



**AMENDED AND RESTATED AGREEMENT BETWEEN BROWARD COUNTY AND LEO A. DALY LLC
FOR CONSULTANT SERVICES FOR BROWARD COUNTY'S MEDICAL EXAMINER'S OFFICE AND
BSO'S CRIME LAB COMBINED FACILITY (FORENSIC SCIENCE CENTER)
(RFP # S2115731P1)**

This amended and restated agreement ("Agreement") is between Broward County, a political subdivision of the State of Florida ("County"), and Leo A. Daly LLC, a Nebraska corporation ("Consultant"), f/k/a Leo A. Daly Company (each a "Party" and collectively referred to as the "Parties").

RECITALS

A. On February 7, 2019, the Parties entered into an Agreement for Consultant Services for Broward County's Medical Examiner's Office and BSO's Crime Lab Combined Facility ("Original Agreement").

B. The Parties entered into a first amendment ("First Amendment") to the Original Agreement on December 8, 2020, and a second amendment ("Second Amendment") to the Original Agreement on July 2, 2021.

C. Consultant performed pre-design, schematic design, and design development phases pursuant to the Original Agreement (as amended by the First Amendment and Second Amendment) for a facility to be sited at 1625 NW 23rd Avenue, Fort Lauderdale, Florida, 33311 ("First Site").

D. The Parties desire to amend and restate the Original Agreement (as amended by the First Amendment and Second Amendment) to revise terms, add new phases to the scope of work, re-perform certain project phases for a new design on a new site located at 2000 W. Commercial Blvd, Fort Lauderdale, Florida ("Second Site"), update salary costs, and update various exhibits to the Agreement.

E. If this Agreement was subject to the requirements of Section 287.055, Florida Statutes, the Consultants' Competitive Negotiation Act, as amended ("CCNA"), County has met the requirements of the CCNA and has selected Consultant to perform the services stated herein.

Now, therefore, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

ARTICLE 1. DEFINITIONS

1.1. **Applicable Law** means all applicable laws, codes, advisory circulars, rules, regulations, and ordinances of any federal, state, county, municipal, or other governmental entity, as may be amended.

- 1.2. **Board** means the Board of County Commissioners of Broward County, Florida.
- 1.3. **Code** means the Broward County Code of Ordinances.
- 1.4. **Contract Administrator** means the Director of Construction Management Division, or such other person designated by the Director of Construction Management Division in writing. The Contract Administrator is the representative of County concerning the Project.
- 1.5. **Contractor** shall mean the person, firm, corporation, or other entity (if any) who enters into an agreement with County to perform construction work for the Project.
- 1.6. **County Attorney** shall mean the chief legal counsel for County who directs and supervises the Office of the County Attorney pursuant to Section 2.10 of the Broward County Charter.
- 1.7. **County Business Enterprise** or **CBE** means an entity certified as meeting the applicable requirements of Section 1-81 of the Code.
- 1.8. **Notice to Proceed** means a written authorization to proceed with the Project, phase, or task, issued by the Contract Administrator.
- 1.9. **Project** means Broward County's Medical Examiner's Office and BSO's Crime Lab Combined Facility.
- 1.10. **Project Manager** means a designee of the Contract Administrator having day-to-day administrative and managerial responsibility for the Project.
- 1.11. **Purchasing Director** means County's Director of Purchasing.
- 1.12. **Services** means the work set forth in the Scope of Services, attached as Restated Exhibit A, and any Optional Services procured under this Agreement, and includes civil, structural, mechanical, and electrical engineering, architectural services, and other professional services as applicable for the Project.
- 1.13. **Small Business Enterprise** or **SBE** means an entity certified as meeting the applicable requirements of Section 1-81 of the Code.
- 1.14. **Subconsultant** means an entity or individual, including subcontractors, providing Services to County through Consultant, regardless of tier.

ARTICLE 2. EXHIBITS

Restated Exhibit A	Scope of Services
Restated Exhibit B	Maximum Billing Rates
Restated Exhibit B-1	Reimbursables for Direct Non-Salary Expenses
Restated Exhibit C	Schedule of Subconsultants

ARTICLE 3. SCOPE OF SERVICES

3.1. Consultant shall provide all Services as set forth in Restated Exhibit A, including all necessary, incidental, and related activities required for full and complete performance of this Agreement (the "Scope of Services").

3.2. This Agreement does not delineate every detail and minor work task required to be performed by Consultant to complete the Project. If Consultant determines that work should be performed to complete the Project and, in Consultant's opinion, that work is outside the level of effort originally anticipated, whether or not the Scope of Services identifies the work items, Consultant will promptly notify the Contract Administrator in writing and seek written approval of the Contract Administrator before proceeding with the work. If Consultant proceeds with such work without notifying the Contract Administrator and obtaining the Contract Administrator's written approval, the work shall be deemed to be within the original level of effort, whether or not specifically addressed in the Scope of Services, with no additional compensation or time for such work. Notice to the Contract Administrator does not constitute authorization or approval by County to Consultant to perform the work. In addition, any such work that would entail additional compensation to Consultant by County, or additional time for performance, requires an amendment to this Agreement pursuant to Section 6.1 or to the applicable Work Authorization. Unless there is an executed amendment or a dispute as set forth in Section 6.4, any work performed by Consultant outside the originally anticipated level of effort without prior written County approval shall be at no additional cost to County.

3.3. Consultant has no right to be retained for other phases of the Project or other services not included in Restated Exhibit A. County shall have the right to procure services for other Project phases not included within this Agreement from any other source.

3.4. County will place at Consultant's disposal all information County reasonably has available that is pertinent to the Project, including previous reports and any other data regarding the Project. County shall arrange for access to, and make all provisions for, Consultant to enter upon public and private property if required for Consultant to perform the Services. Deliverables and documents required to be submitted by Consultant to County under this Agreement will be reviewed by County and responded to in writing with any comments within the time for such comments, if any, stated in Restated Exhibit A.

3.5. Notwithstanding any other remedy otherwise available to County, where the work product of Consultant is found to be deficient for the purpose for which it was produced, Consultant shall correct the deficiency at no cost to County.

3.6. If the Services relate to a construction project, Consultant acknowledges that it is aware of all the duties and responsibilities and agrees to perform such duties and responsibilities as set forth in County's standard form documents or those County documents governing forms of

construction delivery. Consultant agrees to meet with County at reasonable times after reasonable notice.

ARTICLE 4. TIME FOR PERFORMANCE; DAMAGES

4.1. Consultant shall perform the Services within the time periods specified in Restated Exhibit A. Time periods shall commence from the date of the applicable Notice to Proceed.

4.2. Consultant must receive a Notice to Proceed from the Contract Administrator prior to commencement of Services (and prior to commencing any phase of Services for which a separate Notice to Proceed is required per Restated Exhibit A). The Contract Administrator may, at their discretion, require Consultant to submit the deliverables and documents from one phase identified in Restated Exhibit A for the Contract Administrator's review and approval prior to Consultant commencing Services for another phase.

4.3. If the Contract Administrator determines that Consultant is unable to timely complete all or any portion of the Services because of delays resulting from untimely review by County or other governmental agencies having jurisdiction over the Project and such delays are not the fault of Consultant, or because of delays caused by factors outside the control of Consultant, the Contract Administrator has authority, in their sole discretion, and subject to a written amendment to either this Agreement or a Work Authorization, to grant a reasonable extension of time for completion of the Services and additional reasonable compensation, if deemed appropriate. It shall be the responsibility of Consultant to notify the Contract Administrator in writing whenever a delay in approval by a governmental agency is anticipated or experienced, and whenever a delay has been caused by factors outside of Consultant's control, and to inform the Contract Administrator of all facts and details related to the delay, along with an estimate of expected additional time necessary to complete the applicable Services and any request for additional compensation. Consultant must provide such written notice to the Contract Administrator within three (3) business days after the occurrence of the event causing the delay.

4.4. This section is only applicable if (a) the Project involves construction work, (b) County retains a Contractor for the Project, and (c) the Services include construction engineering and inspection services related to Contractor's work. If Contractor fails to substantially complete the Project on or before the substantial completion date specified in its agreement with County through no fault of Consultant, or if Contractor is granted an extension of time beyond said substantial completion date and Consultant's Services are extended beyond the substantial completion date through no fault of Consultant, then Consultant shall be compensated in accordance with Article 5 for all Services rendered by Consultant beyond the substantial completion date. If Contractor's failure to substantially complete the Project on or before the substantial completion date specified in its agreement with County is caused in whole or in part by Consultant, then Consultant shall pay to County its proportional share of any claim for damages to Contractor arising out of the delay and the liquidated damages amount set forth in Section 4.5 below. The provisions for the computation of delay costs, damages, or any other amounts, whether direct or indirect, in the agreement between the Contractor and County are

incorporated herein. This section shall not affect the indemnification rights or obligations of either Party otherwise set forth in this Agreement.

4.5. In the event Consultant fails to complete the phases of Services identified in the Agreement and Restated Exhibit A on or before the applicable time for performance, Consultant shall pay to County the sum of dollars identified below for each calendar day after the applicable time for performance, plus approved time extensions thereof, until completion of the phase:

Project Phase	Amount
Program Validation Phase	\$0
Schematic Design Phase	\$0
Design Development Phase	\$0
50% Construction Documents Phase ¹	\$450
75% Construction Documents Phase ²	\$450
100% Construction Documents Phase ³	\$450
Bidding and Award Phase ⁴	\$450
Construction Administration Phase	\$450
Warranty Administration and Post-Occupancy Services	\$0

These amounts are not penalties but are liquidated damages to County for Consultant's inability to proceed with, and complete, the phases of the Project in a timely manner pursuant to the agreed upon Project Schedule. Liquidated damages are hereby fixed and agreed upon by the Parties, recognizing the impossibility of precisely ascertaining the amount of damages that will be sustained by County as a consequence of such delay, and both Parties desiring to obviate any question or dispute concerning the amount of said damages and the cost and effect of the failure of Consultant to complete the respective phases within the applicable time for performance. This provision shall not affect the rights and obligations of either party as set forth in Section 11.7, Indemnification of County.

¹ Liquidated damages for the 50% Construction Documents Phase shall be applied after the phase's expiration of the aggregate Required Time Period in Restated Exhibit A: Attachment 1 for (a) Document Preparation and Submittal and (b) Document Correction and Re-Submittal.

² Liquidated damages for the 75% Construction Documents Phase shall be applied after the phase's expiration of the aggregate Required Time Period in Restated Exhibit A: Attachment 1 for (a) Document Preparation and Submittal, (b) Cost Estimate Reconciliation, and (c) Document Correction and Re-Submittal.

³ Liquidated damages for the 100% Construction Documents Phase shall be applied after the phase's expiration of the aggregate Required Time Period in Restated Exhibit A: Attachment 1 for (a) Document Preparation and Submittal and (b) Document Correction and Re-Submittal.

⁴ Liquidated damages for the Bidding and Award Phase shall apply for each calendar day that Consultant fails to address and respond to requests of the County or Contractor beyond the time periods established in Exhibit A, Section 3.08.

ARTICLE 5. COMPENSATION AND METHOD OF PAYMENT

5.1. Amount and Method of Compensation. The amounts set forth in this Article 5 are the total compensation payable to Consultant for Services and constitute a limitation upon County's obligation to compensate Consultant for all Services, but do not constitute a limitation of any sort upon Consultant's obligation to perform all Services. Compensation for Services is subject to the following limitations, based upon the applicable method of compensation expressly stated in Restated Exhibit A:

5.1.1. Maximum Amount Not-To-Exceed Compensation. For Services expressly identified in Restated Exhibit A as payable on a "Maximum Amount Not-To-Exceed" basis, compensation to Consultant is based upon the Salary Costs as defined in Section 5.2, up to a maximum not-to-exceed amount of \$0.00.

5.1.2. Lump Sum Compensation. For Services associated with the Second Site expressly identified in Restated Exhibit A as payable on a "Lump Sum" basis, compensation to Consultant shall not exceed a total lump sum of \$14,720,250.00. Consultant acknowledges and agrees that \$5,535,992 in Lump Sum Compensation has been paid to Consultant for Services associated with the First Site. The Project's total Lump Sum compensation for both the First Site and Second Site to the Consultant is \$20,256,242.

5.1.3. Optional Services. County may procure Optional Services associated with the Second Site pursuant to Article 6 up to a maximum amount of \$4,265,419.58. Consultant acknowledges and agrees that an additional \$234,580.42 of Optional Services has been paid by the County to Consultant for prior work identified in Optional Services № 1-3 to the Original Agreement (and to the extent set forth in the First and Second Amendments) for the First Site and alternative site design and investigation. Unused Optional Services amounts shall be retained by County.

5.1.4. Reimbursable Expenses. County will reimburse Consultant for authorized Reimbursable Expenses as defined in Section 5.3 up to a maximum amount of \$394,687.11 associated with the Second Site. Consultant acknowledges and agrees that \$5,312.89 of Reimbursable Expenses associated with the First Site has been paid by the County to Consultant for prior work identified in the Exhibit A to the Original Agreement (and to the extent set forth in the First and Second Amendments). Any unused amounts shall be retained by County.

5.1.5. Subconsultant Fees. Consultant shall bill County for Subconsultant fees using the employee categories for Salary Costs on Restated Exhibit B and Reimbursable Expenses defined in Section 5.3. Any increases in Salary Costs contained in Restated Exhibit B shall be effective for Services performed after execution by all Parties of this Agreement. To the extent Consultant invoices the County for Subconsultant Fees for Services performed prior to all Parties executing this Agreement, such Subconsultant Fees shall be billed at the rates established in the Original Agreement, as amended by the First Amendment.

Consultant shall bill Subconsultant fees with no mark-up and within any applicable maximum amount.

5.1.6. Phased Amounts. Payments for Services associated with the Second Site shall be paid out pursuant to the Project phasing specified in Restated Exhibit A and shall not exceed the amount set forth below for the applicable phase. The invoiced amount for each phase is subject to retainage as set forth in Section 5.5.

Project Phase	Fee %	Lump Sum Fee Phase Amount
Program Validation Phase	<u>5.90%</u>	<u>\$ 869,867</u>
Schematic Design Phase	<u>11.65%</u>	<u>\$ 1,716,012.54</u>
Design Development Phase	<u>23.10%</u>	<u>\$ 3,400,904.37</u>
50% Construction Documents Phase	<u>15.40%</u>	<u>\$ 2,267,417.75</u>
75% Construction Documents Phase	<u>10.20%</u>	<u>\$ 1,502,380.84</u>
100% Construction Documents Phase	<u>10.17%</u>	<u>\$ 1,498,099.61</u>
Bidding and Award Phase	<u>2.83%</u>	<u>\$ 416,851.81</u>
Construction Administration Phase	<u>20.03%</u>	<u>\$ 2,948,993.93</u>
Warranty Administration and Post-Occupancy Services	<u>0.67%</u>	<u>\$99,722.00</u>
Total Services Fee	100%	\$14,720,250.00

The Contract Administrator may, in their discretion, by written notice to Consultant, reallocate funding from any phase shown above to any other phase, provided that the Total Services Fee is not increased.

5.1.7. Consultant acknowledges and agrees that there are no funds currently due or to become due from the County to Consultant relating to Services provided pursuant to the Original Agreement, First Amendment, or Second Amendment, and that there are no outstanding claims pending or to be brought by Consultant against the County for Services performed prior to the date Consultant executed this Agreement, except as expressly stated in this sub-article. Consultant is currently performing work and invoicing the County pursuant to Optional Services Work Authorization No. 03, and accordingly, Optional Services Work Authorization No. 03 is excluded from this sub-article.

5.2. Salary Costs. The term "Salary Costs" as used herein shall mean the hourly rate actually paid to all personnel engaged directly on the Project, as adjusted by an overall multiplier that consists of the following: 1) a fringe benefits factor; 2) an overhead factor; and 3) a final operating margin. Said Salary Costs are to be used only for time directly attributable to the Project. The fringe benefit and overhead rates shall be Consultant's most recent and actual rates determined in accordance with Federal Acquisition Regulation ("FAR") guidelines and audited by an independent Certified Public Accountant. For the purposes of this Agreement, the rates must be

audited for fiscal periods of Consultant within eighteen (18) months preceding the execution date of this Agreement. These rates shall remain in effect for the duration of this Agreement except as provided for in the Agreement.

5.2.1. Consultant shall require all of its Subconsultants to comply with the requirements of Section 5.2.

5.2.2. Salary Costs shown in Restated Exhibit B are the maximum billing rates for each Consultant and Subconsultant employee category, which are provisional, subject to audit of actual costs, and, if the audit discloses that the actual costs are less than the costs set forth on Restated Exhibit B for Consultant or any Subconsultant, Consultant will promptly reimburse County based upon the actual costs determined by the audit. County may withhold the amount Consultant is required to reimburse County from any payment due Consultant under this Agreement.

5.2.3. Unless otherwise noted, the Salary Costs stated above are based upon Consultant's "home office" rates. Should it become appropriate during the course of this Agreement that a "field office" rate be applied, Consultant must submit a supplemental Restated Exhibit B reflective of such rates to the Contract Administrator for review and, subject to Contract Administrator's written approval, may invoice County accordingly.

5.2.4. The total hours payable by County to Consultant for any "nonexempt" personnel (i.e., personnel subject to overtime pay) shall not exceed forty (40) hours per employee in any week. If the Services require Consultant's or Subconsultant's nonexempt personnel to work in excess of forty (40) hours per week, any additional hours for nonexempt personnel must be authorized in advance, in writing, by the Contract Administrator. If approved, Consultant shall invoice Salary Costs for additional hours provided by nonexempt employees at no more than one and one-half of the employee's hourly rate and in a manner consistent with Consultant's or Subconsultant's applicable certified FAR audit and all other provisions of Section 5.2. If a "Safe Harbor" rate is elected for use by Consultant or Subconsultant, then the additional hours for both "exempt" (i.e., not subject to overtime pay) and nonexempt employees are payable at no more than the employee's regular rate.

5.2.5. Consultant and any of its Subconsultants may alternatively use a "Safe Harbor" combined fringe benefit and overhead rate of 110% in lieu of providing fringe benefit and overhead cost factors certified by an independent Certified Public Accountant in accordance with the FAR guidelines. The Safe Harbor rate, once elected, shall remain in place for the duration of this Agreement, and be applicable for use as "home" and "field" fringe benefit and overhead rates, if applicable, and shall not be subject to audit under this Agreement. All other provisions of Section 5.2 remain in place.

5.2.6. Indemnification Related to Paycheck Protection Program Forgiveness. If the State of Florida, federal government, or any other authority seeks recovery from County, whether through offset or any other means, of Paycheck Protection Program (“PPP”) funds received by Consultant or any Subconsultant under the Coronavirus Aid, Relief, and Economic Security (“CARES”) Act and/or any forgiveness of such funds pursuant to Section 1106 of the CARES Act, Consultant must indemnify and hold harmless County and its employees and agents from any and all claims, causes of action, losses, fines, penalties, damages, judgments, and liabilities of any kind, including attorneys’ fees, litigation expenses, and court costs, arising from or relating thereto.

5.3. Reimbursable Expenses. Reimbursement of any travel costs, travel-related expenses, or other direct non-salary expenses directly attributable to this Project shall be limited to those permitted under Section 112.061, Florida Statutes. County shall not be liable for any such expenses that have not been approved in writing in advance by the Contract Administrator. Reimbursable Expenses of Subconsultants must also comply with the requirements of this section.

5.4. Method of Billing.

5.4.1. For Maximum Amount Not-To-Exceed Compensation. Consultant shall submit invoices to the Contract Administrator in a timely manner, no more frequently than on a monthly basis, for all Salary Costs and Reimbursable Expenses attributable to the Project. These invoices shall identify the specific project number, the nature of the Services performed, the total hours performed, and the employee category of the individuals performing same. Invoices must itemize and summarize Reimbursable Expenses by category and identify the personnel incurring the expense and the nature of the Services with which such expense was associated. Where prior written approval by Contract Administrator is required for Reimbursable Expenses, a copy of said approval shall accompany the invoice for such reimbursable. Invoices must also indicate the cumulative amount of CBE participation to date. The statement must show a summary of Salary Costs and Reimbursable Expenses with accrual of the total and credits for portions paid previously. External Reimbursable Expenses and Subconsultant fees must be documented by copies of paid invoices or receipts that describe the amount and nature of the expenses and contain a project number or other identifier that clearly indicates the expense is identifiable to the Project. Subsequent addition of the identifier to the invoice or receipt by Consultant is not acceptable except for meals and travel expenses. Internal expenses must be documented by appropriate Consultant’s cost accounting forms with a summary of charges by category. When requested, Consultant shall provide backup for past and current invoices that records hours and Salary Costs by employee category, Reimbursable Expenses by category, and Subconsultant fees on a task basis, so that total hours and costs by task may be determined.

5.4.2. For Lump Sum Compensation. Consultant shall submit invoices to the Contract Administrator in a timely manner, no more frequently than on a monthly basis. These invoices shall identify the specific project number, the nature of the Services performed, the phase of work, the estimated percent of Services accomplished on each phase, retainage for current invoice by phase, and retainage held to date. Invoices for each phase shall not exceed the amounts allocated to said phase. Invoices must also indicate the cumulative amount of CBE participation to date. The statement must show a summary of fees with accrual of the total and credits for portions paid previously. When requested, Consultant shall provide backup for past and current invoices that record hours, salary costs, and expense costs on a task basis, so that total hours and costs by task may be determined.

5.5. Method of Payment.

5.5.1. County shall pay Consultant within thirty (30) days after receipt of Consultant's proper invoice, as defined by County's Prompt Payment Ordinance, minus any applicable retainage or other deductions permitted by this Agreement.

5.5.2. Unless otherwise provided in this section, County shall have the right to retain an amount equal to ten percent (10%) of each invoice ("retainage") until satisfactory completion of the applicable phase. No amount shall be withheld from payments for Reimbursable Expenses or for Services performed during the construction phase, if applicable.

5.5.3. Upon Consultant's completion of each phase to the satisfaction of the Contract Administrator, County shall remit to Consultant any amounts withheld as retainage for that phase. Final payment for the Project must be approved by the Purchasing Director.

5.5.4. Payment will be made to Consultant at the address for notices in Section 11.10, unless otherwise requested by Consultant in writing and approved by the Contract Administrator in writing.

5.6. Fiscal Year. The continuation of this Agreement beyond the end of any County fiscal year (October 1 through September 30) is subject to both the appropriation and the availability of funds, pursuant to Chapter 129 and, if applicable, Chapter 212, Florida Statutes.

5.7. Transportation Surtax Funding. Any portion of this Project that is budgeted by County to be funded from proceeds of the transportation surtax levied pursuant to Section 212.055(1), Florida Statutes, shall be paid exclusively from the transportation surtax. If such budgeted transportation surtax proceeds are not available or appropriated, County shall not have any obligation to utilize ad valorem funds or any other revenue source to pay for that portion of the Project, and County may terminate this Agreement pursuant to Article 8 below. Funding for transportation surtax-funded work shall be utilized only for the purposes permitted under Section 212.055(1)(d), Florida Statutes.

5.8. Payments to Subconsultants. Consultant must pay Subconsultants and suppliers within fifteen (15) days after receipt of payment from County for such subcontracted work or supplies. If Consultant withholds an amount as retainage from a Subconsultant or supplier, Consultant shall release such retainage and pay same within fifteen (15) days after receipt of payment of retained amounts from County. The Contract Administrator may, at its option, increase allowable retainage or withhold progress payments unless and until Consultant demonstrates timely payments of sums due to all Subconsultants and suppliers. Consultant shall include requirements substantially similar to those set forth in this section in its contracts with Subconsultants and suppliers.

5.9. Withholding by County; Overcharges. Notwithstanding any provision of this Agreement to the contrary, County may withhold payment, in whole or in part, (a) in accordance with Applicable Law, or (b) to the extent necessary to protect itself from loss on account of (i) inadequate or defective work that has not been remedied or resolved in a manner satisfactory to the Contract Administrator, or (ii) Consultant's failure to comply with any provision of this Agreement. The amount withheld shall not be subject to payment of interest by County. In the event of an overcharge of any nature by Consultant in excess of five percent (5%) of the total amount billed in the invoice where the overcharge occurred, Consultant must refund the overbilled amount and pay liquidated damages in the amount of fifteen percent (15%) of the overbilled amount within thirty (30) days after demand by County as just compensation for damages incurred by County due to the overbilling, including, but not limited to, County's administrative costs and loss of potential investment returns (including interest).

5.10. Foreign Entity Tax Withholding. Amounts due to certain foreign persons or entities may be subject to backup withholding taxes under federal law. If Consultant is a foreign person or entity that is required to complete an Internal Revenue Service ("IRS") form to evidence exemption from backup withholding (e.g., Form W-8ECI) ("Foreign Tax Form"), Consultant shall provide County a copy of Consultant's current Foreign Tax Form prior to issuance of any invoice or payment under this Agreement. If Consultant fails to timely provide a completed, current Foreign Tax Form, County will withhold all backup withholding taxes from the amounts due Consultant, remit such sums to the IRS, and pay Consultant only the remainder. County makes no representation regarding the tax treatment of amounts due to Consultant, and Consultant releases and holds County harmless from any claims or damages in any way relating to or arising from any tax withholding by County pursuant to this section.

ARTICLE 6. OPTIONAL AND ADDITIONAL SERVICES; CHANGES IN SERVICES

6.1. County or Consultant may request changes that would increase, decrease, or otherwise modify the Services to be provided under this Agreement. Unless otherwise expressly permitted herein, such changes must be made in accordance with the provisions of the Broward County Procurement Code and must be contained in a written amendment.

6.2. If Services under this Agreement are identified as optional ("Optional Services"), County may select the type, amount, and timing of such services pursuant to a work authorization ("Work

Authorization”) executed by Consultant and County pursuant to Section 6.3. No such selection, when combined with those Services required under this Agreement, may result in a payment obligation exceeding the applicable maximum amount stated in Article 5. A Work Authorization for Optional Services must specify the scope of services and method of compensation applicable to that Work Authorization and the required time for completion of the Optional Services.

