and materials relied upon in the administrative record to support the staff decision.
 - Requestor(s) will state the reasons for protesting the staff decision and may provide evidence to support amending, modifying, or rescinding the staff decision. [15 minutes] *NOTE: The burden of proof is on the Requestor(s)*
 - Rebuttal by Department staff [15 minutes]
 - Rebuttal by Requestor(s) [10 minutes]

Note: Times noted in brackets are for information only and are superseded by times stated in the Notice of Final Review Conference or by the presiding officer.
2. Parties may present evidence during the conference; however, the rules of evidence do not apply.
3. At any time during the conference, the officers conducting the conference may request additional information and may question the Requestor, the staff, and anyone else providing information at the conference.
4. The presiding officer, in his or her sole discretion, may allow additional time for presentations and may impose time limits on the Conference.
5. All Conferences are open to the public.
6. The officers may deliberate in closed session.
7. The officers may announce the decision at conclusion of the Conference or it may be reserved for consideration.
8. The Clerk will mail the written final agency decision (FAD) to parties within 30 days after the Conference. The written decision must explain the basis for the decision and inform the parties of their right to request a contested case hearing before the Administrative Law Court. The FAD will be sent by certified mail, return receipt requested.
9. Communications may also be sent by electronic mail, in addition to the forms stated herein, when electronic mail addresses are provided to the Clerk.

The above information is provided as a courtesy; parties are responsible for complying with all applicable legal requirements.

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NOTICE OF INTENT (NOI)
For Coverage(s) of Primary Permittees
Under South Carolina NPDES General Permit
For Stormwater Discharges From Construction Activities SCR100000
(Maintain As Part of On-Site SWPPP)

C2C-13-0808

For Official Use Only
File Number: 10-13-08-18
Permit Number: SCR10 5691
Submittal Package Complete:

Submission of this Notice of Intent constitutes notice that the Applicant identified in Section II intends to be authorized as a Primary Permittee in the state of South Carolina under NPDES General Permit SCR1000000. Fees required for review and NPDES coverage of each application type are as listed on page 2 of the instructions.

SOUTH CAROLINA
DEPT OF HEALTH AND ENVIRONMENTAL CONTROL
ENVIRONMENTAL QUALITY CONTROL
STORMWATER PERMITTING SECTION
APPROVED FOR CONSTRUCTION ONLY
DHEC PERMIT #: SCR105691
FILE #: 10-13-08-18
DATE ISSUED: 9/29/2014
BY: [Signature]

Date: 05/01/2013
Project/Site Name: 45TH TO 52ND AVENUE DRAINAGE IMPROVEMENTS County: CHARLESTON
(Modification or Change of Information Only) Prior Approved NPDES Permit or File Number:

Do you want this project to be considered for the Expedited Review Program (ERP)? [] Yes or [X] No (See Instructions)

Notice of Intent (NOI) Application Type(s)

- A. Project (Application/Review) Type(s) (Select ALL that apply):
[X] New Project (Initial Notification) Ongoing Project: [] Permitted or [] Un-Permitted
[] Late Notification [] Low Impact Development (LID) or Project Design Above Regulatory Requirements
[] New Owner/Operator or Company Name Change (see instructions, attach Form A (Transfer of Ownership))
[] Major Modification: (see instructions, attach Form B (Major Modifications))
[X] MS4 Project Review
[] Ocean and Coastal Resource Management (OCRM) Review
[] Change of Information/Other (Specify):
B. If Applicable, identify the entity designated as MS4 Reviewer and MS4 Operator (i.e., Lexington County, City of Greer, etc.): MS4 Reviewer CHARLESTON COUNTY MS4 Operator CHARLESTON COUNTY

RECEIVED
AUG 28 2013
Stormwater, Construction & Agriculture Permitting Division

II. Primary Permittee Information

[] Person or [X] Company If a Company, are you a [] Lending Institution or [X] Government Entity?
Company EIN (if applicable): EIN:

- A. Primary Permittee Name: CITY OF ISLE OF PALMS
Mailing Address: P.O. DRAWER 508 City: ISLE OF PALMS State: SC Zip: 29451
Phone: 843-886-6428 Fax: 843-886-8005 Email Address:
B. Contact /ODSA Name (If different from above OR if owner is a company): LINDA TUCKER
Mailing Address: AS ABOVE City: State: Zip:
Phone: Fax: Email Address:
C. Property Owner Name (If different from above): SEE ATTACHED
Mailing Address: City: State: Zip:
Phone: Fax: Email Address:

III. Comprehensive Stormwater Pollution Prevention Plan (C-SWPPP) Preparer Information

- A. C-SWPPP Preparer Name: F. DAVID STEVENS
B. Registered Professional [X] Engineer [] Landscape Architect [] Tier B Land Surveyor S. C. Registration #: 9156
C. Company/Firm Name: CIVIL SITE ENVIRONMENTAL (CSE) S. C. COA #: C00150
Mailing Address: 668 MARINA DRIVE, SUITE B-1 City: CHARLESTON State: SC Zip: 29492
Phone: 843-849-8945 Fax: 843-849-8974 Email Address: JMILNER@CIVILSITEENV.COM

IV. Project/Site Information

- A. Type of Construction Activity(ies) (Select ALL that apply):
[] Commercial [] Industrial [] Institutional [] Mass Grading [] Linear [] Utility/Infrastructure
[] Residential: Single-family [] Residential: Multi-family [] Multi-use (Commercial & Residential)
[] Site Preparation (No New Impervious Area) [X] Other (Specify) DRAINAGE IMPROVEMENTS/UPGRADE
B. Site Address/Location (street address, nearest intersection, etc.) 45TH AVENUE AT PALM BLVD
City/Town (If in limits): CITY OF ISLE OF PALMS Zip Code: 29451
Latitude: 32° 48' 03" N Longitude: - 79° 45' 16" W (Source): [] GPS [X] Web Site: GOOGLE EARTH
Tax Map Number (s) (List all): SEE ATTACHED

RECEIVED
MAY 29 2013
DIRECTOR - CORRM
CHARLESTON OFFICE

D. Impaired Waterbodies Information (Attach additional sheet(s) as needed)

1. 303(d) Listed Impaired Waterbodies					
a. Name of Nearest DHEC Water Quality Monitoring Stations (WQMS)(s) that receives stormwater from your construction site and/or thru an MS4 and the Name of the Corresponding Waterbody?		b. Is this WQMS(s) listed on the most current 303(d) List? If No, proceed to Section 2 of this table. If Yes, complete items c thru f.	c. List the pollutant(s) identified as "CAUSES" of the impairment	d. Will any pollutants causing the impairment be present in your site's construction stormwater discharges?	e. If yes for d, list the "USE SUPPORT" impairment(s) affected by the pollutant(s) identified in c.
Nearest DHEC WQMS(s)	Corresponding Waterbody				
09A-18	AIWW	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	FC	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	SHELLFISH
0B-10	AIWW	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	

f. If yes for d above, will use of the BMPs proposed for your project ensure the site's discharges will **NOT** contribute to or cause further WQS violations for the impairment(s) listed in c? Yes No
 (NOTE: If no for f, this site is NOT eligible for coverage under the CGP). See instructions.

2. TMDL Impaired Waterbodies				
a. Name of Nearest DHEC Water Quality Monitoring Stations (WQMS)(s) that receives stormwater from your construction site and/or thru an MS4?	b. Has a TMDL(s) been developed for this WQMS(s)? If No, identify as such below and proceed to Section VI. If Yes, complete items c thru f of this table.	c. If yes for b, what pollutants are listed as "CAUSES" or causing the impairment?	d. If yes for b, has the standard been "ATTAINED" or "Fully Supported" for the impairment(s)?	e. If no for d (Not Attained), will any pollutants causing the impairment be present in your site's construction stormwater discharges?
09A-18	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
0B-10	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

f. If yes for e above, are your discharges consistent with the assumptions and requirements of the TMDL(s)? Yes No
 (NOTE: If no for f, this site is NOT eligible for coverage under the CGP). See instructions.

VI. Signatures and Certifications DO NOT SIGN IN BLACK INK! Read the Certifications below (in entirety). Provide date, printed name, and signatures below. If you are a New Owner/Operator, as Primary Permittee you must also sign and date the applicable Comprehensive SWPPP Acceptance & Compliance Agreement below.

C-SWPPP PREPARER: "One copy of the C-SWPPP, all specifications and supporting calculations, forms, and reports are herewith submitted and made a part of this application. I have placed my signature and seal on the design documents submitted signifying that I accept responsibility for the design of the system. Further, I certify to the best of my knowledge and belief that the design is consistent with the requirements of Title 48, Chapter 14 of the Code of Laws of SC, 1976 as amended, pursuant to Regulation 72-300 et seq. (if applicable), and in accordance with the terms and conditions of SCR100000." (This should be the person identified in Section III).

FRANK DAVID STUBBS
 Printed Name of C-SWPPP Preparer

[Signature]
 Signature of C-SWPPP Preparer

WSE
 S. C. Registration #

PRIMARY PERMITEE: "I or I (on behalf of my company and its contractors and agents), as the case may be, certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I understand that DHEC enforcement action may be taken if the terms and conditions of the C-SWPPP are not met and I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

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AUG 28 2013

"I or I (on behalf of my company and its contractors and agents), as the case may be, also hereby certify that all land-disturbing construction and associated activity pertaining to this site shall be accomplished pursuant to and in keeping with the terms and conditions of the approved plans and SCR100000. I also certify that a responsible person will be assigned to the project for day-to-day control. I hereby grant authorization to the S. C. Department of Health and Environmental Control (DHEC) and/or the local implementing agency the right of access to the site at all times for the purpose of on site inspections during the course of construction and to perform maintenance inspections following the completion of the land-disturbing activity." (See Section 122.22 of S.C. Reg. 61-9 for signatory authority information.) Having understood the above information, I am signing this certification as Primary Permittee to the aforementioned NPDES general permit."

Linda Tulew
 Printed Name of Primary Permittee
[Signature]
 Signature of Primary Permittee

City Administrator
 Title/Position
5/16/2013
 Date Signed



CHARLESTON
COUNTY
SOUTH CAROLINA

Public Works Department

James R. Neal
Director

843.202.7600
Fax 843.202.7601
jneal@charlestoncounty.org
Lonnie Hamilton, III
Public Services Building
4045 Bridge View Drive, Suite A301
North Charleston, SC 29405-7464

August 22, 2014

City of Isle of Palms
Attn: Ms. Linda Tucker
P.O. Drawer 508
Isle of Palms, SC 29451

RE: 45TH TO 52ND AVENUE DRAINAGE IMPROVEMENTS
TMS #: 571-12-00-208 (multiple)
Permit #: 2014-03-03-257

CONDITIONAL STORMWATER PERMIT

Dear Ms. Tucker,

A review of the referenced project has been completed. Due to additional permits needed from other State or Federal agencies, conditional approval is given.

You must obtain the other necessary permits and submit proof to the Public Works Department that such permits have been obtained. At that time, Charleston County will issue final approval and a County permit can be issued.

If we can be of further service, please let us know.

Sincerely,

Neil J. Desai, P.E.
Stormwater Program Manager

cc: Civil Site Environmental, Inc.
File



American Public Works Association


www.charlestoncounty.org



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

Coastal Zone Consistency Certification

To: Richard Geer, Project Manager, EQC BOW Coastal Stormwater Permitting
From: Tara Maddock, Project Manager, OCRM Coastal Zone Consistency 
Cc: Curtis Joyner, Manager, OCRM Coastal Zone Consistency
Re: 45th to 52nd Avenue Drainage Improvements
Site location: 45th to 52nd Avenues, Isle of Palms, Charleston County
Date: September 13, 2013
CZC #: CZC-13-0808
PN#: SCR10S691

The staff of the Office of Ocean and Coastal Resource Management (OCRM) has reviewed the above referenced Coastal Zone Consistency request for drainage improvements within existing roadways and residential areas and certifies that the above referenced project is **Consistent** with the (1) Transportation Facilities – Roads and Highways and (2) Stormwater Management Guidelines policies contained in the S.C. Coastal Zone Management Program provided that:

- the storage of the first one half (1/2) inch of runoff for the entire site or storage of the first one (1) inch of runoff from the built upon portion of the property, whichever is greater. Storage may be accomplished through retention, detention, or infiltration systems, as appropriate for the specific site.
- in the event that any historic or cultural resources and archaeological or paleontological remains are found during the course of work, the applicant must notify the State Historic Preservation Office and the South Carolina Institute of Archaeology and Anthropology pursuant to South Carolina Code of Laws. Historic or cultural resources consist of those sites named to the National Register and those sites that are eligible for the National Register and other areas of special historic significance. Archaeological remains consist of any materials made or altered by man, which remain from past historic or prehistoric times (ie, older than 50 years). Examples include old pottery fragments, metal, wood, arrowheads, stone implements or tools, human burials, historic docks, structures, or non-recent vessel remains. Paleontological remains consist of old animal remains, original or fossilized, such as teeth, tusks, bone, or entire skeletons and;

This certification shall serve as the final DHEC OCRM Coastal Zone Consistency approval for this permit and does not alleviate the applicant's responsibility to obtain other required local, state or federal approvals.

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

Ocean and Coastal Resource Management

Charleston Office • 1362 McMillan Avenue • Suite 400 • Charleston, SC 29405 • Phone: (843) 953-0200 • Fax: (843) 953-0201 • www.scdhec.gov

On Site Pollution Prevention Plan (OS-SWPPP) For Construction Activities:

Project/Site Name:

45th to 52nd Avenue Drainage
Improvements

Primary Permittee:

City of Isle of Palms

Project Address/Location:

45th to 52nd Avenues
City of Isle of Palms, SC

Permittee/Owner Contact:

P.O. Box 508
Isle of Palms, SC 29451
843-886-6428

SWPPP Preparer:

Civil Site Environmental
F. David Stevens
668 Marina Drive, Suite B-1
Charleston, SC 29492
843-849-8945
843-849-8974 (fax)

Day-to-Day Operator:

OS-SWPPP Preparation Date:

3-10-15

Modification Dates:

Modification I: ___/___/_____

Modification II: ___/___/_____

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Appendix G - Additional Site Logs and Records (OS-SWPPP** Only)	
Appendix H - Construction General Permit (CGP) - SCR100000	

**C-SWPPP is acronym for Comprehensive Storm Water Pollution Prevention Plan*

***OS-SWPPP is acronym for On-Site Storm Water Pollution Prevention Plan*

1.1 Narrative (CGP Section 3.2.1)

Construction Activities and BMP Summary

The project area is located in the City of Isle of Palms, Charleston County, South Carolina. The area is single family residential in nature with well established vegetation and landscaping. There is a mixture of developed and undeveloped lots within the area. This section of the Isle of Palms was developed over the years with little or no coherent storm water collection systems. Due to the lack of storm water facilities in some areas, runoff currently collects in the roadways, on driveways, and in yards where it ponds until it either infiltrates into the soil or evaporates.

The construction activities will be linear in nature and constitute the placement of storm drainage lines. The construction will be conducted in multiple phases. Construction will proceed from the lowest point in the proposed system to the highest point in the proposed system. Best Management Practices (BMPs) will be installed prior to construction where necessary and placed during construction as necessary to control sediment and erosion from pipe placement activities. Areas disturbed during construction will be stabilized immediately after activity is completed.

Pre-Development Conditions

The area is single family residential in nature with well established vegetation and landscaping. There is a mixture of developed and undeveloped lots within the area. The areas to be disturbed lie within South Carolina Department of Transportation rights of way as well as certain areas within the Wild Dunes Resort. Existing drainage is sporadic and no coherent system currently exists to fully drain the areas between 45th to 52nd Avenue. Areas within the Wild Dunes Resort drain ultimately to Morgan Creek.

Post-Development Conditions

Overall site conditions in the post development condition will be unchanged from pre development from a land usage standpoint. Minimal regrading of the areas along the proposed drainage line route will not affect the overall existing conditions with the exception of providing a coherent drainage system to collect and route stormwater runoff.

Pre vs. Post Development Runoff Comparison

Pre-Construction Pond System Outfall Discharges

NODE	2YR DISCHARGE CFS	10YR DISCHARGE CFS	25YR DISCHARGE CFS	100YR DISCHARGE CFS
OUFALL	38.06	72.67	78.40	91.30
OUFALL 2	0.0	0.0	0.0	0.0
OUTFALL 3	19.24	30.52	35.22	46.26
TOTAL	57.3	103.19	113.62	137.56

Post Construction Pond System Outfall Discharges

NODE	2YR DISCHARGE CFS	10YR DISCHARGE CFS	25YR DISCHARGE CFS	100YR DISCHARGE CFS
OUFALL	38.48	72.90	78.68	91.59
OUFALL2	7.62	18.98	22.77	24.34
OUTFALL 3	19.43	30.87	35.56	46.59
TOTAL	65.53	122.75	136.91	162.52
INCREASE OVER PRE	8.23	19.56	23.29	24.96

Note: System outfalls are into tributary/marsh areas of the Atlantic Intercoastal Waterway therefore the increase in post development discharge rate will not create downstream flooding issues.

Flooding Issues

The project area is located in Flood Zones VE(16), VE(17), AE(13), AE(14), AE(15), AE(16) as shown on FIRM Community Panels #45019C 05161J and #45019C 0542J (Nov, 17, 2004). There is presently flooding of varying degrees along the ends of the Avenues between 45th Avenue to 52nd Avenue (inclusive) during most storm events. The proposed project will not alter the existing grading patterns but is being undertaken to help alleviate the flooding conditions in these areas.

1.2 Stormwater Management and Sediment Control (CGP Section 3.2.2)

Erosion Prevention BMPs

The proposed project is for the installation of storm drainage lines. Construction will be linear in nature proceeding from the lowest elevation point of the system to the highest.

Each erosion prevention measure shall be selected on a site-specific basis and details have been provided on the construction site plans. The plans identify all proposed

Erosion Prevention BMPs and the recommended installation, maintenance, and inspection procedures.

Examples of Erosion Prevention BMPs are, but are not limited to, surface roughening, temporary seeding, erosion control blankets, turf reinforcement mats, sodding, riprap, outlet protection, and dust control. Information on the design and proper use of Erosion Prevention BMPs can be located in the [SC DHEC's BMP Handbook](#).

Sediment Control BMPs

Sediment Control BMPs are designed to remove some of the sediment accumulated within stormwater runoff, to the best extent practicable. These BMPs help prevent sediment impacts to adjacent properties and water bodies from stormwater discharges originating from construction sites.

Typically these BMPs are placed near each of the site's outfalls and are installed prior to clearing and grubbing of the site (before large areas of soil are exposed). However, these BMPs can also be located throughout the construction site and, in these circumstances, are installed after mass grading has occurred. Placement, sizing and modifications of Sediment Control BMPs should be left to the SWPPP preparer and/or the Site Engineer. **Contractors must consult the SWPPP Preparer as listed at the front of this SWPPP before making any significant changes to these BMPs.**

Each sediment control BMP shall be selected on a site-specific basis. Examples of Sediment Control BMPs are, but are not limited to sediment traps, sediment basins, silt fence, rock check dams, rock sediment dikes, sediment tubes, and inlet protection. Please consult [SC DHEC's BMP Handbook](#) for more information on Sediment Control BMPs.

Structural Control BMPs and Floodplain Placement

This site-specific SWPPP utilizes the following structural control BMPs: **silt fencing and inlet protection**. These practices have been designed to either divert flows from exposed soils, to retain/detain flows, and to otherwise limit the runoff and the discharge of pollutants from disturbed areas of the construction site.

Throughout the lifespan of the construction project these BMPs will be installed and maintained, as required by the SWPPP and the construction site plans, until final stabilization has been achieved for the areas draining to each BMP. Upon final stabilization, each structural control BMP must be modified to the post-construction conditions shown within the approved construction site plans or removed, if the structural BMP was a temporary structure.

Construction Entrances and Dust Control

Given the linear natures of the construction project the use of a standard construction entrance for the project work is impractical. However, the contractor shall take all necessary steps to ensure sediment is not transported or carried by vehicles from the immediate area of the trenching necessary for the installation of the storm drainage. The

contractor shall sweep clean any sediment tracked onto roadways, sidewalks or other paths at the end of each work day.

During extremely dry conditions, drought, and/or excessive winds, the construction site should be treated for dust control to prevent the suspension of fine sediment particles into the air, being carried offsite, and deposited on adjacent properties or surface waters. This practice may not be directly called out for on the construction site plans. A water tanker used to spray the soil down may be an effective way to prevent excessive dust at a construction site.

Water Quality BMPs During Construction

Site-specific water quality BMPs (e.g., sediment basins, sediment traps, rock check dams, and rock sediment dikes) must be installed prior to the mass clearing, grubbing and grading of the site, and must be kept in functioning order throughout the lifespan of all construction activities. Each of these BMPs must be maintained and inspected until all areas draining to these BMPs have reached final stabilization, approved by the construction site inspector or the SWPPP Preparer, and recorded within the stabilization log located as an appendix of the On-site SWPPP.

The location, installation procedures, and maintenance procedures for each water quality BMP can be found within the approved construction site plans.

Post-Construction Water Quality

All construction sites disturbing 5 acres or more, including construction activities associated with Larger Common Plans disturbing 5 acres or more (for sites located within an MS4 this may be 1 acre or more), must be designed to treat water quality post-construction. These water quality controls must be installed and stabilized prior to terminating coverage under the CGP. These controls will require routine maintenance to remain functional; this is to be conducted by the Primary Permittee or the entity that accepts responsibility for these structures once construction has been completed. Additional information, including permanent maintenance and inspection procedures, can be found in **Appendix C** of the OS-SWPPP or within the construction site plans.

Upon final stabilization, each construction site will have to make the transition from temporary BMPs to permanent BMPs. This transition may include the conversion of a sediment basin to a detention basin, a sediment trap to a bioretention area, or diversion swales to permanently vegetated swales. All post-construction (permanent) water quality and water quantity BMPs are identified in the final phase of the Erosion and Sediment Control located within the construction site plans.

Other Stormwater Management Procedures

Based on the nature, conditions, and/or procedures associated with this construction site, the following items must be followed and adopted by all those conducting land disturbing activities at this site:

- All construction debris must be stockpiled in designated areas, which have been provided with the proper BMPs to prevent the discharge of pollutants through stormwater runoff from building or other similar materials off-site or into surface waters.
- Any additional waste material or stockpile material (i.e., soil and mulch) must also be stored in the designated areas as shown on the Construction Site Plans or as the contractor, responsible for day-day activities at this site, deems appropriate. Silt fence or an approved equal shall surround all stockpiled materials.
- All parties conducting work at this construction site must be informed of and make note of pollutant sources, both industrial and construction, at this site, and be informed of all controls and measures that will be implemented to prevent the discharge of these pollutants in stormwater runoff.
- Any additional non-stormwater discharges, as referenced in the CGP, should be eliminated or reduced to the maximum extent feasible. All unpreventable non-stormwater discharges shall be treated through the approved stormwater management system before release off-site. Following is a list of allowable non-stormwater discharges:
 - Fire hydrant flushing
 - Wash water without detergents
 - Water used for dust control
 - Potable water
 - Building wash down water without detergents
 - Uncontaminated pavement wash water
 - Uncontaminated condensation from mechanical equipment
 - Uncontaminated ground or spring water
 - Water from foundation of footing drains
 - Uncontaminated excavation dewatering
 - Landscape irrigation.

1.3 Sequence of Construction

The construction sequence for this project has been provided on **sheet SWP** of the construction site plans. Each item/step of that construction sequence has been listed in the sequence that they should be implemented.

For additional information or questions on the sequencing please contact the SWPPP Preparer or the Permittee referenced on the cover of this SWPPP.

1.4 Non-Numeric Effluent Limits

Stormwater Volume and Velocity Control

During the implementation of construction activities, all parties performing work at this construction site whose work may affect the implementation of the SWPPP must be informed of and directed on how to comply with this Non-Numeric Effluent Limit, which requires the management of stormwater runoff **within** the construction site and at **each**

outfall. The purpose of this requirement is to control the stormwater volume and velocity at these locations to minimize erosion.

Specifically, each responsible party should be made aware of the practices that have been or should be implemented at the construction site to accomplish these particular stormwater management practices. Below is a list of practices that may be utilized within the disturbed area and at each outfall at construction sites to control stormwater volume and velocity:

Volume Control

- Limiting the amount of disturbed area and exposed soils
- Staging and/or Phasing of the Construction Sequence;
- Sediment Basins and Sediment Traps
- Diverting off-site flow around the construction site;
- Controlling the Drainage Patterns within the Construction Site;
- Temporary Stabilization of Disturbed Areas.

Velocity Control

- Surface Roughening and/or other Slope Stabilization Practices;
- Level Spreaders, Riprap Plunge Pools and/or other Velocity Dissipation BMPS located at the Construction Site's and Sediment Basin Outfalls.
- Use of Rock Checks, Sediment Tubes, Etc. in Temporary Diversions Swales and Ditches.
- Use of Erosion Control Blankets, Turf Reinforcement Mats, and other Non-Vegetative BMPs that can be used to Quickly Stabilize Disturbed Areas.

The SWPPP Preparer/Engineer should approve any modifications (Additional BMPs or Changes to Existing BMPs) to address the management of stormwater volume and velocity prior to implementation. All approved SWPPPs that were issued coverage under the CGP should include ample BMPs and other control measures to address this specific Non-Numeric Effluent Limit.

Soil Exposure, Compaction and Preservation

Throughout construction activities, **the amount of soil exposed during construction should be kept to a minimum.** This may be accomplished by minimizing the amount the disturbed area within the permitted Limits of Disturbance (shown on the approved construction site plans) to only that which is necessary to complete the proposed work. For areas that have already been disturbed and where construction activities will not begin for a period of 14 days or more, temporary stabilization techniques must be implemented.

Prior to implementation of any major grading activities, **topsoil is to be preserved** by placing it in areas designated for stockpiling until final grades are reached. Each stockpile must be equipped with proper sediment and erosion controls to preserve the topsoil and protect adjacent areas from impacts. Once final grades have been reached, the preserved topsoil should be utilized to apply to areas identified for stabilization. Topsoil contains nutrients and organisms that aid in the growth of vegetation.

The **Compaction of Soil** should also be minimized to the degree practicable during grading activities. This is especially important during the replacement of topsoil to aid in a quick establishment of vegetative cover. Compaction of soil may also reduce rainfall's ability to infiltrate into the soil, increasing the amount of stormwater runoff.

