
IFB NO. Y14-1006-J2

ISSUED: March 13, 2014

**INVITATION FOR BIDS
TERM CONTRACT FOR**

**INSTALLATION, MAINTENANCE AND MONITORING FOR LANDFILL GAS
COLLECTION FOR ORANGE COUNTY LANDFILL CELL 9 & 10**

Mail or Hand Deliver

ORIGINAL BID FORM & THREE (3) COMPLETE COPIES

By April 22, 2014

To:

**BOARD OF COUNTY COMMISSIONERS
ORANGE COUNTY, FLORIDA
INTERNAL OPERATIONS CENTRE II
PROCUREMENT DIVISION
400 E. SOUTH STREET – 2nd FLOOR
ORLANDO, FLORIDA 32801**

Bid Opening:

April 22, 2014 - 2:00 PM

**Internal Operations Centre II
Procurement Division, 2nd Floor
Orlando, Florida 32801**

**Non-Mandatory Pre-Bid Conference - April 2, 2014 - 10:00 AM
Solid Waste Administration Building Conference Room
5901 Young Pine Road, Orlando, FL 32829
Interested bidders are encouraged to attend.**

NOTICE TO BIDDERS/OFFERORS

To ensure that your Bid/proposal is responsive, you are urged to request clarification or guidance on any issues involving this solicitation before submission of your response. Your point-of-contact for this solicitation is **John Schmidt at 407/836-5647, or email to John.Schmidt@OCFL.net.**

PART A

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NEW BID BOND REQUIREMENT – See Part C, Instructions to Bidders, Paragraph 19e.

**TABLE OF CONTENTS
TERM CONTRACT**

<u>PART</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
<u>VOLUME I</u>		
A	INVITATION FOR BIDS	PART A
B	NOTICE	PART B
C	INSTRUCTIONS TO BIDDER	
	1. GENERAL	C-1
	2. PREPARATION AND SUBMISSION OF BIDS	C-1
	3. MINORITY/WOMEN OWNED BUSINESS ENTERPRISE	C-3
	4. BID PREFERENCE FOR SERVICE-DISABLED VETERANS (SDV)	C-9
	5. BID ERRORS	C-9
	6. DEVIATIONS	C-9
	7. SUBSTITUTE MATERIAL AND EQUIPMENT	C-10
	8. REQUESTED INFORMATION/DESCRIPTIVE LITERATURE	C-10
	9. AWARD OF CONTRACT/REJECTION OF BIDS	C-10
	10. POSTING OF RECOMMENDED AWARD	C-11
	11. CONTRACT DOCUMENTS	C-12
	12. MODIFICATION/ALTERATION OF SOLICITATION	C-12
	13. LAWS AND REGULATIONS	C-12
	14. REQUIRED DISCLOSURE	C-12
	15. EXECUTION OF WRITTEN CONTRACT	C-13
	16. LICENSING REQUIREMENTS	C-13
	17. SECURITY FORFEITURE	C-13
	18. PERFORMANCE BOND AND PAYMENT BOND	C-14
	19. QUALIFICATIONS OF SURETY COMPANIES	C-14
	20. TRENCH SAFETY ACT	C-15
	21. DRUG FREE WORKPLACE	C-15
	22. BID TABULATION AND RECOMMENDED AWARD	C-15
	23. INDEMNIFICATION FOR TORT ACTIONS	C-15
	24. OCCUPATIONAL SAFETY AND HEALTH ACT (O.S.H.A.)	C-16
	25. PUBLIC ENTITY CRIME STATEMENT	C-16
	26. SUBCONTRACTOR/SUPPLIER INFORMATION	C-16
	27. SUBCONTRACTOR'S PAST PERFORMANCE	C-16
	28. REFERENCES	C-17
	29. UNIT PRICES	C-17
	30. EVALUATION OF OPTIONS	C-17
	31. UNBALANCED PRICING	C-17
	32. BID AND RELATED COSTS	C-18
	33. SOLICITATION CANCELLATIONS	C-18
	34. LICENSES/PERMITS/FEES	C-18
	35. BID ACCEPTANCE PERIOD	C-18
	36. EQUAL OPPORTUNITY	C-18
	37. ETHICS COMPLIANCE	C-19
	38. TOBACCO FREE CAMPUS	C-19
	39. VERIFICATION OF EMPLOYMENT STATUS	C-20
	40. PROPRIETARY INFORMATION	C-20

<u>PART</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
D	BID FORM	
	OFFICIAL BID FORM	D-1
	NON-COLLUSION AFFIDAVIT	ATTACHMENT A
	REQUIRED DISCLOSURE	ATTACHMENT B
	M/WBE REQUIREMENTS	ATTACHMENT C
	COMPLIANCE WITH TRENCH SAFETY ACT	ATTACHMENT D
	REFERENCES	ATTACHMENT E
	SPECIFIC PROJECT EXPENITURE PROJECT	ATTACHMENT F
	RELATIONSHIP DISCLOSURE FORM	ATTACHMENT G
	EMPLOYMENT VERIFICATION CERTIFICATION	ATTACHMENT H
	BID BOND	EXHIBIT 1
E	CONSTRUCTION CONTRACT	
	CONTRACT FORM	E- 1
	PERFORMANCE BOND	E- 6
	PAYMENT BOND	E- 9
	RELEASE OF LIEN	E-11
	CHANGE ORDER FORM	E-12
	DRUG-FREE WORKPLACE FORM	E-14
F	GENERAL CONDITIONS	
	ARTICLE 1 - CONTRACT	F-1
	ARTICLE 2 - DEFINITIONS	F-1
	ARTICLE 3 - ASSIGNMENT OF CONTRACT	F-3
	ARTICLE 4 - PERFORMANCE PERIOD	F-3
	ARTICLE 5 - INTERPRETATIONS AND INTENT	F-4
	ARTICLE 6 - REFERENCE POINTS	F-4
	ARTICLE 7 - BONDS AND INSURANCE AND INDEMNIFICATION	F-5
	ARTICLE 8 - CONTRACTOR'S RESPONSIBILITIES	F-11
	ARTICLE 9 - WORK BY OTHERS AND UTILITY COORDINATION	F-15
	ARTICLE 10 - PROJECT MANAGER'S STATUS	F-17
	ARTICLE 11 - CHANGES IN THE WORK	F-17
	ARTICLE 12 - CHANGE OF CONTRACT PRICE/DELIVERY ORDER	F-18
	ARTICLE 13 - CHANGE OF CONTRACT PERFORMANCE PERIOD	F-19
	ARTICLE 14 - WARRANTY/ACCEPTANCE OF DEFECTIVE WORK	F-19
	ARTICLE 15 - WARRANTY AND PAYMENT	F-22
	ARTICLE 16 - SUSPENSION OF WORK AND TERMINATION	F-25
	ARTICLE 17 – VERBAL ORDERS	F-26
	ARTICLE 18 – MAINTENANCE AND EXAMINATION OF RECORDS	F-27
	ARTICLE 19 - FEDERAL REQUIREMENTS	F-29
	ARTICLE 20 - MINORITY/WOMEN OWNED BUSINESS	F-29
	ARTICLE 21 - ASBESTOS FREE MATERIALS	F-31

ARTICLE 22 - CONDITION OF MATERIALS & PACKAGING	F-31
ARTICLE 23 - NO ASSIGNMENT OF AGREEMENT	F-31
ARTICLE 24 - CONSTRUCTION TERM CONTRACT	F-31
ARTICLE 25 - CONTRACT TERM/RENEWAL	F-32
ARTICLE 26 - OPTION TO EXTEND TERM	F-32
ARTICLE 27 - INTERIM EXTENSION OF PERFORMANCE	F-32
ARTICLE 28 - MINIMUM/MAXIMUM DELIVERY ORDER	F-32
ARTICLE 29 - ISSUANCE AND ADMINISTRATION OF ORDERS	F-32
ARTICLE 30 - VARIATION IN ESTIMATED QUANTITY	F-32
ARTICLE 31 –MISCELLANEOUS	F-33
ARTICLE 32 – CONTRACT CLAIMS	F-33
ARTICLE 33 – VALUE ENGINEERING	F-34
ARTICLE 34 – CONTRACT TYPE	F-37
ARTICLE 35– PATENTS AND ROYALTIES	F-38

G SUPPLEMENTAL CONDITIONS/SPECIAL PROVISIONS

SPECIAL CONDITIONS	G-1 – G-6
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VOLUME II

H TECHNICAL SPECIFICATIONS

DIVISION 1—GENERAL REQUIREMENTS

01010	Summary of Work	1- 2
01025	Measurement and Payment	1- 9
01040	Coordination	1- 10
	Supplement 1, Contractor's Affidavit Verifying Accuracy of Drawings and Specifications	
01060	Surveying	1- 3
01200	Project Meetings	1- 3
01600	Material and Equipment	1- 8
01720	Project Record Documents	1- 4
01800	Health and Safety	1- 4

DIVISION 2—SITE CONSTRUCTION

02315	Fill and Backfill	1- 7
02316	Excavation	1- 3
02320	Trench Backfill	1- 7
02633	Stormwater Corrugated High Density Polyethylene (HDPE) Pipe and Fittings	1- 6
02680	Horizontal Gas Extraction Pipelines	1- 3
02681	Vertical Gas Extraction Wells and Wellheads	1- 14
	Daily Drilling Report	
	Log Materials for Well Construction	
02900	Lawns and Grasses	1- 7

DIVISIONS 3 THROUGH 14 (NOT USED)

DIVISION 15—MECHANICAL

15060	Pipes - General	1- 11
	Pipeline Schedule Legend	
	Pipeline Schedule	
15060-11	Chlorinated Polyvinyl Chloride (CPVC) Pipe and Fittings	1- 1
15060-14	High Density Polyethylene (HDPE) Pipe	1- 2
15100	Valves and Operators	1- 5
15992	Pipe Leak Testing	1- 3
DIVISION 16—NOT USED		

DRAWINGS (BOUND SEPARATELY)

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ISSUED: March 13, 2014

**NOTICE
INVITATION FOR BIDS (IFB) NO. Y14-1006-J2**

**INSTALLATION, MAINTENANCE AND MONITORING FOR LANDFILL GAS
COLLECTION FOR ORANGE COUNTY LANDFILL CELL 9 & 10**

Sealed Bid offers (Original Bid Form and three (3) complete copies) for furnishing the above will be accepted up to **2:00 PM, April 22, 2014**, in the Internal Operations Centre II, the Procurement Division, 2nd Floor, 400 E. South Street, Orlando, FL 32801. Bids will be opened shortly thereafter in the Second Floor Conference Room, Orange County Internal Operations Centre II.

Bid Documents may be obtained from the **Orange County Procurement Division at the above address, Phone: (407) 836-5635.**

NOTE: Bid documents are now available for downloading from the internet at orangecountyfl.net.

1. A printed copy of the basic solicitation documents and a CD containing the construction plans are available for a cost of **\$0.00** per CD.
2. Complete bid documents **including construction plans and specifications** are now available for downloading from the internet at **orangecountyfl.net**.

A **Non-Mandatory Pre-Bid Conference** will be held on **April 2, 2014, 10:00 AM**, at **Solid Waste Administration Building Conference Room, 5901 Young Pine Road, Orlando, FL 32829**. Interested bidders are encouraged to attend.

SCOPE OF WORK: The work includes all labor, materials, equipment, transportation and supplies to perform work including, but not limited to, installation of horizontal and vertical collection wells, installation of secondary stormwater collection system, leachate recirculation piping, placement of sod, and operation, monitoring and maintenance of the Orange County landfill Cells 9 and 10 landfill gas collection and control system.

LOCATION ADDRESS: All work shall be requested on an as-needed basis for the Orange County Landfill Facility, 5901 Young Pine Road, Orlando, FL 32829.

Johnny M. Richardson, CPPO, CFCM
Manager, Procurement Division

PART B

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PART C - INSTRUCTION TO BIDDERS

1. GENERAL:

- a. The term County used herein refers to the Board of County Commissioners, Orange County, Florida, or its duly authorized representative.
- b. The term Bidder used herein refers to the contractor, or business organization submitting a Bid to the County in response to this Invitation for Bids.

2. PREPARATION AND SUBMISSION OF BIDS:

- a. Form of Proposal: Each Bidder shall submit the **Bid in four parts (original Bid Form, marked original, with attachments and three (3) copies of the Bid Form and all attachments)** and indicate his base Bid price and any alternative(s) that may be included in the proper space(s).

The base Bid is the sum of all pay item totals and the County reserves the right to correct errors in pay item totals arising from incorrect extensions. See "**Bid Errors**", Item 4.

- b. All Bids, proposals or quotations, unless otherwise specified, must be delivered in a sealed envelope, either mailed or hand carried, to the Procurement Division, Internal Operations Centre II, 400 E. South Street, 2nd Floor, Orlando, Florida 32801, prior to the Bid opening time as specified in Part B. Bids received after the date and time specified will be returned unopened. The time/date stamp clock located in the Procurement Division shall serve as the official authority to determine lateness of any Bids.

Respondents are cautioned that they are responsible for delivery to the specific location cited above. Therefore, if your Bid, proposal or quotation is delivered by an express mail carrier or by any other means, it is your responsibility to ensure delivery to the above address. This office will not be responsible for deliveries made to any place other than the specified address.

The delivery of said Bid to the Procurement Division prior to the time and date stated in the preceding sentence is solely and strictly the responsibility of the Bidder. The County shall not be responsible for delays in delivery to the Procurement Division caused by the United States Postal Service or courier service, delivery to any other County Office or delays caused by any other occurrence. The Bid delivery time will be scrupulously observed. Bid proposals received after the delivery time specified will not be considered.

The decision to refuse to consider a bid or proposal that was received beyond the date/time established in the solicitation shall not be the basis for a protest pursuant to the Orange County (Procurement Ordinance).

- (1) Invitation for Bid Number
 - (2) Hour and Date of Opening
 - (3) Name of Bidder
 - (4) Return address of the Bidder
- c. Bids will be publicly opened in the Procurement Division Conference Room, 2nd Floor of the Orange County Internal Operations Centre II, 400 E. South Street, Orlando, Florida.
- d. All Bid proposals must be manually and duly signed by an authorized corporate officer, principal, or partner (as applicable) with a signature in full. When a firm is a Bidder, the officer signing shall set out the corporate name in full beneath which he shall sign his name, give title of his office and affix the corporate seal. Anyone signing the Bid proposal as agent must file with it legal evidence of signature authority. Bidders who are nonresident corporations shall furnish to the County a duly certified copy of their permit to transact business in the State of Florida along with the Bid Proposal. Failure to promptly submit this evidence or qualification to do business in the State of Florida may be basis for rejection of the Bid Proposal.
- e. The Bidder is solely responsible for reading and completely understanding the requirements and the specifications of the solicitation.
- f. Bid proposals may be withdrawn by written, telecopied or telegraphic requests dispatched by the Bidder and received by the Manager of the Procurement Division before the time for receiving Bids has expired. Negligence on the part of the Bidder in preparing a Bid proposal is not grounds for withdrawal or modification of a Bid proposal after such Bid proposal has been opened by the County. A Bidder may not withdraw or modify a Bid proposal after the appointed Bid proposal opening and such Bid proposal must be in force for **ninety (90)** days after the Bid opening. Bidders may not assign or otherwise transfer their Bid proposals.
- g. At the time and place fixed for the opening of Bid proposals (see above), every Bid proposal properly delivered within the time fixed for receiving Bid proposals will be opened and publicly read aloud, irrespective of any irregularities found therein. Bidders and other persons interested may be present, in person or by representative. Opened Bids shall remain confidential for ten days after Bid opening or upon posting of the recommended award, whichever comes first.
- h. A Bid, Payment and Performance Bond are a requirement of the IFB when the bid/contract amount exceeds \$100,000.

If Bid security is required by Paragraph h. of this Section, submission of an original Bid Bond (copy not acceptable) completed and signed by all required parties and submitted on the form provided in Exhibit 1 to the Bid Proposal (Part D), or in the alternative, a Certified Check, a Cashier's Check shall be required to accompany each Bid proposal in a stated dollar amount of not less than ten (10%) percent of the total estimated Contract amount for the first Contract year. Submittal of a Bid Bond less than ten percent (10%) of the total estimated Contract amount for the first Contract year shall result in rejection of the bid. **Any submitted Bid Bond must be submitted to the County in duplicate.** The duplicate copy must be a photographic reproduction of the completed form set forth in the Contract Documents and clearly marked "COPY". **Failure to submit the Bid Bond on the form provided in Exhibit 1 to the Bid Proposal (Part D) shall result in rejection of the bid.**

In order to be acceptable to the County, the Surety company issuing the Bid Bond as called for in this Invitation for Bids, shall meet and comply with the minimum standards described in Part C, Section 19, "Qualifications of Surety Companies". **Failure to submit a Bid Bond from a Surety Company meeting these minimum standards shall result in rejection of the bid.**

Certified Checks or Cashier's Checks shall be drawn on a solvent bank or trust company to the order of The Board of County Commissioners and shall have all necessary documentary revenue stamps attached, if required by law. Personal checks are not acceptable to the County. See Section 19, "Qualifications of Surety Companies" for additional requirements.

- i. A pre-Bid conference will be held at the time and location shown in the Notice, Part B of this Bid package.
- j. No interpretation of the meaning of the requirements contained in this solicitation will be made to any Bidder orally. Every request for such interpretation must be **in writing, addressed to John Schmidt, Fax #407/836-5899.** To be given consideration, such requests must be received **Ten (10) days prior to Bid opening.**

Any and all such interpretations and any supplemental instructions will be in the form of a written addendum which, if issued, will be available for downloading from the Internet at orangecountyfl.net. All addenda so issued shall become part of the Contract Documents and receipt shall be acknowledged on the Bid Form, Part D, or by completion of the applicable information on the addendum and returning it not later than the date and time for receipt of the bid.

3. MINORITY/WOMEN OWNED BUSINESS ENTERPRISES:

- a. To provide for the participation of certified minority and women owned businesses (M/WBE's) in the County's procurement of construction services, Bidders submitting bids to the County are urged to comply with

M/WBE subcontracting goals established by the County Minority/Women Business Enterprise Ordinance, No. 94-02 and amended by Ordinance No.2009-21. The overall goal for all bids (inclusive of all additive and deductive alternates) is 25% participation for M/WBE subcontractors and suppliers. The Contract requires that the Contractor commit to the expenditure of at least the required M/WBE percentage of the dollar value of the Contract.

The Ordinance also addresses minority/women group employment levels setting goals to encourage each Bidder to maintain 18% minority and 6% women employees.

Note: Only 50% of material/supply dollars purchased from M/WBE distributors is applied toward the goals for minority and women business enterprise participation on construction projects. Contractor shall list **the total amount of material/supply dollars** to be purchased from each M/WBE distributor on the Subcontractor/Supplier Page (Attachment C-2). **The County will calculate the actual dollars to be applied toward the goals.**

b. **NOTICE: Goals for bids under \$100,000**

There are M/WBE goals for all bids including bids for IFB estimated to be less than \$100,000 (inclusive of all additive and deductive alternates).

c. **M/WBE Bidders competing as primes**

If an M/WBE firm bidding as a prime certifies with his/her bid that it will self-perform 51% percent or more of the project, as evidenced by Attachment C-2, then that firm will not be required to comply with the M/WBE subcontracting goals. **Failure to include the percentage of work and the scope of work to be self-performed, and the dollar amount for the work an M/WBE Bidder competing as a prime intends to self-perform will result in the M/WBE Bidder receiving zero M/WBE participation for the bid.**

However, if the M/WBE Bidder will not be self-performing at least 51% percent of the project, then he/she must comply with the M/WBE participation goal, and good faith effort documentation required from non-M/WBE Bidders to receive M/WBE compliance consideration.

d. **Subcontracts/Purchase Orders**

The successful Bidder shall provide a copy of all fully executed subcontracts and purchase orders issued to M/WBE's listed on Attachment C-2 to the Business Development Division. **Submittal of these subcontracts/purchase orders is a condition precedent to execution of the prime Contract by the County.**

The Contractor shall include a Prompt Payment Clause (reference Part F, Article 22, paragraph B) in all subcontracts and purchase orders. The Contractor should include in the subcontracts that they are contingent upon

execution of the prime Contract.

The County may, at its discretion, require copies of subcontracts/purchase orders for the non-M/WBE's listed on Attachment C-2. However, if this option is not exercised, the awarded Contractor shall provide a list of all non-M/WBE Subcontractors and suppliers certifying that a prompt payment clause has been included in that Contract or purchase order.

e. **Good Faith Effort Documentation Requirements -**

If the established goals (reference paragraph 3.a above) are not achieved, to maximize consideration for MWBE participation, Bidders should provide with the bid sufficient documentation to substantiate that ALL FIVE of the mandatory efforts listed below were undertaken. Bidders meeting or exceeding the goals need not provide good faith effort documentation. Refer to paragraph f for the sliding scale for enforcement of the good faith effort document.

- i. If a bidder desires to meet the good faith effort documentation requirements, he/she must provide written notice to certified M/WBEs that provides the type of work that the Bidder intends to subcontract. The notice shall be by e-mail or fax, no fewer than seven (7) calendar days prior to bid or proposal opening. All e-mails and faxes shall include the legal name of the M/WBE firm. The notice shall advise the M/WBE's:
 - a. that their interest in the contract is being solicited;
 - b. of the specific work the Bidder intends to subcontract;
 - c. how to obtain information about and review the contract plans and specifications;
 - d. information on bonding, insurance and other pertinent requirements;
 - e. the deadline for bid or proposal submissions to the Bidder and the bid due date to the County;
 - f. 24 hours notice of any addenda.
- ii. Bidders shall provide an explanation why the M/WBE goals were not achieved, and list the scopes of service not subcontracted on Attachment C-2
- iii. Also, bidders shall follow up initial submittals of interest by contacting M/WBEs and documenting using a contract log, which shall include the firm's name address, contact information (e-mail, telephone and/or fax numbers), scope of work requested, the date, name of person making the effort, denote if M/WBEs will bid, time quote received and notes denoting if plans and specifications were sent. Each bidder shall use the standardized contact log, Attachment C-5.

- iv. In instances where a non-minority/non-woman contractor is listed for work for which M/WBE availability exists, the Bidder shall submit **ALL** quotations received from M/WBEs **AND** the listed non-M/WBE **within twenty-four (24) hours, if one of the three (3) apparent low Bidders**. The Bidder shall provide an explanation as to why the M/WBE's quotations were not accepted.

Receipt of a lower quotation from a non-M/WBE prior to bid opening will not in itself excuse a Bidder's failure to meet M/WBE participation goals. However, a Bidder's good faith effort obligation does not require a Bidder to accept a quotation from a M/WBE which is an unreasonable price. For the purpose of this subsection, "unreasonable price" means a price above (or below) competitive levels which cannot be attributed to the M/WBE's attempt to cover costs inflated by the present effect of discrimination.

- v. Bidder shall contact the Business Development division staff as a resource to obtain M/WBE participation goal.

If the Bidder fails to meet requirements (i – iv) of the above mentioned good faith effort documentation, then the bidder will be permitted to substitute one of the following with documentation showing that

- (1) The Disney Entrepreneur Center (DEC) was used to host a workshop that informed M/WBE firms how to better prepare for sub-contracting opportunities;
- (2) The Bidder has participated in Orange County Business Development Division's sponsored "How to do Business" workshop;
- (3) The Bidder has sponsored a match-maker event with certified M/WBE firms.

Orange County Business Development Division will determine the usage of this substitution, along with the appropriate time frame for utilizing this credit.

If, after Contract award, Prime Contractors who have not achieved the M/WBE participation goals choose to subcontract work indicated as being self-performed without prior written approval of the Business Development Division (reference Part F, Article 22, paragraph D), the matter will be reported to the Procurement Division with an appropriate responsibility recommendation for consideration in the event the contractor competes for future County contracts.

- f. Sliding scale for enforcement of good faith effort requirements

If the established goals are not achieved by the low Bidder and it has been determined that the good faith efforts required for compliance have not been documented by the low Bidder, then the bid shall be rejected as non-responsive, but only if the next lowest responsive bid does not exceed the low bid by more than:

- i. Eight (8) percent on contract awards up to one hundred thousand dollars (\$100,000.00);or
- ii. Seven (7) percent on contract awards from \$100,000.00 to \$500,000.00; or
- iii. Six (6) percent on contract awards from \$500,000.01 to \$750,000.00; or
- iv. Five (5) percent on contract award from \$750,000.01 to \$2,000,000.00; or
- v. Four (4) percent on contract awards from \$2,00,000.01 to \$5,000,000.00; or
- vi. Three (3) percent on contract awards over \$5,000,000.01.

However, if the next low bid is responsive only because of the Bidder having made good faith effort (not because of having met the goals), the Board may approve award of the Contract to the next low Bidder only if the value of its M/WBE participation is equal to or greater than that of the low Bidder.

- g. Letters of Intent shall match **exactly the information provided on Attachment C-2 to the Bid Forms D, Attachment C-3** and shall be executed by the apparent low Bidder and all M/WBE Subcontractors and/or suppliers listed on Attachment C-2 shall be submitted to the Business Development Division office before 5:00 P.M. on the second business day after bid opening.
- h. Bidders shall not reject an M/WBE as unqualified without sound reasons based on a thorough and documented investigation of that M/WBE's capabilities.
- i. Bidder's efforts will be evaluated considering the ability of other Bidders to meet the requirements relating to the use of M/WBE subcontractors.
- j. Bidders should make whatever additional efforts are necessary to achieve the goals and it is recommended that these efforts be documented. However, this documentation shall not replace the required documentation if the goals are not met. Bidders are encouraged to contact the Business Development Division for guidance and assistance. Additional efforts by Bidders may include but are not limited to the following:
 - i. Bidders should provide interested M/WBE's with assistance in reviewing the Contract plans and specifications.
 - ii. Bidders should assist interested M/WBE's in obtaining required lines of credit, insurance or bonding.
 - iii. Bidders should solicit only types of work that match the capabilities of the M/WBE's and for which they are certified.

- k. All participating M/WBE's must be certified by Orange County. The Business Development M/WBE Directory is available by e-mail or through the Orange County web site at Orangecountyfl.net. **Only firms having established offices in the Orlando MSA (Orange, Lake, Seminole and Osceola Counties) are eligible for Orange County certification. All firms must be certified prior to bid opening and must be certified in the area(s) for which they will be used.** If a firm claims to be certified, but is not listed in the Directory, Contractor should obtain a copy of their Certificate and/or contact the Business Development Division for verification of certification.
- l. The County has established a credit program whereby Contractors are awarded credits to be applied toward meeting the M/WBE goals on certain County bids. Emphasis will be placed on credits for Non-County Utilization and First-Time M/WBE Utilization. Bidders are encouraged to contact the Business Development Division for information on acquiring and applying the credits.
- m. Effective August 1, 2003, the County implemented a graduation program. Under this program, utilization of M/WBE firms designated as graduates shall count toward meeting M/WBE participation goals only on specified projects. All construction solicitations for which the County has determined the overall contract amount to be awarded to the prime in excess of \$10,000,000 for vertical construction, \$7,000,000 for horizontal construction and \$7,000,000 for all other construction are eligible for graduate M/WBE participation. Vertical construction is any construction of a structure or building which requires a general or building contractor's license. Horizontal construction includes but is not limited to roadwork, site work, drainage or utilities work. Other construction is any construction other than what is defined as vertical or horizontal construction. The Bidder's total base bid, which is used by the Procurement Division as the basis for determining Contract award value, will be used to determine if graduated M/WBE firms are eligible to participate. If the contract has option provisions, the total base Bid is the total of the Basic Contract Year plus all Option Years. Prime contractors will receive full M/WBE credit for the use of graduated M/WBE's that meet all other requirements.
- It is the Bidder's responsibility to insure that graduate M/WBE's are not listed in proposals to meet M/WBE participation requirements on projects in which they are not eligible to participate.
- o. The County is compiling information about the MWBE program in order to gauge the level of program understanding and acceptance. Bidders should complete the M/WBE Survey, Attachment C-4 and return with their Bid Proposal Form. Failure to submit the completed survey may delay award of the Contract.

Intentional failure to attempt compliance and/or intentional failure to comply with the M/WBE subcontract goals pursuant to the Minority/Women Business Enterprise Ordinance, may result in the County invoking penalties under that ordinance and/or a finding by the County that a Bidder is "non-responsible", thus resulting in that bid being rejected and the Bidder facing possible suspension or debarment from future County FB's.

4. BID PREFERENCE FOR SERVICE-DISABLED VETERANS (SDV)

The Orange County Service-Disabled Veteran Business Program Ordinance sets vendor preferences for service-disabled veteran business enterprises registered with Orange County Business Development division.

As part of this program, Contractors are required to complete the Attachment C-2 listing ALL subcontractors (majority, women and minority, and service-disabled veteran) their firm will utilize in fulfillment of the requirements of this solicitation.

Also, in accordance with the County SDV Ordinance, preferences for certified service-disabled veteran business enterprises shall be applied on bid awards (sealed bids). The following bid preference scale shall apply to bids submitted by certified service-disabled veterans business enterprises as long as the bid does not exceed the low bid by more than 8% on bid awards up to \$100,000; 7% on bid awards from \$100,000 to \$500,000; 6% on bid awards from \$500,000.01 to \$750,000.00; 5% on bid award from \$750,000.01 to \$2,000,000; 4% on bid awards from \$2,000,000.01 to \$5,000,000; or 3% on bid awards over \$5,000,000.01.

Certified service-disabled veteran business enterprises may be awarded or recommended for award of contracts when their bids are within the above allowed percentage in comparison to the low responsive and responsible bid(s).

If a certified service-disabled veteran business enterprise, entitled to the vendor preference under this section, and one (1) or more other businesses also entitled to this preference, or another vendor preference provided by the Orange County Code, submit bids, proposals, or replies for procurement of commodities or contractual services which are otherwise equal with respect to all relevant considerations, including price, quality, and service, then the Procurement Division Manager shall award the procurement or contract to the business having the smallest net worth.

5. BID ERRORS:

Where Bid forms have erasures or corrections, each erasure or correction must be initialed in ink by the Bidder. In case of unit price Bid items, if an error is committed in the extension of an item, the unit price as shown in the Official Bid Form, will govern. Errors between any sum, computed by the Bidder, and the correct sum thereof will be resolved in favor of the correct sum. Any discrepancy between words and numbers will be resolved in favor of the written words.

6. DEVIATIONS:

Bidders are hereby advised that Orange County will only consider Bid Proposals that meet the specifications and other requirements of the solicitation. In instances where a deviation is stated in the Bid form, said Bid will be subject to rejection by the County in recognition of the fact that said Bid Proposal does not meet the exact requirements imposed by the solicitation.

7. SUBSTITUTE MATERIAL AND EQUIPMENT:

The Contract, if awarded, will be on the basis of material and equipment described in the Drawings or specified in the Specifications without consideration of possible substitute or accepted "or-equal" items. Whenever materials or equipment or patented processes are specified or described in the Contract Documents by naming a trade name, manufacturer, supplier or proprietary item or catalog number, the naming of the item is intended to establish the type, function and quality required and to establish a basis for bidding. Substitute materials or equipment may be considered after a Contract for the Work is executed if sufficient information is supplied by Contractor to allow Project Manager to evaluate the proposed substitution, unless the naming of the item is followed by words indicating that no substitution is permitted. The procedure for submittal of any such application by Contractor and consideration by Project Manager is set forth in the General Conditions. In the event that substitute materials or equipment are used and are less costly than the originally specified material or equipment, then the difference in cost of the item shall benefit the County and Contractor in equal proportions. Applications for substitute materials and equipment shall only be evaluated after the Contract is executed. The Base Bid and Alternates shall reflect the costs for the materials and equipment named or specified only.

8. REQUESTED INFORMATION AND DESCRIPTIVE LITERATURE:

Bidders must furnish all requested information in the spaces provided on the Bid form or attachments thereto. Additionally, where required pursuant to the provisions of this solicitation, Bidders must submit with their Bid Proposal cuts, sketches, descriptive literature and/or complete specifications relative to the items proposed and offered.

9. AWARD OF CONTRACT/REJECTION OF BIDS:

A Contract will be awarded to the low, responsive and responsible Bidder(s), price and other factors considered. The County will award one Contract for this requirement.

The County, at its sole discretion, reserves the right to reject any and all Bids and to waive any informality concerning Bid Proposals whenever such rejection or waiver is in the best interest of the County. The ability of a Bidder to obtain a performance bond and a payment bond shall not be regarded as the sole test of such Bidder's competency or responsibility. Nothing contained herein shall place a duty upon the County to reject Bids or award a Contract based upon anything other than its sole discretion as described herein.

Determination of the low Bidder when additive or deductive Bid items are involved shall be as follows:

A. ADDITIVE/DEDUCTIVE BID ITEMS:

1. If it is deemed to be in the best interest of the County to accept the alternate(s), award will be made to the Bidder that offers the lowest aggregate amount for the base Bid, plus or minus (in the order listed on the Bid form), those additive or deductive Bid items that provide the most features of the work.

2. All Bids will be evaluated on the basis of the same additive or deductive Bid items.
3. Failure of the Bidder to provide pricing for all unit priced items and/or the Base Bid and ALL requested additive/deductible bid items, or alternate bids shall be cause for rejection of the bid as non-responsive.

B. RECIPROCAL LOCAL PREFERENCE

In the event the lowest responsive and responsible bid submitted in response to any invitation for bid is by a bidder whose principal place of business is in a county other than Orange County, and such county grants a bid preference for purchases to a bidder whose principal place of business is in such county, then Orange County may award a preference to the (next) lowest responsive and responsible bidder having a principal place of business within Orange County, Florida.

Such preference shall be equal to the preference granted by the county in which the lowest responsive and responsible bidder has its principal place of business.

10. POSTING OF RECOMMENDED AWARD:

The recommended award will be posted for review by interested parties at the Procurement Division and at <http://apps.ocfl.net/OrangeBids/AwardsRec/default.asp> prior to submission through the appropriate approval process and will remain posted for a period of five full business days. Failure to file a protest to the Manager of the Procurement Division by 5:00 PM on the fifth full business day after the posting date shall constitute a waiver of bid/proposal protest proceedings. Additional information relative to protests can be found at:

<http://www.orangecountyfl.net/VendorServices/VendorProtestProcedures.aspx>

A lobbying blackout period shall commence upon issuance of the solicitation until the Board selects the successful Bidder. For procurements that do not require Board approval, the blackout period commences upon solicitation issuance and concludes upon Contract award. Additional information relative to lobbying can be found at:

<http://www.orangecountyfl.net/OpenGovernment/LobbingAtOrangeCounty.aspx>

The Board of County Commissioners may void any Contract where the County Mayor, one or more County Commissioners, or a County staff person has been lobbied in violation of the blackout period restrictions of Ordinance No. 2002-15.

11. CONTRACT DOCUMENTS:

The Contract Documents shall include the Delivery Orders issued pursuant to the Contract and documents stated in the Contract (Titles, Subtitles, Headings, Running Headlines, Table of Contents and Indexes are used merely for convenience purposes).

12. MODIFICATION/ALTERATION OF SOLICITATION AND/OR CONTRACT DOCUMENTS

Modification or alteration of the documents contained in this solicitation or the contract resulting from this solicitation shall only be made upon receipt of prior written consent of the County.

13. LAWS AND REGULATIONS:

The Bidder's attention is directed to the fact that all applicable Federal and State laws, municipal and county ordinances, and the rules and regulations of all authorities having jurisdiction over any part 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.

14. REQUIRED DISCLOSURE:

Bidder shall disclose all material facts with its Bid submission pertaining to any felony conviction or any pending felony charges in the last three (3) years anywhere in the United States against (i) Bidder, (ii) any business entity related to or affiliated with Bidder, or (iii) any present or former executive employee, officer, director, stockholder, partner or owner of Bidder or against any such related or affiliated entity.

This disclosure shall not apply to any person or entity who is a stockholder, owning less than 20% of the outstanding shares of a Bidder whose stock is publicly owned and traded.

The Board of County Commissioners may reject, at its sole discretion, any Bidder the Commission finds to lack, or whose present or former executive employees, officers, directors, stockholders, partners or owners are found by the Commission to lack honesty, integrity, or moral responsibility. The Commission's finding may be based on the disclosure required herein, the County's own investigation, public records, or any other reliable source of information. The Commission may also reject any Bidder failing to make the disclosure required herein. By submitting a Bid, Bidder recognizes and accepts that the Board of County Commissioners may reject any Bid at its sole discretion and the Bidder waives any claim it might have for damages or other relief arising from the rejection of its Bid or resulting directly or indirectly from the rejection of its Bid based on these grounds or from the disclosure of any pertinent information relating to the reasons for rejection of its Bid.

15. EXECUTION OF WRITTEN CONTRACT:

The successful Bidder will be required to sign a written Contract which has been made a part of this Bid package and identified as the Contract. Said written Contract will evidence in written form the agreement between the parties pursuant to the award having been theretofore made by the County to this Bidder; said signing to be accomplished within ten (10) days after receipt of Notice of Award.

16. LICENSING REQUIREMENTS:

The following licensing requirements shall apply when the applicable Florida Statute mandates specific licensing for Contractors engaged in the type of work covered by this solicitation.

- a. Prime Contractors, to be considered for Contract award for this work shall be either "registered" or "certified" by the State of Florida, Division of Professional Regulation, Construction Industries Licensing Board and licensed by other federal, state, regional, county or municipal agencies having jurisdiction over the specified construction work.
- b. Said licenses shall be in the Bidder's name as it appears on the Official Bid Form. Bidder shall supply appropriate license numbers, with expiration dates, as part of their Bid. Failure to hold and provide proof of proper licensing, certification and registration may be grounds for rejection of the Bid.
- c. Bidder shall provide copies of all applicable licenses with their Bid Proposal.
- d. Subcontractors contracted by the Prime Contractor shall be licensed in their respective fields to obtain construction permits from the County. Said license must be in the name of the Subcontractor listed on Attachment C, Subcontractor/Supplier Page, herein.

17. SECURITY FORFEITURE:

When Bid security has been required (Section 2, Paragraph h.): If, within ten (10) days after notification by the County of the County's approval to award Contract, the successful Bidder refuses or otherwise neglects to execute the required written Contract and fails to furnish the required Performance Bond and Payment Bond, the amount of the Bidder's Bid security (Cashier's Check or Bid Bond) shall be forfeited and the same shall be retained by the County. No plea of mistake in the Bid or misunderstanding of the conditions of forfeiture shall be available to the Bidder for the recovery of his Bid security or as a defense to any action.

18. PERFORMANCE BONDS AND PAYMENT BONDS:

When the contract amount exceeds \$100,000, a Performance Bond and a Payment Bond issued in a sum equal to one hundred (100%) percent of the total estimated Contract amount for the first Contract year by a Surety company considered satisfactory by the County according to the criteria in Section 19 will be required from the successful Bidder for purposes of insuring the faithful performance of the obligations imposed by the resulting Contract and for purposes of protecting the County from lawsuits for non-payment of debts as might be incurred during the successful Bidder's performance under such Contract. The Performance Bond and the Payment Bond forms will be included in the Contract Documents and said forms must be properly executed by the

Surety company and successful Bidder within ten (10) days after receipt of notification from the County of its award of the Contract. Within (10) ten days after the exercise of an option period, the Contractor shall provide Consent of Surety to renewal of the option period at the option period prices accompanied by a power of attorney according to the criteria in Section 19.

Awarded Bidders shall record bonds in the public records as required by Florida State Statutes, Chapter 255.05.

19. QUALIFICATIONS OF SURETY COMPANIES:

In order to be acceptable to the County, a Surety company issuing **the Bid Bond, the Performance Bond and the Payment Bond**, if called for in these Specifications, shall meet and comply with the following minimum standards:

- a. Surety must be admitted to do business in the State of Florida and shall comply with the provisions of Florida Statute 255.05.
- b. Surety must be listed on the U.S. Department of Treasury Fiscal Service, Bureau of Government financial Operations, Federal Register, Part V, latest revision, entitled: "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies".
- c. All bonds shall be originals and issued or countersigned by a producing agent with satisfactory evidence of the authority of the person or persons executing such bond shall be submitted with the bond. Attorneys-in-fact who sign Bid bonds or performance/payment bonds must file with such bond a signed, certified copy of their power of attorney to sign such bond. **Agents of Surety companies must list their name, address and telephone number on all Bonds.**
- d. The life of the bonds shall extend twelve (12) months beyond the end of the Contract term and shall contain a waiver of alteration to the terms of the Contract, extensions of time and/or forbearance on the part of the County.
- e. **Surety must have financial standing having a rating from A.M. Best Company (or other equivalent rating company) equal to or better than A- Class VI.**
- f. Should the Bid, Payment and Performance Bonds be issued by co-sureties, each surety listed on the bond shall meet the requirements in paragraphs a. – e. above. In addition, each surety shall submit a power of attorney and all signatures of the co-sureties representatives shall be notarized. The "lead" surety shall be identified for the purposes of underwriting and claims management.

FAILURE TO MEET ANY OF THE REQUIREMENTS CONTAINED ABOVE SHALL RESULT IN REJECTION OF THE BID.

20. TRENCH SAFETY ACT:

Pursuant to Chapter 90-96 (CS/SB 2626), Laws of Florida, "Trench Safety Act", any person submitting a Bid/proposal is required to complete the form entitled: **COMPLIANCE WITH FLORIDA TRENCH SAFETY ACT (90-96, LAWS OF FLORIDA)**, if applicable, and return the form with the Official Bid Form, (Part D, Attachment D)

This is not a pay item. The purpose of this form is to gather information on the costs associated with trench safety measures and to insure that the Bidder has considered these costs and included them in the Base Bid. Failure to complete this form may result in the Bid being declared non-responsive.

21. DRUG-FREE WORKPLACE FORM:

A Drug-Free Workplace Form (included in Part E) shall be submitted prior to award. Failure to submit this form certifying a drug-free workplace shall be cause for disqualification of the Bidder.

22. BID TABULATION:

Bid files may be examined during normal working hours, thirty (30) days after bid opening, or upon recommendation for award, whichever occurs first. Bidders desiring to view these documents are urged to schedule an appointment. For information concerning this bid, please contact the Procurement Division at the address listed above or by calling (407) 836-5635. Please specify the bid number for which you are inquiring.

Bid opening results will be available at <http://apps.ocfl.net/orangebids/bidresults/results.asp> the day following the Bid opening. Unsuccessful Bidders will not be notified, unless a request is submitted in accordance with this paragraph.

23. INDEMNIFICATION FOR TORT ACTIONS/LIMITATION OF LIABILITY:

The provisions of Florida Statute 768.28 applicable to Orange County, Florida apply in full to this Contract. Any legal actions to recover monetary damages in tort for injury or loss of property, personal injury, or death caused by the negligent or wrongful act or omission of any employee of the County acting within the scope of his/her office or employment are subject to the limitations specified in this statute.

No officer, employee or agent of the County acting within the scope of his/her employment or function shall be held personally liable in tort or named as a defendant in any action for any or damage suffered as a result of any act, event, or failure to act.

The County shall not be liable in tort for the acts or omissions of an officer, employee, or agent committed while acting outside the course and scope of his/her employment. This exclusion includes actions committed in bad faith or with malicious purpose, or in a manner exhibiting wanton and willful disregard of human rights, safety, or property.

24. OCCUPATIONAL SAFETY AND HEALTH ACT (O.S.H.A.):

All material, equipment, etc., to be incorporated into the resultant contract shall meet and conform to all as proposed and offered by Bidders must meet and conform to all O.S.H.A. requirements; the Bidder's signature upon the Bid Proposal form (Part D) being by this reference considered a certification of such fact.

25. PUBLIC ENTITY CRIME STATEMENT (FS 287.133):

A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a Bid on a Contract to provide any goods or services to a public entity, may not submit a Bid on a Contract with a public entity for the construction or repair of a public building or public work, may not submit Bids on leases of real property to a public entity, may not be awarded or perform work as a Contractor, supplier, Subcontractor, or consultant under a Contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Florida State Statutes Section 287.017 for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.

26. SUBCONTRACTOR/SUPPLIER INFORMATION:

If maximum M/WBE participation is desired, bidders must list all proposed Subcontractors and suppliers to be used, regardless of racial or gender grouping, to include names, addresses, phone numbers, type of work subcontracted (trade or commodity), dollar amount of work, and the M/WBE designation or Majority (Non-M/WBE) owned company. Attachment C-2 is provided for this information. Contractor shall not change any Subcontractors without just cause and approval by the County.

27. SUBCONTRACTOR'S PAST PERFORMANCE:

Bidder is responsible for verifying subcontractor's satisfactory performance on previous Orange County projects. Failure to do so may impact Bidder's responsibility determination.

28. REFERENCES:

Bidder should supply (with the bid form) a list of at least THREE (3) similar projects successfully completed **by the Bidder, as a Prime Contractor,** within the last 10 years. Similar projects shall include adequate experience for Landfill Gas (LFG) system operation, maintenance and monitoring (OM&M) services, for a landfill located in Florida. Also, similar projects shall include satisfactory performance for a LFG system construction project. The OM&M experience and the LFG construction project requirements are not required to be in the same project providing the successful experience can be demonstrated among all projects.

EACH SIMILAR PROJECT LISTED SHALL BE LISTED WITH COMPLETE INFORMATION AS SPECIFICALLY PROVIDED ON THE REFERENCE FORM (ATTACHMENT E). THE SPECIFIC INFORMATION ON REFERENCES MUST BE PROVIDED ON THE REFERENCE FORM. DO NOT ATTACH LISTINGS OF REFERENCE INFORMATION. FAILURE TO PROVIDE REFERENCE INFORMATION AS REQUESTED MAY RESULT IN THE REJECTION OF YOUR BID.

The determination of whether a bidder is responsible or not shall be at the sole discretion of the County. Although the County may request submission of a minimum number of similar projects for evaluation, the County's determination of a bidder's responsibility shall not be solely based on the number of similar projects submitted.

The contact person listed as a reference shall be someone who has personal knowledge of the Bidder's performance during the referenced project. Contact persons must have been informed that they are being used as a reference and that the County will be calling or emailing them.

29. UNIT PRICES:

Unless the Bid Item Schedule contained in Part D specifies otherwise, unit prices for individual line items shall include all costs, including but not limited to, mobilization, maintenance of traffic, overhead and profit.

30. EVALUATION OF OPTIONS:

The County shall evaluate Bids/offers for award purposes by adding the total price for all options to the total price of the basic period. However, the evaluation of options will not obligate the County to exercise the option(s).

31. UNBALANCED PRICING

A. Unbalanced pricing may increase performance risk and could result in payment of unreasonably high prices. Unbalanced pricing exists when, despite an acceptable total evaluated price, the price of one or more contract line items is significantly over or understated as indicated by the application of cost or price analysis techniques. The greatest risk associated with unbalanced pricing occur when –

1. Startup work and mobilization are separate line items;
2. Base year quantities and option year quantities are separate line items ; or
3. The evaluated price is the aggregate of estimated quantities to be ordered under separate line items of an indefinite-delivery contract.

B. All offers with separately priced line items or subline items shall be analyzed to determine if the prices are unbalanced. If cost or price analysis techniques indicate that an offer is unbalanced, the Manager Procurement Division shall:

1. Consider the risks to the County associated with the unbalanced pricing in determining the competitive range and in making the award decision; and
2. Consider whether award of the contract will result in paying unreasonably high prices for contract performance.
3. An offer may be rejected if the manager determines that the lack of balance poses an unacceptable risk to the County

32. BID AND RELATED COSTS:

By submission of a Bid, the Bidder agrees that all costs associated with the preparation of his/her Bid will be the sole responsibility of the Bidder. The Bidder also agrees that the County bears no responsibility for any costs associated with the preparation of the Bid and/or any administrative or judicial proceedings resulting from the solicitation process.

33. SOLICITATION CANCELLATIONS

Orange County reserves the right, and the Manager of Procurement Division has absolute and sole discretion to cancel a solicitation at any time prior to approval of the award by the Board of County Commissioners when such approval is required. The decision to cancel a solicitation cannot be the basis for a protest pursuant to the Orange County Code.

34. LICENSES/PERMITS/FEES:

The Orange County Government Fee Directory, incorporated herein by reference, contains a list of licenses, permits and fees that may apply to this project.

The fee directory link "Fees" is available at:

<http://www.orangecountyfl.net/tabid/808/default.aspx>

Bidders shall review all applicable licenses, permits and fees and contact the applicable agency if there are any questions.

35. BID ACCEPTANCE PERIOD:

Any Bid submitted in response to this Invitation of Bids shall remain in effect for a period of 90 days after Bid opening. Upon request of the County, the Bidder at its sole option may extend this period.

36. EQUAL OPPORTUNITY

It is hereby declared that equal opportunity and nondiscrimination shall be the County's policy intended to assure equal opportunities to every person, regardless of race, religion, sex, sexual orientation and gender expression/identity, color, age, disability or national origin, in securing or holding employment in a field of work or labor for which the person is qualified, as provided by Section 17-314 of the Orange County Code and the County Administrative Regulations.

Further, the awarded Contractor shall abide by the following provisions:

- (a) The awarded Contractor shall represent that awarded Contractor has adopted and maintains a policy of nondiscrimination as defined by applicable County ordinance throughout the term of this contract.
- (b) The awarded Contractor shall allow reasonable access to all business and employment records for the purpose of ascertaining compliance with the nondiscrimination provision of the contract.
- (c) The provisions of the prime contract shall be incorporated by the awarded Contractor into the contracts of any applicable subcontractors.

37. ETHICS COMPLIANCE

The following forms are included in this solicitation and shall be completed and submitted as indicated below:

Orange County Specific Project Expenditure Report -The purpose of this form is to document any expenses incurred by a lobbyist for the purposes described in Section 2-351, Orange County Code. This form shall be completed and submitted with any bid, proposal or other response to an Orange County solicitation. The bidder, proposer or responder to the solicitation shall not be awarded a contract unless this form has been completed and submitted. Any questions concerning this form shall be addressed to the purchasing agent or contract administrator identified in the applicable solicitation. Also, a listing of the most frequently asked questions concerning this form is attached for your information.

Relationship Disclosure Form – The purpose of this form is to document any relationships between a bidder, proposer or responder to an Orange County solicitation and the Mayor or any other member of the Orange County Board of County Commissioners. This form shall be completed and submitted with the applicable bid, proposal or response to an Orange County solicitation. No contract award will be made unless this form has been completed and submitted.

Any questions concerning this form shall be addressed to the purchasing agent or contract administrator identified in the applicable solicitation. Also, a listing of the most frequently asked questions concerning this form is attached for your information.

38. TOBACCO FREE CAMPUS

All Orange County operations under the Board of County Commissioners shall be tobacco free. This policy applies to parking lots, parks, break areas and worksites.

It is also applicable to contractors and their personnel during contract performance on county-owned property. Tobacco is defined as tobacco products including, but not limited to, cigars, cigarettes, pipes, chewing tobacco and snuff. Failure to abide by this policy may result in civil penalties levied under Chapter 386, Florida Statutes and/or contract enforcement remedies.

39. VERIFICATION OF EMPLOYMENT STATUS

Prior to the employment of any person performing services under this contract, the contractor shall (a) utilize the U.S. Department of Homeland Security's E-Verify system ("E-Verify") to verify the employment eligibility of all employees within the State of Florida that are hired by the contractor after the execution of the contract and who are providing labor under the contract during the contract term; and, (b) ensure that all of its subcontractors utilize E-Verify to verify the employment eligibility of all employees within the State of Florida of any of those subcontractors, who are hired by those sub-contractors after the execution of the contract, and who are providing labor under the contract during the contract term.

Please refer to USCIS.gov for more information on this process.

Only those employees determined eligible to work within the United States shall be employed under the contract.

Therefore, by submission of a bid in response to this solicitation, the contractor confirms that all employees in the above categories will undergo E-Verification before performing labor under this contract. Attachment H, in Part D, is provided for this information and shall be completed and submitted with the bid.

40. PROPRIETARY INFORMATION

In accordance with Chapter 119 of the Florida Statutes (Public Records Law), and except as may be provided by other applicable State or Federal Law, all proposers should be aware that Request for Proposals or Invitation for Bids and the responses thereto are in the public domain. Proposers must identify specifically any information contained in their response which they consider confidential and/or proprietary and which they believe to be exempt from disclosure, citing specifically the applicable exempting law.

OFFICIAL BID FORM
TERM CONTRACT FOR
INSTALLATION, MAINTENANCE AND MONITORING FOR LANDFILL GAS
COLLECTION FOR ORANGE COUNTY LANDFILL CELL 9 & 10

Mail or Hand Deliver By 2:00 PM , April 22, 2014

ORIGINAL BID FORM AND THREE (3) COMPLETE COPIES

To:

BOARD OF COUNTY COMMISSIONERS
ORANGE COUNTY, FLORIDA
INTERNAL OPERATIONS CENTRE II
PROCUREMENT DIVISION
400 E. SOUTH STREET – 2nd FLOOR
ORLANDO, FLORIDA 32801

Bid Opening:

April 22, 2014, - 2:00 PM

COMPANY NAME

COMPLETE MAILING ADDRESS

CITY, COUNTY, STATE, ZIP CODE

TELEPHONE NUMBER FAX NUMBER

CONTACT PERSON E-MAIL ADDRESS

TIN#: _____

NOTE: COMPANY NAME MUST MATCH LEGAL NAME ASSIGNED TO TIN
NUMBER. CURRENT W9 MUST BE SUBMITTED WITH BID/PROPOSAL

PART D

**To the Board of County Commissioners
Orange County, Florida**

The bidder understands that he/she is bidding for a term Contract for which no specific projects have been identified in the Invitation for Bids. The Bidder further acknowledges to the following:

- a. The sites for the work that may be performed under this Contract may be anywhere within Orange County.
- b. Countywide local conditions that may impact the work have been considered.
- c. The Contract Form, General Conditions, Supplementary Conditions, and other Contract documents have been thoroughly examined.
- d. The resultant Contract will contain estimated quantities, unit prices, extended totals and a total estimated contract amount to furnish all labor, materials, plant, equipment, manpower and other resources, including overhead and profit. These costs shall be the means to price any and all Delivery Orders issued thereunder.
- e. Each specific site for work under this Contract shall be issued to the Contractor via Delivery Order per Articles 4, 24, 28, 29 of the General Conditions and other applicable provisions.
- f. This is a unit price Term Contract and the total Estimated Bid is the sum of all pay items total from the Bid Item Schedule, Pages D-3 through D-5
- g. No specifications or drawings are applicable to the Contract. However, if required, specifications and drawings will apply to individual projects issued under specified Deliver Orders.

**TOTAL ESTIMATED BID:
(BASIC YEAR PLUS OPTION YEARS 1&2)**

_____ **DOLLARS**

(\$ _____)

In the event the Contract is awarded to this Bidder, he/she will enter into a formal written agreement with the County in accordance with the accepted Bid within ten (10) calendar days after said Contract is submitted to him/her. The Bidder further agrees that in the event of the Bidder's default or breach of any of the agreements of this proposal, the said bid deposit shall be forfeited as liquidated damages.

Failure of the Bidder to provide pricing for all unit priced items and/or the Base Bid and ALL requested additive/deductive bid items, or alternate bids shall be cause for rejection of the bid as non-responsive.

BID ITEM SCHEDULE: Y14-1006-J2 – Base Year

Bid Item	Description	Unit	Estimated Quantity	Unit Price	Total Price
1	18-inch Corrugated HDPE Pipe (Stormwater)	LF	200		
2	24-inch to 18-inch HDPE Reducer (Stormwater)	EA	8		
3	24-inch Corrugated HDPE Pipe (Stormwater)	LF	800		
4	8-inch Perforated CPVC Pipe (Vertical Gas Well)	LF	500		
5	8-inch Solid CPVC Pipe (Vertical Gas Well)	LF	200		
6	6-inch Perforated HDPE Pipe (Horizontal Gas Pipelines)	LF	3,400		
7	6-inch Solid HDPE Pipe (Horizontal Gas Pipelines)	LF	400		
8	4-inch Solid HDPE Pipe (Horizontal Gas Pipelines)	LF	400		
9	4-inch Solid HDPE Pipe (LFG Header)	LF	200		
10	6-inch Solid HDPE Pipe (LFG Header)	LF	1,000		
11	8-inch Solid HDPE Pipe (LFG Header)	LF	700		
12	4-inch Solid HDPE Pipe (Leachate)	LF	2,000		
13	3-inch Solid HDPE Pipe (Leachate)	LF	1,000		
14	3-inch Perforated HDPE Pipe (Leachate)	LF	11,500		
15	4-inch Leachate Tee Connection	EA	6		
16	Temporary LFG 8-inch Tee Connection	EA	5		
17	Vertical Wellhead	EA	13		
18	LFG Well Abandonment	LF	160		
19	Bahia Sod	SF	450,000		
20	18-inch Terrace Inlets (Stormwater)	EA	4		
21	24-inch Terrace Inlets (Stormwater)	EA	8		
22	Flare End (at First Bench) (Stormwater)	EA	3		
23	Line Cleaning and Camera Video-Taping Service	DAY	20		
24	Condensate Sump Pumps	EA	3		
25	Labor, Incidentals and Supplies, Monthly Routine Maintenance and Monitoring	MO	12		
26	Labor, Incidentals and Supplies, Non-Routine Scheduled Services	HR	700		
27	Emergency Service Mobilization/On-Site	EA	40		
28	Additional Labor, Emergency Services	HR	200		
29	Large Excavator	Day	10		
30	Small Excavator	Day	10		
31	Wheel Loader	Day	10		
32	Off-Road Dump Truck	Day	10		
	Total Price, Base Year			:	<hr/>

Y14-1006-J2 Bid Item Schedule - Option Year No. 1

Bid Item	Description	Unit	Estimated Quantity	Unit Price	Total Price
33	18-inch Corrugated HDPE Pipe (Stormwater)	LF	400		
34	24-inch to 18-inch HDPE Reducer (Stormwater)	EA	8		
35	24-inch Corrugated HDPE Pipe (Stormwater)	LF	800		
36	8-inch Perforated CPVC Pipe (Vertical Gas Well)	LF	500		
37	8-inch Solid CPVC Pipe (Vertical Gas Well)	LF	200		
38	6-inch Perforated HDPE Pipe (Horizontal Gas Pipelines)	LF	4,700		
39	6-inch Solid HDPE Pipe (Horizontal Gas Pipelines)	LF	500		
40	4-inch Solid HDPE Pipe (Horizontal Gas Pipelines)	LF	400		
41	4-inch Solid HDPE Pipe (LFG Header)	LF	200		
42	6-inch Solid HDPE Pipe (LFG Header)	LF	1,000		
43	8-inch Solid HDPE Pipe (LFG Header)	LF	700		
44	4-inch Solid HDPE Pipe (Leachate)	LF	2,000		
45	3-inch Solid HDPE Pipe (Leachate)	LF	1,000		
46	3-inch Perforated HDPE Pipe (Leachate)	LF	11,500		
47	4-inch Leachate Tee Connection	EA	6		
48	Temporary LFG 8-inch Tee Connection	EA	5		
49	Vertical Wellhead	EA	11		
50	LFG Well Abandonment	LF	90		
51	Bahia Sod	SF	450,000		
52	18-inch Terrace Inlets (Stormwater)	EA	4		
53	24-inch Terrace Inlets (Stormwater)	EA	8		
54	Flare End (at First Bench) (Stormwater)	EA	3		
55	Line Cleaning and Camera Video-Taping Service	DAY	20		
56	Condensate Sump Pumps	EA	3		
57	Labor, Incidentals and Supplies, Monthly Routine Maintenance and Monitoring	MO	12		
58	Labor, Incidentals and Supplies, Non-Routine Scheduled Services	HR	700		
59	Emergency Service Mobilization/On-Site	EA	40		
60	Additional Labor, Emergency Services	HR	200		
61	Large Excavator	Day	10		
62	Small Excavator	Day	10		
63	Wheel Loader	Day	10		
64	Off-Road Dump Truck	Day	10		
Total Price, Option Year #1:				_____	

Y14-1006-J2 Bid Item Schedule - Option Year No. 2

Bid Item	Description	Unit	Estimated Quantity	Unit Price	Total Price
65	18-inch Corrugated HDPE Pipe (Stormwater)	LF	400		
66	24-inch to 18-inch HDPE Reducer (Stormwater)	EA	8		
67	24-inch Corrugated HDPE Pipe (Stormwater)	LF	800		
68	8-inch Perforated CPVC Pipe (Vertical Gas Well)	LF	500		
69	8-inch Solid CPVC Pipe (Vertical Gas Well)	LF	200		
70	6-inch Perforated HDPE Pipe (Horizontal Gas Pipelines)	LF	4,000		
71	6-inch Solid HDPE Pipe (Horizontal Gas Pipelines)	LF	400		
72	4-inch Solid HDPE Pipe (Horizontal Gas Pipelines)	LF	400		
73	4-inch Solid HDPE Pipe (LFG Header)	LF	200		
74	6-inch Solid HDPE Pipe (LFG Header)	LF	500		
75	8-inch Solid HDPE Pipe (LFG Header)	LF	700		
76	4-inch Solid HDPE Pipe (Leachate)	LF	2,000		
77	3-inch Solid HDPE Pipe (Leachate)	LF	1,000		
78	3-inch Perforated HDPE Pipe (Leachate)	LF	11,500		
79	4-inch Leachate Tee Connection	EA	6		
80	Temporary LFG 8-inch Tee Connection	EA	6		
81	Vertical Wellhead	EA	11		
82	LFG Well Abandonment	LF	90		
83	Bahia Sod	SF	450,000		
84	18- inch Terrace Inlets (Stormwater)	EA	8		
85	24- inch Terrace Inlets (Stormwater)	EA	8		
86	Flare End (at First Bench) (Stormwater)	EA	3		
87	Line Cleaning and Camera Video-Taping Service	DAY	20		
88	Condensate Sump Pumps	EA	3		
89	Labor, Incidentals and Supplies, Monthly Routine Maintenance and Monitoring	MO	12		
90	Labor, Incidentals and Supplies, Non-Routine Scheduled Services	HR	700		
91	Emergency Service Mobilization/On-Site	EA	40		
92	Additional Labor, Emergency Services	HR	200		
93	Large Excavator	Day	10		
94	Small Excavator	Day	10		
95	Wheel Loader	Day	10		
96	Off-Road Dump Truck	Day	10		
	Total Price, Option Year 2 :				_____
	Total Estimated Bid (Base Year, plus Option Year 1 & 2) :				_____

The Bidder hereby agrees that there is attached a:

1. Non-Collusion Affidavit Yes ___
2. Required Disclosure Yes ___
3. M/WBE Forms
Employment Data Yes ___
Subcontractor/Supplier Page Yes ___
M/WBE Survey Yes ___
4. Trench Safety Act Form Yes ___ N/A ___
5. Drug-Free Workplace Form Yes ___
6. Good Faith Effort Documentation
(If Goals have not been met) Yes ___ NO ___ N/A ___
7. Three (3) Complete copies of this Bid Form
with all attachments Yes ___
8. References (**See Attachment E**) Yes ___ N/A ___
9. Bid Bond on **Form in Exhibit 1** (10% of Total Estimated
Contract Amount for First Contract Year) Yes ___ N/A ___
10. Licenses Yes ___ N/A ___
11. Current W9 Yes ___
12. Project Expenditure Report, Attachment F Yes ___
13. Relationship Disclosure Form, Attachment G Yes ___
14. Verification of Employment Status, Attachment H Yes ___
15. Personnel and Equipment List (**See Page G-1**) Yes ___

ACKNOWLEDGEMENT OF ADDENDA

The Bidder shall acknowledge receipt of any addenda issued to the solicitation by completing the blocks below or by completion of the applicable information on the addendum and returning it not later than the date and time for receipt of the Bid. Failure to acknowledge an addendum that has a material impact on the solicitation may negatively impact the responsiveness of your Bid. Material impacts include but are not limited to changes to specifications, delivery time, performance period, quantities, bonds, letters of credit, insurance, qualifications, etc.