6.3. Notwithstanding anything to the contrary in this Agreement, Work Authorizations (and amendments thereto) for Optional Services shall be executed on behalf of County as follows: (a) the Contract Administrator may execute Work Authorizations for which the total aggregate cost to County is less than \$50,000; (b) the Purchasing Director may execute Work Authorizations for which the total aggregate cost to County is within the Purchasing Director’s delegated authority; and (c) any Work Authorization above the Purchasing Director’s delegated authority requires express approval by the Board. Consultant shall not commence work on any Work Authorization until receipt of a purchase order and a Notice to Proceed issued by the Contract Administrator.

6.4. If a dispute between the Contract Administrator and Consultant arises over whether any work requested by County is within the scope of contracted Services and such dispute cannot be resolved by the Contract Administrator and Consultant, such dispute shall be promptly presented to the County Administrator or the County Administrator’s designee for resolution, whose decision shall be in writing and shall be final and binding on the Parties. During the pendency of any dispute, Consultant shall promptly perform the disputed work.

ARTICLE 7. REPRESENTATIONS AND WARRANTIES

7.1. Representation of Authority. Consultant represents and warrants that this Agreement constitutes the legal, valid, binding, and enforceable obligation of Consultant, and that neither the execution nor performance of this Agreement constitutes a breach of any agreement that Consultant has with any third party or violates Applicable Law. Consultant further represents and warrants that execution of this Agreement is within Consultant’s legal powers, and each individual executing this Agreement on behalf of Consultant is duly authorized by all necessary and appropriate action to do so on behalf of Consultant and does so with full legal authority.

7.2. Claims Against Consultant. Consultant represents and warrants that there is no action or proceeding, at law or in equity, before any court, mediator, arbitrator, governmental or other board or official, pending or, to the knowledge of Consultant, threatened against or affecting Consultant, the outcome of which may (a) affect the validity or enforceability of this Agreement, (b) materially and adversely affect the authority or ability of Consultant to perform its obligations under this Agreement, or (c) have a material and adverse effect on the consolidated financial condition or results of operations of Consultant or on the ability of Consultant to conduct its business as presently conducted or as proposed or contemplated to be conducted.

7.3. Solicitation Representations. Consultant represents and warrants that all statements and representations made in Consultant’s proposal, bid, or other supporting documents submitted

to County in connection with the solicitation, negotiation, or award of this Agreement, including during the procurement or evaluation process, were true and correct when made and are true and correct as of the date Consultant executes this Agreement, unless otherwise expressly disclosed in writing by Consultant.

7.4. Contingency Fee. Consultant represents and warrants that it has not employed or retained any person or entity, other than a bona fide employee working solely for Consultant, to solicit or secure this Agreement, and that it has not paid or agreed to pay any person or entity, other than a bona fide employee working solely for Consultant, any fee, commission, percentage, gift, or other consideration contingent upon or resulting from the award or making of this Agreement. If this Agreement is subject to Section 287.055, Florida Statutes, the Parties agree and stipulate that the statutory language stated in Section 287.055(6)(a) is deemed included and fully incorporated herein.

7.5. Truth-In-Negotiation Representation. Consultant's compensation under this Agreement is based upon its representations to County, and Consultant certifies that the wage rates, factual unit costs, and other information supplied to substantiate Consultant's compensation, including, without limitation, in the negotiation of this Agreement, are accurate, complete, and current as of the date Consultant executes this Agreement. Consultant's compensation may be reduced by County, in its sole discretion, to correct any inaccurate, incomplete, or noncurrent information provided to County as the basis for Consultant's compensation in this Agreement.

7.6. Public Entity Crime Act. Consultant represents that it is familiar with the requirements and prohibitions under the Public Entity Crime Act, Section 287.133, Florida Statutes, and represents that its entry into this Agreement will not violate that statute. Consultant further represents that there has been no determination that it committed a "public entity crime" as defined by Section 287.133, Florida Statutes, and that it has not been formally charged with committing an act defined as a "public entity crime" regardless of the amount of money involved or whether Consultant has been placed on the convicted vendor list.

7.7. Discriminatory Vendor and Scrutinized Companies Lists; Countries of Concern. Consultant represents that it has not been placed on the "discriminatory vendor list" as provided in Section 287.134, Florida Statutes, and that it is not a "scrutinized company" pursuant to Sections 215.473 or 215.4725, Florida Statutes. Consultant represents and certifies that it is not, and for the duration of the Agreement will not be, ineligible to contract with County on any of the grounds stated in Section 287.135, Florida Statutes. Consultant represents that it is, and for the duration of this Agreement will remain, in compliance with Section 286.101, Florida Statutes.

7.8. Verification of Employment Eligibility. Consultant represents that Consultant and each Subconsultant have registered with and use the E-Verify system maintained by the United States Department of Homeland Security to verify the work authorization status of all newly hired employees in compliance with the requirements of Section 448.095, Florida Statutes, and that entry into this Agreement will not violate that statute. If Consultant violates this section, County

may immediately terminate this Agreement for cause and Consultant shall be liable for all costs incurred by County due to the termination.

7.9. Warranty of Performance. Consultant represents and warrants that it possesses the knowledge, skill, experience, and financial capability required to perform and provide all required and optional Services under this Agreement, and that each person and entity that will provide Services is duly qualified to perform Services by all appropriate governmental authorities, where required, and is sufficiently experienced and skilled in the area(s) for which such person or entity will render Services. Consultant represents and warrants that the Services shall be performed in a skillful and respectful manner, and that the quality of all Services shall equal or exceed prevailing industry standards for the provision of such services.

7.10. Prohibited Telecommunications. Consultant represents and certifies that Consultant and all Subconsultants do not use, and for the duration of this Agreement will not provide or use, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system, as such terms are used in 48 C.F.R. §§ 52.204-24 through 52.204-26.

7.11. Criminal History Screening Practices. If this Agreement is subject to the requirements of Section 26-125(d) of the Code, Consultant represents and certifies that Consultant will comply with Section 26-125(d) of the Code for the duration of the Agreement.

7.12. Entities of Foreign Concern. The provisions of this section apply only if this Agreement provides access to an individual's personal identifying information. By execution of this Agreement, the undersigned authorized representative of Consultant hereby attests under penalty of perjury as follows: Consultant is not owned by the government of a foreign country of concern, is not organized under the laws of nor has its principal place of business in a foreign country of concern, and the government of a foreign country of concern does not have a controlling interest in Consultant; the undersigned authorized representative of Consultant declares that they have read the foregoing statement and that the facts stated in it are true. Terms used in this section that are not otherwise defined in this Agreement shall have the meanings ascribed to such terms in Section 287.138, Florida Statutes.

7.13. Domestic Partnership Requirement. Unless this Agreement is exempt from the provisions of the "Broward County Domestic Partnership Act," Section 16½-157 of the Code ("Act"), Consultant certifies and represents that it shall at all times comply with the provisions of the Act. The contract language referenced in the Act is deemed incorporated in this Agreement as though fully set forth in this section.

7.14. Breach of Representations. Consultant acknowledges that County is materially relying on the representations, warranties, and certifications of Consultant stated in this article, and County shall be entitled to exercise any or all of the following remedies if any such representation, warranty, or certification is untrue: (a) recovery of damages incurred; (b) termination of this

Agreement without any further liability to Consultant; (c) set off from any amounts due Consultant the full amount of any damage incurred; and (d) debarment of Consultant.

ARTICLE 8. TERMINATION

8.1. Termination for Cause. This Agreement or any Work Authorization issued under this Agreement may be terminated for cause by the aggrieved Party if the Party in breach has not corrected the breach within ten (10) days after receipt of written notice from the aggrieved Party identifying the breach. This Agreement may be terminated for cause by County for reasons including, but not limited to, any of the following:

8.1.1. Consultant's (a) failure to suitably or continuously perform the Services in a manner calculated to meet or accomplish the objectives in this Agreement or Work Authorization, (b) suspension or debarment by a state or federal governmental entity or by a local governmental entity with a population in excess of one million people, or (c) repeated submission (whether negligent or intentional) for payment of false or incorrect bills or invoices;

8.1.2. By the County Administrator or the Director of Office of Economic and Small Business Development ("OESBD") for fraud, misrepresentation, or material misstatement by Consultant in the award or performance of this Agreement or that violates any applicable requirement of Section 1-81 of the Code; or

8.1.3. By the Director of OESBD upon the disqualification of Consultant as a CBE or SBE if Consultant's status as a CBE or SBE was a factor in the award of this Agreement, or upon the disqualification of one or more of Consultant's CBE or SBE participants by the Director of OESBD if any such participant's status as a CBE or SBE firm was a factor in the award of this Agreement.

Unless otherwise stated in this Agreement, if this Agreement was approved by Board action, termination for cause by County must be by action of the Board or the County Administrator; in any other instance, termination for cause may be by the County Administrator, the County representative expressly authorized under this Agreement, or the County representative (including any successor) who executed this Agreement on behalf of County. If County erroneously, improperly, or unjustifiably terminates this Agreement or any Work Authorization for cause, such termination shall be deemed a termination for convenience pursuant to Section 8.2 effective thirty (30) days after such notice was provided and Consultant shall be eligible for the compensation provided in Section 8.2 as its sole remedy.

8.2. Termination for Convenience; Other Termination. This Agreement or any Work Authorization may also be terminated for convenience by the Board with at least thirty (30) days advance written notice to Consultant. Consultant acknowledges that it has received good, valuable, and sufficient consideration for County's right to terminate this Agreement or any Work Authorization for convenience including in the form of County's obligation to provide advance

written notice to Consultant of such termination in accordance with this section. This Agreement or any Work Authorization may also be terminated by the County Administrator upon such notice as the County Administrator deems appropriate under the circumstances if the County Administrator determines that termination is necessary to protect the public health, safety, or welfare. If this Agreement or any Work Authorization issued under this Agreement is terminated by County pursuant to this section, Consultant shall be paid for any Services properly performed through the termination date specified in the written notice of termination, subject to any right of County to retain any sums otherwise due and payable, and County shall have no further obligation to pay Consultant for Services under this Agreement.

8.3. Notice of termination shall be provided in accordance with the “Notices” section of this Agreement except that notice of termination by the County Administrator to protect the public health, safety, or welfare may be oral notice that shall be promptly confirmed in writing.

8.4. In addition to any termination rights stated in this Agreement, County shall be entitled to seek any and all available contractual or other remedies available at law or in equity including recovery of costs associated with Consultant’s failure to comply with any term(s) of this Agreement.

ARTICLE 9. INSURANCE

9.1. For the duration of the Agreement, Consultant shall, at its sole expense, maintain the minimum insurance coverages stated in Restated Exhibit E in accordance with the terms and conditions of this article. Consultant shall maintain insurance coverage against claims relating to any act or omission by Consultant, its agents, representatives, employees, or Subconsultants in connection with this Agreement. County reserves the right at any time to review and adjust the limits and types of coverage required under this article.

9.2. Consultant shall ensure that “Broward County” is listed and endorsed as an additional insured as stated in Restated Exhibit E on all policies required under this article.

9.3. On or before the date this Agreement is fully executed or at least fifteen (15) days prior to commencement of Services, as may be requested by County, Consultant shall provide County with a copy of all Certificates of Insurance or other documentation sufficient to demonstrate the insurance coverage required in this article. If and to the extent requested by County, Consultant shall provide complete, certified copies of all required insurance policies and all required endorsements within thirty (30) days after County’s request.

9.4. Consultant shall ensure that all insurance coverages required by this article remain in full force and effect without any lapse in coverage for the duration of this Agreement and until all performance required of Consultant has been completed, as determined by Contract Administrator. Consultant or its insurer shall provide notice to County of any cancellation or modification of any required policy at least thirty (30) days prior to the effective date of cancellation or modification, and at least ten (10) days prior to the effective date of any

cancellation due to nonpayment, and shall concurrently provide County with a copy of its updated Certificates of Insurance evidencing continuation of the required coverage(s).

9.5. All required insurance policies must be placed with insurers or surplus line carriers authorized to conduct business in the State of Florida with an A.M. Best rating of A- or better and a financial size category class VII or greater, unless otherwise approved by County's Risk Management Division in writing.

9.6. If Consultant maintains broader coverage or higher limits than the insurance requirements stated in Restated Exhibit E, County shall be entitled to all such broader coverages and higher limits. All required insurance coverages shall provide primary coverage and not require contribution from any County insurance, self-insurance or otherwise, which shall be in excess of and shall not contribute to the required insurance provided by Consultant.

9.7. Consultant shall declare in writing any self-insured retentions or deductibles over the limit(s) prescribed in Restated Exhibit E and submit to County for approval at least fifteen (15) days prior to the date this Agreement is fully executed or commencement of Services. Consultant shall be solely responsible for and shall pay any deductible or self-insured retention applicable to any claim against County. County may, at any time, require Consultant to purchase coverage with a lower retention or provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention. Any deductible or self-insured retention may be satisfied by either the named insured or County, if so elected by County, and Consultant shall obtain same in endorsements to the required policies.

9.8. Unless prohibited by the applicable policy, Consultant waives any right to subrogation that any of Consultant's insurers may acquire against County and shall obtain same in an endorsement of Consultant's insurance policies.

9.9. Consultant shall require that each Subconsultant maintains insurance coverage that adequately covers the Services provided by that Subconsultant on substantially the same insurance terms and conditions required of Consultant under this article. Consultant shall ensure that all such Subconsultants comply with these requirements and that "Broward County" is named as an additional insured under the Subconsultants' applicable insurance policies. Consultant shall not permit any Subconsultant to provide Services unless and until all applicable requirements of this article are satisfied.

9.10. If Consultant or any Subconsultant fails to maintain the insurance required by this Agreement, County may pay any costs of premiums necessary to maintain the required coverage and deduct such costs from any payment otherwise due to Consultant. If requested by County, Consultant shall provide, within one (1) business day, evidence of each Subconsultant's compliance with this article.

9.11. If any of the policies required under this article provide claims-made coverage: (1) any retroactive date must be prior to the date this Agreement is fully executed; (2) the required

coverage must be maintained after termination or expiration of the Agreement for at least the duration stated in Restated Exhibit E; and (3) if coverage is canceled or nonrenewed and is not replaced with another claims-made policy form with a retroactive date prior to the date this Agreement is fully executed, Consultant must obtain and maintain “extended reporting” coverage that applies after termination or expiration of the Agreement for at least the duration stated in Restated Exhibit E.

ARTICLE 10. EQUAL EMPLOYMENT OPPORTUNITY AND CBE/SBE COMPLIANCE

10.1. Consultant and Subconsultants shall not discriminate on the basis of race, color, sex, religion, national origin, disability, age, marital status, political affiliation, sexual orientation, pregnancy, or gender identity and expression in the performance of this Agreement. Consultant shall include the foregoing or similar language in its contracts with any Subconsultants, except that any project assisted by U.S. Department of Transportation funds shall comply with the nondiscrimination requirements in 49 C.F.R. Parts 23 and 26.

10.2. By January 1 of each year, Consultant must submit, and cause each of its Subconsultants to submit, an Ownership Disclosure Form (or such other form or information designated by County), available at <https://www.broward.org/econdev/Pages/forms.aspx>, identifying the ownership of the entity and indicating whether the entity is majority-owned by persons fitting specified classifications.

10.3. Consultant shall comply with all applicable requirements of Section 1-81 of the Code in the award and administration of this Agreement. Failure by Consultant to carry out any of the requirements of this article shall constitute a material breach of this Agreement, which shall permit County to terminate this Agreement or exercise any other remedy provided under this Agreement or Applicable Law, all such remedies being cumulative.

10.4. Consultant must meet or exceed the required CBE goal for the Agreement by utilizing the CBE firms listed in Restated Exhibit D (or a CBE firm substituted for a listed firm, if permitted) for Twenty-One percent (21%) of total Services (the “Commitment”) for the scope of work and the percentage of work amounts identified on each Letter of Intent. Promptly upon execution of this Agreement by County, Consultant shall enter into formal contracts with the CBE firms listed in Restated Exhibit D and, upon request, shall provide copies of the contracts to the Contract Administrator and OESBD.

10.5. Each CBE firm utilized by Consultant to meet the CBE goal must be certified by OESBD. Consultant shall inform County immediately when a CBE firm is not able to perform or if Consultant believes the CBE firm should be replaced for any other reason, so that OESBD may review and verify the good faith efforts of Consultant to substitute the CBE firm with another CBE firm, as applicable. Whenever a CBE firm is terminated for any reason, Consultant shall provide written notice to OESBD and, upon written approval of the Director of OESBD, shall substitute another CBE firm in order to meet the CBE goal, unless otherwise provided in this Agreement or agreed in writing by the Parties. Such substitution shall not be required if the termination results

from modification of the Services and no CBE firm is available to perform the modified Services; in which event Consultant shall notify County, and OESBD may adjust the CBE goal by written notice to Consultant. Consultant shall not terminate a CBE firm for convenience without County's prior written consent, which consent shall not be unreasonably withheld.

10.6. The Parties stipulate that if Consultant fails to meet the Commitment, the damages to County arising from such failure are not readily ascertainable at the time of contracting. If Consultant fails to meet the Commitment and County determines, in the sole discretion of the OESBD Program Director, that Consultant failed to make Good Faith Efforts (as defined in Section 1-81 of the Code) to meet the Commitment, Consultant shall pay County liquidated damages in an amount equal to fifty percent (50%) of the actual dollar amount by which Consultant failed to achieve the Commitment, up to a maximum amount of ten percent (10%) of the total contract amount, excluding costs and reimbursable expenses. An example of this calculation is stated in Section 1-81.7 of the Code. As elected by County, such liquidated damages amount shall be either credited against any amounts due from County, or must be paid to County within thirty (30) days after written demand. These liquidated damages shall be County's sole contractual remedy for Consultant's breach of the Commitment, but shall not affect the availability of administrative remedies under Section 1-81. Consultant acknowledges and agrees that the liquidated damages provided in this section are proportionate to an amount that might reasonably be expected to flow from a breach of the Commitment and are not a penalty. Any failure to meet the Commitment attributable solely to force majeure, changes to the scope of work by County, or inability to substitute a CBE Subconsultant where the OESBD Program Director has determined that such inability is due to no fault of Consultant, shall not be deemed a failure by Consultant to meet the Commitment.

10.7. Consultant acknowledges that the Board, acting through OESBD, may make minor administrative modifications to Section 1-81 of the Code, which shall become applicable to this Agreement if the administrative modifications are not unreasonable. Written notice of any such modification shall be provided to Consultant and shall include a deadline for Consultant to notify County in writing if Consultant concludes that the modification exceeds the authority under this section. Failure of Consultant to timely notify County of its conclusion that the modification exceeds such authority shall be deemed acceptance of the modification by Consultant.

10.8. County may modify the required participation of CBE firms in connection with any amendment, extension, modification, change order, or Work Authorization to this Agreement that, by itself or aggregated with previous amendments, extensions, modifications, change orders, or Work Authorizations, increases the initial Agreement price by ten percent (10%) or more. Consultant shall make a good faith effort to include CBE firms in work resulting from any such amendment, extension, modification, change order, or Work Authorization, and shall report such efforts, along with evidence thereof, to OESBD.

10.9. Consultant shall provide monthly utilization reports, using the form available at <https://www.broward.org/EconDev/SmallBusiness/Pages/Compliance.aspx>, to the Contract Administrator, to OESBD at SBCOMP@broward.org, and to the Small Business Specialist

designated by the Contract Administrator. In addition, Consultant shall allow County to engage in onsite reviews to monitor Consultant's progress in achieving and maintaining the Commitment. The Contract Administrator in conjunction with OESBD shall perform such review and monitoring, unless otherwise determined by the County Administrator.

10.10. The presence of a "pay when paid" provision in a Consultant's contract with a CBE firm shall not preclude County or its representatives from inquiring into claims of nonpayment or exercising any right stated in Section 5.8.

ARTICLE 11. MISCELLANEOUS

11.1. Contract Administrator Authority. The Contract Administrator is authorized to coordinate and communicate with Consultant to manage and supervise the performance of this Agreement. Consultant acknowledges that the Contract Administrator has no authority to make changes that would increase, decrease, or otherwise materially modify the Services except as expressly set forth in this Agreement or, to the extent applicable, in the Broward County Procurement Code. Unless expressly stated otherwise in this Agreement or otherwise set forth in the Code or the Broward County Administrative Code, the Contract Administrator or designee may exercise ministerial authority in connection with the day-to-day management of this Agreement provided that such instructions and determinations do not change the Services. The Contract Administrator may also approve in writing minor modifications to the Services that do not increase the total cost to County or waive any rights of County. Consultant shall notify Contract Administrator in writing of Consultant's representative(s) to whom matters involving the Project shall be addressed.

11.2. Rights in Documents and Work. Except as provided in the section of this Agreement titled "Reuse of Materials, Deliverables, and other Work Product," any and all documents, reports, studies, photographs, surveys, drawings, maps, models, photographs, specifications, materials, data, or other work created by Consultant in connection with performing Services, in their native file format, whether finished or unfinished ("Documents and Work"), shall be owned by County, and Consultant hereby transfers to County all right, title, and interest, including any copyright or other intellectual property rights, in or to the Documents and Work. Upon expiration or termination of this Agreement, the Documents and Work shall become the property of County and shall be delivered by Consultant to the Contract Administrator within fifteen (15) days after expiration or termination. Any compensation due to Consultant may be withheld until all Documents and Work are received as provided in this Agreement. Consultant shall ensure that the requirements of this section are included in all Consultant's agreements with Subconsultants.

11.3. Public Records. Notwithstanding any other provision in this Agreement, any action taken by County in compliance with, or in a good faith attempt to comply with, the requirements of Chapter 119, Florida Statutes, shall not constitute a breach of this Agreement. If Consultant is acting on behalf of County as stated in Section 119.0701, Florida Statutes, Consultant shall:

11.3.1. Keep and maintain public records required by County to perform the services under this Agreement;

11.3.2. Upon request from County, provide County with a copy of the requested records or allow the records to be inspected or copied within a reasonable time and at a cost that does not exceed that provided in Chapter 119, Florida Statutes, or as otherwise provided by Applicable Law;

11.3.3. Ensure that public records that are exempt or confidential and exempt from public record requirements are not disclosed except as authorized by Applicable Law for the duration of this Agreement and after completion or termination of this Agreement if the records are not transferred to County; and

11.3.4. Upon completion or termination of this Agreement, transfer to County, at no cost, all public records in possession of Consultant or keep and maintain public records required by County to perform the services. If Consultant transfers the records to County, Consultant shall destroy any duplicate public records that are exempt or confidential and exempt. If Consultant keeps and maintains the public records, Consultant shall meet all requirements of Applicable Law for retaining public records. All records stored electronically must be provided to County upon request in a format that is compatible with the information technology systems of County.

If Consultant receives a request for public records regarding this Agreement or the Services, Consultant must immediately notify the Contract Administrator in writing and provide all requested records to County to enable County to timely respond to the public records request. County will respond to all such public records requests.

Consultant must separately submit and conspicuously label as “RESTRICTED MATERIAL – DO NOT PRODUCE” any material (a) that Consultant contends constitutes or contains its trade secrets under Chapter 688, Florida Statutes, or (b) for which Consultant asserts a right to withhold from public disclosure as confidential or otherwise exempt from production under Florida public records laws (including Chapter 119, Florida Statutes) (collectively, “Restricted Material”). In addition, Consultant must, simultaneous with the submission of any Restricted Material, provide a sworn declaration or affidavit in a form acceptable to County from a person with personal knowledge attesting that the Restricted Material constitutes trade secrets or is otherwise exempt or confidential under Florida public records laws, including citing the applicable Florida statute and specifying the factual basis for each such claim. Upon request by County, Consultant must promptly identify the specific applicable statutory section that protects any particular document. If a third party submits a request to County for records designated by Consultant as Restricted Material, County shall refrain from disclosing such material unless otherwise ordered by a court of competent jurisdiction, authorized in writing by Consultant, or the claimed exemption is waived. Any failure by Consultant to strictly comply with the requirements of this section shall constitute Consultant’s waiver of County’s obligation to treat the records as Restricted Material. Consultant must indemnify and hold harmless County and its employees and agents from any

and all claims, causes of action, losses, fines, penalties, damages, judgments, and liabilities of any kind, including attorneys' fees, litigation expenses, and court costs, relating to nondisclosure of Restricted Material in response to a third-party request.

IF CONSULTANT HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO CONSULTANT'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT (954) 357-6402, DBOWE@BROWARD.ORG, 115 S. ANDREWS AVE., SUITE A550, FORT LAUDERDALE, FLORIDA 33301 .

11.4. Audit Rights and Retention of Records. Consultant and all Subconsultants shall preserve all Contract Records (as defined below) for a minimum period of three (3) years after expiration or termination of this Agreement or until resolution of any audit findings, whichever is longer. This section shall survive any dispute or litigation between the Parties, and Consultant expressly acknowledges and agrees to be bound by this section throughout the course of any dispute or litigation with County. Contract Records shall, upon reasonable notice, be open to County inspection and subject to audit and reproduction during normal business hours. County audits and inspections pursuant to this section may be performed by any County representative (including any outside representative engaged by County). County may conduct audits or inspections at any time during the duration of this Agreement and for a period of three (3) years after the expiration or termination of this Agreement (or longer if required by Applicable Law). County may, without limitation, verify information, payroll distribution, and amounts through interviews, written affirmations, and on-site inspection with Consultant's employees, Subconsultants, vendors, or other labor.

Contract Records 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, leases, contracts, commitments, arrangements, notes, daily diaries, drawings, receipts, vouchers, memoranda, e-mails, and any and all other documents that pertain to rights, duties, obligations, or performance under this Agreement. Contract Records include hard copy and electronic records, written policies and procedures, time sheets, payroll records and registers, cancelled payroll checks, estimating work sheets, correspondence, invoices and related payment documentation, cost and expense reports, general ledgers, insurance rebates and dividends, and any other records pertaining to rights, duties, obligations, or performance under this Agreement, whether by Consultant or Subconsultants.