Soil Stabilization

Throughout construction activities, soil stabilization techniques are to be initiated as soon as practicable whenever any clearing, grading, excavating, or other land-disturbing activities have permanently or temporarily ceased on any portion of the construction site and will not resume for a period exceeding 14 calendar days. For areas where initiating stabilization measures is infeasible, (e.g., where snow cover, frozen ground, or drought conditions preclude stabilization), initiate vegetative or non-vegetative stabilization measures as soon as practicable.

Steep Slopes (Slopes of 30% grade or greater)

All disturbed steep slopes (30% grade, ~3H:1V, or greater), and steep slopes to be created through grading activities must be managed in a fashion that limits the potential of erosion along the slopes. All parties whose work is/was responsible for the creation/disturbance of steep slopes must comply with the following items:

- **Minimize the Disturbance** of all steep slopes, when possible.
- **Divert Concentrated or Channelized Flows** of stormwater away from and around steep slope disturbances.
- **Use Specialized BMP Controls** including temporary and permanent seeding with soil binders, erosion control blankets, surface roughening, reducing continuous slope length with terracing or diversions, gradient terraces, interceptor dikes and swales, grass-lined channels, pipe slope drains, subsurface drains, level spreaders, check dams, seep berms, and triangular silt dikes to minimize erosion.
- **Initiate Stabilization Measures** as soon as practicable on any disturbed steep slope areas where construction activities have permanently or temporarily ceased, and will not resume for a period exceeding 7 calendar days.
- **A Vegetative and/or Non-Vegetative Cover** must be established within 3 working days from the time that stabilization measures were initiated.

Stabilization of steep slopes should be a priority for those performing work at the construction site. At the very least, runoff control BMPs should be implemented to transport stormwater runoff from the top of the slope to the toe of the slope. An example of this is to install diversion swales along the top of slope and direct the runoff towards pipe slope drains to transport the runoff to the toe of the slope. All pipe slope drain outlets are to be equipped proper outlet protection.

Sediment Discharge Minimization

Permittees, Contractors, and all other parties responsible for conducting land-disturbing activities are required to install and maintain all erosion and sediment BMPs that are

identified on the approved construction site plans. These BMPs have been designed and approved to address such factors as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soils particle sizes expected to be present on the construction site. **Proper installation, inspection, and maintenance will allow these BMPs to operate at maximum efficiencies in order to minimize sediment discharges to the maximum extent practical.**

Pollutant Discharge Minimization

Permittees, Contractors, and all other parties responsible for conducting land-disturbing activities are required to install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, the following items must be implemented:

- **Minimize the discharge of pollutants from dewatering trenches and excavations** by managing runoff with the appropriate controls. Otherwise these discharges are prohibited;
- **Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters.** Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
- **Minimize the exposure of building materials, building products, construction wastes, trash,** landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to stormwater; and
- **Minimize the discharge of pollutants from spills and leaks** and implement chemical spill and leak prevention and response procedures.

Prohibited Discharges

Permittees, Contractors, and all other responsible parties for conducting land-disturbing activities are prohibited to discharges, from the construction site, the following items:

- **Wastewater from washout of concrete,** unless managed by an appropriate control;
- **Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;**
- **Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;** and
- **Soaps or solvents used in vehicle and equipment washing.**

1.5 Buffer Zone Management

Buffer Zone Narrative (Compliance Option C)

Per Section 3.2.4.C of the CGP, a buffer zone is required to be provided; however, an undisturbed buffer zone is not capable of being provided due to existing development

within the project area and the linear nature of the construction activity. For this reason, Compliance Option C was selected for this project.

Compliance Option C was selected since existing site conditions sit within the area where a buffer would normally be provided.. For this reason, a buffer zone will not be provided as allowed through Compliance Option C listed in Section 3.2.4.C of the CGP.

All perimeter BMPs and sediment control BMPs, as shown on **the drainage and erosion control sheets** of the construction site plans, are to be installed prior to the discharge of stormwater runoff into the adjacent surface water from disturbed areas. Inspection and maintenance of these BMPS are to be conducted until final stabilization is reached. All maintenance procedures and inspection requirements for these BMPs can be found in the construction plan notes and details.

1.6 Certification Statement

"I have placed my signature and seal on the design documents submitted signifying that I accept responsibility for the design of the system. Further, I certify to the best of my knowledge and belief that the design is consistent with the requirements of Title 48, Chapter 14 of the Code of Laws of SC, 1976 as amended, pursuant to Regulation 72-300 et seq. (if applicable), and in accordance with the terms and conditions of SCR100000."



Name David Jones

Title Pres

Date 3/16/15

(Signature and Seal)

Section 2

2.1 Sources of Pollution

Throughout construction activities, each permittee, contractor, and person responsible for conducting work will need to ensure that sources of pollution are managed to prevent their discharge from the construction site. Expected pollution sources during construction have been identified in **Table 2.1-A**, but due to the nature of construction activities, it is often tough to predict all pollution sources that may appear throughout the life of a construction project. For that reason, the following table has also been provided to help all those performing work at this construction site identify possible sources of pollution

Stormwater runoff subjected to the identified pollution sources must be treated by the appropriate BMPs as directed by this SWPPP.

In the event that any additional sources of pollution are identified during construction, the person(s) with day-to-day operational control at the site is to add the new source(s) to **Table 2.1-A** and consult with the SWPPP Preparer to properly address this source and to prevent the discharge of it's pollutant through stormwater runoff.

Table 2.1-A: Potential Sources of Pollution

Source	Material or Chemical	Location*	Appropriate Control Measures
Loose soil exposed/disturbed during clearing, grubbing and grading activities	Sediment	All areas within the Limits of Disturbance	As directed by the construction Plans. This includes Silt Fence, sediment tubes, sediment basins, and sediment traps.
Areas where construction equipment are cleaned, a.k.a. concrete washout	Heavy Metals & pH	Located adjacent to each construction entrance	Concrete Washout Basin.
Water encountered during trenching	Nutrients & Sediment	In and around any trenching activities.	Direct water into impoundments such as basins or traps to allow for the sedimentation of the listed pollutants.
Paving Operations	Sediment & Trash	All areas to be paved.	Inlet protection.
Material Delivery and Storage Areas	Nutrients, pH, Sediment, Heavy Metals, oils & grease	All areas used as storage areas	Silt fence and/or sediment dikes
Equipment fueling and maintenance areas	Metals, hydrocarbons, oils and greases	Areas surrounding fuel tanks	Provide secondary containments, locate in upland areas. Repair leaking and broken hoses.

Paints	Metal oxides, stoddard solvent, talc, calcium-carbonate, arsenic	Throughout site, primarily in areas of building construction	Washwater should be contained and is prohibited from being discharged
Fertilizer	Nitrogen, Phosphorus	Lawn, landscaped areas	Apply per manufacturer recommendations only in amounts needed
Pesticides	Hydrocarbons, organophosphates	Varies	Use minimal amount necessary applied per recommended rates

2.2 Surface Waters

Stormwater runoff from the proposed construction site will discharge into inlets being installed as part of this project. Perimeter and inlet controls have been specified to prevent impacts to the downstream areas. Disturbance of the existing site will be minimized during construction.

2.3 Impairments and TMDLs

Some Waters of the State (WoS) have been identified as not meeting the State’s water quality standards for recreational swimming, fish consumption, aquatic life use, and/or shellfish harvesting for one or more pollutants even after controls for point and nonpoint source pollution have been put in place. These waterbodies have been classified as “impaired.” Once these waterbodies have been identified they are listed on the State’s 303(d) List of Impaired Waterbodies. South Carolina lists impairments as “stations” where samples were taken along a waterbody.

The most recently-approved 303(d) list can be found at the following link:

<http://www.scdhec.gov/environment/water/tmdl/index.htm#4>

After a pre-determined period of time, DHEC is obliged to develop a Total Maximum Daily Load (TMDL) for the pollutant of concern for each impaired station listed on the 303(d) List. A TMDL is the amount of a single pollutant (such as bacteria, nutrients, metals) that can enter a waterbody on daily basis and that waterbody still meet water quality standards. “TMDL” refers to both a calculation of a pollutant entering a waterbody as well as the document containing this calculation along with source

assessments, watershed and land use information, reductions and allocations information, implementation and other relevant information, maps, figures, and pictures.

Once a TMDL has been developed and approved by the EPA, the impaired WoS is removed from the 303(d) list. A separate list is maintained for WoS with approved TMDLs.

Any construction site whose discharges are released into a WoS listed on the 303(d) List or for which an EPA-approved TMDL has been developed must address the specific pollutant set forth in the TMDL and/or potential pollutants for the impairment. The SWPPP must include a description of BMPs to address these pollutants.

The primary permittee and/or contractor must ensure that the construction site discharges remain in compliance with the State's water quality standards. To do so, these parties will have to ensure the function of all approved BMPs to handle the specific pollutant.

Construction Stormwater Discharges are expected to contain pollutants that contribute and/or can cause the following impairments to receiving water bodies: BIO (Macroinvertebrate Community), Turbidity, TP (Total Phosphorus), TN (Total Nitrogen), CHLA (Chlorophyll-a), and Fecal Coliform in waters classified for Shellfish Harvesting in the coastal zone. The presence of any of these impairments in receiving waters will require approval control of the site's construction stormwater discharges. Information on each of these impairments and how to treat stormwater runoff for these impairments has been provided below.

Impairments Effected by Construction Site Discharges and Methods to Control Potential Pollutants Causing or Contributing to the Impairments

- 1. BIO (Macroinvertebrate Community):** A balanced and varied group of Macroinvertebrate organisms is an indicator of a healthy stream that supports aquatic life. A balanced community can be defined as a natural, diverse group of organisms (including Macroinvertebrate) characterized by the ability to sustain itself through season changes, presence of food chain species and a lack of domination by pollutant tolerant or invasive species. If these conditions do not exist, then the site may be considered impaired due to the presence of an undesirable or non-existent Macroinvertebrate community. Sediment from construction sites may further threaten the propagation of these organisms.

Address by: Examples include limiting the amount of disturbed area, designing sediment control BMPs to remove the maximum amount of sediment possible, immediate stabilization of disturbed areas, and other practices may be utilized to control the discharge of sediment from construction sites.

- 2. Turbidity:** Turbidity can be generally defined as the "cloudiness" of a waterbody and may be caused by the growth of aquatic phytoplankton and the presence of suspended solids in the water column. In SC, a water quality standard for turbidity is applicable to all waters of the State (see R. 61-68 D. 11. for numeric

targets by waterbody classification). Turbidity levels that exceed the water quality standard may reduce light penetration, thereby inhibiting aquatic flora growth, and may reduce the ability of fauna, such as fish, to absorb oxygen across their gills.

Address by: Examples include limiting the amount of disturbed area, designing sediment control BMPs to remove the maximum amount of sediment possible, immediate stabilization of disturbed areas, and other practices may be utilized to control the discharge of sediment from construction sites.

- 3. TP (Total Phosphorus):** Similar to total nitrogen, TP is an essential nutrient for the propagation of aquatic life. In SC, a water quality standard for TP is applicable to lakes greater than 40 acres (see R. 61-68 D. 11. for numeric and narrative targets). At acceptable levels, TP is assimilated by aquatic flora ensures the propagation of an overall balanced, indigenous aquatic community. TP levels that exceed the water quality standard are considered impaired and may cause negative impacts to the overall health of the aquatic community by promoting excessive algal growth in lakes. Phosphorous may enter a site's stormwater when excess amounts of the nutrient are applied to the site during temporary or final stabilization.

Address by: To prevent this soil should be tested to determine the quantity of the nutrient present in the soil and the correct amount that needs to be added so that it is absorbed by the vegetation.

- 4. TN (Total Nitrogen):** Similar to total phosphorus, TN is an essential nutrient for the propagation of aquatic life. In SC, a water quality standard for TN is applicable to lakes greater than 40 acres (see R. 61-68 D. 11. for numeric and narrative targets). At acceptable levels, TN is assimilated by aquatic flora and ensures the propagation of an overall balanced, indigenous aquatic community. TN levels that exceed the water quality standard are considered impaired and may cause negative impacts to the overall health of the aquatic community by promoting excessive algal growth in lakes. Nitrogen may enter a site's stormwater when excess amounts of the nutrient are applied to the site during temporary or final stabilization

Address by: Examples include that the soil should be tested to determine the quantity of the nutrient present in the soil and the correct amount that needs to be added so that it is absorbed by the vegetation.

- 5. Chlorophyll-a (CHLA):** CHLA is a pigment present in the cells of photosynthetic flora and some algal species. The presence of CHLA in an aquatic environment is a water quality indicator of the overall productivity in the aquatic system. CHLA is linked to the levels of TP, TN and light penetration in the water column. In SC, a water quality standard for CHLA is applicable to lakes greater than 40 acres (see R. 61-68 D. 11. for numeric and narrative targets). CHLA levels that exceed the water quality standard may suggest that other undesirable

water quality impacts are present as the aquatic system may be too productive to support the propagation of an overall balanced, indigenous aquatic community. Excess nutrients may discharge from a construction site during temporary and final stabilization. Limiting the amount of phosphorus and nitrogen applied while establishing vegetation will prevent excessive levels of CHLA in receiving waters.

Address by: Examples include that the soil should be tested to determine the quantity of the nutrients present in the soil and the correct amount that needs to be added so that it is absorbed by the vegetation.

- 6. Fecal Coliform (FC) in Shellfish Harvesting waters:** Fecal Coliform is an indicator bacteria for other pathogens which may be present in a waterbody. Shellfish Harvesting Waters are tidal salt waters protected for shellfish harvesting and must be protected to a higher standard than other waters because of the risk to human health posed by ingesting shellfish from areas with high levels of bacteria. Bacteria levels increase following rain events. Potential sources of bacteria on construction sites include improperly located porta-johns and litter that may attract rodents and other animals.

Address by: Porta-johns should be placed away from WoS and not placed on catch basins and other drainage structures. Litter and construction debris should be placed in identified areas and emptied on a routine basis.

Impairment Sources and Prevention

Construction sites can contribute to these impairments directly through the release of excess soil and/or nutrients within stormwater runoff. For this reason, proper sediment and erosion control BMPs should be implemented and the design of the stormwater management systems, during both construction and post-construction, should address the control of stormwater runoff. A reduction in the volume released or the rate at which this volume is released can significantly improve the quality of stormwater runoff and limit the amount of the pollutants that contribute to the above listed impairments.

As an example, sediment basins and/or traps should be used during construction to allow for sedimentation of soils/nutrients, and to control the release of stormwater into the impaired water body. Vegetated Detention and Infiltration structures should be implemented as post-construction BMPs to control stormwater volumes. Caution is advised when using fertilizers to reach Final Stabilization; excess fertilizer can contribute to each of the above listed impairments.

Site-Specific Requirements

Per SCDHEC R.61-69 Morgan Creek is classified as Class SFH (Shellfish). The nearest Water Quality Monitoring Station (WQMS) to the site is 09A-18 and 08-10 both in the Atlantic Intercoastal Waterway (AIWW). Station 09A-18 is listed on the 303(d) list as impaired for shellfish use for fecal coliform. Station 08-10 is not listed on the 303(d) list.

The project is not located within an approved TMDL.

2.4 Critical Areas (CZC only)

NOT APPLICABLE.

3.1 SWPPP Availability

OS-SWPP and construction plans will be maintained by site contractor and made available

3.2 Pre-Construction Conferences

A pre-construction conference must be held for each construction project or site with an approved On-Site Stormwater Pollution Prevention Plan (OS-SWPPP). Each contractor, subcontractor, blanket utility provider, etc., who will work at a site must attend this conference in person. The primary purpose of this conference is for:

1. The **preparer of the SWPPP** or someone with a registration equivalent to that of the preparer of the SWPPP; and/or
2. The **person with operational control** of the plans and specifications (the Primary or Secondary Permittee) or their duly authorized representative (as defined in Section 122.22(b) of SC Regulation 61-9)) to review and explain the On-Site SWPPP (OS-SWPPP) so that all are aware of the requirements before they start performing construction-related (land disturbing) activities that may affect the implementation of the approved OS-SWPPP. This conference may be held simultaneously with all contractors and builders present or may be conducted separately with one or more contractors, subcontractors, etc. present.

Pre-construction conference location requirements are defined below.

1. For non-linear construction projects/sites that disturb 10 acres or more, the pre-construction conference must be held on-site unless it is justified in the SWPPP and approved by the Department to conduct the conference off-site.
2. For non-linear construction projects/sites that disturb less than 10 acres, conferences may be held off-site unless specifically required in writing or as a condition of the approved OS-SWPPP by the Department or the respective MS4 to be conducted on-site.
3. For linear construction projects/sites that are not part of a Larger Common Plan (LCP), subdivision or other type of development, conferences may be held off-site unless specifically required in writing or as a condition of the approved OS-SWPPP by the Department or the respective MS4 to be conducted on-site.
4. For linear construction activities (within a LCP), conferences must be held in accordance with disturbed area (<10 acres or > 10 acres) criterion established for non-linear projects/sites in Items C.I and C.II above.
5. In addition, person(s) conducting the conference (Owner/Operator) may choose, at their discretion, to hold a conference normally held off-site, on-site.

3.3 Inspection Requirements

See Sheet SWP of the construction plan set for inspection frequency and requirements.

3.4 Maintenance Requirements

See construction plans for BMP placement and maintenance. Additional reference may be found in SCDHEC BMP handbook. In order to insure the proper functioning of the treatment facilities within the proposed development routine maintenance and inspection is a must. As such the following items must be incorporated into a routine schedule:

- 1) Units should be inspected post construction, prior to being put into service.
- 2) Inspect every six months for the first year to determine the oil and sediment accumulation rate.
- 3) In subsequent years, inspections can be based on first-year observations or local requirements. Cleaning is required once the sediment depth reaches 15% of storage capacity, (generally taking one year or longer). Local regulations for maintenance frequency may vary.
- 4) Inspect the unit immediately after an oil, fuel or chemical spill.
- 5) A licensed waste management company should remove oil and sediment and dispose responsibly.
- 6) Spreader structures should be checked for damage or obstruction. Any damage should be repaired by the entity responsible for maintenance. Any vegetation (weeds, cattails, etc) should be removed from the front of outfall structures. Likewise, any debris should be removed from outfall structures when discovered.
- 7) Routine maintenance of vegetation should be done as appropriate for growing seasons of the vegetation. Spring and summer maintenance should be more frequent than fall/winter maintenance. Maintenance should include mowing of grass and removal of vegetation around outfall structures. Refer to landscape plans for detailed maintenance information.
- 8) All areas disturbed by maintenance activities should be stabilized immediately upon completion of maintenance activity.
- 9) Town of Mt. Pleasant should be notified in writing of any changes in maintenance responsibilities or change of ownership.

Additional maintenance procedures recommended by the manufacturer should be followed per any schedules or recommendations provided with the owner's manual of the units.

3.5 Record Keeping

Inspection reports for each inspection required above, you must complete an inspection report. At a minimum, the inspection report must include:

1. the inspection date;
2. names, titles, and, if not previously given in an inspection report, the qualifications of personnel making the inspection, unless those qualifications change;
3. weather information for the period since the last inspection (or since commencement of construction activity if the first inspection) including a best estimate of the beginning of each storm event, duration of each storm event, approximate amount of rainfall for each storm event (in inches), and whether you know if any discharges occurred. at the very least, the total rainfall (in inches) since the time of the last inspection must be recorded;
4. weather information and a description of any discharges occurring at the time of the inspection;
5. location(s) of discharges of sediment or other pollutants from the site;
6. location(s) of bmps that need maintenance;
7. location(s) of bmps that failed to operate as designed or proved inadequate for a particular location;
8. location(s) where additional bmps are needed that did not exist at the time of inspection;
9. corrective action required including any changes to the os-swppp necessary and implementation dates;
10. site name, operator name and permit number; and
11. verification that all bmps and stormwater controls identified in the os-swppp have been installed and are operating as designed.

Inspection records. a record of each inspection and of any actions taken in accordance with this section must be retained as part of the on-site swppp for at least three years from the date that permit coverage expires or is terminated. the qualified inspector, as identified in section 4.2.e, must sign the inspection report.

Primary permittees. inspectors employed by the primary permittee retain the authority to inspect, report, and document areas of the construction site that are under direct control of the secondary permittee, but only when a lack of compliance by the secondary permittee inhibits the primary permittee's ability to maintain compliance with the overall os-swppp or this permit.

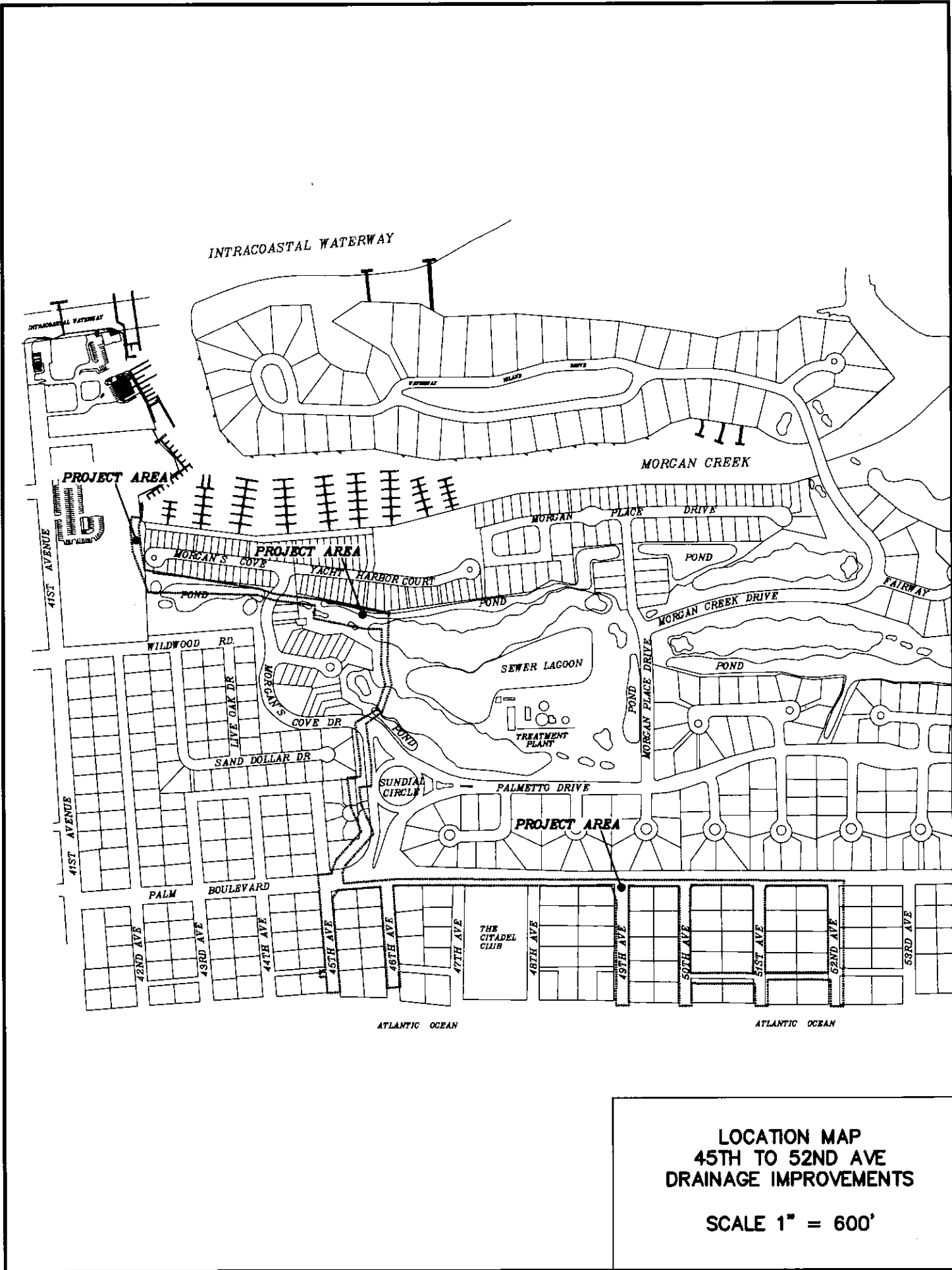
3.6 Final Stabilization

Final site stabilization shall be obtained through the use of impervious surfaces (buildings, parking areas) and landscaped areas. Additional stabilization shall be accomplished

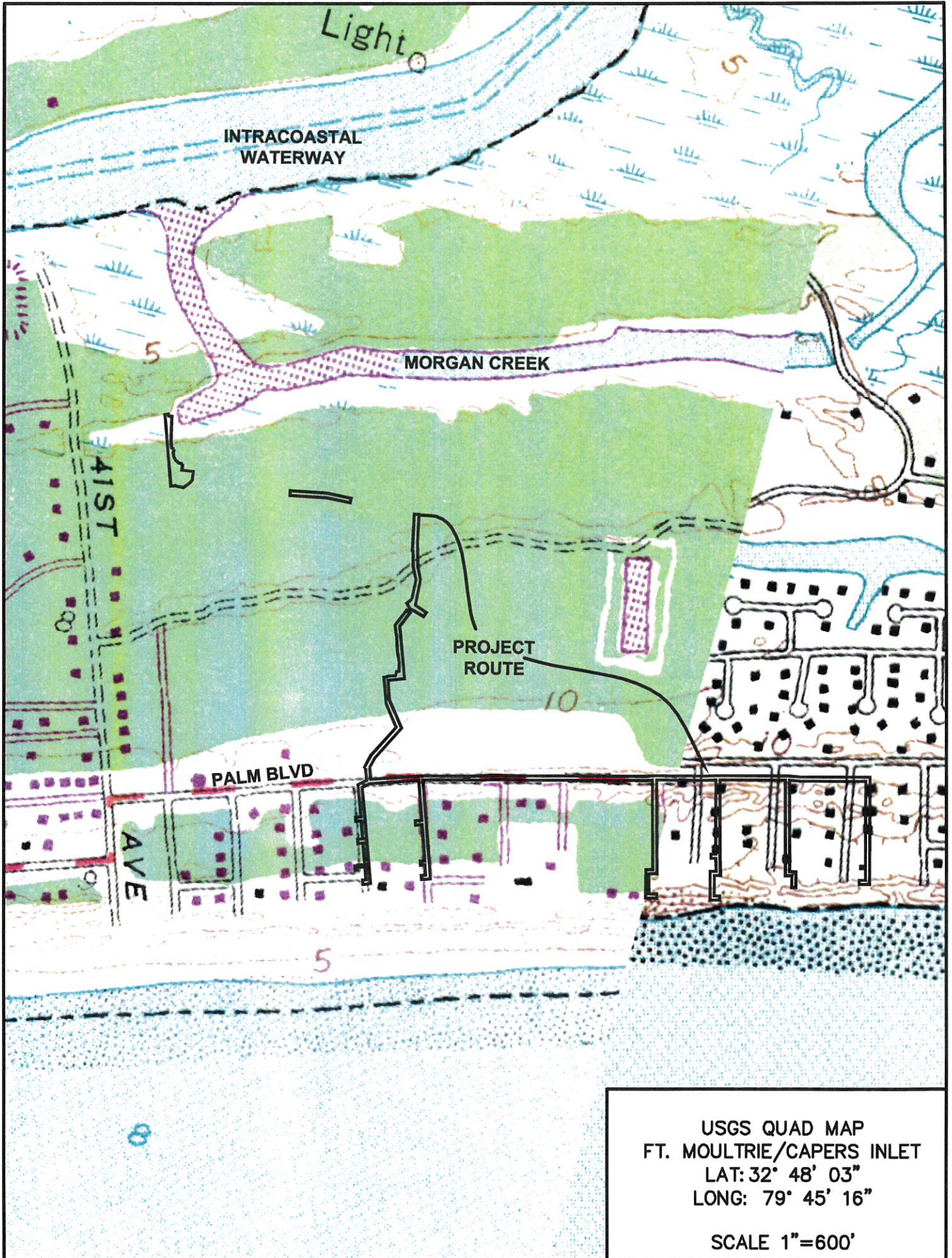
through permanent seeding. Once final stabilization is accomplished on all disturbed areas, the Notice of Termination should be submitted.