Addendum No. _____ Dated _____ Addendum No. _____ Dated _____

Addendum No. _____ Dated _____ Addendum No. _____ Dated _____

If awarded this construction Contract, the Bidder agrees to complete the work covered by this Contract as specified on each Delivery Order.

The Bidder hereby agrees that the County reserves the right to waive informalities in any Bid and to reject any or all Bids, or to accept any Bid that in its judgement will be for the best interest of the County.

FLORIDA CONSTRUCTION INDUSTRIES LICENSING BOARD CERTIFICATION:

(NAME OF HOLDER) (CERTIFICATION NO.)

(SIGNATURE OF BIDDER) (CERTIFICATE EXPIRATION DATE)

(NAME TYPED)

IDENTIFICATION OF BUSINESS ORGANIZATION

Complete and submit the following information:

Type of Organization

Sole Proprietorship Partnership

Joint Venture Corporation

State of Incorporation: _____

Principal Place of Business (Florida Statute Chapter 607):

City/County/State

THE PRINCIPAL PLACE OF BUSINESS SHALL BE THE ADDRESS OF THE BIDDER'S PRINCIPAL OFFICE AS IDENTIFIED BY THE FLORIDA DIVISION OF CORPORATIONS

AUTHORIZED SIGNATORIES/NEGOTIATORS

The Bidder or proposer represents that the following persons are authorized to sign and/or negotiate Contracts and related documents to which the Bidder or proposer will be duly bound:

Name Title Telephone Number E-Mail Address

IN WITNESS WHEREOF, THE BIDDER HAS HEREUNTO SET HIS SIGNATURE AND AFFIXED HIS SEAL THIS _____ DAY OF _____, A.D. 20__.

BY: _____ (SEAL)

TITLE: _____

PRINT NAME AND TITLE

FEDERAL I.D.# _____

NON-COLLUSION AFFIDAVIT

The undersigned being first duly sworn as provided by law, deposes and says:

1. This Affidavit is made with the knowledge and intent that it is to be filed with the Board of County Commissioners, Orange County, Florida and that it will be relied upon by said County, in any consideration which may give to and any action which it may take with respect to this Proposal.

2. The undersigned is authorized to make this Affidavit on behalf of,

(Name of Corporation, Partnership, Individual, etc.)

A _____, formed under the laws of _____

of which he is _____

(Sole Owner, partner, president, etc.)

3. Neither the undersigned nor any other person, firm or corporation named in above Paragraph 2, nor anyone else to the knowledge of the undersigned, have themselves solicited or employed anyone else to solicit favorable action for this Proposal by the County, also that no head of any department or employee therein, or any officer of Orange County, Florida is directly interested therein.

4. This Proposal is genuine and not collusive or a sham; the person, firm or corporation named above in Paragraph 2 has not colluded, conspired, connived or agreed directly indirectly with any Bidder or person, firm or corporation, to put in a sham Proposal, or that such other person, firm or corporation, shall refrain from Bidding, and has not in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference with any person, firm or corporation, to fix the prices of said proposal or proposals of any other Bidder; and all statements contained in the proposal or proposals described above are true; and further, neither the undersigned, nor the person, firm or corporation named above in Paragraph 3, has directly or indirectly submitted said proposal or the contents thereof, or divulged information or data relative thereto, to any association or to any member or agent thereof.

(AFFIANT)

TAKEN, SWORN AND SUBSCRIBED TO BEFORE ME this _____ day of _____, 20__.

Notary Public _____

(SEAL)

(Print, Type or Stamp Commissioned Name of Notary Public)

Personally Known _____ **or Produced Identification** _____

Type of Identification: _____

REQUIRED DISCLOSURE

The following Disclosure is of all material facts pertaining to any felony or civil conviction or any pending felony or civil charges in the last three (3) years in this State or any other State of the United States against 1) Bidder, 2) any business entity related to or affiliated with Bidder, or 3) any present or former executive employee, officer, director, stockholder, partner or owner of Bidder or of any such related or affiliated entity. This Disclosure shall not apply to any person or entity which is only a stockholder, which person or entity owns twenty percent (20) or less of the outstanding shares of a Bidder whose stock is publicly owned and traded.

BIDDER

IFB/RFP Number & Title: _____

EMPLOYMENT DATA, SCHEDULE OF MINORITIES AND WOMEN (Rev. 1/99)

Please provide the following data pertaining to your workforce. If you have an Orange County workforce, it should be shown. If you do not have an Orange county workforce, total permanent workforce should be shown. If this is a Joint Venture, employment data shall be furnished for each firm composing the joint venture. It is mandatory that you provide workforce data. Failure to provide this form with your bid/proposals may be cause for rejection of your bid/proposal.

JOB CATEGORIES	MAJORITY		MINORITY MALES				MINORITY FEMALES				TOTAL
	White Male	White Female	Black	Hispanic	American Indian	Asian American	Black	Hispanic	American Indian	Asian American	
Officials, Mgrs. Supervisors											
Professionals											
Technicians											
Sales Workers											
Office and Clerical											
Craftsman (Skilled)											
Operatives (Semi-Skilled)											
Laborers (Unskilled)											
Service Workers											
Apprentices											
Interns/Co-Ops											
Wages to Work Employees											
TOTAL											
Changes Since Last Report											

The above reflects (Check One): Orange County Workforce Total Permanent Workforce (Outside Orange County)
For Construction Projects Only: Do you intend to hire new employees for the project? Yes No If yes, how many approximately? _____

Name of Firm _____ Period of Report _____ No. of Years in Business in Orange County _____

Form Completed by _____
 Name/Title (Printed or Typed) _____ Signature _____

Form Approved by _____
 Name/Title (Printed or Typed) _____ Signature _____

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PRIME CONTRACTOR/SUBCONTRACTOR/SUPPLIER INFORMATION

If maximum M/WBE participation is desired, bidders must list **all** proposed Subcontractors **and suppliers** to be used. Provide company names; contacts, addresses, phone numbers; work to be performed with the Contractor's own workforce, including estimated dollar amount allocated for that work (work that is consistently and historically performed in-house); total amount to be paid to this sub/supplier (do not discount supply dollars); and M/WBE designation or if non-M/WBE (Majority). See Instructions to Bidders, Part C, for complete M/WBE requirements. Provide **all** information requested. Use additional sheets if necessary. Failure to provide all of the information requested may negatively impact the M/WBE evaluation.

1. What is the estimated percent of work that the Prime Contractor will self-perform? _____%
 List these areas below with approximate dollar amounts to be allocated for the work.

2. Is all work (whether to be subbed or self-performed) listed below? Yes ____ No ____
 Are all material suppliers listed? Yes ____ No ____
 If no, please explain. _____

3. Is your firm certified through Orange County as an M/WBE? Yes ____ No ____
 (See Part C for specific requirements for certified M/WBE firms)

4. Is your firm registered through Orange County as a Service Disabled-Veteran (SDV)? Yes ____ No ____

5. Did you include any M/WBE credits- First Time Utilization (FTU) or Non-County Utilization (NC) with this bid? (If so, insert copy of credit Yes ____ No ____
 (If so, insert copy of credit and specify credit type below)

	<u>COMPANY NAME, CONTACT ADDRESS, PHONE NUMBER</u>	<u>WORK TO BE PERFORMED (TRADE) OR COMMODITY TO BE SUPPLIED</u>	<u>DOLLAR AMOUNT</u>	<u>O.C. CERTIFIED</u>
				<u>M/WBE or Non-M/WBE; Or SDV; or Type of M/WBE Credit -FTU or NC</u>
1	_____	<u>Sub/Supplier/In-house (Circle One)</u> _____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
2	_____	<u>Sub/Supplier/In-house (Circle One)</u> _____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
3	_____	<u>Sub/Supplier/In-house (Circle One)</u> _____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____

Signature of Bidder

Title

PRIME CONTRACTOR/SUBCONTRACTOR/SUPPLIER INFORMATION

<u>COMPANY NAME, CONTACT ADDRESS, PHONE NUMBER</u>	<u>WORK TO BE PERFORMED (TRADE) OR COMMODITY TO BE SUPPLIED</u>	<u>DOLLAR AMOUNT</u>	<u>O.C. CERTIFIED M/WBE or Non-M/WBE; Or SDV; or Type of M/WBE Credit –FTU or NC</u>
4 _____ _____ _____	<u>Sub/Supplier/In-house (Circle One)</u> _____ _____ _____	_____	_____
5 _____ _____ _____	<u>Sub/Supplier/In-house (Circle One)</u> _____ _____ _____	_____	_____
6 _____ _____ _____	<u>Sub/Supplier/In-house (Circle One)</u> _____ _____ _____	_____	_____
7 _____ _____ _____	<u>Sub/Supplier/In-house (Circle One)</u> _____ _____ _____	_____	_____
8 _____ _____ _____	<u>Sub/Supplier/In-house (Circle One)</u> _____ _____ _____	_____	_____
9 _____ _____ _____	<u>Sub/Supplier/In-house (Circle One)</u> _____ _____ _____	_____	_____
10 _____ _____ _____	<u>Sub/Supplier/In-house (Circle One)</u> _____ _____ _____	_____	_____
11 _____ _____ _____	<u>Sub/Supplier/In-house (Circle One)</u> _____ _____ _____	_____	_____

Signature of Bidder

Title

INSTRUCTIONS Contractor shall place the following on their letterhead, executed by their authorized agent. Letter is to be submitted **before 5:00 PM on the second business day (i.e., if bid opens on Thursday, due on Monday before 5:00 PM)** after bid opening to: Orange County Business Development Division; 400 E. South Street; 2nd Floor, Orlando, FL 32801; Fax Number (407) 836-5477. A Letter of Intent is to be executed with all M/WBE Subcontractors and suppliers listed by the Contractor on the Subcontractor/Supplier page submitted with this bid. Any M/WBE's not listed on Subcontractor/Supplier page for this bid will not be accepted. Dollar amounts listed for each Subcontractor shall represent estimated totals for the entire contract, including all Option Years. Failure to submit this form within the required time frame may result in the bid being found non-responsive.

**LETTER OF INTENT
(VERIFICATION M/WBE UTILIZATION)**

IFB # _____ PROJECT TITLE: _____

I, _____, (Prime Contractor) have entered into an agreement with the following Minority/Women-owned Business Enterprise to do the work shown on Attachment C-2 of the Bid Form and shown below. I understand that prior to execution of the prime Contract by Orange County, a subcontract and/or purchase order will be executed with this firm and a copy of the agreement will be sent to the Orange County Business Development Division.

SUBCONTRACTOR/SUPPLIER

SPECIFIC SCOPES OF WORK/COMMODITY

SUBCONTRACT/PURCHASE ORDER PRICE

I understand that I shall not be allowed to substitute or change Subcontractors, without the express prior approval of Orange County's Project Manager and the Business Development Division. Such approval shall in no way relieve my obligations pursuant to Orange County's M/WBE requirements and goals contained in the Orange County Minority/Women Business Enterprise Ordinance, Orange County Code, Chapter 17, Article III, Division 4.

Under penalty of perjury, I declare that I have read the foregoing and the facts stated in it are true. False statements may result in criminal prosecution for a felony of the third degree as provided for in Section 92.525(3), Florida Statutes.

Authorized Agent of Prime Contractor

Authorized Agent, Subcontractor/Supplier

Printed Name & Title

Printed Name & Title

Date: _____

Date: _____

Phone Number

Fax Number

INSTRUCTIONS Contractor shall place the following on their letterhead, executed by their authorized agent. Letter is to be submitted **before 5:00 PM on the second business day (i.e., if bid opens on Thursday , due on Monday before 5:00 PM)** after bid opening to: Orange County Business Development Division; 400 E. South Street; 2nd Floor, Orlando, FL 32801; Fax Number (407) 836-5477. A Letter of Intent is to be executed with all **SDV** Subcontractors and suppliers listed by the Contractor on the Subcontractor/Supplier page submitted with this bid. Any **SDV**'s not listed on Subcontractor/Supplier page for this bid will not be accepted. Failure to submit this form within the required time frame may result in the bid being found non-responsive.

**LETTER OF INTENT
(VERIFICATION OF SERVICE-DISABLED VETERAN UTILIZATION)**

IFB # _____ **PROJECT TITLE** _____

I, _____, (Prime Contractor) have entered into an agreement with the following Service-Disabled Veteran Business to do the work shown on Attachment C-2 of the Bid Form and shown below (contingent upon award of the prime contract to our company). I understand that prior to execution of the prime Contract by Orange County, a subcontract and/or purchase order will be executed with this firm and a copy of the agreement will be sent to the Orange County Business Development Division.

SDV SUBCONTRACTOR/SUPPLIER

SPECIFIC SCOPES OF WORK/COMMODITY

SUBCONTRACT/PURCHASE ORDER PRICE

I understand that I shall not be allowed to substitute or change Subcontractors, without the express prior approval of Orange County's Project Manager and the Business Development Division. Such approval shall in no way relieve my obligations pursuant to Orange County's Service-Disable Veteran Business Program requirements contained in the Orange County Ordinance, Orange County Code, Chapter 17, Article III, Division 5.

Under penalty of perjury, I declare that I have read the foregoing and the facts stated in it are true. False statements may result in criminal prosecution for a felony of the third degree as provided for in Section 92.525(3), Florida Statutes.

Authorized Agent of Prime Contractor

Authorized Agent, Subcontractor/Supplier

Printed Name & Title

Printed Name & Title

Date: _____

Date: _____

Phone Number

Fax Number

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M/WBE Survey

Company _____ Contact Name: _____

Contact's Phone Number: _____ IFB #: _____

Please answer the following questions regarding Orange County's M/WBE Program:

1. If you failed to meet the County's M/WBE goal for this solicitation, please check reasons below:

- No M/WBE contractors/suppliers available
- Self-performing more than 75% of the work
- Self-performing 100% of the work
- Prices from M/WBE contractors/suppliers too high
- Other (please explain)

2. If checked "self performing work" in question #1, explain in detail why you propose to self perform the work and list any subcontractors you intend to use. Also, provide a detailed listing of the suppliers, items to be purchased and costs thereof:

3. When you submitted your bid without the desired M/WBE participation, were you concerned that this deficiency would cause rejection of your bid?

Yes No

If no, why not?

4. What steps do you recommend the County take to ensure that the M/WBE goal is achieved on projects of this nature?

5. Do you support the County's M/WBE program?

Yes No

If no, why not?

6. Do you believe you can remain competitive if you fully complied with the County's M/WBE program?

Yes No If no, why not?

7. Do you have any type of working relationship with M/WBE subcontractors?

Yes No

If yes, is it (check all that apply):

Routine business only

Only during bid solicitation

Other (please explain)

8. Do you desire to establish a working relationship with M/WBE subcontractors?

Yes No

9. Are you aware that you could call the Business Development Division for information or additional assistance with M/WBE participation in bid solicitations?

Yes No

10. Please provide any additional comments:

Please note that failure to provide this information with your Bid Proposal may delay the award of the contract. Therefore, a timely response is requested. You may be contacted by staff from the Business Development Division in the near future.

GOOD FAITH EFFORT M/WBE CONTRACT LOG (See Part C, SECTION 3, Paragraph E-iii)
 (Required only if Good Faith Effort Documentation is being provided as part of this Bid)

IFB No/ Project Name

Firm's Name/Address	Contact Info: E-mail, Phone and /or fax	Scope of Work (Work to be performed/Trade/or Commodity Supplied)	Date	Name of Person Contacting Firms	Firm to Bid (Y or N)	Date & Time Quote Received	Notes

Under penalty of perjury, I declare that I have read the foregoing and the facts stated in it are true. False statements may result in criminal prosecution for a felony of the third degree as provided for in Section 92.525 (3), Florida Statutes. I, _____, (Signature off Authorized Agent),
 _____ / _____ / _____ (Printed Name, Title, and Date)

COMPLIANCE WITH FLORIDA TRENCH SAFETY ACT (90-96, LAWS OF FLORIDA)

Bidder hereby acknowledges that all costs for complying with the Florida Trench Safety Act are included in the various items of the Bid Schedule or Lump Sum Bid. For informational purposes only, the Bidder is required to further identify these costs in the summary below.

TRENCH SAFETY MEASURE (DESCRIPTION)	UNIT OF MEASURE (LF, SY)	UNIT (QUANTITY)	UNIT COST	EXTENDED COST
A) _____	_____	_____	\$_____	\$_____
B) _____	_____	_____	\$_____	\$_____
C) _____	_____	_____	\$_____	\$_____
D) _____	_____	_____	\$_____	\$_____
			TOTAL	\$_____

SIGNED: _____

TITLE: _____

THIS IS NOT A PAY ITEM: The purpose of this form is to gather information on the costs associated with trench safety measures and to insure that the Bidder has considered these costs and included them in the Bid Schedule or Lump Sum Bid. Contractor will not receive additional payment if actual quantities differ from those estimated or if the Contractor uses a safety measure different than those listed.

(Failure to complete this form may result in the Bid being declared non-responsive.)

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REFERENCES:

Bidder should supply (with the bid form) a list of at least THREE (3) similar projects successfully completed **by the Bidder, as a Prime Contractor**, within the last 10 years. Similar projects shall include adequate experience for Landfill Gas (LFG) system operation, maintenance and monitoring (OM&M) services, for a landfill located in Florida. Also, similar projects shall include satisfactory performance for a LFG system construction project. The OM&M experience and the LFG construction project requirements are not required to be in the same project providing the successful experience can be demonstrated among all projects.

EACH SIMILAR PROJECT LISTED SHALL BE LISTED WITH COMPLETE INFORMATION AS SPECIFICALLY PROVIDED ON THE REFERENCE FORM (ATTACHMENT E). THE SPECIFIC INFORMATION ON REFERENCES MUST BE PROVIDED ON THE REFERENCE FORM. DO NOT ATTACH LISTINGS OF REFERENCE INFORMATION. FAILURE TO PROVIDE REFERENCE INFORMATION AS REQUESTED MAY RESULT IN THE REJECTION OF YOUR BID.

The determination of whether a bidder is responsible or not shall be at the sole discretion of the County. Although the County may request submission of a minimum number of similar projects for evaluation, the County's determination of a bidder's responsibility shall not be solely based on the number of similar projects submitted.

The contact person listed as a reference shall be someone who has personal knowledge of the Bidder's performance during the referenced project. Contact persons must have been informed that they are being used as a reference and that the County will be calling or emailing them.

1. Project Name _____
Owner _____
Contact _____
Address _____

Telephone Number/Email Address _____
Contract Number and Amount # _____ \$ _____
Change Orders \$ _____
Final Contract \$ _____
Completed on Schedule? _____ Date: _____
Project Description _____

2. Project Name _____
Owner _____
Contact _____
Address _____

Telephone Number/Email Address _____
Contract Number and Amount # _____ \$ _____
Change Orders \$ _____
Final Contract \$ _____
Completed on Schedule? _____ Date: _____
Project Description _____

3. Project Name _____
Owner _____
Contact _____
Address _____

Telephone Number/Email Address _____
Contract Number and Amount # _____ \$ _____
Change Orders \$ _____
Final Contract \$ _____
Completed on Schedule? _____ Date: _____
Project Description _____

4. Project Name _____
Owner _____
Contact _____
Address _____

Telephone Number/Email Address _____
Contract Number and Amount # _____ \$ _____
Change Orders \$ _____
Final Contract \$ _____
Completed on Schedule? _____ Date: _____
Project Description _____

5. Project Name _____
Owner _____
Contact _____
Address _____

Telephone Number/Email Address _____
Contract Number and Amount # _____ \$ _____
Change Orders \$ _____
Final Contract \$ _____
Completed on Schedule? _____ Date: _____
Project Description _____

6. Project Name _____
Owner _____
Contact _____
Address _____

Telephone Number/Email Address _____
Contract Number and Amount # _____ \$ _____
Change Orders \$ _____
Final Contract \$ _____
Completed on Schedule? _____ Date: _____
Project Description _____

7. Project Name _____
Owner _____
Contact _____
Address _____

Telephone Number/Email Address _____
Contract Number and Amount # _____ \$ _____
Change Orders \$ _____
Final Contract \$ _____
Completed on Schedule? _____ Date: _____
Project Description _____

For Staff Use Only:

Specific Project Expenditure Report (Revised November 5, 2010)

Initially submitted on _____

For use as of March 1, 2011

Updated On _____

**INSTALLATION, MAINTENANCE AND MONITORING FOR LANDFILL GAS
COLLECTION FOR ORANGE COUNTY LANDFILL CELL 9 & 10**

Case or Bid No. **Y14-1006 -J2**

ORANGE COUNTY SPECIFIC PROJECT EXPENDITURE REPORT

**This lobbying expenditure form shall be completed in full and filed with all application submittals.
This form shall remain cumulative and shall be filed with the department processing your application.
Forms signed by a principal's authorized agent shall include an executed Agent Authorization Form.**

This is the initial Form: _____

This is a Subsequent Form: _____

Part I

Please complete all of the following:

Name and Address of Principal (legal name of entity or owner per Orange County tax rolls): _____

Name and Address of Principal's Authorized Agent, if applicable: _____

List the name and address of all lobbyists, consultants, contractors, subcontractors, individuals or business entities who will assist with obtaining approval for this project. (Additional forms may be used as necessary.)

1. Name and address of individual or business entity: _____
Are they registered Lobbyist? Yes ___ or No___

2. Name and address of individual or business entity: _____
Are they registered Lobbyist? Yes ___ or No___

3. Name and address of individual or business entity: _____
Are they registered Lobbyist? Yes ___ or No___

4. Name and address of individual or business entity: _____
Are they registered Lobbyist? Yes ___ or No___

5. Name and address of individual or business entity: _____
Are they registered Lobbyist? Yes ___ or No___

6. Name and address of individual or business entity: _____
Are they registered Lobbyist? Yes ___ or No___

7. Name and address of individual or business entity: _____
Are they registered Lobbyist? Yes ___ or No___

8. Name and address of individual or business entity: _____
Are they registered Lobbyist? Yes ___ or No___

For Staff Use Only:

Specific Project Expenditure Report (Revised November 5, 2010)

Initially submitted on _____

For use as of March 1, 2011

Updated On _____

**INSTALLATION, MAINTENANCE AND MONITORING FOR LANDFILL GAS
COLLECTION FOR ORANGE COUNTY LANDFILL CELL 9 & 10**

Case or Bid No. **Y14-1006 -J2**

Company Name: _____

Part II

Expenditures:

For this report, an "expenditure" means money or anything of value given by the principal and/or his/her lobbyist for the purpose of lobbying, as defined in section 2-351, Orange County Code. This may include public relations expenditures including, but not limited to, petitions, fliers, purchase of media time, cost of print and distribution of publications. However, the term "expenditure" **does not** include:

- Contributions or expenditures reported pursuant to chapter 106, Florida Statutes;
- Federal election law, campaign-related personal services provided without compensation by individuals volunteering their time;
- Any other contribution or expenditure made by or to a political party;
- Any other contribution or expenditure made by an organization that is exempt from taxation under 26 U.S.C. s. 527 or s. 501(c)(4), in accordance with s.112.3215, Florida Statutes; and/or
- Professional fees paid to registered lobbyists associated with the project or item.

The following is a complete list of all lobbying expenditures and activities (including those of lobbyists, contractors, consultants, etc.) incurred by the principal or his/her authorized agent and expended in connection with the above-referenced project or issue. **You need not include de minimus costs (under \$50) for producing or reproducing graphics, aerial photographs, photocopies, surveys, studies or other documents related to this project.**

Date of Expenditure	Name of Party Incurring Expenditure	Description of Activity	Amount Paid
		TOTAL EXPENDED THIS REPORT	\$

For Staff Use Only:

Specific Project Expenditure Report (Revised November 5, 2010)

Initially submitted on _____

For use as of March 1, 2011

Updated On _____

**INSTALLATION, MAINTENANCE AND MONITORING FOR LANDFILL GAS
COLLECTION FOR ORANGE COUNTY LANDFILL CELL 9 & 10**

Case or Bid No. **Y14-1006 -J2**

Company Name: _____

Part III

ORIGINAL SIGNATURE AND NOTARIZATION REQUIRED

I hereby certify that information provided in this specific project expenditure report is true and correct based on my knowledge and belief. I acknowledge and agree to comply with the requirement of section 2-354, of the Orange County code, to amend this specific project expenditure report for any additional expenditure(s) incurred relating to this project prior to the scheduled Board of County Commissioner meeting. I further acknowledge and agree that failure to comply with these requirements to file the specific expenditure report and all associated amendments may result in the delay of approval by the Board of County Commissioners for my project or item, any associated costs for which I shall be held responsible. In accordance with s. 837.06, Florida Statutes, I understand and acknowledge that whoever knowingly makes a false statement in writing with the intent to mislead a public servant in the performance of his or her official duty shall be guilty of a misdemeanor in the second degree, punishable as provided in s. 775.082 or s. 775.083, Florida Statutes.

Date: _____

Signature of Principal or Principal's Authorized Agent
(check appropriate box)

PRINT NAME AND TITLE: _____

STATE OF _____ :

COUNTY OF _____ :

I certify that the foregoing instrument was acknowledged before me this ____ day of _____, 20__ by _____ He/she is personally known to me or has produced _____ as identification and did/did not take an oath.

Witness my hand and official seal in the county and state stated above on the ____ day of _____, in the year _____.

(Notary Seal)

Signature of Notary Public
Notary Public for the State of _____
My Commission Expires: _____

Staff signature and date of receipt of form _____

Staff reviews as to form and does not attest to the accuracy or veracity of the information provided herein.

For Staff Use Only:

Initially submitted on _____

Updated On _____

**INSTALLATION, MAINTENANCE AND MONITORING FOR
LANDFILL GAS COLLECTION FOR ORANGE COUNTY LANDFILL CELL 9 & 10
Case or Bid No. Y14-1006 -J2**

**FREQUENTLY ASKED QUESTIONS (FAQ) ABOUT THE SPECIFIC PROJECT
EXPENDITURE REPORT**

Updated 3-1-11

WHAT IS A SPECIFIC PROJECT EXPENDITURE REPORT (SPR)?

A Specific Project Expenditure Report (SPR) is a report required under Section 2-354(b) of the Orange County Lobbying Ordinance, codified at Article X of Chapter 2 of the Orange County Code, reflecting all lobbying expenditures incurred by a principal and his/her authorized agent(s) and the principal's lobbyist(s), contractor(s), subcontractor(s), and consultant(s), if applicable, for certain projects or issues that will ultimately be decided by the Board of County Commissioners (BCC).

Matters specifically exempt from the SPR requirement are ministerial items, resolutions, agreements in settlement of litigation matters in which the County is a party, ordinances initiated by County staff, and some procurement items, as more fully described in 2.20 of the Administrative Regulations.

Professional fees paid by the principal to his/her lobbyist for the purpose of lobbying need not be disclosed on this form. (See Section 2-354(b), Orange County Code.)

WHO NEEDS TO FILE THE SPR?

The principal or his/her authorized agent needs to complete and sign the SPR and warrant that the information provided on the SPR is true and correct.

A principal that is a governmental entity does not need to file an SPR.

HOW ARE THE KEY RELEVANT TERMS DEFINED?

Expenditure means "a payment, distribution, loan, advance, reimbursement, deposit, or anything of value made by a lobbyist or principal for the purpose of lobbying. This may include public relations expenditures (including but not limited to petitions, flyers, purchase of media time, cost of print and distribution of publications) but does not include contributions or expenditures reported pursuant to Chapter 106, Florida Statutes, or federal election law, campaign-related personal services provided without compensation by individuals volunteering their time, any other contribution or expenditure made by or to a political party, or any other contribution or expenditure made by an organization that is exempt from taxation under 26 U.S.C. s. 527 or s. 501(c)(4)." (See Section 112.3215, Florida Statutes.) Professional fees paid by the principal to his/her lobbyist for the purpose of lobbying are not deemed to be "expenditures." (See Section 2-354, Orange County Code.)

Lobbying means seeking "to encourage the approval, disapproval, adoption, repeal, rescission, passage, defeat or modification of any ordinance, resolution, agreement, development permit, other type of permit, franchise, vendor, consultant, contractor, recommendation, decision or other foreseeable action of the [BCC]," and "include[s] all communications, regardless of whether initiated by the lobbyist or by the person being lobbied, and regardless of whether oral, written or electronic." (See Section 2-351, Orange County Code.) Furthermore, *lobbying* means communicating "directly with the

County Mayor, with any other member of the [BCC], or with any member of a procurement committee.” (See Section 2-351, Orange County Code.) *Lobbying* also means communicating “indirectly with the County Mayor or any other member of the [BCC]” by communicating with any staff member of the Mayor or any member of the BCC, the county administrator, any deputy or assistant county administrator, the county attorney, any county department director, or any county division manager. (See Section 2-351, Orange County Code.) *Lobbying* does not include the act of appearing before a Sunshine Committee, such as the Development Review Committee or the Roadway Agreement Committee other than the BCC.

Principal means “the person, partnership, joint venture, trust, association, corporation, governmental entity or other entity which has contracted for, employed, retained, or otherwise engaged the services of a lobbyist.” *Principal* may also include a person, partnership, joint venture, trust, association, corporation, limited liability corporation, or other entity where it or its employees do not qualify as a lobbyist under the definition set forth in Section 2-351 of the Orange County Code but do perform lobbying activities on behalf of a business in which it has a personal interest.

DOES THE SPR NEED TO BE UPDATED IF INFORMATION CHANGES?

Yes. It remains a continuing obligation of the principal or his/her authorized agent to update the SPR whenever any of the information provided on the initial form changes.

WHERE DO THE SPR AND ANY UPDATES NEED TO BE FILED?

The SPR needs to be filed with the County Department or County Division processing the application or matter. If and when an additional expenditure is incurred subsequent to the initial filing of the SPR, an amended SPR needs to be filed with the County Department or County Division where the original application, including the initial SPR, was filed.

WHEN DO THE SPR AND ANY UPDATES NEED TO BE FILED?

In most cases, the initial SPR needs to be filed with the other application forms. The SPR and any update must be filed with the appropriate County Department or County Division not less than seven (7) days prior to the BCC hearing date so that they may be incorporated into the BCC agenda packet. (See Section 2-354(b), Orange County Code.) When the matter is a discussion agenda item or is the subject of a public hearing, and any additional expenditure occurs less than 7 days prior to BCC meeting date or updated information is not included in the BCC agenda packet, the principal or his/her authorized agent is obligated to verbally present the updated information to the BCC when the agenda item is heard or the public hearing is held. When the matter is a consent agenda item and an update has not been made at least 7 days prior to the BCC meeting or the update is not included in the BCC agenda packet, the item will be pulled from the consent agenda to be considered at a future meeting.

WHO WILL BE MADE AWARE OF THE INFORMATION DISCLOSED ON THE SPR AND ANY UPDATES?

The information disclosed on the SPR and any updates will be a public record as defined by Chapter 119, Florida Statutes, and therefore may be inspected by any interested person. Also, the information will be made available to the Mayor and the BCC members. This information will accompany the other information for the principal's project or item.

CONCLUSION:

We hope you find this FAQ useful to your understanding of the SPR. Please be informed that in the event of a conflict or inconsistency between this FAQ and the requirements of the applicable ordinance governing specific project expenditure reports, the ordinance controls.

Also, please be informed that the County Attorney's Office is not permitted to render legal advice to a principal, his/her authorized agent, or any other outside party. Accordingly, if after reading this FAQ the principal, his/her authorized agent or an outside party has any questions, he/she is encouraged to contact his/her own legal counsel.

For Staff Use Only:

Date Submitted _____

Date Updated _____

Bid Number **Y14-1006 -J2**

RELATIONSHIP DISCLOSURE FORM
FOR USE WITH PROCUREMENT ITEMS, EXCEPT THOSE WHERE THE COUNTY
IS THE PRINCIPAL OR PRIMARY APPLICANT

For procurement items that will come before the Board of County Commissioners for final approval, this form shall be completed by the bidder, offerer, quoter or respondent and shall be submitted to the Procurement Division by the bidder, offerer, quoter or respondent.

In the event any information provided on this form should change, the applicant must file an amended form on or before the date the item is considered by the appropriate board or body.

Part I

**INFORMATION ON APPLICANT (BIDDER, OFFEROR, QUOTER,
PROPOSER, OR RESPONDENT):**

Legal Name of Applicant: _____

Business Address (Street/P.O. Box, City and Zip Code): _____

Business Phone () _____

Facsimile () _____

**INFORMATION ON APPLICANT'S AUTHORIZED AGENT, IF
APPLICABLE:**

(Agent Authorization Form also required to be attached)

Name of Applicant's Authorized Agent:

Business Address (Street/P.O. Box, City and Zip Code): _____

Business Phone () _____

Facsimile () _____

For Staff Use Only:

Date Submitted _____

Date Updated _____

Bid Number **Y14-1006 -J2**

Company Name: _____

Part II

IS THE APPLICANT A RELATIVE OF THE MAYOR OR ANY MEMBER OF THE BCC?

___ YES ___ NO

IS THE MAYOR OR ANY MEMBER OF THE BCC THE APPLICANT'S EMPLOYEE?

___ YES ___ NO

IS THE APPLICANT OR ANY PERSON WITH A DIRECT BENEFICIAL INTEREST IN THE OUTCOME OF THIS MATTER A BUSINESS ASSOCIATE OF THE MAYOR OR ANY MEMBER OF THE BCC?

___ YES ___ NO

If you responded "YES" to any of the above questions, please state with whom and explain the relationship:

(Use additional sheets of paper if necessary)

For Staff Use Only:

Date Submitted _____

Date Updated _____

Bid Number **Y14-1006 -J2**

Company Name: _____

Part III

ORIGINAL SIGNATURE AND NOTARIZATION REQUIRED

I hereby certify that information provided in this relationship disclosure form is true and correct based on my knowledge and belief. If any of this information changes, I further acknowledge and agree to amend this relationship disclosure form prior to any meeting at which the above-referenced project is scheduled to be heard. In accordance with s. 837.06, Florida Statutes, I understand and acknowledge that whoever knowingly makes a false statement in writing with the intent to mislead a public servant in the performance of his or her official duty shall be guilty of a misdemeanor in the second degree, punishable as provided in s. 775.082 or s. 775.083, Florida Statutes.

Signature of Applicant

Date: _____

Print Name and Title of Person completing this form: _____

STATE OF _____ :
COUNTY OF _____ :

I certify that the foregoing instrument was acknowledged before me this ____ day of _____, 20__ by _____. He/she is personally known to me or has produced _____ as identification and did/did not take an oath.

Witness my hand and official seal in the county and state stated above on the ____ day of _____, in the year _____.

(Notary Seal)

Signature of Notary Public
Notary Public for the State of _____
My Commission Expires:

Staff signature and date of receipt of form

Staff reviews as to form and does not attest to the accuracy or veracity of the information provided herein.

AGENT AUTHORIZATION FORM
FOR PROCUREMENTS IN ORANGE COUNTY, FLORIDA



I/WE, (PRINT BIDDER, OFFEROR, QUOTER OR RESPONDENT NAME) _____, DO HEREBY AUTHORIZE TO ACT AS MY/OUR AGENT (PRINT AGENT'S NAME), _____, TO EXECUTE ANY PETITIONS OR OTHER DOCUMENTS NECESSARY TO AFFECT THE CONTRACT APPROVAL PROCESS MORE SPECIFICALLY DESCRIBED AS FOLLOWS, IFB NO. Y14- 1006-J2, INSTALLATION, MAINTENANCE AND MONITORING FOR LANDFILL GAS COLLECTION FOR ORANGE COUNTY LANDFILL CELL 9 & 10, AND TO APPEAR ON MY/OUR BEHALF BEFORE ANY ADMINISTRATIVE OR LEGISLATIVE BODY IN THE COUNTY CONSIDERING THIS CONTRACT AND TO ACT IN ALL RESPECTS AS OUR AGENT IN MATTERS PERTAINING TO THIS CONTRACT.

Date: _____
Signature of Bidder, Offeror, Quoter or Respondent

STATE OF _____ :
COUNTY OF _____ :

I certify that the foregoing instrument was acknowledged before me this _____ day of _____, 20__ by _____. He/she is personally known to me or has produced _____ as identification and did/did not take an oath.

Witness my hand and official seal in the county and state stated above on the _____ day of _____, in the year _____.

(Notary Seal) _____
Signature of Notary Public
Notary Public for the State of _____

My Commission Expires: _____

FREQUENTLY ASKED QUESTIONS (FAQ)
ABOUT THE
RELATIONSHIP DISCLOSURE FORM

Updated 6-28-11

WHAT IS THE RELATIONSHIP DISCLOSURE FORM?

The Relationship Disclosure Form (form OC CE 2D and form OC CE 2P) is a form created pursuant to the County's Local Code of Ethics, codified at Article XIII of Chapter 2 of the Orange County Code, to ensure that all development-related items and procurement items presented to or filed with the County include information as to the relationship, if any, between the applicant and the County Mayor or any member of the Board of County Commissioners (BCC). The form will be a part of the backup information for the applicant's item.

WHY ARE THERE TWO RELATIONSHIP DISCLOSURE FORMS?

Form OC CE 2D is used only for development-related items, and form OC CE 2P is used only for procurement-related items. The applicant needs to complete and file the form that is applicable to his/her case.

WHO NEEDS TO FILE THE RELATIONSHIP DISCLOSURE FORM?

Form OC CE 2D should be completed and filed by the owner of record, contract purchaser, or authorized agent. Form OC CE 2P should be completed and filed by the bidder, offeror, quoter, or respondent, and, if applicable, their authorized agent. In all cases, the person completing the form must sign the form and warrant that the information provided on the form is true and correct.

WHAT INFORMATION NEEDS TO BE DISCLOSED ON THE RELATIONSHIP DISCLOSURE FORM?

The relationship disclosure form needs to disclose pertinent background information about the applicant and the relationship, if any, between, on the one hand, the applicant and, if applicable, any person involved with the item, and on the other hand, the Mayor or any member of the BCC.

In particular, the applicant needs to disclose whether any of the following relationships exist: (1) the applicant is a business associate of the Mayor or any member of the BCC; (2) any person involved with the approval of the item has a beneficial interest in the outcome of the matter *and* is a business associate of the Mayor or any member of the BCC; (3) the applicant is a relative of the Mayor or any member of the BCC; or (4) the Mayor or any member of the BCC is an employee of the applicant. (See Section 2-454, Orange County Code.)

HOW ARE THE KEY RELEVANT TERMS DEFINED?

Applicant means, for purposes of a development-related project, the owner, and, if applicable, the contract purchaser or owner's authorized agent. *Applicant* means, for purposes of a procurement item, the bidder, offeror, quoter, respondent, and, if applicable, the authorized agent of the bidder, offeror, quoter, or respondent.

Business associate means any person or entity engaged in or carrying on a business enterprise with a public officer, public employee, or candidate as a partner, joint venture, corporate shareholder where the shares of such corporation are not listed on any national or regional stock exchange, or co-owner of property. In addition, the term includes any person or entity engaged in or carrying on a business enterprise, or otherwise engaging in common investment, with a public officer, public employee, or candidate as a partner, member, shareholder, owner, co-owner, joint venture partner, or other investor, whether directly or indirectly, whether through a Business Entity or through interlocking Parent Entities, Subsidiary Entities, or other business or investment scheme, structure, or venture of any nature. (See Section 112.312(4), Florida Statutes, and Section 2-452(b), Orange County Code.)

Attachment G

FAQs

Employee means any person who receives remuneration from an employer for the performance of any work or service while engaged in any employment under any appointment or contract for hire or apprenticeship, express or implied, oral or written, whether lawfully or unlawfully employed, and includes, but is not limited to, aliens and minors. (See Section 440.02(15), Florida Statutes.)

Relative means an individual who is related to a public officer or employee as father, mother, son, daughter, brother, sister, uncle, aunt, first cousin, nephew, niece, husband, wife, father-in-law, mother-in-law, son-in-law, daughter-in-law, brother-in-law, sister-in-law, stepfather, stepmother, stepson, stepdaughter, stepbrother, stepsister, half brother, half sister, grandparent, great grandparent, grandchild, great grandchild, step grandparent, step great grandparent, step grandchild, step great grandchild, person who is engaged to be married to the public officer or employee or who otherwise holds himself or herself out as or is generally known as the person whom the public officer or employee intends to marry or with whom the public officer or employee intends to form a household, or any other natural person having the same legal residence as the public officer or employee. (See Section 112.312(21), Florida Statutes.)

DOES THE RELATIONSHIP DISCLOSURE FORM NEED TO BE UPDATED IF INFORMATION CHANGES?

Yes. It remains a continuing obligation of the applicant to update this form whenever any of the information provided on the initial form changes.

WHERE DO THE RELATIONSHIP DISCLOSURE FORM AND ANY SUBSEQUENT UPDATES NEED TO BE FILED?

For a development-related item, the Relationship Disclosure Form and any update need to be filed with the County Department or County Division where the applicant filed the application. For a procurement item, the Relationship Disclosure Form and any update need to be filed with the Procurement Division.

WHEN DO THE RELATIONSHIP DISCLOSURE FORM AND ANY UPDATES NEED TO BE FILED?

In most cases, the initial form needs to be filed when the applicant files the initial development-related project application or initial procurement-related forms. However, with respect to a procurement item, a response to a bid will not be deemed unresponsive if this form is not included in the initial packet submitted to the Procurement Division.

If changes are made after the initial filing, the final, cumulative Relationship Disclosure Form needs to be filed with the appropriate County Department or County Division processing the application not less than seven (7) days prior to the scheduled BCC agenda date so that it may be incorporated into the BCC agenda packet. When the matter is a discussion agenda item or is the subject of a public hearing, and an update has not been made at least 7 days prior to BCC meeting date or is not included in the BCC agenda packet, the applicant is obligated to verbally present such update to the BCC when the agenda item is heard or the public hearing is held. When the matter is a consent agenda item and an update has not been made at least 7 days prior to the BCC meeting or the update is not included in the BCC agenda packet, the item will be pulled from the consent agenda to be considered at a future meeting.

WHO WILL REVIEW THE INFORMATION DISCLOSED ON THE RELATIONSHIP DISCLOSURE FORM AND ANY UPDATES?

The information disclosed on this form and any updates will be a public record as defined by Chapter 119, Florida Statutes, and may therefore be inspected by any interested person. Also, the information will be made available to the Mayor and the BCC members. This form and any updates will accompany the information for the applicant's project or item.

However, for development-related items, if an applicant discloses the existence of one or more of the relationships described above and the matter would normally receive final consideration by the Concurrency Review Committee or the Development Review Committee, the matter will be directed to the BCC for final consideration and action following committee review.

CONCLUSION:

We hope you find this FAQ useful to your understanding of the Relationship Disclosure Form. Please be informed that if the event of a conflict or inconsistency between this FAQ and the requirements of the applicable ordinance or law governing relationship disclosures, the ordinance or law controls.

Also, please be informed that the County Attorney's Office is not permitted to render legal advice to an applicant or any other outside party. Accordingly, if the applicant or an outside party has any questions after reading this FAQ, he/she is encouraged to contact his/her own legal counsel.

E VERIFICATION CERTIFICATION

IFB NO. Y14-1006-J2

NAME OF CONTRACTOR: _____ (referred to herein as
“Contractor”)

ADDRESS OF CONTRACTOR:

The undersigned does hereby certify that the above named contractor:

1. Is registered and is using the E-Verify system; or
2. Does not have any employees and does not intend to hire any new employees during the period of time that the contractor will be providing services under the contract and consequently is unable to register to use the E-Verify system; or
3. Employs individuals that were hired prior to the commencement of providing labor on the contract and does not intend to hire any new employees during the period of time that the contractor will be providing labor under the contract, and consequently is unable to use the E-Verify system.

The undersigned acknowledges the use of the E-Verify system for newly hired employees is an ongoing obligation for so long as the contractor provides labor under the contract and that the workforce eligibility of all newly hired employees will be properly verified using the E-Verify system.

In accordance with Section 837.06, Florida Statutes, Contractor acknowledges that whoever knowingly makes a false statement in writing with the intent to mislead a public servant in the performance of his or her official duties shall be guilty of a misdemeanor in the second degree, punishable as provided in Section 775.082 or Section 775.083, Florida Statutes.

AUTHORIZED SIGNATURE: _____

NAME: _____

TITLE: _____

DATE: _____

ATTACHMENT H

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BID BOND

BOND NUMBER _____

STATE OF FLORIDA)

SS

COUNTY OF ORANGE)

KNOW ALL MEN BY THESE PRESENTS, that we, _____, as Principal, and _____, as Surety, are held firmly bound unto Orange County, Florida, in the penal sum of: \$ _____ Dollars, **(Ten percent {10%} of base bid if no amount entered) (Total Sum Written in Words)**

lawful money of the United States, for the payment of which sum well and truly to be made, we bound ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal has submitted the attached Bid, dated the _____ day of _____, **20**__, for a Contract entitled: **INSTALLATION, MAINTENANCE AND MONITORING FOR LANDFILL GAS COLLECTION FOR ORANGE COUNTY LANDFILL CELL 9 & 10, IFB Y14-1006-J2.**

NOW THEREFORE, if the Principal shall withdraw said Bid prior to the date of opening the same, or shall within ten (10) days after the prescribed forms are presented to him for signature, enter in a written Contract with Orange County, Florida, in accordance with the Bid as accepted, and give a Performance Bond and a Payment Bond with good and sufficient Surety or sureties as may be required, for the faithful performance and proper fulfillment of such Contract and for prompt payment of all persons furnishing labor or materials in connection therewith, or in the event of the failure to enter into such Contract and give such Bonds within the time specified, if the Principal shall pay the County the difference between the amount specified in said Bid and the amount for which the County may procure the required work and/or supplies, provided the latter amount to be in excess of the former, then the above obligations shall be void and of no effect; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above written parties have executed this instrument under their several seals this the _____ day of _____, **20**__, the name and corporate seal of each corporate party being affixed and these presents duly signed by its undersigned, pursuant to authority of its governing body.

CONTRACTOR-PRINCIPAL:

SURETY:

NAME OF BUSINESS ENTITY

NAME OF SURETY

SIGNATURE

SIGNATURE: SURETY AGENT

(SEAL)

(SEAL)

TYPE NAME AND TITLE

TYPE NAME AND TITLE

BUSINESS ADDRESS

BUSINESS ADDRESS

TELEPHONE

TELEPHONE

NAIC NUMBER: _____

Licensed Florida Insurance Agent? Yes _____ No _____

License Number: _____

STATE OF _____)

COUNTY OF _____) SS

CITY OF _____)

Before me, a Notary Public duly commissioned, qualified and acting personally, appeared:

to me well known, who being by me first duly sworn upon oath says that he is Attorney-in-Fact for

as Surety, and that he has been authorized by said Surety to execute the foregoing Bid Bond on behalf of the Principal (CONTRACTOR) named therein in favor of the owner.

Subscribed and sworn to before me this the _____ day of _____, 20__.

Notary Public

(Print, Type or Stamp Commissioned Name of Notary Public)

Personally Known _____ or Produced Identification _____

Type of Identification: _____

In accordance with Part C, Section 19 and Part F Article 8 of the Invitation for Bids, if applicable, list the Lead Surety.

LEAD SURETY AGENT FOR SURETY _____

Signature _____

BY: _____ AGENCY ADDRESS: _____

SURETY ADDRESS: _____

PHONE _____

**BOARD OF COUNTY COMMISSIONERS
ORANGE COUNTY, FLORIDA
CONSTRUCTION TERM CONTRACT**

CONTRACT:

Made between the Board of County Commissioners, Orange County, Florida (hereinafter called COUNTY), represented by the Manager of the Procurement Division executing this Contract, and:

>

Federal Identification Number: >

The CONTRACTOR shall perform all the Work required by the Contract Documents for the proper execution and completion of **INSTALLATION, MAINTENANCE AND MONITORING FOR LANDFILL GAS COLLECTION FOR ORANGE COUNTY LANDFILL CELL 9 & 10** in full accordance with the drawings and as elaborated in the specifications of **Invitation for Bids No. Y14-1006-J2** (hereinafter referred to as IFB) which is made a part of this Contract as completely as if set forth herein.

I

AMOUNT OF CONTRACT:

The County shall pay the Contractor in current funds, and in accordance with the progress payment schedule as stated herein, for the performance of the work, subject to additions and deductions by Change Order as provided in the Contract Documents, the estimated amount of > Dollars (\$>).

II

ASBESTOS FREE MATERIALS:

All work under this Contract will be constructed with asbestos free materials. A written, notarized statement on company letterhead is to be submitted with the executed Contract certifying this fact. All payments shall be withheld until such statement is submitted.

Contractor shall agree that if materials containing asbestos are subsequently discovered at any future time to have been included in the construction done by the Contractor or any of its Subcontractors or agents and were not specified in the design or required by the Contract document, Contractor shall be liable for all costs related to the abatement of such asbestos and damages or claims against the County.

III

ADMINISTRATIVE DATA:

Payments: Based upon invoices submitted to the Project Manager by the Contractor and Delivery Orders issued by the Project Manager, the County shall make payments against the Contract to the Contractor as provided in the Contract Documents.

Should the Contractor fail to complete all Work on or before the date stipulated for completion on a Delivery Order, or such later date as may result from an extension granted by the County, he shall pay and/or the County may retain from the compensation otherwise to be paid to the Contractor, as liquidated damages, the sum of **\$1,000.** for each consecutive calendar day after the date allowed by the Delivery Order until the entire work is complete, which sum is agreed upon as a reasonable and proper measure of damages which County will sustain per diem by failure of Contractor to complete the Work within time as stipulated; it being recognized by County and Contractor that the injury to County which could result from a failure of Contractor to complete on schedule is uncertain and cannot be computed exactly. In no way shall costs for liquidated damages be construed as a penalty on the Contractor.

IV **CONTRACT DOCUMENTS:**

This Contract entered into this date by the Board of County Commissioners hereinafter called the County, represented by the Manager of the Procurement Division executing this Contract and the individual, partnership or corporation named above, hereinafter called the Contractor. Witnesseth that the parties hereto do mutually agree as follows:

- A. The Contractor shall furnish all labor, equipment and materials and perform the Work described for the amount specified in individual Delivery Order in strict accordance with the General Conditions, Supplementary Conditions/Special Provisions, Plans and Specifications and other Contract Documents, all of which are made a part hereof and designated as follows:
1. Orange County Invitation for Bids/Project Manual, **IFB No. Y14-1006-J2**, dated **March 13, 2014**; (which contains the Invitation for Bids, Notice, Instruction to Bidders, Bid Form and Attachments, this Contract, required Bonds and insurance certificates, General Conditions, Supplementary Conditions/Special Provisions, and Specifications);
 2. Addendum No. >; dated>;
 3. >'s Bid Proposal dated **April 22, 2014**;
 4. Certificates of Insurance;
 5. Payment/Performance Bonds;

B. The order of precedence of items and documents is as follows:

Construction Contract
Permits
Supplemental Conditions/Special Provisions
General Conditions
Specifications/Technical Provisions
Drawings/Plans
Road Design, Structures, and Traffic Operations Standards (If applicable)
Florida Department of Transportation Standard Specifications for Road
and Bridge Construction (If applicable)
Bid Proposal
Instructions to Bidders

C. Contract Type:

This is a Requirements Contract and the County's intent is to order from the Contractor all of the goods or services specified in the contract's price schedule that are required to be purchased by the County. If the County urgently requires delivery of goods or services before the earliest date that delivery may be required under this contract, and if the contractor will not accept an order providing for accelerated delivery, the County may acquire the goods or services from another source.

The County's requirements in this contract are estimated and there is no commitment by the County to order any specified amount. Also, if the estimated quantities are not achieved, this shall not be the basis for an equitable adjustment.

Moreover, if the Manager of the Procurement Division determines that the Contractor's performance is less than satisfactory, the County may order the goods or services from other sources until the deficient performance has been cured or the contract terminated.

ORDER LIMITATIONS

a. Minimum Order - When the County requires goods or services covered by this contract in an amount less than \$2,000, the County is not obligated to purchase, nor is the Contractor obligated to provide these goods or services under the contract.

b. Maximum Order – The Contractor is not obligated to honor any order for goods or services in excess of \$250,000.

- D. Delivery Orders shall not exceed \$250,000 without the express written authority of the Manager, Procurement Division.
- E. This Contract is effective >, 20__ and shall remain effective through >, 20__.
- F. This Contract may be unilaterally renewed as provided in the Contract Documents, Part F, Article 26, "Option to Extend the Term of the Contract". Any amendments to this Contract must be in writing.
- G. This Contract may be cancelled or terminated as provided for in the Invitation for Bids.
- H. Ordering against the Contract:
 - 1. Unless otherwise specified in the Contract, the County will place orders by issuance of a numbered Delivery Order against this Contract. Each Delivery Order will specify the locations, description and completion time of the work.
 - 2. The obligations of Orange County under this Contract are subject to need and availability of funds lawfully appropriated for its purpose by the Board of County Commissioners, or other specified funding source for this contract.

I. Taxes:

The County has the following tax exemption certificates assigned:

- 1. Certificate of Registry No. 59-70-004K for tax free transactions under Chapter 32, Internal Revenue Code;
- 2. Florida Sales and Use Tax Exemption Certificate No. 58-12-090729-53C.

J. Invoicing:

- 1. Invoices must be submitted, in duplicate, referencing this Contract number and the Delivery Order number to:

Utilities Department/ Solid Waste Division
Orange County Landfill Facility,
5901 Young Pine Road, Orlando, FL 32829

- 2. Invoices against this Contract are authorized only at the prices stated in your Bid response, unless otherwise provided in the Invitation for Bid.

V

TIME OF COMMENCEMENT AND FINAL COMPLETION:

Work to be completed within period specified on individual Delivery Orders, unless amended by written Change Order executed by both parties to this Contract.

VI
COMPLIANCE WITH M/WBE CONTRACT REQUIREMENTS:

By entering into this Contract, the Contractor affirmatively commits to comply with the M/WBE subcontracting requirements submitted with his/her bid. The failure of the Contractor to comply with this commitment during the Contract's performance period may be considered a breach of Contract.

The County may take action up to and including termination for default if this condition is not remedied within the time period specified by the Manager, Procurement Division.

VII
MISCELLANEOUS PROVISIONS:

- A. Terms used in this Contract which are defined in the General Conditions shall have the meanings designated in those conditions.
- B. No price adjustments shall be made on this contract to the bid price of any products or materials including but not limited to gasoline, diesel or other fuels, and bituminous materials, including asphalt, due to fluctuations in market prices, changes in suppliers or any other reason.
- C. County and Contractor each binds himself, his partners, successors, assigns and legal representatives to the other party hereto, his partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.
- D. This Contract shall be governed by the laws of the State of Florida. Any and all legal action necessary to enforce the provisions of this Contract will be held in Orange County, Florida. Venue for any litigation involving this Contract shall be the Ninth Circuit Court in and for Orange County, Florida.