County shall have the right to audit, review, examine, inspect, analyze, and make copies of all Contract Records at a location within Broward County. Consultant hereby grants County the right to conduct such audit or review at Consultant's place of business, if deemed appropriate by County, with seventy-two (72) hours' advance notice. Consultant agrees to provide adequate and appropriate workspace. Consultant shall provide County with reasonable access to Consultant's

facilities, and County shall be allowed to interview all current or former employees to discuss matters pertinent to the performance of this Agreement. Consultant shall make all Contract Records available electronically in common file formats or via remote access if, and to the extent, requested by County.

Consultant shall, by written contract, require all Subconsultants to agree to the requirements and obligations of this section.

Any incomplete or incorrect entry in such books, records, and accounts shall be a basis for County's disallowance and recovery of any payment upon such entry. If an audit or inspection reveals overpricing or overcharges to County of any nature by Consultant or its Subconsultants in excess of five percent (5%) of the total contract billings reviewed by County, Consultant shall make adjustments for the overcharges and pay liquidated damages pursuant to Section 5.9. Any adjustments or payments due as a result of such audit or inspection shall be made within thirty (30) days after presentation of County's findings to Consultant.

11.5. Subconsultants. Consultant shall utilize only the Subconsultants identified in Restated Exhibit C, Schedule of Subconsultants, to provide the Services for this Project. Consultant shall obtain written approval of Contract Administrator prior to changing or modifying the Schedule of Subconsultants, which shall be automatically updated upon such written approval. Consultant shall bind in writing each and every approved Subconsultant to the terms stated in this Agreement, provided that this provision shall not, in and of itself, impose the insurance requirements set forth in Article 9 on Consultant's Subconsultants.

11.6. Assignment. Neither this Agreement nor any interest herein shall be assigned, transferred, or encumbered without the written consent of the other Party. Any assignment, transfer, encumbrance, or subcontract in violation of this section shall be void and ineffective, constitute a breach of this Agreement, and permit the nonassigning Party to immediately terminate this Agreement, in addition to any other remedies available to the nonassigning Party at law or in equity. County reserves the right to condition its approval of any assignment, transfer, encumbrance, or subcontract upon further due diligence and an additional fee paid to County to reasonably compensate it for the performance of any such due diligence.

11.7. Indemnification of County. If this Agreement constitutes a construction contract or a professional services contract with a design professional, then Section 11.7.1 shall apply. If this Agreement does not constitute a construction contract or a professional services contract with a design professional, then Section 11.7.2 shall apply. The terms "construction contract," "professional services contract," and "design professional" used in this section have the meanings set forth in Sections 725.06 or 725.08, Florida Statutes.

11.7.1. Construction and Professional Services Contracts. Consultant shall indemnify and hold harmless County and its current, past, and future officers and employees from liabilities, damages, losses, and costs, including, but not limited to, reasonable attorneys'

fees, to the extent caused by the negligence, recklessness, or intentionally wrongful conduct of Consultant or other persons employed or utilized by Consultant in the performance of this Agreement.

11.7.2. Contracts Other than Construction or Professional Services. Consultant shall indemnify, hold harmless, and defend County and all of County's current, past, and future officers, agents, and employees (collectively, "Indemnified Party") from and against any and all causes of action, demands, claims, losses, liabilities, and expenditures of any kind, including attorneys' fees, court costs, and expenses, including through the conclusion of any appellate proceedings, raised or asserted by any person or entity not a party to this Agreement, and caused or alleged to be caused, in whole or in part, by any breach of this Agreement by Consultant, or any intentional, reckless, or negligent act or omission of Consultant, its officers, employees, or agents, arising from, relating to, or in connection with this Agreement (collectively, a "Claim"). If any Claim is brought against an Indemnified Party, Consultant shall, upon written notice from County, defend each Indemnified Party with counsel satisfactory to County or, at County's option, pay for an attorney selected by the County Attorney to defend the Indemnified Party.

11.7.3. The applicable provisions of Section 11.7 shall survive the expiration or earlier termination of this Agreement. If considered necessary by the Contract Administrator and the County Attorney, any sums due Consultant under this Agreement may be retained by County until all claims subject to indemnification have been settled or otherwise resolved. Any amount withheld shall not be subject to payment of interest by County.

11.8. Prior Agreements. This Agreement represents the final and complete understanding of the Parties regarding the subject matter of this Agreement and supersedes all prior and contemporaneous negotiations and discussions regarding same. All commitments, agreements, and understandings of the Parties concerning the subject matter of this Agreement are contained herein.

11.9. Amendments. Unless otherwise expressly authorized herein, no modification, amendment, or alteration of any portion of this Agreement is effective unless contained in a written document executed with the same or similar formality as this Agreement and by duly authorized representatives of County and Consultant.

11.10. Notices. Unless otherwise stated herein, for notice to a Party to be effective under this Agreement, notice must be sent via U.S. first-class mail, hand delivery, or commercial overnight delivery, each with a contemporaneous copy via e-mail, to the addresses listed below and shall be effective upon mailing or hand delivery (provided the contemporaneous email is also sent). Addresses may be changed by the applicable Party providing notice of such change in accordance with this section.

FOR COUNTY:

Broward County Director of Construction Management
Attn: Ariadna Musarra, AIA, Director
115 South Andrews Avenue, Room A-550, Fort Lauderdale, Florida 33301
Email address: amusarra@broward.org

FOR CONSULTANT:

LEO A. Daly LLC
1400 Centrepark Blvd., Suite 500
West Palm Beach, FL 33401
Email address: wahanser@leoadaly.com

11.11. Interpretation. The titles and headings contained in this Agreement are for reference purposes only and shall not in any way affect the meaning or interpretation of this Agreement. All personal pronouns used in this Agreement shall include any other gender, and the singular shall include the plural, and vice versa, unless the context otherwise requires. Terms such as “herein” refer to this Agreement as a whole and not to any particular sentence, paragraph, or section where they appear, unless the context otherwise requires. Whenever reference is made to a section or article of this Agreement, such reference is to the section or article as a whole, including all subsections thereof, unless the reference is made to a particular subsection or subparagraph of such section or article. Any reference to “days” means calendar days, unless otherwise expressly stated. Any reference to approval by County shall require approval in writing, unless otherwise expressly stated.

11.12. Consultant’s Staff. Consultant will provide the key staff identified in its proposal for Project as long as said key staff are in Consultant’s employment. Consultant will obtain prior written approval of Contract Administrator to change key staff. Consultant shall provide Contract Administrator with such information as necessary for County to determine the suitability of proposed new key staff. Contract Administrator will be reasonable in evaluating key staff qualifications. If Contract Administrator desires to request removal of any of Consultant’s staff, Contract Administrator shall first meet with Consultant and provide reasonable justification for said removal; upon such reasonable justification, Consultant shall use good faith efforts to remove or reassign the staff at issue.

11.13. Drug-Free Workplace. To the extent required under Section 21.23(f), Broward County Administrative Code, or Section 287.087, Florida Statutes, Consultant certifies that it has and will maintain a drug-free workplace program for the duration of this Agreement.

11.14. Independent Contractor. Consultant is an independent contractor of County, and nothing in this Agreement shall constitute or create a partnership, joint venture, or any other relationship between the Parties. In providing Services, neither Consultant nor its agents shall act as officers, employees, or agents of County, except as authorized by the Contract Administrator for permitting, licensing, or other regulatory requirements. Consultant shall not have the right to

bind County to any obligation not expressly undertaken by County under this Agreement. Consultant and each Subconsultant shall be responsible for any amounts owed to their respective employees for work performed in excess of forty (40) hours in any week if the employee was misclassified as “exempt.”

11.15. Regulatory Capacity. Notwithstanding the fact that County is a political subdivision with certain regulatory authority, County’s performance under this Agreement is as a Party to this Agreement and in the capacity as owner of the Project. If County exercises its regulatory authority, the exercise of such authority and the enforcement of Applicable Law shall have occurred pursuant to County’s regulatory authority as a governmental body separate and apart from this Agreement, and shall not be attributable in any manner to County as a Party to this Agreement.

11.16. Sovereign Immunity. Except to the extent sovereign immunity may be deemed to be waived by entering into this Agreement, nothing herein is intended to serve as a waiver of sovereign immunity by County nor shall anything included herein be construed as consent by County to be sued by third parties in any matter arising out of this Agreement.

11.17. Third-Party Beneficiaries. Neither Consultant nor County intends to primarily or directly benefit a third party by this Agreement. Therefore, the Parties acknowledge that there are no third-party beneficiaries to this Agreement and that no third party shall be entitled to assert a right or claim against either of them based upon this Agreement.

11.18. Conflicts. Neither Consultant nor its employees shall have or hold any continuing or frequently recurring employment or contractual relationship that is substantially antagonistic or incompatible with Consultant’s loyal and conscientious exercise of judgment and care related to its performance under this Agreement. During the duration of this Agreement, none of Consultant’s officers or employees shall serve as an expert witness against County in any legal or administrative proceeding in which they or Consultant is not a party, unless compelled by legal process. Further, such persons shall not give sworn testimony or issue a report or writing, as an expression of such person’s expert opinion that is adverse or prejudicial to the interests of County in connection with any such pending or threatened legal or administrative proceeding unless compelled by legal process. The limitations of this section shall not preclude Consultant or any persons in any way from representing themselves, including giving expert testimony in support of such representation, in any action or in any administrative or legal proceeding. If Consultant is permitted pursuant to this Agreement to utilize Subconsultants to perform any Services, Consultant shall require such Subconsultants, by written contract, to comply with the provisions of this section to the same extent as Consultant.

11.19. Materiality and Waiver of Breach. Each requirement, duty, and obligation set forth in this Agreement was bargained for at arm’s-length and is agreed to by the Parties. Each requirement, duty, and obligation set forth in this Agreement is substantial and important to the formation of this Agreement, and each is, therefore, a material term. County’s failure to enforce any provision of this Agreement shall not be deemed a waiver of such provision or modification of this

Agreement. A waiver of any breach shall not be deemed a waiver of any subsequent breach and shall not be construed to be a modification of this Agreement. To be effective, any waiver must be in writing signed by an authorized signatory of the Party granting the waiver.

11.20. Compliance with Laws. Consultant and the Services must comply with all Applicable Law, including, without limitation, the Americans with Disabilities Act, 42 U.S.C. § 12101, Section 504 of the Rehabilitation Act of 1973, and the requirements of any applicable grant agreements.

11.21. Severability. If any part of this Agreement is found to be unenforceable by any court of competent jurisdiction, that part shall be deemed severed from this Agreement and the balance of this Agreement shall remain in full force and effect.

11.22. Joint Preparation. This Agreement has been jointly prepared by the Parties and shall not be construed more strictly against either Party.

11.23. Priority of Provisions. If there is a conflict or inconsistency between any term, statement, requirement, or provision of any document or exhibit attached to, referenced by, or incorporated in this Agreement and any provision within an article or section of this Agreement, the article or section shall prevail and be given effect.

11.24. Law, Jurisdiction, Venue, Waiver of Jury Trial. This Agreement shall be interpreted and construed in accordance with and governed by the laws of the State of Florida. The exclusive venue for any lawsuit arising from, related to, or in connection with this Agreement shall be in the state courts of the Seventeenth Judicial Circuit in and for Broward County, Florida. If any claim arising from, related to, or in connection with this Agreement must be litigated in federal court, the exclusive venue for any such lawsuit shall be in the United States District Court or United States Bankruptcy Court for the Southern District of Florida. **EACH PARTY HEREBY EXPRESSLY WAIVES ANY RIGHTS IT MAY HAVE TO A TRIAL BY JURY OF ANY CIVIL LITIGATION RELATED TO THIS AGREEMENT. IF A PARTY FAILS TO WITHDRAW A DEMAND FOR A JURY TRIAL AFTER WRITTEN NOTICE BY THE OTHER PARTY, THE PARTY MAKING THE DEMAND FOR JURY TRIAL SHALL BE LIABLE FOR REASONABLE ATTORNEYS' FEES AND COSTS OF THE OTHER PARTY TO CONTEST THE DEMAND FOR JURY TRIAL, AND SUCH AMOUNTS SHALL BE AWARDED BY THE COURT IN ADJUDICATING THE MOTION.**

11.25. Reuse of Materials, Deliverables, and other Work Product. County may, at its option, reuse (in whole or in part) the work product, materials, or deliverables resulting from Consultant's Services (including, but not limited to, drawings, specifications, other documents, and services as described herein and in Restated Exhibit A) without additional compensation being owed to Consultant; and Consultant agrees to such reuse in accordance with this provision. This reuse may include preparation of reverse plans, changes to the program, provision for exceptional site conditions, preparation of documents for off-site improvements, provisions for revised solar orientation, provisions for revised vehicular and pedestrian access, and modifications to building elevations, ornament, or other aesthetic features. If County elects to retain Consultant in connection with a reuse assignment, Consultant will be paid a reuse fee to

be negotiated between County and Consultant. In connection with any reuse assignment that County elects to retain Consultant to perform, Consultant shall revise the design documents to comply with building codes and other jurisdictional requirements current at the time of reuse for the new use or site location. Except for the reuse payment negotiated between County and Consultant, the terms and conditions of this Agreement shall remain in force for each reuse assignment, unless otherwise agreed by the Parties in writing. Any re-use of the Consultant's work created under this Agreement on any other project shall be at the re-user's sole risk and without liability to the Consultant.

11.26. Payable Interest.

11.26.1. Payment of Interest. Unless prohibited by Applicable Law, County shall not be liable for interest to Consultant for any reason, whether as prejudgment interest or for any other purpose, and Consultant waives, rejects, disclaims, and surrenders any and all entitlement to interest in connection with a dispute or claim arising from, related to, or in connection with this Agreement.

11.26.2. Rate of Interest. If the preceding section is inapplicable or is determined to be invalid or unenforceable by a court of competent jurisdiction, the annual rate of interest payable by County under this Agreement, whether as prejudgment interest or for any other purpose, shall be, to the full extent permissible under Applicable Law, one quarter of one percent (0.25%) simple interest (uncompounded).

11.27. Incorporation by Reference. Any and all Recital clauses stated above are true and correct and are incorporated in this Agreement by reference. The attached Exhibits are incorporated into and made a part of this Agreement.

11.28. Multiple Originals and Counterparts. This Agreement may be executed in multiple originals or in counterparts, whether signed physically or electronically; each of which shall be deemed to be an original, and all of which, taken together, shall constitute one and the same agreement.

11.29. Polystyrene Food Service Articles. Consultant shall not sell or provide for use on County property expanded polystyrene products or food service articles (e.g., Styrofoam), unencapsulated expanded polystyrene products, or single-use plastic straws or stirrers, as set forth in more detail in Section 27.173, Broward County Administrative Code.

11.30. Public Art and Design. To the extent the Project includes artwork as defined by Section 1-88 of the Code, Consultant shall cooperate with the artist for the purpose of properly incorporating the artist's design(s) into the design of the Project. Consultant shall notify the artist in writing of all design meetings and shall provide the artist with a schedule of milestone dates. If requested by County, Consultant shall provide workspace for the artist during the preliminary design and design phases. The artist's design as properly incorporated into the design of the Project shall be permitted as part of the master site or facility plan. Consultant's compensation

pursuant to this Agreement includes the services to comply with the requirements set forth in this section. Consultant shall ensure that Subconsultants, if any, are informed of Broward County's Public Art and Design Program and any applicable requirement of working with the artist(s). If Consultants cooperation with the artist requires Consultant or Subconsultants to perform design services for workspace or utilities not contemplated in the basic design, such design services shall be Optional Services for the purpose of this Agreement. The Consultant must notify the County of a request by the artist requiring such design services within five (5) business days after Consultant's receipt of such a request by the artist for Optional Services to be proposed. If the Project is funded in whole or in part with proceeds from the transportation surtax, only artistic elements that are not prohibited under Section 212.055(1), Florida Statutes, may be funded through the surtax.

11.31. Workforce Investment Program. This Agreement constitutes a "Covered Contract" under the Broward Workforce Investment Program, Section 19.211, Broward County Administrative Code ("Workforce Investment Program"). Consultant affirms it is aware of the requirements of the Workforce Investment Program and will use good faith efforts to meet the First Source Referral Goal and the Qualifying New Hires Goal as set forth in the Workforce Investment Program, including by (a) publicly advertising exclusively with CareerSource Broward for at least five (5) business days any vacancies that are the direct result of this Agreement (whether those vacancies are with Consultant or its Subconsultants) and using good faith efforts to interview any qualified candidates referred under the Workforce Investment Program, and (b) using good faith efforts to hire Qualifying New Hires, as defined by the Workforce Investment Program, for at least fifty percent (50%) of the vacancies that are the direct result of this Agreement. Until at least one year after the conclusion of this Agreement, Consultant shall maintain and make available to County upon request all records documenting Consultant's compliance with the requirements of the Workforce Investment Program, and shall submit the required Workforce Investment Reports to the Contract Administrator annually by January 31 and within thirty (30) days after the expiration or termination of this Agreement. Failure to demonstrate good faith efforts to meet the First Source Referral Goal and the Qualifying New Hires Goal shall constitute a material breach of this Agreement.

11.32. Anti-Human Trafficking. By execution of this Agreement by the undersigned authorized representative of Consultant, Consultant hereby attests under penalty of perjury that Consultant does not use coercion for labor or services, as such terms are defined in Section 787.06, Florida Statutes; under penalties of perjury, the undersigned authorized representative of Consultant declares that they have read the foregoing statement and that the facts stated in it are true.

11.33. Use of County Name or Logo. Consultant shall not use County's name or logo in marketing or publicity materials without prior written consent from the Contract Administrator.

11.34. Iron and Steel Products. If this Agreement is for a "public works project" as defined in Section 255.0993, Florida Statutes, then any iron or steel product permanently incorporated in the Project must be produced in the United States, unless specifically exempted in writing by the Contract Administrator in accordance with Section 255.0993, Florida Statutes.

(The remainder of this page is intentionally left blank.)

IN WITNESS WHEREOF, the Parties hereto have made and executed this Agreement: Broward County, through its Board of County Commissioners, signing by and through its Mayor or Vice-Mayor authorized to execute same by Board action on the _____ day of _____, 2025; and Consultant, signing by and through its duly authorized representative.

COUNTY

ATTEST:

Broward County, by and through
its Board of County Commissioners

By: _____
Broward County Administrator, as
ex officio Clerk of the Broward County
Board of County Commissioners

By: _____
Mayor
____ day of _____, 2025

Approved as to form by
Andrew J. Meyers
Broward County Attorney
115 South Andrews Avenue, Suite 423
Fort Lauderdale, Florida 33301

Telephone: (954) 357-7600

BENJAMIN D. Digitally signed by BENJAMIN D. CREGO

By: CREGO Date: 2025.05.01 14:46:50 -04'00'

Benjamin Crego (Date)

Senior Assistant County Attorney
Benjamin D. Digitally signed by Benjamin D. Crego for

By: Crego for Date: 2025.05.01 14:47:06 -04'00'

Michael J. Kerr (Date)
Chief Counsel

BDC/tb
ME Crime Lab S2115731P1
04/22/2025

**AMENDED AND RESTATED AGREEMENT BETWEEN BROWARD COUNTY AND LEO A. DALY LLC
FOR CONSULTANT SERVICES FOR BROWARD COUNTY'S MEDICAL EXAMINER'S OFFICE AND
BSO'S CRIME LAB COMBINED FACILITY (FORENSIC SCIENCE CENTER) (RFP # S2115731P1)**

CONSULTANT

LEO A. DALY LLC
William A

By: **Hanser**

Authorized Signer

Digitally signed by William A.
Hanser
Date: 2025.05.01 13:57:01
-04'00'

William A. Hanser, AIA
Vice-President, Managing Principal

1st day of May, 20 25

Restated Exhibit A Scope Of Services

1.00 Definitions:

ADA – Americans with Disabilities Act.

Authority Having Jurisdiction (AHJ): An organization, office, or local official responsible for enforcing building, life safety, and other codes or standards in a given jurisdiction and duly authorized to issued permits or inspect construction. Taken from the base definition of AHJ as found in the Florida Fire Prevention Code (3.2.2) or as commonly used in chapter 553 of the Florida State Statutes. A site may have multiple such AHJ's enforcing different portions of said building, life safety, or other codes.

ASPE - American Society of Professional Estimators. ASPE defines estimate levels per Project phase.

Bid Set – the Drawings, Project Manual and all other documents used for bidding the Project.

Charrette – a short, collaborative meeting during which members of a team quickly generate ideas to explore and share a broad diversity of design concepts.

Color Board – a display board which contains the proposed building colored finish sample materials for the interior (for example: floor finish, base, wall finish, ceiling) or exterior sample materials (for example: brick, EIFS, window framing, glass, metal) or other materials deemed necessary to convey the design intent

Commissioning - the process of assuring that all systems and components of a building are designed, installed, tested, operated, and maintained according to the operational requirements of the County, basis of design and construction documents. A commissioning process may be applied not only to building projects but also to systems such as HVAC, facade and roofing.

Contract Documents – Contract Documents means the official documents setting forth bidding information, requirements, and construction obligations for the Project, including, but not limited to, the construction scope of work, plans, drawings, exhibits, general requirements, technical specifications, Request for Information responses, addenda, supplements, and any additional documents the submission of which is required by this Project.

Construction Documents – all documents including the Drawings and Project Manual which reflects revisions from bidding and permitting that are used for construction.

Cost Estimate (also known as Opinion of Probable Construction Cost) - the total estimated cost to construct a project.

Deliverable – a tangible product, service or electronic file produced as a result of the Project that is intended to be delivered as contractually required.

Permit Set – all documents including the Drawings and Project Manual submitted to the local municipality for a building permit.

Resident Project Representative (RPR) - An authorized full time on-site representative of Consultant at the Project.

Record Set - all documents including the Drawings and Project Manual revised to illustrate a compendium of the original drawings, incorporating on-site changes known to the Consultant and information taken from the Contractor's As-Constructed drawings.

1.01 Project Description and Program

1.01.01 The following paragraphs form a general description of the professional services required for the design and construction of new facilities. As such, it is not all inclusive and County does not represent that it is a complete inventory of the professional services necessary to achieve County's goals for the new facility. The following paragraphs represent County's minimum level of performance but do not limit the professional services that may be required during any Project phase described herein.

1.01.02 Project Description

(A) The project entails the design and construction of a new Medical Examiner's Office for the Broward County Office of the Medical Examiner and Trauma Services ("OMETS") and Crime Laboratory for the Broward Sheriff's Office ("BSO") in the City of Fort Lauderdale, Florida. The new combined facility will be referred to as the *Forensic Science Center* ("FSC"). The site parcel selected is approximately 8.71 acres.

The new combined facility will be a multi-story building or series of buildings with a final square footage of approximately 180,000 square feet; plus a multi-story parking garage, and any other required ancillary structures or buildings.

The facility shall be designed under Leadership in Environmental and Engineering Design ("LEED") guidelines version V4.1 or current available version and "WELL" Building Standard principles.

The intent is to design and construct a facility suitable for accreditations of the Crime Lab and Medical Examiner. Each will accredit under their respective association, including but not limited to:

ANSI National Accreditation Board (ANAB) under ISO/IEC 17025 and supplement AR3125.

National Association of Medical Examiners (NAME)

Accreditation Council for Graduate Medical Education (ACGME)

(B) The Project site (also referred to as the Second Site) is located at:

***2000 West Commercial Boulevard
Fort Lauderdale, Florida
(Broward Folio # 4942-16-13-0030)***

1.02 Deliverables

1.02.01 Consultant shall submit electronic copies of all deliverables on USB type A thumb drive and via OneDrive file transfer service as per 1.02.02. Consultant shall provide four (4) half-size and two (2) full-size 30" x 42" hard copies of all deliverable documents required (except where otherwise specified), without additional printing cost or other charges, for approval or use by the Contract Administrator. The Contract Administrator shall review submitted documents and provide written review comments to Consultant following each deliverable submission. Consultant shall revise and resubmit four (4) hard copies and revised electronic copies of documents (if not initially satisfactory to the Contract Administrator), as required to fulfill the submittal requirements without additional printing cost or other charges, until approved by Contract Administrator. Such resubmittals shall be made within fourteen (14) calendar days from the receipt of review comments.

Upon request of the Contract Administrator, the direct cost of printing copies in addition to the required deliverables and resubmittals described in the process above, will be compensated as a reimbursable expense. Consultant shall coordinate with Contract Administrator to determine quantity of reimbursable print paper copies required for each deliverable prior to submission.

1.02.02 Consultant shall be required to submit the various documents further defined below in both hardcopy and electronic media formats. Requirements for electronic media submittals are contained in the Agreement (Restated Exhibit A, Attachment 2: BIM Requirements & Electronic Media Submittal Requirements). Requests for deviations from those electronic media submittal requirements shall be submitted in advance by Consultant in writing for the consideration of the Contract Administrator.

1.02.03 Documents, electronic media and other materials submitted to Contract Administrator by Consultant shall be retained by the Contract Administrator except as otherwise noted herein and are subject to the ownership provisions of this Agreement.

1.02.04 All deliverables shall be accompanied by a "Project Transmittal Form" as required by County's Construction Management Division. In the absence of a proprietary form issued by County's Construction Management Division, Consultant shall utilize its own

office standard transmittal form (or an equivalent document such as that published by the American Institute of Architects). The Project Transmittal Form must accurately delineate the date of the submittal and list each component document of the submittal with its applicable date.

1.02.05 Preliminary Architectural Program:

A detailed architectural program as approved by the Contract Administrator and issued by Consultant entitled *Pre-Design Report Site Analysis Volume I and II for the Broward County Forensic Science Center date November 27th, 2019*. Requirements for Consultant's use, validation, and modification of that program are further described below in 3.02.