APPENDIX A
SITE MAPS

Additional maps and information can be found on site construction plans a copy of which should be kept accessible with this SWPPP.

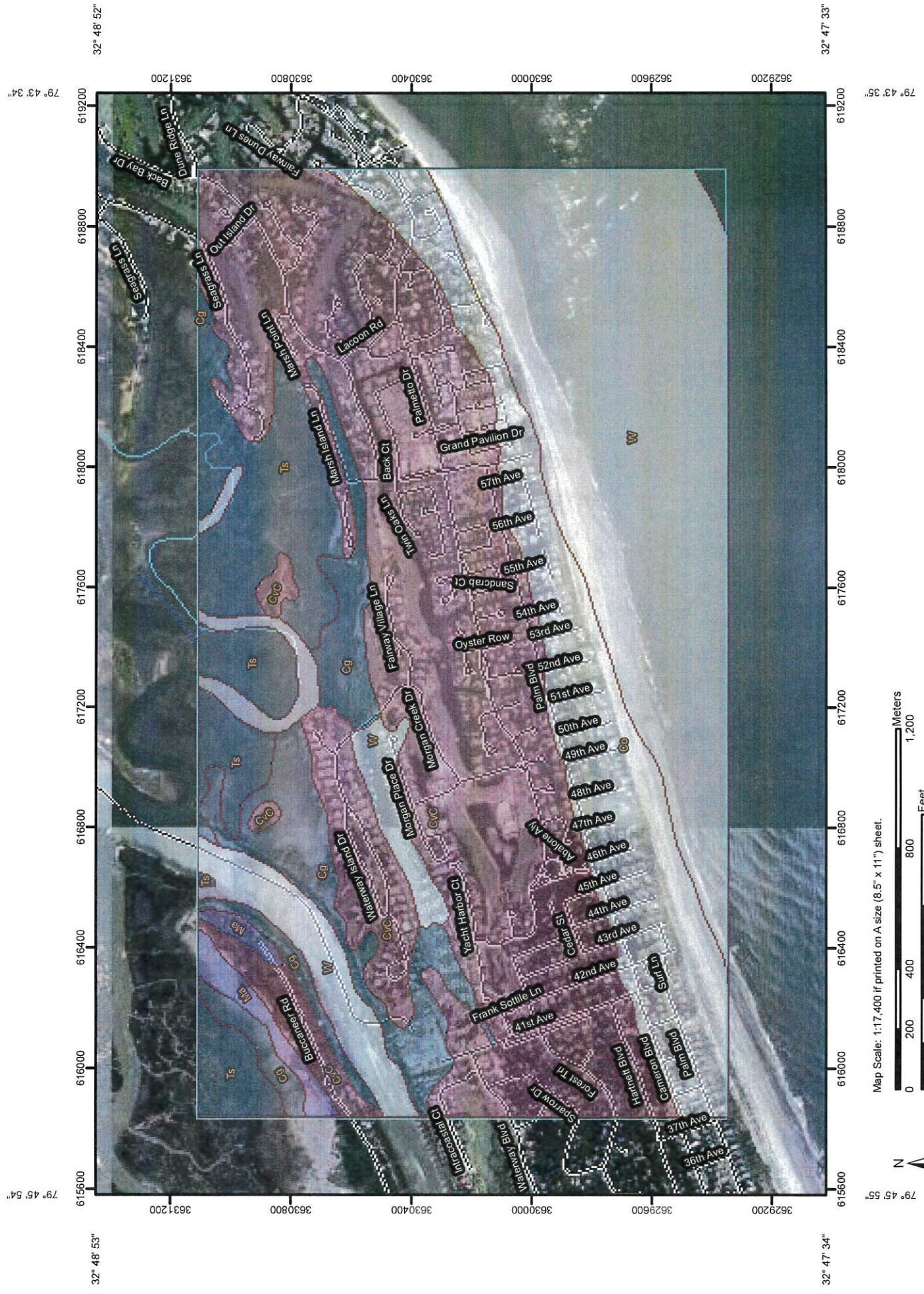


LOCATION MAP
45TH TO 52ND AVE
DRAINAGE IMPROVEMENTS
SCALE 1" = 600'




















USGS QUAD MAP
FT. MOULTRIE/CAPERS INLET
LAT: 32° 48' 03"
LONG: 79° 45' 16"
SCALE 1"=600'

Hydrologic Soil Group—Charleston County Area, South Carolina



MAP LEGEND

- Area of Interest (AOI)**
 -  Area of Interest (AOI)
- Soils**
 -  Soil Map Units
- Soil Ratings**
 -  A
 -  A/D
 -  B
 -  B/D
 -  C
 -  C/D
 -  D
 -  Not rated or not available
- Political Features**
 -  Cities
- Water Features**
 -  Streams and Canals
- Transportation**
 -  Rails
 -  Interstate Highways
 -  US Routes
 -  Major Roads
 -  Local Roads

MAP INFORMATION

Map Scale: 1:17,400 if printed on A size (8.5" x 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000. Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 17N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Charleston County Area, South Carolina
 Survey Area Data: Version 9, Oct 5, 2011

Date(s) aerial images were photographed: 7/21/2005; 6/9/2006

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Charleston County Area, South Carolina (SC690)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Cg	Capers silty clay loam	C/D	107.3	7.8%
Co	Coastal beaches and dune land		175.9	12.8%
CvC	Crevasse-Dawhoo complex, rolling	A	542.4	39.5%
Ma	Made land	B	17.1	1.2%
Ts	Tidal marsh, soft	C/D	131.7	9.6%
W	Water		396.0	28.8%
Subtotals for Soil Survey Area			1,370.3	99.8%
Totals for Area of Interest			1,373.4	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher



APPROXIMATE SCALE

MAP SCALE 1" = 500'



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
CHARLESTON COUNTY,
SOUTH CAROLINA
AND INCORPORATED AREAS

PANEL 561 OF 855

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

COMMUNITY:

JULMBEL PANEL SUREX

FILE OF PARAG. CITY OF

48348 0901 J

Map Note: The MAP NUMBER shown below should be used when placing the order. The COMMUNITY NUMBER shown below should be used on insurance applications for the subject community.

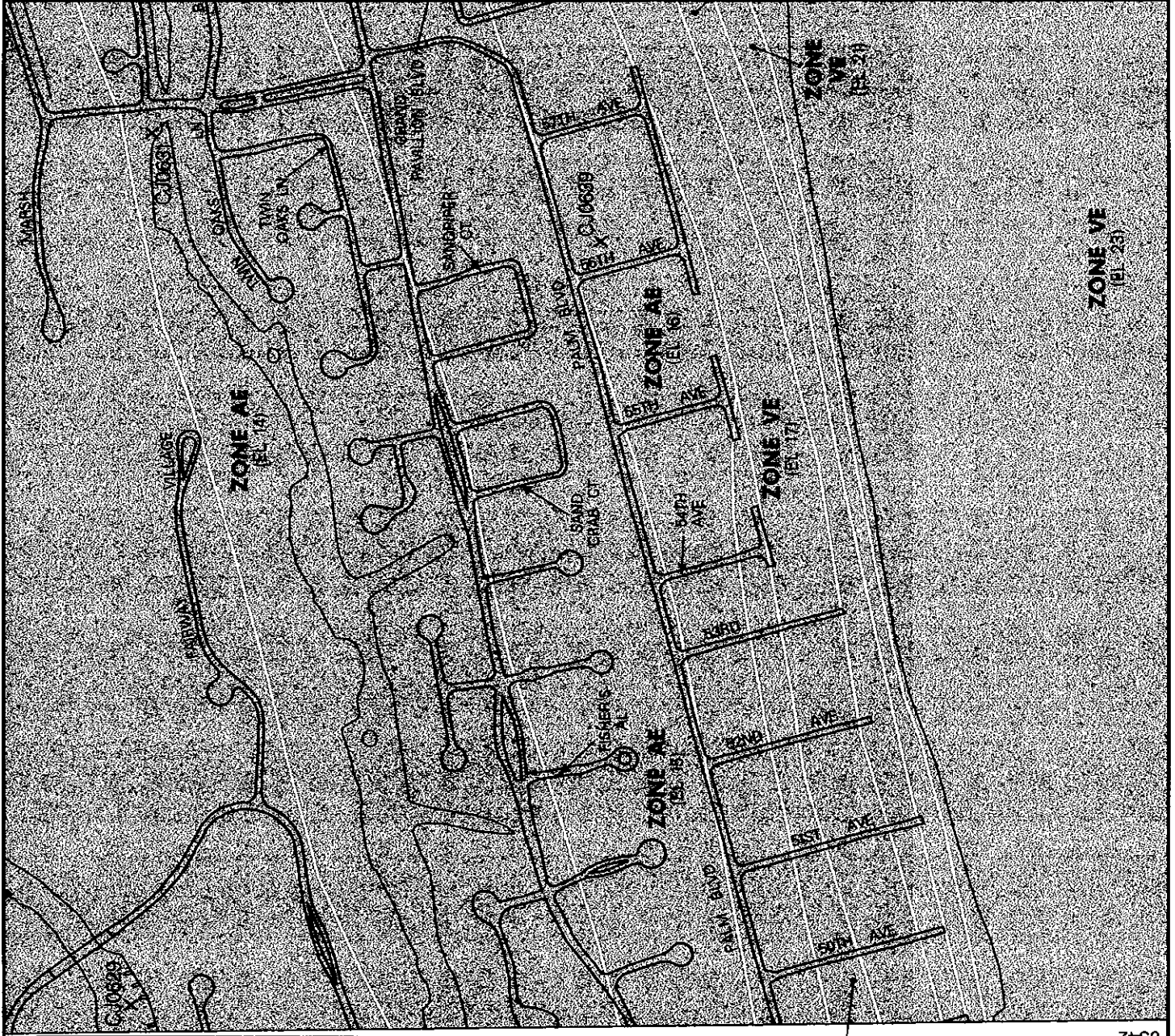
MAP NUMBER
450190356U

EFFECTIVE DATE:
NOVEMBER 17, 2004



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps, check the FEMA Flood Map Store at www.msc.fema.gov





APPROXIMATE SCALE

MAP SCALE 1" = 500'



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
 CHARLESTON COUNTY,
 SOUTH CAROLINA
 AND INCORPORATED AREAS

PANEL 542 OF 855

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
FILE OF PARISH, CITY OF	ASHB	0642	J
MOUNT PLEASANT, TOWN OF	48817	0642	J

Note to User: The MAP NUMBER shown below should be used when placing this order. The COMMUNITY NUMBER shown below should be used on insurance applications for the subject community.

MAP NUMBER
45019C0542J

EFFECTIVE DATE:
NOVEMBER 17, 2004



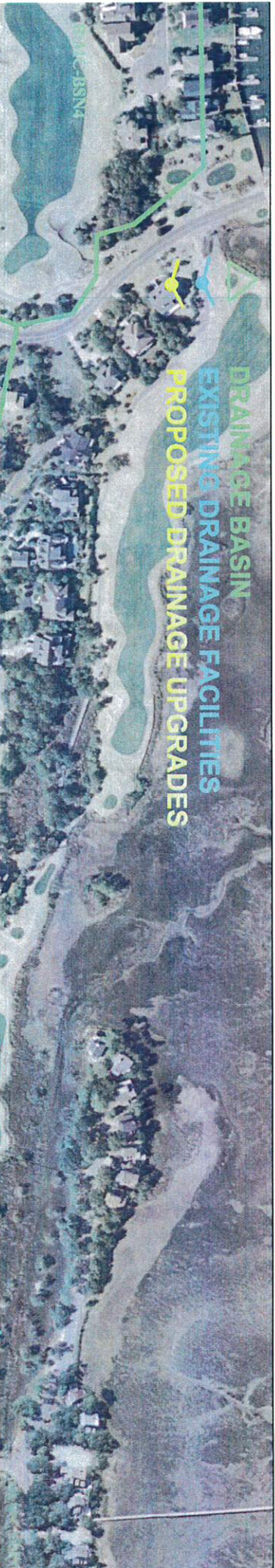
Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.nsc.fema.gov

JOINS PANEL 0561



APPENDIX B
DRAINAGE MAPS



ICPR NODE W/ BASIN



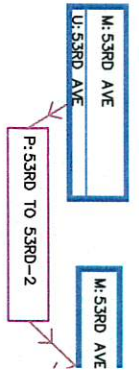
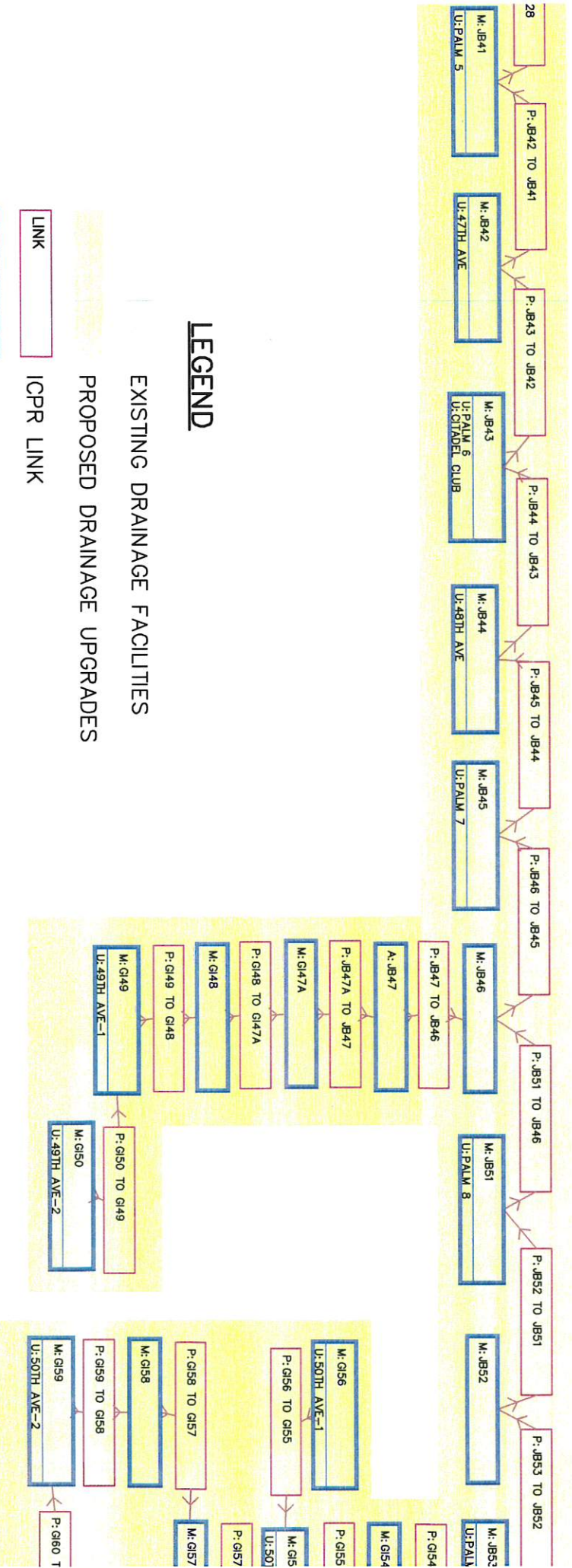
ICPR LINK



PROPOSED DRAINAGE UPGRADES

EXISTING DRAINAGE FACILITIES

LEGEND



APPENDIX C

APPROVALS/CERTIFICATIONS



CONTRACTOR CERTIFICATION FORM
For Coverage(s) Under South Carolina
NPDES General Permit For
Stormwater Discharges From Construction Activities SCR100000

(Maintain As Part of On-Site SWPPP)

Date: _____

A. Project Information

1. NPDES Coverage No.: SCR _____ State Permit (Tracking) No.: _____
2. Project/Site Name (As Approved by Department): _____
3. Owner/Operator Name: _____

B. Contractor Information

1. Name: _____ Title/Position: _____
Mailing Address: _____ City: _____ State: _____ Zip: _____
Company Name (As Applicable): _____
Phone: _____ Email Address: _____
2. Describe Construction-Related Responsibilities & Activities (Home construction, site grading, utility line installation, etc.):

C. Contractor Certification Statements & Agreement: *(Read the Contractor Certification statements below (in entirety) and provide date and signature of agreement below).* See Section 122.22 of S.C. Reg. 61-9 for signatory authority requirements. **DO NOT SIGN IN BLACK INK!**

"I certify by my signature below that I or I (on behalf of my company and its contractors and agents), as the case may be,

- (a) Understand, accept, and will adhere to the provisions of the Stormwater Pollution Prevention Plan (SWPPP) as it pertains to the portion of the project I am or my company is responsible for, and as required by the coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges From Construction Activities SCR100000 issued to the Owner/Operator of the construction activity with whom I am or my company is under contract to perform construction related professional services;
- (b) Am legally accountable to the SC Department of Health and Environmental Control (DHEC), under the authorities of the Clean Water Act and the SC Pollution Control Act, to ensure compliance with the terms and conditions of the SWPPP applicable to my or my company's portion of the project;
- (c) Must comply with the terms and conditions of the Construction General Permit (CGP), will adhere to applicable standards and stormwater erosion control practices established in the SWPPP and in the Best Management Practices (BMP) manual at all times while performing work at the project site, and agree to implement corrective actions identified by the qualified inspector during a site inspection; and
- (d) Understand that DHEC enforcement actions may be taken against any specific or combination of permittees and contractors if the terms and conditions of the SWPPP are not met.

Therefore, having understood the above information, I am signing this certification as contractor to the aforementioned NPDES general permit."

Printed Name of Contractor

Title/Position

Signature of Contractor

Date Signed

Termination of Contractor Certification Agreement: DO NOT SIGN IN BLACK INK!

(When your land-disturbing activities at this site have been completed, sign and date below). After this date, you may not perform any land-disturbing activities at this site unless you sign a new contractor certification agreement).

Signature of Contractor

Date Signed

CONTRACTOR CERTIFICATION FORM

NPDES Coverage No.: SCR _____

State Permit (Tracking) No.: _____

Project/Site Name: _____

C. Contractor Certification Statements:

All contractors performing any land disturbing activity at a construction site must be certified and listed in the On-Site SWPPP (OS-SWPPP) in order to work on the site. *Read the Certification statements below (in entirety) and provide date and signature of agreement below.*

"I certify by my signature below that I or I (on behalf of my company and its contractors and agents), as the case may be,

- (a) Understand, accept, and will adhere to the provisions of the Stormwater Pollution Prevention Plan (SWPPP) as it pertains to the portion of the project I am or my company is responsible for, and as required by the coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges From Construction Activities SCR100000 issued to the Owner/Operator of the construction activity with whom I am or my company is under contract to perform construction related professional services;*
- (b) Am legally accountable to the SC Department of Health and Environmental Control (DHEC), under the authorities of the Clean Water Act and the SC Pollution Control Act, to ensure compliance with the terms and conditions of the SWPPP applicable to my or my company's portion of the project;*
- (c) Must comply with the terms and conditions of the Construction General Permit (CGP), will adhere to applicable standards and stormwater erosion control practices established in the SWPPP and in the Best Management Practices (BMP) manual at all times while performing work at the project site, and agree to implement corrective actions identified by the qualified inspector during a site inspection; and*
- (d) Understand that DHEC enforcement actions may be taken against any specific or combination of permittees and contractors if the terms and conditions of the SWPPP are not met.*

Therefore, having understood the above information, I am signing this certification as contractor to the aforementioned NPDES general permit."

C. CONTRACTOR CERTIFICATION AGREEMENTS

(Sheet 1)

NPDES Coverage No.: SCR _____

State Permit (Tracking) No.: _____

Project/Site Name: _____

Please print legibly and complete all spaces on the form. *If you are an approved Blanket Utility Provider, you do not need to sign this form, but you must submit a copy of your Annual Blanket NOI registration information to the Owner/Operator.* Abbreviate if necessary and submit the completed form to the Owner/Operator. (When your land-disturbing activities at this site are complete, sign and date the termination agreement below. After this date, you may *not* perform any land-disturbing activities at this site unless you sign a new contractor certification agreement). **Additional certification agreement pages may be attached as necessary. DO NOT SIGN IN BLACK INK!**

Contractor Information:

Name: _____ Title/Position: _____

Company Name (As Applicable) _____

Mailing Address: _____ City: _____ State: ____ Zip: _____

Phone: _____ Email Address: _____

Contractor Certification (Signature of Agreement): Provide date and signature. **DO NOT SIGN IN BLACK INK!**

Signature of Contractor

Date Signed

Termination of Contractor Certification Agreement: Provide date and signature. **DO NOT SIGN IN BLACK INK!**

Signature of Contractor

Date Signed

Contractor Information:

Name: _____ Title/Position: _____

Company Name (As Applicable) _____

Mailing Address: _____ City: _____ State: ____ Zip: _____

Phone: _____ Email Address: _____

Contractor Certification (Signature of Agreement): Provide date and signature. **DO NOT SIGN IN BLACK INK!**

Signature of Contractor

Date Signed

Termination of Contractor Certification Agreement: Provide date and signature. **DO NOT SIGN IN BLACK INK!**

Signature of Contractor

Date Signed

Contractor Information:

Name: _____ Title/Position: _____

Company Name (As Applicable) _____

Mailing Address: _____ City: _____ State: ____ Zip: _____

Phone: _____ Email Address: _____

Contractor Certification (Signature of Agreement): Provide date and signature. **DO NOT SIGN IN BLACK INK!**

Signature of Contractor

Date Signed

Termination of Contractor Certification Agreement: Provide date and signature. **DO NOT SIGN IN BLACK INK!**

Signature of Contractor

Date Signed

C. CONTRACTOR CERTIFICATION AGREEMENTS
(Company Certifications)
(Sheet 2)

Use this sheet for certification agreements of contractors, subcontractors, etc. employed by the Contracting Company identified below **ONLY**. If you do not work for the company listed below, do not sign this sheet. If you are an approved Blanket Utility Provider, you do not need to sign this form, but you must submit a copy of your Annual Blanket NOI registration information to the Owner/Operator. Abbreviate if necessary and submit the completed form to the Owner/Operator. (When your land-disturbing activities at this site are complete, sign and date the termination agreement below. After this date, you may *not* perform any land-disturbing activities at this site unless you sign a new contractor certification agreement). **Additional certification agreement pages may be attached as necessary.** Please print legibly and complete all spaces on the form. **DO NOT SIGN IN BLACK INK!**

NPDES Coverage No.: SCR _____ State Permit (Tracking) No.: _____
Project/Site Name: _____

Contracting Company Information:

Company Name _____
Mailing Address: _____ City: _____ State: _____ Zip: _____
Phone: _____ Email Address: _____

Contractor Information:

Contractor Name: _____ Title/Position: _____

Contractor Certification (Signature of Agreement): Provide date and signature. **DO NOT SIGN IN BLACK INK!**

Signature of Contractor

Date Signed

Termination of Contractor Certification Agreement: Provide date and signature. **DO NOT SIGN IN BLACK INK!**

Signature of Contractor

Date Signed

Contractor Name: _____ Title/Position: _____

Contractor Certification (Signature of Agreement): Provide date and signature. **DO NOT SIGN IN BLACK INK!**

Signature of Contractor

Date Signed

Termination of Contractor Certification Agreement: Provide date and signature. **DO NOT SIGN IN BLACK INK!**

Signature of Contractor

Date Signed

Contractor Name: _____ Title/Position: _____

Contractor Certification (Signature of Agreement): Provide date and signature. **DO NOT SIGN IN BLACK INK!**

Signature of Contractor

Date Signed

Termination of Contractor Certification Agreement: Provide date and signature. **DO NOT SIGN IN BLACK INK!**

Signature of Contractor

Date Signed

Instructions for Completing the Contractor Certification Form

If you are uncertain whether you need to obtain coverage under the NPDES General Permit for Stormwater Discharges From Construction Activities SCR100000 (CGP), if you cannot access the websites listed in these instructions, or if you have any questions, contact the Bureau of Water Stormwater Permitting Section at (803) 898-4300 or the Coastal Stormwater Permitting Section at (843) 953-0200. Please see the Bureau of Water, Stormwater Permitting website (<http://www.scdhec.gov/stormwater>) for guidance and additional information.

Who Must Complete a Contractor Certification Form

Contractors (who are not Permittees or Annual Blanket Utility providers), employed by a Primary or Secondary Permittee of a construction project or site, must complete a Contractor Certification Form before performing any land-disturbing activities at the construction site. Contractor Certification Forms do not require Department approval, however, this form must be signed, dated, and submitted by each contractor to the Owner/Operator prior to commencement of *land-disturbing* activities by the contractor.

General Guidance for this Form

Are there Other Requirements for Contractors Completing this form?