BOARD OF COUNTY COMMISSIONERS >
ORANGE COUNTY, FLORIDA

BY: _____
Johnny Richardson, CPPO, CFCM
Manager, Procurement Division

BY: _____
Signature

Type or Print Name

DATE: _____
(for County use only)

P E R F O R M A N C E B O N D

BOND NUMBER _____

KNOW ALL MEN BY THESE PRESENTS that

Name of Contractor _____

Address _____

Phone Number _____

Corporation, Partnership or Individual _____

hereinafter referred to as the Contractor, as Principal, and

Name of Surety _____

Address _____

Phone Number _____

hereinafter called SURETY, as SURETY, are held and firmly bound unto Orange County, 400 East South Street, Orlando, FL 32801, (407)836-5635 a Political Subdivision of the State of Florida as Obligee, hereinafter referred to as Owner, in the full and just sum of \$_____, lawful money of the United States of America, to the payment of which sum, well and truly to be made, the Contractor and SURETY bind themselves, their representatives, and each of their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Contractor has entered into **Contract No. Y14-1006** with the "County", also referred to herein as the OWNER, for the project entitled: **INSTALLATION, MAINTENANCE AND MONITORING FOR LANDFILL GAS COLLECTION FOR ORANGE COUNTY LANDFILL CELL 9 & 10**, and all work shall be requested on an as-needed basis for the Orange County Landfill Facility, 5901 Young Pine Road, Orlando, FL 32829 with conditions and provisions as are further described in the aforementioned Contract, which Contract is by reference made a part hereof for the purpose of explaining this bond.

General description of the Work: Work includes all labor, materials, equipment, supervision, quality control, tools, transportation, supplies, and manpower to perform work including, but not limited to, installation of horizontal and vertical collection wells, installation of stormwater piping, installation of recirculation piping, placement of sod, and operation, monitoring and maintenance of the Orange County landfill Cells 9 and 10 landfill gas collection and control system.

NOW, THEREFORE, the condition of this obligation is such that if Contractor shall fully, promptly and faithfully perform said Contract and all obligations thereunder, including all obligations imposed by the Contract documents (which includes the Notice to Bidders, Instruction to Bidders, Proposal and Bid Form, General and Supplementary Conditions, Detail Specifications, Form(s) of Contract Bond(s), Plans and Specifications and such amendments thereof as may be made as provided for therein), then this obligation shall be void; otherwise it shall remain in full force and effect.

1. The undersigned shall indemnify and save harmless said Owner against and from all costs, expenses and damages, including litigation costs and attorney's fees arising out of, or in connection with the neglect, default or want of care or skill, including patent infringement on the part of said Contractor, his agents, servants or employees in the execution or performance of said Contract.

The applicable provisions of Section 255.05 and 713.01 Florida Statutes apply to this bond.

2. Whenever Contractor shall be, and declared by Owner to be in default under the Contract, the Owner having performed Owner's obligations thereunder, the SURETY may promptly remedy the default or shall promptly:
 - A. Complete the Contract in accordance with its terms and conditions; or
 - B. Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by SURETY of the lowest responsible bidder, or, if the Owner elects, upon determination by the Owner and the SURETY jointly of the lowest responsible bidder, arrange for a Contract between such bidder and the Owner. SURETY shall make available as the work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this Paragraph) sufficient funds to pay the costs of completion, including other costs and damages for which the SURETY may be liable hereunder, the amount set forth in the first paragraph hereof.
3. Any changes in or under the Contract Documents and compliance or noncompliance with any formalities connected with the Contract or the changes shall not affect SURETY'S obligation under this bond. Any increase in the total Contract amount as authorized by the Owner shall accordingly increase the SURETY'S obligation by the same dollar amount of said increase. The Principal shall be responsible for notification to SURETY of all such changes.
4. The undersigned expressly acknowledges its obligations and liabilities for liquidated damages suffered by the Owner under the provisions of the Contract Documents.
5. The undersigned, covenant and agree that no change, extension of time, exercise of options for Contract renewals, changes to Contract amounts, alterations or additions to the terms of the Contract or the work to be performed thereunder, or the specifications accompanying the same shall in any way affect their obligation on this bond, and the SURETY does hereby expressly waive notice of any such change, extension of time, change to Contract amount, alteration, or addition. Moreover, no alterations or additions to this bond form shall be binding unless specifically agreed to in writing by the parties.
6. The Contractor shall save the Owner harmless from any and all damages, expenses and costs which may arise by virtue of any defects in said work or materials within a period of one (1) year from the date of Final Completion of the Project.

Signed and sealed this the _____ day of _____, 20__.

CONTRACTOR, AS PRINCIPAL

WITNESS:

_____ _____ _____	_____ Firm Name BY: _____ Signature _____ Type Name and Title
---------------------------------	------------------------------------------------------------------------------

SURETY

_____ NAIC Number: _____ BY: _____ SURETY ADDRESS: _____ _____	_____ AGENT FOR SURETY _____ Signature AGENCY ADDRESS: _____ _____ PHONE _____
--------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------

Licensed Florida Insurance Agent? Yes _____ No _____

License Number: _____

STATE OF _____)

COUNTY OF _____) SS

CITY OF _____)

Before me, a Notary Public duly commissioned, qualified and acting personally, appeared:

_____ to me well known, who being by me first duly sworn upon oath says that he is Attorney-in-Fact for

_____ as Surety, and that he has been authorized by said Surety to execute the foregoing Performance Bond on behalf of the Principal (Contractor) named therein in favor of the owner.

Subscribed and sworn to before me this the _____ day of _____, 20_____.

Notary Public

(Print, Type or Stamp Commissioned Name of Notary Public)

Personally Known _____ or Produced Identification _____

Type of Identification: _____

In accordance with Part C, Section 19 and Part F Article 8 of the Contract, if applicable, list the Lead Surety.

LEAD SURETY AGENT FOR SURETY

Signature

BY: _____ AGENCY ADDRESS: _____

SURETY ADDRESS: _____

PHONE _____

P A Y M E N T B O N D

BOND NUMBER _____

KNOW ALL MEN BY THESE PRESENTS that

Name of Contractor _____

Address _____

Phone Number _____

Corporation, Partnership or Individual _____

Thereinafter called Contractor, as Principal, and

Name and Address of Surety _____

hereinafter called SURETY, as SURETY, are held and firmly bound unto Orange County, 400 East South Street, Orlando, FL 32801, (407) 836-5635 a Political Subdivision of the State of Florida as Obligee, in the full and just sum of \$_____, lawful money of the United States of America, to the payment of which sum, well and truly to be made, the Contractor and SURETY bind themselves, their representatives, and each of their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Contractor has entered into **Contract No. Y14-1006** with the "County", also referred to herein as the OWNER, for the project entitled: **INSTALLATION, MAINTENANCE AND MONITORING FOR LANDFILL GAS COLLECTION FOR ORANGE COUNTY LANDFILL CELL 9 & 10**, and all work shall be requested on an as-needed basis for the Orange County Landfill Facility, 5901 Young Pine Road, Orlando, FL 32829 with conditions and provisions as are further described in the aforementioned Contract, which Contract is by reference made a part hereof for the purpose of explaining this bond.

General description of the Work: Work includes all labor, materials, equipment, supervision, quality control, tools, transportation, supplies, and manpower to perform work including, but not limited to, installation of horizontal and vertical collection wells, installation of stormwater piping, installation of recirculation piping, placement of sod, and operation, monitoring and maintenance of the Orange County landfill Cells 9 and 10 landfill gas collection and control system.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS such that if Contractor shall promptly make payments to all claimants for any and all labor and material used or reasonably required for use or furnished in connection with the performance of said Contract, and shall perform all other covenants and obligations of this bond, then this obligation shall be void; otherwise it shall remain in full force and effect.

1. The undersigned shall promptly make payment to all persons supplying services, labor, material or supplies used directly or indirectly by said Contractor, or any subcontractor(s) or sub-subcontractor(s), in the prosecution of the work provided for in said Contract.
2. Subject to the Owner's priority, claimants covered by Section 713.01 of the Florida Statutes shall have a direct right of action against the Principal and SURETY under this obligation, after written notice of the performance of labor or delivery of materials or supplies, and non-payment therefore. Any claimant who seeks to recover against the Principal or SURETY under this obligation must also satisfy the notice requirement and time limitations of Section 255.05 of the Florida Statutes, as amended.
3. The undersigned, covenant and agree that no change, extension of time, exercise of options for Contract renewals, change to Contract amounts, alterations or additions to terms of the Contract or the work to be performed thereunder, or the specifications accompanying the same shall in any way affect their obligation on this bond and the SURETY does hereby expressly waive notice of any such change, extension of time, exercise of options for Contract renewal, changes to Contract amount, alternations or additions. Moreover, no alterations or additions to this bond form shall be binding unless specifically agreed to in writing by the parties.

The applicable provisions of Sections 255.05 and Florida Statutes apply to this bond.

4. Any changes in or under the Contract Documents and compliance or noncompliance with any formalities connected with the Contract or the changes shall not affect SURETY'S obligation under this bond. Any increase in the total Contract amount as authorized by the Owner shall accordingly increase the SURETY'S obligation by the same dollar amount of said increase. The Principal shall be responsible for notification to SURETY of all such changes.

Signed and sealed this the _____ day of _____, 20__.

CONTRACTOR, AS PRINCIPAL:

WITNESS:

Firm Name

Signature

By: _____
Signature

Type Name and Title

SURETY:

AGENT FOR SURETY:

NAIC Number: _____

BY: _____
Signature

BY: _____

AGENCY ADDRESS: _____

SURETY ADDRESS _____

PHONE NO. _____

Licensed Florida Insurance Agent? Yes _____ No _____

License Number: _____

STATE OF _____)

COUNTY OF _____) SS

CITY OF _____)

Before me, a Notary Public duly commissioned, qualified and acting personally, appeared:

_____ to me well known, who being by me first duly sworn upon oath says that he is Attorney-in-Fact for

_____ as Surety, and that he has been authorized by said Surety to execute the foregoing Payment Bond on behalf of the Principal (Contractor) named therein favor of the owner.

Subscribed and sworn to before me this the _____ day of _____, 20__.

Notary Public

(Print, Type or Stamp Commissioned Name of Notary Public)

Personally Known _____ or Produced Identification (Type) _____

In accordance with Part C, Section 19 and Part F Article 8 of the Contract, if applicable, list the Lead Surety.

_____	_____
LEAD SURETY AGENT FOR SURETY	
_____	_____
Signature	
BY:_____	AGENCY ADDRESS:_____
SURETY ADDRESS:_____	_____
_____	PHONE_____

(THIS FORM MUST BE UTILIZED IN ALL FINAL PAY APPLICATIONS)

FINAL RELEASE OF LIEN

KNOW ALL MEN BY THESE PRESENTS, that for and in consideration of the sum of monies, set out in the accompanying Estimate Statement No. _____, final, which quantity, the receipt of which is hereby acknowledged, is accepted as full and complete compensation for all work done, materials furnished and damages or claims arising under Orange County Contract No. Y14-1006-J2, entitled: **INSTALLATION, MAINTENANCE AND MONITORING FOR LANDFILL GAS COLLECTION FOR ORANGE COUNTY LANDFILL CELL 9 & 10**

By:

Contractor

(SEAL)

STATE OF _____

COUNTY OF _____

**CHANGE ORDER REQUEST
PURCHASE ORDER / DELIVERY ORDER / CONTRACT**

*Vendor Code: _____ *Vendor Name: _____ . *Date: _____
 *Change Order Request No.: _____ *Document No.: _____ Contract No. _____
 *Department: _____ *Contact/Phone No.: _____

ACCOUNTING LINE CHANGE ONLY:

Accounting Line From: _____ Amount: _____
 Accounting Line To: _____ Amount: _____

COMMODITY LINE NUMBER ADD:

Comm. Line No.: _____ Commodity Code: _____ Quantity: _____ Unit of Measure: _____
 Unit Cost: _____ Description: _____ MA Line No. _____
 Accounting Line: _____ Amount: _____

COMMODITY LINE NUMBER INCREASE / DECREASE / DELETE:

Comm. Line No. _____ Increase Qty By: _____ Decrease Qty By: _____ Increase Unit Cost By: _____
 Decrease Unit Cost By: _____ Accounting Line: _____
 Delete: _____ (check only if you want to delete this line number).

CANCELLATION:

_____ Please cancel Purchase Order / Delivery Order Original sent to vendor: _____ Yes _____ No

***JUSTIFICATION (Required for all transactions):** _____

Enter Retainage for line number(s) _____ in the amount of _____ %

*Original PO/DO/Contract Award/Encumbrance <u>circle one</u>	Contract Amount	Encumbered/De-Encumbered Amount
	\$ _____.	\$ _____.
*Net Dollars for Previous Change Orders (Addition/Subtraction) <u>circle one</u>	\$ _____.	\$ _____.
*Net Dollars for This Change Order (Addition/Subtraction) <u>circle one</u>	\$ _____.	\$ _____.
*Total Dollars	\$ _____.	\$ _____.

By signing this agreement, the Contractor hereby releases the County, its agents, and employees from any and all liabilities under this contract for further equitable adjustments and/or claims associated with this change order.

*Vendor/Contractor Authorization: _____ Date: _____
 *Departmental Approval: _____ Date: _____
 *Purchasing & Contracts Approval: _____ Date: _____

For Purchasing Use Only Track Change Order: __ Yes __ No Change Award Amount to: \$ _____
 Add the following text to the PO/DO: _____

CHANGE ORDER REQUEST CONTINUATION SHEET Document No.: _____

PURCHASE ORDER / DELIVERY ORDER / CONTRACT

ACCOUNTING LINE CHANGE ONLY:

Accounting Line From: _____ Amount: _____

Accounting Line To: _____ Amount: _____

Accounting Line Add: _____ Amount: _____

Accounting Line From: _____ Amount: _____

Accounting Line To: _____ Amount: _____

Accounting Line Add: _____ Amount: _____

COMMODITY LINE NUMBER ADD:

Comm. Line No.: _____ Commodity Code: _____ Quantity: _____ Unit of Measure: _____

Unit Cost: _____ Description: _____ MA Line No. _____

Accounting Line: _____ Amount: _____

Comm. Line No.: _____ Commodity Code: _____ Quantity: _____ Unit of Measure: _____

Unit Cost: _____ Description: _____ MA Line No. _____

Accounting Line: _____ Amount: _____

Comm. Line No.: _____ Commodity Code: _____ Quantity: _____ Unit of Measure: _____

Unit Cost: _____ Description: _____ MA Line No. _____

Accounting Line: _____ Amount: _____

COMMODITY LINE NUMBER INCREASE / DECREASE / DELETE:

Comm. Line No. ____ Increase Qty By: ____ Decrease Qty By: ____ Increase Unit Cost By: ____

Decrease Unit Cost By: ____ Accounting Line: _____

Delete: ____ (check only if you want to delete this line number).

Comm. Line No. ____ Increase Qty By: ____ Decrease Qty By: ____ Increase Unit Cost By: ____

Decrease Unit Cost By: ____ Accounting Line: _____

Delete: ____ (check only if you want to delete this line number).

Comm. Line No. ____ Increase Qty By: ____ Decrease Qty By: ____ Increase Unit Cost By: ____

Decrease Unit Cost By: ____ Accounting Line: _____

*Departmental Approval: _____	Date: _____
Purchasing & Contracts Approval: _____	Date: _____

DRUG-FREE WORKPLACE FORM

The undersigned vendor, in accordance with Florida Statute 287.087 hereby certifies that _____ does:

Name of Business

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
2. Informs employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, employee assistance programs and the penalties that may be imposed upon employees for drug abuse violations.
3. Gives each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in Paragraph 1.
4. In the statement specified in Paragraph 1, notifies the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days such conviction.
5. Imposes a sanction on, or requires the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.
6. Makes a good faith effort to continue to maintain a drug-free workplace through implementation of Paragraphs 1 thru 5.

As the person authorized to sign this statement, I certify that this firm complies fully with above requirements.

Bidder's Signature

Date

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**PART F
GENERAL CONDITIONS**

ARTICLE 1 - THE CONTRACT

The Contract Documents are identified in the Contract, Part E. Titles, Subtitles, Headings, Running Headlines, Table of Contents, and Indexes are printed in the Contract Documents merely for convenience.

ARTICLE 2 - DEFINITIONS

The words and expressions (or pronouns used in their stead) defined in this Article shall, wherever they appear in the Contract Documents, be construed as follows unless a different meaning is clear from the context.

"Addenda" shall mean any additional solicitation provisions issued in writing by the County prior to the date and time for bid openings.

"Bid Proposal" shall mean the offer of proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

"Bidder" shall mean any person, firm or corporation submitting a Bid for the Work.

"Board of County Commissioners" shall mean the Board of County Commissioners, Orange County, Florida, or their duly authorized representative(s).

"Change Order" shall mean a written order to the Contractor, signed by the County, authorizing an addition, deletion or revision in the Work, or an adjustment in the Contract and/or Delivery Order, or the Contract Performance Period or Completion Time issued after execution of the Contract or issuance of a Delivery Order.

"Completion Time" shall mean the number of days specified on a Delivery Order for completion of the Work on that delivery order.

"Contract" shall mean the written agreement between the County and the Contractor covering the Work to be performed; the Contract will be attached to and made a part of the Contract Documents.

"Contractor" shall mean successful Bidder (and vice versa), whether a corporation, firm, individual or any combination thereof, and its (or their) successors, personal representatives, executors, administrators and assigns.

"Contract Amount" shall mean the total estimated award amount. The term "Contract Price" where used in the Contract Documents refers to the Contract Amount.

"Contract Float" shall mean the number of days that an activity or a sequence of activities does not necessarily have to start or end on the scheduled dates to maintain the schedule, or as a minimum, the number of days that an activity may be delayed from its early start date without delaying completion of the Work beyond the Contract Time for Substantial Completion or Final Acceptance.

"Contract Performance Period" shall mean the overall performance period of this Contract.

"County" shall mean the Board of County Commissioners, Orange County, Florida, or their duly authorized representative(s), for whom the Contract Work is being performed.

"Day" shall mean one calendar day when used in the Contract Documents.

"Defective Work" shall mean (a) Work that is unsatisfactory, deficient or damaged, does not conform to the Contract Documents, or does not meet the requirements of any inspection, test or approval, or (b) Work associated with punch list items that the Contractor fails to complete within a reasonable time after issuance of the punch list by the Project Manager.

"Delivery Order" shall mean any order issued against the basic Contract for construction work in accordance with its terms and conditions.

"Drawings" shall mean any drawings issued in conjunction with a Delivery Order to illustrate or further define the work.

"Final Acceptance" shall mean acceptance of the Work specified on an individual Delivery Order by the County upon the expiration of the warranty period as stated in the Contract Documents.

"Final Completion" shall mean acceptance of the Work by the County as evidenced by its signature upon final Certificate of Completion and approval thereof by the Board of County Commissioners. The final Certificate of Completion shall be signed only after the County has assured itself by tests, inspection or otherwise that all of the provisions and requirements of the Contract have been carried out to its satisfaction.

"Notice" shall mean written Notice. Notice shall be served upon the Contractor either personally or by leaving the said Notice at his residence, or place of business, or with his Agent in charge of the Work, or addressed to the Contractor at the residence or place of business given in the Bid and deposited in a postpaid wrapper in any post box regularly maintained by the United States Post Office.

"Notice of Award" shall mean the written notice of award of the Contract given by the County to the apparent successful Bidder.

"Project Manager" shall be the duly authorized representative of the County during the construction period and is named in Article 10.

"Shop Drawings" shall mean all drawings, diagrams, illustrations, brochures, schedules, and other data which are prepared by the Contractor, a Subcontractor, a manufacturer, supplier or distributor and which illustrate the equipment, material and/or some portion of the work.

"Site" shall mean the area upon or in which the Contractor's operations are carried on and such other areas adjacent thereto as may be designated as such by the Project Manager.

"Specifications" shall mean parts of the Contract Documents identified as "Specifications" and organized into Divisions. The specifications include general requirements and technical descriptions of materials, equipment, construction systems, standards and workmanship. The term "Technical Provisions" where used in the Contract Documents refers to the Specifications.

"Subcontractor" shall mean any person, firm or corporation other than employees of the Contractor who or which contracts with the Contractor to furnish, or actually furnishes labor, materials and/or equipment for the work.

"Substantial Completion" shall mean the completion of the Work by the Contractor to the point where the County may make beneficial use of the Work.

"Surety" shall mean any corporation that executes, as Surety, the Contractor's Bid Bond and/or Payment and Performance Bonds securing the performance of this Contract, if required.

"Work" shall mean any and all obligations, duties and responsibilities necessary to the successful completion of the construction assigned to or undertaken by the Contractor under the Contract documents, including the furnishing of all labor materials, equipment, and other incidentals.

ARTICLE 3 - ASSIGNMENT OF CONTRACT

The contractor may not make any assignment of the contractual agreement between the parties, in whole or in part, without prior written authorization as may be given by the County, at its sole discretion.

No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without written consent of the party sought to be bound; and specifically but without limitation, monies that may become due and monies that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

ARTICLE 4 - QUOTATIONS, DELIVERY ORDER AMOUNT, PERFORMANCE PERIOD, PRE-CONSTRUCTION CONFERENCE

The County shall issue a written Request for Quotation to the Contractor based upon a specific requirement for work that is within the scope of this Contract. The Contractor shall within seven (7) calendar days visit the site, if needed, and submit a written quotation to the County, based solely upon the unit prices contained in the Bid Item Schedule, Part D. The Contractor shall also provide with the quotation a proposed completion time (in number of days) for the project.

The Project Manager shall review the quotation, negotiate quantities and/or completion time as needed, and, upon acceptance of the quotation, issue a Delivery Order to the Contractor.

The Delivery Order shall specify the number of days to completion for the work covered by the Delivery Order.

Pre-construction (Pre-work) Conference: Within 20 days after the effective date of the Contract, but before Contractor starts the Work at any site, a conference attended by Contractor, Project Manager, other personnel as required and others as appropriate will be held to discuss such topics as may include, but not limited to; schedules, procedures for handling Shop Drawings and other submittals, processing of invoices, maintenance of traffic, initiation of coordination with affected utilities, and to establish a working understanding among the parties as to the Work.

ARTICLE 5 - INTERPRETATION AND INTENT OF THE CONTRACT DOCUMENTS

It is the intent of the Specifications and Drawings (if applicable) to describe a the work to be constructed in accordance with the Contract Documents. However, the County makes no representation or warranty of any nature whatsoever to the Contractor concerning such documents. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. If the Contractor finds a conflict, error or discrepancy in the Contract Documents, he should call it to the Project Manager's attention in writing before proceeding with the work affected thereby. Any work that may reasonably be inferred from the applicable Specifications or Drawings as being required to produce the intended result shall be supplied whether or not it is specifically called for. Work, materials or equipment described in words which so applied have a well-known technical or trade meaning shall be deemed to refer to such recognized standards. In case of conflict the more stringent requirements shall take precedence and govern.

ARTICLE 6 - REFERENCE POINTS (If Applicable)

Availability of Lands: The County will furnish, as indicated in the Contract Documents and not later than the date when needed by the Contractor, the lands upon which the Work is to be done, rights-of-way for access thereto and such other lands which are designated for the use of the Contractor. Easements for permanent structures or permanent changes in existing facilities will be obtained by the County unless otherwise specified in the Contract Documents. If the Contractor believes that any delay in the County's furnishing these lands or easements entitles him to an extension of the Contract time, he may make a claim therefore as provided in Article 13. The Contractor will provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment. The Project Manager will upon request furnish to the Contractor copies of all available boundary surveys and subsurface tests.

Unforeseen subsurface conditions: The Contractor will promptly notify the Project Manager in writing of any subsurface or latent physical conditions at any site which may differ materially from those indicated in the Contract documents. The Project Manager will promptly investigate those conditions and advise the Contractor in writing if further surveys or subsurface tests are necessary. promptly thereafter, if needed, the Project Manager will obtain the necessary additional surveys and tests and furnish copies to the Contractor. If the Project Manager finds that the results of such surveys or tests indicate subsurface or latent physical conditions differing significantly from those indicated in the Contract documents, a change order shall be issued incorporating the necessary revisions.

Reference points: The Contractor shall be responsible for all field survey work that is needed for the execution of the work and the completion of this project as specified herein. All survey Work shall be done under the supervision of a Registered Professional Surveyor and Mapper.

The County shall furnish, one time, a set of permanent reference markers to form the basis for the above Contractor's survey.

All **section corners** and **quarter section** corners falling within the limits of this project shall be perpetuated by a Florida Registered Surveyor and Mapper.

- a. All such corners falling within or on the boundaries of this project shall have reference ties made, certified to and submitted to the County surveyor, Orange County, Florida, prior to the commencing of construction.
- b. Upon completion of construction and prior to final acceptance by the County, certified corner records shall be submitted to the department of natural resources in compliance with Florida Statutes, Chapter 177.507 and a copy of said certified corner record shall also be submitted to the Orange County surveyor. Said corner records shall reflect the corner as perpetuated and which shall meet these minimum standards:
 1. If the corner falls in asphalt or concrete construction, the corner shall be a 2 1/4" metal disc marked according to standard government practices and set in concrete no less than 18" in depth and shall be encased in an adjustable 5 1/4" diameter or larger valve box raised to the finished surface of construction.
 2. If the corner falls at any other location, it shall be a 4" x 4" concrete monument no less than 23" long with a 2 1/4" metal disc marked according to standard government practices. The top of said monument shall be set flush with the ground ($\pm 0.5'$ depending on conditions).

Any U.S.C. and G.S. monument within limits of construction are to be protected. If monuments are in danger of damage, the Contractor shall contact the Project Manager and the Orange County Surveyor prior to the commencing of construction.

Payment for all necessary survey work shall be included in the Bid as part of the Contractor's base Bid.

ARTICLE 7 - BONDS AND INSURANCE AND INDEMNIFICATION

Payment and Performance Bonds: The CONTRACTOR shall execute and deliver to the County the Payment and Performance Bonds (see Part C, 2-h) included herein as security for the faithful performance and completion of the Work and payment for all materials and labor furnished or supplied in connection with all Work included in the Contract Documents. These Bonds shall be in amounts at least equal to the Contract Amount, shall name the County as obligee and shall be in such form and by sureties of financial standing having a rating from A.M. Best Company (or other equivalent rating company) equal to or better than A- Class VI and must be included on the approved list of sureties issued by the United States Department of Treasury.

Surety Companies shall meet the requirements outlined in Part C, Section 19.

Should the Payment and Performance Bonds be issued by co-sureties, each surety listed on the bond shall meet the requirements above. In addition, each surety shall submit a power of attorney and all signatures of the co-sureties representatives shall be notarized and the "lead" surety shall be identified for the purposes of underwriting and claims management.

Prior to execution of the Contract Documents the County may require the Contractor to furnish such other Bonds, in such form and with such sureties as it may require. If such Bonds are required by written instructions given prior to opening of Bids, the premium shall be paid by the Contractor. If the Contract Amount is increased by Change Order, it shall be the Contractor's responsibility to insure that the Payment and Performance Bonds be amended accordingly and a copy of the amendment is forwarded to the County.

If the Surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any State where any part of the Work is located or it ceases to meet the requirements imposed by the Contract Documents, the Contractor shall within five (5) days thereafter substitute another Bond with another Surety both of which shall be acceptable to the County.

INSURANCE REQUIREMENTS:

Contractor agrees to maintain on a primary basis and at its sole expense, at all times throughout the duration of this Contract the following types of insurance coverage with limits and on forms (including endorsements) as described herein. These requirements, as well as the County's review or acceptance of insurance maintained by Contractor is not intended to and shall not in any manner limit or qualify the liabilities or obligations assumed by Contractor under this Contract. Insurance carriers providing coverage shall be authorized and/or eligible to do business in the State of Florida and shall possess a current **A.M. Best's Financial Strength Rating of A- Class VIII.**

The Contractor shall require and ensure that each of its subcontractors maintain insurance until the completion of their work under any contract associated with this Contract. Failure of the Contractor to maintain insurance coverage for itself or for any other persons or entities for whom it is responsible or to ensure that its subcontractors maintain coverage shall not relieve the Contractor of any contractual responsibility, obligation or liability.

If the CONTRACTOR intends to bid on this Contract as a Joint Venture then all insurance coverage required herein shall include the Joint Venture as "named insured". If the Joint Venture has no employees then this requirement is waived for workers' compensation. The Joint Venture shall also purchase discontinued completed operations coverage for any claims made after the dissolution of the Joint Venture. This coverage shall be for a period of two years following final completion of the project or continuing service contract.

The minimum types and amounts of insurance inclusive of any amount provided by an umbrella or excess policy, shall be as follows:

Workers' Compensation – The Contractor shall maintain coverage for its employees with statutory workers' compensation limits, and no less than the limits indicated in the

Schedule of Limits (see below) for Employers' Liability. Said coverage shall include a waiver of subrogation in favor of the County (Exhibit G). **The County will not accept elective exemptions. Any contractor using an employee leasing company shall complete the Leased Employee Affidavit (Exhibit A).**

Commercial General Liability – The Contractor shall maintain coverage **issued on an ISO form CG 00 01 or its equivalent**, with a limit of liability of not less than the limits indicated in the Schedule of Limits (see below). **Contractor further agrees coverage shall not contain any endorsement(s) excluding or limiting Product/Completed Operations, Independent Contractors, Broad Form Property Damage, X-C-U Coverage, Contractual Liability, or Separation of Insureds.** The General Aggregate limit shall either apply separately to this Contract or shall be at least twice the required occurrence limit.

All projects with a Contract Amount greater than \$20,000,000 shall be written on a Designated Premises or Projects basis (Exhibit B). Commercial umbrella and excess coverage shall include liability coverage for damage to the Contractor's completed work equivalent to that provided under ISO Form CG 00 01 12 04.

Business Automobile Liability - The Contractor shall maintain coverage for all owned; non-owned and hired vehicles **issued on ISO form CA 00 01 or its equivalent**, with limits of not less than the limits indicated in the Schedule of Limits (see below). **In the event the Contractor does not own automobiles the Contractor shall maintain coverage for hired and non-owned auto liability, which may be satisfied by way of endorsement to the Commercial General Liability policy or separate Business Auto Liability policy.**

Schedule of Limits:

Contract Amount	Workers' Comp/ Employers' Liability	General Liability	Automobile Liability
Up to \$10 million	Statutory/\$500,000	\$1,000,000	\$1,000,000
\$10 - \$20 million	Statutory/\$1,000,000	\$5,000,000	\$5,000,000
Over \$20 million	To Be Determined by the County		

Pollution Legal Liability - **The Contractor agrees to maintain Contractor's Pollution Legal Liability with a limit of not less than one million (\$1,000,000) per occurrence on a per-project basis.**

Builders' Risk - If this Contract includes: (1) construction of a new above-ground structure or structures, (2) any addition, improvement, alteration, or repair to an existing structure or structures, or (3) the installation of machinery or equipment into an existing structure or structures, the Contractor shall maintain builders' risk insurance providing coverage to equally protect the interests of the County, the Professional, the Contractor and subcontractors of any tier. **Coverage shall be written on a completed value form (Exhibit C) in an amount at least equal to 100% of the estimated completed value of the project plus any subsequent modifications of that sum. The coverage shall be written on an "all-risk" basis and shall, at a minimum cover the**

perils insured under the ISO CP 10 30 Special Causes of Loss Form (Exhibit D) and shall include property in transit and property stored on or off premises, which shall become part of the project. The Contractor agrees not to maintain a wind or flood sub-limit less than 25% of the estimated completed value of the project. The Contractor agrees any flat deductible(s) shall not exceed \$25,000, and any wind percentage deductible (when applicable) shall not exceed five-percent (5%). The coverage shall not be subject to automatic termination of coverage in the event the project/building is occupied in whole or in part, or put to its intended use, or partially accepted by the County. If such restriction exists the Contractor shall request that the carrier endorse the policy to amend the automatic termination clause to only terminate coverage if the policy expires, is cancelled, the County's interest in the project ceases, or the project is accepted and insured by the County.

Professional Liability- If the construction method is "design-build" the Contractor agrees to maintain Professional Liability on a per-project basis. The Contractor agrees to provide coverage with limits and deductibles as prescribed below.

<u>Project Cost</u>	<u>Minimum Limit</u>	<u>Maximum Deductible</u>
\$0-1,000,000	50% of project cost subject to a minimum of \$100,000/occurrence	10% of project cost or \$25,000, whichever is smaller
\$1,000,000-5,000,000	\$1,000,000	\$100,000
over \$5,000,000	Determined by the County	

When a self-insured retention or deductible exceeds \$100,000 the County reserves the right to request a copy of the Contractor's most recent annual report or audited financial statement. For policies written on a "Claims-Made" basis the Contractor agrees to maintain a retroactive date prior to or equal to the effective date of this contract. In the event the policy is canceled, non-renewed, switched to occurrence form, or any other event which triggers the right to purchase a Supplemental Extended Reporting Period (SERP) during the life of this contract the Contractor agrees to purchase the SERP with a minimum reporting period of not less than two years. Purchase of the SERP shall not relieve the Contractor of the obligation to provide replacement coverage.

The Contractor shall be responsible for all risk of loss whether insured or not until final acceptance of the project by the County. The Contractor agrees to be fully and solely responsible for any costs or expenses resulting from a coverage deductible, co-insurance penalty, or self-insured retention; including any loss not covered because of the application of said deductible, co-insurance penalty, self-insured retention, or coverage exclusion or limitation. The County has the right to request that the Contractor procure and maintain a surety bond for any deductible amounts that exceed any amount stated herein in such amount and on such form that are acceptable to the County.

The County reserves the right, but not the responsibility to periodically review any and all policies of insurance and to reasonably adjust the limits and/or types of coverage required herein, from time to time throughout the term of this Contract. In such event, the County shall provide the Contractor written notice of such adjustments and the

Contractor shall comply within thirty (30) days of receipt thereof. Any request for an exception to these insurance requirements must be submitted in writing to the County for approval.

The Contractor agrees to specifically include the County as an Additional Insured on the Commercial General Liability policy with a CG 20 10 – Additional Insured - Owners, Lessees, Contractors (Exhibit E) or CG 20 26 – Additional Insured- Designated Persons or Organization endorsement, or their equivalent (Exhibit F). The Contractor shall also specifically include the County as an Additional Insured on any Commercial Umbrella or Excess policies unless the County is automatically defined under the policy as an Additional Protected Person.

Additionally, the Contractor agrees to specifically include the County as an Additional Insured under the Contractor's Pollution Liability coverage (when applicable). The name of the organization identified in each Additional Insured endorsement's schedule shall read Orange County Board of County Commissioners.

The Contractor agrees by entering into this written Contract to provide a Waiver of Subrogation in favor of the County, Contractor, Professional, and sub-contractors of any tier for each required policy providing coverage during the life of this Contract (Exhibit H). When required by the insurer, or should a policy condition not permit an endorsement, the Contractor agrees to notify the insurer and request that the policy(ies) be endorsed with a Waiver of Transfer of Rights of Recovery Against Others, or an equivalent endorsement. This Waiver of Subrogation requirement shall not apply to any policy, which includes a condition that specifically prohibits such an endorsement or voids coverage should the Contractor enter into such an agreement on a pre-loss basis.

Before execution of this Contract by the County and the start of any Work and for the duration of this Contract, the Contractor shall provide the COUNTY with current certificates of insurance evidencing all required coverage. The certificates shall clearly indicate that the Contractor has obtained insurance of the type, amount and classification as required for strict compliance with this insurance section. CONTRACTOR shall notify the County within thirty (30) business days of any material change in or cancellation/non-renewal of insurance coverage. The CONTRACTOR shall provide evidence of replacement coverage to maintain compliance with the aforementioned insurance requirements to the COUNTY or its certificate management representative five (5) business days prior to the effective date of the replacement policy (ies). . Certificates shall specifically reference the project title and contract number. The certificate holder shall read:

Orange County Board of County Commissioners
Purchasing & Contracts Division
400 E. South Street
Orlando, Florida 32801

Prior to commencement of any Work performed by subcontractors (if any), the Contractor shall obtain certificates of insurance evidencing coverage from each of its subcontractors and shall furnish within five days, copies of said certificates upon request by the County. In addition to the certificate(s) of insurance the Contractor shall also provide a blanket or specific additional insured endorsement and all waivers of subrogation or transfer of rights of recovery endorsements for each policy. Failure of the County to demand such certificate or other evidence of full compliance with these

insurance requirements or failure of the County to identify a deficiency from evidence provided will not be construed as a waiver of the Contractor's obligation to maintain such insurance.

Indemnification:

Subject to the limitations in the third paragraph under this heading, the Contractor will defend, indemnify and hold harmless the County, the Professional, their agents and employees from and against all liabilities, claims, damages, losses, costs and expenses (including attorney's fees) arising out of or resulting from the performance of the Work, provided that any such liability, claim, damage, loss, cost 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) including the loss of use resulting there from and, is caused in whole or in part by any act or omission of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in whole or in part by a party indemnified hereunder.

The Contractor hereby acknowledges receipt of One Hundred Dollars (\$100) and other good and valuable consideration from the County as consideration for the indemnification provisions in this Contract.

In any and all claims against the County, its agents or employees; the Professional; employees of the Contractor and subcontractor; all persons directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under the previous paragraph shall not be limited in any way as to the amount or type of damages, compensation or benefits payable by or for the Contractor or any subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

The indemnification obligations of the Contractor under this section shall not extend to the liability of the Professional and its agents or employees arising out of the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications, or the giving or the failure to give requested interpretations by the Professional and their agents or employees, provided such giving or failure to give is the primary cause of injury or damage.

The Contractor will defend, indemnify and hold harmless the County and anyone directly or indirectly employed by it from and against all claims, damages, losses and expenses (including attorney's fees) arising out of any infringement of patent rights or copyrights held by others during or after completion of the Work, and shall defend all such claims in connection with any alleged infringement of such rights.

Provided however, if this Contract is deemed by a court of competent jurisdiction to be a construction contract under Section 725.06, Florida Statutes, any obligation of the Contractor to defend, indemnify or hold harmless the County, the Professional and their officers and employees shall be limited to an obligation to indemnify and hold harmless to the extent caused by the negligence, recklessness or intentionally wrongful conduct of the Contractor and persons employed or utilized by the Contractor in the performance of the Contract.

The indemnification provisions contained herein shall survive the termination of this Contract.

ARTICLE 8 - CONTRACTOR'S RESPONSIBILITIES

Supervision and Superintendence - The Contractor will supervise and direct the work efficiently and with his best skill and attention. He will be solely responsible for the means, methods, techniques, sequences and procedure of construction, unless otherwise specified. The Contractor will be responsible to see that the finished Work complies accurately and completely with the Contract Documents.

The Contractor will keep on the site at all times during its work a competent superintendent who shall not be replaced without written notice to the Project Manager. The superintendent will be the Contractor's representative at the site and shall have authority to act on behalf of the Contractor. All communications given to the superintendent shall be as binding as if given to the Contractor.

The Project Manager may require in writing that the Contractor remove from the Work any of Contractor's personnel that the Project Manager determines to be incompetent, careless or otherwise objectionable. No claims for an increase in Contract Amount or Contract Time based on the Project Manager's use of this provision will be valid. Contractor shall indemnify and hold the County harmless from and against any claim by Contractor's personnel on account of the use of this provision.

Labor, Materials and Equipment - The Contractor will provide competent, suitable, qualified personnel to lay out the Work and perform construction as required by the Contract Documents. He will at all times maintain good discipline and order at the site.

The Contractor will furnish all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water and sanitary facilities and incidentals necessary for the execution, testing, initial operation and completion of the Work.

All materials and equipment will be new except as otherwise provided in the Contract Documents. If required by the Project Manager, the Contractor will furnish satisfactory evidence as to the kind and quality of materials and equipment furnished. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable manufacturer, fabricator or processors except as otherwise provided in the Contract Documents.

Emergencies - In emergencies affecting the safety of persons, the Work or property at the site or adjacent thereto, the Contractor, without special instruction or authorization from the Project Manager, is obligated to act at his discretion to prevent threatened damage, injury or loss. He will give the Project Manager prompt written notice of any significant changes in the Work covered by a Delivery Order, or deviations from the Contract Documents caused thereby, and a Change Order shall thereupon be issued covering the changes and deviations involved. If the Contractor believes that additional Work done by him in an emergency which arose from causes beyond his control entitles him to an increase in the Contract price or an extension of the Contract Time, he may make a claim therefore.

Shop Drawing And Samples - After checking and verifying all field measurements, the Contractor will submit to the Project Manager for acceptance in accordance with the accepted schedule of Shop Drawing submission - five copies (or at the Project Manager's option, one reproducible copy) of all Shop Drawings, which shall have been checked by and stamped with the approval of the Contractor and identified as the Project Manager may require.

The data shown on the Shop Drawings will be complete with respect to dimensions, design criteria, materials of construction and the like to enable the Project Manager to review the information as required.

Substitute Materials or Equipment - If it is indicated in the Specifications that the Contractor may furnish or use a substitute that is equal to any material or equipment specified, and if the Contractor wishes to furnish or use a proposed substitute, he will within fifteen (15) days after the award of the Contract make written application to the Project Manager for acceptance of such a substitute, certifying in writing that the proposed substitute will perform adequately the duties imposed by the general design, be similar and of equal substance to that specified and be suited to the same use and capable of performing the same function as the specified. **The application will include sufficient information to allow the Project Manager to evaluate the substitutions. The application will state the extent, if any, to which the review, acceptance, furnishing and installation of the proposed substitute will prejudice Contractor's completion of the Work within the Contract Time(s). If the cost of the review of the substitution is greater than that of the originally specified item, the Contractor will reimburse the County for all costs. County may require Contractor to furnish at Contractor's expense a special performance guarantee or other Surety with respect to any substitute.** The benefit of lower cost items shall be shared between the County and Contractor as specified in the Instructions to Bidders. No substitute shall be ordered or installed without the written acceptance of the Project Manager who shall be the sole judge of acceptability.

Concerning Subcontractors - The Contractor will not employ any Subcontractor, other person or organization against whom the County or the Project Manager may have reasonable objections, nor will the Contractor be required to employ any Subcontractor against whom he has reasonable objection. The Contractor will not make any substitution for any Subcontractor who has been accepted by the Project Manager, unless the County and the Project Manager determine that there is good caused for doing so.

The Contractor will be fully responsible for all acts and omissions of his Subcontractors and of persons directly or indirectly employed by them and of persons for whose acts any of them may be liable to the same extent that they are employed by him. Nothing in the Contract documents shall create, nor shall it be interpreted to create, privity or any other contractual relationship whatsoever between any Subcontractor and the County, or any person or business entity except the Contractor, or any obligation on the part of the County to pay or to see to the payment of any monies due any Subcontractor, except as may otherwise be required by law. The County may furnish to any Subcontractor, to the extent practicable, evidence of amounts paid to the Contractor on account of specific Work done.

The divisions and sections of the Specifications and the identifications of any Drawings shall not control the Contractor in dividing the Work among Subcontractors or delineating the Work to be performed by any specific trade.

The Contractor agrees to bind specifically every Subcontractor to the applicable terms and conditions of the Contract documents for the benefit of the County.

All Work performed for the Contractor by the Subcontractor shall be pursuant to an appropriate agreement between the Contractor and the Subcontractor which shall contain provisions that waive all rights the contracting parties may have against one another for damages caused by fire or other perils covered by insurance held by the County as trustee. The Contractor will pay each Subcontractor a share of any insurance monies received by the Contractor under this insurance.

Patent Fees And Royalties - The Contractor will pay all license fees and royalties and assume all costs incident to the use of any invention, design, process or device which is the subject of patent rights or copyrights held by others.

Permits - The Contractor will secure and pay for all construction permits and licenses and will pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of submittal of a quotation. The Contractor will also pay all public utility charges except as provided for in the Contract documents.

Laws And Regulations - The Contractor will give all notices and comply with all laws, ordinances, rules and regulations applicable to the Work. If the Contractor observes that the Specifications or Drawings are at variance therewith, he will give the Project Manager prompt written notice thereof, and any necessary changes shall be adjusted by an appropriate modification. If the Contractor performs any Work knowing it to be contrary to such laws, ordinances, rules and regulations and without such notice to the Project Manager, he will bear all costs arising therefrom; however, it shall not be his primary responsibility to make certain that the Drawing and Specifications are in accordance with such laws, ordinances, rules and regulations.

Use Of Premises - The Contractor will confine his equipment, the storage of materials and equipment, and the operations of his workmen to the areas permitted by law, ordinances, permits or the requirements of the Contract Documents and shall not unreasonably encumber the premises with materials or equipment.

The Contractor shall confine the operation of workmen and equipment, and the storage of materials and equipment to the County's property at the project site. In the event the Contractor desires to have access to the project site, or perform work or operations pertaining to the Contract on, over or from non-County property adjacent to the project site, the Contractor shall obtain written authorization to do so from the respective adjacent property owner(s) prior to using such property. Such written authorization shall include a provision whereby the property owner agrees to hold the County harmless, and to defend the County, in the event of any liability, loss, injury, or claim incurred as a result of the Contractors work or operations involving the use of the adjacent non-County property. The County shall be provided with a notarized, certified copy of such written authorization(s) before the Contractor commences work or operations or use of such property in connection with work or operations pursuant to this Contract.

Safety And Protection - The Contractor will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. He will take all necessary precautions for the safety of and will provide the necessary protection to prevent damage, injury or loss to:

- A. All employees on the site and other persons who may be affected thereby;
- B. All the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site; and
- C. Other property at the site or adjacent thereto including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

The Contractor will comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. He will erect and maintain, as required by the conditions and the progress of the Work, all necessary safeguards for safety and protection and, in addition, he will comply with all applicable recommendations of the Manual of Accident Prevention in Construction of the Associated General Contractors of America, Inc., and the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) and subsequent revisions and addenda as published by the U.S. Department of Transportation, Federal Highway Administration and adopted by the Florida Department of Transportation. He will notify owners of adjacent utilities when prosecution of the Work may affect them. All damage, injury or loss to any property or all damage, disruption, discontinuance or other loss to any utility system or roadways referred to in Paragraph B. and C. caused directly or indirectly, in whole or in part by the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable will be remedied by the Contractor; except damage or loss attributable to the fault of the Drawings or the Specifications or to the acts or omissions of the County, and not attributable, directly or indirectly, in whole or in part, to the fault of negligence of the Contractor. The Contractor must also comply with the guidelines set forth in the Orange County Safety & Health Manual. The manual can be accessed online at the address below:

<http://www.orangecountyfl.net/VendorServices/OrangeCountySafetyandHealthManual.aspx>

The Contractor will designate a responsible member of his organization whose duty shall be the prevention of accidents at the site. **This person shall be the Contractor's superintendent unless otherwise designated in writing by the Contractor to the Project Manager.**

Emergencies – In emergencies affecting the safety of persons, the Work or property at the site or adjacent thereto, the Contractor, without special instruction or authorization from the Project Manager, is obligated to act at his discretion to prevent threatened damage, injury or loss. He will give the Project Manager prompt written notice of any significant changes in the Work or deviations from the Contract Documents caused thereby, and a Change Order shall thereupon be issued covering the changes and deviations involved. If the Contractor believes that additional Work done by him in an emergency which arose from causes beyond his control entitles him to an increase in the Contract Amount or an extension of the Contract Time, he may make a claim therefore as provides in Articles 12 and 13.

Cleaning Up - The Contractor will keep the site free from accumulations of waste materials, rubbish and other debris resulting from the Work; at the completion of the Work he will remove all waste materials, rubbish and debris from and about the premises as well as all tools, construction equipment and machinery, and surplus materials, and will leave the site clean and ready for occupancy by the County. The Contractor will restore to their original condition those portions of the site not designated for alteration by the Delivery Order.

ARTICLE 9 – WORK BY OTHERS AND UTILITY COORDINATION

Work by Others – The County may perform additional work related to the project by itself, or it may let other direct contracts which shall contain general conditions similar to these. The Contractor will afford the other contractors who are parties to such direct contracts (or the County, if it is performing the additional work itself), reasonable opportunity for the introduction and storage of materials and equipment and the execution of work, and shall properly connect and coordinate his Work with theirs. Should the contract entail relocation of facilities not a part of this Contract, the Contractor will coordinate and cooperate with the applicable entity responsible for this portion of the work.

If any part of the Contractor's Work depends (for proper execution of results) upon work of any such other Contractor (or the County), the Contractor will inspect and promptly report to the Project Manager in writing any defects, deficiencies or delays in such work that render it unsuitable for such proper execution and results.

The Contractor's failure to report shall constitute an acceptance of the other work, except as to defects, deficiencies and delays which may appear in the other work after the execution of the work.

The Contractor will do all cutting, fitting and patching of his Work that may be required to make its several parts come together properly, and fit it to receive or be received by such other work. The Contractor will not endanger any work of others by cutting, excavating or otherwise altering such other work and will only cut or alter such other work with the written consent of the Project Manager.

If the performance of additional work by other Contractors or the County is not noted in the contract documents prior to the execution of the Contract, written notice thereof shall be given to the Contractor prior to starting any such additional work. If the Contractor believes that the performance of such additional work by the County or others involves him in additional expense or entitles him to an extension of the Contract Time, he may make a claim therefore as provided in Article 13.

Utility Coordination – Section 337.401 (1), Florida Statutes and other applicable law allows utility owners to install and maintain along, above, under, across or on any road or right-of-way any electric transmission or distribution facilities, telephone, telegraph, pole lines, poles, railway structures, ditches, sewers, water, heat, gas mains, pipelines, fences, gasoline tanks and pumps, waterlines, gas lines, wire lines, utility service connections, water and gas meter boxes, valve boxes, light standards, cable lines, cable ways, signals, signal boxes, and all other utility installations, improvements and utility appurtenances to be installed and maintained in the right-of-way.

The Contractor understands and agrees that the lands upon which the Work is to be performed consists of prior existing right-of-way, as well as, recently acquired right-of-way. The Contractor acknowledges and agrees that utility installations and appurtenances are located within the limits of the planned construction Work. The utility installations and appurtenances may be in conflict with the Contractor's Work or require relocation or adjustments. All utility conflict resolutions, relocations, or adjustments are to be moved by the utility owners at their expense, unless otherwise provided in the Contract documents.

The Contractor, by submission of a bid, agrees that prior to bid he has studied, performed field inspections, and evaluated all potential utility conflicts, the locations of permanent and temporary utility appurtenances in their present and relocated positions as may be shown on the plans. The Contractor acknowledges and agrees that the Contractor's bid has considered all potential utility conflicts, the locations of permanent and temporary utility appurtenances in their present and relocated positions including those shown on the plans, not shown on the plans, and those identified during the Contractor's pre-bid study or that should have been identified during the Contractor's field inspections, and evaluation of the limits of the planned construction Work.

The design Professional may show surface or subsurface utility conflicts, relocations, or adjustments in the drawings and plans. The surface and subsurface utility information shown in the drawings and plans was obtained and used by the design Professional to establish design criteria for the design plans. The accuracy as to location and the identification of all surface or subsurface utility information is not warranted or guaranteed and is not to be construed as part of the construction plans governing the construction Work. The Contractor shall solely make his own determinations as to surface and subsurface conditions.

The Contractor shall be solely responsible for utility coordination including all utility conflict resolutions, relocations, and adjustments. The concept of "utility coordination" means that the Contractor shall, at a minimum:

- A. Investigate both subsurface and aboveground conditions to identify potential conflicts far enough in advance of his planned construction operations to allow the Contractor to coordinate with utility owners and responsible parties any necessary conflict resolutions, relocations, or adjustments such that they can occur without delay to the Contractor's operations and Progress Schedule.
- B. Conduct regularly scheduled Utility Coordination Meetings with all affected utilities, and shall maintain detailed minutes of the discussions.
- C. Contact all utility owners in advance of any needed conflict resolutions, relocations, or adjustments.
- D. Contact the Project Manager as to all Contractor scheduled utility conflict resolutions, relocations, or adjustments.
- E. Schedule all work to be performed by the utility owners related to utility conflict resolutions, relocations, or adjustments.
- F. Schedule all work to be performed by the utility owners so as not to delay or disrupt in any way the Contractor's own performance of the Contractor's Performance Schedule.
- G. Assure the proper connection of the Contractor's Work with the work of the utility owners.

- H. Assure that the schedule, contacts, and proper connections between the Contractor's Work and the utility owner's work harmonize the work of both in a common action to achieve resolution of utility conflicts, relocations, and adjustments.
- I. Contractor shall, at no cost to the County, adjust the project schedule to allow the work to proceed in such a manner that delays to the progress of the work are minimized.

As discussed more fully in Article 18, delays to the Contractor's Progress Schedule resulting from the resolution of utility conflicts, relocations, and adjustments to utilities will not be considered as the basis for granting a change in Contract Amount or Contract Time.

ARTICLE 10 - PROJECT OWNER STATUS DURING CONSTRUCTION

The Contractor shall provide the following information to all subcontractors and suppliers:

County's Representatives - The Project Owner shall be the Board of County Commissioners. The Board shall be represented by the Project Manager listed below during the construction period:

Manager, Solid Waste Division, or designee, James Flynt
Address: 5901 Young Pine Road, Orlando, FL 32829
Phone: 407-836-6605
Email: James.Flynt@ocfl.net

ARTICLE 11 - CHANGES IN THE WORK

Without invalidating the Contract, the County may at any time or from time to time by written order or directive have additions, deletions or revisions made to the Contract or as specified in individual Delivery Orders; authorized by Change Orders. Upon receipt of a written Change Order, the Contractor will proceed with the change in the Work so ordered or directed.

In the event the County issues the Contractor a written order or directive to change the Work and if the County and the Contractor do not arrive at a mutually acceptable increase or decrease in the Delivery Order price at the time the written order or directive is issued, the Contractor shall not use such lack of mutual acceptance as a basis or cause to stop or otherwise delay the progress or completion of any of the work ordered, directed or required pursuant to the Delivery Order. All such Work shall be executed under the applicable conditions of the Contract Documents. If any Change Order causes an increase or decrease in the Delivery Order price or any extension or shortening of the Delivery Order completion time, an equitable adjustment will be made as provided in Article 12 or Article 13.

Additional Work performed by the Contractor without authorization of a Change Order will not entitle him to an increase in the Delivery Order price or any extension of the completion time of a Delivery Order, except in the case of an emergency as provided in Article 8.

If a Payment Bond and a Performance Bond has been required, it is the Contractor's responsibility to notify his Surety of any changes affecting the general scope of the Work or change of the Contract Price and the amount of the applicable Bonds shall be adjusted accordingly and an amended bond document furnished to the County.

ARTICLE 12 - CHANGE OF CONTRACT PRICE/DELIVERY ORDER

The amount specified on individual Delivery Orders constitutes the total compensation payable to the Contractor for performing the specified Work. All duties, responsibilities and obligations assigned to or undertaken by the Contractor shall be at his expense without change in the Contract Price.

The Delivery Order price may only be changed by written Change Order issued by the County. To be eligible for consideration by the County, any claim for an increase in the Delivery Order Price shall be in writing and delivered to the Project Manager within fifteen (15) days of the occurrence of the event giving rise to the claim. All claims for adjustment in the Delivery Order Price shall be determined by the Project Manager. Any change in the Delivery Order Price or Contract Price shall be incorporated in a Change Order. However, no claim for an adjustment to the Delivery Order Price or Contract Amount will be considered for unforeseeable causes that were beyond the fault of negligence of the Contractor or his Subcontractors or supplier, such as acts of God, floods, riots, etc. This restriction does not restrict submission of claims for additional Completion Time due to events of this nature.

In the event the value of any Work covered by a Change Order is not mutually agreed to by the County and the Contractor prior to the County issuing the Contractor a written order or directive to proceed with the changed Work, then the County, without the Change Order document being executed by the Contractor, shall not be prevented from issuing the Change Order, nor shall the Contractor fail to proceed without delay with the changed Work as ordered or directed by the County.

The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Delivery Order Price shall be determined by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved.

The amount of credit to be allowed by the Contractor to the County for any such change which results in a net decrease in cost, will be the amount of the actual net decrease as determined by the County. When both additions and credits are involved in any one change, the combined overhead and profit shall be figured on the basis of the net decrease, if any.

Cash Allowances - It is understood that the Contractor has included in the Contract Price any allowances so named in the Contract Documents and shall cause the Work so covered to be done by such material men, suppliers or Subcontractors and for such sums within the limit of the allowances as the County may approve. Prior to final payment, the Contract Price shall be adjusted as required and an appropriate Change Order issued. The Contractor agrees that the original Contract Price includes such sums as he deems proper for cost and profit on account of cash allowances. No demand for additional cost or profit in connection therewith will be allowed.

ARTICLE 13 - CHANGE OF CONTRACT PERFORMANCE PERIOD

The Contract Performance Period or the Completion Time of any Delivery Order may only be changed by a written Change Order. Any claim for an extension in the Completion Time to be eligible for consideration shall be in writing and delivered to the Project Manager within five (5) days of the occurrence of the event giving rise to the claim. All claims for adjustment in the Completion Time shall be determined by the Project Manager. Any change in the Completion Time resulting from any such claim shall be incorporated in a Change Order.

The Contract may be extended in an amount equal to time lost due to delays beyond the control of the Contractor if he makes a claim therefor. Such delays shall include, but not be restricted to, acts or neglect by any separate Contractor employed by the County; fires; floods; labor disputes; epidemics or acts of God.

All time limits stated in the Delivery Order are of the essence to the Contract.

In the event the Contractor submits a written claim requesting an extension in the Completion Time, whether such request relates to the County's issuance of a Change Order or for delays beyond the control of the Contractor, the Contractor shall submit with the claim supporting data, information, etc., indicating why the Completion Time cannot be met or maintained. The fact that the Work has been changed by a change order, or that a delay has occurred beyond the control of the Contractor, shall not of or by itself be considered as justification for an extension in the Completion Time unless or until it is established by the Contractor and approved by the County that the established Completion Time is insufficient for the Contractor to perform or complete the Work required by the Delivery Order.

ARTICLE 14 - WARRANTY AND GUARANTEE: ACCEPTANCE OF DEFECTIVE WORK

Warranty and Guarantee - The Contractor warrants and guarantees to the County that all materials and equipment will be new unless otherwise specified and that all Work will be of good quality, free from faults or defects and in accordance with the requirements of the Contract Documents and any inspections, test or approvals referred to in this Article. All unsatisfactory Work; all faulty Work; and all Work not conforming to the requirements of the Contract Documents or such inspections, tests or approvals shall be considered defective. Prompt notice of all defects shall be given to the Contractor. All defective Work, whether or not in place, may be rejected, corrected or accepted as provided in this Article.

All warranty and guarantee coverage periods shall commence from the date of acceptance of the Work under a Delivery Order, regardless of the date of installation of Work, except for items which are determined by the County to be in an incomplete or a non-comply status at the time of substantial completion of the Work. The coverage commencement date for warranties and guarantees of such non-comply items shall be the date of the County's acceptance of non-comply items regardless of the date of installation of the Work. The coverage commencement date of warranties and guarantees shall, in accordance with the provisions stated above, be entered on each warranty or guarantee document. However, in the event the coverage commencement date entered on the warranty or guarantee document is not in accordance with the provisions stated above, the coverage commencement date shall none-the-less be the date determined by applying the provisions stated above.

Tests and Inspections - If the Contract Documents, laws, ordinances, rules, regulations or order of any public authority having jurisdiction over the permitting, construction, use occupancy, activation or operation of the project require any Work to specifically be inspected, tested or approved by someone other than the Contractor, the Contractor will give the Project Manager timely notice of readiness therefor. The Contractor will furnish the Project Manager with the required certificates of inspection, testing or approval. All such tests will be in accordance with the methods prescribed by the American Society for Testing Materials or such other applicable organizations as may be required by law or the Contract Documents.

If any such Work required to be inspected, tested or approved is covered without written approval of the Project Manager, it must if requested by the Project Manager be uncovered for observation at the Contractor's expense. The cost of all such inspections, tests and approvals shall be borne by the Contractor unless otherwise provided.