2.01 Basic Services

2.01.01 Basic Services shall include each of the Services listed below and in the Agreement, and other professional services as necessary to meet the needs of Broward County and accomplish construction of the Project.

2.01.02 The listed Services below shall not limit those activities or services that may be requested by the Contract Administrator.

2.01.03 Consultant shall coordinate their Services with additional County retained consultants as necessary for the Project.

3.01 Basic Services by Project Phase

3.01.01 Consultant agrees to:

(A) Provide complete professional architectural, engineering and/or other professional services set forth in the activities enumerated throughout this Scope of Services and all necessary personnel, equipment and materials to perform the Services;

(B) Complete those design Services in accordance with the Project Schedule (See Restated Amendment - Attachment 1, Project Schedule);

(C) Complete those Services that will deliver a facility (or facilities) within County's established budget for the Project (See Restated Amendment - Attachment 3, Preliminary Project Budget);

(D) Prepare a schedule of Services in compliance with Project Schedule and for approval by County. Such schedule shall show activities including but not limited

to Consultant efforts and County (and other municipal/agency) reviews and approvals required to complete the design Services. This schedule shall initially be submitted to the Contract Administrator within fourteen (14) calendar days of execution of this Agreement for approval.

(E) Participate in the Contract Administrator's programs of Value Engineering and Constructability Reviews throughout Schematic Design, Design Development and Construction Documents activities.

- 3.01.02 Consultant shall schedule and attend Project review and coordination meetings every two (2) weeks with representatives of the Contract Administrator during all design phases. At each of these meetings, Consultant and Contract Administrator shall review the Project's budget, schedule, and scope along with Consultant's development and progress to date on the respective activities of the Project and any special problems related to the continuing progress of the Project. For each Project review and coordination meeting, and as may be otherwise appropriate during any Project phase, Consultant shall provide progress sketches and other documents that are sufficient to illustrate progress and the issues at hand for the Contract Administrator's review. Throughout the term of this Agreement, Consultant shall comply with other meeting obligations as outlined elsewhere in this Agreement. Meetings shall be in-person. Virtual meetings shall be at the discretion of the Contract Administrator.
- 3.01.03 Consultant and representatives of each sub-consulting firm shall attend a Design Kick-Off meeting and a Design Debriefing meeting which will be scheduled by the Contract Administrator at the beginning and end of each of the Project's activities. The Design Kick-Off meetings will provide a forum for the entire Project team to review Project goals, continuing issues, and review performance expectations for the respective phase of the Project. The Design Debriefing Meeting will provide a forum in which the entire Project team can provide feedback concerning team performance, communications, procedures, quality control and other related issues for the current and future projects. Meetings shall be in-person. Virtual meetings shall be at the discretion of the Contract Administrator.
- 3.01.04 Consultant and its interior designer /architect shall attend periodic furnishings and equipment coordination meetings as scheduled by the Contract Administrator during the Schematic, Design Development, and Construction Documents activities of the Project. These meetings will be scheduled to address and coordinate the layout, selection, specification and documentation of furniture and equipment items for the Project. Members of using entities (e.g., Broward Sheriff's Office) and County's using agencies will attend these meetings to coordinate and communicate their functional requirements and preferences. Meetings shall be in-person. Virtual meetings shall be at the discretion of the Contract Administrator.

- 3.01.05 Consultant, the Contract Administrator and the artist(s) selected by County shall attend periodic coordination meetings throughout the Project as scheduled by the Contract Administrator to address the incorporation of public art into the facility. These meetings will focus on the nature of the proposed artwork, the opportunities for integrating artwork into an efficient, economical building design, coordination of building systems and components with proposed artwork, coordination and documentation of artwork within the construction Contract Documents, and the artists' involvement and responsibilities during the construction process. Meetings shall be in-person. Virtual meetings shall be at the discretion of the Contract Administrator.
- 3.01.06 Consultant's Services shall conform to County's standards, including but not limited to, County's design and materials standards manuals, and County's guidelines and procedures manual and forms for capital projects, provided, however, that in the event of conflict the provisions of this Agreement shall govern and Consultant shall remain, as the Architect or Engineer of Record, responsible for the content and accuracy of Consultant's documents generated for this Project.
- 3.01.07 Consultant shall keep Contract Administrator informed of any proposed changes in requirements or in construction materials, systems or equipment as the drawings and specifications are developed. Proposed changes must be reviewed and approved in writing by Contract Administrator prior to incorporation into the design or construction documents.
- 3.01.08 Consultant shall cooperate with Contract Administrator by participating in, reviewing and commenting on Constructability and Value Engineering studies performed by Contract Administrator, and attending meetings, where the content of design and construction Contract Documents will be coordinated and reconciled, scheduled during any phase of the Project. In the event Contract Administrator accepts recommendations from Value Engineering and Constructability studies, Consultant shall, upon review and agreement, implement same, including providing revised drawings and specifications or other documents, as a part of Basic Services. If bids or cost estimates indicate the Project is at or below the construction budget, Consultant shall be compensated for implementing Value Engineering and Constructability changes. Meetings shall be in-person. Virtual meetings shall be at the discretion of the Contract Administrator.
- 3.01.09 Consultant shall be required to submit various documents further defined below in both hardcopy and electronic media formats. The parties shall agree to requirements for electronic media submittals consistent with the requirements contained in Restated Amendment - Attachment 2 – BIM and Electronic Media Submittal Requirements. First Amendment - Attachment 2 is provided as a template for the

Parties and sets forth the expectations of the Parties regarding electronic media submittals. The specific requirements for electronic media submittals shall be further negotiated by the Parties subsequent to the execution of this Agreement. Once the Parties have agreed upon electronic media submittal requirements, requests for deviations from those electronic media submittal requirements shall be submitted in advance by Consultant in writing for the consideration of the Contract Administrator.

- 3.01.10 Documents, electronic media and other materials submitted to Contract Administrator by Consultant shall be retained by the Contract Administrator except as otherwise noted herein and are subject to the ownership provisions of this Agreement.
- 3.01.11 Consultant shall make complete document submittals at the various activities listed below. Incomplete or partial submittals may be requested in advance through the Contract Administrator and may be allowed only when Consultant has received advance approval in writing by the Contract Administrator. Incomplete or partial submittals made without advance approval shall be returned to Consultant unreviewed and unaccepted by the Contract Administrator and subject to any liquidated damages applicable as provided for elsewhere in this Agreement.
- 3.01.12 Consultant shall pursue LEED principles (latest version) established by the United States Green Building Council ("USGBC") for achieving a Gold Rating for building and site development for the Project as part of Basic Services. Professional services required for the achievement of any additional level of LEED certification through the USGBC may be elected by the Contract Administrator for the Project and will be provided under Optional Services.
- 3.01.13 Consultant shall incorporate the WELL Building Standard design principles as a guideline. Professional services required for the achievement of any specific level of WELL certification as may be elected by the Contract Administrator for the Project will be provided under Optional Services.
- 3.01.14 The Consultant shall incorporate resilient design, which is the intentional design of buildings and landscapes in order to respond to natural disasters and disturbances such as hurricanes. Specification of impact glass, protection of mechanical equipment, system redundancy, building entrance location and elevation are some of the issues to consider.
- 3.01.15 Probable Construction Costs Review Process:
 - a. Consultant shall submit deliverables as required under each Project phase to Contract Administrator and Contractor. Upon issuance of a Notice to Proceed for estimating,

Consultant shall furnish a Cost Estimate, within Thirty (30) calendar days after the effective date.

- b. After completion of Cost Estimates, Consultant and Contractor will review and reconcile all estimates developed under each phase, within Twenty-One (21) calendar days of receipt. Consultant, Contractor, and County shall meet and hold workshops to reconcile probable construction cost statements.
- c. Probable construction cost estimates shall be based on the ASPE standards as stated in each Project phase.
- d. Contract Administrator may choose not to issue Notices to Proceed for subsequent Project phases, until construction cost estimates are fully reconciled.
- e. Any and all estimates provided by Consultant are opinions of probable cost based on information that is reasonably available to Consultant. Notwithstanding this, Consultant shall make a best effort to provide an accurate probable cost estimate reflecting current market conditions at the time it is produced, and Consultant shall ensure and verify that its Subconsultants do so. Nothing in this subsection limits the Consultant's responsibilities to adjust the design as necessary under Basic Services detailed in 3.01.08 or to eliminate estimated cost over-runs, if attributable to Consultant.

3.02 Program Validation Phase

Task 1 – User Group Program Validation

- 3.02.01 Consultant shall validate and update the previously performed *Predesign Phase – Programming 1, Medical Examiner's Office* and *Predesign Phase – Programming 2, Broward Sheriff's Office Crime Laboratory* detailed requirements with the identified building user groups, and submit updated space requirements and program to re-establish the following detailed requirements for the Project at the Second Site: design objectives, limitations and criteria; spatial and functional relationships; functional responsibilities of personnel; flexibility and expandability; special equipment and systems, and specific criteria related to the project's specific site location.
- 3.02.02 Consultant shall conduct a series of interviews, facilitated by the Contract Administrator, with the responsible stakeholder agencies and other building users to validate and adjust the findings of prior Predesign phases. Through these interviews, observations and other independent research, Consultant shall verify space requirements and program goals presented in the preliminary architectural program. Consultant shall refine the preliminary program to reflect the results of that

verification and shall provide a finalized, detailed set of goals and requirements for the Project.

3.02.03 Consultant shall validate and submit the program's updated description of occupancy needs and spatial allocation by coordinating with County Staff (including building user groups and others as necessary) and:

- (A) Reestablish criteria for importance of room functions and relationships.
- (B) Update Spatial Interaction Matrix and/ or model (list of departments, divisions or offices or other suitable subdivision that shows their relationship to others).
- (C) Update room by room spatial interaction diagrams and/or model showing all room relationships.
- (D) Update numerical ratings identifying the importance of relationships of each room to other rooms.
- (E) Update link and node diagrams to show departmental and room relationships identified in the interaction matrices.
- (F) Make bubble diagrams indicating spaces with relationships and their importance rankings. Revise as necessary until link crossovers (plan conflicts) are eliminated.
- (G) Creating horizontal and vertical diagrammatic block plans with relative spatial requirements.
- (H) Review and confirm previously proposed preliminary structural, mechanical, and other engineering systems and adjust as needed for the validated detailed requirements.
- (I) Update previously documented relative spatial areas for all departments, rooms; mechanical, vertical transportation; service, exit stairs and corridors; and horizontal circulation.

3.02.04 Consultant shall revise and submit new space, flow diagrams and models consisting of diagrammatic studies and pertinent descriptive text for: internal functions, pedestrian, vehicular and material flow patterns; site requirements; general space allocations; adjacency and material handling.

3.02.05 Consultants' and County's representatives shall attend the following number of meetings with each stakeholder group, based on representatives' availability:

Office of the Medical Examiner and Trauma Services

- a. Kick-off Meeting ME
- b. Workshop #PV1 – 1 Day
- c. Workshop #PV2 – 1 Day
- d. Debrief Meeting – 1 day

Broward Sherriff's Office (BSO) Crime Laboratory

- a. Kick-off Meeting BSO Crime Lab
- b. Workshop #PV1 – 1 Day
- c. Workshop # PV2 – 1 Day
- d. Debrief Meeting – 1 day

- 3.02.06 Consultant shall prepare, submit and present to County staff, stakeholders and project representatives for approval by the Contract Administrator a Detailed Requirements Report, comprised of the validated program. Consultant shall solicit and receive feedback during the duration of the Phase. Deliverables shall be as generally outlined in 1.02.01. Include four (4) spiral-bound 8½" x 11" color hard copies, with fold-out 11" x 17" pages where appropriate for large format graphics or charts without printing cost. A PDF of the same document shall be submitted for record and distribution as well. Meetings shall be in-person. Virtual meetings shall be at the discretion of the Contract Administrator.

Task 2 - Site and Building Analysis.

- 3.02.07 Consultant shall combine and analyze the results of the programming developed under the program validation and produce volumetric or massing studies for the proposed site.
- 3.02.08 Consultant shall utilize updated site surveys supplied by the Contractor after substantial completion of the demolition work at the selected site for this task.
- 3.02.09 Consultant shall develop and submit the program's description of site development criteria, building configuration, construction, and material standards by:
- (A) Listing required or optional provisions for phased construction and future additions.
 - (B) Identifying property building line limitations to estimate ground level building areas.
 - (C) Verifying and documenting site zoning or other restrictions such as building heights, setbacks, easements, site coverage, environmental issues, Federal Aviation Administration (FAA) restrictions, Florida Department of Transportation (FDOT) road access requirements, etc.
 - (E) Identifying orientation considerations for solar, views, street access, etc.

- (F) Identifying options of numbers of building stories and total height based on estimated floor plan areas and overall occupancy classification.
- (G) Estimating size(s) of core area(s) required for:
 - 1. Mechanical services.
 - 2. Electrical services.
 - 3. Specialized Fire Protection services.
 - 4. Vertical transportation.
 - 5. Stair/smoke towers.
- (H) Estimating and documenting structural spans required to-suit room spatial needs.
- (I) Identifying options of building configuration based on functions, occupancy classification, site limitations, orientation, height, spans and structural system.
- (J) Identifying and documenting building cladding and fenestration suited to construction, structural, functional, and cost considerations.
- (K) Identifying and documenting interior partitioning, flooring, and ceiling systems suited to construction, structural, functional, and cost considerations.
- (L) Identifying and documenting any "Contract Administrator Preferences" for interior and exterior construction types, space planning, site planning, space functionalities, building systems and assemblies, room types, building envelopes, and maintenance and operational considerations.
- (M) Identifying and documenting any neighborhood, sociological or demographic influences that will impact the facilities design and operation.
- (N) Identifying and documenting goals for integrating public art into the project.

3.02.10 Consultant shall present a minimum of three alternative site and conceptual fit layouts to the Contract Administrator to illustrate optional creative responses to the architectural program. The Contract Administrator will convene a site layout review conference at which Consultant shall review with the Contract Administrator (and using agency and other concerned parties) these alternative solutions. Alternative approaches should address both design and construction of the project; site use and improvements; selections of materials, building systems and equipment; potential construction methods and methods of project delivery; and Consultant's recommendations concerning the presented alternatives. The Contract Administrator shall identify a preferred site layout solution which shall then form the basis of Consultant's continuing work on the project and directly inform the next design steps.

3.02.11 Utilizing the preferred site conceptual layout, Consultant shall present a minimum of three alternative blocking and stacking building massing concepts to the Contract Administrator to illustrate optional creative responses to the architectural program. The Contract Administrator will convene a site massing review conference at which Consultant shall review with the Contract Administrator (and using agency and other concerned parties) these alternative solutions. Alternative approaches should address both design and construction of the project; site use and improvements; selections of materials, building systems and equipment; potential construction methods and

methods of project delivery; and Consultant's recommendations concerning the presented alternatives. The Contract Administrator shall identify a preferred conceptual massing solution which shall then form the basis of Consultant's continuing work on the project and the primary content of the Design Concept and Report further described below.

Task 3 – Concept Massing Report

3.02.12 Consultant shall prepare, submit and present for approval by the Contract Administrator a 95% complete Concept Massing Report, comprised of the documents listed below, including an identification of any special requirement(s) affecting the Project:

(A) Concept Drawings/ 3D Models. These documents shall reflect the preferred site layout and blocking / stacking concept drawings responding to the Program Validation Phase documentation and architectural program requirements illustrating the general scope, scale, and relationship of project components. Documents shall include, as a minimum, the following in addition to other graphic or descriptive materials Consultant may deem necessary to adequately communicate the project:

- 1) A site plan showing acreage, points of the compass, scale, contours and general topographical conditions, property boundaries and setbacks, flood plain elevation and velocity zone (pursuant to FEMA and/or Broward County criteria, whichever is most stringent), over-all dimensions, adjacent highways, roads, off-site improvements, emergency access, fire hydrants, power transmission lines, ownership and use of adjacent land, right of ways, easements, walks and paths, vehicle and bike parking areas, preliminary chiller plant/cooling tower/electrical vault locations, accessibility for the disabled, service areas, loading docks, play areas, athletic fields, bus and car loading zones, existing buildings and use, location of proposed building(s) and future additions, relocatable or temporary structures, community use buildings, phased construction, and preliminary soil borings. A statement shall be included on the site plan identifying the FEMA and Broward County criteria for flood plain and velocity zone in which the project is located. The statement shall be signed and dated by the Architect or Engineer of Record.

(B) A Preliminary Project Description comprised of a written narrative of preliminary selections of components, assemblies, and systems (including proposed landscape, civil, structural, mechanical, and electrical design elements, components and systems) to be used in the project. Coordinate points of service and preliminary service requirements with Florida Power and Light (FPL),

BellSouth, cable TV and other utility services as required by the Project's scope and program.

(C) A Project Development Schedule: Consultant shall prepare a schedule of services (Project Development Schedule) in compliance with Project Schedule and for approval by the Contract Administrator. Such schedule shall show activities including but not limited to Consultant efforts and Contract Administrator (and other municipal/agency) reviews and approvals required to complete the design services for the Project.

- 1) Include all activities known at this stage of the project's development for the entire project including the construction process. Illustrate all project activities including any projected or preliminary requirements for creating temporary facilities, relocating County's staff and/or other personnel, removing and storing furniture, equipment and/or other appurtenances, work by County, work by separate contractors, and any other activities that relate to or may impact construction of the project (including offsite work and related site reviews, permitting, etc.).
- 2) Prepare in a Gantt chart format, or other format as required by the Contract Administrator, which may be further developed and updated for submittal during subsequent phases of the Basic Services.
- 3) Consultant shall not be permitted to deviate from the milestones indicated on the Project Schedule (Restated Amendment - Attachment 1 of this Agreement) without specific written authorization from the Contract Administrator.

(D) Consultant shall procure and provide documentation of existing site conditions, constraints and other factors that will influence or determine the siting of the proposed facilities and improvements. This shall include a Geotechnical Report, Soil Boring Report and Soils Analysis.

3.02.13 Consultant shall investigate, determine and document the municipal, county and other jurisdictional agency (such as but not limited to the South Florida Water Management District, Health Department, Federal Aviation Authority, Florida Dept. of Transportation, etc.) coordination required for the Project. Consultant shall prepare and provide a list of permits and approvals required by such agencies to the Contract Administrator and shall coordinate with Contract Administrator concerning the timing, application requirements, fees and other matters pertaining to those agency approvals. Consultant, as required by the Contract Administrator, shall attend and provide representation at all review meetings, workshops, hearings and Commission/Council meetings concerning the project as conducted by any and all other agencies having jurisdiction over the project. Attendance at the meetings

denoted herein shall not be construed as meetings associated with the regulatory approval of the proposed project by any agency.

- 3.02.14 Consultant shall present its findings to County staff, stakeholders and project representatives and solicit feedback. Consultant shall prepare, submit and present for approval by the Contract Administrator a 100% complete Concept Massing Report, comprised of the documents generated for the 95% report, further revised and refined to incorporate said feedback.

3.03 Schematic Design Phase:

- 3.03.01 After written Notice to Proceed from County, Consultant shall confer with representatives of County to verify and confirm the Program Validation phase deliverables.

- 3.03.02 NOT USED

- 3.03.03 In the event that Consultant believes that the project scope, schedule or budget is not achievable, Consultant shall immediately notify County in writing as to the reasons one or all of them are unreasonable or not achievable immediately upon discovery.

- 3.03.04 Consultant shall develop and present a minimum of three alternative design solutions based on the preferred site layout and blocking / stacking concept, focusing on exterior articulation, materials, façade options, and other building elements, to the Contract Administrator to illustrate optional creative responses to the architectural program. The Contract Administrator will convene a schematic design review conference at which Consultant shall review with the Contract Administrator (and using agency and other concerned parties) these alternative solutions. Alternative approaches should address both design and construction of the Project; site use and improvements; preliminary selections of materials, building systems and equipment; potential construction methods and methods of project delivery; and Consultant's recommendations concerning the presented alternatives. The Contract Administrator shall identify a preferred design solution which shall then form the basis of Consultant's continuing work on the Project and the primary content of the schematic design report further described below.

- 3.03.05 Consultant shall prepare, submit and present for approval by County a schematic design report, comprised of the schematic design documents listed below including an identification of any special requirement(s) affecting the Project:

(A) "Project Transmittal Form" in accordance with Section 1.02.04.

- (B) "Updated Space Chart Form" formatted to list all spaces within the Project by room number, room title and net square foot area. The Space Chart Form must also include a listing of the Project's total net square foot area, total gross square foot area, and an efficiency percentage derived from the ratio of total net to total gross square foot areas. Note any deviations from Contract Administrator approved programmatic documents for the Project.
- (C) Consultant shall utilize updated site survey supplied by the Contractor after substantial completion of the demolition work at the selected site.
- (D) Concept Drawings. These documents shall be schematic drawings responding to the Program Validation Phase deliverables and architectural program requirements, illustrating the general scope, scale, and relationship of Project components. All plan drawings to include points of the compass, scale, drawing title, dimensions as appropriate, legends, title block, and other graphic information appropriate to the drawing, (i.e. preliminary building code information on architectural floor plan). Documents shall include as a minimum, the following scaled drawings in addition to other graphic or descriptive materials Consultant may deem necessary to adequately communicate the Project:
1. Site Plan showing:
 - a. Contours and general topographical conditions, flood plain elevation, and over-all property and structure dimensions.
 - b. Existing site features such as: adjacent highways, roads, on and off-site improvements, fire hydrants, power transmission lines, and adjacent land use.
 - c. Proposed structures such as: walks and paths, vehicle and bike parking areas, preliminary chiller plant/cooling tower/electrical vault locations, service areas, loading docks, play areas, athletic fields, bus and car loading zones, existing buildings and use, location of proposed building(s) and future additions (where applicable), relocatable or temporary structures, community use buildings and phased construction where applicable.
 2. Floor plans showing:
 - a. Architectural floor plans including: Over-all dimensions, identity of each space, room sizes, proposed door locations, room numbers, occupant loads for gathering spaces, proposed passive design and low energy usage features, outdoor areas, mechanical and electrical rooms, any existing buildings and use, future additions, and phased construction.
 - b. Life-safety plan(s) delineating exits, fire walls, travel distance, protected corridors, smoke partitions, room names and numbers, and any other life-safety features relevant to the facility. Indicate those facilities, or portions thereof, that will serve as emergency shelters, or which have been

- designed to incorporate special emergency preparedness features or equipment including a brief notation of those design features and/or equipment.
- c. Accessibility Plan(s) delineating provisions for accessibility/universal design and compliance with the Florida Accessibility Code for Building Construction (most current edition). Include graphics and notations delineating accessible routes, parking, elevators/ramps/lifts, accessible toilet facilities, and other preliminary building features that will support accessibility.
- 3. Elevations and Longitudinal and Cross-Sections of the building to fully illustrate and indicate the mass and character of the facility including:
 - a. Fenestration, openings, walkways, vertical transportation (elevators, escalators, lifts, ramps and stairs).
 - b. Preliminary material selections, and other building features and spatial relationships.
 - c. Heights of proposed structures, floor to floor levels and ceilings.
 - 4. Landscape Concept Drawings indicating:
 - a. Preliminary locations and character of proposed landscaped areas that will conform to required zoning and development codes and other jurisdictional requirements of Project's location.
 - 5. Preliminary graphics, concept sketches and other supplementary materials suggesting:
 - a. Proposed locations for integrated public art, thematic design treatments for special areas, and/or other spaces which have been programmed for special or thematic design content.
 - 6. Preliminary phasing plans to address:
 - a. Project sequencing, temporary buildings or structures, and other proposed approaches to separate staff and the public from construction activities and traffic. Consultant shall provide illustrative diagrams needed to convey intent as provided by the Contractor as approved by Contract Administrator, for permitting purposes.
- (E) Preliminary Project Description, formatted to match that specified by the latest edition of the Construction Specifications Institute's "Manual of Practice." The narrative to be comprised of:
- 1. Preliminary material selections, components, assemblies, and systems (including proposed landscape, civil, structural, mechanical, and electrical design elements, components and systems) to be used in the Project.

2. Coordinated points of service and preliminary service requirements with Florida Power and Light (FPL), telephone and cable TV provider and other utility services as required by the Project's scope and program and describe preliminary approaches to the provision of applicable utilities to the project.
3. Value Engineering and Constructability issues specifically raised during this Project phase.
4. Recommendations to improve traffic flow and enhance safety based on field observations by Consultant and its traffic subconsultant, and present such recommendations in a report.
5. Other concerns or issues related to the project type or approach, (i.e. resiliency, sustainability).

(F) Mechanical Requirements:

1. Provide a narrative on the proposed system(s) type.

(G) Provide a Building Automation System narrative:

1. Describe the type of proposed system(s).
2. Determine spaces required to house technology equipment required to serve the building.
3. Identify shafts and any horizontal rated chases.
4. Develop initial power estimates for technology to inform electrical loads.
5. Develop preliminary riser diagrams.
6. Initiate coordination with telecommunications service providers for site planning.

(H) Electrical requirements:

1. Electrical load analysis.

- (I) Project Schedule: Consultant shall update the initial project schedule of services in compliance with the Project Schedule (Restated Amendment - First Amendment - Attachment 1 of this Agreement) and for approval by County. Prepare schedule in a bar chart format, or other format as required by County, which may be further developed and updated for submittal during subsequent activities of the Basic Services. Consultant shall not be permitted to deviate from the milestones indicated on the Project Schedule for Consultant's work without specific written authorization from County. Consultant shall notify County in writing of any circumstances which impact Consultant's ability to meet designated milestones in the Project Schedule. Such schedule shall show activities including but not limited to:
1. Consultant efforts and County (and other municipal/agency) reviews and approvals required to complete the design services and other activities.
 2. All activities known at this stage of the Project's development for the entire Project.