Contractors completing this form must also attend a pre-construction conference, and sign and date a Pre-Construction Conference Certification Agreement for each project or construction site where they will be performing construction activities. Contractors *cannot work at a construction site until they sign this certification form and document attendance at the Pre-Construction Conference held for the project or construction site. See Section 4.1 of the 2012 CGP for additional information.*

What Does This Certification Mean?

Upon *signing* this certification, the contractor is accountable to DHEC to ensure the terms and conditions of the approved Stormwater Pollution Prevention Plan (developed for the respective construction project or site) and the Construction General Permit (CGP) are implemented and adhered to in the respective area(s) of the plan where each contractor and/or company signing this form will be performing work. Each contractor becomes subject to DHEC enforcement actions if permit conditions are not met. *See Sections 2.2.3 and 2.3.2 of the 2012 CGP for additional information.*

Should the Owner/Operator Retain This Form?

The Owner/Operator of the construction site must retain completed Contractor Certification Forms with the approved On-Site SWPPP. This form must be retained for at least three years from the date permit coverage expires or is terminated.

Instructions for Completing this Form

Please print legibly and complete all spaces on the form. Abbreviate if necessary to stay within the space allowed for each item and submit the completed form to the Owner/Operator for the specific project or construction site listed in Section A.

Section A - Project Information

Provide all requested information. Enter the date, NPDES coverage number, and Tracking No. provided by the Department for the approved SWPPP. Enter the official or legal name of the project or site, as approved by the Department. If this project is for an individual lot or group of lots, provide the lot number(s). Provide the name of the Owner/Operator.

Section B –Contractor Information

Provide your legal name and title/position. As applicable, provide the legal (formal) name of the company, firm, public organization, or any other entity (you are employed by or represent) on whose behalf you will be performing contractor construction activities. Provide **your** mailing address, telephone and e-mail address. Briefly describe construction-related duties and responsibilities you or your company will perform for this project at the construction site.

Section C – Contractor Certification Statements & Agreement

Read the certification statements (in entirety). Provide your printed name and title or position. Date and sign the certification agreement. Return the signed and dated form to the Owner/Operator. **DO NOT SIGN IN BLACK INK.** Sheets 1 and 2 are formatted for multiple contractor signatures. Sheet 2 is **ONLY** for signatures within a specific company. Each may be copied as necessary. Sign and date the Termination of Contractor Certification Agreement when the services you provide for this project are complete. Return the signed and dated form to the Owner/Operator for record retention as a part of the On-Site SWPPP (OS-SWPPP).

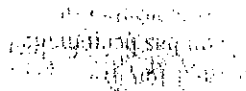


Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

September 29, 2014

LINDA TUCKER
CITY OF ISLE OF PALMS
PO BOX 508
ISLE OF PALMS SC 29451



RE: 45TH TO 52ND AVENUE DRAINAGE IMPROVEMENTS, Charleston County
File number: 10-13-08-18
NPDES Coverage Number: SCR10S691

Dear Linda Tucker:

The Department of Health and Environmental Control (Department or DHEC) has received approval from **Charleston County** for the 1.2 acre portion of the above-referenced project within the Charleston County MS4 and DHEC has approved the Stormwater Pollution Prevention Plan (SWPPP) for the rest of the project. Based on your submission of this documentation and in accordance with the NPDES General Permit for Stormwater Discharges from Construction Activities SCR100000 (CGP), this project has been granted coverage under the CGP on **September 29, 2014**. This project's general permit coverage number is **SCR10S691**. The total disturbed area for this site is **3.9 acres**.

See attached DHEC Office of Ocean and Coastal Resource Management (DHEC-OCRM) certification approved 09/13/2013 for additional conditions related to the Coastal Zone Consistency determination.

An as-built survey(s), signed and sealed by a S.C. Licensed Land Surveyor, should be submitted to **CHARLESTON COUNTY** for any detention structure(s) on this site that are within the county's MS4. The survey(s) should show grades, contours, and depths for all structure(s) and should include the elevations and dimensions of all outlet structures, including but not limited to pipes, orifices, risers, weirs, and emergency spillways. A statement signed by the project's S.C. Registered Engineer indicating that the structure(s) was installed and is operating as shown on approved plans and in approved calculations is required. If the elevations or dimensions of the structures listed above do not match those used in the approved plans, provide a certification statement signed by the project's S.C. Registered Engineer indicating that the structure, as built, will function as shown in approved calculations. A new analysis of the structure (routing) may be necessary.

The CGP can be downloaded at the following website:

<http://www.scdhec.gov/environment/water/swater/docs/CGP-permit.pdf> or you may request a copy from us via email (stormwatercgp@dhec.sc.gov). You are responsible for ensuring your contractor(s) complies with the approved SWPPP and the minimum requirements of the CGP. Also, you are responsible for overall compliance with the Storm Water Management and Sediment Reduction Act of 1991 (1991 Act), SC Pollution Control Act, and the Federal Clean Water Act (CWA). Failure to comply with the approved SWPPP or applicable statutes and regulations may result in enforcement actions.

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

2600 Bull Street • Columbia, SC 29201 • Phone: (803) 898-3432 • www.scdhec.gov

You must notify this DHEC EQC Regional Office prior to starting any land-disturbing activity. The address and telephone number of the EQC office are as follows:

Charleston EQC Office
1362 MCMILLAN AVE STE 300
CHARLESTON SC 29405-2048
843-953-0150

Inspections of this site must be performed by qualified personnel as described in Section 4.2.E of the CGP.

You should be aware that this approval is only applicable for the Stormwater Pollution Prevention Plan (SWPPP) that was submitted for this project. Any additional construction or land disturbing activity beyond the scope of the approved plans is not authorized. Any future work for this project not shown on the stamped, approved plans will require that you submit another site plan for review and approval. All major modifications require review and approval by **CHARLESTON COUNTY MS4**; the Department must be notified in writing by **CHARLESTON COUNTY MS4** of the approval of major modifications if the disturbed area changes. Minor modifications to the approved SWPPP may be made by the SWPPP preparer and do not require review and approval by the Department; these changes should be signed and dated by the SWPPP preparer. If you have a question about whether a modification is major or minor, contact the Coastal Stormwater Permitting Section at (843) 953-0200.

A copy of the stamped, approved SWPPP (including a copy the CGP, contractor certifications, inspection records, rainfall data, etc), NOI, and CGP coverage letter from DHEC must be retained and available at the construction site (or accessible within 30 minutes during normal business hours) from the date of commencement of construction activities to the date of final stabilization. If an on-site location is unavailable to store the SWPPP when no personnel are present, notice of the plan's location must be posted near the main entrance at the construction site.

All contractors who will conduct land-disturbing activities at the site must complete a Contractor Certification Form. Annual Blanket Utility Providers must provide a copy of their annual blanket registration information. You are also responsible for listing all contractors in the SWPPP and for holding a pre-construction conference with each contractor before they can conduct land-disturbing activity at the site.

The Department may conduct periodic inspections of your site. Any violations found during these inspections may result in enforcement action.

This NPDES coverage should be terminated by the permittee when one of the conditions listed in Section 5.1 of the CGP has been met. You must submit a Notice of Termination (NOT) to cancel your NPDES coverage under the CGP. Please see section 5.1 of the CGP for additional information required to be submitted with the NOT.

You are responsible for obtaining any other federal, state, or local permit that may be required for this project. In particular, any permits through the U.S. Army Corps of Engineers for the placement of fill material in Waters of the United States. Please note we have not sent a copy of this letter to any county or city building official. You must send a copy of this letter to these agencies, if necessary.

If material excavated during construction activities leaves the site, a mine operating permit may be needed. You are responsible for contacting the Mining and Reclamation Section to determine if a mining permit is required for the site. The Mining and Reclamation Section can be reached at (803)896-4261 or via e-mail at AskMines@dhec.sc.gov.

Please see the enclosed "Notice of Appeal Procedure" document for information about the procedures for appealing this NPDES coverage.

If you have any questions or cannot access the referenced websites, please call me at 843-953-0238.

Sincerely,



Richard V Geer, Engineer Associate
EQC Bureau of Water, Coastal Stormwater Permitting
1362 McMillan Ave, Suite 400, Charleston SC 29405

cc: F D Stevens—CIVIL SITE ENVIRONMENTAL INC
ec: Neil J Desai PE—CHARLESTON COUNTY MS4

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Faint, illegible text, possibly a stamp or bleed-through.



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

South Carolina Board of Health and Environmental Control
Guide to Board Review
Pursuant to S.C. Code Ann. § 44-1-60
Effective April 1, 2013

The decision of the South Carolina Department of Health and Environmental Control (Department) becomes the final agency decision fifteen (15) calendar days after notice of the decision has been mailed to the applicant, permittee, licensee and affected persons who have requested in writing to be notified, unless a written request for final review accompanied by a filing fee in the amount of \$100 is filed with Department by the applicant, permittee, licensee or affected person.

Applicants, permittees, licensees, and affected parties are encouraged to engage in mediation during the final review process.

If the Board declines in writing to schedule a final review conference, the Department's decision becomes the final agency decision and an applicant, permittee, licensee, or affected person may request a contested case hearing before the Administrative Law Court within thirty (30) calendar days after notice is mailed that the Board declined to hold a final review conference.

I. Filing of Request for Final Review

1. A written Request for Final Review (RFR) and the required filing fee of one hundred dollars (\$100) must be received by Clerk of the Board within fifteen (15) calendar days after notice of the staff decision has been mailed to the applicant, permittee, licensee, or affected persons. If the 15th day occurs on a weekend or State holiday, the RFR must be received by the Clerk on the next working day. RFRs will not be accepted after 5:00 p.m.
2. RFRs shall be in writing and should include, at a minimum, the following information:
 - The grounds for amending, modifying, or rescinding the staff decision;
 - a statement of any significant issues or factors the Board should consider in deciding how to handle the matter;
 - the relief requested; and
 - a copy of the decision for which review is requested.
3. RFRs should be filed in person or by mail at the following address:

South Carolina Board of Health and Environmental Control
Attention: Clerk of the Board
2600 Bull Street
Columbia, South Carolina 29201

Alternatively, RFR's may be filed with the Clerk by facsimile (803-898-3393) or by electronic mail (boardclerk@dhec.sc.gov).

4. The filing fee may be paid by cash, certified check or credit card. If a RFR is filed by facsimile or electronic mail, the filing fee may be mailed to the Clerk of the Board and the envelope must be postmarked within the time allowed for filing a RFR.
5. If there is any perceived discrepancy in compliance with this RFR filing procedure, the Clerk should consult with the Chairman or, if the Chairman is unavailable, the Vice-Chairman. The Chairman or the Vice-Chairman will determine whether the RFR is timely and properly filed and direct the Clerk to (1) process the RFR for consideration by the Board or (2) return the RFR and filing fee to the requestor with a cover letter explaining why the RFR was not timely or properly filed. Processing an RFR for consideration by the Board shall not be interpreted as a waiver of any claim or defense by the agency in subsequent proceedings concerning the RFR.
6. If the RFR will be processed for Board consideration, the Clerk will send an Acknowledgement of RFR to the Requestor and the applicant, permittee, or licensee, if other than the Requestor.
7. The Clerk will email the RFR to all Board members for review, and all Board members will confirm receipt of the RFR to the Clerk by email. If a Board member does not confirm receipt of the RFR within twenty-four (24) hour period, the Clerk will contact the Board member and confirm receipt. If a Board member believes the RFR should be considered by the RFR Committee, he or she will respond to the Clerk's email within forty-eight (48) hours and will request further review. If no Board member requests further review of the RFR within the forty-eight (48) hour period, the Clerk will send a letter by certified mail to the Requestor, with copy by regular mail to the applicant,

permittee, or licensee, if not the Requestor, stating the Board will not hold a Final Review Conference. A copy of the Notice of Appeal Procedure will be included with the letter.

NOTE: If the time periods described above end on a weekend or State holiday, the time is automatically extended to 5:00 p.m. on the next business day.

8. If the RFR is to be considered by the RFR Committee, the Clerk will forward a copy of the RFR to Department staff and Office of General Counsel. A Department response to the RFR should be provided by Department staff to the Clerk within eight (8) working days after the RFR is forwarded.

II. Final Review Conference Scheduling

1. If a Conference will be held, the Clerk will send a letter by certified mail to the Requestor, with copy by regular mail to the applicant, permittee, or licensee, if not the Requestor, informing the Requestor of the determination.
2. The Clerk will request Department staff provide the Administrative Record.
3. The Clerk will send Notice of Final Review Conference to the parties at least ten (10) days before the Conference. The Conference will be publically noticed and should:
 - include the place, date and time of the Conference;
 - state the presentation times allowed in the Conference;
 - state evidence may be presented at the Conference;
 - if the conference will be held by committee, include a copy of the Chairman's order appointing the committee; and
 - inform the Requestor of his or her right to request a transcript of the proceedings of the Conference prepared at Requestor's expense.
4. If a party requests a transcript of the proceedings of the Conference and agrees to pay all related costs in writing, including costs for the transcript, the Clerk will schedule a court reporter for the Conference.

III. Final Review Conference and Decision

1. The order of presentation in the Conference will, subject to the presiding officer's discretion, be as follows:
 - Department staff will provide an overview of the staff decision and the applicable law to include [10 minutes]:
 - Type of decision (permit, enforcement, etc.) and description of the program.
 - Parties
 - Description of facility/site
 - Applicable statutes and regulations.
 - Decision and materials relied upon in the administrative record to support the staff decision.
 - Requestor(s) will state the reasons for protesting the staff decision and may provide evidence to support amending, modifying, or rescinding the staff decision. [15 minutes] *NOTE: The burden of proof is on the Requestor(s)*
 - Rebuttal by Department staff [15 minutes]
 - Rebuttal by Requestor(s) [10 minutes]

Note: Times noted in brackets are for information only and are superseded by times stated in the Notice of Final Review Conference or by the presiding officer.
2. Parties may present evidence during the conference; however, the rules of evidence do not apply.
3. At any time during the conference, the officers conducting the conference may request additional information and may question the Requestor, the staff, and anyone else providing information at the conference.
4. The presiding officer, in his or her sole discretion, may allow additional time for presentations and may impose time limits on the Conference.
5. All Conferences are open to the public.
6. The officers may deliberate in closed session.
7. The officers may announce the decision at conclusion of the Conference or it may be reserved for consideration.
8. The Clerk will mail the written final agency decision (FAD) to parties within 30 days after the Conference. The written decision must explain the basis for the decision and inform the parties of their right to request a contested case hearing before the Administrative Law Court. The FAD will be sent by certified mail, return receipt requested.
9. Communications may also be sent by electronic mail, in addition to the forms stated herein, when electronic mail addresses are provided to the Clerk.

The above information is provided as a courtesy; parties are responsible for complying with all applicable legal requirements.



NOTICE OF INTENT (NOI)
For Coverage(s) of Primary Permittees
Under South Carolina NPDES General Permit
For Stormwater Discharges From Construction Activities SCR100000
(Maintain As Part of On-Site SWPPP)

C2C-13-0808

For Official Use Only
File Number: 10-13-08-18
Permit Number: SCR10 5691
Submission of this Notice of Intent constitutes notice that the Applicant identified in Section II intends to be authorized as a Primary Permittee in the state of South Carolina under NPDES General Permit SCR1000000.

SOUTH CAROLINA
DEPT OF HEALTH AND ENVIRONMENTAL CONTROL
ENVIRONMENTAL QUALITY CONTROL
STORMWATER PERMITTING SECTION
APPROVED - FOR CONSTRUCTION ONLY
DHEC PERMIT #: SCR105691
FILE #: 10-13-08-18
DATE ISSUED: 9/29/2014
BY: [Signature]

Date: 05/01/2013
Project/Site Name: 45TH TO 52ND AVENUE DRAINAGE IMPROVEMENTS County: CHARLESTON
(Modification or Change of Information Only) Prior Approved NPDES Permit or File Number:

Do you want this project to be considered for the Expedited Review Program (ERP)? [] Yes or [X] No (See Instructions)

RECEIVED
AUG 28 2013
Stormwater, Construction & Agriculture Permitting Division

Notice of Intent (NOI) Application Type(s)

- A. Project (Application/Review) Type(s) (Select ALL that apply):
[X] New Project (Initial Notification) Ongoing Project: [] Permitted or [] Un-Permitted
[] Late Notification [] Low Impact Development (LID) or Project Design Above Regulatory Requirements
[] New Owner/Operator or Company Name Change (see instructions, attach Form A (Transfer of Ownership))
[] Major Modification: (see instructions, attach Form B (Major Modifications))
[X] MS4 Project Review
[] Ocean and Coastal Resource Management (OCRM) Review
[] Change of Information/Other (Specify):
B. If Applicable, identify the entity designated as MS4 Reviewer and MS4 Operator (i.e., Lexington County, City of Greer, etc.): MS4 Reviewer CHARLESTON COUNTY MS4 Operator CHARLESTON COUNTY

II. Primary Permittee Information

[] Person or [X] Company If a Company, are you a [] Lending Institution or [X] Government Entity?
Company EIN (if applicable): EIN:

- A. Primary Permittee Name: CITY OF ISLE OF PALMS
Mailing Address: P.O. DRAWER 508 City: ISLE OF PALMS State: SC Zip: 29451
Phone: 843-886-6428 Fax: 843-886-8005 Email Address:
B. Contact /ODSA Name (If different from above OR if owner is a company): LINDA TUCKER
Mailing Address: AS ABOVE City: State: Zip:
Phone: Fax: Email Address:
C. Property Owner Name (If different from above): SEE ATTACHED
Mailing Address: City: State: Zip:
Phone: Fax: Email Address:

III. Comprehensive Stormwater Pollution Prevention Plan (C-SWPPP) Preparer Information

- A. C-SWPPP Preparer Name: F. DAVID STEVENS
B. Registered Professional [X] Engineer [] Landscape Architect [] Tier B Land Surveyor S. C. Registration #: 9156
C. Company/Firm Name: CIVIL SITE ENVIRONMENTAL (CSE) S. C. COA #: C00150
Mailing Address: 668 MARINA DRIVE, SUITE B-1 City: CHARLESTON State: SC Zip: 29492
Phone: 843-849-8945 Fax: 843-849-8974 Email Address: JMILNER@CIVILSITEENV.COM

IV. Project/Site Information

- A. Type of Construction Activity(ies) (Select ALL that apply):
[] Commercial [] Industrial [] Institutional [] Mass Grading [] Linear [] Utility/Infrastructure
[] Residential: Single-family [] Residential: Multi-family [] Multi-use (Commercial & Residential)
[] Site Preparation (No New Impervious Area) [X] Other (Specify) DRAINAGE IMPROVEMENTS UPGRADE
B. Site Address/Location (street address, nearest intersection, etc.) 45TH AVENUE AT PALMS BLVD
City/Town (If in limits): CITY OF ISLE OF PALMS Zip Code: 29451
Latitude: 32° 48' 03" N Longitude: - 79° 45' 16" W (Source): [] GPS [X] Web Site: GOOGLE MAPS
Tax Map Number (s) (List all): SEE ATTACHED

RECEIVED
AUG 28 2013
STORMWATER DIVISION

D. Impaired Waterbodies Information (Attach additional sheet(s) as needed)

1. 303(d) Listed Impaired Waterbodies					
a. Name of Nearest DHEC Water Quality Monitoring Stations (WQMS)(s) that receives stormwater from your construction site and/or thru an MS4 and the Name of the Corresponding Waterbody?		b. Is this WQMS(s) listed on the most current 303(d) List? If No, proceed to Section 2 of this table. If Yes, complete items c thru f.	c. List the pollutant(s) identified as "CAUSES" of the impairment	d. Will any pollutants causing the impairment be present in your site's construction stormwater discharges?	e. If yes for d, list the "USE SUPPORT" impairment(s) affected by the pollutant(s) identified in c.
Nearest DHEC WQMS(s)	Corresponding Waterbody	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	
09A-18	AIWW	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	FC	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	SHELLFISH
08-10	AIWW	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	
f. If yes for d above, will use of the BMPs proposed for your project ensure the site's discharges will NOT contribute to or cause further WQS violations for the impairment(s) listed in c? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (NOTE: If no for f, this site is NOT eligible for coverage under the CGP). See Instructions.					
2. TMDL Impaired Waterbodies					
a. Name of Nearest DHEC Water Quality Monitoring Stations (WQMS)(s) that receives stormwater from your construction site and/or thru an MS4?		b. Has a TMDL(s) been developed for this WQMS(s)? If No, identify as such below and proceed to Section VI. If Yes, complete items c thru f of this table.	c. If yes for b, what pollutants are listed as "CAUSES" or causing the impairment?	d. If yes for b, has the standard been "ATTAINED" or "Fully Supported" for the impairment(s)?	e. If no for d (Not Attained), will any pollutants causing the impairment be present in your site's construction stormwater discharges?
		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
09A-18		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
08-10		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
f. If yes for e above, are your discharges consistent with the assumptions and requirements of the TMDL(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No (NOTE: If no for f, this site is NOT eligible for coverage under the CGP). See Instructions.					

VI. Signatures and Certifications DO NOT SIGN IN BLACK INK! Read the Certifications below (in entirety). Provide date, printed name, and signatures below. If you are a New Owner/Operator, as Primary Permittee you must also sign and date the applicable Comprehensive SWPPP Acceptance & Compliance Agreement below.

C-SWPPP PREPARER: "One copy of the C-SWPPP, all specifications and supporting calculations, forms, and reports are herewith submitted and made a part of this application. I have placed my signature and seal on the design documents submitted signifying that I accept responsibility for the design of the system. Further, I certify to the best of my knowledge and belief that the design is consistent with the requirements of Title 48, Chapter 14 of the Code of Laws of SC, 1976 as amended, pursuant to Regulation 72-300 et seq. (if applicable), and in accordance with the terms and conditions of SCR100000." (This should be the person identified in Section III).

FRANK DAVID STUBBS
Printed Name of C-SWPPP Preparer

[Signature]
Signature of C-SWPPP Preparer

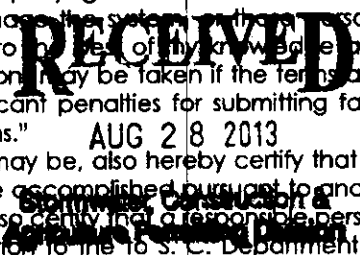
215E
S. C. Registration #

PRIMARY PERMITTEE: "I or I (on behalf of my company and its contractors and agents), as the case may be, certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, and on those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I understand that DHEC enforcement action may be taken if the terms and conditions of the C-SWPPP are not met and I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." AUG 28 2013

"I or I (on behalf of my company and its contractors and agents), as the case may be, also hereby certify that all land-disturbing construction and associated activity pertaining to this site shall be accomplished pursuant to and in keeping with the terms and conditions of the approved plans and SCR100000. I also certify that a responsible person will be assigned to the project for day-to-day control. I hereby grant authorization to the to S. C. Department of Health and Environmental Control (DHEC) and/or the local implementing agency the right of access to the site at all times for the purpose of on site inspections during the course of construction and to perform maintenance inspections following the completion of the land-disturbing activity." (See Section 122.22 of S.C. Reg. 61-9 for signatory authority information.) Having understood the above information, I am signing this certification as Primary Permittee to the aforementioned NPDES general permit."

Linda Tucker
Printed Name of Primary Permittee
[Signature]
Signature of Primary Permittee

[Signature]
Title/Position
5/16/2013
Date Signed





CHARLESTON
COUNTY
SOUTH CAROLINA

Public Works Department

James R. Neal
Director

843.202.7600
Fax 843.202.7601
jneal@charlestoncounty.org
Lonnie Hamilton, III
Public Services Building
4045 Bridge View Drive, Suite A301
North Charleston, SC 29405-7464

August 22, 2014

City of Isle of Palms
Attn: Ms. Linda Tucker
P.O. Drawer 508
Isle of Palms, SC 29451

RE: 45TH TO 52ND AVENUE DRAINAGE IMPROVEMENTS
TMS #: 571-12-00-208 (multiple)
Permit #: 2014-03-03-257

CONDITIONAL STORMWATER PERMIT

Dear Ms. Tucker,

A review of the referenced project has been completed. Due to additional permits needed from other State or Federal agencies, conditional approval is given.

You must obtain the other necessary permits and submit proof to the Public Works Department that such permits have been obtained. At that time, Charleston County will issue final approval and a County permit can be issued.

If we can be of further service, please let us know.

Sincerely,

Neil J. Desai, P.E.
Stormwater Program Manager

cc: Civil Site Environmental, Inc.
File



American Public Works Association


www.charlestoncounty.org



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

Coastal Zone Consistency Certification

To: Richard Geer, Project Manager, EQC BOW Coastal Stormwater Permitting
From: Tara Maddock, Project Manager, OCRM Coastal Zone Consistency 
Cc: Curtis Joyner, Manager, OCRM Coastal Zone Consistency
Re: 45th to 52nd Avenue Drainage Improvements
Site location: 45th to 52nd Avenues, Isle of Palms, Charleston County
Date: September 13, 2013
CZC #: CZC-13-0808
PN#: SCR10S691

The staff of the Office of Ocean and Coastal Resource Management (OCRM) has reviewed the above referenced Coastal Zone Consistency request for drainage improvements within existing roadways and residential areas and certifies that the above referenced project is **Consistent** with the (1) Transportation Facilities – Roads and Highways and (2) Stormwater Management Guidelines policies contained in the S.C. Coastal Zone Management Program provided that:

- the storage of the first one half (1/2) inch of runoff for the entire site or storage of the first one (1) inch of runoff from the built upon portion of the property, whichever is greater. Storage may be accomplished through retention, detention, or infiltration systems, as appropriate for the specific site.
- in the event that any historic or cultural resources and archaeological or paleontological remains are found during the course of work, the applicant must notify the State Historic Preservation Office and the South Carolina Institute of Archaeology and Anthropology pursuant to South Carolina Code of Laws. Historic or cultural resources consist of those sites named to the National Register and those sites that are eligible for the National Register and other areas of special historic significance. Archaeological remains consist of any materials made or altered by man, which remain from past historic or prehistoric times (ie, older than 50 years). Examples include old pottery fragments, metal, wood, arrowheads, stone implements or tools, human burials, historic docks, structures, or non-recent vessel remains. Paleontological remains consist of old animal remains, original or fossilized, such as teeth, tusks, bone, or entire skeletons and;

This certification shall serve as the final DHEC OCRM Coastal Zone Consistency approval for this permit and does not alleviate the applicant's responsibility to obtain other required local, state or federal approvals.