Neither observations by the Contractor nor inspections, tests or approvals by persons other than the Contractor shall relieve the Contractor from his obligations to perform the Work in accordance with the requirements of the Contract Documents.

Access To The Work - The Project Manager and his representative, other representatives of the County and representatives of all Agencies having jurisdiction over the permitting, construction, occupancy, use, activation and operation of the Work will at all times have access to the Work. The Contractor will provide proper facilities for such access and observation of the Work and also for any inspection or testing thereof by others. **Uncovering Work** - If any Work is covered contrary to the request of the Project Manager or contrary to the requirements of the Contract documents and applicable standards, it must, if requested by the Project Manager, be uncovered for observation and replaced at the Contractor's expense.

If the Project Manager considers it necessary or advisable that covered Work be inspected or tested by others, the Contractor, at the Project Manager's request, will uncover, expose or otherwise make available for observation, inspection or testing as the Project Manager may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is defective, the Contractor will bear all the expense of such uncovering, exposure, observation, inspection and testing, and of satisfactory reconstruction. If, however, such Work is not found to be defective, the Contractor will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and re-construction, if he makes a claim therefor as provided in Articles 12 and 13.

Notice to Cure - If the County determines the Work performed pursuant to issuance of a Delivery Order is defective or deficient; if the Contractor fails to supply sufficient skilled workers or suitable materials or equipment; if the Contractor fails to make prompt payments to Subcontractors for labor, materials or equipment; if the work is not progressing in a safe, orderly or well coordinated manner; or if the general progress and/or quality of the work is not adequate to ensure continuation or completion of the work in accordance with the Contract completion time requirements,

then the Procurement Division Manager may issue a notice to cure, giving the Contractor a specific period of time (1) in which to submit to the Project Manager a written Plan of Action including a schedule setting forth a plan by which the deficiencies will be corrected, and (2) a specific period of time in which to correct the deficiencies. If the Contractor does not submit a Plan of Action to indicate how and when the deficiencies indicated in the notice to cure will be cured within the specified time frame that is acceptable to the Project Manager, and if those deficiencies are not corrected within that time frame, then the County may take further action, up to and including Contract termination. The Contractor shall not be entitled to any delay claims as a result of the County's issuance of the notice to cure.

Correction or Removal Of Defective Work - If required by the Project Manager prior to approval payment on a Delivery Order the Contractor will, promptly, without cost to the County and as specified by the Project Manager, either correct any defective Work whether or not fabricated, installed or completed or, if the Work has been rejected by the Project Manager, remove it from the site and replace it with non-defective Work. If the Contractor does not correct such defective Work or remove and replace such rejected Work within a reasonable time, or as specified in a written notice from the Project Manager, the County may have the deficiency corrected or the rejected Work removed and replaced. All direct and indirect costs of such correction or removal and replacement shall be paid by the Contractor. The Contractor will also bear the expense of making good all Work of others destroyed or damaged by this correction, removal or replacement of his defective Work.

One (1) year Correction Period - If, after the approval of payment and prior to the expiration of one (1) year after the date of Completion or such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents, any Work under a Delivery Order is found to be defective; the Contractor will promptly without cost to the County and in accordance with the Project Manager's written instructions, either correct such defective Work or, if it has been rejected by the Project Manager, remove it from the site and replace it with non-defective Work. If the Contractor does not promptly comply with the terms of such instructions, the Project Manager may have the defective work corrected or the rejected Work removed and replaced; all direct and indirect costs of such removal and replacement will be paid by the Contractor.

Acceptance Of Defective Work - If, instead of requiring correction or removal and replacement of defective Work, the Project Manager prefers to accept it, then he may do so. In such case, if found that acceptance occurs prior to approval of final payment, a Change Order shall be issued incorporating the necessary revisions in the Delivery Order including an appropriate reduction in the price of the order. If the acceptance occurs after approval of final payment, and appropriate amount shall be paid by the Contractor to the County.

Neglected Work By Contractor - If the Contractor should neglect to prosecute the Work in accordance with the Contract Documents, including any requirements of the progress schedule, the County may, after three (3) days written notice to the Contractor and without prejudice to any other remedy it may have, make good such deficiency and the cost thereof shall be charged against the Contractor.

A Change Order shall be issued incorporating the necessary revision in the Contract documents including an appropriate reduction in the Contract Price. If the payments then or therefore due the Contractor are not sufficient to cover such amount, the Contractor will pay the difference to the County.

ARTICLE 15 - WARRANTY AND PAYMENT

Contractor's Warranty Of Title - The Contractor warrants and guarantees that title to all Work, materials and equipment covered by an invoice, whether incorporated in the Work or not, will have passed to the County prior to issuance of the invoice, free and clear of all liens, claims, security interests and encumbrances; and that no Work, materials or equipment covered by an invoice will have been acquired by the Contractor or by any other person performing the Work at the site or furnishing materials and equipment for the Work subject to an agreement under which an interest therein or encumbrance thereon is retained by the seller or otherwise imposed by the Contractor or such other person.

Application of Payments – Applications for payments shall be processed in accordance with Florida Statute 218.735, Part VII, “Local Government Prompt Payment Act”.

The Project Manager shall provide written notice to the Contractor identifying the name, address, phone number and email address of the agent or employee the Contractor is required to submit payment requests or invoices to. This notice will be provided no later than ten (10) days after issuance of the Notice to Proceed.

Based upon Applications for Payment submitted to the Project Manager by the Contractor and Certificates for Payment issued by the Project Manager the County shall make progress payments on account of the Contract Amount to the Contractor as provided in the Contract Documents as follows:

In the timeframes outlined in FS 218.735, Section 2, ninety percent (90%) of the portion of the Contract Amount properly allocable to labor, materials and equipment incorporated in the Work and ninety percent (90%) of the portion of the Contract Amount properly allocable to materials and equipment suitably stored at the site or at some other location agreed upon in writing, for the period covered by the application for payment, less the aggregate of previous payments made by the Owner. The Project Manager, shall reduce the retainage percentage withheld to 5% when the completion of the Work ascertained as payable exceeds fifty percent (50%) of the total contract amount. Upon Final completion of the entire Work, a sum sufficient to increase the total payments to one hundred percent (100%) of the Contract Amount, less such amounts as the Owner shall determine for all incomplete work and unsettled claims as provided in the Contract Documents.

Upon Final Completion of a Delivery Order, one hundred percent (100%) of the order amount, less such amounts as the County shall determine for all incomplete work and unsettled claims as provided in the Contract Documents, shall be paid.

Approval of Payments - The Project Manager will, within twenty (20) business days after receipt of each application for payment, either indicate his approval of payment or return the Application to the Contractor indicating in writing the reason for refusing to approve payment. In the latter case, the Contractor may make the necessary corrections and re-submit the Application. The County will pay the Contractor the amount approved within the time frame set forth in the Local Government Prompt Payment Act.

In the event the Contractor and the Project Manager do not achieve mutual agreement on the basis or amount of the payment, and should the Contractor be unwilling to make the necessary corrections or modifications, and re-submit the Application, then the County, to avoid delay in paying the Contractor the amount the County has determined the Contractor is entitled to receive, shall approve and process the Application by making such adjustments thereto as the County deems appropriate so that the Contractor receives, without delay, payment of the amount the County has determined to have been earned and owing to the Contractor.

In the event a dispute arises involving payments or invoices that have been rejected by the Project Manager and resubmitted by the Contractor and that cannot be resolved in accordance with F.S. 218.735 (3) the Orange County Payment/Invoice Disputes Resolution Process Procedures shall be used to resolve the dispute. The procedures can be obtained by contacting the Procurement Division at 407-836-5635.

The Project Manager's approval of any payment requested in an application for payment shall constitute a representation by him to the County, based on the Project Manager's on-site observations of the Work in progress and on his review of the application for payment and the supporting data, that the Work has progressed to the point indicated; that, to the best of his knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning Project upon Substantial Completion, to the results of any subsequent tests called for in his approval); and that the Contractor is entitled to payment of the amount approved. However, by approving any such payment, the Project Manager shall not thereby be deemed to have represented that he made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, that he has reviewed the means, methods, techniques, sequences and procedures of construction nor that he has made any examination to ascertain how or for what purpose the Contractor has used the moneys paid or to be paid to him on account of the Contract Amount.

The Project Manager's approval of final payment shall constitute an additional representation by him to the County that the conditions precedent to the Contractor's belief being entitled to final payment as set forth in this Article have been fulfilled.

The Project Manager may refuse to approve the whole or any part of any payment if in his opinion he is unable to make such representations to the County. He may then refuse to approve any such payment because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously approved, to such extent as may be necessary in his opinion to protect the County from loss because:

- A. The Work is defective;
- B. Claims have been filed or there is reasonable evidence indicating the probable filing thereof;
- C. The Contract Amount has been reduced because of Change Order(s);
- D. The County has been required to correct defective Work or complete the Work in accordance with Article 14; or
- E. Of unsatisfactory prosecution of the Work, including failure to clean up as required by Article 8.

Inspection - Upon written notice from the Contractor that all the Work is complete including the previously listed deficiencies and that the Work is complete in all respects, the Project Manager will make an inspection with the Contractor. The Project Manager will issue a single punch list of items to be completed or corrected by the Contractor. The punch list must specify a date, not to exceed five (5) days after the punch list has been developed and reviewed, in which the delivery of the punch list to the Contractor must be made. Items not included on the punch list cannot be used as a basis to withhold final payment for retainage. In addition, the final contract completion date shall be at least thirty (30) days after the delivery of the punch list to the Contractor. Punch lists not provided to the Contractor by the date agreed upon for delivery will cause the contract time for completion to be extended by the number of days the local government exceeded the delivery date. Damages may only be assessed against the Contractor in the event the Contractor fails to complete the project within the contract period as was extended by the guidelines set forth in this provision.

The final undisputed retainage payment, if any, must be made within twenty (20) business days after receipt of a proper payment request. This would be less any amount withheld in accordance with contract provisions for incomplete or uncorrected work unless otherwise provided for by written notice to the Contractor specifying the failure of the Contractor to meet contract requirements in the development of the punch list.

Inspection For Final Payment - After the Contractor has completed any such corrections to the satisfaction of the Project Manager and delivered all documents as required by the Contract Documents, he may submit an invoice, following the procedure for payment. The invoice shall be accompanied by legally effective releases or waivers of liens from the Contractor and all Subcontractors and suppliers which performed services or supplied material or equipment for the Contractor pursuant to the Contract Documents and the consent of Surety, if applicable to payment.

Contractor's Continuing Obligation - The Contractor's obligation to complete the Work in accordance with the Contract Documents shall be absolute. Neither approval of any invoice by the County, any payment by the County to the Contractor under the Contract Documents, any use or occupancy of the Work or any part thereof by the County, any act of acceptance by the County, any failure to do so, nor any correction of defective Work by the County shall constitute an acceptance of Work not in accordance with the Contract Documents.

Waiver Of Claims - The making and acceptance of payment shall constitute:

- A. A waiver of all claims by the County against the Contractor other than those arising from unsettled liens, from non-conforming, non-complying, deficient, incomplete or defective Work appearing after final payment or from failure to comply with the requirements of the Contract Documents, or from the terms of any special guarantees specified therein, and,
- B. A waiver of all claims by the Contractor against the County other than those previously made in writing and still unsettled.

ARTICLE 16 - SUSPENSION OF WORK AND TERMINATION

County May Suspend Work - The County may at, any time and without cause, suspend the Work or any portion thereof by notice in writing to the Contractor. The Project Manager shall fix the date on which Work shall be resumed and the Contractor will resume the Work on the date so fixed. For unreasonable delays, the Contractor may be allowed an increase in the Delivery Order Price, an extension of the completion time specified in the Delivery Order, or both, if directly attributable to any suspension and if he makes a claim therefore as provided in Articles 12 and 13. However, no profits will be allowed on claims for suspended work. Also, during any period of suspension, the Contractor shall take all available measures to mitigate costs such as taking on new Work, reassigning resources to other Contracts, etc.

Termination for Default- If the Contractor is adjudged bankrupt or insolvent; if he makes a general assignment for the benefit of his creditors without County approval; if a trustee or receiver is appointed for the Contractor or for any of his property; if he files a petition to take advantage of any debtor's act or to reorganize under the bankruptcy or similar laws; if he fails to prosecute and complete the work in accordance with the established project schedule or within the Contract time period; if he repeatedly fails to supply sufficient skilled workers or suitable materials or equipment; if he repeatedly fails to make prompt payment to Subcontractors for labor, materials or equipment; if he disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction; if he disregards the authority of the Project Manager; or if he otherwise substantially violates any provisions of the Contract Documents, then the County may, without prejudice to any other right or remedy and after giving the Contractor and his Surety seven (7) days written notice, terminate the contract for default and assign the completion of the Work to the Surety or take possession of the Work and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor and finish the Work by whatever method it may deem expedient.

Prior to termination for default, the County will provide adequate written notice to the (vendor/contractor/consultant) through the Manger, Procurement Division, affording him/her the opportunity to cure the deficiencies or to submit a specific plan to resolve the deficiencies within ten (10) days (or the period specified in the notice) after receipt of the notice. Failure to adequately cure the deficiency shall result in termination action. Such termination may also result in suspension or debarment of the Contractor in accordance with the County's Procurement Ordinance.

The contractor and its surety shall be liable for any damage to the County resulting from the Contractor's default of the contract. This liability includes any increased costs incurred by the County in completing contract performance.

If the amount of the Delivery Order exceeds the direct and indirect cost of the County completing the Project, such excess shall be paid to the Contractor. If such cost exceeds such unpaid balance, the Contractor will pay the difference to the County. Such cost incurred by the County will be determined by the County and incorporated in a Change Order.

In the event of termination by the County for any cause, the contractor will not have, under any circumstance, any claim against the County for lost profits or compensation for lost opportunities. After a receipt of a Termination Notice and except as otherwise directed by the County the vendor shall:

- A. Stop work on the date and to the extent specified.
- B. Terminate and settle all orders and subcontracts relating to the performance of the terminated work.
- C. Transfer all work in process, completed work, and other materials related to the terminated work as directed by the County.
- D. Continue and complete all parts of that work that have not been terminated.

If the contractor's failure to perform the contract arises from causes beyond the control and without the fault or negligence of the (vendor/contractor/consultant), the contract shall not be terminated for default. Examples of such causes include (1) acts of God or the public enemy, (2) acts of a government in its sovereign capacity, (3) fires, (4) floods, (5) epidemics, (6) strikes and (7) unusually severe weather.

Where the Contractor's services have been so terminated by the County, said termination shall not affect any rights of the County against the Contractor then existing or which may thereafter accrue. Any payment of monies by the County due the Contractor will not release the Contractor from liability.

Termination for Convenience: Upon seven (7) days written notice to the Contractor and the Surety, or sooner if reasonable under the circumstances, the County may, without cause and without prejudice to any other right or remedy, elect to terminate any part of the Work, or the Contract in whole or in part, as the County may deem appropriate. In any termination for convenience, the Contractor shall be paid for Work completed by the Contractor, Subcontractors and suppliers at the time of termination provided the Work has been inspected and accepted by the County. However, the payment to the Contractor will exclude any and all anticipated supplemental costs, administrative expenses and profit for uncompleted Work. Upon termination for convenience, the County shall have full power and authority to take possession of the Work, assume any subcontracts with Subcontractors and suppliers that the County selects, and prosecute the Work to completion by Contract or as the County may deem expedient.

A termination for convenience may apply to individual delivery orders, purchase orders or to the contract in its entirety.

Authority to Terminate: The authority to terminate this Contract including all notices thereto is the sole responsibility of the Manager, Procurement Division.

ARTICLE 17 – VERBAL ORDERS

The Project Manager under the following conditions may issue verbal Change Orders to the Delivery Order:

- A. To address bona fide emergency requirements.
- B. To ensure the continuity of critical elements of contract performance.

Any such verbal direction shall be confirmed in writing by the Project Manager to the contractor within five (5) calendar days after issuance. Concurrently, a copy of the written direction shall be provided to the Manager, Procurement Division with documentation in the form of an emergency justification for the action taken. A formal Change Order and associated Contract amendment, if applicable, will be negotiated in conjunction with the Procurement Division and shall succeed the written confirmation not later than thirty (30) calendar days after issuance of the verbal direction.

Board approval, as applicable, shall be obtained.

ARTICLE 18 - MAINTENANCE AND EXAMINATION OF RECORDS

The Contractor shall keep adequate records and supporting documents applicable to this Contract. Said records and documentation shall be retained by the Contractor for a minimum of five (5) years after the date of final payment on this contract. If any litigation, claim or audit is commenced prior to the expiration of the five (5) year period, the records shall be maintained until all litigation, claims or audit findings involving the records have been resolved.

If applicable, time records and cost data shall be maintained in accordance with generally accepted accounting principles. This includes full disclosure of all transactions associated with the contract.

Contractor's "records and supporting documents" as referred to in this Contract shall include any and all information, materials and data of every kind and character, including without limitation, records, books, papers, documents, subscriptions, recordings, agreements, purchase orders, invoices, leases, contracts, commitments, arrangements, notes, daily diaries, superintendent reports, drawings, receipts, vouchers and memoranda, and any and all other agreements, sources of information and matters that may in the County's judgment have any bearing on or pertain to any matters, rights, duties or obligations under or covered by any Contract document. Such records and documents shall included (hard copy, as well as computer readable data, written policies and procedures; time sheets; payroll registers; cancelled checks; subcontract files (including proposals of successful and unsuccessful bidders, bid recaps, etc.); original estimates; estimating worksheets; correspondence; change order files (including pricing data used to price change proposals and documentation covering negotiated settlements); back-charge logs and supporting documentation; general ledger entries detailing cash and trade discounts earned, insurance rebates and dividends; and any other contractor records which may have a bearing on matters of interest to the County in connection with the Contractor's dealings with the County (all foregoing hereinafter referred to as "records and supporting documents") to the extent necessary to adequately permit evaluation and verification of:

- a) Contractor compliance with contract requirements; or
- b) Compliance with provisions for pricing change orders; or
- c) Compliance with provisions for pricing invoices; or
- d) Compliance with provisions regarding pricing of claims submitted by the Contractor or his payees; or
- e) Compliance with the County's business ethics; or
- f) Compliance with applicable state statutes and County Ordinances and regulations.

Records and documents subject to audit shall also include those records and documents necessary to evaluate and verify direct and indirect costs, (including overhead allocations) as they may apply to costs associated with this Contract. In those situations where Contractor's records have been generated from computerized data (whether mainframe, mini-computer, or PC based computer systems), Contractor agrees to provide the County's representatives with extracts of data files in computer readable format on data disks or suitable alternative computer exchange formats.

The County and its authorized agents shall have the right to audit, inspect and copy records and documentation as often as the County deems necessary throughout the term of this contract and for a period of five (5) years after final payment. Such activity shall be conducted during normal business hours. The County, or any of its duly authorized representatives, shall have access within forty-eight (48) hours to such books, records, documents, and other evidence for inspection, audit and copying.

The County, during the period of time defined by the preceding paragraph, shall have the right to obtain a copy of and otherwise inspect any audit made at the direction of the Contractor as concerns the aforesaid records and documentation.

Records and documents shall be made accessible at the Contractor's local place of business. If the records are unavailable locally, it shall be the Contractor's responsibility to insure that all required records are provided at the Contractor's expense including payment of travel and maintenance costs incurred by the County's authorized representatives or designees in accessing records maintained out of the county. The direct costs of copying records, excluding any overhead cost, shall be at the County's expense.

Contractor shall require all payees (examples of payees include subcontractors, insurance agents, material suppliers, etc.) to comply with the provisions of this article by including the requirements hereof in a written contract agreement between contractor and payee. Such requirements include a flow-down right of audit provisions in contracts with payees, which shall also apply to Subcontractors and Sub-subcontractors, material suppliers, etc. Contractor shall cooperate fully and shall cause all aforementioned parties and all of Contractor's subcontractors (including those entering into lump sum subcontracts and lump sum major material purchase orders) to cooperate fully in furnishing or in making available to the County from time to time whenever requested in an expeditious manner any and all such records, documents, information, materials and data.

The County's authorized representatives or designees shall have reasonable access to the Contractor's facilities, shall be allowed to interview all current or former employees to discuss matters pertinent to the performance of this Contract and shall have adequate and appropriate work space, in order to conduct audits in compliance with this article.

Even after a change order proposal has been approved, Contractor agrees that if the County later determines the cost and pricing data submitted was inaccurate, incomplete, not current or not in compliance with the terms of the contract regarding pricing of change orders, then an appropriate contract price reduction will be made. Such post-approval contract price adjustment will apply to all levels of contractors and/or subcontractors and to all types of change order proposals specifically including lump sum change orders, unit price change orders, and cost-plus change orders.

If an audit inspection or examination by the County, or its designee, in accordance with this article discloses overpricing or overcharges (of any nature) by the Contractor to the County in excess of one-half of one percent (.5%) of the total contract billings, the reasonable actual cost of the County's audit shall be reimbursed to the County by the Contractor. Any adjustments and /or payments that must be made as a result of any such audit or inspection of the contractor's invoices and /or records and supporting documents shall be made within a reasonable amount of time (not to exceed 90 days) from presentation of the County's findings to the Contractor.

ARTICLE 19 - FEDERAL REQUIREMENTS

In the event this Contract is paid in whole or in part from any federal governmental agency or source, the specific terms, regulations and requirements governing the disbursement of these funds shall be specified herein and become a part of this clause.

ARTICLE 20 - MINORITY/WOMEN OWNED BUSINESS ENTERPRISE REQUIREMENTS AND SMALL BUSINESS PROVISIONS

The Contractor will comply with all requirements of Orange County's Minority/Women Owned Business Enterprise Ordinance No. 94-01, as amended by Ordinance No. 2009-21. In summary, the ordinances establish a goal of 25% of the County's annual monetary value of contracts be awarded to minority/women owned-business enterprises meeting Contract specifications. The goals for work force employment levels are 18% minority and 6% women. Other provisions of the Ordinance as it pertains to construction projects may be found in Part C of this document.

To facilitate monitoring for compliance with the Ordinance, the Contractor shall:

- A. Provide to the County's Business Development Division all subcontracts and/or purchase orders, fully executed by both parties, with each Subcontractor and supplier listed on Attachment C-2 in the Prime Contractor's bid (M/WBE's and non-M/WBE's). **The prime Contract will not be executed by the County until these documents are on file in the Business Development Division.** Prime Contractor should include in the subcontract / purchase order a statement that makes the legality of the document contingent upon execution of the prime Contract by the County.
- B. The Contractor shall include a **Prompt Payment Clause** and payment schedule in all subcontracts and purchase orders (including those with non-M/WBE's) stating that payment will be made to the Subcontractor/suppliers within 72 hours of receipt of payment from the County. The Contractor shall pay each Subcontractor and supplier for all work covered under an Application for Payment within the 72 hour timeframe.

This provision in no way creates any contractual relationship between any Subcontractor and Orange County or any liability on Orange County for the Contractor's failure to make timely payments. The timeliness of such payments may be evaluated by the Business Development Division in considering compliance with the Ordinance.

C. The Contractor shall submit:

- 1) A Monthly Workforce Report (Current Field Employment Data). Contractor shall also ensure that all Subcontractors/suppliers with contracts over \$50,000 supply a Monthly Workforce Report; and
- 2) A Monthly Prime Contractor's Report including M/WBE Utilization Reports
The Contractor shall furnish written documentation evidencing actual dollars paid to each Subcontractor/supplier listed and/or utilized by the Contractor. This will include, but not be limited to: copies of canceled checks, approved invoices, and signed, sworn affidavits certifying the accuracy of payments so that the County may determine actual participation achieved by the Contractor prior to issuance of final payment.

The required reports are to be submitted to the Business Development Division no later than the fifth day of each month beginning one month after the Work begins and to continue until Final Completion. Contractor's Progress Payments may be delayed if reports are not submitted in a timely manner.

The final Prime Contractor's Report-M/WBE Utilization Report shall be signed by the Contractor's authorized agent certifying that all information contained there in is a true and accurate account of M/WBE utilization per the bid and contract documents. Approval of the final Application for Payment is contingent upon receipt of this certification.

D. Contractor shall not substitute, replace or terminate any M/WBE firm without **prior written authorization of the County**, nor shall the Contractor reduce the scope of work or monetary value of a subcontract without prior written authorization of the County. All modifications, additions and deletions to any and all Contracts issued to said M/WBE's shall also have prior written authorization of the County.

E. The Contractor shall expeditiously advise all M/WBE's and the Business Development Division of all Change Orders, contract modifications, additions and deletions to any and all contracts issued to said M/WBE's.

F. Failure of the Contractor to adhere to the provisions of the Ordinance may subject the Contractor to penalties as outlined in Sec. 17-326 of the Ordinance. The penalties include:

- 1) Liquidated damages up to 10% of the Contract;
- 2) Suspension or permanent debarment from bidding;
- 3) Termination of any present contracts;
- 4) Withholding retainage;

- 5) A negative evaluation of good-faith effort on future bids;
- 6) Withholding of payments.

ARTICLE 21 - ASBESTOS FREE MATERIALS

- A. Project is to be constructed with asbestos free materials. A written, notarized statement on company letterhead is to be submitted with the Contract. Payment shall be withheld until such statement is submitted.
- B. Contractor shall agree that if materials containing asbestos are subsequently discovered at any future time to have been included in the construction performed by the Contractor or any of its Subcontractors or agents and were not specified in the design or required by the Contract document, Contractor shall be liable for all costs related to the abatement of such asbestos and damages or claims against the County.

ARTICLE 22 - CONDITION OF MATERIALS AND PACKAGING

In instances where the Specifications, (Part H) make this subject applicable (and unless otherwise indicated), all goods and items offered for sale and/or shipped by the Contractor pursuant to the requirements imposed upon said Contractor by this Contract will be new and in first class condition: all related containers being new and suitable for storage and shipment; all prices including the cost of standard commercial packaging. Contractors will be solely responsible for making any and all claims against carriers as concerns missing or damaged items.

ARTICLE 23 -NO ASSIGNMENT OF AGREEMENT

Contractor may not make any assignment of the contractual agreement between the parties, in whole or in part, without prior written authorization as may be given by the County, at its sole discretion.

No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without written consent of the party sought to be bound; and specifically but without limitation, monies that may become due and monies that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

ARTICLE 24 - CONSTRUCTION TERM CONTRACT

This is a construction term Contract for the services specified, and effective for the period specified. The quantities provided are estimates only and are not purchased by this Contract. Performance shall be accomplished only as authorized by Delivery Orders issued against the Contract. The County may issue orders requiring performance at the multiple locations.

ARTICLE 25 - CONTRACT TERM/RENEWAL

The Contract resulting from this solicitation shall commence effective upon execution by both parties and extend for a period of twelve (12) months.

The County may unilaterally renew the Contract for the periods specified on the Bid Proposal Form for twenty-four (24) months. An additional six (6) months extension may also be unilaterally exercised at the County's discretion. Refer to the clauses entitled "Option to Extend the Term of the Contractor" and "Interim Extension of Performance".

ARTICLE 26 - OPTION TO EXTEND THE TERM OF THE CONTRACT

The County may unilaterally extend the term of this Contract by written notice to the Contractor at least 60 days before the expiration of any Contract term. The exercise of the option shall be for the period specified and for the prices listed on the Bid Proposal Form. All other terms and conditions of the Contract shall apply to the option periods.

ARTICLE 27 - INTERIM EXTENSION OF PERFORMANCE

After all options have been exercised, and it is determined that interim performance is required to allow for the solicitation and award of a new Contract, the County may unilaterally extend the Contract for a maximum period of six months. Pricing, delivery and all other terms and conditions of the Contract shall apply during this period.

The total duration of this Contract, including the exercise of all options, shall not exceed 3.5 years.

ARTICLE 28 - MINIMUM/MAXIMUM DELIVERY ORDER AMOUNT

The Contractor is not obligated to accept Delivery Orders less than \$2,000 or in excess of \$250,000. However, if the Contractor accepts any orders outside these parameters, they shall be performed in accordance with all requirements of the Contract.

ARTICLE 29 - ISSUANCE AND ADMINISTRATION OF ORDERS

Any order issued during the effective period of this Contract not completed within that period shall be completed by the Contractor within the time specified in the order. The Contract shall govern the Contractor's and the County's rights and obligations with respect to that order to the same extent as if the order were completed during the Contract's performance period.

ARTICLE 30 - VARIATION IN ESTIMATED QUANTITY

If the quantity of a unit priced item in this Contract is an estimated quantity, and the actual quantities ordered exceeds the estimate by 50% or more, then the County may negotiate a lower unit price, which will be incorporated into the Contract by Contract Amendment.

Failure of the Contractor to agree to a reduced unit price may result in the termination of the Contract and re-solicitation of the requirement.

ARTICLE 31 - MISCELLANEOUS

Whenever any provision of the Contract Documents requires the giving of written notice, it shall be deemed to have been validly given if delivered in person to the individual, to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail (postage prepaid) to the last business address known to the County.

Specifications and Drawings, if any, furnished to the Contractor by the County shall remain the County's property, and shall apply to a specified delivery order.

The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder, and, in particular but without limitation, the warrants, guarantees and obligations imposed upon the Contractor and the rights and remedies available to the County thereunder shall be in addition to and not a limitation of any otherwise imposed or available by law, by special guarantee or other provisions of the Contract Documents.

Should the County or the Contractor suffer injury or damage to its person or property because of any omission or act of the other or of any of his employees, agents or others for whose acts he is legally liable, claim should be made in writing to the other party within a reasonable time of the first observance of such injury or damage.

All Contracts in excess of one hundred thousand dollars (\$100,000.00) shall comply with all the requirements of Section 114 of the Clean Air Act (42 USC 7401 et seq.) as amended and Section 308 of the Federal Water Pollution Control Act (33 USC 1251 et seq.) as amended.

This Contract shall be governed by the laws of the State of Florida. Any and all legal action necessary to enforce the provisions of this Contract will be held in Orange County, Florida. Venue for any litigation involving this Contract shall be the Ninth Circuit Court in and for Orange County, Florida.

ARTICLE 32 – CONTRACT CLAIMS

“Claim” as used in this provision means a written demand or written assertion by one of the contracting parties seeking as a matter of right, the payment of a certain sum of money, the adjustment or interpretation of contract terms, or other relief arising under or relating to this contract.

“Claim” as used in this provision applies after failure of the parties to agree to an adjustment as provided in Article 12, Change of Contract Price/Delivery Order and Article 13, Change of Contract Performance Period.

Claims made by a Contractor against the County relating to a particular contract shall be submitted to the Procurement Division Manager in writing clearly labeled “Contract Claim” requesting a final decision.

The Contractor also shall provide with the claim a certification as follows: “I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the Contractor believes the County is liable; and that I am duly authorized to certify the claim on behalf of the Contractor.

Failure to document a claim in this manner shall render the claim null and void. Moreover, no claim shall be accepted after final payment of the contract.

The decision of the Procurement Division Manager shall be issued in writing and shall be furnished to the Contractor. The decision shall state the reasons for the decision reached. The Procurement Division Manager shall render the final decision within sixty (60) days after receipt of Contractor's written request for a final decision. The Procurement Division Manager's decision shall be final and conclusive.

The Contractor shall proceed diligently with performance of this contract pending final resolution of any request for relief, claim, appeal or action arising under the contract and shall comply with any final decision rendered by the Manager of the Procurement Division.

ARTICLE 33 - VALUE ENGINEERING

A. Intent and Objective: This Section applies to any cost reduction proposal (hereinafter referred to as a Value Engineering Change Proposal or VECP) initiated and developed by the CONTRACTOR for the purpose of refining the Contract Documents so as to contribute to design cost effectiveness or significantly improve the quality of the Work. This Section does not, however, apply to any such proposal unless it is identified by the CONTRACTOR, at the time of its submission to the COUNTY, as a proposal submitted pursuant to this Section.

VECPs contemplated are those that would result in net savings to the COUNTY by providing either: (A) a decrease in the cost of performance of the Work, or; (B) a reduction in cost of ownership (hereinafter referred to as collateral costs) of the Work, regardless of acquisition costs. VECPs must result in savings without impairing essential functions and characteristics such as safety, service, life, reliability, economy of operation, ease of maintenance, aesthetics and necessary standard design features. However, nothing herein prohibits the submittal of VECPs where the required functions and characteristics could be combined, reduced or eliminated as being nonessential or excessive.

Plan errors which are identified by the CONTRACTOR and which result in a cost reduction, will not qualify for submittal as a VECP.

The COUNTY reserves the right to reject at its discretion any VECP submitted. Substitution of another design alternate, which is detailed in the Plans, for the one on which the CONTRACTOR bid, will not be allowed under this Section. Pending execution of a formal supplemental Agreement, implementing an approved VECP, the CONTRACTOR shall remain obligated to perform in accordance with the terms of the existing Contract. No time extensions will be granted due to the time required to review a VECP.

B. Subcontractors: The CONTRACTOR is encouraged to include the provisions of this Section in contracts with subcontractors. The CONTRACTOR shall encourage submission of VECPs from subcontractors, however, it is not mandatory that VECPs be submitted nor is it mandatory that the CONTRACTOR accept or transmit to the COUNTY VECPs proposed by his subcontractors.

C. Data Requirements: As a minimum, the following information shall be submitted by the CONTRACTOR with each VECP;

A description of the difference between the existing requirements and the proposed change, and the comparative advantages and disadvantages. Separate detailed cost estimates for both the existing requirements and the proposed change. The cost estimates shall be broken down by item numbers indicating quantity increases or decreases and deleted pay items.

Additional proposed Work, now covered by the Contract Documents, shall be identified by current COUNTY pay item numbers. In preparing the estimates, the CONTRACTOR shall include overhead, profit and bond. No separate pay item(s) for these costs will be allowed.

An itemization of plan details, plan sheets, design standards and Specifications that must be changed or added if the VECP is adopted. Preliminary plan drawings must be sufficient to describe the proposed changes.

An estimate of the effects the VECP would have on collateral costs to the COUNTY.

Engineering Incentive or other analysis in sufficient detail to identify and describe specific features of the Contract Documents which must be changed if the VECP is accepted, with a proposal as to how these changes can be accomplished and an assessment of their effect on other Project elements. The COUNTY may require that Engineering Incentive analyses be performed by a prequalified consultant in the applicable class of Work. Any design changes which result from the VECP must be supported by computations sealed by a Professional registered in the State of Florida.

A statement of the time by which approval of the VECP must be issued by the COUNTY to obtain the total estimated cost reduction during the remainder of this Contract noting any effect on the Contract completion time or delivery schedule.

D. Processing Procedures: Two copies of each VECP shall be submitted to the County's Project Manager, or his/her duly authorized representative, VECPs will be processed expeditiously; however, the COUNTY will not be liable for any delay in acting upon a VECP submitted pursuant to this Section.

The CONTRACTOR may withdraw, in whole or in part, a VECP not accepted by the COUNTY within the period specified in the VECP. The COUNTY shall not be liable for any VECP development cost in the case where a VECP is rejected or withdrawn. The COUNTY shall be the sole judge of the acceptability of a VECP and of the estimated net savings in construction and/or collateral costs from the adoption of all or any part of such proposal. In determining the estimated net savings, the right is reserved to disregard the Contract prices if, in the judgment of the COUNTY, such prices do not represent a fair measure of the value of Work to be performed or to be deleted.

Prior to approval, the COUNTY may modify a VECP, with the concurrence of the CONTRACTOR, to make it acceptable. If any modification increases or decreases the net savings resulting from the VECP, the CONTRACTOR'S fair share will be determined upon the basis of the VECP modified and upon determination of final quantities. The net savings shall be computed by subtracting the revised total cost of all bid items affected by the VECP design from the total cost of the same bid items as represented in the Contract Documents. Prior to approval of the VECP, which initiates the supplemental Contract, the CONTRACTOR shall provide acceptable contract quality Plan sheets revised to show all details consistent with the VECP design.

- E. Computations for Change in Contract Cost of Performance:** CONTRACTOR development and implementation costs for the VECP will not be recoverable. If the VECP is adopted, the CONTRACTOR'S share of the net savings as defined hereinafter shall be considered full compensation to the CONTRACTOR for the VECP. COUNTY costs of processing or implementation of a VECP will not normally be considered in the estimate. However, the COUNTY reserves the right, where it deems such action appropriate, to require the CONTRACTOR to pay the COUNTY'S cost of investigating and implementing a VECP submitted by the CONTRACTOR as a condition of considering such proposal.

Where such a condition is imposed, the CONTRACTOR shall indicate his acceptance thereof in writing, and such acceptance shall constitute full authority for the COUNTY to deduct amounts payable to the COUNTY from any monies due or that may become due to the CONTRACTOR under the Contract.

- F. Computations for Collateral Costs:** When collateral cost savings are sought by the CONTRACTOR, separate estimates must be prepared for collateral costs of both the existing Contract requirement and the proposed change. Each estimate shall consist of an itemized breakdown of all costs and the basis for the data used in the estimate. Cost benefits to the COUNTY include, but are not limited to: reduced costs of operation, maintenance or repair, and extended useful service life. Increased collateral costs include the converse of such factors. Computations shall be as follows:

Costs shall be calculated over a 20-year period on a uniform basis for each estimate. If the difference in the estimates as approved by the COUNTY indicate a savings, the CONTRACTOR shall divide the resultant amount by 20 to arrive at the average annual net collateral savings. The resultant savings shall be shared as stipulated in paragraph G below.

- G. Sharing Arrangements:** If a VECP is approved by the COUNTY, the CONTRACTOR may be entitled to share in both construction savings and collateral savings to the full extent provided for in this subsection. Except for innovative ideas, the CONTRACTOR and COUNTY shall each receive 50 percent of net reduction in the cost of performance of this Contract. For innovative ideas, the reduction in the cost of performance shall be shared as follows:

ACCRUED NET SAVINGS	CONTRACTOR'S SHARE %	COUNTY'S SHARE %
Less than \$25,000	85	15
\$25,000 to \$50,000	75	25
Over \$50,000	50	50

If an approved change is identical or similar to a previously submitted VECP or an idea previously utilized by the COUNTY it will not be considered an innovative idea, thus, will only qualify for a 50 percent sharing of savings. When collateral savings occur, the CONTRACTOR shall receive 20 percent of the average one year's net collateral savings. The CONTRACTOR shall not receive construction savings or collateral savings on optional Work listed in this Contract until the COUNTY exercises its option to obtain that Work.

ARTICLE 34 - CONTRACT TYPE

This is a Requirements Contract and the County's intent is to order from the Contractor all of the goods or services specified in the contract's price schedule that are required to be purchased by the County. If the County urgently requires delivery of goods or services before the earliest date that delivery may be required under this contract, and if the contractor will not accept an order providing for accelerated delivery, the County may acquire the goods or services from another source.

The County's requirements in this contract are estimated and there is no commitment by the County to order any specified amount. Also, if the estimated quantities are not achieved, this shall not be the basis for an equitable adjustment.

Moreover, if the Manager of the Procurement Division determines that the Contractor's performance is less than satisfactory, the County may order the goods or services from other sources until the deficient performance has been cured or the contract terminated.

ORDER LIMITATIONS

- a. Minimum Order - When the County requires goods or services covered by this contract in an amount less than \$2,000, the County is not obligated to purchase, nor is the Contractor obligated to provide these goods or services under the contract.
- b. Maximum Order – The Contractor is not obligated to honor any order for goods or services in excess of \$250,000.

ARTICLE 35 – PATENTS AND ROYALTIES

Unless otherwise provided, the bidder shall be solely responsible for clearing the right to use any patented or copyrighted materials in the performance of the contract.

The Contractor, without exception, shall indemnify and save harmless the County and its employees from liability of any nature or kind, including cost and expenses for or on account of any copyrighted, patented, or unpatented invention, process, or article manufactured or

supplied by the Contractor. In the event of any claim against the County of copyright or patent infringement, the County shall promptly provide written notification to the Contractor. If such a claim is made, the Contractor shall use its best efforts to promptly purchase for the County any infringing products or services or procure a license, at no cost to the County, which will allow continued use of the service or product. If none of the alternatives are reasonably available, the County agrees to return the article on request to the Contractor and receive reimbursement, if any, as may be determined by a court of competent jurisdiction.

EXHIBIT A

LEASED EMPLOYEE AFFIDAVIT

I affirm that an employee leasing company provides my workers' compensation coverage. I further understand that my contract with the employee leasing company limits my workers' compensation coverage to enrolled worksite employees only. My leasing arrangement does not cover un-enrolled worksite employees, independent contractors, uninsured subcontractors or casual labor exposure.

I hereby certify that 100% of my workers are covered as worksite employees with the employee leasing company. I certify that I do not hire any casual or uninsured labor outside the employee leasing arrangement. I agree to notify the County in the event that I have any workers not covered by the employee leasing workers' compensation policy. In the event that I have any workers not subject to the employee leasing arrangement, I agree to obtain a separate workers' compensation policy to cover these workers. I further agree to provide the County with a certificate of insurance providing proof of workers' compensation coverage prior to these workers entering any County jobsite.

I further agree to notify the County if my employee leasing arrangement terminates with the employee leasing company and I understand that I am required to furnish proof of replacement workers' compensation coverage prior to the termination of the employee leasing arrangement.

I certify that I have workers' compensation coverage for all of my workers through the employee leasing arrangement specified below:

Name of Employee Leasing Company: _____

Workers' Compensation Carrier: _____

A.M. Best Rating of Carrier: _____

Inception Date of Leasing Arrangement: _____

I further agree to notify the County in the event that I switch employee-leasing companies. I recognize that I have an obligation to supply an updated workers' compensation certificate to the County that documents the change of carrier.

Name of Contractor: _____

Signature of Owner/Officer: _____

Title: _____ Date: _____

EXHIBIT B

POLICY NUMBER:
LIABILITY

COMMERCIAL GENERAL

CG 25 03 03 97

THIS ENDORSMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**DESIGNATED CONSTRUCTION PROJECT(S)
GENERAL AGGREGATE LIMIT**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Designated Construction Projects:

“Any person or organization on whose behalf you are required to obtain a Designated Construction Project under a written contract or agreement”

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

- A. For all sums which the insured becomes legally obligated to pay as damages caused by “occurrences” under **COVERAGE A (SECTION I)**, and for all medical expenses caused by accidents under **COVERAGE C (SECTION I)**, which can be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:
 - 1. A separate Designated Construction Project General Aggregate Limit applies to each designated construction project, and that limit is equal to the amount of the General Aggregate Limit shown in the Declarations.
 - 2. The Designated Construction Project General Aggregate Limit is the most we will pay for the sum of all damages under **COVERAGE A**, except damages because of “bodily injury” or “property damage” included in the “products-completed operations hazard”, and for medical expenses under **COVERAGE C** regardless of the number of:
 - a. Insureds;
 - b. Claims made or “suits” brought or
 - c. Persons or organization making claims or bringing “suits”
 - 3. Any payments made under **COVERAGE A** for damages or under **COVERAGE C** for medical expenses shall reduce the Designated Construction Project General Aggregate Limit for that designated construction project. Such payments shall not reduce the General Aggregate Limit shown in the Declarations nor shall they reduce any other Designated Construction Project General Aggregate Limit for any other designated construction project shown in the Schedule above.
 - 4. The limits shown in the Declarations for Each Occurrence, Fire Damage and Medical Expense continue to apply. However, instead of being

subject to the General Aggregate Limit shown in the Declarations, such limits will be subject to the applicable Designated Construction Project General Aggregate Limit.

- B.** For all sums which the insured becomes legally obligated to pay as damages caused by “occurrences” under **COVERAGE A (SECTION I)**, and for all medical expenses caused by accidents under **COVERAGE C (SECTION I)**, which cannot be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:
1. Any payments made under **COVERAGE A** for damages or under **COVERAGE C** for medical expenses shall reduce the amount available under the General Aggregate Limit or the Products-Completed Operations Aggregate Limit, whichever is applicable; and
 2. Such payments shall not reduce any Designated Construction Project General Aggregate Limit.
- C.** When coverage for liability arising out of the “products- completed operations hazard” is provided, any payments for damages because of “bodily injury” or “property damage” included in the “products-completed operations hazard” will reduce the Products-Completed Operations Aggregate Limit, and not reduce the General Aggregate Limit nor the Designated Construction Project General Aggregate Limit.
- D.** If the applicable designated construction project has been abandoned, delayed, or abandoned and then restarted, or if the authorized contracting parties deviate from plans, blueprints, designs, specifications or timetables, the project will still be deemed to be the same construction project.
- E.** The provisions of Limits of Insurance (**SECTION III**) not otherwise modified by this endorsement shall continue to apply as stipulated.

EXHIBIT C

**COMMERCIAL PROPERTY
CP 00 20 06 07**

BUILDERS RISK COVERAGE FORM

Various provisions in this policy restrict coverage. Read the entire policy carefully to determine rights, duties and what is and is not covered.

Throughout this policy the words “you” and “your” refer to the Named Insured shown in the Declarations. The words “we”, “us” and “our” refer to the Company providing this insurance. Other words and phrases that appear in quotation marks have special meaning. Refer to Section **G.**, Definitions.

A. Coverage

We will pay for direct physical loss of or damage to Covered Property at the premises described in the Declarations caused by or resulting from any Covered Cause Loss.

1. Covered Property

Covered Property as used in this Coverage Part, means the type of property described in this section, **A.1.**, and limited in **A.2.**, Property Not Covered, If a Limit of Insurance is shown in the Declarations for that type of property.

Building Under Construction, meaning the building or structure described in the Declarations while in the course of construction, including:

- a. Foundations;
- b. The following property:
 - (1) Fixtures and machinery;
 - (2) Equipment used to service the building; and
 - (3) Your building materials and supplies used for construction;

Provided such property is intended to be permanently located in or on the building or structure described in the Declarations or within 100 feet of its premises;

- c. If not covered by other insurance, temporary structures built or assembled on site, including cribbing,

scaffolding and construction forms.

2. Property Not Covered

Covered Property does not include:

- a. Land (including land on which the property is located) or water;
- b. The following property when outside of buildings:
 - (1) Lawns, trees, shrubs or plants;
 - (2) Radio or television antennas (including satellite dishes) and their lead-in wiring, master or towers; or
 - (3) Signs (other than signs attached to buildings)

3. Covered Causes of Loss

See applicable Causes Of Loss Form as shown in the Declarations.

4. Additional Coverages

a. Debris Removal

- (1) Subject to Paragraphs (3) and (4), we will pay your expense to remove debris of Covered Property caused by or resulting from a Covered Cause of Loss that occurs during the policy period. The expenses will be paid only if they are reported to us in writing within 180 days of the date of direct physical loss or damage.
- (2) Debris Removal does not apply to costs to:
 - (a) Extract “pollutants” from land or water; or

- (b) Remove, restore or replace polluted land or water.
- (3) Subject to the exceptions in paragraph (4), the following provisions apply:
- (a) The most we will pay for the total of direct physical loss or damage plus debris removal expense is the Limit of Insurance applicable to the Covered Property that has sustained loss or damage.
- (b) Subject to (a) above, the amount we will pay for debris removal expense is limited to 25% of the sum of the deductible plus the amount that we pay for direct physical loss or damage to the Covered Property that has sustained loss or damage.
- (4) We will pay up to an additional \$10,000 for debris removal expense, for each location, in any one occurrence of physical loss or damage to Covered Property if one or both of the following circumstances apply:
- (a) The total of the actual debris removal expense plus the amount we pay for direct physical loss or damage exceeds the Limit of Insurance on the Covered Property that has sustained loss or damage.
- (b) The actual debris removal expense exceeds 25% of the sum of the deductible plus the amount that we pay for direct physical loss or damage to the Covered Property that has sustained loss or damage.
- Therefore if (4)(a) and/or (4)(b) apply, our total payment for direct physical loss or damage and debris removal expense may reach but will never exceed the Limit of Insurance on the Covered Property that has sustained loss or damage, plus \$10,000.
- (5) **Examples**
The following examples assume that there is no Coinsurance penalty.

Example #1

Limit or Insurance:	\$90,000
Amount of Deductible:	\$ 500
Amount of Loss:	\$50,000
Amount of Loss Payable:	\$49,500
	(\$50,000 - \$500)
Debris Removal Expense:	\$10,000
Debris Removal Expense Payable:	\$10,000
	(\$10,000 is 20% of \$50,000.)

The debris removal expense is less than 25% of the sum of the loss payable plus the deductible. The sum of the loss payable and the debris removal expense (\$49,500 + \$10,000 = \$59,500.) is less than the Limit of Insurance. Therefore, the full amount of debris removal expense is payable in accordance with the terms of Paragraph (3).

Example #2

Limit of Insurance:	\$90,000
Amount of Deductible:	\$ 500
Amount of Loss:	\$80,000
Amount of Loss Payable:	\$79,500
	(\$80,000 - \$500)
Debris Removal Expense:	\$30,000
Debris Removal Expense Payable	
Basic Amount:	\$10,500
Additional Amount:	\$10,000

The basic amount payable for debris removal expense under the terms of Paragraph (3) is calculated as follows: \$80,000 (\$79,500 + \$500) x .25 = \$20,000; capped at \$10,500. The cap applies because the sum of the loss payable (\$79,500) and the basic amount payable for debris removal expense (\$10,500) cannot exceed the Limit of Insurance (\$90,000).

The additional amount payable for debris removal expense is provided in accordance with the terms of Paragraph (4), because the debris removal expense (\$30,000) exceeds 25% of the loss payable plus the deductible (\$30,000 is 37.5% of \$80,000), and because the sum of loss payable and debris removal expense (\$79,500 + \$30,00 = \$109,500) would exceed the Limit of Insurance (\$90,000). The additional amount of covered debris removal expense is \$10,000, the maximum payable under Paragraph (4). Thus the total payable for debris removal expense in this example is \$20,500; \$9,500 of the debris removal expense is not covered.

b. Preservation Of Property

If it is necessary to move Covered Property from the described premises to preserve it from loss or damage by a Covered Cause of Loss, we will pay for any direct physical loss or damage to that property:

- (1) While it is being moved or while temporarily stored at another location; and
- (2) Only if the loss or damage occurs within 30 days after the property is first moved.

c. Fire Department Service Charge

When the fire department is called to save or protect Covered Property from a Covered Cause of Loss, we will pay up to \$1,000, unless a higher limit is shown in the Declarations, for your liability for fire department service charges:

- (1) Assumed by contract or agreement prior to loss; or
- (2) Required by local ordinance.

No Deductible applies to this Additional Coverage.

d. Pollutant Clean-up And Removal

We will pay your expense to extract “pollutants” from land or water at the described premises if the discharge, dispersal, seepage, migration, release or escape of the “pollutants” is caused by or results from a Covered Cause of Loss that occurs during the policy period. The

expense will be paid only if they are reported to us in writing within 180 days of the date on which the Covered Cause of Loss occurs.

This Additional Coverage does not apply to costs to test for, monitor or assess the existence, concentration or effects of “pollutants”. But we will pay for testing which is performed in the course of extracting the “pollutants” from the land or water.

The most we will pay under this Additional Coverage for each described premises is \$10,000 for the sum of all covered expenses arising out of Covered Causes of Loss occurring during each separate 12 month period of this policy.

5. Coverage Extensions

a. Building Materials And Supplies Of Others

(1) You may extend the insurance provided by this Coverage Form to apply to building materials and supplies that are:

- (a) Owned by others;
- (b) In your care, custody or control;
- (c) Located in or on the building described in the Declarations, or within 100 feet of its premises; and
- (d) Intended to become a permanent part of the building.

(2) The most we will pay for loss or damage under this Extension is \$5,000 at each described premises, unless a higher Limit of Insurance is specified in the Declarations. Our payment for loss of or damage to property of others will only be for the account of the owner of the property.

b. Sod, Trees, Shrubs And Plants

You may extend the insurance provided by this Coverage Form to apply to loss or damage to sod, trees, shrubs and plants outside of buildings on the described premises, if the loss or damage is caused by or results from any of the following causes of loss:

- (1) Fire;
- (2) Lightning;

- (3) Explosion;
- (4) Riot or Civil Commotion; or
- (5) Aircraft.

The most we will pay for loss or damage under this Extension is \$1,000, but not more than \$250 for any one tree, shrub or plant. These limits apply to any one occurrence, regardless of the types or number of items lost or damaged in that occurrence.

B. Exclusions And Limitations

See applicable Causes Of Loss From as shown in the Declarations.

C. Limits Of Insurance

The most we will pay for loss or damage in any one occurrence is the applicable Limit of Insurance shown in the Declarations.

The most we will pay for the loss or damage to outdoor signs attached to buildings is \$2,500 per sign in any one occurrence.

The limits applicable to the Coverage Extensions and the Fire Department Service Charge and Pollutant Clean-up And Removal Additional Coverage are in addition to the Limit of insurance.

Payments under the Preservation Of Property Additional Coverage will not increase the applicable Limit of insurance.

D. Deductible

In any one occurrence of loss or damage (hereinafter referred to as loss), we will first reduce the amount of loss if required by Additional Condition – Need For Adequate Insurance. If the adjusted amount of loss is less than or equal to the Deductible, we will not pay for that loss. If the adjusted amount of loss exceeds the Deductible, we will then subtract the Deductible from the adjusted amount of loss, and will pay the resulting amount or the Limit of Insurance, whichever is less.

When the occurrence involves loss to more than one item of Covered Property and separate Limits of Insurance apply, the losses will not be combined in determining application of the Deductible But the Deductible will be applied only once per occurrence.

Example #1

(This example assumes there is no penalty for underinsurance.)

Deductible:	\$ 1,000
Limit of Insurance – Building #1:	\$ 60,000
Limit of Insurance – Building #2:	\$ 80,000
Loss to Building #1:	\$ 60,100
Loss to Building #2:	\$ 90,000

The amount of loss to Building #1 (\$60,100) is less than the sum (\$61,000) of the Limit of Insurance applicable to Building #1 plus the Deductible.

The Deductible will be subtracted from the amount of loss in calculating the loss payable for Building #1:

\$60,100	
<u>- 1,000</u>	
\$59,100	Loss Payable – Building #1

The Deductible applies once per occurrence and therefore is not subtracted in determining the amount of loss payable for Building #2. Loss payable for Building #2 is the Limit of Insurance of \$80,000.

Total amount of loss payable: \$59,100 + \$80,000 = \$139,100.

Example #2

(This example, too, assumes there is no penalty for underinsurance.)

The Deductible and Limits of Insurance are the same as those in Example #1

Loss to Building #1:	\$ 70,000
(Exceeds Limit of Insurance plus Deductible)	
Loss to Building # 2	\$ 90,000
(Exceeds Limit of Insurance plus Deductible)	
Loss Payable - Building #1:	\$ 60,000
(Limit of Insurance)	
Loss Payable – Building #2	\$ 80,000
(Limit of Insurance)	

Total amount of loss payable:
\$140,000

E. Loss Conditions

The following conditions apply in addition to the Common Policy Conditions and the Commercial Property Conditions.

1. Abandonment

There can be no abandonment of any property to us.

Appraisal

If we and you disagree on the value of the property or the amount of loss, either may make written demand for an appraisal of the loss. In this event, each party will select a competent and impartial appraiser. The two appraisers will select and umpire. If they cannot agree, either may request that selection be made by a judge of a court having jurisdiction. The appraiser will state separately the value of the property and amount of loss. If they fail to agree, they will submit their differences to the umpire. A decision agreed to by any two will be binding. Each party will:

- a. Pay its chosen appraiser; and
- b. Bear the other expenses of the appraisal and umpire equally.

If there is an appraisal, we will still retain our right to deny claim.

3. Duties In The Event Of Loss Or Damage

a. You must see that the following are done in the event of loss or damage to Covered Property:

- (1) Notify the police if a law may have been broken.
- (2) Give us prompt notice of the loss or damage. Include a description of the property involved.
- (3) As soon as possible, give us a description of how, when and where the loss or damage occurred.
- (4) Take all reasonable steps to protect the Covered Property from further damage, and keep a record of your expenses necessary to protect the Covered Property, for consideration in the settlement of the claim. This will not increase the Limit of Insurance. However, we will not pay for any subsequent loss or damage resulting from cause of loss that is not a Covered Cause of Loss. Also if feasible, set the damaged property aside and in the best possible order for

examination.

- (5) At our request, give us complete inventories of the damaged and undamaged property. Include quantities, costs, values and amount of loss claimed.
- (6) As often as may be reasonably required, permit us to inspect the property proving the loss or damage and examine your books and records. Also permit us to take samples of damaged and undamaged property for inspection, testing and analysis, and permit us to make copies from your books and records
- (7) Send us a signed, sworn proof of loss containing the information we request to investigate the claim. You must do this within 60 days after our request. We will supply you with the necessary forms.
- (8) Cooperate with us in the investigation or settlement of the claim.
 - b. we may examine any insured under oath while not in the presence of any other insured and at such times as may be reasonably required, about any matter relating to this insurance or the claim, including an insured's books and records. In the event of an examination, an insured's answer must be signed.

4. Loss Payment

a. In the event of loss or damage covered by this Coverage Form, at our option, we will either:

- (1) Pay the value of lost or damaged property;
- (2) pay the cost of repairing or replacing the lost or damaged property, subject to b. below;
- (3) Take all or any part of property at an agreed or appraised value; or
- (4) Repair, rebuild or replace the property with other property of like kind and quality, subject to b. below.

We will determine the value of lost or damaged property, or the cost of its repair

or replacement, in accordance with the applicable terms of the Valuation Condition in this Coverage Form or any applicable provision which amends or supersedes the Valuation Condition.

- b.** The cost to repair, rebuild or replace does not include the increased cost attributable to enforcement of any ordinance or law regulating the construction, use or repair of any property.
- c.** We will give notice of our intentions within 30 days after we receive the sworn proof of loss.
- d.** We will not pay you more than your financial interest in the Covered Property.
- e.** We may adjust losses with the owners of lost or damaged property if other than you. If we pay the owners, such payments will satisfy your claims against us for the owners' property. We will not pay the owners more than their financial interest in the Covered Property.
- f.** We may elect to defend you against suits arising from claims of owners of property. We will do this at our expense.
- g.** We will pay for covered loss or damage within 30 days after we receive the sworn proof of loss, if you have complied with all of the terms of this Coverage Part and:
 - (1)** We have reached agreement with you on the amount of loss; or
 - (2)** An appraisal award has been made.
- h.** A party wall is a wall that separates and is common to adjoining buildings that are owned by different parties. In settling covered losses involving a party wall, we will pay a portion of the loss to the party wall based on your interest in the wall in proportion to the interest of the owner of the adjoining building. However, if you elect to repair or replace your building and the owner of the adjoining building elects not to repair or replace the building, we will pay you the full value of the loss to the party wall, subject to all

applicable policy provisions including Limits of Insurance, the Valuation and Coinsurance Conditions and all other provisions of this Loss Payment Condition. Our payment under the provision of this paragraph does not alter any right of subrogation we may have against any entity, including the owner or insurer of the adjoining building, and does not alter the terms of the Transfer Of Rights Of Recovery Against Others To Us Condition in this policy.

5. Recovery Property

If either you or we recover any property after loss settlement, that party must give the other prompt notice. At your option, the property will be returned to you. You must then return to us the amount we paid to you for the property. We will pay recovery expenses and the expenses to repair the recovered property, subject to the Limit of Insurance.

6. Valuation

We will determine the value of Covered Property at actual cash value as of the time of loss or damage.

F. Additional Conditions

The following conditions apply in addition to the Common Policy Conditions and the Commercial Property Conditions.