3. Illustrate all Project activities including any projected or preliminary requirements for creating temporary facilities, relocating County's staff and/or other personnel, removing and storing furniture, equipment and/or other appurtenances, hazardous material abatement, work by County, work by separate Contractors, and any other activities that relate to or may impact construction of the Project as provided by Contract Administrator (including offsite work and related site reviews, permitting, etc.).
- (J) Preliminary color boards and interior design sketch perspectives to communicate spatial relationships, preliminary furniture selections, material types previously developed in prior amendments, proposed colorways and texture palette/selections for preliminary finish materials with County. Provide three (3) copies of preliminary color boards.
- (K) Consultant and its security subconsultant shall provide narrative for the following security items:
1. Access control system
 2. Video surveillance system and digital recording
 3. Door control security intercom
 4. Motion detection system
 5. Vehicle detectors for gate controls
 6. Security system LAN
 7. Security miscellaneous
 8. Security detection
 9. Uninterrupted Power Supply (UPS).
- (L) The Statement of Probable Construction Cost: Consultant shall verify the Contractor's Schematic Design estimate of probable Construction Cost and submit to County for review and approval, as per 3.01.15. The estimate will be itemized by major categories and projected to the expected time of bid. If, in the Contract Administrator's sole opinion, the Project merits a design estimate, it shall be prepared per the American Society of Professional Estimators' (ASPE Eleventh or latest Edition) of Standard Estimating Practice (ASPE Level 2) and shall be prepared by an independent cost estimator. Contract Administrator may authorize Consultant to obtain independent cost estimating services as an Optional Service. Estimating format ASPE Level 1-4 shall include contingencies, general conditions, acceleration, escalation, construction duration, site work, mobilization, Contractor profit and any other pertinent markup.
- (M) If the Statement of Probable Construction Cost exceeds the reconciled Direct Construction Cost for construction, per section 3.01.15, Consultant shall review the scope of the Project, specified materials, equipment, component systems, and types of construction and recommend changes and reasonable adjustments to

those items to align the Probable Construction Cost to the County's available funds to eliminate the estimated cost over-run. The recommended changes and reasonable adjustments are to be made at no additional cost to County, if attributable to Consultant.

- 3.03.06 Consultant shall determine the municipal, county and other jurisdictional agency (such as the South Florida Water Management District, City of Fort Lauderdale Development Review Committee, etc.) coordination required for the Project and, through County, make applications for site plan and other review as appropriate to this phase of the Project. Consultant shall attend and provide representation at all review meetings, workshops, hearings and Commission, Town or City Council meetings concerning the Project as conducted by all other agencies having jurisdiction over the Project.
- 3.03.07 Consultant shall submit copies of all deliverables in accordance with Section 1.02.01.
- 3.03.08 Consultant shall provide presentations of the Schematic Design to County's staff and to the Broward County Board of County Commissioners or their designee as required.
- 3.03.09 Consultant shall not proceed with the next Phase until the acceptance of all required presentations and reports, reconciliation or correction of all outstanding County review comments, and receipt of a written Notice to Proceed with the next phase.
- 3.03.10 Consultant shall review County's sustainability goals and define how they will be accomplished with respect to siting, energy use reduction, potable water use reduction, sustainable materials, renewable energy, and protecting indoor environmental quality within a sustainable charrette. Provide daylighting narrative explaining strategy to incorporate natural daylighting into building configuration and design. Summarize inclusion of renewable energy technologies in design. Perform a schematic level energy model of the building envelope to attain the best energy efficiency for the building type and function. Provide a summary of LEED credits being pursued and anticipated point levels to be achieved.
- 3.03.11 Preliminary mood boards and sketch perspectives to communicate spatial relationships, preliminary finish materials for discussion with County. Provide three (3) copies of preliminary mood boards.
- 3.03.12 Consultant shall conduct, in addition to regularly scheduled meetings, the following workshops as part of the lab planning efforts for this phase:
 - (A) Kick-off Meeting – ½ Day
 - (B) Workshop #SD 1 – 3½ Day plan review with user groups
 - (C) Workshop #SD 2 – 3½ Day second plan review with user groups

(D) Workshop #SD 3 – 1½ Day final plan review and engineering planning

- 3.03.13 Consultant shall provide preliminary building envelope analyses to study cladding and glazing systems under consideration, as they pertain to the building program. Develop conceptual approaches to moisture migration and mitigation, insulation, solar gain factors, solar controls, High Velocity Hurricane Zones, for essential facility requirements, daylighting, color rendition, and any other major relevant elements or concerns.
- 3.03.14 Consultant shall update and revise the previously developed comprehensive signage and wayfinding package to include the following at a minimum:
1. Research and analysis of city signage code for exterior and interior signage.
 2. Provide building wayfinding verbiage and name review recommendations.
 3. Identify and provide ambiguous terminology locations.
 4. Provide complete analysis document with photos of existing signage types, new construction and remodeling, or replacement upgrade recommendation throughout campus.
 5. Provide map depicting high traffic points and signage centers.
 6. Provide schematic design of Signage Hierarchy (provide two options) for exterior and interior wayfinding and identity signage elements.
 7. Provide preliminary location plans and message schedules for all exterior and interior wayfinding and identity signage elements.
 8. Identify proposed budgets for all buildings including interior and exterior signage.
 9. Provide initial samples/color samples for approvals.
 10. Provide phased approach to updating all signage within the floor area on a priority basis, i.e. Priority One: within six months; Priority Two: within two years; Priority Three: within two to five years.
- 3.03.15 Consultant shall procure updated geotechnical reports from those procured under 3.02.12D.
- 3.03.16 Schematic Design Deliverables (Section reference in parentheses):
- 1) Transmittal Form (3.03.05A).
 - 2) Program Confirmation (3.03.01) which includes Updated Space Chart Form (3.03.05B).
 - 3) Design Solutions (3) with preferred option (3.03.04)
 - 4) Site Survey (3.03.05(C)1)
 - 5) Geotechnical Report (3.02.13 and 3.03.15), signed and sealed reports.
 - 6) Schematic Drawings (3.03.05D)
 - A) Site Plan
 - B) Landscape Plan

- C) Floor Plans
- D) Phasing Plans (3.03.05C6)
- E) Elevations
- F) Sections
- G) Three-dimensional views
- 7) Preliminary Project Description (3.03.05D)
- 8) MEP requirements (including building system automation narrative) (3.03.05E,F, G)
- 9) Project Schedule (3.03.05H)
- 10) Verification of Contractor's Cost Estimate (3.03.05J)
- 11) Summary of AHJ Approval (3.03.06)
- 12) LEED Requirements (3.03.10)
- 13) Mood Boards (3.03.11)
- 14) Hard copies as specified in 3.03.07.
- 15) BIM Model, BIM Execution Plan (BIMPxP), model progression schedule and Electronic Media per Restated Amendment - Attachment 2 – BIM and Electronic Media Submittal Requirements.
- 16) Traffic recommendation study report (counts to be provided by County)
- 17) Security System narrative
- 18) Site Lighting design and photometrics
- 19) Preliminary Lab equipment data book
- 20) Preliminary Room data sheets

3.04 Design Development Phase:

3.04.01 After written Notice to Proceed from County and based on the approved Schematic Design Documents and any adjustments authorized by County in the Project Scope or Project Budget, Consultant shall prepare, submit and present for approval by County, Design Development Phase documents, comprised of the following:

(A) "Project Transmittal Form" in accordance with Section 1.02.04

(B) Documents: Including, in addition to Schematic Design Phase requirements, the following:

1. Civil site plan(s) showing, in addition to Schematic Design Phase site survey requirements, landscaping, drainage, water retention ponds, sewage disposal and water supply system, chilled water supply and return piping and such physical features that may adversely affect or enhance the safety, health, welfare, visual environment, or comfort of the occupants.
2. A statement, signed and dated by Consultant or designated Subconsultant, included on the site plan identifying the number of existing trees, the number of required trees, and the number of new trees to be planted.

3. Recommendations from Consultant and its traffic subconsultant on traffic, access, traffic visibility and sight lines, parking layout, and internal site circulation based on site plan and landscape plan review, reflected on the drawings.
4. Soil testing results including a copy of the Geotechnical Engineer's report on the site including soil borings and other testing necessary to determine the subsurface conditions on site. When unusual soil conditions or special foundation problems are indicated, submit the proposed method of treatment and any recommendations for additional special testing.
5. Floor plan(s) including, but not limited to, the following:
 - a. A floor plan drawn at an architectural scale that will allow the entire facility to be shown on one sheet, without break lines and which indicates Project phasing as applicable to the Project.
 - b. Floor plans drawn at 1/8 inch or larger scale showing occupied spaces or special rooms with dimensions, equipment and furnishing layouts, sanitary facilities, stairs, elevators, and identification of accessible areas for the disabled.
 - c. Furniture and equipment plan at an architectural scale that will allow the entire facility (or respective floor of a multi-story building) on a single drawing sheet.
 - d. Large scale plans (at a minimum of ¼ inch scale) for restrooms, kitchens, stairs, and other spaces that require detailed delineation of furniture, fixture and equipment. Provide detailed plans (at a minimum of ½ inch scale) for mechanical rooms, electrical rooms, telephone and network rooms, and elevator machine rooms.
 - e. Reflected ceiling plan(s) (corresponding to scale, orientation and layout of building floor plans) indicating light fixture layout, air diffusers and return grilles, other ceiling mounted mechanical/plumbing system components, ceiling mounted electrical system components, proposed soffits, ceiling height changes, ceiling material changes, access panels, and other principal ceiling design features.
 - f. Roof Plans drawn at an architectural scale that will allow the entire facility to be shown on one sheet, without break lines indicating approximate locations and sizes of all rooftop equipment including lab exhaust fans, mechanical equipment, rooftop antennas and rooftop solar energy systems.
 - g. Formatting (using break lines as necessary) allowing the use of standard 30" x 42" drawing sheets. (Larger sheet sizes may be used only with advance written authorization of the Contract Administrator.)

6. Preliminary Room Finish Schedule.

7. Preliminary Door Schedule.
8. Life-safety plans to show exit strategy, rated doors, rated walls and partitions, emergency wall openings, ramps, and other life safety equipment applicable to the Project such as working stage protection, range and fume hoods, eye wash, emergency showers, etc.
 - a. Indicate and provide information concerning occupancy type, construction type, building area(s) (in square feet), total building occupancy, fire zone, maximum travel distances allowed/provided, maximum dead-end corridor allowed/provided, minimum exit corridor width allowed/provided.
 - b. By symbol, indicate exits (required/provided) fire extinguishers, exit signs, generator(s) and other life-safety equipment relevant to the facility.
 - c. By symbol, indicate connections and tie-ins to existing equipment if applicable.
9. A phasing plan to delineate the order of the construction and delineating staging and storage areas, and temporary buildings or structures, and other area designations and approaches to control and separate staff and the public from construction activities and traffic. Consultant shall provide illustrative diagrams needed to convey intent in coordination with the Contractor, for permitting purposes.
10. Updated Accessibility Plan(s) indicating the further development of the facility's accessible/universal design features and compliance with the ADA.
 - a. When planning open space office or administrative spaces, submit a floor plan showing the methods used to permanently define the means of egress, such as surface finish or color.
11. Plumbing fixture locations, fixture schedule and fixture unit calculations.
12. All exterior building elevations and enough building sections as necessary to fully illustrate and indicate the scale, massing and spatial relationships of the facility.
13. Typical building sections to show dimensions, proposed construction materials, and relationship of finished floors to finished grades.
14. Preliminary Structural Drawings including plans and sections indicating systems, connections and foundations. These drawings may be structural roughs.

15. Mechanical Drawings including floor plans, reflected ceiling plans and diagrams of the facility's air conditioning (HVAC), plumbing and other mechanical building systems required for distribution and disposal of solids, fluids and gases within the facility. Include duct layout, air handling equipment, return air systems, fresh air intakes, air handling equipment, plumbing lines, equipment and fixtures, location of grease trap(s), LP gas tank location and natural gas pipe lay out, and any other system components necessary. Enhance systems description to include a description of proposed HVAC system equipment including the chiller, pumps, AHU's, cooling tower, electric duct heaters, etc. Ductwork may be presented as single line diagrams except for those areas in which ductwork or other air handling equipment is large, within tightly confined or unusually configured spaces, or within proximity to other duct runs and/or equipment. Consultant shall coordinate with Mechanical Commissioning (Cx) agent and incorporate all feedback into design prior to submitting deliverable to County.

16. Building Automation System narrative describing the type of proposed system(s). Provide a list of primary equipment that will be interfacing with the system(s). Provide a preliminary sequence of operations for occupied, unoccupied and standby modes.

Consultant shall coordinate with telecommunication service providers, determine riser diagrams for all systems, coordinate pathways, verify shaft sizes, determine rooftop antenna locations, develop preliminary wireless access point heat map, develop specifications, coordinate preliminary door hardware, finalize power requirements for technology systems and HVAC loads, review initial equipment specifications, and coordinate data needs.

17. Electrical Drawings including reflected ceiling plans, lighting layouts for the outdoors and interior spaces, and a one-line diagram of the electrical distribution showing electrical outlets for all systems in all spaces. Location of all the main components of the electrical system such as transformers, panels, and main switch board, and emergency generator and fuel storage, location of communications consoles, cable or closed-circuit television head-ins, radio antennas, and satellite and short-wave dish antennas and equipment, master clock, fire alarm panel. Include principal equipment and rack locations for computer networking systems. Show locations of all primary building mechanical equipment such as chillers, air handler units, etc. and their respective electrical connections. Graphically indicate interconnection of rooftop solar panel system into building electrical system.

18. Landscape and Irrigation Drawings including preliminary designs for a code conforming landscape layout and supporting irrigation system. Landscape

drawings should indicate preliminary locations of major planting areas (trees and planting beds), existing plant materials designated to remain and requiring protection, preliminary plant species selections, and any “special” landscape features. Irrigation system drawings should indicate preliminary system selections, water sources and schematic distribution concept.

19. Equipment and Furnishing Schedules: Indicating equipment and furnishing items that will be provided by the Contractor and those that will be provided by County or others.

20. Outline specifications:

- a. Organized and formatted according to the Specification Section numbering system for outline specifications as established by the Construction Specifications Institute's latest edition of MasterFormat current on the date of execution of the Agreement.
- b. With the exception of Divisions 00 and 01, provide outline specifications or provide detailed notes on drawings giving general description of all finishes, materials, and systems including civil, structural, HVAC, electrical, plumbing, and specialty items, including fire sprinklers, alarm systems, electronic controls and computer networking components.
- c. Supplement (but do not replace) outline specification sections with “cut-sheets”, product information, data, and samples as requested by Contract Administrator or as necessary to communicate Consultant's design intent to the Contract Administrator.
- d. Provide content edited on a Project specific basis for the Project described in this agreement. Outline specifications reflecting Consultant's other or past projects submitted in an unedited or partially edited form obvious to the Contract Administrator will be returned un-reviewed to Consultant. For any such returned outline specifications, Consultant shall prepare and re-submit at no additional cost to County replacement outline specifications edited to specifically describe the Project described in this Agreement. Initiate Project specific specifications, including the following:
 - 11 27 00 - Photographic Equipment
 - 11 53 00 - Laboratory Equipment
 - 11 53 13 - Fume Hoods
 - 11 53 53 - Biological Safety Cabinets
 - 11 53 60 - Autopsy & Morgue Equipment
 - 11 67 23 - Firing Range Equipment
 - 12 35 53 - Lab Casework & Accessories, etc.;

13 21 26 - Cold Rooms

- e. In consultation with County, provide Life Cycle Cost Analysis ("LCCA") for predetermined elements of the Project to County for review and approval.
 - f. Florida Energy Code ("FEC"). FEC forms, including preliminary calculations for mechanical systems, documenting energy efficiency ratio rating of HVAC equipment, electrical systems, insulation (including proposed roof insulation type), and building envelope shall be submitted to County for review and approval with the Design Development Phase documents.
21. The Statement of Probable Construction Cost: Consultant shall verify the Contractor's Design Development Estimate of Probable Construction Cost and submit to County for review and approval as per 3.01.15. The estimate will be itemized by major categories and projected to the expected time of bid. If, in the Contract Administrator's sole opinion, the Project merits a Design Development estimate (ASPE Level 3) prepared by an independent cost estimator, then Contract Administrator may authorize Consultant to obtain those independent cost estimating services as an Optional Service. Utilize the Construction Specification Institute's ("CSI") latest edition of MasterFormat to organize the estimate. Estimating format ASPE Level 1-4 shall include contingencies, general conditions, acceleration, escalation, construction duration, site work, mobilization, Contractor profit and any other pertinent markup.
22. If the Statement of Probable Construction Cost exceeds the reconciled Direct Construction Cost for construction, per section 3.01.15, Consultant shall review the scope of the Project, specified materials, equipment, component systems, and types of construction and recommend changes and reasonable adjustments to those items to align the Probable Construction Cost to the County's available funds to eliminate the estimated cost over-run. The recommended changes and reasonable adjustments are to be made at no additional cost to County, if attributable to Consultant.
23. An updated Project Schedule reflecting development and anticipated schedules for all subsequent Project activities. A letter from Consultant and each of the major technical disciplines and any necessary subconsultants explaining how each previous review comment (as generated by County and/or other reviewing agencies) concerning the Project have been addressed and/or corrected.
24. A simplified single line floor plan of the Project; a database format schedule reflecting the room numbers; the name of the room or space; the net square

footage of the space and the occupant capacity of the space on electronic media and on a single 30" x 42" sheet conforming to County's standards for graphics and for electronic media submittals. This drawing and database information will be used in preparing facilities management information by County. Consultant shall coordinate with County and utilize County's requirements for room numbers, room name assignments and electronic media (format, layering, etc.) prior to developing final documents for this submittal. Hardcopy graphics shall be suitable for clearly legible half size reductions. Comply with County's requirements for electronic media specified in Restated Amendment - Attachment 2 – BIM and Electronic Media Submittal Requirements.

25. A letter or 3rd party commissioned report from County's Construction Management Division (and other agencies at its direction), indicating the extent of any known or suspected hazardous materials (PCB's, arsenic, groundwater contaminants, etc.) which might require mitigation by County prior to or during construction of the Project. Establish and confirm responsibility for removing hazardous materials in the design development documents and coordinate with Project Development Schedule, Statement of Probable Construction Cost and other documentation.

26. Color boards to review the color selections for all finish materials with County.

- 3.04.02 Staff from each of Consultant's major technical disciplines, and subconsultants as necessary shall attend coordination, review and presentation meetings with County to explain the design concept and technical resolution of their respective building or site systems. Meetings shall be in-person. Virtual meetings shall be at the discretion of the Contract Administrator.
- 3.04.03 Consultant shall submit copies of all deliverables in accordance with Section 1.02.01.
- 3.04.04 Consultant shall not proceed with the next Phase until the acceptance of all required presentations and reports, reconciliation or correction of all outstanding County review comments, and receipt of a written Notice to Proceed with the next phase.
- 3.04.05 Consultant shall provide assessment of compliance with ASHRAE 90.1 baseline requirements. Update daylighting strategy to incorporate natural daylighting into building configuration and design. Consider renewable energy technologies in design. Update results of energy model. Conduct integrated design charrette meeting with review of sustainable goals. Provide a summary of LEED credits being pursued and anticipated point levels to be achieved with assignment to responsible party.

- 3.04.06 Provide Equipment and Furnishing Drawings: Provide layout elevations, preliminary systems furniture workstation plates and isometric drawings indicating the locations, scale and proposed arrangement of all furniture and equipment items including those that will be provided by the Contractor and those that will be provided by County. Provide a symbols legend and unique identifiers for each piece of furniture or equipment corresponding to those established in the Equipment and Furnishing Schedules described above. Coordinate with County concerning standardized color coding of Equipment and Furnishing drawings necessary to facilitate internal County review and coordination of equipment and furnishings. Ensure that all illustrated furniture items are drawn to manufacturer's dimensions and are not generic templates or blocks which may not accurately reflect the size and configuration of proposed furniture or equipment items.
- 3.04.07 Provide Equipment and Furnishing Schedules: Provide a basis of design for each furniture type. Provide documentation for each furniture item which includes dimensions, selected finishes and furniture features.
- 3.04.08 Consultant shall further update and revise a comprehensive signage and wayfinding package to minimally include the following:
1. Provide building final wayfinding verbiage and name review recommendations.
 2. Provide map depicting all signage locations and signage centers.
 3. Provide final design of Signage Hierarchy for exterior and interior wayfinding and identity signage elements.
 4. Provide final location plans and message schedules for all exterior and interior wayfinding and identity signage elements.
 5. Provide refined budget planning for all exterior and interior components.
 6. Provide final samples/color approvals.
 7. Provide revised phased approach to updating all signage within the area on a priority basis, i.e. Priority One: within six months; Priority Two: within two years; Priority Three: two to five years.
- 3.04.09 Consultant shall conduct, in addition to regularly scheduled meetings, the following workshops as part of the lab planning efforts for this phase:
- (A) Kick-off Meeting – ½ Day
- (B) Workshop #DD1 – 3½ Day Lab Casework/Plan/Equipment meeting with user groups
- (B) Workshop #DD2 – 3½ Day Lab Casework/Plan/Equipment meeting with user groups
- (C) Workshop #DD3 – 1½ Day Final plan review and Engineering Coordination meeting

- 3.04.10 Consultant and Security Subconsultant shall provide design development for the following security items in coordination with County and BSO internal security departments:
1. Access control system
 2. Video surveillance and digital recording system
 3. Door control security intercom
 4. Motion detection system
 5. Vehicle detectors for gate controls
 6. Security system Local Area Network (LAN)
 7. Security miscellaneous
 8. Security detection
 9. UPS
- 3.04.11 Consultant shall Coordinate security requirements with:
1. Door hardware specifier for selection of electric door hardware;
 2. Electrical Consultant for electrical service to security electronics equipment rooms;
 3. Mechanical Consultant for equipment room conditioning.
- 3.04.12 Consultant shall coordinate building envelope reviews for and with:
1. Moisture assessment design compliance;
 2. HVAC System and Controls Review;
 3. Building Envelope Commissioning (Cx) agent.
- 3.04.13 Design Development Deliverables (Section reference in parentheses):
1. Transmittal Form (3.04.01A).
 2. Design Development Drawings (3.04.01B)
 1. Civil Site Plan
 2. Landscape Plan with tree survey
 3. Geotechnical Report
 4. Floor Plans
 - a. Furniture/Equipment Plans
 - b. Detailed Plans
 - c. Reflected Ceiling Plans
 - d. Life Safety/Accessibility Plans
 - e. Phasing Plans (3.04.01B9)
 5. Elevations
 6. Sections
 7. Structural Drawings
 8. Mechanical Drawings (including building automation system narrative)
 9. Electrical Drawings
 10. Finish/Equipment Plans and Schedules

11. Three-dimensional views
12. Outline Specifications (3.04.01B19)
13. Energy Code Forms (3.04.01B19f)
14. Project Schedule (3.04.01B19h)
15. Cost Estimate – Level 3 (3.04.01B19g)
16. Color Boards (3.04.01B19l)
17. Response to Comments issued in previous phases (3.04.01B19i)
18. LEED Requirements (3.04.05)
19. Hard copies as specified in (3.04.03)
20. BIM Model, BIM Execution Plan (BIMPxP), model progression schedule and electronic media per Restated Amendment - Attachment 2 – BIM and Electronic Media Submittal Requirements.
21. Site lighting design
22. Diagrammatic security plan
23. Lab casework/equipment plans
24. Lab casework schedule
25. Lab equipment schedule
26. Sink Schedule
27. Fume Hood Schedule
28. Biological Safety Cabinet Schedule
29. Critical Specialty details
30. Lab Finishes Discussion and Check
31. Update room data sheets
32. Update equipment data book

3.05 50% Construction Documents Phase:

- 3.05.01 After written Notice to Proceed from County and based on the approved Design Development Phase documents and any adjustments in the scope or quality of the Project or in the fixed limit of construction cost ("FLCC") authorized by County, Consultant shall prepare for approval by County and in accordance with County's requirements for format and organization, Final Construction Documents setting forth in detail the requirements for the construction of the Project. Consultant is responsible for the full compliance of the design with all applicable codes.
- 3.05.02 Consultant shall make a 50% Construction Documents submittal, for approval by County. Consultant shall submit copies of all deliverables in accordance with Section 1.02.01. Submittals shall include the following:
 - (A) "Project Transmittal Form" in accordance with Section 1.02.04
 - (B) Updated FEC compliance forms. Submit five (5) copies signed and sealed by a State of Florida registered design professional.

(C) Drawings:

1. Cover sheet/table of contents including:
 - a. Project title.
 - b. Sheet index including sheet identification and title.
 - c. List of current Broward County Board of County Commissioners.
 - d. Location plan.
2. Site Plans and detailing which, in addition to the requirements, indicate:
 - a. Legal description, property lines, location of applicable easement lines, setback lines, other restrictive lines or limits, existing site features or amenities to remain, limits of Work area, locations of temporary structures, and preliminary identification of staging areas and related Contractor facilities for use during execution of the Work.
 - b. Site Demolition plans.
 - c. Spot elevations, based on the civil grading plan, for the perimeter of the new additions, sidewalk, or any other areas pertinent to the drainage of rainwater.
 - d. Parking lot lighting poles location and type.
 - e. Final location for maintenance access holes, handholes, pull boxes.
 - f. Layout of underground distribution systems (normal power emergency power, fire alarm, master clock, intercommunication, computer networking, television, telephone, radio (or other communications systems, antennas, etc.), security, control and spares).
 - g. Details of all curbing, typical parking spaces (regular and accessible), accessibility ramps and curb cuts, light fixtures, flagpole and fence foundations, and any other site improvement or condition pertinent to the scope of work.
 - h. Plans and details of new site equipment or furnishings including equipment, accessory structures, signage and kiosks, planters, seating areas and other site furniture, book drops, postal equipment, vehicular and parking equipment, landscape accessories, site and security lighting, art work (and associated footings, supports, lighting and other accessories), security and pedestrian safety devices, traffic control devices, loading dock equipment, dumpster and recycling areas, and other equipment or improvements appropriate and necessary for the Project as determined by County.
3. Life-safety plans updated to show exit strategy, occupant load, path of travel, rated doors, rated walls and partitions, ramps, vertical lifts and other life safety equipment applicable to the Project.