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

Ocean and Coastal Resource Management

Charleston Office • 1362 McMillan Avenue • Suite 400 • Charleston, SC 29405 • Phone: (843) 953-0200 • Fax: (843) 953-0201 • www.scdhec.gov

APPENDIX E
INSPECTION LOG AND REPORTS

APPENDIX F
RAINFALL LOG AND REPORTS

SWPPP Rainfall Records (January - June)												Year:	
January	Rainfall	February	Rainfall	March	Rainfall	April	Rainfall	May	Rainfall	June	Rainfall		
1		1		1		1		1		1			
2		2		2		2		2		2			
3		3		3		3		3		3			
4		4		4		4		4		4			
5		5		5		5		5		5			
6		6		6		6		6		6			
7		7		7		7		7		7			
8		8		8		8		8		8			
9		9		9		9		9		9			
10		10		10		10		10		10			
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28		28		28		28		28		28			
29		29		29		29		29		29			
30				30		30		30		30			
31				31				31					

APPENDIX G

ADDITIONAL SITE LOGS AND RECORDS

APPENDIX H

CONSTRUCTION GENERAL PERMIT SCR100000

A copy of the NPDES General Permit for Stormwater Discharges from Construction Activities (SCR100000) can be found at the following address:

<http://www.scdhec.gov/environment/water/swater/docs/CGP-permit.pdf>

STATE OF SOUTH CAROLINA)
) AGREEMENT AND GRANT OF
) TEMPORARY DRAINAGE EASEMENT
COUNTY OF CHARLESTON)

THIS AGREEMENT is made and entered into by and between Lowe Wild Dunes Investors, L.P., a South Carolina Limited Partnership (“Grantor”), and the City of Isle of Palms, S.C., a South Carolina municipal corporation (“City” or “Grantee”), this 16th day of October, 2015.

WHEREAS, the City has installed a stormwater collection system in the City of Isle of Palms, in the general vicinity of Palm Boulevard, including, but not limited to, the area between 53rd Avenue and 57th Avenue (“City System”) which discharges into the stormwater collection and discharge system operated by Wild Dunes Community Association in Wild Dunes Resort (“WDCA System”); and

WHEREAS, the City intends to extend the City System to include the area between 45th Avenue and 52nd Avenue (“Phase II”) which will also discharge into the WDCA System; and

WHEREAS, Grantor owns certain real property over, under, and upon which City desires to install drainage lines for the purpose of collection and transfer of stormwater drainage by Phase II of the City System for discharge into the WDCA System; and

WHEREAS, Grantor wishes to grant the City a temporary easement on the real property for construction and use of stormwater drainage facilities to accommodate the City's current needs while allowing for relocation in the future if needed by Grantor.

THEREFORE, for and in consideration of the sum of Ten and no/100 (\$10.00) Dollars in hand paid by City to Grantor, the receipt and sufficiency of which are hereby acknowledged by Grantor, the parties hereto agree as follows:



1. Grantor hereby grants to City a non-exclusive temporary easement for the purpose of construction of stormwater drainage facilities for the collection and transfer of stormwater drainage by Phase II of the City System for discharge into the WDCA System (the "Temporary Easement") over, under and upon portions of the Grantor's real property described in Exhibit I attached hereto and incorporated herein by reference, and as shown on that certain plat titled "Preliminary Exhibit of Proposed Drainage Easements" for the 45th to 52nd Ave. Drainage Improvements Project, prepared by Civil Site Environmental, dated November 7, 2014, as revised March 18, 2015, and attached hereto as Exhibit II and incorporated herein by reference.

2. Subject to obtaining prior written approval from Grantor of the repair or restoration scope of work for any affected portion of the Temporary Easement, City shall have the right to construct, install and maintain within the Temporary Easement all drainage lines, collection boxes, pumps, electrical boxes, and any other improvements which may from time to time be utilized in connection with the operation of Phase II of the City System. City shall meet with Grantor prior to commencement of the work detailed above to obtain approval from Grantor of the scope of work for the repair or restoration of the affected portion of the Temporary Easement. Except in the event of an emergency, such meeting shall occur no less than five (5) days prior to commencement of work. Grantor also grants to City a non-exclusive temporary easement over such lands of Grantor which immediately adjoin the Temporary Easement as is necessary to install or maintain Phase II of the City System. City, at its expense, shall repair and restore any portion of the Temporary Easement affected by the repair or restoration work to the same condition of the Temporary Easement existing prior to the repair or restoration work, including performing the repair or restoration in accordance with the criteria shown and described in Exhibit III.



3. The City agrees to operate and maintain the City System in accordance with all applicable local, state and federal laws, rules, and regulations.

4. The Temporary Easement shall burden the lands of Grantor described in Exhibit I and depicted in Exhibit II. All provisions of this Agreement, including the benefits and burdens, shall be considered as covenants running with the land and are and shall remain binding upon and inure to the benefit of the parties hereto and their respective successors and assigns forever.

5. This Temporary Easement may be modified by the parties at any time by mutual consent by recorded instrument which refers to this grant of Temporary Easement.

6. Grantor agrees that it shall make no use of the lands covered by the Temporary Easement for any purpose which interferes with the use of the Temporary Easement by the City for stormwater drainage except as specified under Paragraph 7 hereunder. Grantor further agrees to provide the City with written notice prior to placing any new structures upon the Temporary Easement or making alterations or modifications to the existing contours or other physical characteristics of the land comprising the Temporary Easement area.

7. If at any time the Temporary Easement interferes with Grantor's development of the land comprising the Temporary Easement area, Grantor and City shall modify the Temporary Easement to relocate the Temporary Easement to a mutually beneficial location at the sole expense of City. Upon completion of Grantor's development of the land comprising the Temporary Easement area, the parties hereto shall execute and record a permanent drainage easement agreement defining the actual location of the easement as relocated and constructed by the City, at which time this Temporary Easement shall automatically terminate.

8. Grantor hereby warrants to the City that Grantor holds a fee simple absolute title to the real property subject to all matters of record; Grantor has the full right, power and authority to grant the Temporary Easement; the City, its successors and assigns, shall quietly



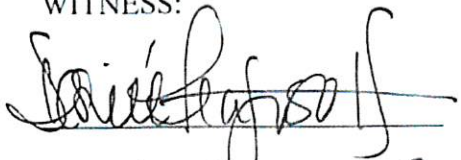
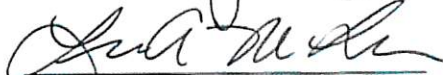
enjoy the Temporary Easement for the uses stated herein unless and until any portion of the Temporary Easement is relocated by mutual agreement as provided herein; and the execution and delivery of this Agreement by Grantor do not conflict with or constitute a default under any mortgage or other agreement to which Grantor may be bound.

TO HAVE AND TO HOLD, all and singular, the Temporary Easement rights and privileges above described unto the City, its successors and assigns forever.


And Grantor hereby binds itself and its successors and assigns to warrant and forever defend all and singular the Temporary Easement rights and privileges unto the City, its successors and assigns, against Grantor and its successors, and against all persons whomsoever lawfully claiming or to claim the same or any part thereof.


IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals, by and through the undersigned agents, as of the date stated above.

WITNESS:

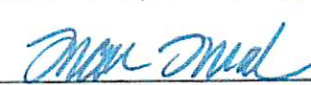


(as to City)

The City of Isle of Palms, S.C.

By: 
Title: City Administrator



(as to Grantor)

Low Wild Dunes Investors, L.P.
By:  ITS AUTHORIZED AGENT.
Title: V.P.


VICE PRESIDENT

STATE OF SOUTH CAROLINA)
)
COUNTY OF CHARLESTON) ACKNOWLEDGMENT

I, a Notary Public for the State of South Carolina, do hereby certify that the above named City of Isle of Palms, S.C., by and through the above-named agent, personally appeared before me this 14th day of October, 2015, and acknowledged the due execution of the foregoing instrument.

Keith S. Schuler (Seal)
NOTARY PUBLIC FOR SOUTH CAROLINA
My Commission Expires: 04/05/2020

STATE OF SOUTH CAROLINA)
)
COUNTY OF CHARLESTON) ACKNOWLEDGMENT

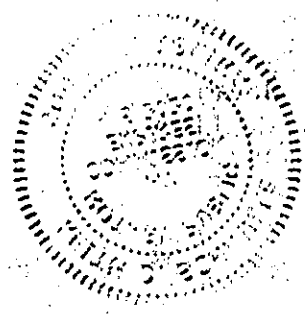
I, a Notary Public for the State of South Carolina, do hereby certify that the above named Lowe Wild Dunes Investors, LP, by and through the above-named agent, personally appeared before me this 10th day of October, 2015, and acknowledged the due execution of the foregoing instrument.

Keith S. Schuler (Seal)
NOTARY PUBLIC FOR SOUTH CAROLINA
My Commission Expires: 04/05/2020

THE CITY OF ISLE OF PALMS

ATTEST:

CLERK

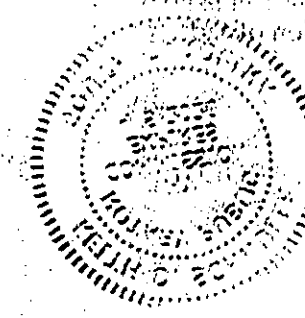


[Signature]
CITY MANAGER

THE CITY OF ISLE OF PALMS

ATTEST:

CLERK



[Signature]
CITY MANAGER

THE CITY OF ISLE OF PALMS

ATTEST:

CLERK

APPROVED BY THE CITY COUNCIL
ON THIS 15th DAY OF MAY 2017

EXHIBIT I

Legal Description of real property of Lowe Wild Dunes Investors, LP

ALL that certain piece, parcel or tract of land, situate, lying and being in the State of South Carolina, County of Charleston, City of Isle of Palms, known and designated as "Tract "G," Block "F," Lake Parcel 1, 1.474 Ac., 64,226 Sq. Ft." as more particularly shown on that certain plat by Engineering, Surveying & Planning, Inc. entitled "Plat of Tract "G," Block "F" Lake Parcels 1, 2 & 3 Wild Dunes - City of Isle of Palms, Charleston County, South Carolina" dated March 1, 1994 and recorded on February 19, 1998 in the R.M.C. Office for Charleston County in Plat Book EC, Pages 323-324, said tract having such site, shape, dimensions, buttings and boundings as shown on said plat.

TMS# 604-00-00-041

AND

ALL that certain piece, parcel or tract of land, situate, lying and being in the State of South Carolina, County of Charleston, City of Isle of Palms, known and designated as "Tract "G," Block "J," Lake Parcel 1, 1.041 Acres" as more particularly shown on that certain plat by Engineering, Surveying & Planning, Inc. entitled "Plat of Tract "G," Block "J" Lake Parcel 1, Wild Dunes, City of Isle of Palms, Charleston County, S.C." dated March 1, 1994 and recorded on April 21, 1999 in the R.M.C. Office for Charleston County in Plat Book DB, Page 904, said tract having such site, shape, dimensions, buttings and boundings as shown on said plat.

TMS# 571-08-00-320

AND

ALL that certain piece, parcel or tract of land, situate, lying and being in the State of South Carolina, County of Charleston, City of Isle of Palms, known and designated as "Tract "G," Block "J," 2.207 Acres, Fairway No. 13 of the Harbor Course" as more particularly shown on that certain plat by Engineering, Surveying & Planning, Inc. entitled "Plat of Tract "G," Block "J" Lake Parcel 1, Wild Dunes, City of Isle of Palms, Charleston County, S.C." dated March 1, 1994 and recorded on April 21, 1999 in the R.M.C. Office for Charleston County in Plat Book DB, Page 904, said tract having such site, shape, dimensions, buttings and boundings as shown on said plat.

TMS# 571-08-00-226

AND

ALL that certain piece, parcel or tract of land, situate, lying and being in the State of South Carolina, County of Charleston, City of Isle of Palms, known and designated as "Tract "G," Block "F," 16.549 Acres" as more particularly shown on that certain plat by Engineering, Surveying & Planning, Inc. entitled "Plat of Tract "G," Block "F" Lake



Parcels 1, 2 & 3 Wild Dunes – City of Isle of Palms, Charleston County, South Carolina” dated March 1, 1994 and recorded on February 19, 1998 in the R.M.C. Office for Charleston County in Plat Book EC, Pages 323-324, said tract having such site, shape, dimensions, buttings and boundings as shown on said plat.

TMS# 604-00-00-036

AND

ALL that certain piece, parcel or tract of land, situate, lying and being in the State of South Carolina, County of Charleston, City of Isle of Palms, known and designated as “Tract “G,” Block “F,” Lake Parcel 3, 0.409 Ac., 17,824 Sq. Ft.” as more particularly shown on that certain plat by Engineering, Surveying & Planning, Inc. entitled “Plat of Tract “G,” Block “F” Lake Parcels 1, 2 & 3 Wild Dunes – City of Isle of Palms, Charleston County, South Carolina” dated March 1, 1994 and recorded on February 19, 1998 in the R.M.C. Office for Charleston County in Plat Book EC, Page 324, said tract having such site, shape, dimensions, buttings and boundings as shown on said plat.

TMS# 604-00-00-038



EXHIBIT II

[Attach Plat prepared by Civil Site Environmental titled "Preliminary Exhibit of Proposed Drainage Easements" for 45th to 52nd Ave. Drainage Improvements dated November 7, 2014, as revised March 18, 2015]

EXHIBIT III

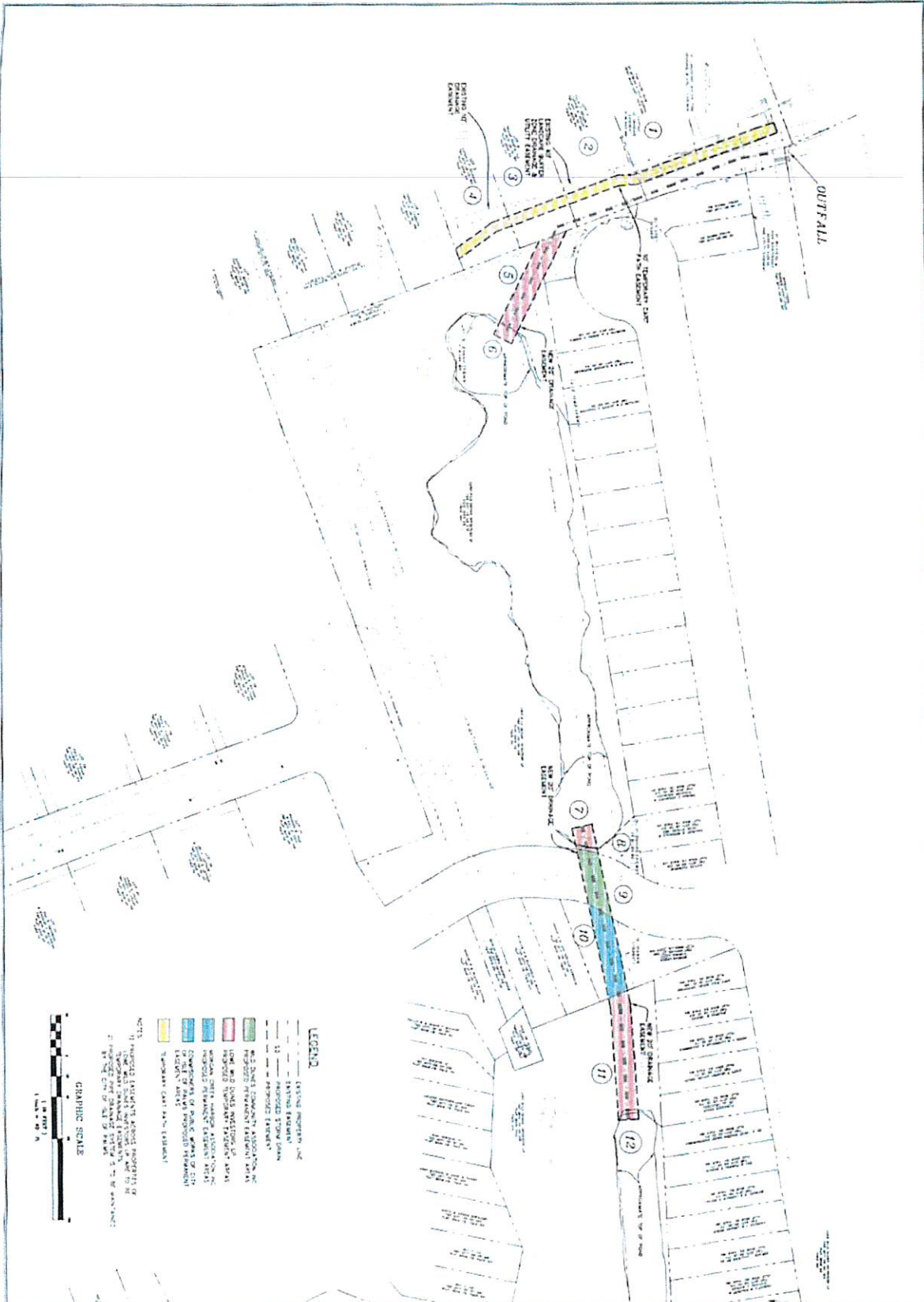
Restoration Criteria and Description Following Repair or Restoration

The City repair or restoration of the Temporary Easement shall meet the following criteria. Except in the event of an emergency, a meeting between the City and Grantor to review and approve specific repair or restoration plans shall be held at least five (5) days prior to commencement of any work being performed on the City System by the City in the Temporary Easement area.

The City shall provide for the complete repair or restoration of the Temporary Easement area to the approval and full satisfaction of Grantor, which approval shall not be unreasonably withheld. The City will restore all affected areas back to their original pre-construction state based on the approval by Grantor of the repair or restoration work. The specific plans and design for the repair or restoration work of the affected areas will be reviewed at the aforementioned meeting between the City and Grantor. Subsequent to the meeting and review Grantor will provide written approval with any and all conditions for the repair or restoration work for all affected areas within the Temporary Easement area.



45th to 52nd Avenue Drainage Improvements
 City of Isle of Palms, SC



 CITY OF ISLE OF PALMS ENGINEER JOHN A. JAMES LICENSE NO. 1012	 PROFESSIONAL ENGINEER JOHN A. JAMES LICENSE NO. 9158	PROJECT: 45TH TO 52ND AVE DRAINAGE IMPROVEMENTS PRELIMINARY EXHIBIT OF PROPOSED DRAINAGE EASEMENTS CITY OF ISLE OF PALMS	REVISIONS NO. 1: 01-10-14: 10% PLAN SET NO. 2: 01-10-14: 10% PLAN SET NO. 3: 01-10-14: 10% PLAN SET
			SHEET NUMBER 920-PH2 1012

[Handwritten signature]

enjoy the Temporary Easement for the uses stated herein unless and until any portion of the Temporary Easement is relocated by mutual agreement as provided herein; and the execution and delivery of this Agreement by Grantor do not conflict with or constitute a default under any mortgage or other agreement to which Grantor may be bound.

TO HAVE AND TO HOLD, all and singular, the Temporary Easement rights and privileges above described unto the City, its successors and assigns forever.

And Grantor hereby binds itself and its successors and assigns to warrant and forever defend all and singular the Temporary Easement rights and privileges unto the City, its successors and assigns, against Grantor and its successors, and against all persons whomsoever lawfully claiming or to claim the same or any part thereof.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals, by and through the undersigned agents, as of the date stated above.

WITNESS:

[Signature]

[Signature]
(as to City)

The City of Isle of Palms, S.C.

By: [Signature]

Title: City Administrator

[Signature]

[Signature]
(as to Grantor)

Lowe Wild Dunes Investors, L.P.

By: [Signature]

Title: VP



BP0533922

PGS:

9

STATE OF SOUTH CAROLINA)
)
COUNTY OF CHARLESTON) AGREEMENT AND GRANT OF
 DRAINAGE EASEMENT

THIS AGREEMENT is made and entered into by and between Morgan Creek Harbor Association, Inc., a South Carolina nonprofit corporation ("Grantor"), and the City of Isle of Palms, S.C., a South Carolina municipal corporation ("City" or "Grantee"), this 15th day of JANUARY, 2018. U DF
RLD

WHEREAS, the City has installed a stormwater collection system in the City of Isle of Palms, in the general vicinity of Palm Boulevard, including, but not limited to, the area between 53rd Avenue and 57th Avenue ("City System") which discharges into the stormwater collection and discharge system operated by Wild Dunes Community Association in Wild Dunes Resort ("WDCA System"); and

WHEREAS, the City intends to extend the City System to include the area between 45th Avenue and 52nd Avenue ("Phase II") which will also discharge into the WDCA System; and

WHEREAS, Grantor owns certain real property over, under, and upon which City desires to install drainage lines for the purpose of collection and transfer of stormwater drainage by Phase II of the City System for discharge into the WDCA System; and

WHEREAS, Grantor wishes to grant the City a permanent easement on the real property for construction and use of the Phase II stormwater drainage facilities.

THEREFORE, for and in consideration of the sum of Ten and no/100 (\$10.00) Dollars in hand paid by City to Grantor, the receipt and sufficiency of which are hereby acknowledged by Grantor, the parties hereto agree as follows:

1. Grantor hereby grants to City a permanent, transmissible, non-exclusive easement for the purpose of construction of stormwater drainage facilities for the collection and transfer of

stormwater drainage by Phase II of the City System for discharge into the WDCA System (the "Easement") over, under and upon a portion of the Grantor's real property described in Exhibit I attached hereto and incorporated herein by reference, and as shown on that certain plat titled "Preliminary Exhibit of Proposed Drainage Easements" for the 45th to 52nd Avenue Drainage Improvements Project, prepared by Civil Site Environmental, dated November 7, 2014, as revised March 18, 2015, and attached hereto as Exhibit II and incorporated herein by reference.

2. City shall have the right to construct, install and maintain within the Easement all drainage lines, collection boxes, pumps, electrical boxes, and any other improvements which may from time to time be utilized in connection with the operation of Phase II of the City System. Grantor also grants to City a temporary easement over such immediately adjoining lands of Grantor as is necessary to install or maintain Phase II of the City System.

3. The City agrees to operate and maintain its stormwater system pursuant to all applicable local, state and federal laws, rules, and regulations.

4. The Easement shall be an easement appurtenant to the lands of Grantor described in Exhibit I as depicted on the attached plat in Exhibit II. All provisions of this Agreement, including the benefits and burdens, shall be considered as covenants running with the land and are and shall remain binding upon and inure to the benefit of the parties hereto and their respective successors and assigns forever.

5. The City agrees to restore the Easement to substantially the condition which existed prior to the City's installation of Phase II of its drainage system.

6. Grantor agrees that it shall make no use of the lands covered by the Easement for any purpose which interferes with the use of the Easement by the City for stormwater drainage. Grantor shall not place any new structures on the Easement or alter or modify the existing

contours or other physical characteristics of the land comprising the Easement area without the prior written consent of the City.

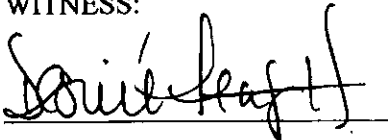
7. Grantor hereby warrants to the City that Grantor holds a fee simple absolute title to the real property; Grantor has the full right, power and authority to grant the Easement; the City, its successors and assigns, shall quietly enjoy the Easement for the uses stated herein; and the execution and delivery of this Agreement by Grantor does not conflict with or constitute a default under any mortgage or other agreement to which Grantor may be bound.


TO HAVE AND TO HOLD, all and singular, the easement rights and privileges above described unto the City, its successors and assigns forever.

And Grantor hereby binds itself and its successors and assigns to warrant and forever defend all and singular these easement rights and privileges unto the City, its successors and assigns, against Grantor and its successors, and against all persons whomsoever lawfully claiming or to claim the same or any part thereof.

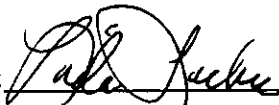
IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals, by and through the undersigned agents, as of the date stated above.

WITNESS:



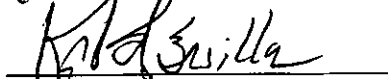

(as to City)

The City of Isle of Palms, S.C.

By: 

Title: City Administrator




(as to Grantor)

Morgan Creek Harbor Association, Inc.

By: 

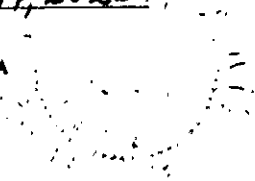
Title: President

STATE OF SOUTH CAROLINA)
)
COUNTY OF CHARLESTON) ACKNOWLEDGMENT

I, a Notary Public for the State of South Carolina, do hereby certify that the above named City of Isle of Palms, S.C., by and through the above-named agent, personally appeared before me this 5th day of February, 2016, and acknowledged the due execution of the foregoing instrument.

M. B. Copeland (Seal)
NOTARY PUBLIC FOR SOUTH CAROLINA
My Commission Expires: Sept. 14, 2022

M. B. Copeland
NOTARY PUBLIC FOR SOUTH CAROLINA
My commission expires September 14, 2022



STATE OF SOUTH CAROLINA)
)
COUNTY OF CHARLESTON) ACKNOWLEDGMENT

I, a Notary Public for the State of South Carolina, do hereby certify that the above named Morgan Creek Harbor Association, Inc., by and through the above-named agent, personally appeared before me this 5th day of February, 2016, and acknowledged the due execution of the foregoing instrument.

Laura A. McLellan (Seal)
NOTARY PUBLIC FOR SOUTH CAROLINA
My Commission Expires: 12-15-16

Laura A. McLellan
NOTARY PUBLIC FOR SOUTH CAROLINA
My commission expires December 15, 2016

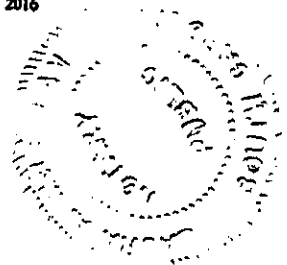


EXHIBIT I

Legal Description of Real Property of Morgan Creek Harbor Association, Inc.