1. Mortgageholders

- a.** The term mortgageholder includes trustee.
- b.** We will pay for covered loss of or damage to buildings or structures to each mortgageholder shown in the Declarations in their order of precedence, as interests may appear.
- c.** The mortgageholder has the right to receive loss payment even if the mortgageholder has started foreclosure or similar action on the building or structure.
- d.** If we deny your claim because of your acts or because you have failed to comply with the terms of this Coverage Part, the mortgageholder will still have the right to receive loss payment if the mortgageholder:

- (1) Pays any premium due under this Coverage Part at our request if you have failed to do so;
- (2) Submits a signed, sworn proof of loss within 60 days after receiving notice from us of your failure to do so; and
- (3) Has notified us of any change in ownership, occupancy or substantial change in risk known to the mortgageholder.

All of the terms of this Coverage Part will then apply directly to the mortgageholder.

e. If we pay the mortgageholder for any loss or damage and deny payment to you because of your acts or because you have failed to comply with the terms of this Coverage Part:

- (1) The mortgageholder's rights under the mortgage will be transferred to us to the extent of the amount we pay; and
- (2) The mortgageholder's right to recover the full amount of the mortgageholder's claim will not be impaired.

At our option, we may pay to the mortgageholder the whole principal on the mortgage plus any accrued interest. In this event, your mortgage and note will be transferred to us and you will pay your remaining mortgage debt to us.

f. If we cancel this policy, we will give written notice to the mortgageholder at least:

- (1) 10 days before the effective date of cancellation if we cancel for your nonpayment of premium; or
- (2) 30 days before the effective date of cancellation if we cancel for any other reason.

g. If we elect not to renew this policy, we will give written notice to the mortgageholder at least 10 days before the expiration date of this policy.

2. Need for Adequate Insurance

We will not pay a greater share of any loss than the portion that the Limit of

Insurance bears to the value on the date of completion of the building described in the Declarations.

EXAMPLE #1 (UNDERINSURANCE)

When: The value of the building on the date of completion is: \$200,000
 The Limit of Insurance for it is: \$100,000
 The Deductible is: \$ 500
 The amount of loss is: \$ 80,000

Step (1): $\$100,000 \div \$200,000 = .50$

Step (2): $\$80,000 \times .50 = \$40,000$

Step (3): $\$40,000 - \$500 = \$39,500.$

We will pay no more than \$39,500. The remaining \$40,500 is not covered.

EXAMPLE #2 (ADEQUATE INSURANCE)

When: The value of the building on the date of completion is: \$200,000
 The Limit of Insurance for it is: \$200,000
 The Deductible is: \$ 1,000
 The amount of loss is: \$ 80,000

The limit of Insurance in the example is adequate and therefore no penalty applies. We will pay no more than \$79,000 (\$80,000 amount of loss minus the deductible of \$1,000).

3. Restriction Of Additional Coverage – Collapse

If the Causes Of Loss – Broad Form is applicable to this Coverage Form, Paragraph C.2.f. of the Additional Coverage – Collapse does not apply to this Coverage Form.

If the Cause Of Loss – Special Form is applicable to this Coverage Form, Paragraphs D.2.c. and D.2.d of the Additional Coverage Collapse do not apply to this Coverage Form.

4. When Coverage Ceases

The insurance provided by this Coverage Form will end when one of the following first occurs:

- a. This policy expires or is cancelled.
- b. The property is accepted by the purchaser;
- c. Your interest in the property ceases;
- d. You abandon the construction with no intention to complete it;
- e. Unless we specify otherwise in writing.
 - (1) 90 days after construction is complete or;
 - (2) 60 days after any building described in the Declarations is:
 - (a) Occupied in whole or in part; or
 - (b) Put to its intended use.

G. Definitions

“Pollutants” means any solid, liquid, gaseous or thermal irritant or contaminant, including smoke, vapor, soot, fumes, acids, alkalis, chemicals and waste. Waste includes materials to be recycled, reconditioned or reclaimed.

CAUSES OF LOSS – SPECIAL FORM

Words and phrases that appear in quotation marks have special meaning. Refer to Section **G.**, Definitions.

A. Covered Causes Of Loss

When Special is shown in the Declarations, Covered Causes of Loss means Risk of Direct Physical Loss unless the loss is:

1. Excluded in Section **B.**, Exclusions; or
2. Limited in Section **C.**, limitations; that follow.

B. Exclusions

1. We will not pay for loss or damage caused directly or indirectly by any of the following. Such loss or damage is excluded regardless of any other cause or event that contributes concurrently or in any sequence to the loss.

a. Ordinance or Law

The enforcement of any ordinance or law:

- (1) Regulating the construction, use or repair of any property; or
- (2) Requiring the tearing down of any property, including the cost of removing its debris.

This exclusion, Ordinance Or Law applies whether the loss results from:

- (a) An ordinance or law that is enforced even if the property has not been damaged; or
- (b) The increased costs incurred to comply with an ordinance or law in the course of construction, repair, renovation, remodeling or demolition of property, or removal of its debris, following a physical loss to that property.

b. Earth movement

- (1) Earthquake, including any earth sinking, rising or shifting related to such

event;

- (2) Landslide including any earth sinking, rising or shifting related to such event.
- (3) Mine subsidence, meaning subsidence of a man-made mine, whether or not mining activity has ceased;
- (4) Earth sinking (other than sinkhole collapse), rising or shifting including soil conditions which cause settling, cracking or other disarrangement of foundations or other parts or realty. Soil conditions include contraction, expansion, freezing, thawing, erosion, improperly compacted soil and the action of water under the ground surface.

But if Earth Movement, as described in **b.(1)** through **(4)** above, results in fire or explosion, we will pay for the loss or damage caused by that fire or explosion.

- (5) Volcanic eruption, explosion or effusion. But if volcanic eruption, explosion or effusion results in fire, building glass breakage or Volcanic Action, we will pay for the loss or damage caused by that fire, building glass breakage or Volcanic Action.

Volcanic Action means direct loss or damage resulting from the eruption of a volcano when the loss or damage is caused by:

- (a) Airborne volcanic blast or airborne shock waves;
- (b) Ash, dust or particulate matter; or
- (c) Lava flow.

All volcanic eruptions that occur within any 168-hour period will constitute a single occurrence.

Volcanic Action does not include the cost to remove ash, dust or particulate matter that does not cause direct physical loss or damage to the described property.

c. Governmental Action

Seizure or destruction of property by order of governmental authority.

But we will pay for loss or damage caused by or resulting from acts of destruction ordered by governmental authority and taken at the time of a fire to prevent its spread, if the fire would be covered under this Coverage Part.

d. Nuclear Hazard

Nuclear reaction or radiation, or radioactive contamination, however caused.

But if nuclear reaction or radiation, or radioactive contamination, results in fire, we will pay for the loss or damage caused by that fire.

e. Utility Services

The failure of power, communication, water or other utility service supplied to the described premises, however caused, if the failure:

- (1) Originates away from the described premises; or
- (2) Originates at the described premises but only if such failure involves equipment used to supply the utility service to the described premises from a source away from the described premises.

Failure of any utility service includes lack of sufficient capacity and reduction in supply. Loss or damage caused by a surge of power is also excluded, if the surge would not have occurred but for an event causing failure of power.

But if the failure or surge of power, or the failure of communication, water or other utility service, results in Covered Cause of loss, we will pay for the loss or damage caused by that Covered Cause of Loss.

Communication services include but are

not limited to service relating to Internet access or access to any electronic, cellular or satellite network.

f. War And Military Action

- (1) War, including undeclared or civil war;
- (2) Warlike action by military force, including action in hindering or defending against an actual or expected attack, by any government, sovereign or other authority using military personnel or other agents; or
- (3) Insurrection, rebellion, revolution, usurped power, or action taken by governmental authority in hindering or defending against any of these.

g. Water

- (1) Flood, surface water, waves, tides, tidal waves, overflow of any body of water or their spray, all whether driven by wind or not;
- (2) Mudslide or mudflow;
- (3) Water that backs up or overflows from a sewer, drain or sump; or
- (4) Water under the ground surface pressing on, or flowing or seeping through:
 - (a) Foundations, walls, floors or paved surfaces;
 - (b) Basements, whether paved or not; or
 - (c) Doors, windows or other openings.

But if Water, as described in **g.(1)**. Through **g.(4)**. above, results in fire, explosion or sprinkler leakage, we will pay for the loss or damage caused by that fire explosion or sprinkler leakage.

h. "Fungus", Wet Rot, Dry Rot And Bacteria

Presence, growth, proliferation, spread or any activity of "fungus", wet or dry rot or bacteria.

But if "fungus", wet or dry rot or bacteria results in a "specified cause of loss", we will pay for the loss or damage caused by that "specified cause of loss". This exclusion does not apply:

1. When “fungus”, wet or dry rot or bacteria results from fire or lightning; or
2. To the extent that coverage is provided in the Additional Coverage – Limited Coverage For “Fungus”, Wet Rot, Dry Rot And Bacteria with respect to loss or damage by a cause of loss other than fire or lightning.

Exclusions **B.1.a.** through **B.1h.** apply whether or not the loss event results in widespread damage or affects a substantial area.

2. We will not pay for loss or damage caused by or resulting from any of the following:

a. Artificially generated electrical, magnetic or electromagnetic energy that damages, disturbs, disrupts or otherwise interferes with any:

- (1) Electrical or electronic wire, device, appliance, system or network; or
- (2) Device, appliance, system or network utilizing cellular or satellite technology.

For the purpose of this exclusion, electrical, magnetic or electromagnetic energy includes but is not limited to:

- (a) Electrical current, including arcing;
- (b) Electrical charge produced or conducted by a magnetic or electromagnetic field;
- (c) Pulse of electromagnetic energy; or
- (d) Electromagnetic waves or microwaves.

But if fire results, we will pay for the loss or damage caused by the fire.

- b.** Delay, loss of use or loss of market.
- c.** Smoke, vapor or gas from agricultural smudging or industrial operations
- d. (1)** Wear and tear;
- (2)** Rust or other corrosion, decay, deterioration, hidden or latent defect or any quality in property that causes it to damage or destroy itself;
- (3)** Smog;
- (4)** Setting, cracking, shrinking or expansion;

(5) Nesting or infestation, or discharge or release of waste products or secretions, by insects, birds, rodents or other animals.

(6) Mechanical breakdown, including rupture or bursting caused by centrifugal force. But if mechanical breakdown results in elevator collision, we will pay for the loss or damage caused by the elevator collision.

(7) The following causes of loss to personal property:

- (a)** Dampness or dryness of atmosphere;
- (b)** Changes in or extremes of temperature; or
- (c)** Marring or scratching.

But if an excluded cause of loss that is listed in **2.d.(1).** through **(7)** results in a “specified cause of loss” or building glass breakage, we will pay for the loss or damage caused by that “specified cause of loss” or building glass breakage.

e. Explosion of steam boilers, steam pipes, steam engines or steam turbines owned or leased by you, or operated under your control. But if explosion of steam boilers, steam pipes, steam engines or steam turbines result in fire or combustion explosion, we will pay for the loss or damage caused by that fire or combustion explosion. We will also pay for loss or damage caused by or resulting from explosion of gases or fuel within the furnace of any fired vessel or within the flues or passages through which the gases of combustion pass.

f. Continuous or repeated seepage or leakage of water, or the presence or condensation of humidity, moisture or vapor, that occurs over period of 14 days or more.

g. Water, other liquids, powder or molten material that leaks or flows from plumbing, heating, air conditioning or other equipment (except fire protective systems) caused by or resulting from freezing, unless:

- (1) You do your best to maintain heat in the building or structure; or
- (2) You drain the equipment and shut off the supply if the heat is not maintained.

h. Dishonest or criminal act by you, any of your partners, members, officers, managers, employees (including leased employees), directors, trustees, authorized representatives or anyone to whom you entrust the property for any purpose.

- (1) Acting alone or in collusion with others; or
- (2) You drain the equipment and shut off the supply if the heat is not maintained.

This exclusion does not apply to acts of destruction by your employees (including leased employees); but theft by employees (including leased employees) is not covered.

i. Voluntary parting with any property by you or anyone else to whom you have entrusted the property if induced to do so by any fraudulent scheme, trick, device or false pretense.

j. rain, snow, ice or sleet to personal property in the open.

k. Collapse, including any of the following conditions of property or any part of the property:

- (1) An abrupt falling down or caving in;
- (2) Loss of structural integrity, including separation of parts of the property or property in danger of falling down or caving in; or
- (3) Any cracking, bulging, sagging, bending, leaning, setting, shrinkage or expansion as such condition relates to (1) or (2) above.

But if collapse results in a Covered Cause of Loss at the described premises, we will pay for the loss or damage caused by that Covered Cause of Loss.

The exclusion, **k.**, does not apply:

- (a) To the extent that coverage is provided under the Additional Coverage – Collapse; or
- (b) To collapse caused by one or more of the following:

- (i) The “specified cause of loss”;
- (ii) Breakage of building glass;
- (iii) Weight of rain that collects on a roof; or
- (iv) Weight of people or personal property.

l. Discharge, dispersal, seepage, migration, release or escape of “pollutants” unless the discharge, dispersal, seepage, migration, release or escape is itself caused by any of the “specified causes of loss”. But if the discharge, dispersal, seepage, migration, release or escape of “pollutants” results in “specified cause of loss”, we will pay for the loss or damage caused by that “specified cause of loss”.

The exclusion, **l.**, does not apply to damage to glass caused by chemicals applied to glass.

m. Neglect of an insured to use all reasonable means to save and preserve property from further damage at and after the time loss.

3. We will not pay for loss or damage caused by or resulting from any of the following, **3.a.** through **3.c.** But if an excluded cause of loss that is listed in **3.a.** through **3.c.** results in a Covered Cause of Loss, we will pay for the loss or damage caused by that Covered Cause of Loss.

a. Weather conditions. But this exclusion only applies if weather conditions contribute in any way with a cause or event excluded in Paragraph **1.** above to produce the loss or damage.

b. Acts or decisions, including the failure to act or decide, of any person, group, organization or governmental body.

c. Faulty, inadequate or defective:

- (1) Planning, zoning, development, surveying, siting;
- (2) Design, specifications, workmanship, repair, construction, renovation, remodeling, grading, compaction;
- (3) Materials used in repair, construction renovation or remodeling; or
- (4) Maintenance;

of part or all of any property on or off the described premises.

4. Special Exclusions

The following provisions apply only to the specified Coverage Forms.

a. Business Income (And Extra Expense) Coverage Form, Business Income (Without Extra Expense) Coverage Form, Or Extra Expense Coverage Form

We will not pay for:

- (1)** Any loss caused by or resulting from:
 - (a)** Damage or destruction of “finished stock”; or
 - (b)** The time required to reproduce “finished stock”.

This exclusion does not apply to Extra Expense.

- (2)** Any loss caused by or resulting from direct physical loss or damage to radio or television antennas (including satellite dishes) and their lead in-wiring, masts or towers.

- (3)** Any increase of loss caused by or resulting from:

- (a)** Delay in rebuilding, repairing or replacing the property or resuming “operations”, due to interference at the location of the rebuilding, repair or replacement by strikers or other persons; or

- (b)** Suspension, lapse or cancellation of any license, lease or contract. But if the suspension, lapse or cancellation is directly caused by the “suspension” of “operations”, we will cover such loss that affects your Business Income during the “period of restoration” and any extension of the “period of restoration” in accordance with the terms of the Extended business Income Additional Coverage and the Extended Periods Of Indemnity Optional Coverage or any variation of these.

- (4)** Any Extra Expense caused by or resulting from suspension, lapse or cancellation of any license, lease or

contract beyond the “period of restoration”.

- (5)** Any other consequential loss.

b. Leasehold interest Coverage Form

- (1)** Paragraph **B.1.a.**, Ordinance Or Law, does not apply to insurance under this Coverage Form.
- (2)** We will not pay for any loss caused by:
 - (a)** Your cancelling the lease;
 - (b)** The suspension lapse or cancellation of any license; or
 - (c)** Any other consequential loss.

c. Legal liability Coverage Form

- (1)** The following exclusions do not apply to insurance under this Coverage Form:

- (a)** Paragraph **B.1.a.**, Ordinance Or Law;
- (b)** Paragraph **B.1.c.**, Governmental Action
- (c)** Paragraph **B.1.d.**, Nuclear Hazard;
- (d)** Paragraph **B.1.e.**, Utility Services; and
- (e)** Paragraph **B.1.f.**, War And Military Action

- (2)** The following additional exclusions apply to insurance under this Coverage Form:

(a) Contractual Liability

We will not defend any claim or “suit”, or pay damages that you are legally liable to pay solely by reason of your assumption of liability in a contract or agreement. But this exclusion does not apply to a written lease agreement in which you have assumed liability for building damage resulting from an actual or attempted burglary or robbery, provided that:

- (i)** Your assumption of liability was executed prior to accident; and
- (ii)** The building is Covered Property under this Coverage Form.

(b) Nuclear Hazard

We will not defend any claim or “suit”, or pay any damages, loss,

expense or obligation, resulting from nuclear reaction or radiation, or radioactive contamination, however caused.

5. Additional Exclusion

The following provisions apply only to the specified property.

LOSS OR DAMAGE TO PRODUCTS

We will not pay for loss or damage to any merchandise, goods or other product caused by or resulting from error or omission by any person or entity (including those having possession under an arrangement where work or a portion of the work is outsourced) in any stage of the development, production or use of the product, including planning, testing, processing, packaging, installation, maintenance or repair. This exclusion applies to any effect that compromises the form, substance or quality of the product. But if such error or omission results in a Covered Cause loss, we will pay for the loss or damage caused by that Covered Cause of Loss.

C. Limitations

The following limitations apply to all policy forms and endorsements, unless otherwise stated.

1. We will not pay for loss of or damage to property, as described and limited in the section. In addition, we will not pay for any loss that is a consequence of loss or damage as described and limited in this section.

a. Steam boilers, steam pipes steam engines or steam turbines caused by or resulting from any condition or event inside such equipment. But we will pay for loss of or damage to such equipment caused by or resulting from an explosion of gases or fuel within the furnace of any fired vessel or within the flues or passages through which the gases of combustion pass.

b. Hot water boilers or other water heating equipment caused by ore resulting from any condition or event

inside such boilers or equipment, other than an explosion.

c. The interior of any building or structure or to personal property in the building or structure, caused by or resulting from rain, snow, sleet, ice, sand or dust, whether driven by wind or not, unless:

(1) The building or structure first sustains damage by a Covered Cause of Loss to its roof or walls through which the rain, snow, sleet, ice, sand or dust enters; or

(2) The loss or damage is caused by or results from thawing of snow, sleet or ice on the building or structure.

d. Building materials and supplies not attached as part of the building or structure caused by or resulting from theft.

However, this limitation does not apply to:

(1) Building materials and supplies held for sale by you, unless they are insured under the Builders Risk Coverage Form; or

(2) Business Income Coverage or Extra Expense Coverage.

e. Property that is missing, where the only evidence of the loss or damage is a shortage disclosed on taking inventory, or other instances where there is no physical evidence to show what happened to the property.

f. Property that has been transferred to a person or to a place outside the described premises on the basis of unauthorized instructions.

2. We will not pay for loss of or damage to the following types of property unless caused by the "specified causes of loss" or building glass breakage:

a. Animals, and then only if they are killed or their destruction is made necessary.

b. Fragile articles such as statuary, marbles, chinaware and porcelains, if broken. This restriction does not apply to:

- (1) Glass; or
- (2) Containers of property held for sale.
- c. Builders' machinery, tools and equipment owned by you or entrusted to you, provided such property is Covered Property.
 - (1) If the property is located on or within 100 feet of the described premises, unless the premises is insured under the Builders Risk Coverage Form; or
 - (2) To Business Income Coverage or to Extra Expense Coverage.
- 3. The special limit shown for each category, a. through d., is the total limit for loss of or damage to all property in that category. The special limit applies to any one occurrence of theft, regardless of the types or number of articles that are lost or damaged in that occurrence. The special limits are:
 - a. \$2,500 for furs, fur garments and garments trimmed with fur.
 - b. \$2,500 for jewelry, watches, watch movements, jewels, pearls, precious and semiprecious stones, bullion, gold, silver, platinum, and other precious alloys or metals. This limit does not apply to jewelry and watches worth \$100 or less per item.
 - c. \$2,500 for patterns, dies, molds and forms.
 - d. \$250 for stamps, tickets, including lottery tickets held for sale, and letters for credit.
 These special limits are part of, not in addition to, the Limit of Insurance applicable to the Covered Property. This limitation, **C.3.**, does not apply to Business Income Coverage or Extra Expense Coverage.
- 4. We will not pay the cost to repair any defect to a system or appliance from which water, other liquid, powder or molten material escapes. But we will pay the cost to repair or replace damaged parts of fire-extinguishing equipment if the damage:
 - a. Results in discharge of any substance from an automatic fire protection system; or
 - b. Is directly caused by freezing.
 However, this limitation does not apply to

Business Income Coverage or to Extra Expense Coverage.

D. Additional Coverage – Collapse

The coverage provided under this Additional Coverage – Collapse applies only to an abrupt collapse as described and limited in **D.1.**, through **D.7.**,

- 1. For the purpose of this Additional Coverage –Collapse, abrupt collapse means an abrupt falling down or caving in of a building or any part of a building with the result that building or part of the building cannot be occupied for its intended purpose.
- 2. We will pay for direct physical loss or damage to Covered Property, caused by abrupt collapse of building or any part of a building that is insured under this Coverage Form or that contains Covered Property insured under this Coverage Form, if such collapse is caused by one or more of the following.
 - a. Building decay that is hidden from view unless the presence of such decay is known to an insured prior to collapse;
 - b. Insect or vermin damage that is hidden from view, unless the presence of such damage is known to an insured prior to collapse;
 - c. Use of defective material or methods in construction, remodeling or renovation if the abrupt collapse occurs during the course of the construction, remodeling or renovation.
 - d. Use of defective material or methods in construction, remodeling or renovation if the abrupt collapse occurs after the construction, remodeling or renovation is complete but only if the collapse is caused in part by:
 - (1) A cause of loss listed in **2.a.** or **2.b.**;
 - (2) One or more of the “specified causes of loss”;
 - (3) Breakage of building glass;
 - (4) Weight of people or personal property; or
 - (5) Weight of rain that collects on a roof.

3. This Additional Coverage – Collapse does **not** apply to:

- a.** A building or any part of a building that is in danger of falling down or caving in;
- b.** A part of a building that is standing, even if it has a separated from another part of the building; or
- c.** A building that is standing or any part of a building that is standing even if it shows evidence of cracking, bulging, sagging, bending, leaning, settling, shrinkage or expansion.

4. With respect to the following property:

- a.** Outdoor radio or television antennas (including satellite dishes) and their lead-in wiring, masts or towers;
- b.** Awnings, gutters and downspouts;
- c.** Yard fixtures;
- d.** Outdoor swimming pools;
- e.** Fences;
- f.** Piers, wharves and docks;
- g.** Beach or diving platforms or appurtenances;
- h.** Retaining walls; and
- i.** Walks, roadways and other paved surfaces;

if an abrupt collapse is caused by cause of loss listed in **2.a.** through **2.d.**, we will pay for loss or damage to that property only if:

(1) Such loss or damage is a direct result of the abrupt collapse of a building insured under this Coverage Form.

(2) The property is Covered Property under this Coverage Form.

5. If personal property abruptly falls down or caves in and such collapse is **not** the result of abrupt collapse of a building, we will pay for loss or damage to Covered property caused by such collapse of personal property only if:

- a.** The collapse of personal property was caused by a cause of loss listed in **2.a.** through **2.d.**;
- b.** The personal property which collapses is inside a building; and
- c.** The property which collapses is not of a kind listed in **4.**, regardless of whether

that kind of property is considered to be personal property or real property.

The coverage stated in the Paragraph **5.** does not apply to personal property if marring and/or scratching is the only damage to that personal property caused by the collapse.

6. This Additional Coverage – Collapse does not apply to a personal property that has not abruptly fallen down or caved in, even if the personal property shows evidence of cracking, bulging, sagging, bending, leaning, settling, shrinkage or expansion.

7. This Additional Coverage – Collapse will not increase the Limits of Insurance provided in this Coverage Part.

8. The term Covered Cause of Loss includes the Additional Coverage – Collapse as described and limited in **D.1.** through **D.7.**

E. Additional Coverage – Limited Coverage For “Fungus”, Wet Rot, Dry Rot And Bacteria

1. The coverage described in **E.2.** and **E.6.** only applies when the “fungus”, wet or dry rot or bacteria is the result of one or more of the following causes that occurs during the policy period and only if all reasonable means were used to save and preserve the property from further damage at the time of and after that occurrence.

a. A “specified cause of loss” other than fire or lightning; or

b. Flood, if Flood Coverage Endorsement applies to the affected premises.

2. We will pay for loss or damage by “fungus” wet or dry rot or bacteria. As used in this Limited Coverage, the term loss or damage means:

a. Direct physical loss or damage to Covered Property caused by “fungus”, wet or dry rot or bacteria including the cost of removal of the “fungus”, wet or dry rot or bacteria;

b. The cost to tear out and replace any part of the building or other property as needed to gain access to the “fungus”, wet or dry rot or bacteria; and

c. The cost of testing performed after

removal, repair, replacement or restoration of the damaged property is completed, provided there is a reason to believe that “fungus”, wet or dry rot or bacteria are present.

3. The coverage described under **E.2.** of this Limited Coverage is limited to \$15,000. Regardless of the number of claims, this limit is the most we will pay for the total of all loss or damage arising out of all occurrences of “specified cause of loss” (other than fire or lightning) and Flood which take place in a 12 month period (starting with the beginning of the present annual policy period). With respect to a particular occurrence of loss which results in “fungus”, wet or dry rot or bacteria, we will not pay more than a total of \$15,000 even if the “fungus”, wet or dry rot or bacteria continues to be present or active, or recurs, in a later policy period.
4. The coverage provided under this Limited Coverage does not increase the applicable Limit of Insurance on any Covered Property. If a particular occurrence results in loss or damage by “fungus”, wet or dry rot or bacteria, and other loss or damage, we will not pay more, for the total of all loss or damage, than the applicable Limit of Insurance on the affected Covered Property.

If there is covered loss or damage to Covered Property, not caused by “fungus”, wet or dry rot or bacteria, loss payment will not be limited by the terms of this Limited Coverage, except to the extent that “fungus”, wet or dry rot or bacteria causes an increase in the loss. Any such increase in the loss will be subject to the terms of this Limited Coverage.

5. The terms of this Limited Coverage do not increase or reduce the coverage provided under Paragraph **F.2.** (Water Damage, Other Liquids, Powder Or Molten Material Damage) of this Causes Of Loss Form or under the Additional Coverage – Collapse.
6. The following, **6.a** or **6.b.**, applies only if Business Income and/or Extra Expense

Coverage applies to the described premises and only if the “suspension” of “operations” satisfies all terms and conditions of the applicable Business Income and/or Extra Expense Coverage Form.

- a. If the loss which resulted in “fungus”, wet rot or dry rot or bacteria does not in itself necessitate a “suspension” of “operations”, but such “suspension” is necessary due to loss or damage to property caused by “fungus” wet or dry rot or bacteria, then our payment under Business Income and/or Extra Expense is limited to the amount of loss and/or expense sustained in a period of not more than 30 days. The days need not be consecutive.
- b. If a covered “suspension” of “operations” was caused by loss or damage other than “fungus”, wet or dry rot or bacteria but remediation of “fungus”, wet or dry rot or bacteria but remediation of “fungus”, wet or dry rot or bacteria prolongs the “period of restoration”, we will pay for loss and/or expense sustained during the delay (regardless of when such delay occurs during the “period of restoration”), but such coverage is limited to 30 days. The days need not be consecutive.

F. Additional Coverage Extensions

1. Property In Transit

This Extension applies only to your personal property to which this form applies.

- a. You may extend the insurance provided by this Coverage Part to apply to your personal property (other than property in the care, custody or control of your salespersons) in transit more than 100 feet from the described premises. Property must be in or on a motor vehicle you own, lease or operate while between points in the coverage territory.
- b. Loss or damage must be caused by or result from one of the following causes of loss:

- (1) Fire, lightning, explosion, windstorm or hail riot or civil commotion, or vandalism.
- (2) Vehicle collision, upset or overturn. Collision means accidental contact of your vehicle with another vehicle or object. It does not mean your vehicle's contact with the roadbed.
- (3) Theft of an entire bale, case or package by forced entry into a securely locked body or compartment of the vehicle. There must be visible marks of the forced entry.

c. The most we will pay for loss or damage under this Extension is \$5,000.

This Coverage Extension is additional insurance. The Additional Condition, Coinsurance, does not apply to this Extension.

2. Water Damage, Other Liquids, Powder Or Molten Material Damage

If loss or damage caused by or resulting from covered water or other liquid, powder or molten material damage loss occurs, we will also pay the cost to tear out and replace any part of the building or structure to repair damage to the system or appliance from which the water or other substance escapes. This Coverage Extension does not increase the Limit of Insurance.

3. Glass

- a. We will pay for expenses incurred to put up temporary plates or board up openings if repair or replacement of damaged glass is delayed.
- b. We will pay for expenses incurred to remove or replace obstructions when repairing or replacing glass that is part of a building. This does not include removing or replacing window displays.

The Coverage Extension, **F.3.**, does not increase the Limit of Insurance.

G. Definitions

- 1. "Fungus" means type or form of fungus, including mold or mildew, and any mycotoxins, spores, scents or by-products produced or released by fungi.

- 2. "Specified cause of loss" means the following: fire; lightning; explosion; windstorm or hail; smoke; aircraft or vehicles; riot or civil commotion; vandalism; leakage from fire-extinguishing equipment; sinkhole collapse; volcanic action; falling objects; weight of snow, ice or sleet; water damage.

a. Sinkhole collapse means sudden sinking or collapse of land into underground empty spaces created by the action of water on limestone or dolomite. This cause of loss does not include:

- (1) The cost of filling sinkholes; or
- (2) Sinking or collapse of land into manmade underground cavities.

b. Falling objects does not include loss or damage to:

- (1) Personal property in the open; or
- (2) The interior of a building or structure, or property inside a building or structure, unless the roof or an outside wall of the building or structure is first damaged by a falling object.

c. Water damage means accidental discharge or leakage of water or steam as the direct result of the breaking apart or cracking of a plumbing, heating, air conditioning or other system or appliance (other than a sump system including its related equipment and system including its related equipment and parts), that is located on the described premises and contains water or steam.

EXHIBIT E

POLICY NUMBER: COMMERCIAL GENERAL LIABILITY
CG 20 10 07 04

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS SCHEDULED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s):	Location(s) Of Covered Operations
Orange County Board of County Commissioners Procurement Division 400 E. South Street Orlando, FL 32801	
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. Section II – Who Is An Insured is amended to incline as an additional insured the person(s) or organization(s) shown in the Schedule but only with respect to liability for “bodily injury”, “property damage” or “personal and advertising injury” caused, in whole or in part by:

1. Your acts omissions; or
2. The acts or omissions of those acting on your behalf;

In the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

The insurance does not apply to “bodily injury” or “property damage” occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of “your work” out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

EXHIBIT F

POLICY NUMBER:
LIABILITY

COMMERCIAL GENERAL

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.
ADDITIONAL INSURED – DESIGNATED
PERSON OR ORGANIZATION**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s)

Orange County Board of County Commissioners
Procurement Division
400 E. South Street
Orlando, FL 32801

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for “bodily injury”, “property damage” or “personal and advertising injury” caused, in whole or in part, by your acts or omissions or the acts or omissions of those acting on your behalf:

- A. In the performance of your ongoing operations; or
- B. In connection with you premises owned by or rented to you.

EXHIBIT G

WORKERS COMPENSTION AND EMPLOYEES LIABILITY INSURANCE POLICY

WC 00 03 13

2ND Reprint

Effective April 1, 1984

Advisory

WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Schedule

Name of Person or Organization:

ORANGE COUNTY BOARD OF COUNTY COMMISSIONERS
PROCUREMENT DIVISION
400 E. SOUTH STREET
ORLANDO, FL 32801

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EXHIBIT H

POLICY NUMBER: _____

COMMERCIAL GENERAL LIABILITY
CG 24 04 10 93

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY

WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US

This endorsement modifies Insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name of Person or Organization:

ORANGE COUNTY BOARD OF COUNTY COMMISSIONERS
PROCUREMENT DIVISION
400 E. SOUTH STREET
ORLANDO, FL 32801

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

The TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US Condition (Section IV – COMMERCIAL GENERAL LIABILITY CONDITIONS) is amended by the addition of the following:

We waive any right to recovery we may have against the person or organization shown in the Schedule above because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a contract with that person or organization and included in the "Products-completed operations hazard". This waiver applies only to the person or organization shown in the Schedule above.

**PART G
SPECIAL CONDITIONS**

The work includes all labor, materials, equipment, supervision, quality control, tools, transportation, supplies, and manpower to perform work including, but not limited to, installation of horizontal and vertical landfill gas (LFG) collection wells, installation of stormwater management pipes, installation of leachate recirculation pipes, placement of sod, and operation, monitoring, and maintenance of the Orange County Landfill Cells 9 and 10 landfill gas collection and control system. Work may be conducted on a scheduled and emergency need throughout the contract term. Additional information is included in the attached drawings.

1. SPECIAL REQUIREMENTS: Contractor Qualifications and Resources

The Contractor shall be experienced in the field of LFG system operation, maintenance, monitoring, and construction.

A. **PERSONNEL AND EQUIPMENT LIST:** The Contractor shall demonstrate adequate resources (manpower and equipment) to provide the required services to the County. The Contractor shall provide a Personnel and Equipment List showing all available personnel and equipment anticipated to be used under this contract.

B. **PREVIOUS RELATED EXPERIENCE:** (See Part D, Attachment E)

IMPORTANT: Bidders failing to provide the above referenced information may result in their bid determined as non-responsive and ineligible for award.

2. WORK SEGMENTS

Work shall generally be separated into the following tasks:

- Task 1 Installation of horizontal and vertical LFG collection wells as the placement of waste proceeds
- Task 2 Installation of leachate recirculation system components
- Task 3 Placement of sod
- Task 4 Installation of stormwater management system componets
- Task 5 Routine OM&M of:
 - LFG extraction wells and conveyance system
 - Condensate collection sumps, pumps, and pipes
 - Monthly data review, organization, and reporting
- Task 6 Non-routine scheduled maintenance
- Task 7 Emergency services

COUNTY ASSUMPTIONS

In general the County shall:

- a. Provide access to the site at reasonable times.
- b. Provide successful bidder with records of previous operations.

CONTRACTOR ASSUMPTIONS

In general the Contractor shall:

- a. Provide uninterrupted management, operation, monitoring, and maintenance of the LFG collection system in accordance with this Contract in a cost-effective and business-like manner.
- b. Provide qualified management, supervision, and personnel necessary to perform the services under this contract.
- c. Provide more than one person to conduct the services under this Contract, not including personnel related to the online data management system.
- d. Submit a site-specific Health and Safety Plan to the Owner prior to beginning work.
- e. Provide 24-hour emergency service.
- f. Be available on-site within 12 hours of being notified.
- g. Have all reports signed by a Professional Engineer registered in the State of Florida, stating that he/she will assume professional responsibility for the validity and accuracy of monitoring results and system data.
- h. Maintain an on-site log detailing each inspection and/or site visit. Inspection records shall be maintained for the life of the contract.
- i. Have the electrical components of the entire system inspected annually for proper operation by a qualified electrician. A report summarizing the inspection shall be submitted to the County.
- j. Annually perform a comprehensive inspection of all components contained in the LFG collection and control facilities. The annual inspection shall be performed by the Contractor's field management personnel familiar with the site. A report summarizing the inspection shall be submitted to the County.
- k. Apprise County of rule requirements to ensure the facility is in compliance.
- l. Keep all components and equipment in good operation condition.

3. WORK TASKS (Tasks may be done concurrently with others)

Task 1 – Installation of Horizontal and Vertical LFG Extraction Wells

Provide and install solid and perforated HDPE pipe and appurtenances in accordance with the specifications and as shown on the drawings. Piping shall be delivered and installed within 7 days of being notified.

Task 2 – Installation of Leachate Recirculation System

Provide and install solid and perforated HDPE pipe and appurtenances in accordance with the specifications and as shown on the drawings. Piping shall be delivered and installed within 7 days of being notified.

Task 3 – Installation of Sod over Intermediate Cover

Provide and install Bahia sod in accordance with the specifications and drawings as solid waste operations proceed. Intermediate cover shall be placed and graded by the County. Sod shall be delivered and placed within 72 hours of being notified.

Task 4 – Installation of Stormwater Piping

Provide and install corrugated HDPE pipe and appurtenances in accordance with the specifications and as shown on the drawings. Install terrace inlets as shown on the drawings. Piping shall be delivered and installed within 7 days of being notified.

Task 5 – Routine Operation and Monitoring

The LFG collection and control system for the Cell 9 and 10 area shall be monitored routinely by the Contractor at least once per week. All monitoring shall be in accordance with NSPS requirements (40 CFR 60, Subpart WWW), including pertinent calibrations, monitoring, and reporting.

5.1 LFG Extraction System

- 5.1.1 All system components shall be checked for proper operation in accordance with NSPS requirements. The extraction system shall be operated to control nuisance odors.
- 5.1.2 At each LFG extraction point, header isolation valves, and condensate sumps, the following shall be measured and recorded.
 - 5.1.2.1 LFG flow
 - 5.1.2.2 LFG composition. (Oxygen levels above 5 percent shall be noted and addressed per NSPS requirements.)
 - 5.1.2.3 LFG pressure. (Non-negative pressures shall be noted and addressed per NSPS requirements.)
 - 5.1.2.4 LFG temperature. (Temperatures equal to or above 131° F shall be noted and addressed per NSPS requirements.)
- 5.1.3 At locations where elevated temperature and oxygen are observed, additional monitoring by the Contractor for carbon monoxide may be required by the County.
- 5.1.4 In conjunction with the routine monitoring, adjustments to the system shall be made, as required, to maintain odor control and system balance. If pressure, composition, and temperature exceedances noted above are not corrected within 15 days through system adjustments, the County shall be notified and the Contractor shall develop a corrective action plan to correct the exceedance within 120 calendar days. Corrective actions shall be conducted in accordance with Task 6.
- 5.1.5 Contractor shall check the condensate handling system for proper operation. Record pump cycle count, liquid level, and air pressure for each of the condensate sump pumps. Exercise all valves annually.

5.2 Reporting

- 5.2.1 A report shall be submitted to the County by the 10th of each month summarizing the last three months of operation, including inspection results.

- 5.2.2 All wellhead monitoring data required under the NSPS shall be recorded and saved by the Contractor. The monthly report shall include wellhead readings of gas composition (methane, carbon dioxide, oxygen, and balance gas), pressure, temperature, and flow rate. Readings and comments shall also be included for rechecks of wells that are out of compliance with the NSPS wellhead operating criteria. The report shall detail the cause of the non-compliance, all remedial actions taken to correct the non-compliance, and any future work that may be necessary to keep the wells in compliance with the NSPS requirements.
- 5.2.3 Flare station data to be included in the report shall include gas composition and temperature, vacuum applied to the header system, and flow rate.
- 5.2.4 Condensate management system monitoring data shall also be provided in the monthly report.
- 5.2.5 The monthly report shall detail all work conducted and confirm the system maintained compliance with the NSPS. Any corrections conducted on the system or required to be conducted shall be listed. The report shall include a narrative summary of any significant trends in the monitoring data and explanations of anomalous data. Recommendations shall also be provided regarding potential non-routine repairs that are anticipated.
- 5.2.6 At the end of the calendar year, submit to the County a hard copy and electronic copy of all monitoring data gathered during the year. This data will be used in preparing the NSPS annual report and the Contractor shall respond to any questions from the County regarding the monitoring data.

5.3 Online Data Management System

- 5.3.1 The Contractor is to provide and maintain an online data management system for the Cell 9 and 10 Landfill Gas Collection System. The Contractor is also required to input data collected during the services conducted under Task 1 into the online data management system.
 - 5.3.1.1 Data Management System Program Requirements. At a minimum, the data management application must be provided and maintained to include the following performance requirements:
 - 5.3.1.1.1 Online accessible data management in a secured data management facility;
 - 5.3.1.1.2 User specific login, password, and application role access;
 - 5.3.1.1.3 User created Geospatial data mapping feature that graphically represents monitoring value distributions for user defined date ranges;
 - 5.3.1.1.4 User created trend graphs to graphically represent monitoring values for user defined date ranges;
 - 5.3.1.1.5 ID specific trigger limits used in conjunction with application logic to identify exceedance events and provide the timeframe to fix the issue;
 - 5.3.1.1.6 Real-time data metrics dashboard to identify currently unmonitored active monitoring points for the current month and current open exceedances;
 - 5.3.1.1.7 Historical data export in .csv, .txt, and .pdf formats;
 - 5.3.1.1.8 Exceedance summary reports in a spreadsheet format;

- 5.3.1.1.9 Direct user upload of monitoring data;
- 5.3.1.1.10 Application feature to monitor and track changes to data to maintain data integrity;
- 5.3.1.1.11 Automated email event alerts to identify when data is uploaded to the application; and
- 5.3.1.1.12 Site specific document storage that allows user defined folder structure.
- 5.3.2 Past Data Retrieval and Input - Within 30 days of the execution of this contract, the Contractor is required to download all Cell 9 and 10 LFG system data from the current Contractor's online data management system. The County will provide the link location, user name, and password to the Contractor to allow access to the system. The data is available for export in .csv, .txt, or .pdf formats. The Contractor is required to upload the past data information into their online data management system in order to be a part of the Contractor's managed database. An electronic copy of the downloaded data is to be provided to the County.
- 5.3.3 Inputting New Data - The Contractor is required to input data into the online data management system within 48 hours of field recording services conducted under Task 1.
- 5.3.4 Storage - The Contractor is to maintain, store, and backup the data through the contract term and at least two years after termination of the Contract. Site specific information loaded to the system remains property of the County.
- 5.3.5 Instrumentation - The Contractor shall provide and use a Landtec GEM2000, GEM5000, or County-approved equivalent to measure landfill gas flow rates, composition, and pressures at each wellhead, header/lateral piping, and at the flare stations. The Contractor is responsible for satisfying the manufacturer's recommended factory maintenance of the instrument, as well as any unscheduled repair or maintenance of the instrument. The Contractor is responsible for providing all hoses, connections, filters, calibration gases, and other accessories necessary for proper use of the instrument. The Contractor shall calibrate the instrument before taking measurements in accordance with the manufacturer's specifications. A copy of the calibration certification documentation shall be provided to the County.

Task 6 – Non Routine Scheduled Maintenance

Non-routine scheduled maintenance shall consist of corrective repair or maintenance work identified during weekly monitoring. This work shall include but not be limited to:

- Header pipe realignment
- Resetting of pipe supports
- Repair/replacement of broken valves
- Replacement of wellheads
- Replacement of torn flex hoses
- Repair of lateral pipelines
- Installation of replacement extraction wells
- Cleaning and adjusting condensate pumps and components
- LFG analytical sampling
- Cleaning/camera investigation of pipelines

This type of work is critical for system operation. No work shall be conducted under this task unless authorized in writing by the County.

Task 7 – Emergency Work

The services under this task include events that require immediate response. Due to the urgent nature of these items they cannot be scheduled. The events and services under this task could include, but are not limited to:

- Repair of main header pipeline breaks
- Respond to odor complaints
- Respond to LFG migration detection

The Contractor shall be able to be contacted 24 hours a day, 7 days a week, and be onsite within 12 hours of being notified. Emergency On-Site Mobilization shall be issued per occurrence on an as-needed basis and billed at the Emergency Service Mobilization rate as bid. Additional Emergency Service Labor, as approved by the County, shall be on an as-needed basis and billed at the proper contract hourly rate.

.....
IFB NO. Y14-1006-J2

INVITATION FOR BIDS

FOR

**INSTALLATION, MAINTENANCE AND MONITORING FOR LANDFILL GAS
COLLECTION FOR ORANGE COUNTY LANDFILL CELL 9 & 10**
.....

PART H

TECHNICAL SPECIFICATIONS

.....
VOLUME II
.....

CONTENTS**BID FORM****TECHNICAL SPECIFICATIONS****DIVISION 1—GENERAL REQUIREMENTS**

01010	Summary of Work.....	1-	2
01025	Measurement and Payment.....	1-	9
01040	Coordination	1-	10
	Supplement 1, Contractor's Affidavit Verifying Accuracy of Drawings and Specifications		
01060	Surveying	1-	3
01200	Project Meetings	1-	3
01600	Material and Equipment.....	1-	8
01720	Project Record Documents	1-	4
01800	Health and Safety	1-	4

DIVISION 2—SITE CONSTRUCTION

02315	Fill and Backfill	1-	7
02316	Excavation.....	1-	3
02320	Trench Backfill	1-	7
02633	Stormwater Corrugated High Density Polyethylene (HDPE) Pipe and Fittings	1-	6
02680	Horizontal Gas Extraction Pipelines.....	1-	3
02681	Vertical Gas Extraction Wells and Wellheads.....	1-	14
	Daily Drilling Report Log Materials for Well Construction		
02900	Lawns and Grasses.....	1-	7

DIVISIONS 3 THROUGH 14 (NOT USED)**DIVISION 15—MECHANICAL**

15060	Pipes - General.....	1-	11
	Pipeline Schedule Legend Pipeline Schedule		
15060-11	Chlorinated Polyvinyl Chloride (CPVC) Pipe and Fittings.....	1-	1
15060-14	High Density Polyethylene (HDPE) Pipe.....	1-	2
15100	Valves and Operators.....	1-	5
15992	Pipe Leak Testing	1-	3

DIVISION 16—NOT USED**DRAWINGS (BOUND SEPARATELY)****END OF SECTION**

**SECTION 01010
SUMMARY OF WORK**

PART 1 GENERAL

1.01 PROJECT DESCRIPTION

A. The Project work to be performed by the Contractor consists of furnishing all labor, materials, equipment, tools, transportation, services, incidentals, and performing all work necessary to complete the Project, in-place and ready for service, in accordance with these specifications entitled "Installation, Maintenance and Monitoring for Landfill Gas Collection and Control Systems for Orange County Landfill Cells 9 and 10." The work generally consists of installing portions of the LFG collections system, secondary storm water collection system, and leachate recirculation system as waste placement proceeds, and includes, but is not limited to, the following items:

1. Have all materials and procedures approved within 30 days of execution of the Contract.
2. Except as otherwise noted herein, mobilize within 30 days of written notification from the Owner for each delivery order.
3. Provide construction staking/system layout/surveying prior to construction.
4. Install horizontal and vertical landfill gas (LFG) extraction wells, including wellheads.
5. Install below grade high-density polyethylene (HDPE) lateral and header gas pipe. Pipe will be installed in excavations made both in refuse and cover soil. Install gas pipe connections to the existing LFG collection system.
6. Pressure test installed piping and connection to existing LFG collection system.
7. Install leachate recirculation distribution trench pipes.
8. Install below grade HDPE leachate recirculation header pipes and connect the header pipes to existing force main. Pipe will be installed in excavations made both in refuse and cover soil.
9. Install storm water inlet structures and down comer piping.
10. Install sod over intermediate cover.
11. Provide conformance surveying.
12. Provide as-built documentation.
13. Complete all fieldwork within time specified for each delivery order.
14. Provide routine operation of the LFG Extraction System, including existing condensate sumps.
15. Provide non-routine scheduled services and emergency services.

1.02 WORK SEQUENCE

A. Sequence construction work to accommodate work with any other contractors onsite and/or County forces.

1.03 CONTRACTOR'S USE OF PREMISES

- A. Limit use of premises for work, storage, and access to allow work by other contractors, owner occupancy, and normal landfill operations.
- B. Access: No less than 5 days before each mobilization, the Contractor shall arrange with the County a sequence of procedures, means of access, space for storage of materials and equipment, and use of approaches and roadways. Contractor's use of the premises shall be confined to the areas approved by the County.
- C. Smoking is prohibited on the landfill.
- D. Contractor shall not dispose of waste oils, fuels, cleaners or other potentially hazardous substances onsite.

1.04 COUNTY OCCUPANCY AND LANDFILL OPERATIONS

- A. The County will occupy the Site and continue to conduct landfill operations at the active landfill cells. The Contractor shall cooperate with the County during construction operations to minimize conflicts and facilitate County usage. The Contractor shall perform the Work so as not to interfere with the County's landfill operations and maintenance, environmental monitoring, and other County activities at the Site.

1.05 SITE CONDITIONS

- A. Existing Features: The Contract Documents require the Contractor to field verify the location of existing features; See Section 01060, Surveying. Existing features include but may not be limited to the following: storm water drainage structures, existing landfill gas headers, laterals and collection wells, electrical lines, fiber optic lines, and potable, leachate, wastewater, and condensate force mains.
- B. Contractor shall enforce safety procedures to minimize hazards to workers, the public, and the environment.

1.06 SUPERINTENDENT

- A. Contractor shall provide a single qualified full time English-speaking superintendent for the duration of the Project. Contractor shall not change superintendent without the County's written permission. Contractor's proposal to change personnel must be justifiable to the County, and must demonstrate that the proposed replacement possesses adequate qualifications.

PART 2 PRODUCTS (NOT USED)**PART 3 EXECUTION (NOT USED)****END OF SECTION**

**SECTION 01025
MEASUREMENT AND PAYMENT**

PART 1 GENERAL

1.01 DEFINITIONS

- A. The Contractor shall receive and accept the compensation provided in the Contract as full payment for furnishing all labor, equipment, and materials and for performing all construction/operations necessary to complete the work as described in the Contract, and in full payment for all losses or damages incurred during the work, for any discrepancies between actual and estimated quantities, or from any unanticipated difficulties which may arise during the work until final acceptance by the County.
- B. The prices included in the Bid Proposal shall include all costs for labor, equipment, incidentals and supplies, materials, taxes, freight, permits, handling and tests required to perform the work as shown on the Contract Documents.
- C. The Contractor shall field verify all quantities and dimensions shown on the Plans or contained in the Contract Specifications.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 MEASUREMENT AND PAYMENT

Item 1, 34, 67 – 18-inch Corrugated HDPE Pipe (Stormwater):

- 1. Measurement: Measurement for this item shall be on an installed linear foot basis as measured by an independent surveyor.
- 2. Payment: Payment for this item shall be at the contract unit price per linear foot of pipe installed. Payment includes excavation, backfilling, piping connections, quality control, surveying, and testing. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 2, 35, 68 – 24-inch to 18-inch HDPE Reducer (Stormwater):

- 1. Measurement: Measurement for this item shall be on an installed count each.
- 2. Payment: Payment for this item shall be at the contract unit price for each reducer installed. Payment includes excavation, backfilling, and piping connections. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 3, 36, 69 – 24-inch Corrugated HDPE Pipe (Stormwater):

1. **Measurement:** Measurement for this item shall be on an installed linear foot basis as measured by an independent surveyor.
2. **Payment:** Payment for this item shall be at the contract unit price per linear foot of pipe installed. Payment includes excavation, backfilling, piping connections, quality control, surveying, and testing. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 4, 37, 70 – 8-inch Perforated CPVC Pipe (Vertical Gas Well):

1. **Measurement:** Measurement for this item shall be on an installed linear foot basis as measured by the driller and Contractor, and verified by the County.
2. **Payment:** Payment for this item will be at the contract unit price per foot of pipe installed. Payment will include all excavating, backfilling, health and safety requirements, piping stone or tire chip backfill material, and soil backfill material. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 5, 38, 71 – 8-inch solid CPVC Pipe (Vertical Gas Well):

1. **Measurement:** Measurement for this item shall be on an installed linear foot basis as measured by the driller and Contractor, and verified by the County.
2. **Payment:** Payment for this item will be at the contract unit price per foot of pipe installed. Payment will include all excavating, backfilling, health and safety requirements, and soil backfill material. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 6, 39, 72 – 6-inch Perforated HDPE Pipe (Horizontal Gas Well):

1. **Measurement:** Measurement for this item shall be on an installed linear foot basis as measured by an independent surveyor.
2. **Payment:** Payment for this item will be at the contract unit price per foot of pipe installed. Payment will include all excavating, backfilling, health and safety requirements, piping, tire chip backfill, and soil backfill material. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 7, 40, 73 – 6-inch Solid HDPE Pipe (Horizontal Gas Well):

1. **Measurement:** Measurement for this item shall be on an installed linear foot basis as measured by an independent surveyor.
2. **Payment:** Payment for this item will be at the contract unit price per foot of pipe installed. Payment will include all excavating, backfilling, health and safety requirements, piping, and soil backfill material. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 8, 41, 74 – 4-inch Solid HDPE Pipe (Horizontal Gas Well):

1. **Measurement:** Measurement for this item shall be on an installed linear foot basis as measured by an independent surveyor.
2. **Payment:** Payment for this item will be at the contract unit price per foot of pipe installed. Payment will include all excavating, backfilling, health and safety requirements, piping, and soil backfill material. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 9, 42, 75 – 4-inch Solid HDPE Pipe (LFG Header):

1. **Measurement:** Measurement for this item shall be on an installed linear foot basis as measured by an independent surveyor.
2. **Payment:** Payment for this item will be at the contract unit price per foot of pipe installed. Payment will include all excavating, backfilling, health and safety requirements, piping, and soil backfill material. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 10, 43, 76 – 6-inch Solid HDPE Pipe (LFG Header):

1. **Measurement:** Measurement for this item shall be on an installed linear foot basis as measured by an independent surveyor.
2. **Payment:** Payment for this item will be at the contract unit price per foot of pipe installed. Payment will include all excavating, backfilling, health and safety requirements, piping, and soil backfill material. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 11, 44, 77 – 8-inch Solid HDPE Pipe (LFG Header):

1. Measurement: Measurement for this item shall be on an installed linear foot basis as measured by an independent surveyor.
2. Payment: Payment for this item will be at the contract unit price per foot of pipe installed. Payment will include all excavating, backfilling, health and safety requirements, piping, and soil backfill material. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 12, 45, 78 – 4-inch Solid HDPE Pipe (Leachate):

1. Measurement: Measurement for this item shall be on an installed linear foot basis as measured by an independent surveyor.
2. Payment: Payment for this item will be at the contract unit price per foot of pipe installed. Payment will include all excavating, backfilling, health and safety requirements, pipe, soil backfill material, and connection to the existing leachate recirculation system. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 13, 46, 79 – 3-inch Solid HDPE (Leachate):

1. Measurement: Measurement for this item shall be on an installed linear foot basis as measured by an independent surveyor.
2. Payment: Payment for this item will be at the contract unit price per foot of pipe installed. Payment will include all excavating, backfilling, health and safety requirements, piping, soil backfill material, and connection to existing leachate recirculation system. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 14, 47, 80 – 3-inch Perforated HDPE (Leachate):

1. Measurement: Measurement for this item shall be on an installed linear foot basis as measured by an independent surveyor.
2. Payment: Payment for this item will be at the contract unit price per foot of pipe installed. Payment will include all excavating, backfilling, health and safety requirements, piping, stone or tire chip backfill material, soil backfill material, and connection to existing leachate recirculation system. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 15, 48, 81 – 4-inch Leachate Tee Connection:

1. Measurement: Measurement for this item shall be on a completed and installed unit basis.
2. Payment: Payment for this item will be at the contract unit price per each installed unit, including valves, fittings, pipe connections, guard posts, testing, and other incidentals. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 16, 49, 82 – 8-inch Temporary LFG Tee Connection:

1. Measurement: Measurement for this item shall be on a completed and installed unit basis.
2. Payment: Payment for this item will be at the contract unit price per each installed unit, including valves, fittings, pipe connections, testing, and other incidentals. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 17, 49, 81 – Vertical Wellhead:

1. Measurement: Measurement for this item shall be on a completed and installed unit basis.
2. Payment: Payment for this item will be at the contract unit price per each installed unit, including valves, fittings, pipe connections, gauges, monitoring/access ports, flow measurement devices, testing, above ground 8-inch CPVC piping and other incidentals. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 18, 50, 82 – LFG Well Abandonment:

1. Measurement: Measurement for this item shall be on an installed linear foot basis as measured by Contractor and confirmed by Owner.
2. Payment: Payment for this item will be at the contract unit price per linear foot of borehole abandoned. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 19, 51, 83 – Sod, Bahia:

1. **Measurement:** Measurement for this item shall be on an installed square foot basis per as measured by an independent surveyor.
2. **Payment:** Payment for this item shall be at the contract unit price per square foot of sod installed in accordance with Section 02900, Lawns and Grasses. Payment includes delivery and installation. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 20, 52, 84 – 18-inch Terrace Inlets (Stormwater):

1. **Measurement:** Measurement for this item shall be on an installed count each.
2. **Payment:** Payment for this item shall be at the contract unit price for each terrace inlet installed. Payment includes excavation, backfilling, piping connections, rip rap, geotextile and sod. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 21, 53, 85 – 24-inch Terrace Inlets (Stormwater):

1. **Measurement:** Measurement for this item shall be on an installed count each.
2. **Payment:** Payment for this item shall be at the contract unit price for each terrace inlet installed. Payment includes excavation, backfilling, piping connections, rip rap, geotextile and sod. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 22, 54, 86 – Flare Ends (at First Bench) (Stormwater):

1. **Measurement:** Measurement for this item shall be on an installed count each.
2. **Payment:** Payment for this item shall be at the contract unit price for each flare end installed. Payment includes excavation, backfilling, piping connections, rip rap, geotextile and sod. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 23, 55, 87 – Line Cleaning and Camera Video-Taping Service:

1. **Measurement:** Measurement for this item shall be on an 8-hour work day confirmed by the County.
2. **Payment:** Payment for this item shall be at the contract unit price for each 8-hour day worked. Payment includes mobilization, demobilization and all equipment required to safely clean leachate and LFG lines and to video tape the lines as required.

Item 24, 56, 88 – Condensate Sump Pumps:

1. **Measurement:** Measurement for this item shall be on a completed and installed unit basis. Condensate Sump Pumps shall be EPG SurePump with size 4 stainless steel wheeled sump drainer, 1/2 HP 460 V, 3 phase motor, 100 feet of jacketed 14-4 CP motor lead, 0-5 PSI level sensor with lighting arrestor and 100-foot of poly lead, temperature sensor with 100-foot lead and 100-feet of 1/8 inch stainless steel suspension cable and clamps.
2. **Payment:** Payment for this item will be at the contract unit price per each installed unit, including, fittings, piping connections, testing, and other incidentals. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 25, 57, 89 – Monthly Routine Operation Maintenance and Monitoring:

1. **Measurement:** Measurement for this item shall be on a monthly basis for operation of the LFG extraction system (Control system) including condensate sumps. Operations shall include coordination with the operation of Orlando Utilities Commission's blower/treatment facility and the County maintenance contractor of the leachate collection system.
2. **Payment:** Payment for this item shall be at the contract unit price for each month of operation. The Control System shall be monitored at least once a week. All monitoring shall be in accordance with NSPS requirements per 40 CFR 60 Subpart WWW and the requirements of Greenhouse Reporting Rule (40 CFR Part 98). Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 26, 58, 90 – Non-Routine Scheduled Services:

1. Measurement: Measurement for this item shall be on an hourly basis for corrective repair or maintenance work identified during the weekly monitoring and outlined in the scope of work.
2. Payment: Payment for this item shall be at the contract unit price per hour. Payment shall constitute full compensation for all, labor, supplies, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 27, 59, 91 – Emergency Services, On-Site Mobilization:

1. Measurement: Measurement for this item shall be based on a per occurrence for events that require immediate response as outlined in the scope of work. The unit price per occurrence shall include mobilization and demobilization, and be for the first 4-hour period on-site. Only 1 onsite mobilization per emergency.
2. Payment: Payment for this item shall be at the contract unit price. Payment shall constitute full compensation for all labor, supplies, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 28, 60, 92 – Additional Emergency Service Labor:

1. Measurement: Measurement for this item shall be on an hourly basis for additional time required to conduct repairs beyond the first 4-hour period of onsite emergency service work as requested by the County.
2. Payment: Payment for this item shall be at the contract unit price. Payment shall constitute full compensation for all labor, supplies, equipment, and work incidental thereto, necessary to complete this item in accordance with the Contract Documents.