- a. In addition to previous information, provide UL, flame spread and/or other classification(s) of proposed finishes, determination that building has fire sprinklers, notations concerning installation of life safety equipment by certified specialty sub-contractors pursuant to Florida Administrative Code Rule 4a-b and section 489.105(n), Florida Statutes and other applicable rules and regulations.
 - b. By symbol, indicate exits (required/provided), fire extinguishers, fire alarm equipment, annunciator panels, smoke vents, master valves and emergency disconnects, emergency exit lighting, emergency power equipment, fire sprinklers, fire valve cabinets, exit signs, smoke and fire dampers, generator(s) and other life-safety equipment relevant to the facility.
 - c. By symbol, indicate connections and tie-ins to existing equipment.
4. Phasing plans to delineate the order of the construction and delineating staging and storage areas, maintenance of traffic, temporary buildings or structures, temporary utilities, other temporary constructions, construction access (including parking and delivery locations), haul routes, site barriers, traffic control devices, and other area designations and protective measures to control and separate staff and the public from construction activities and traffic. Consultant shall provide illustrative diagrams needed to convey intent as provided by the Contractor as approved by Contract Administrator, for permitting purposes.
5. Landscape plans and detailing including a plant list clearly referenced and targeted, details for shrub and tree plantings, identification of plants and trees to remain (with associated plans and details of their protection, maintenance and care during the Project), identification of plants to be removed or relocated (including details and specifications for their preparation, replanting, maintenance or disposal), and other necessary documentation to ensure healthy and vigorous plant growth.
6. Irrigation plans and details delineating the entire area of the Project, and addressing necessary connections, alteration, repair or replacement of any existing irrigation systems and irrigation requirements for plant materials provided or retained on site during the Project.
7. Full floor plans including:
 - a. All dimensions and any target notes explaining the extent of Work, wall types, or other component, assembly or directions regarding the Construction.

- b. Note all chases and delineate all rainwater leaders.
 - c. Show structural tie columns and coordinate with the floor plan.
 - d. Target interior elevations.
 - e. Delineate and note all built-in cabinetry or equipment.
 - f. Identify room numbers (using County standard room number system) and door numbers with all spaces and doors having individual numbers.
8. Provide separate demolition plan(s) and other drawings (elevations, sections, etc.), if the scope of work includes demolition which is too excessive to indicate on the drawings that depict new construction.
9. Indicate notes on the extent of the demolition: address dimensions at locations where partial walls are being removed or altered, existing room names and numbers, existing partitions, equipment, plumbing, HVAC or electrical elements.
- a. Include notes dealing with repair of existing areas as a result of demolition.
 - b. Delineate any modifications to existing buildings involving structural elements within the structural documents rather than on the architectural.
 - c. Provide detailing for protective barriers and safeguards (indoor and outdoor) to provide separation of construction activities and protection of County's existing facilities.
10. Building elevations developed further than at the Design Development Phase and including delineation of building joints (including dimensionally located stucco control joints if applicable), material locations, elevation heights, color scheme, special finishes, and other building features.
11. Building and wall sections to establish vertical controls and construction types for the Project. Include clear graphics, and notes on construction assemblies and systems to be used, dimensions, and heights. Provide associated detailing to delineate solutions for difficult connections.
12. Reflected ceiling plans indicating ceiling types, heights, light fixture types, mechanical diffuser locations, sprinkler heads if area is sprinklered. Delineate and detail any dropped soffits or joint conditions between different materials. Ensure coordination with architectural, electrical, mechanical and plumbing disciplines and work of any applicable subconsultants.
13. Roof plans and details:
- a. Indicating all roof penetrations, including drains, scupper, mechanical exhaust fans, any other equipment on the roof, slopes of roof with

elevations shown, type of insulation system coordinated with building energy calculations, type of roofing system to be used sufficient for a 30 year No Dollar Limit warranty with Wind Speed Rider, expansion joints, equipment walking paths, and rooftop solar energy system.

- b. Dimensions to locate the items noted previously, and detail targets shown.
 - c. Roofing system details including but not limited to drains, roof sumps, scuppers, curbs, goosenecks, lighting protection system, equipment supports, parapets, drip edges, gutters and downspouts.
14. Large scale building sections as appropriate to this level of document development and as required to establish vertical controls for the Project. Include clear graphics, and notes on construction assemblies and systems to be used, dimensions, heights. Provide associated detailing to delineate solutions for difficult or unique connections.
15. Interior elevations of all room designs (where those rooms house casework, built-in furniture, variations in material finishes, wall mounted equipment or specialty items, graphics, artworks, plumbing, mechanical or electrical fittings, fixtures or equipment, or other improvement that cannot be shown as a standard detail for several similar rooms) including detail targets referencing cabinetry details, dimensions and heights, notes indicating type of equipment (and whether equipment is in or out of contract), wall materials, finishes, and accessories.
16. Details of casework as necessary to appropriately delineate custom or pre-manufactured casework. Provide appropriate schedules referencing manufacturer's numbers or catalogs, finishes, hardware and other construction characteristics.
17. Details of the following:
- a. Door jamb, head and sill conditions including delineation of required fire ratings for assemblies and components, electrical power requirements and connections to fire alarm, security and other building automation systems within the Project or the existing facility.
 - b. Wall and partition types including identification of rated assemblies and product limitations and tolerances relative to those ratings.
 - c. Window head, sill and jamb conditions, and anchorage methods shown, in lieu of referencing to manufacturer's standards.
 - d. Signage and Wayfinding to include room and building identification, monument sign, directional signage, wayfinding, directories, emergency exiting and equipment signs, occupancy and other code mandated

- signage, and any other items pertinent to the identification of the Project. Coordinate and delineate electrical connections and power requirements.
- e. Interior or exterior expansion control connections and related flashings, cover plates, applied sealants, etc.
 - f. Two (2) flag poles for one (1) United States and one (1) Florida flag that comply with federal and state statutes for flag and pole size. Illumination to comply with LEED standards.
 - g. Any other specialized items necessary to clearly express the intent of the Project design.
18. Room finish, door and window schedules coordinated with the floor plans.
19. Structural foundation and framing plans, with associated diagrams, schedules, notes, detailing and section drawings completed sufficiently to communicate the design intent and coordination with other disciplines.
20. Mechanical Drawings:
- a. Provide double line duct work layout and HVAC equipment layout drawings with related diagrams, schedules, notes, detailing and section drawings completed sufficiently to communicate the design intent and coordination with other disciplines.
 - b. Provide a Building Automation System narrative describing the type of system(s).
 - c. Provide plumbing equipment and fixture layout drawings with related diagrams, schedules, fixture schedules, notes, detailing and section drawings completed sufficiently to communicate the design intent and coordination with other disciplines.
 - d. Provide 1/2-inch scale plans, elevations and sections of the mechanical rooms showing service clearance, room openings, nominal equipment size, ceiling height, duct clearance between bottom of joist and top of ceiling and any ceiling mounted lighting fixtures, electrical equipment or other building assembly or component, etc.
 - e. Consultant shall coordinate with Mechanical Commissioning (Cx) agent and incorporate all feedback into design prior to submitting deliverable to County.
21. Fire Sprinkler Drawings:
- a. Provide a performance-based piping and sprinkler head layout and equipment layout drawings with related diagrams, notes, detailing and section drawings completed sufficiently to communicate the design intent and coordination with other disciplines.

22. Electrical: Provide drawings for the following systems:

- a. Lighting including circuiting and luminaire identification and switching. Also provide illuminance diagrams for all typical indoor spaces and parking lots.
- b. Convenience outlets and circuiting, special outlets and circuiting, television outlets, and power systems and equipment. Provide riser diagrams for all electrical systems including master clock, intercom, fire alarm, cable television, computer networking/telephone. Also, provide for emergency and normal power distribution. Provide luminaire schedule.
- c. Panel schedule may be in preliminary form, but circuitry must be included.
- d. Applicable installation details.
- e. General legend and list of abbreviations.
- f. Voltage drop computation for all main feeders.
- g. Short circuit analysis
- h. Provide 1/2" scale floor plan and wall elevations for all electrical rooms.
- i. Indicate surge protector for main switchboard and electrical panels.
- j. Rooftop solar energy system and it's interconnection to building electrical system.

23. Voice and Data Plans with final technology device locations including CCTV, equipment and panels in telecommunication rooms, door hardware, wireless access point layout, roof mounted antennas and cable trays, grounding systems, and rack and equipment cabinet elevations.

24. Furniture and Equipment Plans and Furniture and Equipment Schedules indicating "In Contract" and "Not in Contract" furniture and equipment items, loose furniture and systems furniture and their location within the facility.

25. Finish Plans and Schedules indicating limits of finishes, identifying transitions and details of same. Provide elevations where more than one wall finish is to be applied. Include building section and elevation references on these plans.

(D) Progress specifications:

1. Provide Project Manual excluding Procurement documents.
2. Provide a Division 00 and 01 based upon the standard documents provided by County and edited by Consultant after consultation with County to establish Project specific requirements.

3. Include progress set of all other Sections in all Divisions or detailed notes on drawings with each section developed to demonstrate to County an understanding of the Project and an appropriate level of developmental progress comparable to that of the drawings. Specifications will include:
 - 11 27 00 - Photographic Equipment
 - 11 53 00 - Laboratory Equipment
 - 11 53 13 - Fume Hoods
 - 11 53 53 - Biological Safety Cabinets
 - 11 53 60 - Autopsy & Morgue Equipment
 - 11 67 23 - Firing Range Equipment
 - 12 35 53 - Lab Casework & Accessories, etc.
 - 13 21 26 - Cold Rooms
 4. Specification sections shall be organized to follow the CSI's latest edition of MasterFormat with each section developed to include CSI's standard 3-part section and page formats with full paragraph numbering.
- (E) Updated Project Schedule, formatted as a preliminary construction schedule reflecting continued Project development and illustrating anticipated schedules for all subsequent Project phases, including permitting and submittal coordination with all agencies having jurisdiction on the Project, Project phasing, site mobilization, temporary facilities, general construction sequencing, anticipated substantial completion dates, County occupancy, and all other significant Project events. Format updated schedule as a Bar Chart (Gantt Chart) type schedule with milestones.
- (F) Color boards, (minimum 2 for County), illustrating the selection of colors, finishes, textures and aesthetic qualities for all finish materials for final review and approval by County and to establish a final palette of material selections for development of subsequent specifications, schedules and other requirements for incorporation into the Construction Documents.
- (G) A letter from Consultant and each of the major technical disciplines and any necessary Subconsultants or explaining how each previous comment concerning the Project have been addressed and/or corrected.
- (H) The Statement of Probable Construction Cost: Consultant shall verify the Contractor's 50% Construction Documents Estimate of Probable Construction Cost and submit to County for review and approval as per 3.01.15. The estimate will be itemized by major categories and projected to the expected time of bid. If, in the Contract Administrator's sole opinion, the Project merits a 50% Construction Documents estimate (ASPE Level 4) prepared by an independent cost estimator, then Contract Administrator may authorize Consultant to obtain those

independent cost estimating services as an Optional Service. Utilize the CSI's latest edition of MasterFormat to organize the estimate. Estimating format ASPE Level 1-4 shall include contingencies, general conditions, acceleration, escalation, construction duration, site work, mobilization, Contractor profit and any other pertinent markup.

- (I) If the Statement of Probable Construction Cost exceeds the reconciled Direct Construction Cost for construction, per section 3.01.15, Consultant shall review the scope of the Project, specified materials, equipment, component systems, and types of construction and recommend changes and reasonable adjustments to those items to align the Probable Construction Cost to the County's available funds to eliminate the estimated cost over-run. The recommended changes and reasonable adjustments are to be made at no additional cost to County, if attributable to Consultant.

- (J) An overall keying strategy diagram and proposed schedule based on county requirements.

- 3.05.03 Consultant shall make all changes to the documents as required by the County's review of the documents and resolve all questions of constructability, code compliance, compliance with County standards, or other issues raised by County during its review of the documents. County will retain the documents submitted at this phase.
- 3.05.04 Consultant shall not proceed with the completion of 75% Construction Documents until the acceptance of all required presentations and reports, County approval of all required submittals, and receipt of a written Notice to Proceed with the next phase.
- 3.05.05 Consultant shall provide updated assessment of compliance with ASHRAE 90.1 baseline requirements. Update daylighting strategy to incorporate natural daylighting into building configuration and design. Incorporate renewable energy technologies. Update results of energy model. Submit project's commissioning report by independent commissioning agent. Provide an updated summary of LEED credits being pursued and anticipated point levels to be achieved with assignment to responsible party.
- 3.05.06 Consultant shall further develop and update the comprehensive signage and wayfinding package to minimally include the following:
 - 1. Provide building final wayfinding verbiage and name review recommendations.
 - 2. Provide map depicting all signage locations and signage centers.
 - 3. Provide final design of Signage Hierarchy for exterior and interior wayfinding and identity signage elements.
 - 4. Provide final location plans and message schedules for all exterior and interior

wayfinding and identity signage elements.

5. Provide refined budget planning for all exterior and interior components.
6. Provide final samples/color approvals.
7. Provide revised phased approach to updating all signage within the area on a priority basis, i.e. Priority One: within six months; Priority Two: within two years; Priority Three: two to five years.

3.05.07 Consultant shall coordinate security requirements with:

1. Door hardware specifier for selection of electric door hardware.
2. Electrical Consultant for electrical service to security electronics equipment rooms.
3. Mechanical Consultant for equipment room conditioning.

3.05.08 Consultant shall coordinate building envelope reviews for and with:

1. Moisture assessment design compliance.
2. HVAC System and Controls Review.
3. Building Envelope Commissioning (Cx) agent

3.05.09 Consultant shall conduct in addition to regularly scheduled meetings, the following workshops, as part of the lab planning efforts for this phase,

1. Workshop CD 50% – Final County reviews

3.05.10 Construction Documents (50% Deliverables (Section reference in parentheses):

1. Transmittal Form (3.05.02A).
2. Construction Document Drawings (3.05.02C)
3. Title Sheet
4. Site Demolition Plan
5. Civil Site Plan
6. Landscape Plan
7. Irrigation Plan
8. Site Lighting Plan
9. Geotechnical Report
10. Full Floor Plans
 - a. Demolition Plans
 - b. Furniture/Equipment Plan
 - c. Detailed Plans
 - d. Reflected Ceiling Plans
 - e. Life Safety/Accessibility Plans
 - f. Roof Plans
 - g. Phasing Plans (3.05.02C4)
11. Elevations

12. Interior Elevations
13. Sections
14. Wall Sections
15. Building Details
16. Signage and Wayfinding
17. Structural Drawings
18. Mechanical Drawings
19. Fire Sprinkler Drawings
20. Electrical Drawings
21. Furniture, Fixtures and Equipment Plans and Schedules
22. Finish Plans and Schedules
23. Three-dimensional views
24. Project Manual (3.05.02D)
25. Energy Code Forms (3.05.02B)
26. Project Schedule (3.05.02E)
27. Cost Estimate (3.05.02H)
28. Color Boards (3.05.02F)
29. Response to Previous Comments (3.05.02G)
30. LEED Requirements (3.05.05)
31. Hard copies as specified in 3.05.02
32. BIM Model (LOD 300), BIM Execution Plan (BIMPxP), model progression schedule and electronic media per Restated Amendment - Attachment 2 – BIM and Electronic Media Submittal Requirements.
33. Lab casework/equipment plans
34. Lab casework schedule
35. Lab equipment schedule
36. Sink schedule
37. Fume Hood Schedule
38. Biological Safety Cabinet schedule
39. Specialty construction details

3.06 75% Construction Documents Phase

- 3.06.01 After written Notice to Proceed from County and based on the approved 50% Construction Documents submittal and any adjustments in the scope or quality of the Project or in the FLCCC authorized by County, Consultant shall prepare for approval by County and in accordance with County's requirements for format and organization, 75% Construction Documents setting forth in greater detail the requirements for the construction of the Project. Consultant is responsible for the full compliance of the design with all applicable codes. Submittals shall include check sets of the Drawings, Specifications, reports, programs, a final up-dated Project Development Schedule, a verification of the Contractor's Updated Statement of Probable Construction Cost and such other documents as reasonably required by County based upon the Consultant's cost estimate review, or as reconciled with Contractor and approved by County Administrator. The construction documents shall conform to County's requirements, all mandatory requirements cited by County's Construction Management Division (or its designated reviewers). Consultant shall, through the Construction Management Division, coordinate Project specific requirements with other participating County review agencies (Office of Economic and Small Business Development ("OESBD"), Risk Management Division, County Attorney, etc.) and others listed below or having jurisdiction or special interest in the Project.
- 3.06.02 Consultant shall submit copies of all deliverables in accordance with Section 1.02.01. Submittals shall include the following:
- (A) "Project Transmittal Form" in accordance with Section 1.02.04.
- (B) Drawings: The drawings shall include the following:
1. Site plans including, but not limited to, area location map, legal description of property, demolition, excavation, utilities, finish grading, landscaping, mechanical, electrical, civil/structural, and architectural site plans.
 2. Plans and details including, but not limited to:
 - a. Title sheet utilizing County's Construction Management Division's standard cover sheet format including a table of contents and statement of compliance by the architect and engineer of record.
 - b. Abbreviations and Symbols: Each discipline shall have a list of abbreviations, schedule of material indications, and schedule of notations and symbols at the beginning of their section of the plans. (Alternatively, Consultant may provide a complete, fully coordinated set of abbreviations, material indications, notations and symbols for the entire Project following the cover sheet.)

- c. Information Available to Bidders: Drawing sheets such as surveys, “as-constructed” drawings, and other graphic material provided and clearly marked as “Information Available to Bidders” shall be provided within the drawing set after coordination with County's Construction Management Division.
- d. Architectural sheets including floor plans with room numbers (using County standard room number system), door, window and finish schedules, roof plans, elevations, sections, and details.
- e. Signage and Wayfinding to include room and building identification, monument sign, directional signage, wayfinding, directories, emergency exiting and equipment signs, occupancy and other code mandated signage, and any other items pertinent to the identification of the Project. Coordinate and delineate electrical connections and power requirements.
- f. Civil/Structural sheets including paving; drainage; foundation plans; floor plans; roof plans; structural plans; sections; details; pipe, culvert, beam, and column schedules.
- g. Mechanical sheets including floor plans; elevations, sections; details; riser and other diagrams; kitchen exhaust hoods; and, equipment, fan, fixture and other necessary schedules and drawing information with an indication that the mechanical/electrical systems from the Phase II FEC/LCCA analysis have been incorporated into the documents.
- h. Fire sprinkler sheets as performance-based documents including reflected ceiling plans, sections, other diagrams, and equipment locations.
- i. Electrical sheets including floor plans; sections; elevations; details; riser and other diagrams; fixture, panel and other schedules; and other drawing information with an indication that the mechanical/electrical systems from the Phase II FEC/LCCA analysis have been incorporated into the documents.
- j. Landscape Architecture, Interior Design, and other subconsultant prepared sheets including plans, sections, elevations, details, diagram, schedules and other drawing information necessary to communicate the complete and integrated scope of work related to that discipline.
- k. A phasing plan to delineate the order of the construction and delineating staging and storage areas, maintenance of traffic, temporary buildings or structures, temporary utilities, other temporary constructions, construction access (including parking and delivery locations), haul routes, site barriers, traffic control devices, and other area designations and protective measures to control and separate staff and the public from construction activities and traffic. Consultant shall provide illustrative diagrams needed to convey intent as provided by the Contractor as approved by Contract Administrator, for permitting purposes.

(C) Project Manual. Consultant shall review and coordinate with County regarding the preparation of the following:

1. Any supplemental information required from Consultant to assist in County's completion of Division 00 procurement and contracting requirements with respect to the foregoing documents and regarding any other agreements necessary for construction of the Project. Include documents made necessary by the Bidding Method chosen by County. However, in no case will Consultant amend or delete items from these documents without prior written approval from County.
2. A specific set of Division 01 specifications based upon guide documents provided by County (or, in the absence of County guide specification documents, from Consultant's own specifications as previously coordinated with County), including all schedules, lists and inventories as required to complete County's guide documents including Contractor's Submittal schedules, warranty schedules, salvage schedules, etc.
3. Specification sections for remaining Divisions or detailed notes on drawings organized and formatted. Project specific specifications shall include:
 - 11 27 00 - Photographic Equipment
 - 11 53 00 - Laboratory Equipment
 - 11 53 13 - Fume Hoods
 - 11 53 53 - Biological Safety Cabinets
 - 11 53 60 - Autopsy & Morgue Equipment
 - 11 67 23 - Firing Range Equipment
 - 12 35 53 - Lab Casework & Accessories, etc.
 - 13 21 26 - Cold Rooms
4. Approved alternate bid items, if required and authorized by County, to bring the Project within the FLCC which would permit County in its sole discretion to accept or reject portions of the construction of the Project.

(D) The Statement of Probable Construction Cost: Consultant shall verify the Contractor's 75% Construction Documents Estimate of Probable Construction Cost and submit to County for review and approval, as per 3.01.15. The estimate will be itemized by major categories and projected to the expected time of bid. If, in the Contract Administrator's sole opinion, the Project merits a 75% Construction Documents estimate (ASPE Level 4) prepared by an independent cost estimator, then Contract Administrator may authorize Consultant to obtain those independent cost estimating services as an Optional Service. Utilize the CSI's latest edition of MasterFormat to organize the estimate. Include an estimate for all furnishings including loose furniture, equipment, shipping and installation

labor. Estimating format ASPE Level 1-4 shall include contingencies, general conditions, acceleration, escalation, construction duration, site work, mobilization, Contractor profit and any other pertinent markup.

(E) A letter from Consultant and each of the major technical disciplines and any necessary subconsultants explaining how each previous review comment (as generated by County and/or other reviewing agencies) concerning the Project have been addressed and/or corrected.

(F) A proposed overall keying organizational diagram and proposed schedule based on county requirements.

- 3.06.03 If the Statement of Probable Construction Cost exceeds the reconciled Direct Construction Cost for construction, per section 3.01.15, Consultant shall review the scope of the Project, specified materials, equipment, component systems, and types of construction and recommend changes and reasonable adjustments to those items to align the Probable Construction Cost to the County's available funds to eliminate the estimated cost over-run. The recommended changes and reasonable adjustments are to be made at no additional cost to County, if attributable to Consultant.
- 3.06.04 If, in the Contract Administrator's sole opinion, the Project merits a construction documents phase estimate prepared by an independent cost estimator, the Contract Administrator may authorize Consultant to obtain those independent cost estimating services as an Optional Service expense. If an estimate or cost analysis was required by the Contract Administrator for a previous phase of the Project, Consultant shall utilize the previously established independent cost estimator, or a replacement acceptable to the Contract Administrator
- 3.06.05 Consultant shall make all required changes or additions and resolve all questions on the documents. The check set shall be returned to County. Upon final approval by County, Consultant shall furnish record copy, signed and sealed by the Florida registered design professionals responsible for their preparation, of all Drawings, Specifications and other documents required during this project phase to County without additional charge.
- 3.06.06 Consultant shall, with County's assistance, file the required civil engineering documents for approval by governmental authorities having jurisdiction (including Broward County and municipalities and their constituent departments, the South Florida Water Management District, and other state, local or federal agency with jurisdictional authority over some aspect of the Project) and obtain certifications of "permit approval" by reviewing authorities prior to the commencement of the Bidding and Procurement activities and early enough to ensure that the eventual contractor

is not delayed by permit processing by Broward County, a municipality or other jurisdictional agency.

Consultant shall provide the original documents or reproducible copies as may be required for submittal to all governmental authorities.

(A) Consultant or its licensed subconsultants shall provide services to apply for all jurisdictional approvals.

(B) Consultant shall attend and provide representation at all review meetings, workshops, hearings and Commission/Council meetings concerning the Project as conducted by other jurisdictional agencies. Consultant shall submit documents, attend meetings and provide other support as necessary to fully participate in any submittals, resubmittals, review meetings, presentations or negotiations required to obtain jurisdictional approval for the Project.

(C) Any changes to the Project drawings or Project Manual or other supporting document made necessary by jurisdictional reviews shall be made by Consultant at no additional cost to County. Consultant shall be compensated for any revisions to the Contract Documents made necessary by such jurisdictional reviews if the requisite compliance requirement or interpretation did not exist in written form prior to the review.

(D) County will notify Consultant when permits shall be transferred to the responsibility of the Contactor for the Project.

3.06.07 Staff from each of Consultant's major technical disciplines and subconsultants as necessary shall attend coordination, review and presentation meetings with County to explain the development of the design concept and technical resolution of their respective building or site systems.

3.06.08 The Contract Administrator's review and approval of the drawings, specifications, calculations and other construction documents shall not relieve Consultant of any responsibility for their accuracy, adequacy and completeness.

3.06.09 Provide updated equipment, furnishing plans and equipment and furnishing schedules. Indicate "In Contract" and "Not in Contract" furniture and equipment items, loose furniture and systems furniture. Consultant shall specify three equipment and furnishings "basis of design," based on County's performance standards for furniture:

(A) Systems Furniture: Provide systems furniture workstation template drawings including a Panel Plan (showing panel widths, heights and finishes), a Component

Plan and Isometric (indicating all components to be provided within the Project with a written description of each component by size, type and quantity and with an isometric drawing of workstations) and an Electrical Panel Plan (indicating electrical outlets, locations of system power entry, computer data and telephone receptacles).

(B) Loose Furniture and Equipment: Provide updated furniture floor plans indicating loose furniture and equipment items with symbols, legends, notes and indicators required for earlier submittals. Supplement with drawing notations concerning installation.