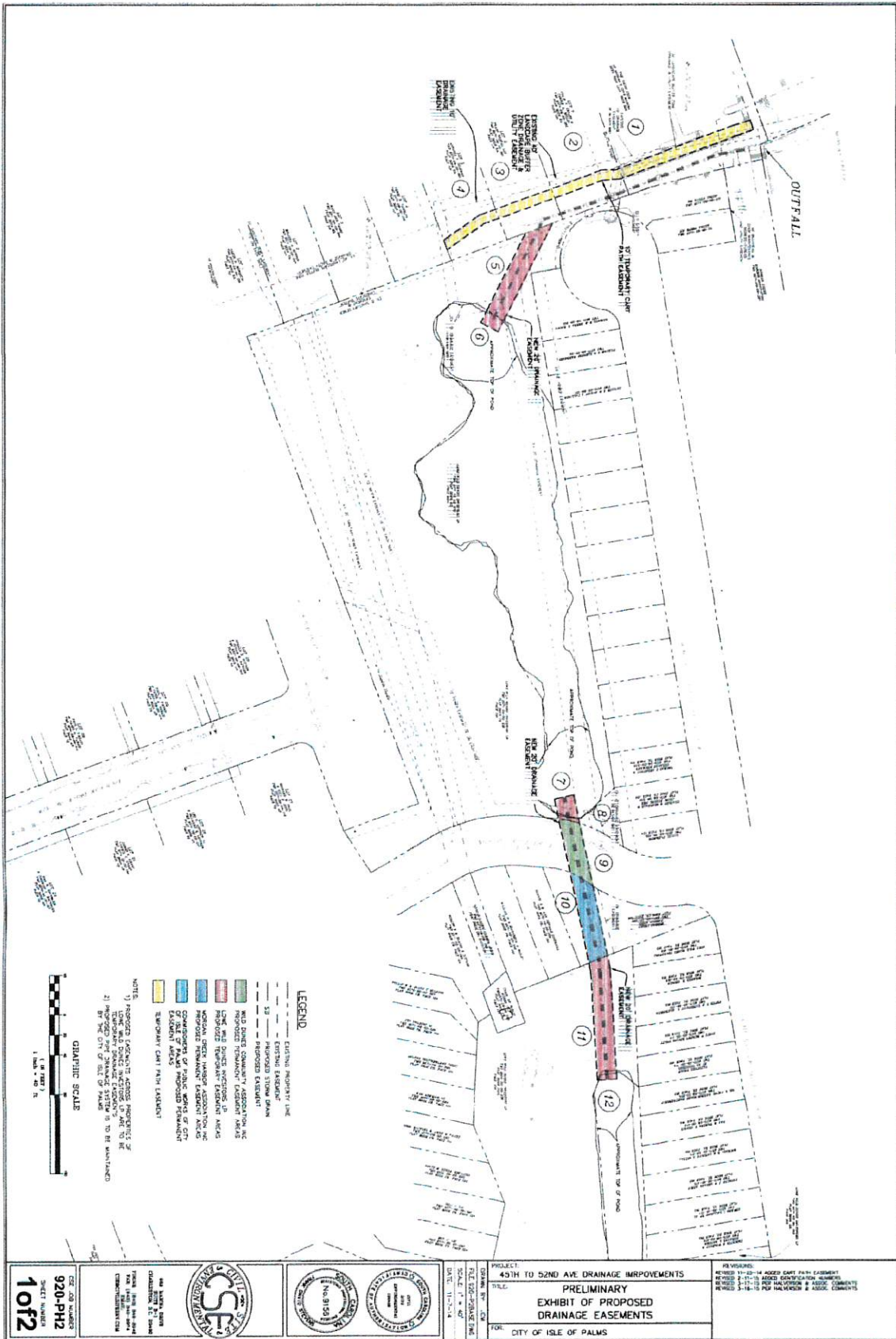
ALL that certain piece, parcel or tract of land, situate, lying and being in the State of South Carolina, County of Charleston, City of Isle of Palms, known and designated as "Common Area 5.517 S.F." as more particularly shown on that certain plat by Engineering, Surveying & Planning, Inc. entitled "Final Plat of Tract "F," Block "E," 57 Lots & Tract "G," Block "J" Wild Dunes – City of Isle of Palms, Charleston County, South Carolina" dated October 29, 1990 and recorded on December 27, 1990 in the R.M.C. Office for Charleston County in Plat Book CB, Page 124, said tract having such site, shape, dimensions, buttings and boundings as shown on said plat.

TMS# 571-08-00-208

EXHIBIT II

**[Attach Plat prepared by Civil Site Environmental titled "Preliminary Exhibit of Proposed
Drainage Easements" for 45th to 52nd Ave. Drainage Improvements
dated November 7, 2014, as revised March 18, 2015]**

45th to 52nd Avenue Drainage Improvements
 City of Isle of Palms, SC



LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING STORM DRAIN
- PROPOSED EASEMENT
- PROPOSED CONDUIT
- PROPOSED TEMPORARY EASEMENT
- PROPOSED PERMANENT EASEMENT
- PROPOSED UTILITY EASEMENT
- PROPOSED EASEMENT FOR CONDUIT
- PROPOSED EASEMENT FOR WATER MAIN
- PROPOSED EASEMENT FOR GAS
- PROPOSED EASEMENT FOR FIBER OPTIC
- PROPOSED EASEMENT FOR CABLE
- PROPOSED EASEMENT FOR TELEPHONE
- PROPOSED EASEMENT FOR POWER
- PROPOSED EASEMENT FOR WATER
- PROPOSED EASEMENT FOR SEWER
- PROPOSED EASEMENT FOR RAIN WATER
- PROPOSED EASEMENT FOR SWAMP
- PROPOSED EASEMENT FOR WETLAND
- PROPOSED EASEMENT FOR WOODLAND
- PROPOSED EASEMENT FOR PRAIRIE
- PROPOSED EASEMENT FOR SAVANNAH
- PROPOSED EASEMENT FOR TROPICAL FOREST
- PROPOSED EASEMENT FOR OTHER

NOTES:

- 1) PROPOSED EASEMENT TO ADDRESS PROPERTIES OF TEMPORARY CONSTRUCTION EASEMENT TO BE MAINTAINED
- 2) PROPOSED PERMANENT EASEMENT TO BE MAINTAINED
- 3) PROPOSED EASEMENT TO BE MAINTAINED
- 4) PROPOSED EASEMENT TO BE MAINTAINED
- 5) PROPOSED EASEMENT TO BE MAINTAINED
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- 11) PROPOSED EASEMENT TO BE MAINTAINED
- 12) PROPOSED EASEMENT TO BE MAINTAINED

GRAPHIC SCALE
 1" = 100'
 1" = 200'
 1" = 300'

DATE: 11-13-14
 SCALE: 1" = 100'
 PROJECT: 45TH TO 52ND AVE DRAINAGE IMPROVEMENTS
 TITLE: PRELIMINARY EXHIBIT OF PROPOSED DRAINAGE EASEMENTS
 DRAWN BY: CJD
 CHECKED BY: CJD
 FOR: CITY OF ISLE OF PALMS

PROVIDER:
 REVIEWED 11-23-14 ASPECT DATE FOR EASEMENT
 REVIEWED 11-23-14 ASPECT DATE FOR EASEMENT
 REVIEWED 11-23-14 ASPECT DATE FOR EASEMENT
 REVIEWED 11-23-14 ASPECT DATE FOR EASEMENT

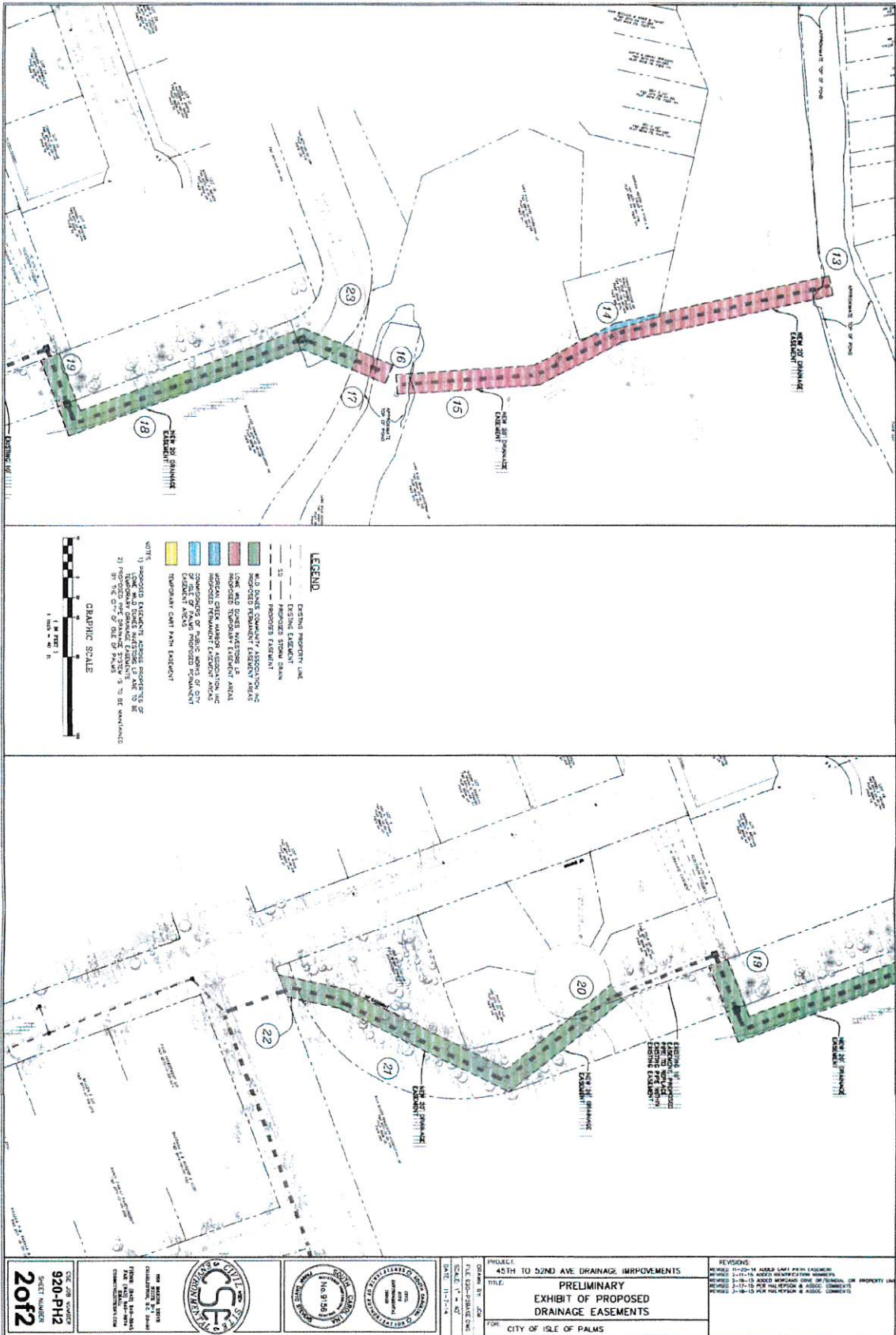
10f2
 920-PH2
 SHEET NUMBER

CITY OF ISLE OF PALMS
 1888
 1914

Professional Engineer
 No. 8193
 State of South Carolina

Professional Surveyor
 No. 8193
 State of South Carolina

45th to 52nd Avenue Drainage Improvements
 City of Isle of Palms, SC



RECORDER'S PAGE



NOTE: This page **MUST** remain
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Filed By:

HALVERSEN & ASSOCIATES
 171 CHURCH STREET
 SUITE 330
 CHARLESTON SC 29401 (BOX)

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Time:	12:39:58 PM	
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Charlie Lybrand, Register Charleston County, SC		

MAKER:

MORGAN CREEK HARBOR

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		# of References:	<input type="text"/>

RECIPIENT:

CITY OF ISLE OF PALMS

Note:

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Extra Reference Cost	\$ -
Extra Pages	\$ 4.00
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TOTAL	\$ 14.00

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STATE OF SOUTH CAROLINA)
)
COUNTY OF CHARLESTON)

AGREEMENT AND GRANT OF
DRAINAGE EASEMENT

THIS AGREEMENT is made and entered into by and between Wild Dunes Community Association, Inc., a South Carolina nonprofit corporation (“WDCA” or “Grantor”), and the City of Isle of Palms, S.C., a South Carolina municipal corporation (“City” or “Grantee”), this 29th day of December, 2015.

WHEREAS, WDCA and the City executed an Agreement and Grant of Perpetual Drainage Easement dated November 15, 2006 and amended January 19, 2011, by which WDCA granted the City a drainage easement to allow the City to collect and discharge stormwater into the WDCA stormwater collection and discharge system (“WDCA System”); and

WHEREAS, the City installed a stormwater collection system in the City of Isle of Palms, in the general vicinity of Palm Boulevard, including, but not limited to, the area between 53rd Avenue and 57th Avenue (“City System”) which discharges into the WDCA System; and

WHEREAS, the City intends to extend the City System to include the area between 45th Avenue and 52nd Avenue (“Phase II”) which will also discharge into the WDCA System; and

WHEREAS, Grantor owns certain real property over, under, and upon which City desires to install drainage lines for the purpose of collection and transfer of stormwater drainage by Phase II of the City System for discharge into the WDCA System; and

WHEREAS, Grantor wishes to grant the City a permanent easement on the real property for construction and use of the Phase II stormwater drainage facilities and agrees to allow the City to discharge the stormwater collected by Phase II into the WDCA System.

THEREFORE, for and in consideration of the sum of Ten and no/100 (\$10.00) Dollars in hand paid by City to Grantor, the receipt and sufficiency of which are hereby acknowledged by Grantor, the parties hereto agree as follows:

1. Grantor hereby grants to City a permanent, transmissible, non-exclusive easement for the purpose of construction of stormwater drainage facilities for the collection and transfer of stormwater drainage by Phase II of the City System for discharge into the WDCA System (the "Easement") over, under and upon portions of the Grantor's real property described in Exhibit I attached hereto and incorporated herein by reference, and as shown on that certain drawing titled "Preliminary Exhibit of Proposed Drainage Easements" for the 45th to 52nd Ave. Drainage Improvements Project, prepared by Civil Site Environmental, dated November 7, 2014, as revised March 18, 2015, and attached hereto as Exhibit II and incorporated herein by reference.

2. City agrees to design and construct Phase II of the City System to specifications which will not adversely impact the capacity and discharge capability of the WDCA System.

3. City shall have the right to construct and install and the obligation to maintain within the Easement all drainage lines, collection boxes, pumps, electrical boxes, and any other improvements which may from time to time be utilized in connection with the operation of Phase II of the City System. Grantor also grants to City a temporary easement over such immediately adjoining lands of Grantor as is necessary to install or maintain Phase II of the City System.

4. Grantor hereby grants to the City the right to discharge the stormwater collected by Phase II of the City System into the WDCA System.

5. Each of the parties hereto agrees to operate and maintain its respective stormwater system pursuant to all applicable local, state and federal laws, rules, and regulations.

6. The Easement shall be an easement appurtenant to the lands of Grantor described in Exhibit I as depicted on the attached plat in Exhibit II. All provisions of this Agreement,

including the benefits and burdens, shall be considered as covenants running with the land and are and shall remain binding upon and inure to the benefit of the parties hereto and their respective successors and assigns forever.

7. The City agrees to restore and landscape the Easement in accordance with Grantor's specifications to substantially the condition which existed prior to the City's installation of Phase II of its drainage system.

8. Grantor agrees that it shall make no use of the lands covered by the Easement for any purpose which interferes with the use of the Easement by the City for stormwater drainage. Grantor shall not place any new structures on the Easement or alter or modify the existing contours or other physical characteristics of the land comprising the Easement area without the prior written consent of the City.

9. Grantor hereby warrants to the City that Grantor holds a fee simple absolute title to the real property; Grantor has the full right, power and authority to grant the Easement; the City, its successors and assigns, shall quietly enjoy the Easement for the uses stated herein; and the execution and delivery of this Agreement by Grantor does not conflict with or constitute a default under any mortgage or other agreement to which Grantor may be bound.

TO HAVE AND TO HOLD, all and singular, the easement rights and privileges above described unto the City, its successors and assigns forever.

And Grantor hereby binds itself and its successors and assigns to warrant and forever defend all and singular these easement rights and privileges unto the City, its successors and assigns, against Grantor and its successors, and against all persons whomsoever lawfully claiming or to claim the same or any part thereof.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals, by
and through the undersigned agents, as of the date stated above.

WITNESS:

Scott August

[Signature]
(as to City)

The City of Isle of Palms, S.C.

By: [Signature]

Title: City Administrator

Wild Dunes Community Association, Inc.

[Signature]

David Kynski
(as to WDCA)

By: [Signature]

Title: President

STATE OF SOUTH CAROLINA)
)
COUNTY OF CHARLESTON) ACKNOWLEDGMENT

I, a Notary Public for the State of South Carolina, do hereby certify that the above named City of Isle of Palms, S.C., by and through the above-named agent, personally appeared before me this 29th day of Dec, 2015, and acknowledged the due execution of the foregoing instrument.

Ms. Copeland (Seal)
NOTARY PUBLIC FOR SOUTH CAROLINA
My Commission Expires: 9/14/2022

STATE OF SOUTH CAROLINA)
)
COUNTY OF CHARLESTON) ACKNOWLEDGMENT

I, a Notary Public for the State of South Carolina, do hereby certify that the above named Wild Dunes Community Association, Inc., by and through the above-named agent, personally appeared before me this 11th day of DECEMBER, 2015, and acknowledged the due execution of the foregoing instrument.

Carol McCally (Seal)
NOTARY PUBLIC FOR SOUTH CAROLINA
My Commission Expires: 9-8-19

EXHIBIT I

Legal Description of real property of Wild Dunes Community Association, Inc.

ALL that certain piece, parcel or tract of land, situate, lying and being in the State of South Carolina, County of Charleston, City of Isle of Palms, known and designated as "Morgan's Cove Drive 50' R/W" as more particularly shown on that certain plat by Engineering, Surveying & Planning, Inc. entitled "Final Plat of Tract "F," Block "E," 57 Lots & Tract "G," Block "J," Wild Dunes - City of Isle of Palms, Charleston County, South Carolina" dated October 29, 1990 and recorded on December 27, 1990 in the R.M.C. Office for Charleston County in Plat Book CB, Page 124, said tract having such site, shape, dimensions, buttings and boundings as shown on said plat.

TMS# 571-08-00-288

AND

ALL those certain pieces, parcels or tracts of land, situate, lying and being in the State of South Carolina, County of Charleston, City of Isle of Palms, known and designated as the Rights-of-Way for "Marina Place" and "Sundial Circle" as more particularly shown on that certain plat by Wilbur Smith and Associates, Inc. entitled "Plat of Roadway and Common Area Located City of Isle of Palms, Charleston County, S.C." dated June 22, 1978 and recorded on December 11, 1978 in the R.M.C. Office for Charleston County in Plat Book AM, Page 28, said tracts having such site, shape, dimensions, buttings and boundings as shown on said plat.

TMS# 571-12-00-128

AND

ALL those certain pieces, parcels or tracts of land, situate, lying and being in the State of South Carolina, County of Charleston, City of Isle of Palms, known and designated as the "Greenway," containing 0.830 acres and the "Buffer Area" containing 0.287 acres, as more particularly shown on that certain plat by Wilbur Smith and Associates, Inc. entitled "Plat of Roadway and Common Area Located City of Isle of Palms, Charleston County, S.C." dated June 22, 1978 and recorded on December 11, 1978 in the R.M.C. Office for Charleston County in Plat Book AM, Page 28, said tracts having such site, shape, dimensions, buttings and boundings as shown on said plat.

TMS# 571-12-00-127

AND

ALL that certain piece, parcel or tract of land, situate, lying and being in the State of South Carolina, County of Charleston, City of Isle of Palms, consisting of the Right-of-Way known as Great Heron Court and designated as "Great Heron Court Private 36' R/W Total R/W area 0.154 acre (6,702 square feet)" as more particularly shown on that certain

plat by Thomas V. Bessent, L.S., "Final Subdivision Plat Lots 1-5, Great Heron Court, Wild Dunes, City of Isle of Palms, Charleston County, South Carolina" dated May 5, 2008 with comments added November 21, 2008 with additional comments added May 11, 2009 and recorded on May 12, 2009 in the R.M.C. Office for Charleston County in Book L09, Page 0219, said tract having such site, shape, dimensions, buttings and boundings as shown on said plat.

TMS# 571-12-00-105

EXHIBIT II

[Attach Plat prepared by Civil Site Environmental titled "Preliminary Exhibit of Proposed Drainage Easements" for 45th to 52nd Ave. Drainage Improvements dated November 7, 2014, as revised March 18, 2015]

RECORDER'S PAGE



NOTE: This page **MUST** remain
 with the original document

Filed By:

HALVERSEN & ASSOCIATES
 171 CHURCH STREET
 SUITE 330
 CHARLESTON SC 29401 (BOX)

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Charlie Lybrand, Register Charleston County, SC		

MAKER:

WILD DUNES COMM ASSN

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 # of References:

RECIPIENT:

CITY OF IOP

Note:

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Extra Reference Cost	\$ -
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1. Grantor hereby grants to City a permanent, transmissible, non-exclusive easement for the purpose of construction of stormwater drainage facilities for the collection and transfer of stormwater drainage by Phase II of the City System for discharge into the WDCA System (the "Easement") over, under and upon a portion of the Grantor's real property described in Exhibit I attached hereto and incorporated herein by reference, and as shown on that certain drawing titled "Exhibit of Proposed Drainage Easement Across Property of Isle of Palms Water & Sewer Commission" for the 45th to 52nd Avenue Drainage Improvements Project, prepared by Civil Site Environmental, dated September 22, 2015, and attached hereto as Exhibit II and incorporated herein by reference. The size, shape, dimensions, and buttings and boundings of the Easement are shown and depicted as points "E-F-G-H" and labeled as "Proposed Drainage Easement" encompassing 0.01 Acres (296 square feet) on said drawing in Exhibit II.

2. City shall have the right to construct, install and maintain within the Easement all drainage lines and junction boxes required for the operation of Phase II of the City System. Grantor also grants to City a temporary easement over such immediately adjoining lands of Grantor as is necessary to install or maintain Phase II of the City System.

3. The City agrees to operate and maintain its stormwater system pursuant to all applicable local, state and federal laws, rules, and regulations.

4. The City acknowledges and agrees that there is an emergency well for use as a potable water source located on Grantor's property as depicted in Exhibit II. As stated in the letter dated April 5, 2016 from the South Carolina Department of Health and Environmental Control (DHEC) to Grantor, attached hereto as Exhibit III and incorporated herein by reference, if DHEC determines, through sampling or other measures, that the well water is impacted by the installation of City's drainage pipes and does not meet the standards of the State Primary Drinking Water

Regulations, R. 61-58, DHEC will not allow the well to be used for potable drinking water. In such event, the City agrees, at City's expense, to make such repairs or corrections as are necessary to return the well to its prior condition as a potable water source. If it is determined that the negative impact to Grantor's well was caused by other contributing factors or third parties, the City's responsibility under this section shall be limited to the negative impacts attributable to City's actions. Grantor agrees to arrange for testing of the well water by an independent certified lab before and after installation of the City's drainage pipes at Grantor's expense.

5. The Easement shall be an easement appurtenant to the lands of Grantor described in Exhibit I as depicted on the attached plat in Exhibit II. All provisions of this Agreement, including the benefits and burdens, shall be considered as covenants running with the land and are and shall remain binding upon and inure to the benefit of the parties hereto and their respective successors and assigns forever.

6. The City agrees to restore the Easement to substantially the condition which existed prior to the City's installation of Phase II of its drainage system.

7. Grantor agrees that it shall make no use of the lands covered by the Easement for any purpose which interferes with the use of the Easement by the City for stormwater drainage. Grantor shall not place any new structures on the Easement or alter or modify the existing contours or other physical characteristics of the land comprising the Easement area without the prior written consent of the City, and such consent shall not be unreasonably withheld.

8. Grantor hereby warrants to the City that Grantor holds a fee simple absolute title to the real property; Grantor has the full right, power and authority to grant the Easement; the City, its successors and assigns, shall quietly enjoy the Easement for the uses stated herein; and the

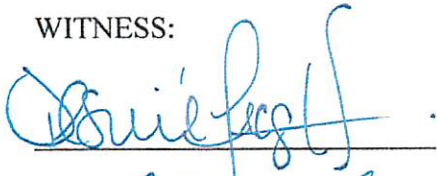
execution and delivery of this Agreement by Grantor does not conflict with or constitute a default under any mortgage or other agreement to which Grantor may be bound.


TO HAVE AND TO HOLD, all and singular, the easement rights and privileges above described unto the City, its successors and assigns forever.

And Grantor hereby binds itself and its successors and assigns to warrant and forever defend all and singular these easement rights and privileges unto the City, its successors and assigns, against Grantor and its successors, and against all persons whomsoever lawfully claiming or to claim the same or any part thereof.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals, by and through the undersigned agents, as of the date stated above.


WITNESS:





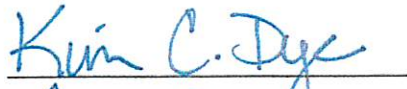
(as to City)


The City of Isle of Palms, S.C.

By: 


Title: City Administrator

Commissioners of Public Works of the City of Isle of Palms d/b/a Isle of Palms Water and Sewer Commission





(as to Grantor)

By: 

Title: General Manager

STATE OF SOUTH CAROLINA)
) ACKNOWLEDGMENT
COUNTY OF CHARLESTON)

I, a Notary Public for the State of South Carolina, do hereby certify that the above named City of Isle of Palms, S.C., by and through the above-named agent, personally appeared before me this 22 day of Sept., 2016, and acknowledged the due execution of the foregoing instrument.

M. B. Copeland
NOTARY PUBLIC FOR SOUTH CAROLINA
My commission expires September 14, 2022

M B Copeland (Seal)
NOTARY PUBLIC FOR SOUTH CAROLINA
My Commission Expires: 9/14/2022

STATE OF SOUTH CAROLINA)
) ACKNOWLEDGMENT
COUNTY OF CHARLESTON)

I, a Notary Public for the State of South Carolina, do hereby certify that the above named Commissioners of Public Works of the City of Isle of Palms d/b/a Isle of Palms Water and Sewer Commission by and through the above-named agent, personally appeared before me this 22 day of Sept., 2016, and acknowledged the due execution of the foregoing instrument.