Item 29, 61, 93 – Large Excavator:

1. Measurement: This equipment may be required in conjunction with work under Bid Items 26, 27, 28, 58, 59, 60, 90, 91 and 92 as indicated on the Bid Form. Measurement for this item shall be on a daily rate basis for a large excavator equivalent to a Caterpillar Model 320.
2. Payment: Payment for this item shall be at the contract unit price. Payment shall constitute full compensation for all labor including equipment operator, supplies, fuel, maintenance, repair, and work incidental to mobilization, operation and demobilization of this equipment in accordance with the Contract Documents.

Item 30, 62, 94 – Small Excavator:

1. Measurement: This equipment may be required in conjunction with work under Bid Items 26, 27, 28, 58, 59, 60, 90, 91, and 92 as indicated on the Bid Form. Measurement for this item shall be on a daily rate basis for a small excavator equivalent to a Caterpillar Model 303.
2. Payment: Payment for this item shall be at the contract unit price. Payment shall constitute full compensation for all labor including equipment operator, supplies, fuel, maintenance, repair, and work incidental to mobilization, operation and demobilization of this equipment in accordance with the Contract Documents.

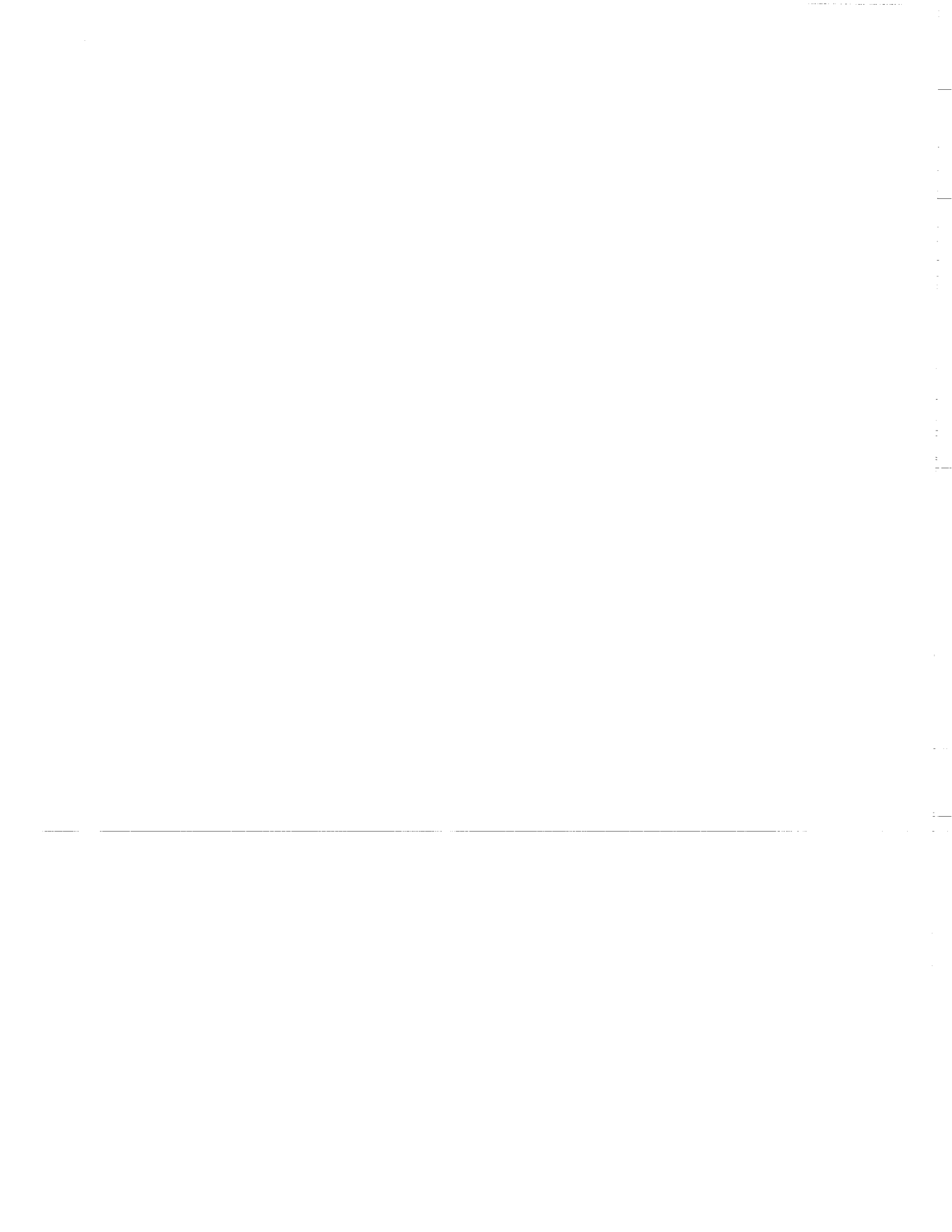
Item 31, 63, 95 – Wheel Loader:

1. Measurement: This equipment may be required in conjunction with work under Bid Items 26, 27, 28, 58, 59, 60, 90, 91, and 92 as indicated on the Bid Form. Measurement for this item shall be on a daily rate basis for a wheel loader equivalent to a Caterpillar Model 966.
2. Payment: Payment for this item shall be at the contract unit price. Payment shall constitute full compensation for all labor including equipment operator, supplies, fuel, maintenance, repair, and work incidental to mobilization, operation and demobilization of this equipment in accordance with the Contract Documents.

Item 32, 646 – 18-25 CY Off-Road Dump Truck:

1. Measurement: This equipment may be required in conjunction with work under Bid Items 26, 27, 28, 58, 59, 60, 90, 91, and 92 as indicated on the Bid Form. Measurement for this item shall be on a daily rate basis for an 18-25 CY off-road dump truck.
2. Payment: Payment for this item shall be at the contract unit price. Payment shall constitute full compensation for all labor including equipment operator, supplies, fuel, maintenance, repair, and work incidental to mobilization, operation and demobilization of this equipment in accordance with the Contract Documents.

END OF SECTION



**SECTION 01040
COORDINATION**

PART 1 GENERAL

1.01 SUBMITTALS

- A. Photographs and other records of examination.
- B. Electronic Media Release Form.
- C. Contractor's Affidavit Verifying Accuracy of Drawings and Specifications.

1.02 CLAIMS FOR PROPERTY DAMAGES

- A. In the event of any indirect or direct damaged to public or private property caused in whole or in part by an act, omission, or negligence on the part of the Contractor, Subcontractor, or anyone directly or indirectly employed by the Contractor, or by anyone for whose acts the Contractor may be liable, the Contractor shall at his own expense and cost promptly remedy and restore such property to a condition equal to or better than that existing before such damage was done. The Contractor shall perform such restoration by underpinning, repairing, rebuilding, replanting, or otherwise restoring as required or directed by the Engineer or County, or shall make good such damage in a satisfactory and acceptable manner.

1.03 ITEMS SPECIFIED ON DRAWINGS

- A. Item of material, equipment, machinery, and the like may be specified on the Drawings and not in the Specifications. Such items shall be provided by the Contractor in accordance with the Specifications on the Drawings.

1.04 ENVIRONMENTAL PROTECTION

- A. Excavations: All drilling excavations shall be confined to the immediate area of the drilling rig. Boreholes shall be backfilled by the end of each workday and prior to moving the drill rig to a new drilling location.
- B. Environmental Constraints:
 - 1. Dust Control: Trucked water shall be used if necessary to prevent dust from the Contractor's activities.
 - 2. Explosion Protection: Cautions shall be exercised on overnight stoppage to prevent methane accumulation. Contractor shall be responsible for enforcing all additional explosion protection precautions according to the guidelines in Section 01800, Health and Safety.

3. Fire Control: Contractor shall be responsible for fire control and shall include fire control procedures (which will be adhered to during the entire contract time) in the Health and Safety Plan required by the General Conditions of the Contract Documents.
4. Litter: Contractor shall be required to control, collect, and haul all waste excavated or exposed by the Work to a location designated by the County on a daily basis.

1.05 WORKING HOURS

- A. The normal working hours for the County's Resident Project Representative (RPR) are defined as any 10-hour period between the hours of 7:00 a.m. and 7:00 p.m. on the weekdays of Monday through Friday. Any work beyond the aforementioned normal working hours of the County's RPR shall be requested in writing 48 hours in advance. All overtime and weekend work compensation to County's RPR for working beyond the normal work hours are considered "overtime" compensation and shall be paid for by the Contractor at the overtime pay rate of \$50.00 per hour. The Contractor agrees that the County shall deduct such charges from payments due to the Contractor.

1.06 OTHER WORK

- A. Coordination of County's Work by Others: Reference the General Conditions for coordination of County's work by others, if any, and coordinate Contractor's Work with County or County's designated coordinator.
- B. The Contractor shall be required to afford other contractors and the County reasonable opportunity for the introduction, transportation, and storage of their materials and equipment, and the execution of their work, and shall properly connect and coordinate the Work with such other work. The Contractor shall coordinate his construction work activities with the County and other contractors to store his apparatus, materials, supplies, and equipment in such orderly fashion at the site of the Work as will not unduly interfere with the progress of the Work or the work of any other contractors.
- ~~C. If the execution or result of any part of the Work depends upon any work of the County or of any separate contractor, the Contractor shall, prior to proceeding with the Work, inspect and promptly report to the County in writing any apparent discrepancies or defects in such work of the County or of any separate contractor that render it unsuitable for the proper execution or result of any part of the Work.~~
- D. Failure of the Contractor to so inspect and report shall constitute an acceptance of the County's or other contractor's work as fit and proper to receive the Work, except as to defects which may develop in the County's or other contractor's work after completion of the Work and which the Contractor could not have discovered by its inspection prior to completion of the work.

- E. Should the Contractor cause damage to the work or property of the County or of any other contractors on the Project, or to other work on the Site, or delay or interfere with the County's ongoing operations or facilities or adjacent facilities or said separate contractors work, the Contractor shall be liable for the same; and, in the case of another contractor, the Contractor shall attempt to settle said claim with such other contractor prior to such other contractor's institution of litigation or other proceedings against the Contractor.
- F. If such contractor sues the County on account of any damage, delay, or interference caused or alleged to have been so caused by the Contractor, the County shall notify the Contractor, who shall defend the County in such proceedings at the Contractor's expense. If any judgment or award is entered against the County, the Contractor shall satisfy the same and shall reimburse the County for all damages, expenses, attorney's fees, and other costs which the County incurs as a result thereof.
- G. Should another contractor cause damage to the Work or to the property of the Contractor or cause delay or interference with the Contractor's performance of the Work, the Contractor shall present directly to said other contractor any claims it may have as a result of such damage, delay or interface (with an information copy to the County) and shall attempt to settle its claim against said other contractor prior to the institution of litigation or other proceedings against said other contractor.
- H. In no event shall the Contractor seek to recover from the County or the Engineer, and the Contractor hereby represents to the County and the Engineer that it will not seek to recover from them, or either of them, any costs, or any expenses including, but not limited to, attorney's fees or losses of profit incurred by the Contractor or any delay or interference caused or allegedly caused by any other contractors.

1.07 HAZARD COMMUNICATIONS

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with law and regulations.
- B. Contractor shall inform their employees working onsite that the work site is a former World War II training facility that was used for small arms firing, air tactics evaluations, and training demonstrations of strafing, practice bombing, air-to-ground rocket firing and high explosive bombing; and that unexploded ordnance may still be present at the site.

1.08 SEQUENCE OF WORK

- A. Perform Work continuously during critical connections and changeovers, and as required to prevent interruption of County's operations.

- B. Coordinate proposed Work with the facility operations personnel before effecting unit shutdowns. Under no circumstances cease Work at the end of a normal working day if such actions may inadvertently cause a cessation of any facility operating process, in which case, remain onsite until necessary repairs are complete.

1.09 VERIFICATION OF DRAWINGS AND SPECIFICATIONS

- A. Contractor shall verify all dimensions, quantities, and details shown on the Drawings, supplementary drawings, material schedules, Specifications or other information received from the Engineer, and shall notify Engineer and County of any and all errors, omissions, conflicts, and discrepancies found herein. The Contractor shall not be held responsible for the discovery of such discrepancy, but any work done on the item involved after such discovery, and prior to authorization by the County and Engineer, shall be done at the Contractor's risk and expense. Failure to discover or correct errors, conflicts or discrepancies shall not relieve the Contractor of full responsibility for unsatisfactory work, faulty construction, or improper operation resulting therefrom; nor shall it relieve the Contractor of full responsibility for rectifying such conditions at Contractor's own expense.
- B. Contractor shall not be allowed to take advantage of any errors or omissions, as full instructions or clarification Drawings will be furnished by the Engineer, should such errors or omissions be discovered. All material schedules are given for the convenience of the Engineer and the Contractor and are not guaranteed to be complete. The Contractor shall assume all responsibility for the making estimates of the size, kind, and quantity of materials and equipment included in Work to be done under the Contract. County does not express, imply, or guarantee that the actual amount of Work to be accomplished will correspond to the quantities given.
- C. The Bidding Contractors must satisfy themselves as to the quantities and nature of the Work by personal examination of the location of Work, and estimate the quantity of the Work based on the Bid Drawings, Specifications, and any Addendum, thereafter; and by such other means as they may choose including site survey and data collections, as to the actual conditions and requirements of the Work and the accuracy of the estimates provided by the County. The Contractor shall not, at any time after the submission of their bid, dispute any such statement or estimate of the County and Engineer, nor assert that there has been any misunderstanding in regard to the nature or amount of the Work to be done.

1.10 UTILITY NOTIFICATION AND COORDINATION

- A. Coordinate Work with various utilities within Project limits. Notify applicable utilities prior to commencing Work, if damage occurs, or if conflicts or emergencies arise during Work.

- B. The Contractor shall notify the electric company and coordinate the installation of electrical service to the site, as necessary. The Contractor shall pay all costs associated with the installation of electrical service to the site.
- C. The Contractor shall, at all times in performance of the Work, employ approved methods and exercise reasonable care and skill so as to avoid unnecessary delay, injury, damage, or destruction of public utility installations and structures; and shall, at all times in the performance of the Work, avoid unnecessary interference with, or interruption of, public utility services, and shall cooperate fully with the County's thereof to that end.
- D. The Contract Documents contain data relative to existing public utility installations and structures above and below the ground surface. These data are not guaranteed as to their completeness or accuracy and it is the responsibility of the Contractor to make his own investigations to inform himself fully of the character, conditions, and extent of all installations and structures as may affect the construction operations.
- E. The Contractor shall protect all County and public utility installations and structures from damage during the Work. All required protective devices and construction shall be provided by the Contractor at his expense. All existing installations and public utilities damaged by the Contractor, which are shown on the Drawings or have been located in the field by the utility shall be repaired by the Contractor, at his expense, as directed by the County. No separate payment shall be made for such protection or repairs to public utility installations or structures.
- F. Public utility installations or structures owned or controlled by the County or other governmental body which are shown on the Drawings to be removed, relocated, replaced, or rebuilt by the Contractor shall be considered as a part of the general cost of doing the Work and shall be included in the prices bid for the various Contract items. No separate payment shall be made therefore.
- G. Where public utility installations or structure owned or controlled by the County or other governmental body are encountered during the course of the Work, and are not indicated on the Drawings or in the Specifications, and when, in the opinion of the County, removal, relocations, replacement, or rebuilding is necessary to complete the Work under this Contract, such Work shall be accomplished by the utility having jurisdiction, or such work may be ordered, in writing by the County, for the Contractor to accomplish.
 - 1. The maintenance, repair, removal, relocation, or rebuilding of public utility installations and structures, when accomplished by the Contractor, shall be done by methods approved by the County.

2. If such work is accomplished by the Contractor, it will be paid for as extra work as provided in the Agreement. If such work is accomplished by the utility having jurisdiction it will be carried out expeditiously and the Contractor shall give full cooperation to permit the utility to complete the removal, relocation, replacement, or rebuilding as required.
- H. The Contractor shall give written notice to the County and other governmental utility departments and other owner's of public utilities of the location of his proposed construction operations, at least 48 hours in advance of breaking ground in any area or on any unit of the Work. This can be accomplished by making the appropriate contract with the following utility companies:

American Tel & Tel Company (AT&T)

1717 South Apopka-Vineland Road
 Gotha, Florida 32734
 (Underground Coaxial Cables)
 Phone: 407/422-9208

Duke Energy, Inc.

P.O. Box 14042
 St. Petersburg, Florida 33733
 Phone: 800-228-8485

Florida Power & Light

(No local locations)
 Sanford
 Titusville 407/267-2331
 Daytona Beach

Southern Bell Tel & Tel Company

2949 Sand Lake Road
 (Room 207 Sand Lake Road Eng.)
 Orlando, Florida 32802
 Phone: 407/351-8010
 (Dig. Const.) 1-800-342-1901

United Telephone Company

Engineering Department
 33 North Main Street
 Post Office Box 339
 Winter Garden, Florida 32787
 Phone: 407/656-1515

Florida Gas Transmission Company

Pipeline District No. 6
 7990 Steer Lake Road
 Orlando, Florida 32861
 Phone: 407/295-4341

People's Gas Company

600 West Robinson Street
 Orlando, Florida 32801
 Phone: 407/849-2261

Orlando Utilities Commission

(Power, Electric, Water)
 500 South Orange Avenue
 Orlando, Florida 32802
 (Water) Phone: 407/423-9100
 (Overhead Utilities)
 Phone: 407/423-9119
 (Underground Utilities)
 Phone: 407/423-9160

City of Orlando Engineering

400 South Orange Avenue
 Orlando, Florida 32804
 Phone: 407/849-2261

Orange County Utilities

9150 Curry Ford Road
 3rd Floor
 Orlando, Florida 32825
 Phone: 407/836-7200

1.11 COUNTY FACILITIES

- A. Contractor shall not create a public nuisance including, but not limited to, encroachment on adjacent lands, road closure without the County's prior approval, prevention of the County from performing normal operations at the landfill, littering along the main Site access road and/or outside of the construction limits.
- B. The Contractor shall be responsible for any encroachments on rights-of-way or property of the public or adjoining property owner's and shall hold the County and Engineer and Consultant(s) harmless because of any encroachments which may be a result of his lack of proper layout or project execution. In this regard, the Contractor shall, without extra cost to the County, remove any work or that portion of any work that encroaches on the property of others or that is built beyond legal building or setback limits, and he shall rebuild the affected work or portion of work at the proper location and in full compliance with the Contract Documents.
- C. Operation of Existing Facilities:
 - 1. Continuous operation of County's facilities is of critical importance. Schedule and conduct activities to enable existing facilities to operate continuously, unless otherwise specified.
 - 2. Do not proceed with Work affecting a facility's operation and roads without obtaining County's advance approval of the need for and duration of such Work.
 - 3. Provide 7 days' advance request for approval to County of need to shut down a process or facility or reroute traffic.
- D. Relocation of Existing Facilities:
 - 1. During construction, it is expected that minor relocations of Work will be necessary.
 - 2. Provide complete relocation of existing structures and Underground Facilities, including piping, utilities, equipment, structures, electrical conduit wiring, electrical duct bank, and other necessary items.
 - 3. Use only new materials for relocated facility. Match materials of existing facility, unless otherwise shown or specified.
 - 4. Perform relocations to minimize downtime of existing facilities.
 - 5. Install new portions of existing facilities in their relocated position prior to removal of existing facilities, unless otherwise accepted by Engineer.

1.12 PHYSICAL CONDITIONS

- A. Exercise reasonable care to verify locations of existing subsurface structures and Underground Facilities.
- B. Thoroughly check immediate and adjacent areas subject to excavation by visual examination (and by electronic metal and pipe detection equipment, as necessary) for indications of subsurface structures and Underground Facilities.

- C. Make exploratory excavations where existing Underground Facilities or structures may potentially conflict with proposed Underground Facilities or structures. Conduct exploratory excavations in presence of County and sufficiently ahead of construction to avoid possible delays to Contractor's Work.

1.13 CONSTRUCTION CONDITIONS AND SUBSURFACE INVESTIGATION

- A. The Contractor shall strictly adhere to the specific requirements of the governmental unit(s) or agency(ies) having jurisdiction over the work. Wherever there is a difference in the requirements of a jurisdictional body and these Specifications, the more stringent shall apply.
- B. Prior to submission of a bid, the Contractor shall determine and investigate the nature and location of the work, the conformation of the ground, the character and quality of the substrata, the types and quantity of materials to be encountered, the nature of the work conditions, the character of equipment and facilities needed during the prosecution of the work, the general and specific conditions, and all other matters which can in any way affect the work under this Contract. Any claim of the Contractor due to nature of the work, substrata, groundwater, landfill gas and leachate, and other such Site conditions will not be allowed or acceptable by the County.

1.14 DAILY REPORTS

- A. The Contractor shall prepare daily reports of construction activities, including nonwork days. The report shall include as a minimum:
 1. Manpower, number of personnel by name and craft.
 2. Equipment with Contractor's identification number on the Project.
 3. Major deliveries.
 4. Activities and Work with reference to the schedule activity numbers.
 5. New problems.
 6. Other pertinent information.
- B. A similar report shall be prepared by each subcontractor and submitted along with the Contractor's report.
- C. The reports shall be submitted to the County on a weekly basis. Each report shall be signed and dated by the Contractor's Superintendent and the Project Manager. Submittal of these daily reports should not be construed to mean that the County has agreed or disagreed with the content of these reports.

1.15 EMERGENCIES

- A. The Contractor shall, at all times, after regular working hours, including weekend and holidays, maintain a telephone where he or his representative can be reached on an emergency basis. The Contractor or his representative shall be prepared to act to correct conditions on the site deemed to constitute an emergency by either the County, his agent, the Engineer, or local authorities, and is obligated to act to prevent threatened damage, injury, or loss without special instructions from the County. The Contractor shall give the County prompt written notice of all significant changes in the Work or deviations from the Contract Documents caused thereby. If a condition on the site requires attention after regular working hours, either the County, agent, Engineer, or local authority shall call the Contractor or his representative at the emergency telephone number, identify himself, and describe the emergency condition. The Contractor is expected to dispatch men and equipment to adequately institute corrective measures within 2 hours of notification. If for some reason the Contractor or his agent cannot be reached at the emergency number after a reasonable time (1/2 hour), the County shall have the right to immediately initiate corrective measures, and the cost shall be borne by the Contractor.
- B. In the event the Contractor fails to maintain safe job conditions and traffic conditions, including, but not limited to, trench settlement and hazardous storage of backfill or construction materials, the County, after failure of the Contractor to commence substantial steps at the jobsite to rectify the situation within 2 hours of the time the Contractor has been notified of the unsafe conditions, may hire guards, take such precautions, make such repairs, and take any other steps which the County or the County's agent in its direction, considers necessary to protect the property, persons, or the County. The cost of any of these precautions, guards, or steps shall be deducted from the payments due the Contractor, and the Contractor will be billed for these services, work, and material at prevailing rates.
- C. Emergency phone numbers (fire, medical, police) shall be posted at the Contractor's phone and its location known to all.
-
- D. Accidents shall be reported immediately to the County's Project Manager by messenger or phone.
- E. All accidents shall be documented and a fully detailed written report submitted to the County after each accident.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 CUTTING, FITTING, AND PATCHING

- A. Cut, fit, adjust, or patch work and work of others, including excavation and backfill as required, to make Work complete.
- B. Obtain prior written authorization from the County before commencing work to cut or otherwise alter:
 - 1. Structural or reinforcing steel, structural columns or beams, elevated slabs, trusses, or any other structural member.
 - 2. Weather- or moisture-resistant elements.
 - 3. Efficiency, maintenance, or safety of element.
 - 4. Work of others.
- C. Restore existing work, Underground Facilities, and surfaces that are to remain in completed Work including concrete-embedded piping, conduit, and other utilities as specified and as shown.
- D. Make restorations with new materials and appropriate methods as specified for new Work of similar nature; if not specified, use best recommended practice of manufacturer or appropriate trade association.
- E. Fit Work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces and fill voids.
- F. Remove specimens of installed Work for testing when requested by County.

3.02 SUPPLEMENTS

- A. The supplements listed below, and included after this section, are part of this Specification.
 - 1. Supplement 1, Contractor's Affidavit Verifying Accuracy of Drawings and Specification.

END OF SECTION

**CONTRACTOR'S AFFIDAVIT VERIFYING ACCURACY
OF
DRAWINGS AND SPECIFICATIONS**

(This Affidavit shall be submitted to the Engineer prior to the start of Construction)

STATE OF _____)
COUNTY OF _____)

The undersigned being first duly sworn as provided by law, deposes and certifies that:

1. The undersigned is authorized to make this Affidavit on behalf of,

_____ (Name of Corporation, Partnership, Individual, etc.)

A _____, formed under the laws of _____
of which he is _____ (Sole Owner, Partner, President, etc.)

2. Prior to the start of work on the site, Affiant has carefully studied, reviewed and compared the Drawings and Specifications and checked and verified all pertinent figures shown thereon and all applicable field measurements;

3. Affiant hereby verifies that the, Drawings and Specifications in the Contract Documents for the _____ (Project Name) accurately represent the existing site conditions and do not contain any conflicts, errors, ambiguities, or discrepancies except as specifically noted below.

4. Number of exceptions _____ (if none, please indicate zero in the space provided). Each exception is explained in detail on the attached sheets. _____ additional sheets are attached.

_____ Affiant

BY: _____

Sworn and subscribed before me this _____ day of _____, 20____.

_____ Notary Public

My Commission Expires:

END OF CONTRACTOR VERIFICATION FORM

**SECTION 01060
SURVEYING**

PART 1 GENERAL

1.01 SUBMITTALS

- A. Surveyor Qualifications:
 - 1. Submit to the County the name, address, telephone number, and qualifications of the surveyor, crew chief, and all other persons who are proposed to perform surveys or survey-related duties 30 days prior to start of any survey work.
 - 2. All control survey and layout shall be performed and signed and sealed by a qualified land surveyor registered in the State of Florida.
- B. Field Notes and/or Data Collector Output: Within 48 hours of completing and reducing the notes, or downloading and computing using a data collector, for a survey or portion of survey, submit reduced data to the County.

1.02 PROJECT RECORD DOCUMENTS

- A. Maintain onsite a complete, accurate log of control of survey work as it progresses. All original field notes, computations, and other records for the purpose of layout and quantity surveys shall be recorded in field books.

PART 2 PRODUCTS

2.01 GENERAL

- A. Unless otherwise specified in individual Specification sections, the following minimum standards shall apply:
 - 1. Control Surveys: Vertical shall close within 0.03 foot. Horizontal control angles shall close to the nearest plus or minus 10 seconds. Measured distances shall be plus or minus 0.01 foot.
 - 2. Quantity Surveys: Horizontal distances shall be plus or minus 0.1 foot.

2.02 EQUIPMENT AND MATERIALS

- A. Contractor shall provide all equipment and materials as required to properly perform the surveys. All material shall be of good professional quality and in first-class condition.
- B. All instruments (conventional or electronic) shall be calibrated according to the manufacturer's recommendations and maintained in accurate calibration throughout the execution of the work.

PART 3 EXECUTION**3.01 INSPECTION**

- A. Verify with the County locations of site reference and survey control points prior to starting work. Promptly notify the County of any discrepancies discovered. Verify layouts periodically during construction.

3.02 SURVEY REFERENCE POINTS

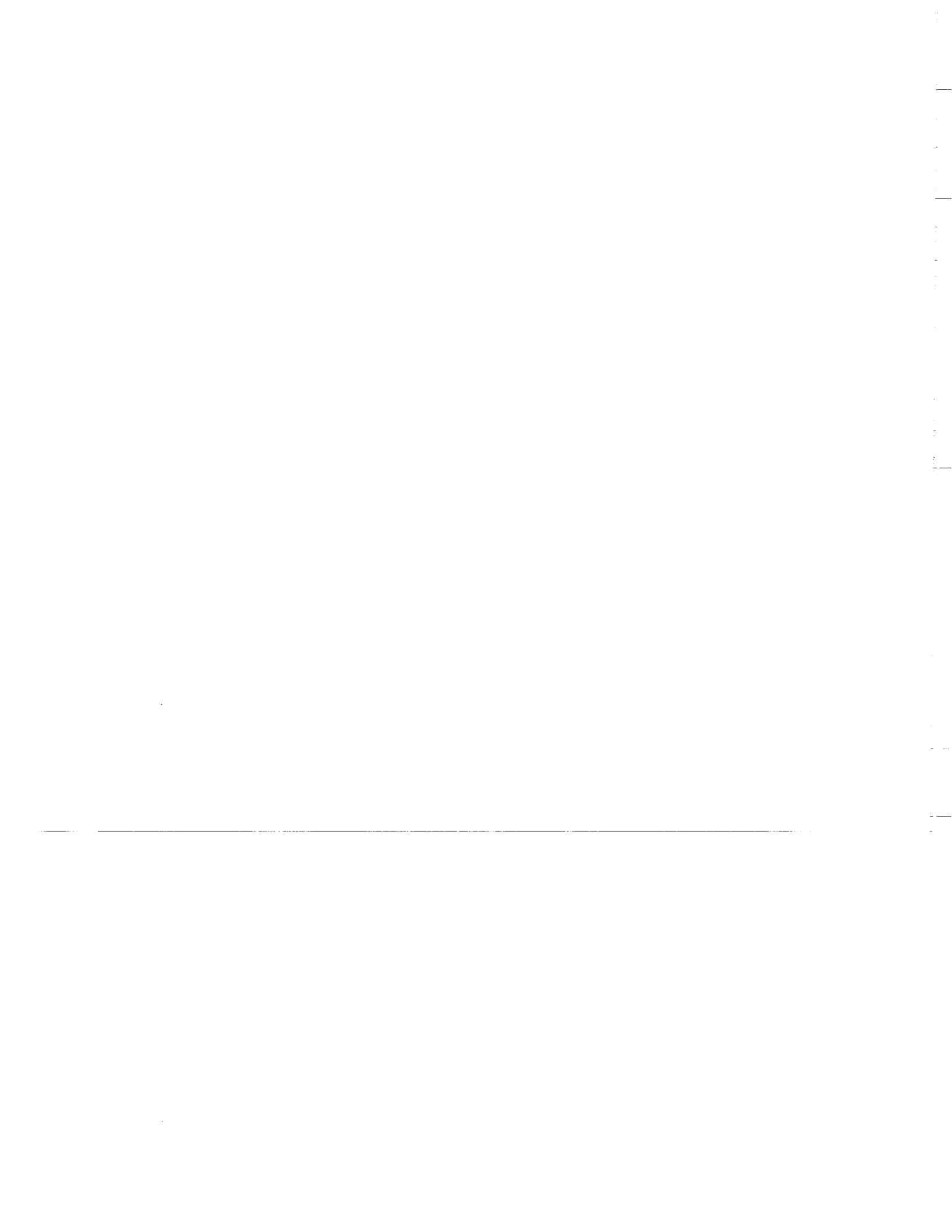
- A. Protect survey points prior to starting work and preserve permanent reference points during construction.
- B. Promptly report to the County the loss, damage, or destruction of any reference point or relocation required because of changes in grades or other reasons. Replace dislocated survey control points based on original survey control.

3.03 SURVEY REQUIREMENTS

- A. Reference survey monuments or establish new survey monuments referenced to the project horizontal coordinate grid system and the National Geodetic Vertical Datum.
- B. Reference survey and site reference points to the provided control monuments and record locations of survey control points, using horizontal project coordinate grid system and National Geodetic Vertical Datum, on Record Drawings.
- C. Establish lines, levels, and locate and lay out site features to be constructed including necessary stakes for cut, fill, placement, and grading operations and stakes for utility locations, slopes, and invert elevations. When it is necessary to remove a grade marker for construction operations, appropriate offset staking shall be used.
- D. All marks given shall be carefully preserved and, if destroyed or removed by the Contractor without the County's approval, they shall be reset, if necessary, at no additional cost to this Contract.
- E. All work not done with the methods and equipment as submitted by the Contractor and approved by the County shall be removed and replaced using approved methods and equipment.
- F. It shall be the duty of the Contractor to keep the County informed of the times and places at which he intends to work in order that the County may have an ample opportunity to furnish and/or to check the lines and elevations with a minimum of inconvenience to the County or delay to the Contractor.

- G. As-built documentation for extension of the existing header, installation of the condensate sump and skid mounted flare shall be submitted. The coordinates and elevations of installed pipe, fittings, ground elevation, tie ins and appurtenances shall be recorded. The location and elevation for all electrical lines shall be recorded.
- H. The following as-built documentation shall be provided at completion of the requirements for each delivery order. All transition points including tees, elbows, etc. shall also be recorded and reported. The survey shall be submitted in AutoCAD format, latest version on a CD and four signed and sealed hard copies.
1. For the horizontal gas extraction wells, the coordinates and elevation for the beginning and end of the perforated and solid pipe, at 50-foot intervals along the pipe, at the wellhead and at the connection to the existing LFG collection system.
 2. For the leachate recirculation trench pipes, the coordinates and elevation for the beginning and end of the perforated and solid pipe, at 50-foot intervals along the pipe, at the connection to the existing leachate recirculation system.
 3. For the vertical gas extraction wells, the coordinates and elevation for the beginning and end of the perforated and solid pipe, at the wellhead and at the connection to the existing LFG collection system.
 4. For the stormwater piping, the coordinates and elevation at each terrace.

END OF SECTION



**SECTION 01200
PROJECT MEETINGS**

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1, General Requirements Specification sections, apply to this section.

1.02 SUMMARY

- A. This section specifies administrative and procedural requirements for project meetings including but not limited to:
 - 1. Preconstruction Conference.
 - 2. Progress Meetings.
 - 3. Coordination Meetings.

1.03 DESCRIPTION

- A. The County will schedule and administer a preconstruction conference after the Contract is awarded, meetings before each delivery order is issued, construction progress meetings as required, and specially called meetings throughout the progress of work. The County will be responsible for preparing the agenda, making arrangements, preparing the meeting summaries and presiding at these meetings.
- B. Representatives of the Contractor, Subcontractor(s), and Suppliers attending these meetings shall be qualified and authorized to act on behalf of the entity each represents.
- C. The Contractor shall attend meetings to assure that work is performed correctly and consistent with Contract Documents and construction schedules.

1.04 PRECONSTRUCTION CONFERENCES

- A. After Contract award and before each delivery order is issued, a joint meeting shall be held with representatives of the County, Contractor and his Superintendent, and other invited parties that may be affected by the Project.

- B. These meetings are intended to introduce the various key personnel from each organization and to discuss the Contract Documents, the start of construction, order of work, labor and legal requirements, approved insurance requirements, names of the major subcontractors, method of payment, Shop Drawing submittal schedule, protection of existing facilities, and other pertinent items associated with the Project. The Contractor shall bring three copies of a construction schedule, schedule of values, and shop drawing submittals to these meetings.
- C. The suggested Agenda for the Preconstruction Meetings:
1. Introduction of key personnel and roles.
 2. Overview of Project.
 - a. Project summary.
 - b. Contract completion time.
 - c. Liquidated damages.
 - d. Guarantee of work.
 3. Project schedule.
 4. Critical work sequencing.
 5. Labor requirements.
 6. Relationship and Coordination with:
 - a. Other Contracts.
 - b. On-going landfill operations.
 7. Use of Premises:
 - a. Access and traffic control.
 - b. Office, work, and storage areas.
 - c. Temporary facilities/utilities.
 - d. Safety and first aid procedures.
 - e. Security procedures.
 - f. Posting of signs.
 - g. Cleanup procedures.
 - h. Other County requirements.
 8. Procedures and Processing of:
 - a. Record Documents.
 - b. Shop Drawings.
 - c. Change Orders.
 - d. Applications for Payment.
 - e. Partial Payments.
 9. Construction facilities, controls and aids.
 10. Survey and Staking of work.
 11. Equipment to be used.
 12. Material/manufacturers/suppliers to be used.
 13. Major equipment/material deliveries.
 14. Onsite material storage requirements.
 15. Project inspections.

1.05 PROGRESS MEETINGS

- A. During the course of the Contract, progress meetings will be organized and conducted by the County to discuss the progress of the Work. The Contractor and his construction superintendent shall attend these meetings.
- B. The progress meetings will be held at the Solid Waste Division office onsite.
- C. The suggested agenda for these meetings:
 - 1. Review summary of previous meeting.
 - 2. Review of work progress since previous meeting.
 - 3. Progress schedule during next work period.
 - 4. Field observations, problems, conflicts.
 - 5. Problems that impede the construction schedule.
 - 6. Review of off-site fabrication and delivery schedules.
 - 7. Corrective measures and procedures to regain projected schedule.
 - 8. Revisions to construction schedule.
 - 9. Coordination of work items with County activities.
 - 10. Shop drawings and other submittals.
 - 11. Maintenance of quality standards.
 - 12. Pending changes and substitutions.
 - 13. Review proposed changes for:
 - a. Effect on construction schedule and on completion date.
 - b. Effect on other Contracts of the Project.
 - 14. Other business.
 - 15. Critical/long-lead items.

PART 2 – PRODUCTS (NOT USED)**PART 3 – EXECUTION (NOT USED)****END OF SECTION**



**SECTION 01600
MATERIAL AND EQUIPMENT**

PART 1 GENERAL

1.01 DEFINITIONS

A. Products:

1. New items for incorporation in the Work, whether purchased by Contractor, County, or taken from previously purchased stock.
2. Existing materials or components required for reuse.
3. Includes references by the terms material, equipment, machinery, components, subsystem, system, hardware, software, and terms of similar intent and is not intended to change the meaning of such other terms used in the Contract Documents as those terms are self-explanatory and have well recognized meanings in the construction industry.
4. Items identified by manufacturer's product name, including make or model designation, indicated in the manufacturer's published product literature, that is current as of the date of the Contract Documents.

1.02 DESIGN REQUIREMENTS

- A.** All materials and manufactured articles for incorporation into the Work shall be new and unused standard products from recognized, reputable manufacturers.
- B.** Provide systems, equipment, and components, including supports and anchorages, in accordance with the provisions of the latest edition of Standard Building Code (SBCCI).
1. Wind: 100 mph, with exposure C condition and an importance factor of 1.15.
 2. Seismic: Zone 1, importance factor of 1, unless specified otherwise.

1.03 SUBMITTALS

A. Administrative Submittals:

1. List of all proposed substitute or "or-equal" items/methods.
2. Schedule of factory tests required by Contract Documents. Identify tests for which County's presence has been specified.

B. Quality Control Submittals:

1. Factory Tests: As specified in the individual Specifications.
 - a. Procedures: Preliminary outlines.
 - 1) Final Accepted Procedures: Prior to start of factory testing.
 - b. Test Documentation: Results of successful testing, including certification of procedures and results.

1.04 ENVIRONMENTAL REQUIREMENTS

- A. Altitude: Provide materials and equipment suitable for installation and operation under rated conditions at 100 feet above sea level.
- B. Provide equipment and devices installed outdoors or in unheated and uncooled enclosures capable of continuous operation within an ambient temperature range of 15 degrees F to 110 degrees F. If heating and/or cooling is required for continuous operation at the ambient temperatures specified, such heating and cooling shall be provided by the Contractor at no additional cost to the County.

1.05 PREPARATION FOR SHIPMENT

- A. When practical, factory assemble products. Matchmark or tag separate parts and assemblies to facilitate field assembly. Cover machined and unpainted parts that may be damaged by the elements with a strippable protective coating.
- B. Package products to facilitate handling and protect from damage during shipping, handling, and storage. Mark or tag outside of each package or crate to indicate its purchase order number, bill of lading number, contents by name, name of Project and Contractor, equipment number, and approximate weight. Include complete packing lists and bills of materials with each shipment.
- C. Spare parts, special tools, test equipment, expendables, and maintenance materials:
 1. Furnish as required by the Specifications prior to (i) starting functional testing, or (ii) operation of the equipment by the County, or (iii) 75 percent Project completion, whichever occurs first.
 2. Properly package to avoid damage, in original cartons insofar as possible. Replace parts damaged or otherwise inoperable.
 3. Firmly affix to, and prominently display on, each package.
 - a. Minimum 3-inch by 6-inch manila shipping tag with the following information printed clearly:
 - 1) Manufacturer's part description and number.
 - 2) Applicable equipment description.
 - 3) Quantity of parts in package.

- 4) Equipment manufacturer.
 - 5) Applicable Specification section.
 - 6) Name of Contractor.
 - 7) Project name.
4. Notify the County's Resident Project Representative upon arrival.
- D. Protect equipment from exposure to the elements and keep thoroughly dry and dust-free at all times. Protect painted surfaces against impact, abrasion, discoloration, or other damage. Grease or oil all bearings and similar items.
- E. Factory Test Results: Contractor and County to review and accept before product shipment as required in individual Specification sections.

1.06 DELIVERY AND INSPECTION

- A. Deliver products in accordance with the accepted current progress schedule and coordinate to avoid conflict with Work and conditions at the site. Deliver anchor bolts and templates sufficiently early to permit setting prior to placement of structural concrete.
- B. Deliver products in undamaged condition, in manufacturer's original container or packaging, with identifying labels intact and legible. Include on label date of manufacture and shelf life, where applicable. Include UL labels on products so specified.
- C. Unload products in accordance with manufacturer's instructions for unloading, or as specified. Record the receipt of products at the site. Inspect for completeness and evidence of damage during shipment.
- D. Remove damaged products from the site and expedite delivery of identical new and undamaged products, and remedy incomplete or lost products to provide products as specified, so as not to delay the progress of the Work.

1.07 HANDLING, STORAGE, AND PROTECTION

- A. Handle products in accordance with the manufacturer's written instructions, and in a manner to prevent damage. Store products, upon delivery, in accordance with manufacturer's instructions, with labels intact and legible, in approved storage yards or sheds. Provide manufacturer's recommended maintenance during storage, installation, and until products are accepted for use by the County.
- B. Arrange storage in a manner that provides easy access for inspection. Make periodic inspections of stored products to assure that products are maintained under specified conditions, and free from damage or deterioration. Keep running account of products in storage to facilitate inspection and to estimate progress payments for products delivered, but not installed, in the Work.

- C. Store electrical, instrumentation, and control products, and equipment with bearings in weathertight structures maintained above 60 degrees F. Protect electrical, instrumentation, and control products, and insulation against moisture, water, and dust damage. Connect and operate continuously all space heaters furnished in electrical equipment.
- D. Store fabricated products aboveground, on blocking or skids, and prevent soiling or staining. Store loose granular materials in a well-drained area on solid surfaces to prevent mixing with foreign matter. Cover products that are subject to deterioration with impervious sheet coverings; provide adequate ventilation to avoid condensation.
- E. Store finished products that are ready for installation in dry and well ventilated areas. Do not subject to extreme changes in temperature or humidity.
- F. Hazardous Materials: Prevent contamination of personnel, the storage building, and the site. Meet the requirements of the product specifications, codes, and manufacturer's instructions.

1.08 SUBSTITUTE AND "OR-EQUAL" PRODUCTS

- A. When a particular product is specified or called for, it is intended and shall be understood that the proposal tendered by the Contractor included those products in the bid submitted. Should the Contractor desire to use a product or products potentially equal to those specified, the Contractor shall furnish information as described herein and in the Standard General Conditions. The alternate product or products shall meet the requirements of the Specifications and shall, in all respects, be equal to or better than the products specified by name herein. The County shall be the sole entity deciding the proposed product substitution meets the Specifications.
- B. Listing of Proposed Substitute or "Or-equal" Items or Methods:
 1. With consideration of the additional evaluation time necessary for the County's review of such items, indicate for each item the review status (either substitute or "or-equal") and estimated submission date.
 2. Contractor, in indicating the review status of the proposed item, acknowledges that the time shown for the County's review on the current accepted schedule is sufficient only to allow the County to accomplish review for the status indicated and not sufficient to perform both a review for "or-equal" status and a subsequent review for substitute status on the same product.

3. The County may return, unreviewed, those submissions (i) not shown on the current accepted schedule, (ii) for which the review status differs from that indicated on the accepted list unless previously approved in writing by the County, (iii) not in accordance with the General Conditions and as specified herein, (iv) which are incomplete, or (v) which are uncertified, in which case Contractor shall provide the specified product.
- C. Submit seven copies of documentation for the proposed substitute or “or-equal” item/method, to include all supporting data required for the County's review. Complete, sign, and transmit a cover sheet with each proposed substitute or “or-equal” item/method submission.
 - D. Contractor shall provide a point by point list demonstrating the equality of the proposed substitution.
 - E. Substitutions involving building code related products or materials must be approved by the Orange County Building Department.
 - F. Disposition of Substitute Item/Method:
 1. Accepted: The County will document acceptance of substitution in writing to the Contractor. If the substitution involves a change in Contract Amount, the County will recommend a Change Order for the Contractor and County execution. Such Change Order will accompany the County's evaluation and acceptance of Contractor's proposed substitute.
 2. Rejected:
 - a. One copy retained by County.
 - b. One copy returned to Contractor with a commentary by the County.
 - c. Remaining copies will be destroyed.
 - d. Contractor shall provide item specified in Contract Documents.
 - G. The Contractor shall be responsible for all costs associated with product substitutions that require major design changes to the Work made necessary by the substitutions.

PART 2 PRODUCTS

2.01 GENERAL

- A. Provide manufacturer's standard materials suitable for service conditions unless otherwise specified in the individual Specifications.
- B. Where product specifications include a named manufacturer, with or without model number, and also include performance requirements, named manufacturer's products must meet the performance Specifications.

- C. Like items of products furnished and installed in the Work shall be end products of one manufacturer and of the same series or family of models to achieve standardization for appearance, operation and maintenance, spare and replacement parts, and manufacturer's services, and implement same or similar process instrumentation and control functions in same or similar manner.
- D. Provide interchangeable components of the same manufacturer, for similar components, unless otherwise specified.
- E. Equipment, Components, Systems, Subsystems: Design and manufacture with due regard for health and safety of operation, maintenance, and accessibility, durability of parts, and shall comply with applicable OSHA, state, and local health and safety regulations.
- F. Regulatory Requirement: Coating materials shall meet federal, state, and local requirements limiting the emission of volatile organic compounds and for worker exposure.
- G. Safety Guards: Provide for all belt or chain drives, fan blades, couplings, or other moving or rotary parts. Cover rotating part on all sides. Design for easy installation and removal. Use 16-gauge or heavier; galvanized steel, aluminum coated steel, or galvanized or aluminum coated 1/2-inch mesh expanded steel. Provide galvanized steel accessories and supports, including bolts. For outdoors application, prevent entrance of rain and dripping water.
- H. Provide materials and equipment listed by UL wherever standards have been established by that agency.
- I. Equipment Finish: Provide manufacturer's standard finish and color, except where specific color is indicated.
- J. Special Tools and Accessories: Furnish to County, upon acceptance of equipment, all accessories required to place each item of equipment in full operation. These accessory items include, but are not limited to, adequate oil and grease (as required for first lubrication of equipment after field testing), light bulbs, fuses, hydrant wrenches, valve keys, handwheels, chain operators, special tools, and other spare parts as required for maintenance.
- K. Lubricant: Provide initial lubricant recommended by equipment manufacturer in sufficient quantity to fill lubricant reservoirs and to replace consumption during testing, startup, and operation until final acceptance by County.

2.02 FABRICATION AND MANUFACTURE

A. General:

1. Manufacture parts to U.S.A. standard sizes and gauges.
2. Two or more items of the same type shall be identical, by the same manufacturer, and interchangeable.
3. Design structural members for anticipated shock and vibratory loads.
4. Use 1/4-inch minimum thickness for steel that will be submerged, wholly or partially, during normal operation.
5. Modify standard products as necessary to meet performance Specifications.

B. Lubrication System:

1. Require no more than weekly attention during continuous operation.
2. Convenient and accessible. Oil drains with bronze or stainless steel valves and fill plugs easily accessible from the normal operating area or platform. Locate drains to allow convenient collection of oil during oil changes without removing equipment from its installed position.
3. Provide constant-level oilers or oil level indicators for oil lubrication systems.
4. For grease type bearings, which are not easily accessible, provide and install stainless steel tubing; protect and extend tubing to convenient location with suitable grease fitting.

2.03 SOURCE QUALITY CONTROL

- A. Where Specifications call for factory testing to be witnessed by County, notify County not less than 14 days prior to scheduled test date, unless otherwise specified.
- B. Calibration Instruments: Bear the seal of a reputable laboratory certifying that instrument has been calibrated within the previous 12 months to a standard endorsed by the National Institute of Standards and Technology (NIST).
- C. Factory Tests: Perform in accordance with accepted test procedures and document successful completion.

PART 3 EXECUTION

3.01 INSPECTION

- A. Inspect materials and equipment for signs of pitting, rust decay, or other deleterious effects of storage. Do not install material or equipment showing such effects. Remove damaged material or equipment from the site and expedite delivery of identical new material or equipment. Delays to the Work resulting from material or equipment damage which necessitates procurement of new products will be considered delays within Contractor's control.

3.02 INSTALLATION

- A. Equipment Drawings show general locations of equipment, devices, and raceway, unless specifically dimensioned.
- B. No shimming between machined surfaces is allowed.
- C. Install Work in accordance with NECA Standard of Installation, unless otherwise specified.
- D. Repaint painted surfaces that are damaged prior to equipment acceptance.
- E. Handle, install, connect, clean, condition, and adjust products in accordance with manufacturer's instructions and as may be specified. Retain a copy of manufacturers' instruction at site, available for review at all times.
- F. For material and equipment specifically indicated or specified to be reused in the Work:
 - 1. Use special care in removal, handling, storage, and reinstallation to assure proper function in the completed Work.
 - 2. Arrange for transportation, storage, and handling of products that require offsite storage, restoration, or renovation. Include costs for such Work in the Contract Price.

3.03 ADJUSTMENT AND CLEANING

- A. Perform required adjustments, tests, operation checks, and other startup activities.

3.04 LUBRICANTS

- A. Fill lubricant reservoirs and replace consumption during testing, startup, and operation prior to acceptance of equipment by County.

END OF SECTION

**SECTION 01720
PROJECT RECORD DOCUMENTS**

PART 1 – GENERAL

1.01 SUMMARY

- A. The Contractor shall maintain at the Site one Record Copy of:
1. Drawings.
 2. Project Manual.
 3. Addenda.
 4. Change Orders and other modifications to Contract.
 5. Project Manager field orders, written instructions, or clarifications.
 6. Approved submittals.
 7. Field test records.
 8. Construction photographs.
 9. Associated permits.
 10. Certificates of inspection and approvals.

1.02 SUBMITTALS

- A. At Substantial Completion the Contractor shall: Deliver two review sets of Record Documents within 30 days after Substantial Completion to the County. Each set of Record Documents shall consist of: one set of 22 by 34-inch blue-line drawings, one copy of the Operation and Maintenance manual, and one copy of vendor and material supply information. The County shall comment and return one set to Contractor. The Record Drawings shall be generated using computer software as specified in paragraph 3.03.F.
- B. Accompany the submittals with a transmittal letter containing the following:
1. Date.
 2. County project title and number.
 3. Contractor's name and address.
 4. Title of record document.
 5. Signature of Contractor or authorized representative.
- C. At County's acceptance: Upon receipt of County's comments, Contractor shall deliver, within 30 days, to County five complete sets of Record Documents incorporating County's comments. Documents shall be sealed by a Professional Engineer registered in the State of Florida.
- D. Quality Assurance:
1. Furnish qualified and experienced person, whose duty and responsibility shall be to maintain Record Documents.

2. Accuracy of Records:
 - a. Coordinate changes within record documents, making legible and accurate entries on each page of Specifications and other documents where such entry is required to show change.
 - b. Purpose of Project record documents is to document factual information regarding aspects of Work, both concealed and visible, to enable future modification of Work to proceed without lengthy and expensive site measurement, investigation, and examination.
3. Make entries within 24 hours after receipt of information that a change in Work has occurred.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 MAINTENANCE OF RECORD DOCUMENTS AND SAMPLES

- A. Contractor shall store documents and samples in Contractor's field office apart from documents used for construction.
 1. Provide files and racks for storage of documents.
 2. Provide secure storage space for storage of samples.
- B. Maintain documents in clean, dry, legible condition and in good order. Record Documents shall not be used for construction purposes.
- C. Make documents and samples available at all times for inspection by County.
- D. Failure to properly maintain Record Documents may be reason to delay a portion of progress payments until records comply with Contract Documents.

3.02 CONSTRUCTION PHOTOGRAPHS

- A. The Contractor shall provide a series of digital photographs documenting all aspects of construction. Each photograph shall have the following information identified:
 1. Project Name.
 2. Date.
 3. A detailed description identifying location and name of feature photographed.
- B. Photographs shall be taken weekly or during execution of individual Work items, whichever is more frequent, beginning prior to the start of construction and continuing through the completion of all construction.

- C. Photographs shall be taken to document each major Work item, including:
1. Preconstruction conditions.
 2. Mobilization.
 3. Installation of the gas header piping.
 4. Header crossings over and near storm water structures and under roads.
 5. Lateral crossings over each storm water terrace.
 6. Installation of horizontal and vertical LFG extraction wells.
 7. Installation of leachate recirculation system.
 8. Installation of storm water pipelines and appurtenances.
 9. Site cleaning and demobilization.

3.03 RECORD DOCUMENTS

- A. Label each document "RECORD DOCUMENTS" in large printed letters.
- B. Maintain record set of Drawings and Specifications legibly annotated to show all changes made during construction.
1. Graphically depict changes by modifying or adding to plans, details, sections, elevations, or schedules.
 2. Make changes on each sheet affected by changes.
- C. Record information concurrently with construction progress and within 24 hours after receipt of information that change has occurred. Do not cover or conceal Work until required information is recorded.
- D. As-Built Drawings shall include the following:
1. Title Sheet (includes site location map, site address and phone number, and names, addresses and phone numbers of Contractor).
 2. Well and Header Layout (as-built and drawn using surveyed horizontal and vertical coordinates).
 3. As-Built typical Details.
 4. Pipe profiles of all leachate recirculation system header and trench pipes.
 5. Pipe profiles of all LFG piping, wellheads, and lateral connections.
 6. Pipe profiles of all storm water pipes and appurtenances.
- E. Project Documentation:
1. Each copy shall be bound and at the minimum consist of the following information:
 - a. Cover Sheet.
 - b. Table of Contents.
 - c. List of Addenda.

- d. Project Contact List - includes the names, phone numbers and address of the following:
 - 1) Project Manager.
 - 2) Site Representative.
 - 3) Pipe Contractor.
 - 4) Surveyor.
 - 5) Record Documenter.
 - e. Project Vendor List.
 - f. Construction Notes/Bill of Materials.
 - g. Project Record Drawing Summary.
 - h. Pressure Test Reports.
 - i. Contractor's Daily Work Logs.
 - j. Construction Meeting Notes/Status Reports.
2. Project Document Appendices shall include:
- a. HDPE Pipe Specifications.
 - 1) Pipe Installation Manual.
 - 2) Engineering Characteristics Manual.
 - 3) Pipe Material Data Sheet.
 - 4) Fabricated fittings specification sheets.
 - b. LFG Flow Meter Specifications and O&M Manual.
 - c. Valve Specifications:
 - 1) Wellhead valves.
 - 2) Check valves.
 - 3) Ball valves.
 - 4) LFG Tee Connection Valves.
 - 5) LFG Flow Metering Station Valves.
 - 6) Leachate Recirculation Connection Valves.
 - d. Flexible Hose Specifications: Manufacturer's specifications on hose and clamps.
 - e. Photographs.

F. General File Requirements:

- 1. AutoCAD 2010 files for all Record Drawings including:
 - a. 3-dimensional, 1:1 format.
 - b. Existing survey reference points.
 - c. Breaklines that define all surface features.
- 2. Contours and spot elevations must be at correct elevation. A CD or DVD shall be used for submittal of electronic files.
- 3. An electronic copy (Adobe PDF or approved equal) of the Record Drawings and other documentation shall also be included on the CD or DVD.
- 4. Label disk with name, date, and file reference names.

END OF SECTION

**SECTION 01800
HEALTH AND SAFETY**

PART 1 GENERAL

1.01 GENERAL

- A. The Contractor is solely responsible for the health, safety, and protection of all onsite personnel during the performance of the Work. The Contractor shall perform the work specified in these Contract Documents in accordance with the health and safety requirements specified herein, including the current edition of the Standard Operating Safety Guide: NIOSH Guidance Manual, and all federal, OSHA, state, and local health and safety regulations, including OSHA regulations for hazardous waste site work. It shall be the responsibility of the Contractor to be familiar with the required health and safety regulation in the performance of the Work.
- B. The Contractor will use only site crew members in the exclusion zone that are currently trained in accordance with the United States Occupational Safety and Health Administration (OSHA) regulations 29 CFR 1910.120. The workers also need to have completed the minimum 40-hour Hazardous Materials training course and necessary refresher courses. The exclusion zone refers to areas of open refuse. A copy of the current training certificate will be provided to the County for each site worker prior to the start of site work. This applies to both the Contractor's workers and any Subcontractor site workers.
- C. All site workers that work in the exclusion zone must be under a Medical Monitoring Program as outlined in 29 CFR 1910.120, and be physically capable of wearing a respirator, if necessary. Proof of participation in this program must be provided to the County prior to the start of Work.
- D. No smoking will be allowed on the landfill property.
- E. Actions that potentially endanger workers shall be stopped immediately and brought to the County's attention.

1.02 CONDITIONS AND HAZARDS AT THE SITE

- A. The solid waste located in the landfill has the potential of containing hazardous organic or toxic vapors. Possible hazardous emissions that could be released during borehole drilling and/or excavation and grading of refuse are methane, carbon dioxide, carbon monoxide, hydrogen sulfide, vinyl chloride, and asbestos, among others. The Contractor is responsible for incorporating safety monitoring and provisions, and implementing safety protocols if hazardous vapors or any other hazards are encountered during performance of the Work.

1.03 SITE-SPECIFIC HEALTH AND SAFETY PLAN

- A. The Contractor shall prepare a written site-specific Health and Safety Plan (Plan) for use by the Contractor and Subcontractor site workers. This plan must be prepared to meet the 29 CFR 1910.120 OSHA regulations and shall include as a minimum, the following:
1. **Organizational Structure:** To include general supervision, Health and Safety Officer, and lines of authority, responsibility, and communication. The Health and Safety Officer shall be a worker, other than the superintendent, who will be present at all times during Site construction.
 2. **Comprehensive Work Plan:** To include the Work tasks and objectives, resources needed, and training requirements for workers (Health and Safety requirements, machine operations license, etc.). This shall also include a section on safety procedures to be followed for the Work, including excavation and well drilling.
 3. **Health and Safety:** To include identification of possible site hazards, training levels for each category of site workers, personal protective equipment and medical surveillance needed, site control measures, and confined space entry procedures.
 4. **Emergency Response Plans:** To include all emergency telephone numbers, a highlighted map showing the quickest route to the nearest emergency care facility, and directions to such facility.
 5. **Air Monitoring Procedures:** To include frequency and type of air monitoring in work areas, calibration of air monitoring equipment, and action levels of air contaminants for site worker protection. All equipment calibration and field gas measurements shall be recorded with the date and time of sample, and the sampler's name. Sampling shall be done by a Contractor worker trained in the use of the gas sampling equipment. These trained workers shall be designated in the Contractor's Plan.
 6. **Respiratory Protection Program:** To include written documentation of the Contractor's respiratory program.
 7. **A signature page for all site workers covered by the Plan (Contractor and Subcontractor site workers).**
- B. Acceptance of the Contractor's Plan by the County is necessary prior to the start of site operations.
- C. The Contractor shall consider the various materials disposed of (municipal solid waste) that may be encountered during excavation in preparing the Health and Safety Plan.