(C) Loose furniture detailed specifications and descriptive data coordinated through County's Purchasing Division (via the Contract Administrator) in enough detail to allow procurement through the Purchasing Division:

1. Manufacturer's Information
2. Vendor State and Local Contract Listings
3. Vendor Information
4. Quantities
5. Item numbers keying specifications to Furniture Floor Plans
6. Manufacturer's Model Numbers
7. Description, size, finishes and other information required to order furniture
8. Installation General Notes

(D) Systems furniture detailed specifications and descriptive data coordinated through County's Purchasing Division (via the Contract Administrator) in enough detail to allow procurement through the Purchasing Division:

1. Manufacturer's Information
2. Vendor State and Local Contract Listings
3. Vendor Information
4. Quantities
5. Item numbers keying specifications to Furniture Floor Plans
6. Manufacturer's Model Numbers
7. Description, size, finishes and other information required to order furniture
8. Installation General Notes

(E) Two (2) updated color boards illustrating furniture selections and the selection of colors, finishes, textures and aesthetic qualities of all finish materials for final review and approval by County and to establish a final palette of material selections for development of subsequent specifications, schedules and other requirements for incorporation into the Contract Documents.

- (F) Finish Plans indicating limits of finishes, identifying transitions and details of same. Provide elevations where more than one wall finish is to be applied to a vertical surface. Include building section and elevation references, room names and numbers. Provide Finish Schedules and Legends for floors, walls, ceilings and all prominent elements; identify materials associated with specified finishes. Identify location specification for colors and finishes of all trim, doors, baseboards, etc.

- 3.06.10 Consultant shall, in addition to regularly scheduled meetings, conduct the following workshop as part of the lab planning efforts for this phase:

Workshop CD 75% – Engineering Coordination meetings

- 3.06.11 Construction Documents (75%) Deliverables (Section reference in parentheses):

1. Transmittal Form (3.06.02A).
2. Construction Document Drawings (3.06.02B) which are signed and sealed
3. Title Sheet
4. Site Demolition Plan
5. Civil Site Plan
6. Landscape Plan
7. Site Lighting Plan
8. Irrigation Plan
9. Geotechnical Report
10. Full Floor Plans
 - a. Demolition Plans
 - b. Furniture/Equipment Plan
 - c. Detailed Plans
 - d. Reflected Ceiling Plans
 - e. Life Safety/Accessibility Plans/Code Analysis
 - f. Roof Plans
 - g. Phasing Plans (3.06.02B2k)
11. Exterior Elevations
12. Interior Elevations
13. Building Sections
14. Wall Sections
15. Building Details
16. Signage and Wayfinding
17. Structural Drawings
18. Mechanical Drawings
19. Plumbing Drawings
20. Fire Sprinkler Drawings
21. Electrical and Low Voltage Drawings
22. Furniture, Fixtures and Equipment Plans and Schedules

23. Finish Plans, (Elevations if needed) and Schedules
24. Three-dimensional views
25. Project Manual (3.06.02C)
26. Project Schedule (3.05.02E)
27. Cost Estimate (3.06.02D)
28. Color Boards (3.06.10C)
29. Response to Previous Comments (3.06.02E)
30. LEED Requirements (3.05.05)
31. Hard copies as specified in 3.06.01.
32. BIM Model, BIM Execution Plan (BIMPxP), model progression schedule and electronic media per Restated Amendment - Attachment 2 – BIM and Electronic Media Submittal Requirements.
33. Lab casework/equipment plans
34. Lab casework schedule
35. Lab equipment schedule
36. Sink schedule
37. Fume hood Schedule
38. Biological Safety Cabinet schedule
39. Specialty construction details

3.07 100% Construction Documents Phase:

- 3.07.01 After written Notice to Proceed from County and based on the approved 75% Construction Documents submittal and any adjustments in the scope or quality of the Project or in the FLCC authorized by County, Consultant shall prepare for approval by County and in accordance with County's requirements for format and organization, 100% Construction Documents setting forth in greater detail the final requirements for the construction of the Project. Upon 100% completion of the Construction Documents, Consultant shall submit deliverables to County as per 1.02.01. Drawings shall be provided as four (4) full size copies and four (4) half-size sets of check sets of the Drawings, Specifications, reports, programs, a final up-dated Project Development Schedule, and such other documents as reasonably required by County. The 100% construction documents shall conform to County's requirements and all mandatory requirements cited by County's Construction Management Division (or its designated reviewers). Consultant shall, through the Construction Management Division, coordinate Project specific requirements with other participating County review agencies (OESBD, Risk Management Division, County Attorney, etc.) and others listed below or having jurisdiction or special interest in the Project.
- 3.07.02 All documents for this phase shall be provided in both hard copy and in electronic media. Consultant must obtain County's approval of the 100% Construction

Documents Phase documents prior to submittal for permitting or bidding. 100% Construction Documents Phase Contract Documents shall be included with the 100% Construction Documents Phase submittal:

(A) "Project Transmittal Form" in accordance with Section 1.02.04

(B) General Requirements:

1. Bid Set. This submittal is the official construction document set and shall be the bid documents.
2. Signed and Sealed/Statements of Compliance: Only complete documents, properly signed and sealed by Consultant and respective subconsultants, will be accepted for review; in addition, these documents shall contain a statement of compliance by the architect or engineer of record that "To the best of my knowledge these drawings and the Project Manual are complete, and comply with the current edition of the Florida Building Code.
3. When requested by County, engineering calculations for mechanical, electrical, and structural systems shall be submitted separately from drawings and the Project Manual.
4. Changes to the Contract Documents may be made by addenda or resubmittal of documents graphically indicating the changes. Addenda shall be signed and sealed by the design professionals and submitted to the Contract Administrator in duplicate as they occur during the bidding process. Documents resubmitted shall bear the appropriate signatures and seals.

(C) Drawings: The drawings shall include, in addition to the document requirements specified above, the following:

1. Site plans including, but not limited to, area location map, legal description of property, demolition, excavation, utilities, finish grading, landscaping, mechanical, electrical, civil/structural, and architectural site plans.
2. Plans and details including, but not limited to:
 - a. Title sheet utilizing County's Construction Management Division's standard cover sheet format including a table of contents and statement of compliance by the architect and engineer of record.
 - b. Abbreviations and Symbols: Each discipline shall have a list of abbreviations, schedule of material indications, and schedule of notations and symbols at the beginning of their section of the plans. (Alternatively,

Consultant may provide a complete, fully coordinated set of abbreviations, material indications, notations and symbols for the entire Project following the cover sheet.)

- c. Information Available to Bidders: Drawing sheets such as surveys, “as-constructed” drawings, and other graphic material provided and clearly marked as “Information Available to Bidders” shall be provided within the drawing set after coordination with County's Construction Management Division.
- d. Architectural sheets including floor plans with room numbers (using County standard room number system), door, window and finish schedules, roof plans, interior and exterior elevations, multiple building, wall and assembly sections, details and all appropriate cross-references.
- e. Signage and Wayfinding to include room and building identification, monument sign, directional signage, wayfinding, directories, emergency exiting and equipment signs, occupancy and other code mandated signage, and any other items pertinent to the identification of the Project. Coordinate and delineate electrical connections and power requirements.
- f. Civil/Structural sheets including paving; drainage; foundation plans; floor plans; roof plans; structural plans; sections; details; and pipe, culvert, beam and column schedules.
- g. Mechanical sheets including floor plans; elevations, sections; details; riser and other diagrams; kitchen exhaust hoods; and, equipment, fan, fixture and other necessary schedules and drawing information with an indication that the mechanical/electrical systems from the 75% Construction Documents Phase FEC/LCCA analysis have been incorporated into the documents.
- h. Fire sprinkler sheets as performance-based documents including reflected ceiling plans, sections, details, riser and other diagrams, equipment locations. Identify all fire hazard groups and sprinkler head types.
- i. Electrical sheets including floor plans; sections; elevations; details; riser and other diagrams; fixture, panel and other schedules; and other drawing information with an indication that the mechanical/electrical systems from the 75% Construction Documents Phase FEC/LCCA analysis have been incorporated into the documents.
- j. Landscape Architecture, Interior Design, and other subconsultant prepared sheets including plans, sections, elevations, details, diagram, schedules and other drawing information necessary to communicate the complete and integrated scope of work related to that discipline.
- k. A phasing plan to delineate the order of the construction and delineating staging and storage areas, maintenance of traffic, temporary buildings or structures, temporary utilities, other temporary constructions, construction access (including parking and delivery locations), haul routes, site barriers, traffic control devices, and other area designations and

protective measures to control and separate staff and the public from construction activities and traffic. Consultant shall provide illustrative diagrams needed to convey intent as provided by the Contractor as approved by Contract Administrator, for permitting purposes.

(D) Project Manual. Consultant shall review and coordinate with County regarding the preparation of the following:

1. Any supplemental information required from Consultant to assist in County's completion of Division 00 procurement and contracting requirements with respect to the foregoing documents and regarding any other agreements necessary for construction of the Project. Include documents made necessary by the Bidding Method chosen by County. However, in no case will Consultant amend or delete items from these documents without prior written approval from County.
2. A Project specific set of Division 01 specifications based upon guide documents provided by County (or, in the absence of County guide specification documents, from Consultant's own specifications as previously coordinated with County), including all schedules, lists and inventories as required to complete County's guide documents including Contractor's Submittal schedules, warranty schedules, salvage schedules, etc.
3. Final specification sections for remaining Divisions or detailed notes on drawings organized and formatted as required for the set of 50% progress specifications. Final Project specific Specifications to include:
 - 11 27 00 - Photographic Equipment
 - 11 53 00 - Laboratory Equipment
 - 11 53 13 - Fume Hoods
 - 11 53 53 - Biological Safety Cabinets
 - 11 53 60 - Autopsy & Morgue Equipment
 - 11 67 23 - Firing Range Equipment
 - 12 35 53 - Lab Casework & Accessories, etc.
 - 13 21 26 - Cold Rooms
4. Approved alternate bid items, if required and authorized by County, to bring the Project within the FLCC which would permit County in its sole discretion to accept or reject portions of the construction of the Project.

(E) A letter from Consultant and each of the major technical disciplines and any necessary subconsultants explaining how each previous review comment (as generated by County and/or other reviewing agencies) concerning the Project have been addressed and/or corrected.

(F) A final keying organizational diagram and keying schedule based on County requirements.

- 3.07.03 If Contractor's Guaranteed Maximum Price (GMP) exceeds the reconciled Direct Construction Cost for construction, per section 3.01.15, Consultant shall review the scope of the project, specified materials, equipment, component systems, and types of construction and recommend changes and/or reasonable adjustments to those items to align the Probable Construction Cost to the County's available funds to eliminate the estimated cost over-run. The recommended changes and reasonable adjustments are to be made at no additional cost to County, if attributable to Consultant.
- 3.07.04 If, in the Contract Administrator's sole opinion, the Project merits a construction documents phase estimate prepared by an independent cost estimator, then Contract Administrator may authorize Consultant to obtain those independent cost estimating services as an Optional Service expense. If an estimate or cost analysis was required by the Contract Administrator for a previous phase of the Project, Consultant shall utilize the previously established independent cost estimator, or a replacement acceptable to the Contract Administrator.
- 3.07.05 Consultant shall make all required changes or additions and resolve all questions on the documents. The complete check set shall be returned to County. Upon final approval by County, Consultant shall furnish to County without additional charge, three (3) record copies, signed and sealed by the Florida registered design professionals responsible for their preparation, of all Drawings, Specifications and other documents required during this Project.
- 3.07.06 Consultant shall, with County's assistance, file the required civil engineering documents for approval by governmental authorities having jurisdiction over the Project (including Broward County and municipalities and their constituent departments, the South Florida Water Management District, and other state, local or federal agencies with jurisdictional authority over some aspect of the Project) and obtain certifications of "permit approval" by reviewing authorities prior to the commencement of Bidding and Award Phase and early enough to ensure that the eventual contractor is not delayed by permit processing by Broward County, a municipality, or any other jurisdictional agency.

Consultant shall provide the original documents or reproducible copies as may be required for submittal to any and all governmental authorities.

(A) Consultant or its licensed subconsultants shall provide services to apply for all jurisdictional approvals.

- (B) Consultant shall attend and provide representation at all review meetings, workshops, hearings and Commission/Council meetings concerning the Project as conducted by other jurisdictional agencies. Consultant shall submit documents, attend meetings and provide other support as necessary to fully participate in any submittals, resubmittals, review meetings, presentations or negotiations required to obtain jurisdictional approval for the Project.
 - (C) Any changes to the Project drawings or Project Manual or other supporting document made necessary by jurisdictional reviews shall be made by Consultant at no additional cost to County. Consultant shall be compensated for any revisions to the Contract Documents made necessary by such jurisdictional reviews if the requisite compliance requirement or interpretation did not exist in written form prior to the review.
 - (D) County will notify Consultant when permits will be transferred to the responsibility of the Contactor for the Project.
- 3.07.07 Staff from each of Consultant's major technical disciplines and subconsultants as necessary shall attend coordination, review and presentation meetings with County to explain the development of the design concept and technical resolution of their respective building or site systems.
- 3.07.08 The Contract Administrator's review and approval of the drawings, specifications, calculations and other construction documents shall not relieve Consultant of any responsibility for their accuracy, adequacy and completeness.
- 3.07.09 County's review and approval of the drawings, specifications, calculations and other construction documents shall not relieve Consultant of any responsibility for their accuracy, adequacy and completeness.
- 3.07.10 Consultant shall provide updated equipment and furnishing drawings and equipment and furnishing schedules. Indicate "In Contract" and "Not in Contract" furniture and equipment items, loose furniture and systems furniture. Consultant shall specify three equipment and furnishings "basis of design," based on County's performance standards for furniture. Consultants to recommend (3) or with an approved equal manufacturer's with 'bases of performance' criteria, quality standards, and warrantee period. Provide updated equipment and furnishing plans and equipment and furnishing schedules.
- (A) Systems Furniture: Provide systems furniture workstation template drawings including a Panel Plan (showing panel widths, heights and finishes), a Component Plan and Isometric (indicating all components to be provided within the Project with a written description of each component by size, type and quantity and with

an isometric drawing of workstations) and an Electrical Panel Plan (indicating electrical outlets, locations of system power entry, computer data and telephone receptacles.

(B) Loose Furniture and Equipment: Provide updated furniture floor plans indicating loose furniture and equipment items with symbols, legends, notes and indicators required for earlier submittals. Supplement with drawing notations concerning installation.

(C) Final Color boards illustrating furniture selections and the selection of colors, finishes, textures and aesthetic qualities of all finish materials for final review and approval by County and to establish a final palette of material selections for development of subsequent specifications, schedules and other requirements for incorporation into the Contract Documents.

(D) Loose furniture detailed specifications and descriptive data coordinated through County's Purchasing Division (via the Contract Administrator) in enough detail to allow procurement through the Purchasing Division:

1. Manufacturer's Information
2. Vendor State and Local Contract Listings
3. Vendor Information
4. Quantities
5. Item numbers keying specifications to Furniture Floor Plans
6. Manufacturer's Model Numbers
7. Description, size, finishes and other information required to order furniture
8. Installation General Notes

(E) Systems furniture detailed specifications and descriptive data coordinated through County's Purchasing Division (via the Contract Administrator) in enough detail to allow procurement through the Purchasing Division:

1. Manufacturer's Information
2. Vendor State and Local Contract Listings
3. Vendor Information
4. Quantities
5. Item numbers keying specifications to Furniture Floor Plans
6. Manufacturer's Model Numbers
7. Description, size, finishes and other information required to order furniture.
8. Installation General Notes

(F) Finish Plans indicating limits of all finishes, identifying transitions and details of same. Provide elevations where more than one wall finish is to be applied to a vertical surface. Include building section and elevation references, ceiling heights if above 9' above finish floor, room names and numbers. Provide Finish Schedules and Legends for floors, walls and ceilings, at a minimum; identifying materials and their associated finish. Provide or identify where to find specification for colors and finishes of all trim, doors, baseboards, etc.

3.07.11 Consultant shall develop a comprehensive signage package to minimally include the following:

1. Detail drawings (fabrication techniques, materials, colors, lighting requirements).
2. Provide revisions to location plans and message schedules as deemed necessary due to construction changes.
3. Bid Procurement - preparation and distribution of bid documents.
4. Review & provide analysis of competitive bids.

3.07.12 Consultant and its security subconsultant shall submit construction documents for the following Security items:

1. Access Control System
2. Video Surveillance System and Digital Recording
3. Door Control Security Intercom
4. Motion Detection System
5. Vehicle Detectors for Gate Controls
6. Security System LAN
7. Security Miscellaneous
8. Security Detection
9. UPS

3.07.13 Consultant shall coordinate building envelope reviews for:

1. Moisture Assessment Design
2. HVAC System and Controls Review

3.07.14 Consultant shall, in addition to regularly scheduled meetings, conduct the following workshop as part of the lab planning efforts for this phase:

Workshop CD 100% – Engineering Coordination meetings

3.07.15 Construction Documents (100%) Deliverables (Section reference in parenthesis):

1. Transmittal Form (3.07.02A).
2. Construction Document Drawings (3.07.02C) which are signed and sealed
3. Title Sheet
4. Site Demolition Plan
5. Civil Site Plan
6. Landscape Plan
7. Site Lighting Plan
8. Irrigation Plan
9. Geotechnical Report
10. Full Floor Plans
 - a. Demolition Plans
 - b. Furniture/Equipment Plan
 - c. Detailed Plans
 - d. Reflected Ceiling Plans
 - e. Life Safety/Accessibility Plans/Code Analysis
 - f. Roof Plans
 - g. Phasing Plans (3.07.02C2k)
11. Exterior Elevations
12. Interior Elevations
13. Building Sections
14. Wall Sections
15. Building Details
16. Signage and Wayfinding
17. Structural Drawings
18. Mechanical Drawings
19. Fire Sprinkler Drawings
20. Electrical Drawings
21. Furniture, Fixtures and Equipment Plans and Schedules
22. Finish Plans, (Elevations if needed) and Schedules
23. Three-dimensional views
24. Engineering Calculations (3.07.02B3)
25. Project Manual (3.07.02D)
26. Energy Code Forms (3.05.02B)
27. Project Schedule (3.05.02E)
28. Color Boards (3.07.10C)
29. Response to Previous Comments (3.07.02E)
30. LEED Requirements (3.05.05)
31. Hard copies as specified in 3.07.01.
32. Report on incorporation of community input.
33. BIM Model, BIM Execution Plan (BIMPxP), model progression schedule and electronic media per Restated Amendment - Attachment 2 – BIM and Electronic Media Requirements.
34. Lab casework/equipment plans

- 35. Lab casework schedule
- 36. Lab equipment schedule
- 37. Sink schedule
- 38. Fume hood Schedule
- 39. Biological Safety Cabinet schedule
- 40. Specialty construction details

3.08 Bidding and Award Phase

- 3.08.01 Upon obtaining all necessary approvals of the Construction Documents, approval by County of the latest Statement of Probable Construction Cost, and a specific Notice to Proceed with the Bidding and Award phase of the Project, Consultant shall assist County in obtaining bids and awarding construction contracts. Bidding and award of the construction contract shall be a Negotiated Agreement as further detailed below.
- 3.08.02 Consultant shall assist County in conducting negotiations with a Contractor or other similar entity to establish a Guaranteed Maximum Price and other contractual issues related to the reconciliation establishment of the construction contract with the Contractor.
- 3.08.03 Consultant will incorporate County's Standard Form Construction Documents (as provided by County for alternative construction delivery) into the Project Manual and shall make final modifications to the Project Manual to reflect results of County's negotiations with the Contractor. County will coordinate any deviations from the Standard Form Construction Documents in advance with Consultant and County's Office of the County Attorney.
- 3.08.04 Consultant shall assist County and the Contractor in obtaining permits, approvals and authorizations from jurisdictional agencies with authority over the Project. Consultant shall, as requested by County, meet on an as-needed basis with jurisdictional agencies in order to clarify or explain submitted documents and to ascertain the scope and intent of review comments made by those jurisdictional agencies. Consultant shall provide graphic and written documents as necessary to facilitate these jurisdictional reviews, including issuing revised drawings and specifications in response to review comments and/or other concerns generated by those jurisdictional agencies without additional cost to County.
- 3.08.05 Consultant shall assist County's review of the Contractor's bidding activities and make recommendations concerning the conduct and result of that bidding. These activities shall include investigating the qualifications of bidders and provision of a written recommendation for bid award. Consultant shall review and, upon request of County, prepare Contract Price Element Adjustment Memoranda made necessary by the

Contractor's bidding activities, changes requested by County, and/or other circumstances affecting the Project's GMP structure.

- 3.08.06 Consultant shall provide to County's Contract Administrator two (2) reproducible copies of the finalized construction Contract Documents, including all drawings and specifications. County will be responsible for printing the documents and distributing them to the Contractor. County reserves the right to instruct Consultant to print the construction Contract Documents (including drawings and specifications) and distribute them to the Contractor, either through its open agreements with printing firms or as a reimbursable service through Consultant.
- 3.08.07 Consultant shall assist the County and Contractor by making themselves available as necessary to address issues related to the design as required to bid the Project for a Guaranteed Maximum Price. This includes but is not limited to, addressing bid Requests for Information (RFI), attending bidder Q&A sessions and issuing responses, addressing and responding to subcontractor proposed alternative designs, reviewing and issuing a professional opinion on add-alternate bid proposals, reviewing and advising County on Subcontractor proposals, and rendering interpretations and clarifications of the drawings and specifications in a written format, supplemented by appropriate graphics, acceptable to County. Consultant's responses to such requests shall be made within seven (7) calendar days or within any prior time limits agreed upon by the County in writing.
- 3.08.08 Consultant shall attend coordination meetings, negotiation meetings, pre-bid conferences and bid openings as scheduled by County and the Contractor.
- 3.08.09 Consultant shall prepare addenda, if any are required, for County to issue to the Contractor. Such documentation shall be prepared and submitted to County within seven (7) calendar days or within any prior time limits agreed upon by the County. No addenda shall be issued without County's approval and if dimensional changes or extensive graphic changes are required the full drawing sheets shall be revised, signed, sealed, and issued as addendum drawings as directed by County. Extensive modifications to specification section(s) shall be prepared as replacements of the entire specification section(s).
- 3.08.10 Consultant shall advise and consult with County in awarding and assisting in the preparation of any agreements necessary for the construction of the Project, including, without limitation, that form of agreement between County and Contractor.
- 3.08.11 If the Guaranteed Maximum Price exceeds County's funds available for the Project, the Contract Administrator will either: (A) approve the increase in Project cost and award a contract or, (B) reject the negotiations with the Contractor and initiate

negotiations with alternatively selected firms within a reasonable time with no change in the Project, (C) direct Consultant to revise the Project scope or quality, or both, as approved by the Contract Administrator, and reinstate negotiations with the Contractor, or (D) suspend or abandon the Project.

3.08.12 Under Article 3.08.11(C) above, Consultant shall, without additional compensation, modify the Construction Documents as necessary to bring the Guaranteed Maximum Price within County's available funds for the Project. County may recognize exceptional construction market cost fluctuations before exercising the option provided in Article 3.08.11(C) above. County agrees to discuss this issue with Consultant prior to exercising this option.

3.08.13 If the Contract Administrator determines an estimate or cost analysis is required by County for this phase, Consultant shall utilize Consultant's cost estimator, or a replacement acceptable to County, to analyze bids and to assist in the preparation of any modified documents that may be required to ensure successful negotiations with the Contractor as an Optional service expense.

3.09 Construction Administration Phase:

3.09.01 Construction activities will begin with the award of the Construction Contract and will end when the Contractor's Final Certificate of Payment is approved by Consultant and County. During this period, Consultant shall provide Administration of the Construction Contract as set forth in the construction Contract Documents between County and the Contractor.

3.09.02 Consultant, as the representative of the County during Construction, shall advise and consult with County and shall have authority to act on behalf of County within the limits established by this Agreement and the Contract Documents. Consultant shall contemporaneously provide County with copies of all communications between Consultant and Contractor and others concerning matters material to the cost, time, sequence, scope, performance or requirements of the Project.

3.09.03 In addition to any RPR, Consultant and Consultant's respective Subconsultants shall attend all key construction events as necessary to ascertain the progress of the Project and to determine in general if the Work is proceeding in accordance with the Contract Documents and the Project Schedule. A minimum of at least one site visit per week will be required by Consultant. The Subconsultant(s) will be required to visit the site at least once a week when their respective portion of the work is in progress. Consultant is responsible for ensuring that its Subconsultants meet the requirements of this section.

- (A) In addition to any RPR, Consultant shall visit the site at least once per week from the time construction begins until substantial completion on an ongoing periodic basis to become familiar with the progress and quality of the Work and to determine if the Work is proceeding in accordance with the Contract Documents and Project Schedule. Consultant shall coordinate the timing of these visits with County's Representative to permit joint observations of the progress of the Work and discussions about Project issues. Based on on-site observations, Consultant shall keep County informed of the progress and quality of the Work. Consultant shall promptly submit to County a detailed written report of the results of each visit to the site, and copies of all field reports and notes of meetings with contractor, subcontractors of any tier, or suppliers.
- (B) Consultant shall, based upon its on-site visits, promptly report to County any defects and deficiencies in the Work coming to the attention of Consultant and shall endeavor to guard County against defects and deficiencies in the Work. This obligation is not reduced or limited by the fact that others, such as County's staff, are also observing the work on behalf of County. Consultant shall make on-site observations utilizing the same personnel over the course of the Work and shall, if requested by County, replace personnel whom County has found to be incompetent or unacceptable.
- (C) Consultant shall not have control over, or charge of, nor be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work.

3.09.04 Consultant shall always have access to the Work wherever it is in preparation or progress. Consultant shall have an affirmative obligation to advise County in writing within 24 hours if Consultants access to the Work is restricted. Consultant and the subconsultants shall review and assess as to whether the Contractor is making timely, accurate, and complete notations on the "Project Record Documents" and maintaining various other administrative records as required by the Contract Documents. In addition, County may at its discretion require Consultant and all subconsultants to regularly submit additional written materials or forms to County relating to or regarding the Project or its progress.