Martha O. Williams (Seal)
NOTARY PUBLIC FOR SOUTH CAROLINA
My Commission Expires: 11-14-2023



EXHIBIT I

Legal Description of IOPWSC's Real Property

ALL that certain piece, parcel or lot of land, together with the buildings and improvements thereon, situate, lying and being on the Isle of Palms, Charleston County, South Carolina, designated as "6,050 Sq. Ft. 0.139 Acre" being Deep Well Site 2, 0.139 Acre, measuring and containing 6,050 square feet, as shown on a plat prepared by William Porcher, RLS, dated December 18, 1987, entitled "PLAT OF DEEP WELL SITE 2 NEAR MARINA PLACE, WILD DUNES - CITY OF ISLE OF PALMS, CHARLESTON COUNTY, SOUTH CAROLINA," and being attached to deed from Wild Dunes Associates to Island Utilities, Inc. dated December 24, 1987 and recorded in Book K-171 at page 356 in the RMC Office for Charleston County, South Carolina as Exhibit "A." Reference to said plat being craved for a more complete description.

TMS# 571-08-00-166

EXHIBIT II

**(Attach Drawing prepared by Civil Site Environmental titled “Exhibit of Proposed
Drainage Easement Across Property of Isle of Palms Water & Sewer Commission” for the
45th to 52nd Avenue Drainage Improvements
dated September 22, 2015)**

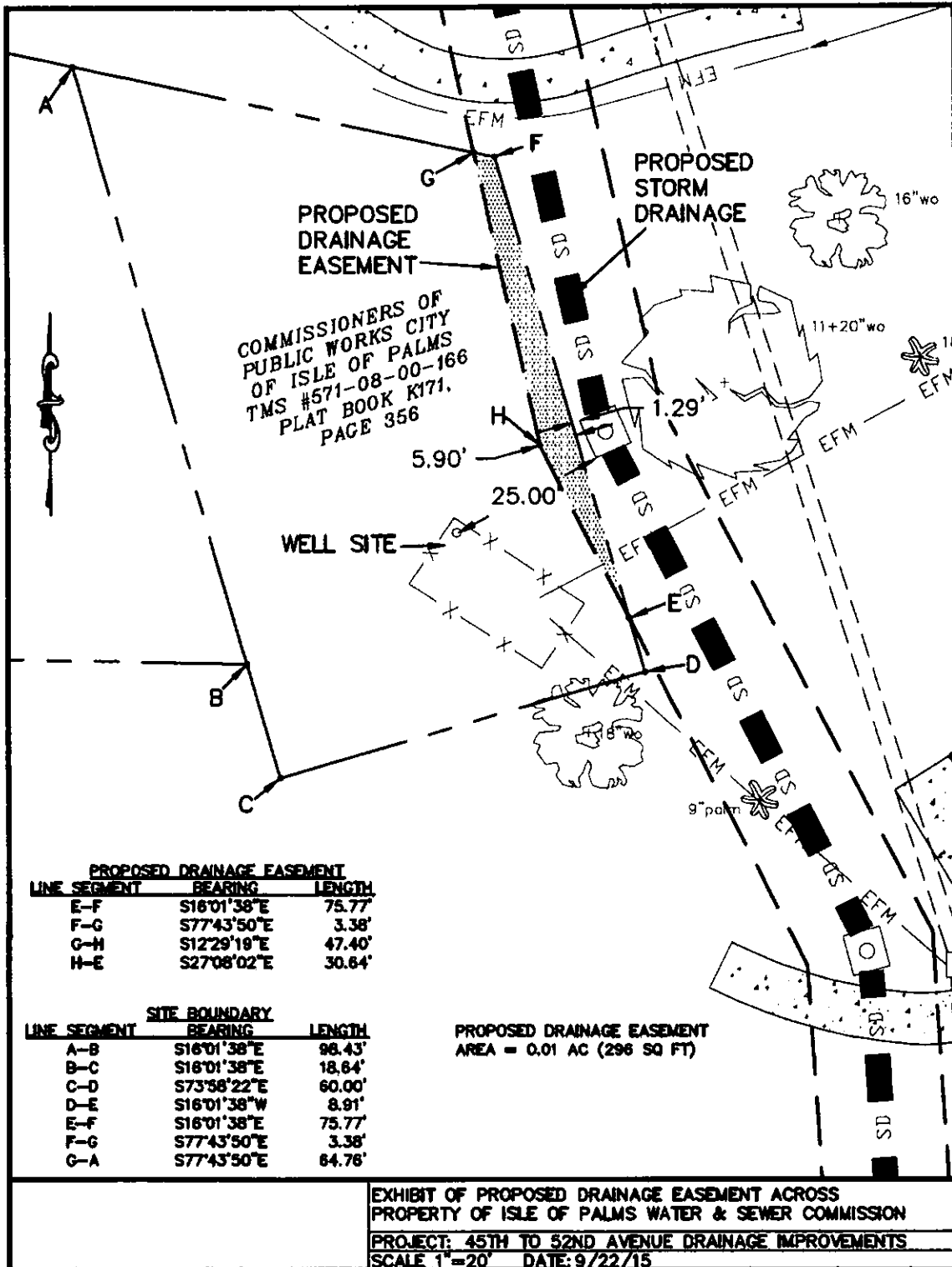


EXHIBIT OF PROPOSED DRAINAGE EASEMENT ACROSS
 PROPERTY OF ISLE OF PALMS WATER & SEWER COMMISSION
 PROJECT: 45TH TO 52ND AVENUE DRAINAGE IMPROVEMENTS
 SCALE 1"=20' DATE: 9/22/15

EXHIBIT III

(Attach letter from DHEC to IOPWSC dated April 5, 2016)



Catherine E. Heigel, Director

Promoting and protecting the health of the public and the environment

April 5, 2016

Ms. Kristin Champagne, PE, Manager
Isle of Palms Water & Sewer Commission
PO Box 528
Isle of Palms, SC 29451

RE: Use of Potable Water Well #4 (source code g10336)

Ms. Champagne;

Thank you for your recent discussions with both me and our local Charleston EQC office regarding the future use of your Well #4 located on the IOP golf course. It has come to our attention that there is a project request to locate a new line, carrying storm water, within the established pollution free radius for this well. I have discussed this at length with our ground water section here at DHEC and they indicated that there is a low probability of impact on your well. In addition, the State Primary Drinking Water Regulations, R.61-58 do not address this issue either. Therefore, as long as the well remains in compliance with R.61-58 the proximity of the source water piping system will not affect the future use of this well as a potable water source. If the Department determines, through sampling or other measures, that the water is impacted and does not meet standards, the well will not be allowed to be used for potable drinking water.

If you have any questions, please either e-mail me at welchra@dhec.sc.gov, or call me at (803) 898-3546.

Sincerely,



Richard Welch, PE, Manager
Drinking Water Permitting & Recreational Waters Compliance
Drinking Water Protection Division
SC DHEC - Bureau of Water

Cc: Harvey Wilkins, PE, Charleston EQC Regional Office

STATE OF SOUTH CAROLINA)
)
COUNTY OF CHARLESTON) AGREEMENT AND GRANT OF TEMPORARY
) GOLF CART PATH EASEMENT

THIS AGREEMENT is made and entered into by and between Yacht Club at Morgan’s Cove Marina Association, Inc. (“Grantor”) and the City of Isle of Palms, S.C., a South Carolina municipal corporation (“City”) this 5th day of July, 2016.

WHEREAS, the City has installed a stormwater collection system in the City of Isle of Palms, in the general vicinity of Palm Boulevard, including, but not limited to, the area between 53rd Avenue and 57th Avenue (“City System”) which discharges into the stormwater collection and discharge system operated by Wild Dunes Community Association in Wild Dunes Resort (“WDCA System”); and

WHEREAS, the City intends to extend the City System to include the area between 45th Avenue and 52nd Avenue (“Phase II”) which will also discharge into the WDCA System; and

WHEREAS, in order to complete Phase II of the City System, it will be necessary for the City to replace drainage pipes which are located beneath the golf cart path within an existing easement that crosses Grantor’s real property; and

WHEREAS, City desires to install a temporary golf cart path upon a portion of Grantor’s real property until such time as the drainage pipe replacement work is completed and the existing golf cart path can be restored to its original condition; and

WHEREAS, Grantor wishes to grant the City a temporary easement on Grantor’s real property for installation and use of a temporary golf cart path and for ingress and egress necessary for replacement of the drainage pipes beneath the existing golf cart path.

THEREFORE, for and in consideration of the sum of Ten and no/100 (\$10.00) Dollars in hand paid by City to Grantor, the receipt and sufficiency of which are hereby acknowledged by Grantor, the parties hereto agree as follows:

1. Grantor hereby grants to City a non-exclusive temporary easement for the purpose of installation and use of a temporary golf cart path (the "Temporary Easement") over, under and upon portions of the Grantor's real property described in Exhibit I attached hereto and incorporated herein by reference, and as shown on that certain plat titled "Preliminary Exhibit of Proposed Drainage Easements" for the 45th to 52nd Ave. Drainage Improvements Project, prepared by Civil Site Environmental, dated November 7, 2014, as revised June 2, 2016, and attached hereto as Exhibit II and incorporated herein by reference. Grantor also grants to City a non-exclusive temporary easement over Grantor's real property which immediately adjoins the Temporary Easement area for ingress and egress necessary for the installation of the temporary golf cart path and for replacement of the drainage pipes beneath the existing golf cart path.

2. City agrees to clean and/or vacuum the connecting drain line located on Grantor's property, as City's Contractor deems necessary and at such time as City's Contractor deems appropriate, during the course of the drainage pipe replacement work. Grantor grants to City a non-exclusive temporary easement over a portion of Grantor's real property for ingress and egress necessary for cleaning and/or vacuuming the drain line as depicted on the drawing titled "Exhibit Showing a Temporary Construction Easement Across the Property of the Yacht Club at Morgan's Cove Marina," prepared by Civil Site Environmental, dated May 18, 2016 and revised June 8, 2016, attached hereto as Exhibit III and incorporated herein by reference.

3. City agrees to install appropriate construction fencing and/or barricades at the site to keep golf carts on the designated temporary golf cart path within the Temporary Easement.

4. Upon completion of City's drainage pipe replacement work and restoration of the existing golf cart path, the City agrees to restore the Temporary Easement area to substantially the condition which existed prior to City's installation of the temporary golf cart path, at which time the Temporary Easement shall automatically terminate.

5. The Temporary Easement shall burden the lands of Grantor described in Exhibit I and depicted in Exhibit II. All provisions of this Agreement, including the benefits and burdens, shall be considered as covenants running with the land and are and shall remain binding upon and inure to the benefit of the parties hereto and their respective successors and assigns forever.

6. Grantor agrees that it shall make no use of the lands covered by the Temporary Easement for any purpose which interferes with the use of the Temporary Easement by the City for the temporary golf cart path.

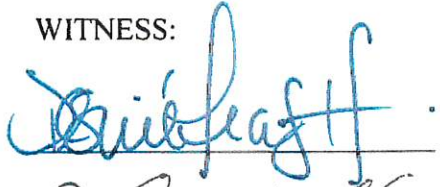
7. Grantor hereby warrants to the City that Grantor has the full right, power and authority to grant the Temporary Easement and the City, its successors and assigns, shall quietly enjoy the Temporary Easement for the uses stated herein.


TO HAVE AND TO HOLD, all and singular, the Temporary Easement rights and privileges above described unto the City, its successors and assigns forever.

And Grantor hereby binds itself and its successors and assigns to warrant and forever defend all and singular the Temporary Easement rights and privileges unto the City, its successors and assigns, against Grantor and its successors, and against all persons whomsoever lawfully claiming or to claim the same or any part thereof.


IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals, by and through the undersigned agents, as of the date stated above.

WITNESS:



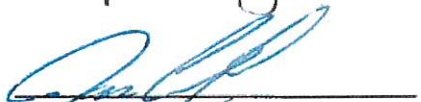

(as to City)

The City of Isle of Palms, S.C.

By: 

Title: City Administrator




(as to Grantor)

Yacht Club at Morgan's Cove Marina Association, Inc.

By: 

Title: Board President

STATE OF SOUTH CAROLINA)
)
COUNTY OF CHARLESTON) ACKNOWLEDGMENT

I, a Notary Public for the State of South Carolina, do hereby certify that the above named City of Isle of Palms, S.C., by and through the above-named agent, personally appeared before me this 20th day of July, 2016, and acknowledged the due execution of the foregoing instrument.

Mrs Capelard (Seal)
NOTARY PUBLIC FOR SOUTH CAROLINA
My Commission Expires: Sept 14, 2022

STATE OF SOUTH CAROLINA)
)
COUNTY OF CHARLESTON) ACKNOWLEDGMENT

I, a Notary Public for the State of South Carolina, do hereby certify that the above named Yacht Club at Morgan’s Cove Marina Association, Inc. by and through the above-named agent, personally appeared before me this ____ day of _____, 2016, and acknowledged the due execution of the foregoing instrument.

_____ (Seal)
NOTARY PUBLIC FOR SOUTH CAROLINA
My Commission Expires: _____

EXHIBIT I

Legal Description of Property

All those certain Units, being known and designated as Units F-1 through F-24 and G-1 through G-24, and Units 1 through 48 in The Yacht Club at Morgan's Cove Marina Horizontal Property Regime, Charleston County, South Carolina, a horizontal property regime established pursuant to the South Carolina Horizontal Property Act, Section 27-31-10 et seq., 1976 South Carolina Code of Laws, as amended, and submitted by Master Deed For The Yacht Club at Morgan's Cove Marina Horizontal Property Regime dated June 2, 1993 and recorded on June 3, 1993 in the RMC Office for Charleston County in Book T227, Page 666, and as it may thereafter be amended from time to time (the "Master Deed"); together with an appurtenant, undivided percentage interests in the Common Elements, all as defined and set forth in the Master Deed (the Unit and undivided interests in the Common Elements being collectively referred to as the "Unit"); together with the rights and entitlements, and subject to all easements, conditions and restrictions, as set forth in the Master Deed.

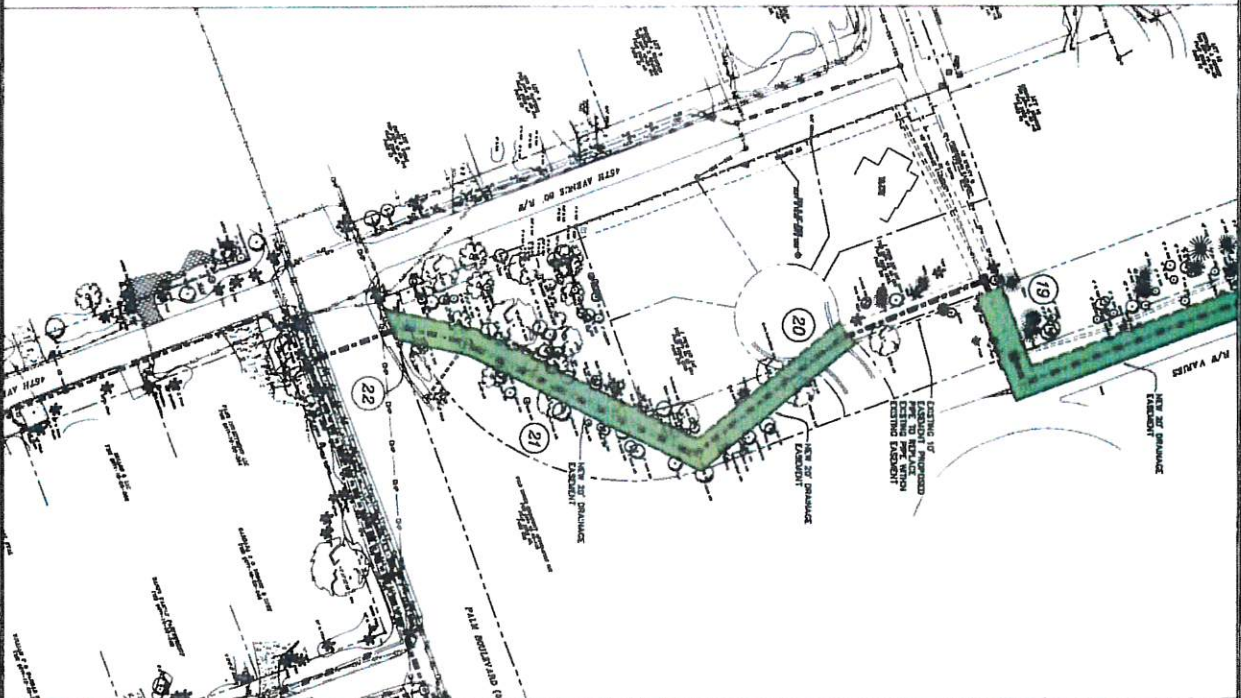
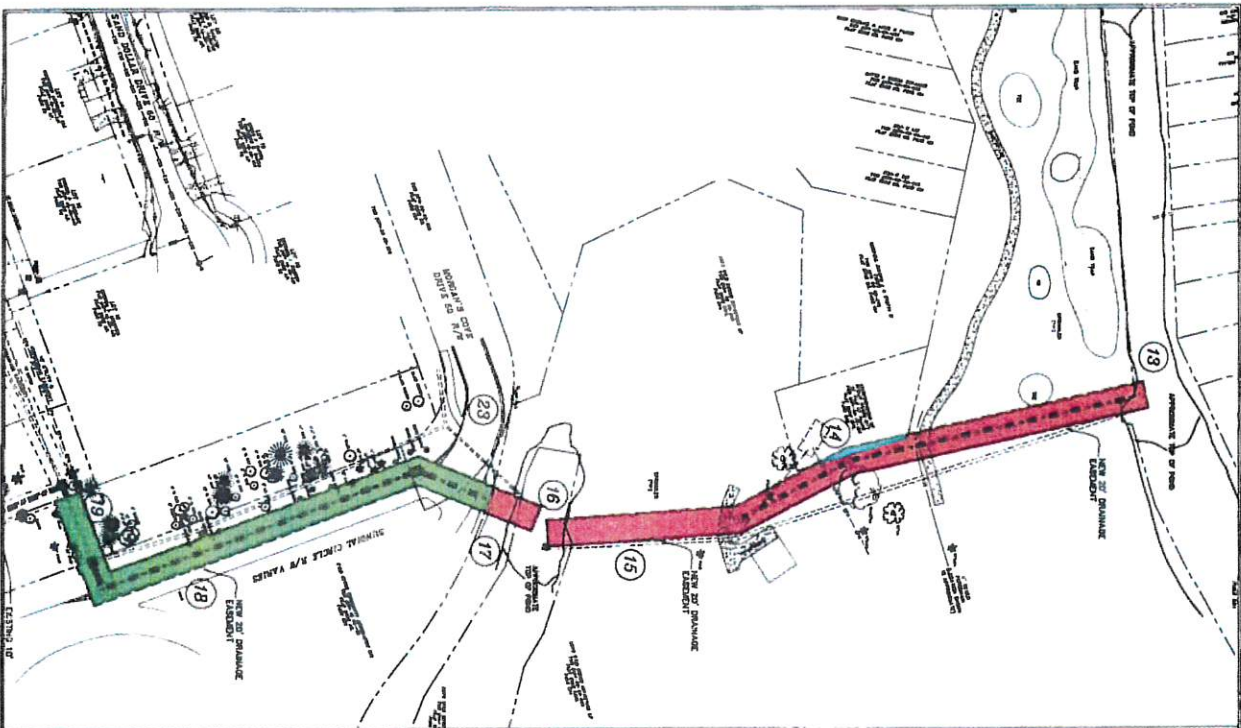
TMS Nos. 571-08-00-239 through -286

EXHIBIT II

[Attach Plat prepared by Civil Site Environmental titled “Preliminary Exhibit of Proposed Drainage Easements” for 45th to 52nd Ave. Drainage Improvements dated November 7, 2014, as revised June 2, 2016]

EXHIBIT III

[Attach Drawing prepared by Civil Site Environmental titled “Exhibit Showing a Temporary Construction Easement Across the Property of the Yacht Club at Morgan’s Cove Marina” dated May 18, 2016 and revised June 8, 2016]



LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- PROPOSED STORM DRAIN
- PROPOSED EASEMENT
- WFO DUES COMMUNITY ASSOCIATION, INC. PROPOSED PERMANENT EASEMENT AREAS
- LONG BEACH DUES INVESTMENT, LP PROPOSED PERMANENT EASEMENT AREAS
- PROPOSED TEMPORARY EASEMENT AREAS
- PROPOSED PERMANENT EASEMENT AREAS
- CHANGEOVER OF PUBLIC WORKS OF CITY OF ISLE OF PALMS PROPOSED PERMANENT EASEMENT AREAS
- TEMPORARY CANT PAINT EASEMENT

NOTES:

- PROPOSED EASEMENTS AREAS PROPERTIES OF LONG BEACH DUES INVESTMENT LP ARE TO BE MAINTAINED BY THE CITY OF ISLE OF PALMS.
- PROPOSED TEMPORARY EASEMENT AREAS ARE TO BE MAINTAINED BY THE CITY OF ISLE OF PALMS.

GRAPHIC SCALE
1" = 50' 0"

PROJECT: 45TH TO 52ND AVE DRAINAGE IMPROVEMENTS
TITLE: PRELIMINARY EXHIBIT OF PROPOSED DRAINAGE EASEMENTS
DATE: 11-7-14
SCALE: 1" = 40'
DESIGNER: JCB
FILE NO.: 2012-00000000
FOR: CITY OF ISLE OF PALMS

REVISIONS:

REVISED	11-10-14	ADDED CANT PAINT EASEMENT
REVISED	11-10-14	ADDED TEMPORARY EASEMENT
REVISED	11-10-14	ADDED TEMPORARY EASEMENT
REVISED	11-10-14	ADDED TEMPORARY EASEMENT
REVISED	11-10-14	ADDED TEMPORARY EASEMENT

CSF
CITY OF ISLE OF PALMS
ENGINEERING & SURVEYING
REGISTERED PROFESSIONAL ENGINEERS
REGISTERED PROFESSIONAL SURVEYORS
NO. 91262

2012
920-PH2
SHEET NUMBER



EXHIBIT SHOWING A TEMPORARY CONSTRUCTION EASEMENT ACROSS THE PROPERTY OF THE YACHT CLUB AT MORGAN'S COVE MARINA

DATE: 5/18/16 (rev 6/8/16) SCALE 1"=30'

WHEREAS, Grantor wishes to grant the City a temporary easement on Grantor's real property for installation and use of a temporary golf cart path and for ingress and egress necessary for replacement of the drainage pipes beneath the existing golf cart path.

THEREFORE, for and in consideration of the sum of Ten and no/100 (\$10.00) Dollars in hand paid by City to Grantor, the receipt and sufficiency of which are hereby acknowledged by Grantor, the parties hereto agree as follows:

1. Grantor hereby grants to City a non-exclusive temporary easement for the purpose of installation and use of a temporary golf cart path (the "Temporary Easement") over, under and upon portions of the Grantor's real property described in Exhibit I attached hereto and incorporated herein by reference, and as shown on that certain plat titled "Preliminary Exhibit of Proposed Drainage Easements" for the 45th to 52nd Ave. Drainage Improvements Project, prepared by Civil Site Environmental, dated November 7, 2014, as revised March 18, 2015, and attached hereto as Exhibit II and incorporated herein by reference. Grantor also grants to City a non-exclusive temporary easement over Grantor's real property which immediately adjoins the Temporary Easement area for ingress and egress necessary for the installation of the temporary golf cart path and for replacement of the drainage pipes beneath the existing golf cart path.

2. The Temporary Easement shall burden the lands of Grantor described in Exhibit I and depicted in Exhibit II. All provisions of this Agreement, including the benefits and burdens, shall be considered as covenants running with the land and are and shall remain binding upon and inure to the benefit of the parties hereto and their respective successors and assigns forever.

3. Grantor agrees that it shall make no use of the lands covered by the Temporary Easement for any purpose which interferes with the use of the Temporary Easement by the City for the temporary golf cart path.

4. Upon completion of City's drainage pipe replacement work and restoration of the existing golf cart path, the City agrees to restore and landscape the Temporary Easement area to substantially the condition which existed prior to City's installation of the temporary golf cart path, at which time this Temporary Easement shall automatically terminate.

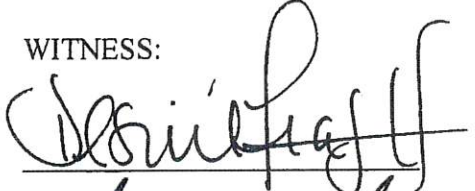
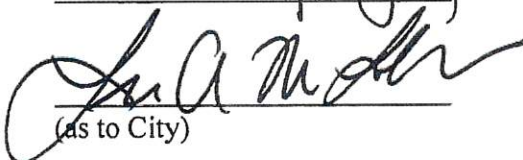
5. Grantor hereby warrants to the City that Grantor holds a fee simple absolute title to the real property subject to all matters of record; Grantor has the full right, power and authority to grant the Temporary Easement; the City, its successors and assigns, shall quietly enjoy the Temporary Easement for the uses stated herein; and the execution and delivery of this Agreement by Grantor do not conflict with or constitute a default under any mortgage or other agreement to which Grantor may be bound.

TO HAVE AND TO HOLD, all and singular, the Temporary Easement rights and privileges above described unto the City, its successors and assigns forever.


And Grantor hereby binds itself and its successors and assigns to warrant and forever defend all and singular the Temporary Easement rights and privileges unto the City, its successors and assigns, against Grantor and its successors, and against all persons whomsoever lawfully claiming or to claim the same or any part thereof.


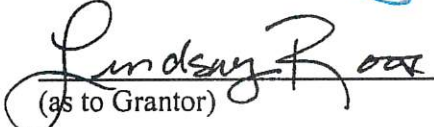
IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals, by and through the undersigned agents, as of the date stated above.

WITNESS:




(as to City)


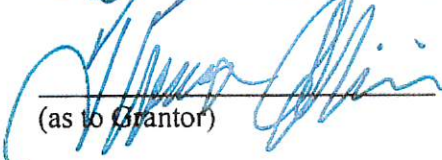
The City of Isle of Palms, S.C.

By: 
Title: City Administrator



(as to Grantor)

Colin F. Kelley

By: 
Title: owner



(as to Grantor)

Carrie A. Kelley

By: 
Title: owner

STATE OF SOUTH CAROLINA)
)
COUNTY OF CHARLESTON) ACKNOWLEDGMENT

I, a Notary Public for the State of South Carolina, do hereby certify that the above named City of Isle of Palms, S.C., by and through the above-named agent, personally appeared before me this 3rd day of August, 2016, and acknowledged the due execution of the foregoing instrument.