1.04 FIRE SAFETY

- A. The Contractor shall perform all Work in a fire-safe manner. He shall supply and maintain on the Site adequate fire-fighting equipment capable of extinguishing incipient fires.

1.05 SITE OPERATIONS

- A. The Plan will be kept onsite in an easily accessible spot during all site operating hours. All site workers will be notified of the location of the Plan.
- B. A Safety Meeting will be held by Contractor and attended by all Contractor and Subcontractor site workers prior to starting construction. At this safety meeting, the Plan will be reviewed with the site workers, and all site workers will sign the Plan indicating that they have been apprised of the Plan's contents. New site workers must review the Plan with the Contractor's Health and Safety Officer prior to beginning work onsite, and must sign that they have been apprised of the Plan's contents.
- C. Site operations will take place in conditions of adequate light only.
- D. Areas of open refuse (i.e., excavations, trenches and boreholes) will be monitored for combustible gases, methane, volatile organics, hydrogen sulfide, and oxygen through the use of continuous-read field gas meters. Appropriate respiratory protection will be utilized by all workers, as necessary.
- E. No workers will be allowed in any trench or excavation while excavation of the area is in progress. Entry into the excavation shall be made only after the Contractor's site worker has monitored the air in the excavation, and determined the appropriate level of personal protection required for entry into the excavation. Site workers in excavations must be supervised at all times.
- F. Site workers shall limit their dermal exposure to excavated refuse. Minimal skin protection includes safety-toe boots, long pants, long-sleeved shirts, safety glasses, hard hats, and rubber gloves to be used when perform work near or handling refuse.
- G. Startup and shutdown of engines will not be done in areas of excavated refuse.
- H. "A Compilation of Landfill Gas Field Practices and Procedures," Solid Waste Association of North America (SWANA), March 1992," should be reviewed for further safety information.

1.06 EMERGENCY AND FIRST AID REQUIREMENTS

- A. In the event of any emergency associated with or resulting from work at this Site, the Contractor shall without delay: Cease work activity on the site; notify the County and appropriate local authorities, take safe and diligent action to remove or otherwise minimize the cause of the emergency; render full assistance to local authorities; and institute whatever measures might be necessary to prevent any repetition of the conditions or actions leading to or resulting in the emergency.
- B. The Contractor shall have at least two trained First Aid Technician onsite at all times. This person may perform other duties, but must be immediately available to render first aid when needed.
- C. At least one “industrial” first aid kit shall be provided and be maintained fully stocked at a manned location. First aid kit locations shall be specially marked and provided with adequate water and other supplies necessary to cleanse and decontaminate burns, wounds, or lesions.

1.07 PERSONAL HYGIENE AND DECONTAMINATION

- A. The Contractor shall be responsible for and ensure all Contractor, Subcontractor, and service personnel observe and adhere to the personal hygiene-related provisions of this Section, the Contractor’s site specific Health and Safety Plan, the EPA Standard Operating Safety Guide, the NIOSH Guidance Manual, and all state, federal, and OSHA regulations.
- B. Contractor, Subcontractor, and service personnel found to be consistently disregarding the personal hygiene-related provisions of this plan, shall at the request of the County, be barred from the site.
- C. Contractor, Subcontractor, and service personnel shall be required to thoroughly cleanse their hands and other exposed areas before taking lunch breaks. Lunch breaks shall be taken at locations away from Work activities.

PART 2 PRODUCTS (NOT USED)**PART 3 EXECUTION (NOT USED)****END OF SECTION**

**SECTION 02315
FILL AND BACKFILL**

PART 1 GENERAL

1.01 REFERENCES

- A. The following is a list of standards that may be referenced in this section:
1. American Society for Testing and Materials (ASTM):
 - a. C136, Standard Method for Sieve Analysis of Fine and Coarse Aggregates.
 - b. D75, Standard Practice for Sampling Aggregates.
 - c. D1557, Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³)).
 - d. D2922, Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).

1.02 DEFINITIONS

- A. Relative Compaction:
1. Ratio, in percent, of as-compacted field dry density to laboratory maximum dry density as determined in accordance with ASTM D1557 (Modified Proctor).
 2. Apply corrections for oversize material to either as-compacted field dry density or maximum dry density, as determined by the County.
- B. Optimum Moisture Content:
1. Determined in accordance with the ASTM Standard specified to determine maximum dry density for relative compaction.
 2. Determine field moisture content on basis of fraction passing 3/4-inch sieve.
- C. Prepared Ground Surface: Ground surface after completion of required demolition, clearing and grubbing, scalping of sod, stripping of topsoil, excavation to grade, and subgrade preparation.
- D. Completed Course: A course or layer that is ready for next layer or next phase of Work.
- E. Lift: Loose (uncompacted) layer of material.
- F. Geosynthetics: Geotextiles, geogrids, geocomposites, or geomembranes.

G. Well-Graded:

1. A mixture of particle sizes with no specific concentration or lack thereof of one or more sizes.
2. Does not define numerical value that must be placed on coefficient of uniformity, coefficient of curvature, or other specific grain size distribution parameters.
3. Used to define material type that, when compacted, produces a strong and relatively incompressible soil mass substantially free from detrimental voids.

H. Influence Area: Area within planes sloped downward and outward at 60-degree angle from horizontal measured from:

1. 1-foot outside outermost edge at base of foundations or slabs.
2. 1-foot outside outermost edge at surface of roadways or shoulder.
3. 0.5-foot outside exterior at spring line of pipes or culverts.

I. Excavated Material: Material from required excavations or from designated borrow areas on or near site.

J. Imported Material: Materials obtained from sources offsite, suitable for specified use.

1.03 SUBMITTALS

A. Samples: Material taken at source.

B. Quality Control Submittals:

1. Catalog and manufacturer's data sheets for compaction equipment.
2. Certified test results from independent testing agency.
3. Gradation test, carbonate content, and constant head permeability test results for imported drainage sand.

1.04 QUALITY ASSURANCE

A. Notify County when:

1. Structure or tank is ready for backfilling, and whenever backfilling operations are resumed after a period of inactivity.
2. Soft or loose subgrade materials are encountered wherever embankment or site fill is to be placed.
3. Fill material appears to be deviating from Specifications.

1.05 SEQUENCING AND SCHEDULING

A. Complete applicable Work specified in Section 02316, Excavation; Section 02320 Trench Backfill prior to placing fill or backfill.

- B. Do not place granular base, subbase, or surfacing until after subgrade has been prepared.

PART 2 PRODUCTS

2.01 SOURCE QUALITY CONTROL

- A. Gradation Tests: Gradation analyses at one test for every 1,000 cubic yards. One test minimum is required for granular fill. The gradation tests shall use a minimum of five sieves ranging from No. 40 to No. 200 sieve.
- B. Samples: Collected in accordance with ASTM D75:
 - 1. During production of imported material, provide samples as follows:
Granular fill.
 - 2. Clearly mark to show source of material and intended use.

2.02 EARTHFILL

- A. Earthfill shall be excavated material from required excavations free from rocks larger than 3 inches, ashes, cinders, trash, debris, and other deleterious materials. Roots and other organic material shall not exceed 2 percent by weight and the material shall not contain roots with caliper greater than 2 inches.

2.03 GRANULAR FILL

- A. Granular fill shall be imported or excavated material that is clean sand or crushed limestone with the following properties:
 - 1. Free from dirt, clay balls, and other deleterious material.
 - 2. Roots and other organic material shall not exceed 2 percent by weight and the material shall not contain roots with caliper greater than 1/2 inch.
 - 3. Well-graded from coarse to fine and containing sufficient fines to bind material when compacted, but with maximum 20 percent by weight passing No. 200 sieve.

PART 3 EXECUTION

3.01 GENERAL

- A. Keep placement surfaces free of water, debris, and foreign material during placement and compaction of fill and backfill materials.

- B. Place and spread fill and backfill materials in horizontal lifts of specified uniform thickness, in a manner that avoids segregation, and compact each lift to specified densities prior to placing successive lifts. Slope lifts only where necessary to conform to final grades or as necessary to keep placement surfaces drained of water.
- C. During filling and backfilling, keep level of fill and backfill around each structure and buried tank even.
- D. If pipe, conduit, duct bank, or cable is to be installed within fill or backfill:
 - 1. Fill or backfill to an elevation 2 feet above top of item to be laid.
 - 2. Excavate trench for installation of item.
 - 3. Install bedding, if applicable, as specified in Section 02320, Trench Backfill.
 - 4. Install item.
 - 5. Backfill envelope zone and remaining trench, as specified in Section 02320, Trench Backfill, before resuming filling or backfilling specified in this section.
- E. Tolerances:
 - 1. Final Lines and Grades: Within a tolerance of 0.1-foot unless dimensions or grades are shown or specified otherwise.
 - 2. Grade to establish and maintain slopes and drainage as shown. Reverse slopes are not permitted.
- F. Settlement: Correct and repair any subsequent damage to structures, pavements, curbs, slabs, pipes, and other facilities, caused by settlement of fill or backfill material.

3.02 BACKFILL UNDER AND AROUND STRUCTURES

- A. Under Facilities: Within influence area beneath structures, slabs, embankments, earthen dikes, pavements, curbs, piping, conduits, duct banks, and other facilities, backfill with granular fill, unless otherwise shown. Place granular fill in lifts of 8-inches maximum thickness, and compact each lift to minimum of 98 percent relative compaction as determined in accordance with ASTM D1557.
- B. Other Areas: Backfill with earthfill to lines and grades shown, with proper allowance for topsoil thickness where shown. Place in lifts of 8 inches maximum thickness, and compact each lift to minimum 90 percent relative compaction as determined in accordance with ASTM D1557.

3.03 FILL

- A. Outside influence areas of structures, embankments, pavements, curbs, slabs, pipes, and other facilities: Unless otherwise shown, place earthfill as follows:
1. Maximum 8-inch thick lifts.
 2. Place and compact fill across full width of embankment.
 3. Compact to minimum 90 percent relative compaction as determined in accordance with ASTM D1557.
 4. Dress completed embankment with allowance for topsoil, crest surfacing, and slope protection, where applicable.

3.04 STOCKPILING

- A. Prior to the start of delivery of soil material to the project Site, the Contractor shall prepare a sketch and a written stockpiling plan, if he plans to stockpile soil instead of direct haul to the Work area. The plan shall indicate the location of stockpiling areas for different material (e.g. granular fill, earthfill, drainage sand, etc.). This plan shall also include temporary roads, protection against weather and erosion, protection of the liner, and must be reviewed and approved by the County prior to any delivery to the site. County's review of the Contractor's plan will not relieve the Contractor of supplying and installing materials as specified.
- B. Excavated materials classified as granular fill shall be stockpiled in designated areas free of incompatible soil, debris, roots, or other objectionable materials.
- C. Excavated material classified as spoil shall be segregated from granular fill and stockpiled or disposed of in the manner shown on the Drawings or as specified by the County.
- D. Stockpiles of fill or spoil shall be no steeper than 3:1 (horizontal: vertical), graded to drain, sealed by tracking parallel to the slope with a dozer or other means approved by the County.
- E. Stockpiles shall be maintained daily during periods when fill is taken from the stockpile.
- F. The Contractor may cover fill stockpiles with plastic sheeting or other material in order to preserve the moisture content of the fill.
- G. Stockpiles that will remain out of active use for a period greater than three months shall be stabilized.

3.05 SITE TESTING

- A. The Contractor will conduct the following tests.
- B. Gradation tests for onsite excavated granular fill:
1. One sample from each 1,000 cubic yard of finished product, or more often as determined by the County, if variation in gradation is occurring, or if material appears to depart from Specifications.
 2. If test results indicate material does not meet Specification requirements, terminate material placement until corrective measures are taken.
 3. Remove material placed in Work that does not meet Specification requirements.
- C. In-place density tests: In accordance with ASTM D1556 or D2922. During placement of materials, test as follows:
1. Granular Fill and Earth Fill: One test for every 10,000 square feet or one test per lift.
 2. Earthfill: One test for every 20,000 square feet or one test per list.
 3. The compaction testing is summarized in the following table.

Summary of Soil Compaction Requirements				
	Lifts Inches		Percent Compaction	Testing Frequency
Granular Fill for Embankment (Berm)	8	ASTM D1557	98	One per 10,000 SF or one per lift
Granular Fill under Roads and Structures	8	ASTM D1557	98	One per 10,000 SF or one per lift
Earthfill not under Embankment Roads, or Structures	8	ASTM D1557	90	One per 20,000 SF or one per lift

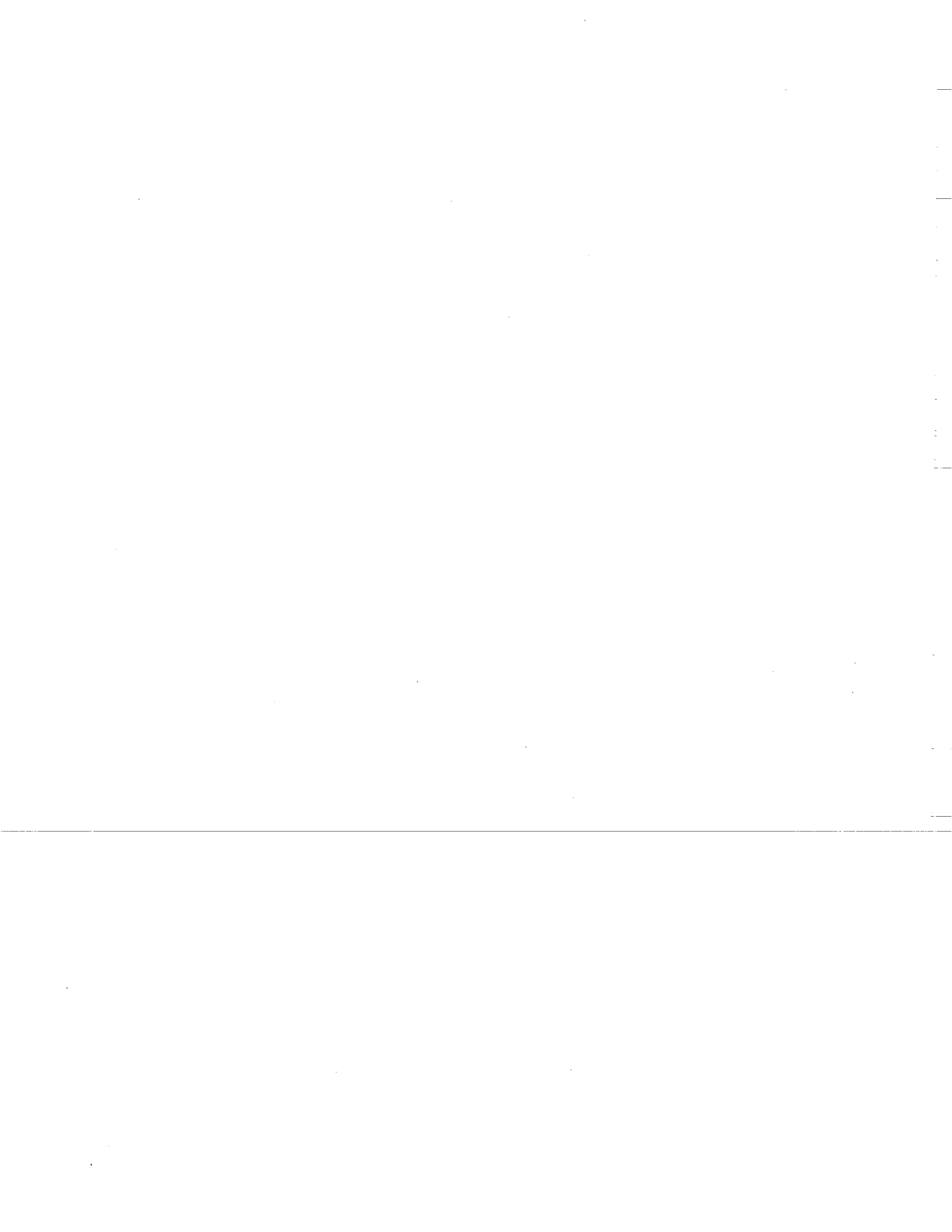
4. For compaction requirements of trench backfill material, see Section 02320, Trench Backfill.

3.06 REPLACING OVEREXCAVATED MATERIAL

- A. Replace excavation carried below grade lines shown or established on the Design Drawings as follows:
1. Beneath footings: Granular fill.
 2. Beneath fill or backfill: Same material as specified for overlying fill or backfill.
 3. Beneath slabs-on-grade: Granular fill.

4. Trenches:
 - a. Unauthorized overexcavation: Either trench stabilization material or granular pipe base material, as specified in Section 02320, Trench Backfill.
 - b. Authorized overexcavation: Trench stabilization material, as specified in Section 02320, Trench Backfill.
5. Permanent cut slopes (where overlying area is not to receive fill or backfill):
 - a. Flat to moderate steep slopes (3:1 or flatter): Earthfill.
 - b. Steep slopes (Steeper than 3:1):
 - 1) Correct overexcavation by transitioning between overcut areas and designed slope adjoining areas, provided such cutting does not extend offsite or outside easements and right-of-ways, or adversely impacts existing facilities, adjacent property, or completed Work.
 - 2) Backfilling overexcavated areas is prohibited unless, in the County's opinion, backfill will remain stable, and overexcavated material is replaced as compacted earth fill.

END OF SECTION



**SECTION 02316
EXCAVATION**

PART 1 GENERAL

1.01 SUBMITTALS

A. Shop Drawings:

- 1. Excavation Plan and Details:**
 - a. Methods and sequencing of excavation.**
 - b. Proposed locations of excavated material.**

1.02 QUALITY ASSURANCE

- A. Provide adequate survey control to avoid unauthorized overexcavation.**

1.03 REFERENCES

- A. The following is a list of standards which may be referenced in this section.**
- 1. Orange County Manual of Standards and Specifications for Wastewater and Water Main Construction.**

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 GENERAL

- A. Excavate to lines, grades, and dimensions shown and as necessary to accomplish Work. Excavate to within tolerance of plus or minus 0.1-foot except where dimensions or grades are shown or specified as maximum or minimum. Allow for forms, working space, granular base, topsoil, and similar items, wherever applicable. Trim to neat lines where concrete is to be deposited against earth.**
- B. Do not overexcavate without the written authorization of the County.**

3.02 UNCLASSIFIED EXCAVATION

- A. Excavation is unclassified. Complete all excavation regardless of the type, nature, or condition of the materials encountered.**

3.03 TRENCH WIDTH

- A. Minimum width of trenches:
 - 1. Single pipes, conduits, direct-buried cables, and duct banks:
 - a. Less than 4-inch outside diameter or width: 18 inches.
 - b. Greater than 4-inch outside diameter or width: 18 inches greater than outside diameter or width of pipe, conduit, direct-buried cable, or duct bank.
 - 2. Multiple pipes, conduits, cables, or duct banks in single trench: 18 inches greater than aggregate width of pipes, conduits, cables, duct banks, plus space between.
 - 3. Increase trench widths by thicknesses of sheeting.
- B. Maximum trench width: Unlimited, unless otherwise shown or specified, or unless excess width will cause damage to existing facilities, adjacent property, or completed Work.

3.04 EMBANKMENT AND CUT SLOPES

- A. Shape, trim, and finish cut slopes to conform with lines, grades, and cross-sections shown, with proper allowance for topsoil or slope protection, where shown.
- B. Remove stones and rock that exceed 3-inch diameter and that are loose and may roll down slope. Remove exposed roots from cut slopes.
- C. Round tops of cut slopes in soil to not less than a 6-foot radius, provided such rounding does not extend offsite or outside easements and right-of-ways, or adversely impacts existing facilities, adjacent property, or completed Work.

3.05 STOCKPILING EXCAVATED MATERIAL

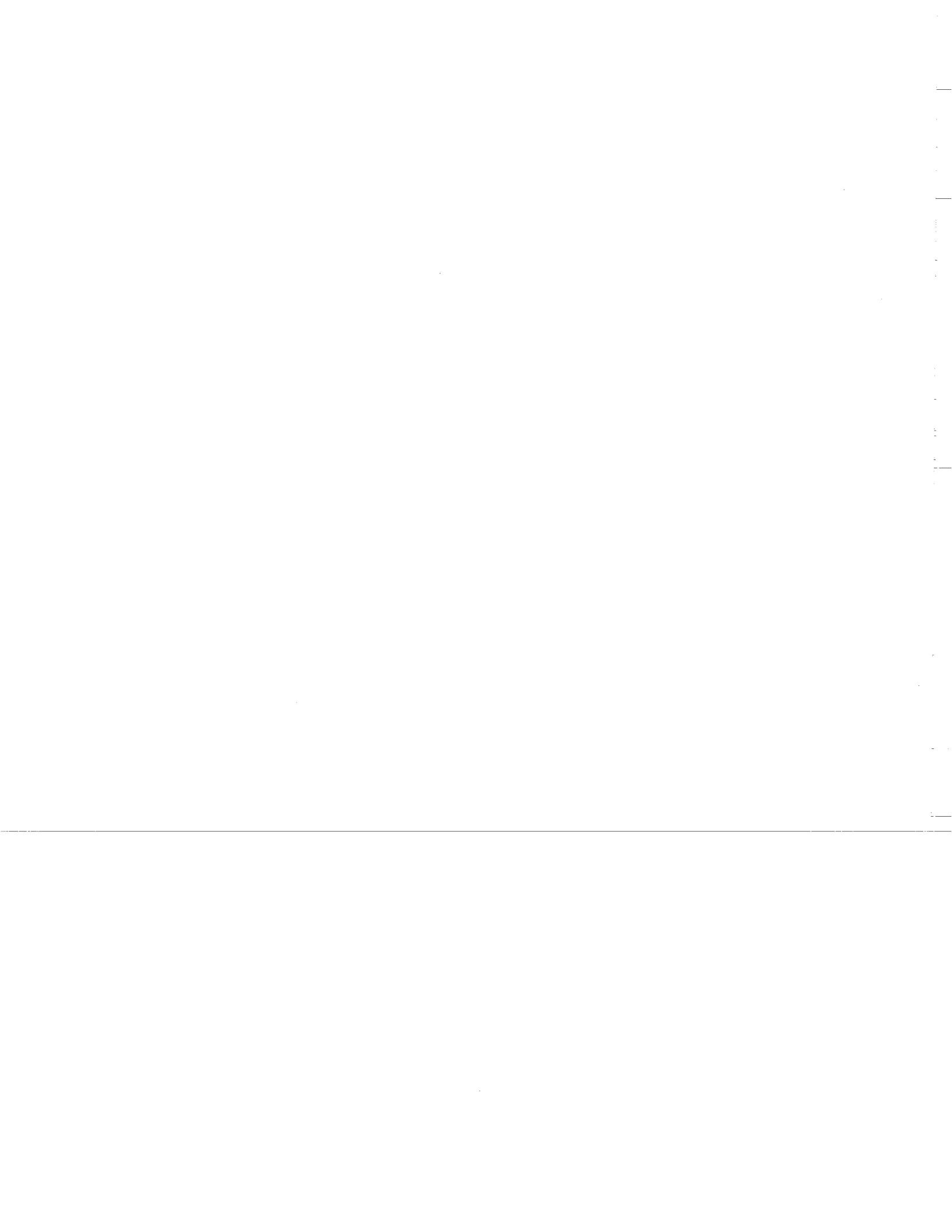
- A. See Section 02315, Fill and Backfill for stockpiling of fill material.
- B. Stockpile excavated material that is suitable for use as fill or backfill until material is needed. Separate material meeting the requirements of granular fill from the material meeting the requirements of earthfill.
- C. Post signs indicating proposed use of material stockpiled. Post signs that are readable from all directions of approach to each stockpile. Signs should be clearly worded and readable by equipment operators from their normal seated position.
- D. Confine stockpiles to within easements, rights-of-way, and approved work areas. Do not obstruct roads or streets.

- E. Do not stockpile excavated material adjacent to trenches and other excavations unless excavation sideslopes and excavation support systems are designed, constructed, and maintained for stockpile loads.
- F. Do not stockpile excavated materials near or over existing facilities, adjacent property, or completed Work, if weight of stockpiled material could induce excessive settlement.

3.06 DISPOSAL OF SPOIL

- A. Dispose of excavated materials that are unsuitable for use as fill or backfill at locations designated by the County.

END OF SECTION



**SECTION 02320
TRENCH BACKFILL**

PART 1 GENERAL

1.01 REFERENCES

- A. The following is a list of standards which may be referenced in this section:
1. American National Standards Institute (ANSI): Z535.1, Safety Color Code.
 2. American Public Works Association (APWA): Uniform Color Code for Temporary Marking of Underground Utility Locations.
 3. American Society for Testing and Materials (ASTM):
 - a. C33, Standard Specification for Concrete Aggregates.
 - b. C94, Specification for Ready-Mixed Concrete.
 - c. C136, Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
 - d. D422, Standard Test Method for Particle-Size Analysis of Soils.
 - e. D1140, Standard Test Method for Amount of Material in Soils Finer than the No. 200 (75 micrometer) Sieve.
 - f. D1557, Test Method for Laboratory Compaction Characteristics of Soil using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³)).
 - g. D3776, Standard Test Method for Mass per Unit Area (Weight) of Fabric.
 - h. D4318, Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.
 - i. D4533, Standard Test Method for Trapezoid Tearing Strength of Geotextiles.
 - j. D4832, Standard Test Method for Preparation and Testing of Controlled Low Strength Material (CLSM) Test Cylinders.
 - k. D4991, Standard Test Method for Leakage Testing of Empty Rigid Containers by Vacuum Method.
 - l. D5034, Standard Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test).
 4. Orange County Utility Standards Manual of Standards and Specifications for Wastewater and Water Main Construction.

1.02 DEFINITIONS

- A. Bedding Material: Granular material upon which pipes, conduits, cables, or duct banks are placed.
- B. Imported Material: Material obtained by the Contractor from source(s) offsite.
- C. Lift: Loose (uncompacted) layer of material.

- D. Pipe Zone: Backfill zone that includes full trench width and extends from prepared trench bottom to an upper limit above top outside surface of pipe, conduit, cable or duct bank.
- E. Prepared Trench Bottom: Graded trench bottom after stabilization and installation of bedding material.
- F. Relative Compaction: The ratio, in percent, of the as-compacted field dry density to the laboratory maximum dry density as determined by ASTM D1557. Corrections for oversize material may be applied to either the as-compacted field dry density or the maximum dry density, as determined by the County.
- G. Selected Backfill Material: Material available onsite that the County determines to be suitable for a specific use.
- H. Well-Graded: A mixture of particle sizes that has no specific concentration or lack thereof of one or more sizes producing a material type that, when compacted, produces a strong and relatively incompressible soil mass free from detrimental voids. Well-Graded does not define any numerical value that must be placed on the coefficient of uniformity, coefficient of curvature, or other specific grain size distribution parameters.

1.03 SUBMITTALS

- A. Shop Drawings: Manufacturer's descriptive literature for marking tapes.
- B. Samples:
 - 1. Trench stabilization material.
 - 2. Bedding and pipe zone material.
 - 3. Granular backfill.
 - 4. Earthfill.
- C. Quality Control Submittals: Catalog and manufacturer's data sheets for compaction equipment.
 - 1. Certified Gradation Analysis: Submit not less than 30 days prior to delivery for imported materials or anticipated use for onsite excavated materials, except for trench stabilization material that will be submitted prior to material delivery to site.

PART 2 PRODUCTS**2.01 MARKING TAPE****A. Plastic:**

1. Inert polyethylene, impervious to known alkalis, acids, chemical reagents, and solvents likely to be encountered in soil.
2. Thickness: Minimum 4 mils.
3. Width: 12 inches.
4. Identifying Lettering: Minimum 1-inch high, permanent black lettering imprinted continuously over entire length.
5. Manufacturers and Products:
 - a. Reef Industries; Terra Tape.
 - b. Allen; Markline.

B. Metallic:

1. Solid aluminum foil, visible on unprinted side, encased in a protective high visibility, inert polyethylene plastic jacket.
2. Foil Thickness: Minimum 5.5 mils.
3. Width: 12 inches.
4. Identifying Lettering: Minimum 1-inch high, permanent black lettering imprinted continuously over entire length.
5. Joining Clips: Tin or nickel-coated furnished by tape manufacturer.
6. Manufacturers and Products:
 - a. Reef Industries; Terra "D."
 - b. Allen; Detectatape.

C. Color: In accordance with APWA Uniform Color Code for Temporary Marking of Underground Facilities.

Color^a	Facility
Red	Electric power lines, cables, conduit, and lightning cables
Orange	Communicating alarm or signal lines, cables, or conduit
Yellow	Gas, oil, steam, petroleum, or gaseous materials
Green	Sewers, leachate, and drain lines
Blue	Water, irrigation, and slurry lines
^a As specified in ANSI Z53.1, Safety Color Code.	

2.02 TRENCH STABILIZATION MATERIAL

- A. Granular fill as specified in Section 02315, Fill and Backfill.

2.03 BEDDING MATERIAL AND PIPE ZONE MATERIAL

- A. Friable and no clay balls, roots, or other organic material.
- B. Granular fill as specified in Section 02315, Fill and Backfill.

2.04 EARTH BACKFILL

- A. Earthfill as specified in Section 02315, Fill and Backfill.

2.05 SOURCE QUALITY CONTROL

- A. Perform gradation analysis in accordance with ASTM C136 for granular fill and earthfill.

PART 3 EXECUTION

3.01 TRENCH PREPARATION

- A. Water Control:
 - 1. Remove water in a manner that minimizes soil erosion from trench sides and bottom.
 - 2. Provide continuous water control until trench backfill is complete.
- B. Remove foreign material and backfill contaminated with foreign material that falls into trench.

3.02 TRENCH BOTTOM

- A. Firm Subgrade: Grade with hand tools, remove loose and disturbed material, and trim off high areas and ridges left by excavating bucket teeth. Allow space for bedding material if shown or specified.
- B. Soft Subgrade: If subgrade is encountered that may require removal to prevent pipe settlement, notify the County. The County will determine depth of overexcavation, if any, required.

3.03 BEDDING

- A. Furnish imported bedding material where, in the opinion of the County, excavated material is unsuitable for bedding or insufficient in quantity.
- B. Place over the full width of the prepared trench bottom in multiple equal lifts when the required depth exceeds 8 inches.
- C. Hand grade and compact each lift to provide a firm, unyielding surface.

- D. Minimum Thickness: As follows:
1. Pipe, 15 Inches and Smaller: 4 inches.
 2. Pipe, 18 Inches to 36 Inches: 6 inches.
 3. Pipe, 42 Inches and Larger: 8 inches.
 4. Conduit: 4 inches.
 5. Duct Banks: 4 inches.
- E. Check grade and correct irregularities in bedding material. Loosen top 1 to 2 inches of compacted bedding material with a rake or by other means to provide a cushion before laying each section of pipe, conduit, direct-buried cable, or duct bank.
- F. Install to form continuous and uniform support except at bell holes, if applicable, or minor disturbances resulting from removal of lifting tackle.
- G. Bell or Coupling Holes: Excavate in bedding at each joint to permit proper assembly and inspection of joint and to provide uniform bearing along barrel of pipe or conduit.

3.04 BACKFILL PIPE ZONE

- A. Upper limit of pipe zone shall not be less than following:
1. Pipe: 12 inches, unless shown otherwise.
 2. Conduit: 3 inches, unless shown otherwise.
 3. Duct Bank: 3 inches, unless shown otherwise.
- B. Restrain pipe, conduit, cables, and duct banks as necessary to prevent their movement during backfill operations.
- C. Place material simultaneously in lifts on both sides of pipe and, if applicable, between pipes, conduit, cables, and duct banks installed in same trench.
1. Pipes 10 Inches and Smaller Diameter: First lift less than or equal to 1/2 pipe-diameter.
 2. Pipes Over 10-Inch Diameter: Maximum 6-inch lifts.
- D. Thoroughly tamp each lift, including area under haunches, with handheld tamping bars supplemented by "walking in" and slicing material under haunches with a shovel to ensure that voids are completely filled before placing each succeeding lift.
- E. After the full depth of the pipe zone material has been placed as specified, compact the material by a minimum of three passes with a vibratory plate compactor only over the area between the sides of the pipe and the trench walls.
- F. Do not use power-driven impact compactors to compact pipe zone material.

3.05 MARKING TAPE INSTALLATION

- A. Continuously install marking tape along centerline of all buried piping, on top of last lift of pipe zone material. Coordinate with piping installation Drawings.
 - 1. Metallic Marking Tape: Install with nonmetallic piping and waterlines.
 - 2. Plastic Marking Tape: Install with metallic piping.

3.06 BACKFILL ABOVE PIPE ZONE

- A. General:
 - 1. Process excavated material to meet specified gradation requirements.
 - 2. Adjust moisture content as necessary to obtain specified compaction.
 - 3. Do not allow backfill to free fall into the trench or allow heavy, sharp pieces of material to be placed as backfill until after at least 2 feet of backfill has been provided over the top of pipe.
 - 4. Do not use power driven impact type compactors for compaction until at least 4 feet of backfill is placed over top of pipe.
 - 5. Backfill to grade with proper allowances for topsoil, crushed rock surfacing, and pavement thicknesses, wherever applicable.
 - 6. Backfill around structures with same class backfill as specified for adjacent trench unless otherwise shown or specified.
- B. Backfill for areas to receive sod or seed:
 - 1. Place earthfill in lifts not exceeding 8-inch thickness.
 - 2. Mechanically compact each lift to a minimum of 90 percent relative compaction prior to placing succeeding lifts.
- C. Backfill for areas under facilities, gravel surfacing, and asphalt concrete paving: Backfill trench above the pipe zone with granular backfill in lifts not exceeding 8 inches. Compact each lift to a minimum of 98 percent relative compaction prior to placing succeeding lifts.

3.07 MAINTENANCE OF TRENCH BACKFILL

- A. After each section of trench is backfilled, maintain the surface of the backfilled trench even with the adjacent ground surface until final surface restoration is completed.
- B. Gravel Surfacing Rock: Add gravel surfacing rock where applicable and as necessary to keep the surface of the backfilled trench even with the adjacent ground surface, and grade and compact as necessary to keep the surface of backfilled trenches smooth, free from ruts and potholes, and suitable for normal traffic flow.

- C. Other Areas: Add excavated material where applicable and keep the surface of the backfilled trench level with the adjacent ground surface.

3.08 SETTLEMENT OF BACKFILL

- A. Settlement of trench backfill, or of fill or facilities constructed over trench backfill will be considered a result of defective compaction of trench backfill.

END OF SECTION



**SECTION 02633
STORMWATER DRAIN CORRUGATED HIGH DENSITY
POLYETHYLENE (HDPE) PIPE AND FITTINGS**

PART 1 GENERAL

1.01 WORK INCLUDED

- A. This section covers the Work necessary for the installation of the stormwater drain pipe and fittings (HDPE).
- B. The Contractor shall furnish all labor, materials, tools, supervision, transportation, and installation equipment necessary for installation of all corrugated (smooth interior wall) high density polyethylene (HDPE) pipe, fittings and appurtenances as specified herein, or as shown on the Drawings.
- C. The Contractor shall coordinate the installation of the HDPE pipe and fittings with other construction activities and subcontractors at the site.

1.02 RELATED SPECIFICATIONS

- A. Section 02315, Fill and Backfill.
- B. Section 02316, Excavation.
- C. Section 02320, Trench Backfill.

1.03 QUALIFICATIONS

- A. The Contractor shall provide the services of the HDPE pipe and fitting manufacturer (Manufacturer), and installer (Installer). The Contractor shall accept and retain full responsibility for all materials and installation and shall be held responsible for any defects in the material and installation of HDPE pipes and fittings complete and in-place.
- B. The Manufacturer shall be responsible for the production and delivery of the corrugated HDPE pipe and fittings and shall be a well established firm with more than 10 years of experience in the manufacture of HDPE pipes and fittings.
- C. The Installer shall be experienced with field handling, storing, installing, and other site aspects related to the HDPE pipes and fittings, and connections to other structures and features of the Project.

1.04 SUBMITTALS

- A. The Contractor shall submit to the County for approval, within 21 days after receiving Delivery Order or other written notice to install piping and at least 21 days before the start of work, complete detailed Shop Drawings of all corrugated HDPE pipe and fittings, a list of materials to be furnished, the names of the Suppliers and the proposed dates of delivery of the materials to the site. Submittals are not required after the initial notice to install piping unless a different product is proposed.
- B. The Contractor shall submit to the County the corrugated HDPE Pipe Manufacturer's Certification of Compliance with these Specifications for all materials delivered to the site, and shall comply with the corrugated HDPE Pipe Manufacturer's recommendations for handling, storing, and installing corrugated HDPE pipes and fittings.
- C. The Contractor shall submit to the County the following raw materials documentation from the corrugated HDPE Pipe Manufacturer, prior to transporting any HDPE pipe or fittings to the site:
 - 1. Certificate stating the specific resin, its source and the information required by ASTM D1248.
 - 2. Certification that no recycled compound has been added to the resin.
 - 3. Certificate stating pipe stiffness is in accordance with ASTM D2412.

1.05 CONSTRUCTION QUALITY ASSURANCE

- A. The Construction Quality Assurance Technician or County shall observe installation of corrugated HDPE pipe and fittings to assure installation is in conformance with these Specifications.
- B. The Contractor shall provide an installation schedule for stormwater drainpipes connected to manholes and energy dissipation structures.

PART 2 PRODUCTS

2.01 HIGH DENSITY POLYETHYLENE COMPOUND

- A. The corrugated HDPE pipe and fittings shall be manufactured from new HDPE resin conforming to ASTM D1248 (Type III, Class C, Category 4 or 5, Grade P33), ASTM D3350 (Cell Classification PE 324420C). The resin shall be precompounded. In plant blending of noncompounded resins shall not be permitted.
- B. The polyethylene compound shall contain no less than 2 percent and no more than 5 percent carbon black.

2.02 CORRUGATED HIGH DENSITY POLYETHYLENE PIPES AND FITTINGS

- A. All corrugated HDPE pipe and fittings shall comply with the ASTM F405.
- B. Corrugated pipes and fittings shall be N-12 Type by Advanced Drainage Systems Inc., Hi-Q by Hancor Inc.; or approved equal.
- C. All corrugated HDPE pipe shall have a nominal inside diameter in accordance with the stormwater pipe schedule on the Drawings.
- D. Corrugated HDPE pipes and fittings shall be homogeneous throughout and free of visible cracks, holes (other than intentional manufactured perforations), foreign inclusions, or other deleterious effects, and shall be uniform in color, density, melt index, and other physical properties.
- E. The ends of the pipe shall be squarely and cleanly cut to facilitate joining. Temporary end caps shall be placed on the upper end stubouts and also be used to prevent entry of foreign materials during construction. Do not use internal pipe plugs. At stubouts, install end cap over HDPE barrel, place 4-foot by 4-foot plywood, and backfill.
- F. All fittings (bends, wyes) shall be corrugated. Fittings may be either molded or fabricated. Fittings may be fuse-welded or fabricated to accept split couplings with stainless steel coupling bands.

2.03 IDENTIFICATION

- A. The following shall be continuously printed on the pipe, or spaced at intervals not exceeding 5 feet:
 - 1. Name and/or trademark of the pipe manufacturer.
 - 2. Nominal pipe size.
 - 3. Manufacturing Standard Reference (e.g., ASTM F405), the pipe stiffness, and the pipe designation (e.g., standard or heavy duty).
 - 4. The Manufacturer's identification symbol.
 - 5. A production code from which the date and place of manufacture can be determined.

2.04 PIPE BEDDING MATERIAL

- A. Pipe bedding material shall be granular fill as specified in Sections 02315, Fill and Backfill; 02320, Trench Backfill, and as indicated on the Drawings.

PART 3 EXECUTION**3.01 PREPARATION FOR INSTALLATION**

- A. The Contractor shall become familiar with all portions of the Work to be completed under this section.
- B. Prior to beginning installation, the Contractor shall carefully inspect all preparation and work specified in other sections that are related to the downdrain system and culvert installation. Contractor shall verify that all work is complete to the point where installation under this section may commence without adverse impact.
- C. If the Contractor has concerns over installed components under other Sections, he shall notify the County within 48 hours of site inspection. If notification of deficiency is not made prior to installation of pipes, fittings, and manholes, it is construed that the Contractor accepts the related Work of other sections.

3.02 INSTALLATION

- A. General:
 - 1. All corrugated HDPE pipe and fittings shall be installed in accordance with the Manufacturer's instructions.
 - 2. The Contractor shall carefully examine all pipe fittings for cracks, damage, or defects before installation. Defective materials shall be immediately removed from the site and replaced at no additional cost to the Owner.
 - 3. The interior of all pipe and fittings shall be inspected, and any foreign material shall be completely removed from the pipe interior before it is moved into final position.
- B. Trench Excavation: Excavate trenches for downdrains to the grade shown. Make width of trench sufficient to permit complete tamping of the backfill under and around the pipe but not greater than OD plus 18 inches. Shape bottom of the trench to fit accurately the lower part of the pipe exterior. The area around the ends of the culverts shall be graded for proper drainage. See Specification Section 02320, Trench Backfill for additional information.

C. Laying Pipe:

1. Inspect pipe before laying and remove any damaged or defective pipe from the job, and replace at the Contractor's sole expense. Begin laying at the lowest end of culvert. Backfill and tamp fill to ensure that it fills the annular space between corrugations to assure proper bedding of pipe. Compact granular fill adjacent to pipe by hand or small mechanical tamper to one foot above spring line of pipe.
2. Do not machine-compact backfilled granular soil near or over pipes unless there is a minimum one foot granular fill layer thickness over the crown of the pipe.
3. Thoroughly clean ends of the pipes.
4. Join downrain pipes and underdrain pipes to manholes using Manufacturer's recommendations to provide a secure connection.

3.03 HANDLING AND PLACEMENT

- A. The Contractor shall exercise care when transporting, handling and placing corrugated HDPE pipe and fittings, such that they will not be cut, or otherwise damaged.
- B. Ropes, fabric or rubber-protected slings and straps shall be used when handling corrugated HDPE pipe. Chains, cables, or hooks shall not be inserted into the pipe ends as a means of handling pipe.
- C. Under no circumstances shall pipe or fittings be dropped into trenches, or dragged over sharp and cutting objects.
- D. Pipe shall be stored on clean level ground, preferably turf or sand, free of sharp objects. The pipes should be stored out of direct sunlight.
- E. The maximum allowable depth of cuts, gouges, or scratches on the exterior surface of corrugated HDPE pipe or fittings is 10 percent of the wall thickness. The interior of the pipe and fittings shall be free of cuts, gouges, and scratches. Sections of pipe with excessive cuts, gouges, or scratches shall be removed at no cost to the Owner.
- F. No pipe shall be placed until the Representative or Quality Assurance Representative or County has approved the sub-grade and bedding and materials.
- G. Blocking under piping shall not be permitted unless specifically accepted by the County due to special conditions.

3.04 JOINTS AND CONNECTIONS

- A. Corrugated HDPE pipe shall be joined with split couplings secured by stainless steel bands or fused welds. The split couplings shall be ADS split premium type XX65 having a length of at least eight corrugations (four on either side of pipe joint) or acceptable equal, for pipe diameters up to 36 inches. The "XX" designation denotes the pipe diameter.
- B. HDPE pipe shall be installed with strict adherence to manufacture recommendations. Manufacturers shall conduct field instruction for installation personnel. Bid cost shall include cost of instruction and partial inspection of installation. Manufacturer shall approve installation technique.
- C. Bends and specialized fittings shall be joined to pipe using split-couplings or fusion-butt welded as specified or as shown on the Drawings.
- D. All joints and fittings shall be wrapped with nonwoven geotextile, two corrugations minimum on each side of split coupling to prevent fines/soil intrusion after pipe settlement. Geotextile shall be Mirafi, 140NC (nonwoven) or approved equal. The ends of the geotextile shall be securely fastened with plastic ties.

3.05 PROTECTION OF WORK

- A. The Contractor shall use all means necessary to protect all products during shipment, storage, and installation and to protect all prior work and materials installed or completed under other sections of these Specifications.
- B. In the event of damage to prior work, or work completed as specified in this section, the Contractor shall immediately make all repairs and replacements necessary to the approval of the County, at no additional cost to the County.

END OF SECTION

**SECTION 02680
HORIZONTAL GAS EXTRACTION PIPELINES**

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes: Construction of horizontal gas extraction pipelines.

1.02 SUBMITTALS

A. Shop Drawings:

1. Product technical data including:

- a. Acknowledgement that products submitted meet requirements of standards referenced.
- b. Manufacturer's installation instructions.

- B. Submit three copies of the following installation data at appropriate times during construction:

1. Daily installation report: During the installation of horizontal gas extraction pipelines, maintain a daily, detailed log.

- a. Furnish a complete description of number of feet installed, number of hours on the job, and such other pertinent data as may be requested by the County. List length and diameter of each installed pipe.

2. Installers log: During the installation of each gas collection pipe, prepare and keep and complete log setting forth the following:

- a. Elevation of invert or top of each pipe with a defined reference point for all depth measurements.
- b. Any and all other pertinent information for a complete and accurate log.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Landfill Gas Collection Pipelines: Provide new clean HDPE pipe as specified in Section 15060, Pipes-General.
- B. Tire Chip Backfill: Provide nominal 2-inch tire chips for the trench backfill.
- C. Provide 10-ounce nonwoven needle punched polypropylene geotextile fabric. Overlap geotextile fabric two feet.

D. Wellheads:

1. The landfill gas (LFG) collection system wellheads shall be a 2-inch or 3-inch LANDTEC Accu-Flo™ wellhead assemblies as specified by the County and shall consist of wellhead piping, flow control gate valve, gas temperature gauge, quick connect gas sampling, static and impact pressure ports, flex connector, PVC union disconnect, and dust cap. Wellhead pipelines and fittings shall be Schedule 80 PVC.
2. The equipment shall be capable of withstanding the rigors of landfill gas recovery application including internal high vacuum, weathering, gas constituent, and ultraviolet light exposure.
3. The wellhead shall be connected to the horizontal collection pipeline stickup with Fernco connector, shall be tight and leak free, and shall be height adjustable in the field using adapter bushings.
4. The wellhead assembly shall be capable of being used with the LANDTEC GEM-2000™ Gas Extraction Monitor incorporating all GEM-2000™ monitoring functions.

- E. Flex Joint: Flexible hose shall be installed for connection of the new wellheads to the LFG collection system lateral pipeline. Flexible connecting hose between the wellheads and laterals shall be chemically compatible with landfill gases.

PART 3 EXECUTION

3.01 PREPARATION

A. Installation Methods:

1. The location of the trenches shall be determined by the County. The location may vary to accommodate disposal operations.
2. The trenches shall be excavated to a minimum of 4 feet deep. All waste shall be removed daily to the active working face, as designated by the County. A steady grade shall be maintained to eliminate high and low points.
3. The 6-inch pipe shall be welded together and perforated as specified.
4. All pipes shall be flushed clean prior to backfilling and connection to the existing system.
5. The tire chip pack surrounding the perforated pipe shall be 2-foot square wrapped with geotextile with a 2-foot overlap. The top 2 feet of the backfill shall be clean fill.
6. Horizontal trenches shall not be backfilled until they are inspected by County.

7. The perforated pipe shall extend to within 100 feet of the western side slope. The solid wall pipe shall be sloped toward the landfill. The wellhead will be installed where the solid pipe comes out of the landfill. Care shall be taken to avoid creating a low point at the wellhead where condensate can accumulate. The wellhead will be connected by flex hose to the lateral pipeline. Flex hose shall be installed such that no traps or bellies are formed that will accumulate condensate.
8. The lateral piping shall extend down slope and connect to the existing header.
9. The lateral piping shall be placed to provide a minimum of 2 feet of cover. The backfill shall be clean fill.
10. All disturbed areas on the side slope shall be resodded.

END OF SECTION



**SECTION 02681
VERTICAL GAS EXTRACTION WELLS AND WELLHEADS**

PART 1 GENERAL

1.01 DESCRIPTION

- A. Scope of Work: The Contractor shall provide all labor, equipment, materials, and appurtenances necessary to drill, install, and make ready vertical landfill gas (LFG) extraction wells and wellheads as specified herein and as indicated on the Drawings.
- B. The perforated pipe, seals, stone, and soil backfill packs shall be set at depths shown on the Drawings or as designated in the field by the County. It is expected that combustible, asphyxiant, and hazardous gases will be venting from boreholes drilled to install LFG extraction wells. The Contractor's bid price shall include provision for all equipment and procedures necessary to safely install wells under this condition. All work shall be performed by qualified workers in accordance with the best standards and practices available.
- C. All waste excavated or generated from the drilling operation shall be collected and transferred to Cells 9 or 10 for disposal at the end of each day. No excavated waste shall be left onsite at close of the workday. Any portion of the daily or intermediate soil cover contaminated with solid waste from the drilling operation or other operations of the Contractor shall be collected the end of the day and transferred to Cells 9 or 10 for disposal. There will be no disposal charge for disposal of the excavated waste and contaminated soil in Cells 9 or 10. The Contractor shall be responsible for repairs to the daily or intermediate soil cover disturbed during well installation.
- D. Related Work Described Elsewhere:
 - 1. Section 02315, Fill and Backfill, Section 02316, Excavation, and Section 02320, Trench Backfill.
 - 2. Section 15060-11, CPVC pipe.

- E. Qualifications: The subcontractor for installation of the landfill gas wells and collection piping system (LFG subcontractor), if utilized, shall have the following minimum QUALIFICATIONS. The qualification documents shall be submitted to the County at the pre-construction meeting. If the LFG subcontractor cannot meet the following qualification in the opinion of the County, the County reserves the right to require the Contractor to propose another company who can meet these minimum qualifications:
1. The LFG subcontractor shall demonstrate, by submitting a list of previous projects and references, a minimum of three similar size active landfill gas construction projects within the last 5 years.
 2. The LFG subcontractor shall document that the company will be capable of providing necessary well drilling equipment and experienced personnel for this Project.
 3. The LFG subcontractor shall submit resumes of LFG subcontractor's key personnel, including Project Manager, Superintendent, and Supervisor highlighting experience with similar size active LFG construction projects.
 4. The LFG subcontractor shall submit OSHA Certifications and resume for the proposed Site Safety Officer.

1.02 REFERENCES

A. American Society for Testing and Materials (ASTM):

1. D420, Standard Guide for Investigating and Sampling Soil and Rock.
2. D422, Standard Method for Particle-Size Analysis of Soils.
3. D1452, Standard Practice Method for Soil Investigation and Sampling by Auger Borings.
4. D2487, Standard Test Method for Classification of Soils for Engineering Purposes.
5. D2488, Standard Practice for Description and Identification of Soils (Visual-Manual Procedure).

1.03 SUBMITTALS

- A. The Contractor shall prepare and submit to the County, for review and approval, Certificates of Compliance on materials furnished, and manufacturer's brochures containing complete information and instructions pertaining to the storage, handling, installation, and inspection of pipe and appurtenances furnished.
1. The Contractor shall prepare and submit to the County for review and approval, Shop Drawings showing dimensions, materials, and manufacturer's information for backfill materials, pipe, pipe perforations, fittings, bentonite, and wellhead components. Submittal

information shall contain the following product technical data at a minimum:

- a. Acknowledgement that products submitted meet requirements of standards referenced.
 - b. Catalog and manufacturers data sheets for CPVC pipe, casing, and screen.
 - c. Catalog and manufacturer's data sheet for vertical wellheads.
 - d. Manufacturer's installation instructions for wellheads.
 - e. Qualifications and resumes of wells installation personnel, including designation of supervisory personnel.
 - f. Operations and maintenance manuals for gas systems wellheads and valves.
- B. Two weeks prior to well drilling, the Contractor shall submit an example well boring log and construction log. The example logs shall be completed with all of the required descriptions and pertinent information required under paragraph 3.03 of this section. A copy of an appropriate well boring log can be found in the back of this section, along with waste classification criteria.
- C. Two weeks prior to construction of LFG wells, the Contractor shall submit to the County for review and approval, results of the sieve analysis and calcium carbonate content for the stone backfill, samples of all well backfill materials, the name and location of the vendor(s), and the source of materials furnished (for CQA Consultant testing, if needed).
- D. At the end of each day, Contractor shall provide the County copies of the handwritten well boring and completion logs for each well drilled on that day. Information to be included on the well logs is listed in paragraph 3.03 of this section.
- E. Final boring logs based on field information shall be typewritten and submitted with the Record Documents by the Contractor, as stated in Section 01720, Project Record Documents. Descriptions of the boring and excavated material shall be according to the guideline sheet at the end of this section. The Contractor shall submit a final survey that includes the constructed locations, and provide as-built drawings with all well logs.

1.04 QUALITY ASSURANCE

- A. Retain a professional experienced in installation of vertical LFG wells to be responsible for observing and documenting information related to all installation activities.
- B. Inspect well materials for cleanliness, deformations, and imperfections, and to ensure conformance with Specifications prior to use.

1.05 CONSTRUCTION SAFETY PROGRAM

- A. The Contractor is advised that the decomposing refuse produces landfill gas that is approximately 50 percent methane by volume. The Contractor is advised of the need for precautions against fire, explosion, and asphyxiation when working in or near excavations that are in or near refuse-filled areas.
- B. The Contractor shall perform all work in a fire-safe manner. He shall supply and maintain, on the site, adequate fire-fighting equipment capable of extinguishing incipient fires. The Contractor shall develop and maintain, for the duration of the Contract, a safety program that will effectively incorporate and implement all required safety provisions for work in or near refuse-filled areas, including complying with all federal, state, and local safety codes, ordinances, and regulations, including the requirements of the United States Occupational Safety and Health Administration (OSHA), in accordance with 29 CFR 1910, OSHA Standards and other such safety measures as may be required by the above mentioned regulatory agencies. Where these regulations do not apply, applicable parts of the National Fire Prevention Standards for Safeguarding Building Construction Operations (NFPA No. 241) shall be followed. The Contractor shall appoint an employee who is qualified and authorized to supervise and enforce compliance with the safety program. This person should be present at all times during construction and should be trained in the use of all of the recommended safety equipment.
- C. The duty of the County to review the Contractor's performance is not intended to include a review or approval of the adequacy of the Contractor's safety supervisor, the safety program, or any safety measures taken in, on, or near the project construction site. The Contractor has complete responsibility of the construction safety program based on all applicable federal, state, and local codes, ordinances, and regulations.
- D. The Contractor shall make all reports as are, or may be, required by any authority having jurisdiction, and permit all safety inspections of the work being performed under this Contract. Before proceeding with any construction work, the Contractor shall take necessary action to comply with all provisions for safety and accident prevention.
- E. Payment for complying with the additional Safety Requirements for Construction on the work shall be included in the unit price, and no separate payment will be made therefore.

PART 2 PRODUCTS**2.01 DRILLING EQUIPMENT**

- A. Contractor is expected to provide drilling equipment suitable for drilling in refuse to depths required for this project (maximum depth of drilling is 120 feet from surface).
- B. Provide bucket-auger drilling rig in good working condition capable of completing the wells as described on the Drawings and in these Specifications.
- C. No payment of reimbursement will be made by the County for damage or equipment loss due to poor drilling methods, lack of drilling supervision, or undersized drilling equipment.
- D. Provide all tools, bits, and all other necessary equipment.

2.02 NON-CALCAREOUS STONE

- A. Provide gravel material consisting of non-calcareous, clean, well-sorted silica or granite rock.
- B. Provide FDOT Standard size of course aggregate No. 5 with a uniformity coefficient of 2.5 or less. Gravel pack shall be clean and free of any dirt, clay balls, shells, roots, and other organic material.

2.03 SOIL BACKFILL MATERIAL

- A. Soil backfill material shall be granular material free of clay, sticks, roots, and other organic material from an on-site source, as specified in Section 02315, Fill and Backfill, and Section 02320, Trench Backfill.

2.04 BENTONITE

- A. "Bentonite Pellet Plug" as used in the Drawings, shall refer to a well seal comprised of hydrated sodium bentonite pellets or chips of a thickness as indicated on the Drawings. Bentonite material shall consist of clay greater than 85 percent sodium montmorillonite, without additives.
- B. Bentonite shall be hydrated per manufacturer's instructions prior to backfilling with soil. Bentonite shall be hydrated in 6-inch lifts as per paragraph 3.05.B of this section.
- C. Under no circumstances will the use of granular bentonite be permitted.

2.05 WELLHEAD MATERIALS

- A. Wellheads shall be 2-inch or 3-inch Accu-Flo wellheads by LANDTEC, or approved equal. Wells with less than 75 feet depth (dimension "L") shall have a 2-inch wellhead, wells with more than 75-foot depth shall have a 3-inch wellhead.
- B. Vertical wellhead models shall be used for all vertical wells and horizontal collection pipelines.
 - 1. General:
 - a. The LFG collection system wellheads shall be LANDTEC Accu-Flo™ wellhead assemblies, or approved equal, and shall consist of wellhead pipes, flow control gate valve, gas temperature gauge, quick connect gas sampling ports, static and impact pressure ports, flex connector, PVC union disconnect, and dust cap. Wellhead piping and fittings shall be Schedule 80 PVC. Adapters shall be Schedule 40 PVC.
 - b. The equipment shall be capable of withstanding the rigors of landfill gas recovery applications including internal high vacuum, weathering, gas constituent, and ultraviolet light exposure.
 - c. The wellhead shall be tight and leak free and shall be height adjustable in the field using adapter bushings.
 - d. The wellhead assembly shall be capable of being used with the LANDTEC GEM-2000™ Gas Extraction Monitor incorporating all GEM-2000™ monitoring functions.
 - e. Equipment supplied under this section shall have a proven performance of not less than 2 years in actual landfill service.
 - f. It is the intent of this Specification that the wellhead assembly shall be supplied as a complete manufactured unit.
 - C. Materials:
 - 1. Measurement Tube:
 - a. The measurement tube shall be Schedule 80 PVC pipe and shall fit concentrically into the well casing.
 - b. The measurement tube shall be of sufficient length to allow gas to achieve a uniform velocity profile before being measured.
 - 2. Impact Tube:
 - a. The impact tube shall be Type 316 stainless steel.
 - b. A stainless steel centralizer shall be installed on the impact tube.
 - c. The entrance of the impact tube shall be in an area of uniform gas flow.
 - 3. Unions: The wellhead shall have a PVC union fitting immediately upstream of the flow control gate valve.

4. **Fittings:** PVC fittings shall be Schedule 80 socket fittings. Adapters shall be Schedule 40 PVC.
5. **Temperature Gauge:** The temperature gauge shall have a stainless steel probe, watertight dial cover, and calibration nut. It shall be connected to the wellhead with a quick connect fitting.
6. **Quick Connect Ports:** Quick connect ports shall be positive sealing and shall be constructed of polypropylene, stainless steel, or chrome plated brass.
7. **Nuts, Bolts, and Gaskets:**
 - a. For aboveground installation, nuts and bolts shall be Type 304 stainless steel.
 - b. For belowground installation, nuts and bolts shall be Type 304 stainless steel.
 - c. Gasket for flange installation shall be neoprene rubber.