M. D. Capelant (Seal)
NOTARY PUBLIC FOR SOUTH CAROLINA
My Commission Expires: Sept 14, 2022

STATE OF SOUTH CAROLINA)
)
COUNTY OF CHARLESTON) ACKNOWLEDGMENT

I, a Notary Public for ~~the State of South Carolina~~, do hereby certify that the above named Colin F. Kelley by and through the above-named agent, personally appeared before me this ___ day of _____, 2016, and acknowledged the due execution of the foregoing instrument.

_____ (Seal)
~~NOTARY PUBLIC FOR SOUTH CAROLINA~~
My Commission Expires: _____

STATE OF SOUTH CAROLINA)
)
COUNTY OF CHARLESTON) ACKNOWLEDGMENT

I, a Notary Public for ~~the State of South Carolina~~, do hereby certify that the above named Carrie A. Kelley by and through the above-named agent, personally appeared before me this ___ day of _____, 2016, and acknowledged the due execution of the foregoing instrument.

_____ (Seal)
~~NOTARY PUBLIC FOR SOUTH CAROLINA~~
My Commission Expires: _____

EXHIBIT I

Legal Description of Property

ALL that certain piece, parcel or lot of land, together with buildings and improvements thereon, situate, lying and being in the City of Isle of Palms, County of Charleston, State of South Carolina, known and designated as LOT 7, and being shown on that certain Plat entitled, "FINAL PLAT SHOWING THE SUBDIVISION OF A 3.933 ACRE TRACT KNOWN AS HARBOUR DUNES LOCATED ON FRANK SOTTILE LANE, CITY OF ISLE OF PALMS, CHARLESTON COUNTY, SC," said Plat being prepared by Charles F. Dawley, Jr., RLS dated May 2, 1995 and which Plat is duly recorded in the RMC Office for Charleston County, SC in Plat Book EA, Page 717. Said lot having such actual size, shape, dimensions, buttings and boundings, as shown on said Plat, reference to which is hereby made for a more complete description.

TMS Nos. 571-08-00-302

14 Frank Sottile Lane, Isle of Palms, SC 29451

EXHIBIT II

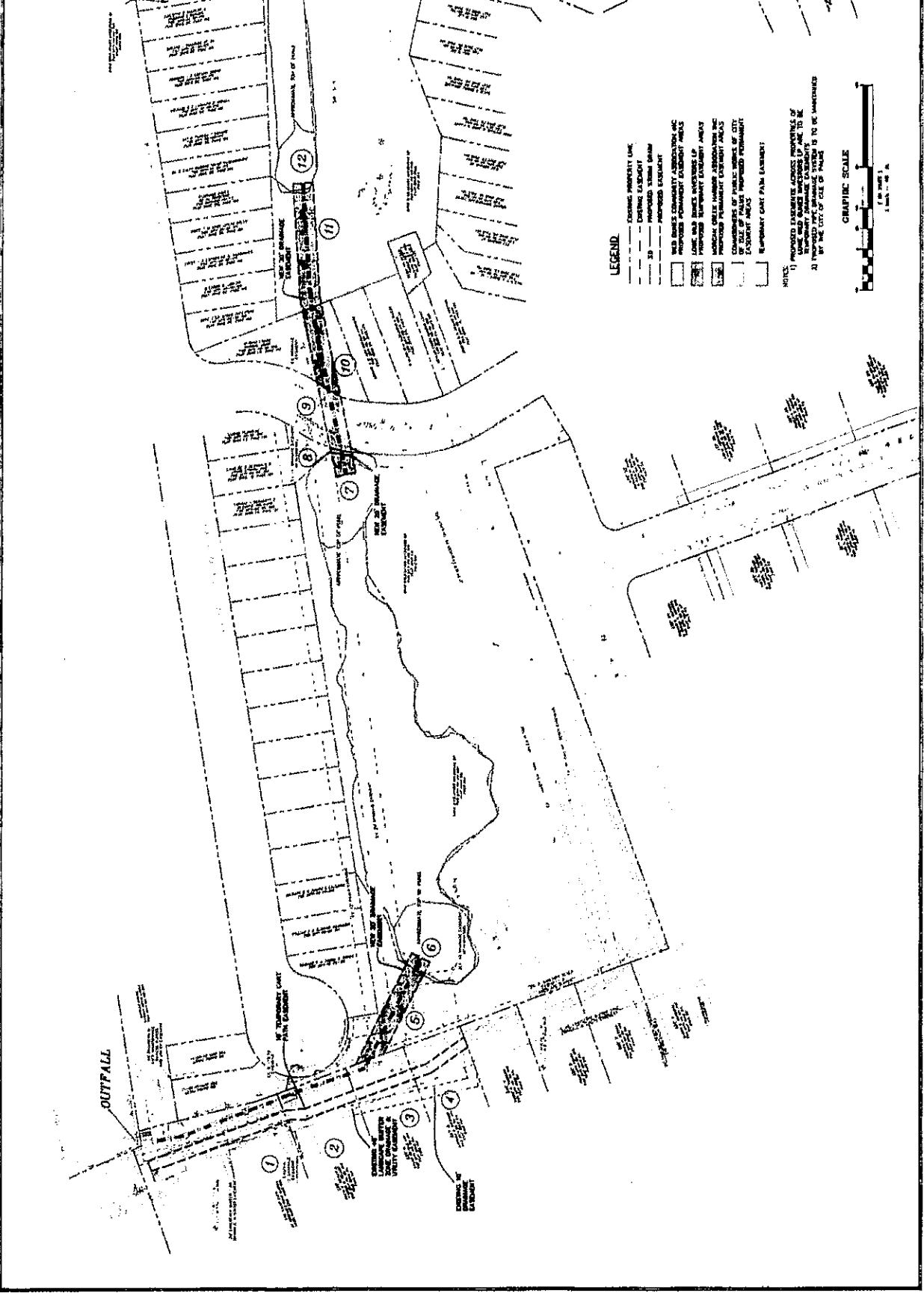
[Attach Plat prepared by Civil Site Environmental titled "Preliminary Exhibit of Proposed Drainage Easements" for 45th to 52nd Ave. Drainage Improvements dated November 7, 2014, as revised March 18, 2015]

PREPARED BY: [Name]
 DATE: [Date]
 PROJECT: 45th to 52nd Ave Drainage Improvements
 SHEET NO. 10f2
 CITY OF PALM BEACH

PRELIMINARY
 EXHIBIT OF PROPOSED
 DRAINAGE IMPROVEMENTS
 CITY OF PALM BEACH



920-PH2
 10f2



- LEGEND**
- EXISTING PROPERTY LINE
 - EXISTING EASEMENT
 - PROPOSED STORM DRAIN
 - PROPOSED EASEMENT
 - PROPOSED EXHAUST
 - EXISTING PUBLIC UTILITY
 - PROPOSED PUBLIC UTILITY
 - EXISTING CITY EASEMENT
 - PROPOSED CITY EASEMENT
 - EXISTING CITY EASEMENT
 - PROPOSED CITY EASEMENT

NOTES
 1) PROPOSED EASEMENTS ARE SUBJECT TO THE CITY ENGINEER'S REVIEW AND APPROVAL.
 2) PROPERTY OWNERS ARE TO BE NOTIFIED BY THE CITY OF PALM BEACH.



WHEREAS, Grantor wishes to grant the City a temporary easement on Grantor's real property for installation and use of a temporary golf cart path and for ingress and egress necessary for replacement of the drainage pipes beneath the existing golf cart path.

THEREFORE, for and in consideration of the sum of Ten and no/100 (\$10.00) Dollars in hand paid by City to Grantor, the receipt and sufficiency of which are hereby acknowledged by Grantor, the parties hereto agree as follows:

1. Grantor hereby grants to City a non-exclusive temporary easement for the purpose of installation and use of a temporary golf cart path (the "Temporary Easement") over, under and upon portions of the Grantor's real property described in Exhibit I attached hereto and incorporated herein by reference, and as shown on that certain plat titled "Preliminary Exhibit of Proposed Drainage Easements" for the 45th to 52nd Ave. Drainage Improvements Project, prepared by Civil Site Environmental, dated November 7, 2014, as revised March 18, 2015, and attached hereto as Exhibit II and incorporated herein by reference. Grantor also grants to City a non-exclusive temporary easement over Grantor's real property which immediately adjoins the Temporary Easement area for ingress and egress necessary for the installation of the temporary golf cart path and for replacement of the drainage pipes beneath the existing golf cart path.

2. The Temporary Easement shall burden the lands of Grantor described in Exhibit I and depicted in Exhibit II. All provisions of this Agreement, including the benefits and burdens, shall be considered as covenants running with the land and are and shall remain binding upon and inure to the benefit of the parties hereto and their respective successors and assigns forever.

3. Grantor agrees that it shall make no use of the lands covered by the Temporary Easement for any purpose which interferes with the use of the Temporary Easement by the City for the temporary golf cart path.

4. Upon completion of City's drainage pipe replacement work and restoration of the existing golf cart path, the City agrees to restore and landscape the Temporary Easement area to substantially the condition which existed prior to City's installation of the temporary golf cart path, at which time this Temporary Easement shall automatically terminate.

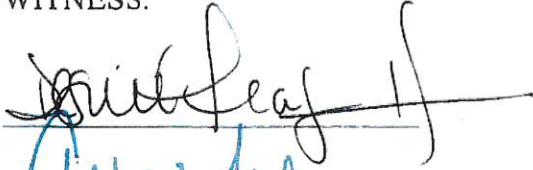
5. Grantor hereby warrants to the City that Grantor holds a fee simple absolute title to the real property subject to all matters of record; Grantor has the full right, power and authority to grant the Temporary Easement; the City, its successors and assigns, shall quietly enjoy the Temporary Easement for the uses stated herein; and the execution and delivery of this Agreement by Grantor do not conflict with or constitute a default under any mortgage or other agreement to which Grantor may be bound.

TO HAVE AND TO HOLD, all and singular, the Temporary Easement rights and privileges above described unto the City, its successors and assigns forever.


And Grantor hereby binds itself and its successors and assigns to warrant and forever defend all and singular the Temporary Easement rights and privileges unto the City, its successors and assigns, against Grantor and its successors, and against all persons whomsoever lawfully claiming or to claim the same or any part thereof.


IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals, by and through the undersigned agents, as of the date stated above.

WITNESS:

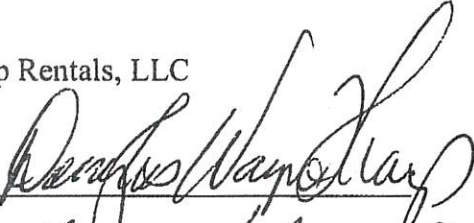

Amy Lee
(as to City)

The City of Isle of Palms, S.C.

By: 
Title: City Administrator


Anna Larmer
(as to Grantor)

Tharp Rentals, LLC

By: 
Title: MEMBER/MANAGER

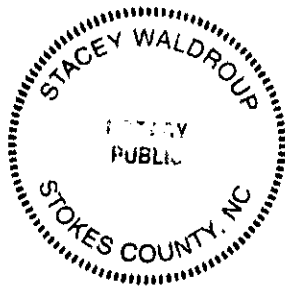
STATE OF SOUTH CAROLINA)
) ACKNOWLEDGMENT
COUNTY OF CHARLESTON)

I, a Notary Public for the State of South Carolina, do hereby certify that the above named City of Isle of Palms, S.C., by and through the above-named agent, personally appeared before me this 11th day of March, 2016, and acknowledged the due execution of the foregoing instrument.

Ad Capel (Seal)
NOTARY PUBLIC FOR SOUTH CAROLINA
My Commission Expires: Sept 14, 2022

North
STATE OF ~~SOUTH~~ CAROLINA)
) ACKNOWLEDGMENT
Forrest
COUNTY OF ~~CHARLESTON~~)

I, a Notary Public for the State of ~~South~~^{North} Carolina, do hereby certify that the above named Tharp Rentals, LLC by and through the above-named agent, personally appeared before me this 3 day of March, 2016, and acknowledged the due execution of the foregoing instrument.



Stacey Waldroup (Seal)
NOTARY PUBLIC FOR SOUTH CAROLINA
My Commission Expires: January 29, 2017

EXHIBIT I

Legal Description of Property

ALL that certain piece, parcel or lot of land, together with the improvements thereon, situate, lying and being in the City of Isle of Palms, County of Charleston, State of South Carolina, known and designated as Lot 6, on a plat entitled, "Final Plat Showing the Subdivision of a 3.933 Acre Tract known as Harbour Dunes located on Frank Sottile Lane, City of Isle of Palms, Charleston County, SC," dated May 2, 1995 and recorded in Plat Book EA at Page 717, RMC Office for Charleston County, South Carolina. Said lot having such size, shape, metes and bounds as will by reference to said plat more fully appear.

TMS Nos. 571-08-00-301

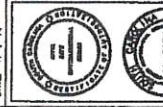
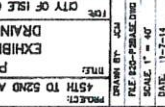
12 Frank Sottile Lane, Isle of Palms, SC 29451

EXHIBIT II

[Attach Plat prepared by Civil Site Environmental titled "Preliminary Exhibit of Proposed Drainage Easements" for 45th to 52nd Ave. Drainage Improvements dated November 7, 2014, as revised March 18, 2015]

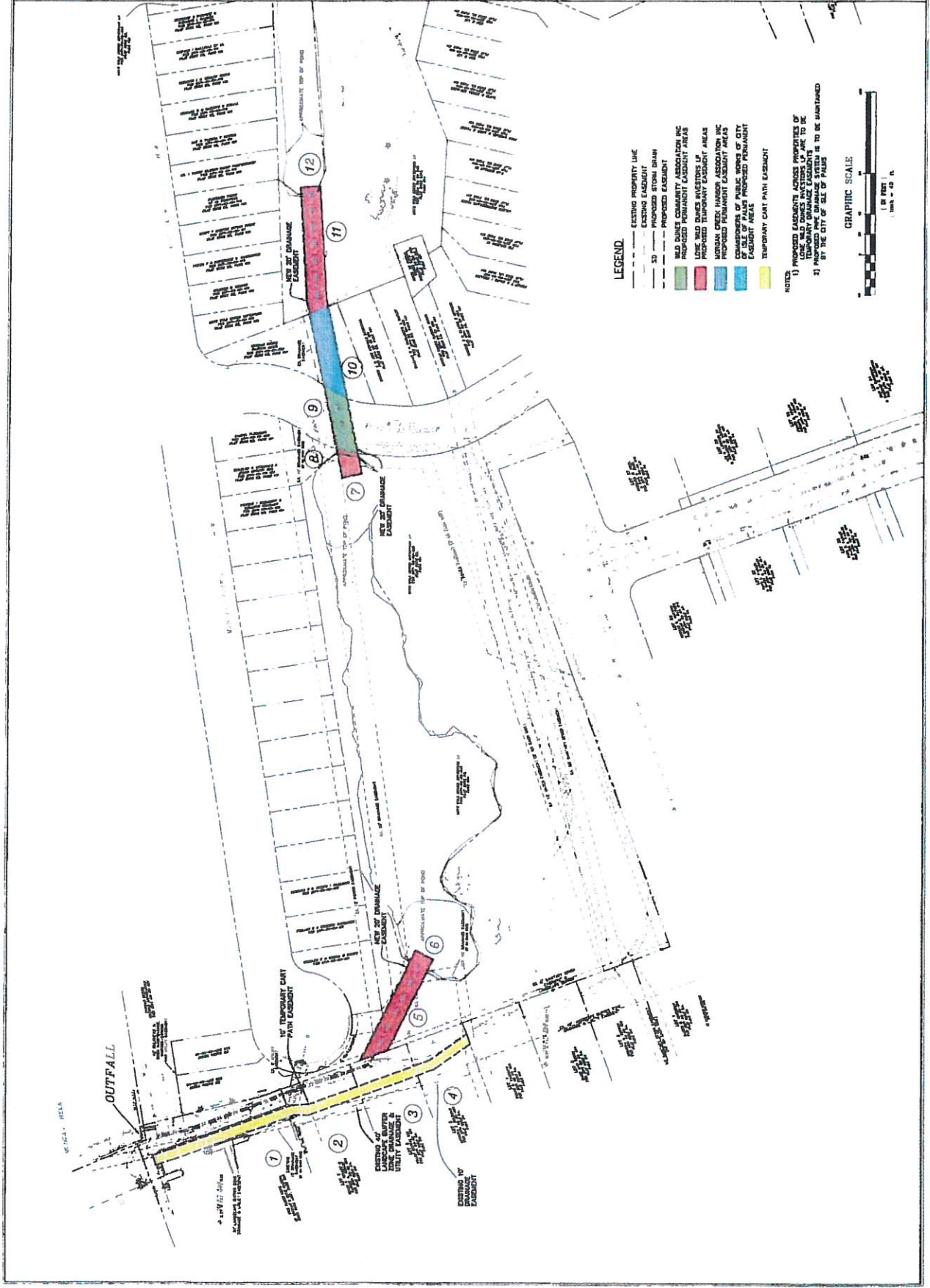
PROJECT: 45TH TO 52ND AVE DRAINAGE IMPROVEMENTS
 PRELIMINARY EXHIBIT OF PROPOSED DRAINAGE EASEMENTS
 CITY OF ISLE OF PALMS
 DRAWN BY: JCM
 FILE NO: 200-PB-2103
 SCALE: 1" = 40'
 DATE: 11-2-11

REVISIONS:
 NO. DATE BY
 1 11/02/11 JCM
 2 11/02/11 JCM
 3 11/02/11 JCM
 4 11/02/11 JCM
 5 11/02/11 JCM
 6 11/02/11 JCM
 7 11/02/11 JCM
 8 11/02/11 JCM
 9 11/02/11 JCM
 10 11/02/11 JCM
 11 11/02/11 JCM
 12 11/02/11 JCM



DATE: 11-2-11
 SCALE: 1" = 40'
 FILE NO: 200-PB-2103
 DRAWN BY: JCM




CITY OF ISLE OF PALMS
 920-PH2
 SHEET NUMBER
 1 of 2

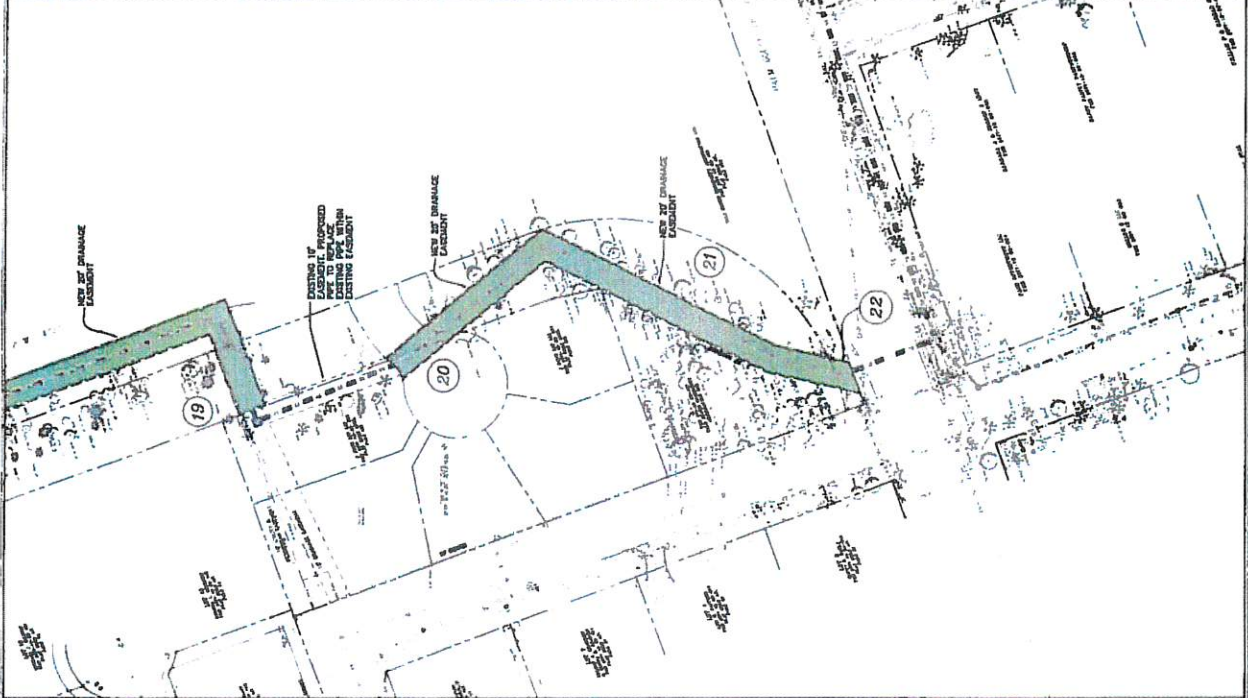


- LEGEND**
- EXISTING PROPERTY LINE
 - EXISTING EASEMENT
 - PROPOSED STORM DRAIN
 - PROPOSED EASEMENT
 - M&D DANCE COMMUNITY ASSOCIATION INC PROPOSED PERMANENT EASEMENT AREAS
 - L&M M&D DANCES INVESTORS LP PROPOSED TEMPORARY EASEMENT AREAS
 - M&D DANCE COMMUNITY ASSOCIATION INC PROPOSED PERMANENT EASEMENT AREAS
 - COMPANIES OF PUBLIC WORKS OF CITY OF ISLE OF PALMS PROPOSED PERMANENT EASEMENT AREAS
 - TEMPORARY CART PATH EASEMENT

NOTES:
 1) PROPOSED EASEMENTS ACROSS PROPERTIES OF L&M M&D DANCES INVESTORS LP ARE TO BE MAINTAINED BY THE CITY OF ISLE OF PALMS.
 2) PROPOSED PARK DRAINAGE SYSTEM IS TO BE MAINTAINED BY THE CITY OF ISLE OF PALMS.



PROJECT: 45TH TO 52ND AVE DRAINAGE IMPROVEMENTS PRELIMINARY EXHIBIT OF PROPOSED DRAINAGE EASEMENTS CITY OF ISLE OF PALMS	DRAWN BY: SCS DATE: 11-7-14	  	FOR: WILSON CIVIL 1000 W. PALM BEACH BLVD. WEST PALM BEACH, FL 33411 PHONE: (561) 833-1000 FAX: (561) 833-1001 WWW.WILSONCIVIL.COM	CEE JOB NUMBER: 920-PH2 SHEET NUMBER: 20f2
	SCALE: 1" = 40' DATE: 11-7-14	REVISIONS: NO. DATE BY DESCRIPTION 1 11/7/14 SCS 2 11/10/14 SCS 3 11/10/14 SCS 4 11/10/14 SCS 5 11/10/14 SCS 6 11/10/14 SCS 7 11/10/14 SCS 8 11/10/14 SCS 9 11/10/14 SCS 10 11/10/14 SCS 11 11/10/14 SCS 12 11/10/14 SCS 13 11/10/14 SCS 14 11/10/14 SCS 15 11/10/14 SCS 16 11/10/14 SCS 17 11/10/14 SCS 18 11/10/14 SCS 19 11/10/14 SCS 20 11/10/14 SCS 21 11/10/14 SCS 22 11/10/14 SCS 23 11/10/14 SCS 24 11/10/14 SCS 25 11/10/14 SCS 26 11/10/14 SCS 27 11/10/14 SCS 28 11/10/14 SCS 29 11/10/14 SCS 30 11/10/14 SCS 31 11/10/14 SCS 32 11/10/14 SCS 33 11/10/14 SCS 34 11/10/14 SCS 35 11/10/14 SCS 36 11/10/14 SCS 37 11/10/14 SCS 38 11/10/14 SCS 39 11/10/14 SCS 40 11/10/14 SCS 41 11/10/14 SCS 42 11/10/14 SCS 43 11/10/14 SCS 44 11/10/14 SCS 45 11/10/14 SCS 46 11/10/14 SCS 47 11/10/14 SCS 48 11/10/14 SCS 49 11/10/14 SCS 50 11/10/14 SCS 51 11/10/14 SCS 52 11/10/14 SCS 53 11/10/14 SCS 54 11/10/14 SCS 55 11/10/14 SCS 56 11/10/14 SCS 57 11/10/14 SCS 58 11/10/14 SCS 59 11/10/14 SCS 60 11/10/14 SCS 61 11/10/14 SCS 62 11/10/14 SCS 63 11/10/14 SCS 64 11/10/14 SCS 65 11/10/14 SCS 66 11/10/14 SCS 67 11/10/14 SCS 68 11/10/14 SCS 69 11/10/14 SCS 70 11/10/14 SCS 71 11/10/14 SCS 72 11/10/14 SCS 73 11/10/14 SCS 74 11/10/14 SCS 75 11/10/14 SCS 76 11/10/14 SCS 77 11/10/14 SCS 78 11/10/14 SCS 79 11/10/14 SCS 80 11/10/14 SCS 81 11/10/14 SCS 82 11/10/14 SCS 83 11/10/14 SCS 84 11/10/14 SCS 85 11/10/14 SCS 86 11/10/14 SCS 87 11/10/14 SCS 88 11/10/14 SCS 89 11/10/14 SCS 90 11/10/14 SCS 91 11/10/14 SCS 92 11/10/14 SCS 93 11/10/14 SCS 94 11/10/14 SCS 95 11/10/14 SCS 96 11/10/14 SCS 97 11/10/14 SCS 98 11/10/14 SCS 99 11/10/14 SCS 100 11/10/14 SCS		



LEGEND

- EXISTING PROPERTY LINE
- PROPOSED STORM DRAIN
- PROPOSED EASEMENT
- WILD DUNES COMMUNITY ASSOCIATION INC PROPOSED PERMANENT EASEMENT AREA
- LINE WILD DUNES INVESTORS LP AREAS
- PROPOSED TEMPORARY EASEMENT AREAS
- PROPOSED PERMANENT EASEMENT AREAS
- COMPONENTS OF PUBLIC WORKS OF CITY OF ISLE OF PALMS PROPOSED PERMANENT EASEMENT AREAS
- TEMPORARY CART PATH EASEMENT

NOTES

- PROPOSED EASEMENT'S ACROSS PROPERTIES OF LINE WILD DUNES INVESTORS LP ARE TO BE MAINTAINED BY THE CITY OF ISLE OF PALMS.
- PROPOSED PVE DRAINAGE SYSTEM IS TO BE MAINTAINED BY THE CITY OF ISLE OF PALMS.

GRAPHIC SCALE

1" = 40'

1" = 80'

1" = 160'