D. Performance Specifications:

1. **Volumetric Flow Rating:** The nominal flow capacity of the wellheads shall be:

Wellhead Nominal Size (Inches)	Min. Flow (CFM)	Max. Flow (CFM)	Pressure Depth (Inches H₂O)
2.0	2	75+	0.1-5.0
3.0	50	300	0.1-10.0

2. **Accuracy:** The measurement tube assembly shall be pre-calibrated and lab certified. The measurement tube shall have an accuracy and repeatability of 5 percent through the recommended flow range when used and maintained in accordance with the manufacturer's instructions and recommendations.
3. **Pressure Design Ratings:** The wellhead shall be designed to withstand a vacuum of 29.8 inches of mercury.

2.06 PVC GATE VALVES

- A. Provide PVC Gate Valves, or approved alternative. The valve shall be constructed of Type 1, Grade 1 PVC with socket fittings and a polypropylene wedge. No metal parts shall be in contact with the LFG flowing through the valve. The valves shall meet the requirements of ASTM D1784 for rigid PVC compounds. The "gate" shall be of a tapered cylindrical plug design made of PVC, thickly lined with styrene butadiene rubber (SBR) material, flanged, non-rising stem with position indicator.

2.07 STAINLESS STEEL HOSE CLAMPS

- A. Hose clamps for attaching flexible tubing to pipe shall be made with a stainless steel band, housing, and screw. The clamps shall be of the worm type, shall tighten firmly and evenly, and shall not flatten out.

2.08 VALVE AND PIPE SUPPORT

- A. Pipe supports for wellhead piping shall be constructed in accordance with the wellhead manufacturer's recommendations. Steel angles and pipe shall be Type 316 stainless steel. All nuts, bolts, and washers shall be Type 316 stainless steel.

2.09 LABCOCK VALVE

- A. Provide ball valves equipped with 3/8-inch NPT threaded fitting for airtight connection to well casing as shown in the Drawings, and with a 3/8-inch hose fitting for connection to sampling hoses.
- B. Valves shall be PVC labcocks as manufactured by Asahi/America, Medford, MA.

2.10 ISOLATION RING

- A. Provide HDPE reinforced geofabric isolation ring (donut) to prevent infiltration of the bentonite seal into the gravel pack or granular fill material. Isolation ring shall be as manufactured by LFG Specialties, Cleveland, OH (216) 891-0300 or approved alternative.

2.11 SAND

- A. Granular soil, as defined in Specification 02315, Fill and Backfill, shall be used as the soil/sand portion of the vertical well backfill.

2.12 SAMPLE PORTS

- A. Sample ports shall be 1/4-inch NPT polypropylene quick disconnect monitoring ports, Ryan Herco Co. part no. 0812-002, or Colder Products part no. LCD 240-04, or equal.

2.13 WELL IDENTIFICATION

- A. Upon completion of well drilling, Contractor shall promptly paint the well identification number on the well casing using 4-inch tall stenciled letters and white or yellow paint. Lettering by hand or by any other means shall not be permitted.

- B. Contractor shall supply and affix to each wellhead a plastic tag marked with pre-printed letters designating the well identification number (e.g., EW-#). Tags shall not be marked with pen or marker. Tags shall be 2-1/2-inch square tag, yellow with black lettering, Square Setonply® tag, style M4550, by Seton (800-243-6624), or equal. Tag shall be secured to the wellhead with a stainless steel cable as approved by the County. Tags shall be secured with ample slack in the stainless steel cable to allow the tag to turn so it may be viewed from either side of the wellhead.

PART 3 EXECUTION

3.01 PRE-CONSTRUCTION SERVICES

- A. The Contractor's Florida Registered surveyor shall perform a special purposed survey to stake the well locations, obtain actual ground elevations, and identify any conflicts prior to any well drilling activities.
- B. Contractor shall submit the survey update results to the County and notify the County of any discrepancies between the elevations shown on the Drawings and actual field measurement elevations, and any other conflicts that may be evident.
- C. The County will prepare an updated well schedule based on the Contractor's survey of the ground elevations and submit to the Contractor within 10 working days.
- D. The updated well schedule shall be used by the Contractor for construction of the vertical LFG wells. Compensation shall be based on actual boring depth (total "L").

3.02 DRILLING

- A. The Contractor shall coordinate the start of drilling with the County.
- B. The Contractor shall provide at all times a thoroughly experienced, competent driller during all operations at the drill site.
- C. The Contractor must use dry drilling equipment.
- D. Wells are to be drilled to the depth and diameter as shown on the well schedule. The boring depths shown on the well schedule are estimated and may be adjusted in the field by the County. Under no circumstances are the drilling depths from the well schedule on the Drawings to be exceeded unless approved by the County in advance.
1. Wet Borings:
 - a. The County shall be notified of wet boring conditions.

- b. If water is encountered in a boring, the Contractor may be directed by the County to drill beyond the point at which it was encountered. If wet conditions remain, at the direction of the County, the boring may be terminated (after driller has attempted to advance the boring for at least 3 hours) and the length of perforated pipe adjusted by the County. If wet conditions cease (e.g., due to a perched water layer), then drilling will continue to the design depth.
 - c. If water is encountered in a boring at a shallow depth, the County may decrease the well depth and length of perforated pipe, or relocate the well.
 - 2. Abandoned Borings:
 - a. If, in the opinion of the County, the borehole has not reached a sufficient depth to function as an effective extraction well, the Contractor shall abandon this borehole by backfilling it with clean granular fill. Contractor shall supply additional clean soil to refill any settlement within the abandoned borehole, as approved by the County.
 - b. Compensation for abandoned borings shall be based on the unit price for well borehole abandonment.
- E. The borehole for the well shall be straight and the well pipe shall be installed in the center of the borehole.
- F. The Contractor shall take all necessary precautions to maintain the well pipe vertically plumb during the entire backfill operation of the borehole to the satisfaction of the County. Severe out of plumb and leaning well pipes shall be repaired by the Contractor.
- G. The Contractor shall utilize a grate over the borehole opening to keep the well plumb while backfilling the well. The grate shall not be removed until the borehole is backfilled to ground surface.
- H. If the pipe is installed out of plumb, as determined by the County, the Contractor, at his own expense, shall correct the alignment.
- I. The well casing shall extend approximately 4 feet above ground surface. No pipe couplings shall be installed above grade or within 10 feet of ground surface below grade.

3.03 WELL LOGS

- A. Contractor shall keep detailed well logs for all wells drilled. Information recorded on the well logs shall include the following:
 - 1. Incremental depths of borehole and total depth of well.

2. Visual description of refuse at 5-foot intervals:
 - a. Type of waste encountered including the estimated percentage of the following components (by volume) on visual inspection:
 - 1) Paper/Cardboard.
 - 2) Plastic.
 - 3) Yard waste.
 - 4) Construction debris.
 - 5) Textiles.
 - 6) Tires.
 - 7) Sludge.
 - 8) Dirt.
 - b. Moisture content (in percentages) based on the guidelines attached to the end of this section.
 - c. State of decomposition based on the guidelines attached to the end of this section.
 - d. Temperature of excavated refuse.
 3. Occurrence, depth, and thickness of water-bearing zones.
 4. Length of slotted pipe and solid pipe below grade.
 5. Thickness, description and depth from ground surface of backfill layers.
 6. Length of above ground riser stick-up pipe.
- B. Contractor shall use the well borings description sheet provided at the end of this section as a guideline for describing excavated materials.
 - C. Field copies of the well logs shall be provided to the County. If the Contractor fails to provide field copies of well logs to the County at the end of each day, the Contractor will not be allowed to conduct any further drilling activities until the logs have been submitted and reviewed by the County.
 - D. Typed final copies of the well logs shall be submitted by the Contractor with the Record Drawings in accordance with Section 01720, Project Record Documents. Handwritten logs will not be acceptable for submittal with the Record Drawings.
 - E. In the event that a borehole must be abandoned, the Contractor shall plug and abandon the borehole from the bottom to the surface using granular fill material, in a manner approved by the County. The need for abandonment will be determined by the County. The Contractor will be paid for plugging the abandoned borehole in accordance with the unit price for Well Abandonment in the Bid Schedule, provided that the abandonment is not due to the Contractor's negligence, carelessness, or defective equipment.
 - F. Construct the landfill gas wells in strict conformance with all laws, rules, regulations, and standards in the State of Florida.

- G. Furnish the County with a weekly Drilling Report signed by the drilling supervisor and Contractor superintendent, which shall include tabulation of quantities for each unit price pay item and a description of all approvals made by the County. Keep the records up-to-date with the progress of drilling. Keep a copy at the drill site for inspection by the County.
- H. The Daily Drilling Report shall be signed by both the drilling supervisor and Contractor's superintendent and witnessed by the County's representative at the completion of each day's drilling. Use reproductions of the report form located at the end of this section along with a drilling log form, or furnish another form for approval.

3.04 CASING AND SCREEN PLACEMENT

- A. Screen, centralizers, and blank casing shall be installed straight and plugged into the borehole at the depths approved by the County, based on observation of the borehole samples. All fittings shall be made airtight. Length of blank casing shall be the difference between final cover elevation and top of screen elevation, as shown on the Drawings. Length of screen shall be the difference between top of screen elevation and bottom of screen elevation, as shown on Drawings. During installation a cap shall be placed over the top of each casing to prevent introduction of dirt and debris. Sufficient space shall be allowed between casing and borehole wall to allow placement of the bentonite seals without gaps; spacing and centralizing devices shall be used as necessary.
- B. The top of the casing at landfill surface shall be marked prior to casing installation so that once the well is constructed the mark would be visible at the landfill surface.
- C. All wells shall be constructed and all casing set round, straight, and plumb. To demonstrate compliance with the requirements, the Contractor shall perform the test described in Appendix C of AWWA A100-90. The test for plumbness and alignment shall be made following construction of the well.
- D. Contractor shall submit to the County the completed data sheets, computations for deflection, including spreadsheet formulas if spreadsheet is used, and longitudinal graphical projections of constructed well alignment in both north-south and east-west planes.

3.05 GRAVEL PACK PLACEMENT

- A. Gravel pack material shall be placed from the bottom to one foot above the top of the screened interval. The gravel shall be placed in the borehole in such a manner as to prevent bridging and to control raveling of soils.

3.06 SAND PLACEMENT

- A. Sand shall be placed at the locations shown on the Drawings.

3.07 BENTONITE SEAL PLACEMENT

- A. Sand/Bentonite Mixture shall be placed from the bottom to the top of the sealed location as shown on the Drawings.

3.08 JOINING OF PIPES

- A. Pipes shall be joined as specified in Section 15060, Pipes-General. In addition, lag screws shall be installed at each coupling to secure vertical piping during placement in well boring.
- B. Four lag screws per coupling or two lag screws per bell fitting shall be installed.
- C. The length of the lag screws shall equal, but not exceed, the sum of the pipe and coupling (or bell fitting) wall thicknesses. Under no circumstances may the screw length exceed the sum of the pipe and coupling wall thickness.
- D. At the end of each day, Contractor shall cap the ends of all joined pipes longer than 20 feet to prevent entry by animals and debris.

3.09 BACKFILLING

- A. Backfilling of the well shall commence immediately after well drilling is completed and the well piping has been installed in the borehole.
- B. Backfill materials shall be placed carefully within the wells to the dimensions shown on the Plans and as approved by the County.
- C. Backfill containing foreign material may be rejected by the County on the basis of a visual examination.
- D. Both well piping and backfill shall be installed with a safety grate installed over the boring. The safety grate shall remain in place until backfill is at existing ground surface.
- E. Bentonite Pellet Plug shall be backfilled and hydrated in 6-inch lifts. The Contractor shall soak each lift according to the manufacturer's instructions prior to filling the next one. A minimum of six bags of bentonite shall be poured into the borehole per 6-inch lift.
- F. Soil backfill shall be rodded in the boring to provide even distribution and compaction.

- G. Backfilling shall be completed by the end of each workday. No open boreholes will be allowed to sit overnight.
- H. Workers in the vicinity of the borehole (within 10 feet) shall be tied off to the drill rig for additional safety.

3.10 WASTE DISPOSAL

- A. The Contractor shall transfer construction waste including well cuttings and any granular fill contaminated with solid waste to the active landfill working face, or other area as directed by the County, for disposal. The County will not charge Contractor a tipping fee.
- B. The cost to the Contractor to transport the waste excavated shall be included in the unit portion of the Bid and no additional compensation will be made.
- C. Contractor shall dispose of all excavated refuse by the end of each working day. No refuse shall be allowed to sit onsite overnight.

3.11 TEMPORARY CAP

- A. The Contractor shall temporarily cap the riser pipe of the vertical extraction well immediately after well pipe installation to prevent venting of LFG into the atmosphere. Lag screws may be necessary to secure the cap due to the internal gas pressure within the well.
- B. The Contractor shall remove this cap during the installation of the wellheads.

3.12 WELLHEAD INSTALLATION

- A. Wellheads shall be installed in accordance with manufacturer's recommendations. PVC pipe sections of the wellhead shall be air-tight. Any leaks shall be repaired by Contractor at no additional cost to the County.
- B. Install flexible hose so that hose has no sags, as shown on the Drawings. However, flexible hose shall not be taut. Provide enough slack to accommodate minor pipe settlement, as approved by the County.

3.13 SUPPLEMENTS

- A. The supplements listed below, following "END OF SECTION," are part of this Specification.
 - 1. Daily Drilling Report.
 - 2. Log Materials for Well Construction.

END OF SECTION

DAILY DRILLING REPORT

Project: Cell 9-10 LFG Collection System		County: Orange County, Florida	
Date:		Well No.:	
Casing/Drill Hole Diameter:		_____ -inch	
Depth of Well		Depth to Water Encountered (if any)	
Start of Shift _____ feet		Start of Shift _____ feet	
End of Shift _____ Feet		End of Shift _____ feet	

A. Log of Materials Encountered During Drilling

DESCRIPTION	Depth		Refuse Temperature	Description of Estimated Moisture Content of Refuse
	FROM	TO		

Remarks: (Character of drilling, miscellaneous work items, etc.)

Borehole Cover at End of Shift: Yes _____

Borehole Abandonment Due to: _____

County Notified: _____ at _____ a.m./p.m.





**SECTION 02900
LAWNS AND GRASSES**

PART 1 GENERAL

1.01 DEFINITIONS

- A. Maintenance Period: Begin maintenance immediately after each area is planted (seed, sod) and continue for a period of 12 weeks after all planting under this section is completed, or 12 weeks after substantial completion of this Project, whichever is longer.
- B. Satisfactory Stand: Grass or section of grass of 10,000 square feet or larger that has:
 - 1. No bare spots larger than 3 square feet.
 - 2. Not more than 10 percent of total area with bare spots larger than 1 square foot.
 - 3. Not more than 15 percent of total area with bare spots larger than 6 square inches.

1.02 SUBMITTALS

- A. Shop Drawings: Product labels/data sheets.
- B. Quality Control Submittals:
 - 1. Seed: Certification of seed analysis, germination rate, and inoculation:
 - a. Certify that each lot of seed has been tested by a testing laboratory certified in seed testing within 6 months of date of delivery.
Include with Certification:
 - 1) Name and address of laboratory.
 - 2) Date of test.
 - 3) Lot number for each seed specified.
 - 4) Test Results: (i) name, (ii) percentages of purity and of germination, and (iii) weed content for each kind of seed furnished.
 - b. Mixtures: Proportions of each kind of seed.
 - 2. Seed Inoculant Certification: Bacteria was prepared specifically for legume species to be inoculated.
 - 3. Certification of sod, include source and harvest date of sod, and sod seed mix.
- C. Contract Closeout Submittals: Description of required maintenance activities and activity frequency.

1.03 DELIVERY, STORAGE, AND PROTECTION

A. Seed:

1. Furnish in standard containers with seed name, lot number, net weight, percentages of purity, germination, and hard seed and maximum weed seed content, clearly marked for each container of seed.
2. Keep dry during storage.

B. Sod:

1. Do not harvest if sod is excessively dry or wet to the extent survival may be adversely affected.
2. Harvest and deliver sod only after laying bed is prepared for sodding.
3. Roll or stack to prevent yellowing.
4. Deliver and lay within 24 hours of harvesting.
5. Keep moist and covered to protect from drying from time of harvesting until laid.

C. Hydroseeding Mulch: Mark package of wood fiber mulch to show air dry weight.

1.04 WEATHER RESTRICTIONS

- A. Perform Work under favorable weather and soil moisture conditions as determined by accepted local practice.

1.05 SEQUENCING AND SCHEDULING

- A. Complete Work under this section within 10 days following completion of soil preparation.

B. Notify County at least 3 days in advance of:

1. Each material delivery.
2. Start of planting activity.

C. Planting Season: Those times of year that are normal for such Work as determined by accepted local practice.

1.06 MAINTENANCE SERVICE

- A. Contractor: Perform maintenance operations during maintenance period to include:

1. Watering: Keep surface moist.
2. Washouts: Repair by filling with topsoil, liming, fertilizing, seeding, and mulching.
3. Mulch: Replace wherever and whenever washed or blown away.

4. Mowing: Mow to 2 inches after grass height reaches 3 inches, and mow to maintain grass height from exceeding 3-1/2 inches.
5. Fences: Repair and maintain until satisfactory stand of grass is established.
6. Reseed unsatisfactory areas or portions thereof immediately at the end of the maintenance period if a satisfactory stand has not been produced.
7. Reseed/replant during next planting season if scheduled end of maintenance period falls after September 15.
8. Reseed/replant entire area if satisfactory stand does not develop by July 1 of the following year.

PART 2 PRODUCTS

2.01 LIME

- A. Composition: Ground limestone with not less than 85 percent total carbonate ASTM C602.
- B. Gradation:
 1. Minimum 50 percent passing No. 100 sieve.
 2. Minimum 90 percent passing No. 20 sieve.
 3. Coarser material acceptable provided rates of application are increased proportionately on basis of quantities passing No. 100 sieve.

2.02 FERTILIZER

- A. Commercial, uniform in composition, free-flowing, suitable for application with equipment designed for that purpose. Minimum percentage of plant food by weight.
- B. Mix:
 1. Nitrogen: 10.
 2. Phosphoric Acid: 10.
 3. Potash: 10.
 4. Use either bonemeal or superphosphate. Bonemeal to be commercial, raw, finely ground, with minimum analysis of 4 percent nitrogen and 20 percent phosphoric acid.
 5. Superphosphate to be soluble mixture of phosphate obtained from treated mineral phosphates with minimum analysis of 20 percent available phosphoric acid.
- C. Top Dress Type: As recommended by local authority.

2.03 SEED

- A. Fresh, clean new-crop seed that complies with the tolerance for purity and germination established by Official Seed Analysts of North America.
- B. Seeds of Legumes: Inoculated with pure culture of nitrogen-fixing bacteria prepared specifically for legume species in accordance with inoculant manufacturer's instructions.
- C. Summer Seed Mix:

Species	Proportion By Weight
Argentine Bahia	350 Pounds Per Acre

- D. Winter Protective Seed: Annual ryegrass.

2.04 SOD

- A. Certified, containing grass mix: Species to be Bahia grass.
- B. Strongly rooted pads, capable of supporting own weight and retaining size and shape when suspended vertically from a firm grasp on upper 10 percent of pad.
 1. Grass Height: Normal.
 2. Strip Size: Supplier's standard.
 3. Soil Thickness: Uniform; 1-inch plus or minus 1/4 inch at time of cutting.
 4. Age: Not less than 10 months or more than 30 months.
 5. Condition: Healthy, green, moist; free of diseases, nematodes, and insects, and of undesirable grassy and broadleaf weeds. Yellow sod, or broken pads, or torn or uneven ends will not be accepted.

2.05 STRAW MULCH

- A. Threshed straw of oats, wheat, barley, or rye, free from (i) seed of noxious weeds or (ii) clean salt hay.

2.06 HYDROSEEDING MULCH

- A. Wood Cellulose Fiber Mulch:
 1. Specially processed wood fiber containing no growth or germination inhibiting factors.
 2. Dyed a suitable color to facilitate inspection of material placement.

3. Manufactured such that after addition and agitation in slurry tanks with water, the material fibers will become uniformly suspended to form a homogenous slurry.
4. When hydraulically sprayed on ground, material will allow absorption and percolation of moisture.

2.07 FENCE

- A. Two-inch by 2-inch posts 4-feet high, spaced 10 feet on center, and strung with single strand of No. 12 gauge wire marked with cloth strips at 3-foot intervals.

PART 3 EXECUTION

3.01 PREPARATION

- A. Grade areas to smooth, even surface with loose, uniformly fine texture.
 1. Roll and rake, remove ridges, fill depressions to meet finish grades.
 2. Limit such Work to areas to be planted within immediate future.
 3. Remove debris, and stones larger than 1-1/2 inches diameter, and other objects that may interfere with planting and maintenance operations.
- B. Moisten prepared areas before planting if soil is dry. Water thoroughly and allow surface to dry off before seeding. Do not create muddy soil.
- C. Restore prepared areas to specified condition if eroded or otherwise disturbed after preparation and before planting.

3.02 FERTILIZER AND LIME

- A. Apply evenly over area in accordance with manufacturer's instructions. Mix into top 6 inches of top soil.
- B. Application Rate: 23 pounds per 1,000 square feet (1,000 pounds per acre).

3.03 SEEDING

- A. Start within 2 days of preparation completion.
- B. Mechanical: Broadcast seed in two different directions, compact seeded area with cultipacker or roller.
 1. Sow seed at uniform rate of 5 pounds per 1,000 square feet.
 2. Use Brillion type seeder.
 3. Broadcasting will allowed only in areas too small to use Brillion type seeder. Where seed is broadcast, increase seeding rate 20 percent.
 4. Roll with ring roller to cover seed, and water with fine spray.

- C. Hydroseeding:
 1. Application Rate: 8 pounds per 1,000 square feet.
 2. Apply on moist soil, only after free surface water has drained away.
 3. Prevent drift and displacement of mixture into other areas.
 4. Upon application, allow absorption and percolation of moisture into ground.
 5. Mixtures: Seed and fertilizer may be mixed together, apply within 30 minutes of mixing to prevent fertilizer from burning seed.
- D. Cover Crop Seeding: Apply seed at rate of 120 pounds per acre to areas that are bare or incomplete after September 15.
- E. Mulching: Apply uniform cover of straw mulch at a rate of 2 tons per acre.
- F. Water: Apply with fine spray after mulching to saturate top 4 inches of soil.
- G. Provide temporary seeding for stockpiled topsoil Stock piles to be seeded within 14 days of stockpiling.

3.04 SODDING

- A. Install sod on the areas as shown on the Drawings.
- B. Do not plant dormant sod.
- C. Lay sod to form solid mass with tightly fitted joints; butt ends and sides, do not overlap.
 1. Stagger strips to offset joints in adjacent courses.
 2. Work from boards to avoid damage to subgrade or sod.
 3. Tamp or roll lightly to ensure contact with subgrade; work sifted soil into minor cracks between pieces of sod, remove excess to avoid smothering adjacent grass.
 4. Complete sod surface true to finished grade, even, and firm.
- D. Fasten sod on 4H to 1V or steeper slopes to prevent slippage with wooden pins 6 inches long driven through sod into subgrade, until flush with top of sod. Install at sufficiently close intervals to securely hold sod.
- E. Water sod with fine spray immediately after planting. During first week, water daily or more frequently to maintain moist soil to depth of 4 inches.
- F. Apply top dress fertilizer at recommended rate.

3.05 GUARANTEE

- A. If, at the end of the 12-week lawn maintenance period, or at 12 weeks after substantial completion of this Project, whichever is longer, a satisfactory stand of grass has not been produced, the Contractor shall renovate and reseed the grass or unsatisfactory portions thereof immediately. If a satisfactory stand of grass develops within the 12-week maintenance period, it will be accepted. If it is not accepted, a complete replanting will be required during the planting season meeting all of the requirements specified hereinbefore.

3.06 FIELD QUALITY CONTROL

- A. Twelve weeks after seeding or sodding is complete and on written notice from Contractor, County will, within 15 days of receipt, determine if a satisfactory stand has been established.
- B. If a satisfactory stand has not been established, County will make another determination after written notice from Contractor following the next growing season.

3.07 PROTECTION

- A. Protect from traffic by erecting temporary fence around each newly seeded area.

END OF SECTION



**SECTION 15060
PIPES - GENERAL**

PART 1 GENERAL

1.01 REFERENCES

- A. The following is a list of standards that may be referenced in this Section and any supplemental Data Sheets:
1. American Association of State Highway and Transportation Officials (AASHTO): Standard Specifications for Highway Bridges.
 2. American National Standards Institute (ANSI):
 - a. B1.20.1, Pipe Threads, General Purpose (Inch).
 - b. B16.5, Pipe Flanges and Flanged Fittings.
 - c. B16.15, Cast Bronze Threaded Fittings, Classes 125 and 250.
 - d. B16.21, Nonmetallic Flat Gaskets for Pipe Flanges.
 3. American Petroleum Institute (API): SPEC 5L, Specification for Line Pipe.
 4. American Society of Mechanical Engineers (ASME): B31.3, Process Pipes.
 5. American Society for Nondestructive Testing (ASNT): SNT-TC-1A, Personnel Qualification and Certification in Nondestructive Testing.
 6. American Society for Testing and Materials (ASTM):
 - a. A320/A320M, Standard Specification for Alloy/Steel Bolting Materials for Low-Temperature Service.
 - b. A563, Standard Specification for Carbon and Alloy Steel Nuts.
 - c. B61, Standard Specification for Steam and Valve Bronze Castings.
 - d. D1248, Standard Specification for Polyethylene Plastics Extrusion Materials for Wire and Cable.
 - e. D1330, Standard Specification for Rubber Sheet Gaskets.
 - f. D2657, Heat Joining of Thermoplastic Pipe and Fittings.
 - g. D3035, Polyethylene Plastic Pipe (SDR-PR) Based on Controlled Outside Diameter.
 - h. D3261, Standard Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing.
 - i. F714, Standard Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter.

1.02 DEFINITIONS

- A. Submerged or Wetted: Zone below elevation of: Liquid surface or within 3 feet above top of liquid surface.

1.03 DESIGN REQUIREMENTS

- A. Where pipe diameter, thickness, pressure class, pressure rating, or thrust restraint is not shown or specified, design pipes system in accordance with the following:
 - 1. Process Pipes: ASME B31.3.
 - 2. Buried Pipes: H20-S16 traffic load with 1.5 impact factor, AASHTO Standard Specifications for Highway Bridges, as applicable.
 - 3. Thrust Restraints:
 - a. Design for test pressure shown in Pipeline Schedule.
 - b. Allowable Soil Pressure: 1,000 pounds per square foot.
 - c. Low Pressure Pipelines:
 - 1) When bearing surface of the fitting against soil provides an area equal to or greater than area required for thrust restraint, concrete thrust blocks will not be required.
 - 2) Determine bearing area for fittings without thrust blocks by projected area of 70 percent of internal diameter multiplied by chord length for fitting centerline curve.

1.04 SUBMITTALS

- A. Shop Drawings:
 - 1. Hydraulic Thrust Restraint for Restrained Joints: Details including materials, sizes, assembly ratings, and pipe attachment methods.
 - 2. Thrust Blocks: Concrete quantity, bearing area on pipe, and fitting joint locations.
 - 3. Dissimilar Buried Pipe Joints: Joint types and assembly drawings.
 - 4. The Contractor shall verify with pipe manufacturer all connection details.
- B. Quality Control Submittals:
 - 1. Manufacturer's Certification of Compliance.
 - 2. Laboratory Testing Equipment: Certified calibrations, manufacturer's product data, and test procedures.

1.05 DELIVERY, STORAGE, AND HANDLING

A. General:

1. Flanges: Securely attach metal, hardboard, or wood protectors over entire gasket surface.
2. Threaded or Socket Welding Ends: Fit with metal, wood, or plastic plugs or caps.
3. Linings and Coatings: Prevent excessive drying.
4. Cold Weather Storage: Locate products to prevent coating from freezing to ground.
5. Handling: Use heavy canvas or nylon slings to lift pipe and fittings.

1.06 HANDLING AND STORAGE OF HIGH-DENSITY POLYETHYLENE PIPE

- A. The Contractor shall exercise special care during the unloading, handling, and storage of all polyethylene pipe to ensure that the pipe is not cut, gouged, scored, or otherwise damaged. Any pipe segment that has cuts in the pipe wall exceeding 10 percent of the wall thickness shall be cut out and removed from the site at the Contractor's cost. The pipe shall be stored so that it is not deformed axially or circumferentially, which may hinder pipe installation. After the unloading of any pipe material ordered to the Project site and before installation of the pipe, the Contractor shall inspect all pipe to verify its condition prior to installation with the County and/or the Project Inspector. A pipe condition inspection report shall be filed with and approved by the County prior to installation.
- B. All polyethylene pipe without an ultraviolet inhibitor shall not be stored unprotected against the outside elements.

PART 2 PRODUCTS

2.01 PIPES: FLEXIBLE PVC PIPE AND HDPE

- A. Flexible PVC pipe shall be as manufactured by Kanaflex Corporation, Compton, California (310-637-1616), Series 101-PS, or approved equal.
- B. Fasteners for flexible PVC pipe shall be Kanaflex 101-PS power lock clamps, or approved equal.
- C. HDPE shall be as specified on Pipe Data Sheet(s) and Pipeline Schedule located at the end of this section as Supplement.
- D. Diameters Shown: Standardized Products: Nominal size.

2.02 JOINTS

A. Flanged Joints:

1. Flat-faced carbon steel or alloy flanges when mating with flat-faced cast or ductile iron flanges.
2. Higher pressure rated flanges as required to mate with equipment when equipment flange is of higher pressure rating than required for pipes.

B. Threaded Joints: NPT taper pipe threads in accordance with ANSI B1.20.1.

C. Thrust Tie-Rod Assemblies: NFPA 24; tie-rod attachments relying on clamp friction with pipe barrel to restrain thrust are unacceptable.

D. Mechanical connections of high density polyethylene pipe to auxiliary equipment such as valves, pumps, tanks, and other pipe systems shall be through flanged connections consisting of the following:

1. A polyethylene stub end thermally butt-fused to end of pipe.
2. ASTM A240, Type 304 stainless steel backing flange, 125-pound, ANSI B16.1 standard. Insulating flanges shall be used where shown.
3. Bolts and nuts of sufficient length to show a minimum of three complete threads when the joint is made and tightened to manufacturer's standard. Retorque nuts after 4 hours.
4. Gaskets as specified on Data Sheet.

2.03 GASKET LUBRICANT

- A. Lubricant shall be supplied by pipe manufacturer and no substitute or "or-equal" will be allowed.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify size, material, joint types, elevation, horizontal location, and pipe service of existing pipelines to be connected to new pipelines or new equipment.

3.02 PREPARATION

- A. All Work shall be performed as specified herein and supervised by personnel experienced in the installation of the pipe.
- B. The Project Foreman assigned to the Project by the Contractor shall be onsite at all times from the time of inception to the time of completion. The Project Foreman shall not be replaced without prior consent of the County.
- C. Notify County at least 2 weeks prior to field fabrication of pipe or fittings.

- D. Inspect pipe and fittings before installation, clean ends thoroughly, and remove foreign matter and dirt from inside.
- E. Damaged Coatings and Linings: Repair using original coating and lining materials in accordance with manufacturer's instructions.

3.03 INSTALLATION-GENERAL

- A. Join pipe and fittings in accordance with manufacturer's instructions, unless otherwise shown or specified.
- B. Remove foreign objects prior to assembly and installation.
- C. Flanged Joints:
 - 1. Install perpendicular to pipe centerline.
 - 2. Bolt Holes: Straddle vertical centerlines, aligned with connecting equipment flanges or as shown.
 - 3. Use torque-limiting wrenches to ensure uniform bearing and proper bolt tightness.
 - 4. Plastic Flanges: Install annular ring filler gasket at joints of raised-face flange.
 - 5. Raised-Face Flanges: Use flat-face flange when joining with flat-faced ductile or cast iron flange.
- D. Threaded and Coupled Joints:
 - 1. Conform with ANSI B1.20.1.
 - 2. Produce sufficient thread length to ensure full engagement when screwed home in fittings.
 - 3. Countersink pipe ends, ream and clean chips and burrs after threading.
 - 4. Make connections with not more than three threads exposed.
 - 5. Lubricate male threads only with thread lubricant or tape as specified on Pipe Data Sheets.
- E. Couplings:
 - 1. General:
 - a. Install in accordance with manufacturer's written instructions.
 - b. Before coupling, clean pipe holdback area of oil, scale, rust, and dirt.
 - 2. Application:
 - a. Nonmetallic Pipe Systems: Teflon bellows connector.
- F. Service Saddle Applications:
 - 1. Plastic Pipes: Nylon-coated iron.

G. High Density Polyethylene Pipes:

1. Join pipes, fittings, and flange connections by means of thermal butt-fusion.
2. Butt-fusion shall be performed in accordance with pipe manufacturer's recommendations as to equipment and technique. The Contractor shall perform trial fusion welds in the field and submit samples to the County for review prior to installation of the pipe. Full penetration welds shall provide a homogeneous material across the cross section of the weld. The fusion machine employed for the trial welds shall be the same machine to be utilized for the complete Project.
3. Special Precautions at Flanges: Polyethylene pipe connected to heavy fittings, manholes, and rigid structures shall be supported in such a manner that no subsequent relative movement between polyethylene pipe at flanged joint and rigid structures is possible.
4. Fusion equipment shall be operated only by technicians who have been certified by the pipe manufacturer or Supplier, and who have a minimum of 2 years' experience of fusion welding 8 inches or larger diameter pipelines. The technician's experience, certification, and verifiable references shall be documented in the HDPE pipe submittal.
5. The product certification shall include certified laboratory data confirming that said tests have been performed on a Sample of the pipe to be provided under this Contract, or pipe from that production run, and that satisfactory results were obtained prior to any installation of said pipe.
6. Only those tools designed for the aforementioned procedures, and approved by the pipe manufacturer or Supplier and the County, shall be used for assembly of pipe fittings to ensure proper installation. The heater plate shall be equipped with suitable means to measure the temperature of plate surfaces and to assure uniform heating such as thermometers or pyrometers.
7. Pipe Joining:
 - a. Sections of polyethylene pipe shall be joined into continuous lengths on the jobsite above ground. The joining method shall be the butt fusion method and shall be performed in strict accordance with the pipe manufacturer's recommendations. Fusion equipment used in the joining procedure shall be capable of meeting all conditions recommended by the pipe manufacturer, including, but not limited to, fusion temperature, alignment, and fusion pressure. Electrofusion may be used for field closures as necessary when other fusion equipment cannot be utilized in a trench type environment. For end sections or "tail" pipe, the use of electrofusion couplings as manufactured by Central Plastics Company, or approved equal, is acceptable.

- b. A fire-retardant bag or suitable enclosure shall be used with the heater plate to facilitate control of heating process and to protect the heater plate surfaces from dirt and other debris when not in use. The heater plate surfaces shall be cleaned regularly as needed to prevent accumulation of fusion welding residues or other substances that may result in faulty pipe joining.
- c. Butt fusion shall conform to ASTM D2657 and pipe manufacturer's criteria for the type of joining. Joint strength shall be equal to or greater than that of the adjacent pipe.
- d. The inside and outside of pipe ends shall be cleaned with a cotton or nonsynthetic cloth to remove dirt, water, grease, and other foreign materials. The pipe ends shall be cut square and carefully aligned just prior to heating.
- e. After achieving the proper melt pattern, the pipe ends shall be brought together in a firm, rapid motion applying sufficient pressure to form a pipe bead (1/8 inch to 3/16 inch in height) around and inside the entire circumference of the pipe.

3.04 INSTALLATION-EXPOSED PIPES

A. Pipes Runs:

- 1. Parallel to building or column lines and perpendicular to floor, unless shown otherwise.
- 2. Pipes upstream and downstream of flow measuring devices shall provide straight lengths as required for accurate flow measurement.

B. Flanges: Provide at each pipe connection to equipment or instrumentation on equipment side of each block valve to facilitate installation and removal.

C. Install pipes so that no load or movement in excess of that stipulated by equipment manufacturer will be imposed upon equipment connection; install to allow for contraction and expansion without stressing pipe, joints, or connected equipment.

D. Pipe Clearance, Unless Otherwise Shown:

- 1. Between Equipment or Equipment Pipes and Adjacent Pipes: Minimum 3 feet 0 inches, measured from equipment extremity and extremity of pipe system including flanges, valve bodies or mechanisms, insulation, or hanger/support systems.
- 2. From Adjacent Work: Minimum 1 inch from nearest extremity of completed pipe system including flanges, valve bodies or mechanisms, insulation, or hanger/support systems.
- 3. Do not route pipes in front of or to interfere with access ways, ladders, stairs, platforms, walkways, openings, doors, or windows.
- 4. Headroom in front of openings, doors, and windows shall not be less than the top of the opening.

5. Do not install pipes containing liquids or liquid vapors in transformer vaults or electrical equipment rooms.
6. Do not route pipes over, around, in front of, in back of, or below electrical equipment including controls, panels, switches, terminals, boxes, or other similar electrical work.

3.05 INSTALLATION-BURIED PIPE

A. Joints:

1. Dissimilar Buried Pipes: Provide flexible mechanical compression joints for pressure pipe.
2. Concrete Encased or Embedded Pipe: Do not encase joints in concrete unless specifically shown.

B. Placement:

1. Keep trench dry until pipe laying and joining are completed.
2. Exercise care when lowering pipe into trench to prevent twisting or damage to pipe.
3. Measure for grade at pipe invert, not at top of pipe.
4. Excavate trench bottom and sides of ample dimensions to permit visual inspection and testing of entire flange, valve, or connection.
5. Prevent foreign material from entering pipe during placement.
6. Close and block open end of last laid pipe section when placement operations are not in progress and at close of day's Work.
7. Lay pipe upgrade with bell ends pointing in direction of laying.
8. If joint deflection of standard pipe lengths will not accommodate horizontal or vertical curves in alignment, provide:
 - a. Shorter pipe lengths.
 - b. Special mitered joints.
 - c. Standard or special fabricated bends.
9. After joint has been made, check pipe alignment and grade.
10. Place sufficient pipe zone material to secure pipe from movement before next joint is installed.
11. Prevent uplift and floating of pipe prior to backfilling.

C. HDPE Pipe Placement:

1. Lay pipe snaking from one side of trench to other.
2. Offset: As recommended by manufacturer for maximum temperature variation between time of solvent welding and during operation.
3. Do not lay pipe when temperature is below 40 degrees F, or above 90 degrees F when exposed to direct sunlight.
4. Shield ends to be joined from direct sunlight prior to and during the laying operation.

D. Tolerances:

1. Deflection From Vertical Grade: Maximum 1/4 inch.
2. Joint Deflection: Maximum of 75 percent of manufacturer's recommendation.
3. Horizontal position of pipe centerline on alignment around curves maximum variation of 1.75 feet from position shown.
4. Pipe Cover: Minimum 3 feet, unless otherwise shown.

3.06 BRANCH CONNECTIONS

- A. Do not install branch connections smaller than 1/2-inch nominal pipe size, including instrument connections, unless shown otherwise.
- B. Threaded Pipe Tap Connections:
 1. Limitations: Threaded taps in pipe barrel are unacceptable.

3.07 PIPE CLEANING AND TESTING – HDPE LANDFILL GAS PIPES

- A. Clean all pipes of debris. Cleaning for tight lines shall consist of mechanically blowing air into one end of the section, discharging debris from the other end in a safe manner. Contractor shall provide mechanical blower for this cleaning. The cleaning operation shall demonstrate air velocities in the pipe of over 23m/s (4,500 fpm) for 1 hour at all points along the centerline of the pipe. Alternatively, the pipe may be cleaned with a pig. The perforated LFG collectors shall be cleaned with a pig. Pipe may be cleaned in sections.
- B. Air Testing: All solid landfill gas pipes (both above and below ground) shall be air tested for leaks. The pipeline shall be tested with the ends of the pipes temporarily closed. After all plugs are in place and securely blocked, introduce air slowly into the pipe section to be tested until the internal air pressure reaches 5.0 psi greater than atmospheric pressure. Allow a minimum of 2 minutes for the air temperature to stabilize. Pipe and joints being air tested shall be considered acceptable when tested at an average pressure of 5.0 psi greater than atmospheric pressure and the section of pipe loses air at a rate less than 0.0030 cubic foot per minute per square foot of internal pipe surface. Contractor shall provide calculations for maximum acceptable loss before testing and field data sheets with test results for County approval.
- C. Pipes shall be tested in its final configuration. Pipe sections shall be tested with all blind flanges and other connections in place in the same configuration that they will be under during operation of the system. Testing shall ensure that all pipe welds, blind flanges, and other connections are leak-free according to the criteria listed above.

- D. Pipe test failure shall require the Contractor to find and fix the point(s) of leaks causing the failure. The section shall then be retested and the process repeated until all sections of pipe pass the air testing criteria.

3.08 PIPE CLEANING – HDPE LANDFILL LEACHATE RECIRCULATION PIPES

- A. Following assembly and testing, flush pipelines (except as stated below) with water at 2.5 fps minimum flushing velocity until foreign matter is removed.
- B. If impractical to flush large diameter pipe at 2.5 fps, clean in-place from inside by brushing and sweeping, then flush at lower velocity.
- C. Insert cone strainers in flushing connections to attached equipment and leave in-place until cleaning is complete.
- D. Remove accumulated debris through drains 2 inches and larger or by removing spools and valves from pipelines.

3.09 PIPE CLEANING AND VIDEO INSPECTION OF HDPE PIPES

- A. The Contractor shall flush and clean the HDPE pipes as directed by the County. Remove all accumulated debris, rocks, sand, and other foreign material from the leachate collection system by jet cleaning. The Contractor shall video camera survey the cleaned pipes and provide to the County an inspection report and video record on a CD. The video inspection shall be performed by a qualified firm with 5 years of experience in cleaning, inspection and video-taping small pipelines.

3.10 PIPE IDENTIFICATION

- A. See Pipeline Schedule.

3.11 WARRANTY

- A. The Contractor shall provide to the County a warranty to be in force and effect for a period of 1 year from the date of final acceptance by the County. The warranty shall require the Contractor to repair or replace the pipe should leakage, separation, collapse, or other failure result from faulty materials or installation as determined by the County.

3.12 SUPPLEMENTS

A. The supplements listed below, following "END OF SECTION," are part of this Specification.

1. Pipeline Schedule Legend.
2. Pipeline Schedule.
3. Data Sheets.

<u>Number</u>	<u>Title</u>
-11	Chlorinated Polyvinyl Chloride (CPVC) Pipe
-14	High Density Polyethylene (HDPE) Pipe

END OF SECTION



PIPELINE SCHEDULE LEGEND**SERVICE**

LFG	Landfill Gas
LE/REC	Leachate Recirculation

EXPOSURE

BUR	Buried
EXP	Exposed
SUB	Submerged
ENC	Concrete Encased

JOINT TYPE

FW	Fusion Weld
FLG	Flanged
PO	Push-On
SW	Socket Weld
THD	Threaded

MATERIAL

HDPE	High Density Polyethylene
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PRESSURE TEST

H	Hydrostatic
I	In Service
P	Pneumatic
NA	Not Applicable



**Orange County Landfill – Cells 9 & 10 Pipe Installation
Pipeline Schedule**

Service	Size (inches)	Exposure	Material	Pipe Schedule/Class	Joint Type	Max. Operating Press. (psig)	Test Type	Test Press. (psig)	Color Code	Color	Remarks
LFG	6 - 48	BUR/EXP	HDPE	SDR 17	FW, FLG	1.80	P	10.0	-	-	
LFG	8	BUR/EXP	CPVC	SCH 80	SW	1.80	P	10.0	-	-	For vertical gas wells only.
LE/REC	3 - 4	BUR/EXP	HDPE	SDR 11	FW, FLG	100	H	150	-	-	



SECTION 15060-11 CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE AND FITTINGS		
Item	Size	Description
Pipe	All	Schedule 80 CPVC: Type IV, Grade I or Class 23447-B conforming to ASTM D1784 and ASTM F441. Pipe shall be manufactured with titanium dioxide for ultraviolet protection. Threaded nipples shall be Schedule 80.
Fittings	All	Schedule to Match Pipe Above: Conforming to the requirements of ASTM F439 for socket weld type and Schedule 80 ASTM F437 for threaded type. Fittings shall be manufactured with titanium dioxide for ultraviolet protection.
Joints	All	Solvent socket weld except where connection to threaded valves and equipment may require future disassembly.
Flanges	All	One piece, molded hub Type CPVC flat face flange in accordance with Fittings above; 125-pound ASME B16.1 drilling.
Bolting	All	Flat Face Mating Flange and In Corrosive Areas: ASTM A193/A193M, Type 316 stainless steel Grade B8M hex head bolts and ASTM A194/A194M Grade 8M hex head nuts. Raised Face Mating Flange: Carbon steel ASTM A307 Grade B square head bolts and ASTM A563 Grade A heavy hex head nuts.
Gaskets	All	Flat Face Mating Flange: Full faced 1/8-inch thick ethylene propylene (EPR) rubber. Raised Face Mating Flange: Flat ring 1/8-inch ethylene propylene (EPR) rubber, with filler gasket between OD of raised face and flange OD to protect the flange from bolting moment.
Solvent Cement	All	All socket type joints shall be made employing primer and solvent cements that meet or exceed the requirements of ASTM F493 and primers that meet or exceed the requirements of ASTM F656 and as recommended by the pipe and fitting manufacturer, except solvent weld cement for CPVC pipe joints in sodium hypochlorite service shall be free of silica filler and shall be certified by the manufacturer to be suitable for that service. Certification shall be submitted. Solvent cement and primer shall be listed by NSF for use with potable water.
Thread Lubricant	All	Teflon tape.

END OF SECTION



SECTION 15060-14 HIGH DENSITY POLYETHYLENE (HDPE) PIPE										
Item	Size	Description								
General	All	Pipe lengths, fittings, and flanged connections to be joined by thermal butt-fusion shall be of the same type, grade, and class of polyethylene compound and supplied from the same raw material supplier.								
Pipe		<p>ASTM D3350, high density polyethylene, maximum allowable hoop stress 800 psi at 73.4 degrees F.</p> <p>Polyethylene resins shall conform to Type PE 3408 or better.</p> <p>Protection shall be provided against ultraviolet light degradation using carbon black, not less than 2 percent well dispersed in the resin.</p> <p>Pipe wall thickness shall reflect the required SDR* and diameter, as shown in Table 8, ASTM F714.</p> <p>Design Stress Rating: ASTM F714, 800 psi hydrostatic.</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">Pressure Rating</td> <td style="text-align: center;">SDR*</td> </tr> <tr> <td style="text-align: center;">160 psi</td> <td style="text-align: center;">11</td> </tr> <tr> <td style="text-align: center;">130 psi</td> <td style="text-align: center;">13.5</td> </tr> <tr> <td style="text-align: center;">100 psi</td> <td style="text-align: center;">17</td> </tr> </table> <p>* SDR: standard dimension ratio = OD/thickness</p>	Pressure Rating	SDR*	160 psi	11	130 psi	13.5	100 psi	17
Pressure Rating	SDR*									
160 psi	11									
130 psi	13.5									
100 psi	17									
Fittings	6 inch & smaller	Molded fittings, butt fusion joined, conforming to ASTM D3261.								
	8 inch & larger	<p>Same as pipe, butt fusion joined, conforming to ASTM D3350.</p> <p>All fittings shall have same pressure rating as pipe, unless otherwise noted.</p>								
Flanges		ASTM A240 Type 316 stainless steel, 125-pound, ANSI B16.1 standard, Van Stone type with one-piece molded polyethylene stud ends, same rating as pipe.								

SECTION 15060-14 HIGH DENSITY POLYETHYLENE (HDPE) PIPE		
Item	Size	Description
Bolting		Stainless steel, ASTM A193/A193M Rev A Grade B8M studs and ASTM A194/A194M Grade 8M hex head nuts. Washers shall be same material as bolts.
Gaskets		Flat ring, 1/8-inch ethylene propylene diene monomer (neoprene).

END OF SECTION

**SECTION 15100
VALVES AND OPERATORS**

PART 1 GENERAL

1.01 REFERENCES

- A. The following is a list of standards which may be referenced in this section:
1. American National Standards Institute (ANSI):
 - a. B16.1, Cast Iron Pipe Flanges and Flanged Fittings.
 - b. C111/A21.11, Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
 2. American Society of Sanitary Engineers (ASSE): 1011, Performance Requirements for Hose Connection Vacuum Breakers.
 3. American Society for Testing and Materials (ASTM):
 - a. A276, Standard Specification for Stainless Steel Bars and Shapes.
 - b. B61, Standard Specification for Steam or Valve Bronze Castings.
 - c. B62, Standard Specification for Composition Bronze or Ounce Metal Castings.
 - d. D1784, Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.
 4. American Water Works Association (AWWA):
 - a. C504, Rubber-Seated Butterfly Valves.
 - b. C508, Swing-Check Valves for Waterworks Service, 2 inches to 24 inches NPS.
 - c. C550, Protective Epoxy Interior Coatings for Valves and Hydrants.
 - d. C606, Grooved and Shouldered Joints.
 - e. C800, Underground Service Line Valves and Fittings.
 5. Manufacturers Standardization Society (MSS): SP-88, Diaphragm Type Valves.
 6. Orange County Manual of Standards and Specifications for Wastewater and Water Main Construction Latest Revision 1999.

1.02 SUBMITTALS

- A. Shop Drawings:
1. Product data sheets for make and model.
 2. Complete catalog information, descriptive literature, Specifications, and identification of materials of construction.
 3. Sizing calculations for OPEN/CLOSE throttle and modulating.

B. Quality Control Submittals:

1. Certificate of Compliance for:
 - a. Butterfly Valves: Full compliance with AWWA C540.
2. Tests and inspection data.
3. Manufacturer's Certificate of Proper Installation.
4. Operation and Maintenance Manual.

PART 2 PRODUCTS

2.01 GENERAL

- A. Valve to include operator, handwheel, extension stem, floor stand, worm and gear operator, operating nut, chain, wrench, and accessories for a complete operation.
- B. Valve to be suitable for intended service. Renewable parts not to be of a lower quality than specified.
- C. Valve same size as adjoining pipe.
- D. Valve ends to suit adjacent piping.
- E. Size operator to operate valve for the full range of pressures and velocities.
- F. Valve to open by turning counterclockwise.
- G. Factory mount operator and accessories.

2.02 MATERIALS

- A. Brass and bronze valve components and accessories that have surfaces in contact with water to be alloys containing less than 16 percent zinc and 2 percent aluminum.
- B. Approved Alloys are of the Following ASTM Designations:
 1. B61, B62, B98 (Alloy UNS No. C65100, C65500, or C66100), B139 (Alloy UNS No. C51000), B584 (Alloy UNS No. C90300 or C94700), B164, B194, and B127.
 2. Stainless steel Alloy 18-8 may be substituted for bronze.

2.03 FACTORY FINISHING

A. Epoxy Lining and Coating:

1. In accordance with AWWA C550 unless otherwise specified.
2. Either two-part liquid material or heat-activated (fusion) material except only heat-activated material if specified as "fusion" or "fusion bonded" epoxy.
3. Minimum 7-mil dry film thickness except where limited by valve operating tolerances.

B. Exposed Valves: Safety isolation valves and lockout valves with handles, handwheels, or chain wheels "safety yellow."

2.04 VALVES

A. Butterfly Valves:

1. Type V512 Lug Butterfly Valve, 2 Inches to 36 Inches, for landfill gas service:
 - a. Cast iron or ductile iron body, Type 316 stainless steel disc, Type 18-8 stainless steel one-piece stem, self-lubricating sleeve type bearing, Viton replaceable resilient seat, self-adjusting packing, suitable for temperatures up to 250 degrees F, bubble-tight at 50 psi differential pressure, bubble tight under 10-inch Hg vacuum valve body to fit between ANSI B16.1 flanges.
 - b. Manufacturers and Products:
 - 1) Tyco/Keystone; Model AR2.
 - 2) Centerline; LT.
 - 3) Grinnell, LC8000.
 - 4) Bray, 531.
2. Type V520 Solid Polyvinyl Chloride Butterfly Valve 1-1/2 Inches to 8 Inches for leachate recirculation service:
 - a. Wafer body type, buried service, pressure rated 150 psi at 70 degrees F CWP, solid ASTM D1784, Type I, Grade 1, PVC body and contoured PVC or polypropylene valve disc, stainless steel valve stem, Viton seat, 2-inch square operating nut.
 - b. Manufacturers and Products:
 - 1) ASAHI/America;
 - 2) Or equal.

2.05 OPERATORS

A. Manual Operator:

1. General:
 - a. Operator force not to exceed 40 pounds under any operating condition, including initial breakaway. Gear reduction operator when force exceeds 40 pounds.
 - b. Operator self-locking type or equipped with self-locking device.
 - c. Position indicator on quarter-turn valves.
 - d. Worm and gear operators one-piece design worm-gears of gear bronze material. Worm hardened alloy steel with thread ground and polished. Traveling nut type operators threader steel reach rods with internally threaded bronze or ductile iron nut.
2. Exposed Operator:
 - a. Galvanized and painted handwheels.
 - b. Lever operators allowed on quarter-turn valves 8 inches and smaller.
 - c. Cranks on gear type operators.
 - d. Chain wheel operator with tiebacks, extension stem, floor stands, and other accessories to permit operation from normal operation level.
 - e. Valve handles to take a padlock, and wheels a chain and padlock.
3. Buried Operator:
 - a. Buried service valves shall have geared operators exposed above ground. Enclose moving parts of valve and operator in PVC or cast iron housing to prevent contact with the soil.
 - b. Design buried service operators for quarter-turn valves to withstand 450 foot-pounds of input torque at the FULLY OPEN or FULLY CLOSED positions, grease packed and gasketed to withstand a submersion in water to 10 psi.
 - c. Buried valves shall have extension stems, bonnets, and valve boxes.

PART 3 EXECUTION

3.01 INSTALLATION

A. Flange Ends:

1. Flanged valve boltholes shall straddle vertical centerline of pipe.
2. Clean flanged faces, insert gasket and bolts, and tighten nuts progressively and uniformly.

- B. Valve Orientation:
1. Install operating stem vertical when valve is installed in horizontal runs of pipe having centerline elevations 4 feet 6 inches or less above finished floor, unless otherwise shown.
 2. Orient butterfly valve shaft so that unbalanced flows or eddies are equally divided to each half of the disc, i.e., shaft is in the plane of rotation of the eddy.
- C. Extension Stem for Operator: Where the depth of the valve is such that its centerline is more than 3 feet below grade, furnish an operating extension stem with 2-inch operating nut to bring the operating nut to a point 6 inches below the surface of the ground and/or box cover.
- D. Torque Tube: Where operator for quarter-turn valve is located on floor stand, furnish extension stem torque tube of a type properly sized for maximum torque capacity of the valve.
- E. Floor Box and Stem: Steel extension stem length shall locate operating nut in floor box.

3.02 TESTS AND INSPECTION

- A. Valve may be either tested while testing pipelines, or as a separate step.
- B. Test that valves open and close smoothly with operating pressure on one side and atmospheric pressure on the other, in both directions for two-way valve and applications.

3.03 MANUFACTURER'S SERVICES

- A. The Valve(s) as Listed Below Require Manufacturer's Field Services: V512.
- B. Manufacturer's Representative: Present at site for minimum person-days listed below, travel time excluded:
 1. 1/2 person-day for installation assistance and inspection.
 2. 1/2 person-day for functional and performance testing and completion of Manufacturer's Certificate of Proper Installation.

END OF SECTION



**SECTION 15992
PIPE LEAK TESTING**

PART 1 GENERAL

1.01 SUBMITTALS

A. Quality Control Submittals:

1. Testing Plan: Submit prior to testing and include at least the information that follows.
 - a. Testing dates.
 - b. Pipe systems and section(s) to be tested.
 - c. Test type.
 - d. Method of isolation.
 - e. Calculation of maximum allowable leaks for pipe section(s) to be tested.
2. Certifications of Calibration: Testing equipment.
3. Certified Test Report.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 PREPARATION

- A. Notify County in writing 5 days in advance of testing. Perform testing in presence of County.
- B. Pressure Pipe:
 1. Install temporary thrust blocking or other restraint as necessary to protect adjacent pipe or equipment and make taps in pipe prior to testing.
 2. Wait 5 days minimum after concrete thrust blocking is installed to perform pressure tests. If high-early strength cement is used for thrust blocking, wait may be reduced to 2 days.
 3. Prior to test, remove or suitably isolate appurtenant instruments or devices that could be damaged by pressure testing.
 4. New Pipe Connected to Existing Pipe:
 - a. Isolate new pipe with grooved-end pipe caps, spectacle blinds, blind flanges, or as acceptable to County.
 - b. Test joint between new pipe and existing pipe by methods that do not place entire existing system under test load, as approved by County.
 5. Test Pressure: As indicated on Pipeline Schedule.

- C. Test section may be filled with water and allowed to stand under low pressure prior to testing.

3.02 HYDROSTATIC TEST FOR PRESSURE PIPE

- A. Fluid: Clean water of such quality to prevent corrosion of materials in pipe system.
- B. No leaks are allowed for high density polyethylene pipe.
- C. Exposed Pipe:
1. Maximum Filling Velocity: 0.25 feet per second, applied over full area of pipe.
 2. Vent pipe during filling. Open vents at high points of pipe system or loosen flanges, using at least four bolts, or use equipment vents to purge air pockets.
 3. Maintain hydrostatic test pressure continuously 60 minutes, minimum, without leaks and for such additional time as necessary to conduct examinations for leaks.
 4. Examine joints and connections for leaks.
 5. Correct visible leaks and retest as specified.
- D. Buried Pipe:
1. Test sections shall not exceed 2,000 feet.
 2. Test after backfilling has been completed.
 3. Expel air from pipe system during filling.
 4. Apply and maintain specified test pressure with hydraulic force pump. Valve off pipe system when test pressure is reached.
 5. Maintain hydrostatic test pressure continuously for 2 hours minimum.
 6. Maximum Allowable Leaks:

$$L = \frac{SD(P)^{1/2}}{133,200}$$

where:

- L = Allowable leaks, in gallons per hour.
 S = Length of pipe tested, in feet.
 D = Nominal diameter of pipe, in inches.
 P = Test pressure during leaks test, in pounds per square inch.

7. Correct leaks greater than allowable, and retest as specified.

3.03 PNEUMATIC TEST FOR COMPRESSED AIR PIPE

- A. Fluid: Oil-free, dry air.
- B. Procedure:
 - 1. Apply preliminary pneumatic test pressure of 5 psig maximum to pipe system prior to final leak testing, to locate visible leaks. Apply soap bubble mixture to joints and connections, examine for leaks.
 - 2. Correct visible leaks and repeat preliminary test until visible leaks are corrected.
 - 3. Gradually increase pressure in system to half of specified test pressure. Thereafter, increase pressure in steps of approximately one-tenth of specified test pressure until required test pressure is reached.
 - 4. Maintain pneumatic test pressure continuously for minimum of 10 minutes and for such additional time as necessary to conduct soap bubble examination for leaks.
 - 5. Correct visible leaks and retest as specified.
- C. Allowable Leaks: Pipe system, exclusive of possible localized instances at pump or valve packing, shall show no visual evidence of leaks.

3.04 FIELD QUALITY CONTROL

- A. Test Report Documentation:
 - 1. Test date.
 - 2. Description and identification of pipe tested.
 - 3. Test fluid.
 - 4. Test pressure.
 - 5. Remarks, Including:
 - a. Leaks (type, location).
 - b. Repair/replacement performed to remedy excessive leaks.
 - 6. Signed by Contractor and County to represent that test has been satisfactorily completed.

END OF SECTION