3.09.05 Consultant shall assist County in determining the amounts owing to Contractor based on observations at the site and on evaluations of Contractor's Applications for Payment and shall certify Certificates for Payment in such amounts as provided in the Contract Documents and in such form as County may request. The certification of a Certificate for Payment shall constitute a representation by Consultant to County, based on Consultant's observations at the site and on the data comprising Contractor's Application for Payment, that the Work has progressed to the point indicated; that the quality of the Work is in substantial accordance with the Contract

Documents (subject to an evaluation of the Work for substantial conformance with the Contract Documents upon substantial completion, to the results of any subsequent tests required by or performed under the Contract Documents, to minor deviations from the Contract Documents correctable prior to final completion, and to any specific qualifications stated in the Certificate for Payment); and that Contractor is entitled to payment in the amount certified. However, the certification of a Certificate for Payment shall not be a representation that Consultant has made any examination, other than information which has come to Consultant's attention, to ascertain how and for what purpose Contractor has used the moneys paid by County.

- 3.09.06 RFIs: Consultant shall interpret submitted requests and provide recommendations and/or instructions concerning the requirements of the Contract Documents by the written request of either the County or Contractor. Consultant's response to such requests shall be made within fourteen (14) calendar days or within any prior time limits agreed upon by the County. Consultant shall render written advisory decisions on all claims, disputes, and other matters in question between County and Contractor relating to the execution or progress of the Work or the interpretation of the Contract Documents. RFIs are not intended to replace routine communications, a submittal, a safety plan or schedule, transmittal, or a documentation method.

If insufficient information is provided to allow the Consultant to offer a recommendation or instructions, Consultant shall request Contractor to provide the additional information required in a timely manner.

- 3.09.07 All interpretations and advisory decisions of Consultant shall be consistent with the intent of, and reasonably inferable from, the Contract Documents and shall be in writing or in the form of drawings. In the capacity of interpreter, Consultant shall endeavor to secure faithful performance by both County and Contractor and shall not show partiality to either.

- 3.09.08 Consultant shall have authority to recommend rejection of Work which does not conform to the Contract Documents. Consultant shall not have authority to stop the Work without approval of County. Whenever, in Consultant's reasonable opinion, it is necessary or advisable for the implementation of the intent of the Contract Documents, Consultant may recommend special inspection or testing of the Work in accordance with the provisions of the Contract Documents, whether or not such Work can then be fabricated, installed, or completed, but Consultant shall take such action only after consultation with County. Consultant's monitoring of such additional special testing or inspections is a part of the Basic Services. County shall furnish all such tests, inspections, and reports that are required by law or by the Contract Documents or that it has previously approved in writing, without waiving its right to reimbursement from Contractor. However, neither this authority of Consultant nor a decision made in good faith either to exercise or not to exercise such authority shall

give rise to a duty of responsibility of Consultant to Contractor or other third parties performing portions of the Work.

3.09.09 Contractor Submittals: Consultant shall promptly review and take other appropriate action upon Contractor's submittals such as shop drawings, product data and samples, but only for conformance with the design concept of the Contract Documents. Such action shall be taken within fourteen (14) calendar days of receipt by Consultant unless County and Consultant otherwise mutually agree. In the special case of large complex and multi-disciplined submittals, the County may, in its sole discretion, allow action to be taken within twenty-one (21) calendar days of receipt by Consultant.

(A) Consultant's review shall not constitute review or approval of safety precautions or of construction means, methods, techniques, sequences or procedures. Consultant shall maintain a log of all submittals made and shall compare the submittals with Contractor's progress schedule. Consultant shall not approve changes to the contract or substitutions through the regular submittal process but will utilize those respective methods specified in the Contract Documents.

(B) Should Consultant have to reject submittals of shop drawings, product data, samples or other required Contractor submittal due to Contractor's non-compliance more than two (2) times, then Consultant shall be due additional services for each subsequent review. Fees for such additional services shall be negotiated by Contract Administrator as Optional Services with Consultant according to Article 6 of the Agreement and for an hourly rate not to exceed the average hourly rate for all personnel specified in this Agreement's Exhibit B, Maximum Billing Rates.

3.09.10 Consultant shall coordinate with and assist County concerning contract modifications including the development, review, recommendation for approval, and processing of Contract Price Element Adjustment Memoranda ("CPEAMs"), Change Orders, and amendments to the construction contract, including services necessary due to County's or other jurisdictional authority's required review of such contract modifications for code compliance. Consultant shall:

(A) Meet with County prior to the preparation of CPEAMs, change order items or amendments to ensure that proposed changes comply with applicable codes.

(B) Reconcile Consultant's analysis of proposed Change Order amounts with an analysis provided by Consultant's cost estimator and provide County with a recommendation concerning the respective cost studies.

- (C) Submit written and graphic information documenting proposed changes for formal review by County and municipal or other jurisdictional agencies for code compliance and any necessary permitting.
- (D) Consultant shall review and indicate concurrence through signing CPEAM forms, change orders and amendments for County's authorization in accordance with the Contract Documents, and shall have authority to order minor changes in the Work not involving an adjustment in the contract sum or an extension of the contract time and which are not inconsistent with the intent of the Contract Documents. Such minor changes shall be affected by written order issued through County. The Basic Services shall include providing recommendations concerning proposed change orders and minor changes, and the preparation and processing of change orders and construction change directives.
- (E) Consultant shall process, prepare and issue request for proposals and other contract modification documents in a timely manner and not allow the period required for evaluation, preparation or to issue such documents to exceed twenty-one (21) calendar days. Consultant shall provide written notification to County concerning those modification documents requiring more than twenty-one (21) calendar days processing time with an attached explanation of the circumstances requiring longer processing time.
- (F) All final decisions with respect to substitutions, change orders, and other contract modifications shall be at the sole determination of County.

3.09.11 Consultant shall conduct thorough site observations, make written recommendations and otherwise assist County in determining the dates of substantial completion and final completion, shall review, approve in writing and forward to Contract Administrator for review, written warranties and related documents required by the Contract Documents and assembled by Contractor, and shall certify Contractor's final application for payment. At substantial completion, Consultant shall prepare a punch list of observed items requiring correction, completion or replacement by Contractor within thirty (30) calendar days after the issuance of the Certificate of Substantial Completion. The Punch List shall describe all Work yet to be completed and to be corrected by Contractor, including the estimated cost to complete and correct each item of Work on the Punch List, to satisfy the requirements of this Agreement for final completion and to make the Work satisfactory and acceptable. The Punch List shall be provided to Contractor within five (5) days after final development and review. The process for developing the estimated cost of each item of Work on the Punch List shall use the following methodology or methodologies: Direct Costs, prorated values of outstanding Work based on Contractor's original Schedule of Values, unit prices provided in the bid, labor costs per hour, per square foot of site area, per assembly, historical and current prices for similar work, industry cost database(s), or other

methodology established by County. Consultant shall administer the Contractor's submittal of various closeout submittals including warranty documents, complete versions of final, approved shop drawings and other submittals organized by specification section, operations and maintenance materials, extra materials, and other closeout submittals as required by the Contract Documents. Consultant shall provide electronic versions of these materials to County. Consultant and its subconsultants shall verify and confirm the Contractor's successful demonstration of equipment and systems and the training of County's personnel as required by the Contract Documents. Consultant shall inspect the Project upon final completion to determine compliance with the Contract Documents and, upon so determining, prepare and execute the required forms and other documents indicating that the Work is completed in compliance with the Contract Documents and ready for use by the County.

- 3.09.12 Consultant shall review, approve and/or certify Contractor's submittal of as-constructed survey documentation, (including Computer Aided Design (CAD) and/or other hardcopy or electronic media documents) as may be required by jurisdictional agencies with authority over the Project.
- 3.09.13 NOT USED.
- 3.09.14 Consultant shall assist the Contract Administrator in coordinating and supervising vendor delivery and set-up of those "not-in-contract" furniture and equipment items.
- 3.09.15 Consultant and its lab Subconsultant shall provide up to 12 site visits during construction phase, and an additional 10 site visits as follows:
 - CA1-Site visit pre-installation of casework
 - CA2-Site visit mockup casework review
 - CA3-Site visit intermediate review
 - CA4-Site visit intermediate review
 - CA5-Site visit intermediate review
 - CA6-Site visit intermediate review
 - CA7-Site visit intermediate review
 - CA8-Site visit punch list preparation 1
 - CA9-Site visit punch list preparation 2
 - CA10-Site visit punch list final inspection
- 3.09.16 Consultant and Security Subconsultant shall review product data, shop drawings, RFI responses, factory demonstration review, and installed system for conformance with Contract Documents and the Project Schedule. Subconsultant shall be required to visit the site at least once a week while their respective portion of the work is in progress, until it is accepted by County and BSO security staff.

3.10 Warranty Administration and Post-Occupancy Services

- 3.10.01 For one year following substantial completion of the Project, Consultant shall assist County, without additional compensation, in securing correction of design related defects, and shall in the sixth month make observations of the Project with County and report any observed discrepancies to County and Contractor. At a minimum such post-occupancy on-site observation shall include Architecture, Interior Design, MEP, and Lab Consultant. County reserves the option to have an eleventh month post-occupancy observation walkthrough with design team as an optional service.
- 3.10.02 Consultant, with Subconsultants who contributed to the design of the Project, shall participate in a post-occupancy walk through and evaluation which will be scheduled by County's Construction Management Division at a time subsequent to the eleventh month warranty inspection specified above. During this walkthrough and evaluation, Consultant shall:
- (A) Assist County in reviewing the built Project on site.
 - (B) Participate in and assist County's Construction Management Department in conducting interviews with principal building occupants and users.
 - (C) Generate written commentary concerning the relative success or failure of the facility's design; specified materials, equipment and systems; the Project's design, bidding and construction process; construction cost, schedule and quality concerns that affected the Project, the effectiveness of administrative and managerial procedures utilized by County, Consultant and the Contractor, and recommendations concerning future design and construction of the same or similar building types.
 - (D) Assist County's Construction Management Division in preparing and distributing a post-occupancy evaluation report that presents the findings and recommendations generated during the post-occupancy walkthrough and evaluation.
 - (E) Participate in presentations of the post-occupancy report as required to the County Commission and individual County Commissioners, County Administrator, stakeholders, and/or the public as required.
- 3.10.03 Provide Warranty Administration and support for furniture, fixtures and equipment for a minimum one-year post-installation period (starting from date of installation, inspection and final acceptance by the Contract Administrator) and extending through any extended or special warranty periods associated with individual furniture, fixture or equipment items.

4.01 Optional Services:

- 4.01.01 Any other services not otherwise included in this Agreement and not customarily furnished in accordance with generally accepted architectural practice related directly to design, construction or project administration, and warranty administration and post-occupancy services may be obtained as Optional Services by the County, and if authorized in advance by an appropriate written authorization, will be compensated for as provided under Article 5.

END OF SECTION

Restated Exhibit A, Scope Of Services
Attachment 1:
Project Schedule

Project No.: 104134
RFP No.: S2115731P1
Project Title: Broward County's Medical Examiner's Office and BSO's Crime Lab Combined Facility
Facility Name: Broward County's Medical Examiner's Office and BSO's Crime Lab Combined Facility (Forensic Science Center)

The required project schedule milestones for this project are presented below. Items marked undetermined require additional development and submittal of the Consultant's Project development schedule as required by this Agreement.

PHASE	REQUIRED TIME PERIOD (CALENDAR DAYS)	
Program Validation Phase		
Consultant's Document Preparation and Submittal	135 Days	<input type="checkbox"/> Undetermined
County Review of Submittals		<input checked="" type="checkbox"/> Undetermined
Consultant's Document Correction and Re-Submittal	14 Days	<input type="checkbox"/> Undetermined
Schematic Design Phase		
Consultant's Document Preparation and Submittal	120 Days	<input type="checkbox"/> Undetermined
County Review of Submittals and Cost Estimate Reconciliation	52 Days	<input type="checkbox"/> Undetermined
Consultant's Document Correction and Re-Submittal	14 Days	<input type="checkbox"/> Undetermined
Design Development Phase		
Consultant's Document Preparation and Submittal	140 Days	<input type="checkbox"/> Undetermined
County Review of Submittals and Cost Estimate Reconciliation	52 Days	<input type="checkbox"/> Undetermined
Consultant's Document Correction and Re-Submittal	14 Days	<input type="checkbox"/> Undetermined

50% Construction Documents Phase

Consultant's Document Preparation and Submittal	60 Days	<input type="checkbox"/> Undetermined
County Review of Submittals and Cost Estimate Reconciliation	52 Days	<input type="checkbox"/> Undetermined
Consultant's Document Correction and Re-Submittal	14 Days	<input type="checkbox"/> Undetermined

75% Construction Documents Phase

Consultant's Document Preparation and Submittal	60 Days	<input type="checkbox"/> Undetermined
County Review of Submittals and Cost Estimate Reconciliation	52 Days	<input type="checkbox"/> Undetermined
Consultant's Document Correction and Re-Submittal	14 Days	<input type="checkbox"/> Undetermined

100% Construction Documents Phase

Consultant's Document Preparation and Submittal	60 Days	<input type="checkbox"/> Undetermined
County Review of Submittals		<input checked="" type="checkbox"/> Undetermined
Consultant's Document Correction and Re-Submittal	21 Days	<input type="checkbox"/> Undetermined

Bidding and Award Phase

Guaranteed Maximum Price Reconciliation		<input checked="" type="checkbox"/> Undetermined
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Construction Administration Phase

Substantial Completion Date:	915 Days	<input type="checkbox"/> Undetermined
Final Completion Date:	90 Days	<input type="checkbox"/> Undetermined

Warranty Administration and Post-Occupancy Services

Warranty Administration and Post-Occupancy	365 Days	<input type="checkbox"/> Undetermined
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**FIRST AMENDMENT
EXHIBIT A, SCOPE OF SERVICES
ATTACHMENT 2:
BIM REQUIREMENTS & ELECTRONIC MEDIA SUBMITTAL REQUIREMENT**

EXHIBIT A - SCOPE OF WORK
ATTACHMENT 2:
BIM and Electronic Media Submittal Requirements

Introduction

The Contract Administrator will be utilizing electronic media as the principal way it develops, communicates and archives information concerning its various construction programs for the County. To that end, County's standard Professional Services Agreements for Consultant services and Construction Agreements for construction services require submittal of documents produced on electronic media. The County requires Building Information Modeling (BIM) based design, documentation and construction deliverables, scaled to the County's needs, especially for all major projects, including all new construction. These requirements shall also apply to County Managing General Contractor Agreements. In the event of a Design-Bid-Build construction delivery procurement, a second, modified BIM Project Execution Plan (BIM PxP) will be required to clarify the contractor's involvement to further develop and complete the project BIM and all related activities.

For projects utilizing BIM delivery, Consultant and Contractor will include native BIM format and Industry Foundation Class (IFC) electronic BIM deliverables in addition to all other electronic copies of hardcopy submissions and other files that support the intent of the project at all project milestones. Data interoperability is important to the County and is in line with our life cycle vision. Design Authoring software shall be used throughout the project lifecycle and shall be parametric. It is also important that nationally defined standards and protocols be used when developing BIM's so that data may be normalized for multiple uses, now and in the future. Most current versions of standards such as the National BIM Standards, BIMForum LOD Specification Part 1 and Commentary, OmniClass, Unifomat and MasterFormat, should be used whenever possible.

The Consultant will derive any two-dimensional (2D) deliverables from the Building Information Model. Further, it is the intent of the County to require open-standard facility management data as a project deliverable at all milestones. Project Consultant shall initiate and jointly develop BIM and Construction Operations Building Information Exchange (COBie) information to be completed by the Contractors throughout their corresponding phases of the project.

Definitions and Identifications for BIM terms used in this Attachment, requirements for electronic media, the BIM/CADD Standard of Care, Level of Development (LOD), COBie and other requirements are presented in Sections 1, 2 and 3 of this Attachment 2. The detailed (BIM PxP) Template is provided in Section 4 and is required to be developed at project initiation to provide a master information and data management plan and assignment of roles and responsibilities for model creation and data integration. Wherever possible, the BIM PxP will be developed through a collaborative approach involving all Project Consultants, Contractors and applicable County staff. A small sample of the Model Progression Schedule/Agent Responsible Matrix Template (MPS) is provided in Section 5 and will be made available in its native Excel format upon request. An Introduction and directions for completion are described on the first page of the document.

An important goal for the Construction Management Division is to not only enhance the value of all team efforts to efficiently design and construct lean, new and renovated construction projects using BIM, but also to assist in achieving a consistent use and development of BIM across multiple building types and for a wide range of County agencies. Predictable and uniform data will help to ensure a building dataset that will facilitate ongoing building operation and maintenance protocols, and perhaps someday be called upon to provide usable and reliable data to support other SMART City / SMART County initiatives.

Table of Contents - Exhibit A - Scope of Work, Attachment 2:

- Section 1 - Definitions and Identifications**
- Section 2 - Electronic Media**
- Section 3 - BIM/ CADD Standard of Care, Level of Development (LOD), COBie**
- Section 4 - BIM Execution Plan (BIM PxP) *(Template to be completed)***
- Section 5 - Model Progression Schedule/
Agent Responsible Matrix (MPS) *(Template to be completed)***

Section 1 Definitions and Identifications

The following definitions and identifications set forth below apply to this Attachment 2 unless the context, the Agreement, Exhibit A, Scope of Work in which the word or phrase is used requires a different definition. In the event of a conflict, the Contract Administrator will determine its final resolution:

- 1.1 **3D Coordination & Conflict Analysis:** A process in which clash detection software is utilized during the coordination process to determine field conflicts by comparing 3D models of building systems. The goal of clash detection is to eliminate the major system conflicts prior to installation.
- 1.2 **As-Constructed BIMs:** Multiple Construction BIMs, delivered and validated by the Contractor before closing-up spaces and reviewed by the Consultants that represent the final As-Constructed building and components, including embedded data as required by the Contract Documents.
- 1.3 **Asset Management:** A process in which an organized management system will efficiently aid in the maintenance and operation of a facility and its assets. Asset Management utilizes the data contained in a record model to determine cost implications of changing or upgrading building assets, segregate costs of assets for financial tax purposes, and maintain a current comprehensive database that can produce the value of a company's assets.
- 1.4 **Augmented Reality Simulation (AR):** A Model Use where 3D models - combined with other technologies - allow users to experience virtual objects superimposed on top of physical objects or places, thus allowing images from the physical and virtual worlds to appear as one. AR is typically experienced through hand-held screens, wearables, holograms and projections.

- 1.5 **BIM:** Building Information Modeling (sometimes redundantly identified as a BIM model). BIM is not a specific product or technology, instead it's a collection of software applications and processes designed to facilitate coordination and project collaboration through a facilities lifecycle. BIM is a digital representation of physical and functional characteristics of a facility and is used as a process for developing design, construction and operations and maintenance documentation by virtually constructing a building, bridge or other form of infrastructure – before anything is built.
- 1.6 **BIM Project Execution Plan (BIM PxP / PxP):** A document that defines the appropriate uses for Building Information Modeling on a project (e.g., design authoring, design review and 3D coordination), along with a detailed design and documentation process for executing BIM throughout a facility's lifecycle, team contacts, team responsibilities, team roles, definitions, delivery methods / formats, LOD matrix, work flow and process maps are among other information outlined in the BIM PxP.
- 1.7 **Building Maintenance Scheduling:** A process in which the functionality of the building structure (walls, floors, roof, etc.) and equipment serving the building (mechanical, electrical, plumbing, etc.) are maintained over the operational life of a facility.
- 1.8 **BIM2Field:** See definition for Digital Layout.
- 1.9 **CAD/CADD:** Computer Aided Design/Computer Aided Design and Drafting. Interchangeably used terms interpreted as 2D, (Two Dimensional) representations in electronic format. CAD represents all pre-BIM digital tools and their 2D/3D deliverables.
- 1.10 **CAD/BIM Manager:** The System Administrator and/or person responsible for leading the BIM implementation processes within an organization and supporting it in developing/delivering new BIM services and model-based efficiencies. Also responsible for the management of all CAD and BIM data and processes.
- 1.11 **CIM / Sub-Surface:** Civil Information Modeling and subsurface utility mapping that relates and is coordinated with the building modeling.
- 1.12 **Clash Detection/ Clash Rendition:** A process in which clash detection software is used during the coordination process to determine field conflicts by comparing 3D models of building systems prepared by different disciplines. Rendition or the visual representation of the native-format model file is be used specifically for spatial coordination processes. The key benefit is to eliminate major system conflicts prior to installation, reducing errors, and hence costs, prior to commencement of construction.
- 1.13 **COBie:** Construction Operations Building Information Exchange specifications as administered through the buildingSMART alliance, National Institute of building Sciences, Washington, DC. http://www.nibs.org/?page=bsa_cobie.
- 1.14 **Code Validation:** A process in which code validation software is utilized to check model parameters against specific codes.
- 1.15 **Commissioning:** The process of verifying in new construction that agreed upon building systems achieve the County's project requirements.
- 1.16 **Compatible Data:** Data that can be accessed directly by the target BIM or CADD system upon delivery to the County, without further translation or post-processing of the electronic digital data files. It is the responsibility of Consultant to ensure this minimum level of compatibility.

- 1.17 **Constructability / PEER Review:** Constructability can be defined as a review of the building model along with drawings, specifications to determine feasibility to assembly the project in the manner documented. The review includes, but does not limit, evaluating and identifying efficiencies, assemblies, systems and obstacles to construction.
- 1.18 **Construction System Design:** A process in which 3D System Design Software is utilized to design and analyze the construction of a complex building system (e.g. form work, glazing, tiebacks, etc.) in order to improve planning.
- 1.19 **Coordination BIM:** A model prepared for the physical coordination of systems between disciplines, involving Clash Detection reports, Constructability reviews, virtual and/or personal coordination meetings with architects, engineers, consultants, construction manager(s) and sub-contractors.
- 1.20 **Cost Analysis:** A process in which a BIM can offer a preliminary analysis of the costs of constructing a Project during the design process and provide cost benefit effects of additions and modifications with potential to save time and avoid budget overruns. The accumulation, examination, and manipulation of cost data for comparisons and projections.
- 1.21 **Cost Estimation:** A process in which a BIM is used to develop accurate quantity take-offs for the purpose of creating or validating cost estimates.
- 1.22 **Design Authoring:** A process in which 3D software is used to develop a BIM based on criteria that is important to the translation of the building's design. Design authoring tools are a first step towards BIM, connecting the 3D model with a database of properties, quantities, means and methods, costs and schedules.
- 1.23 **Design for Maintenance:** An evaluation process where each object selected during design for inclusion in a BIM are evaluated for maintenance issues, such as recommended, or code required clearances to perform routine maintenance activates to include complete replacement of the object or any of its components.
- 1.24 **Design Model:** is an object-based 3D model generated by the Design Team (individually or as a group) for the purposes of design analysis, Clash Detection and documentation.
- 1.25 **Design Reviews:** A process in which a 3D model is used to showcase the proposed design to the stakeholders and to help evaluate whether it has met deliverable requirements.
- 1.26 **Digital Fabrication:** A process that utilizes machine technology to prefabricate objects directly from a 3D Model. The Model is spooled into appropriate sections and input into fabrication equipment for production of system assemblies.
- 1.27 **Digital Layout - BIM2Field:** A process that allows information in a BIM to be transferred to digital layout tools for layout in conformance to the model. This information can be used to validate (QA/QC) the physical facility against the model.
- 1.28 **Disaster Planning / EM Preparation:** A process in which emergency responders would have access to critical building information in the form of model and information system. The BIM would provide critical building information to the responders, that would improve the efficiency of the response and, more importantly, minimize the safety risks. The dynamic building information would be provided by a building automation system (BAS), while the static building information, such as floor plans and equipment schematics, would reside in a BIM model. These two systems would be integrated via a wireless connection and emergency responders would be linked to an overall system. The

BIM coupled with the BAS would be able to clearly display where the emergency was located within the building, possible routes to the area, and any other harmful locations within the building.

- 1.29 **Electrical Analysis:** A process in which intelligent modeling software uses the BIM model to determine the most effective electrical system based on engineering and design specifications. These analysis tools and performance simulations can significantly improve the design of the facility and its energy consumption during its lifecycle in the future.
- 1.30 **Energy Analysis:** A process in which intelligent modeling software uses the BIM model to determine the most effective facility energy plan based on engineering and design specifications. These analysis tools and performance simulations can significantly improve the design of the facility and its energy consumption during its lifecycle in the future.
- 1.31 **Existing Conditions Modeling:** A process in which a project team develops a parametric 3D model of the existing conditions for a site, facilities on a site, or a specific area within a facility. This model can be developed in multiple ways depending on what is desired and what is most efficient. Once the model is constructed, it can be queried for information, whether it be for new construction or a modernization project.
- 1.32 **Facility Data Exchange:** A process where a facility data schema is developed to ensure information is supplied to the BIM in electronic form so that it can be easily exchanged between the BIM and the organizations selected tool. The capability should include textural as well as graphic entities.
- 1.33 **Federated BIM:** A BIM model which links (does not merge) several single-discipline models together. Federated Models do not merge the properties of individual models into a single database. A federated model is useful for design co-ordination, clash avoidance and clash detection, approvals processes, design development, estimating and so on, but the individual models do not interact, they have clear authorship and remain separate. This means that the liabilities of the originators of the separate models are not changed by their incorporation into the federated model.
- 1.34 **IFC:** Industry Foundation Classes, open sharable standards for building information as defined by the buildingSMART alliance, National Institute of building Sciences, Washington, DC. <http://www.buildingSmart.org/compliance/certified-software>
- 1.35 **Information Manager:** The BIM Protocol refers to and provides for the appointment of an 'Information Manager' by the employer. This is the project manager, or BIM Manager who is responsible for managing the processes of information exchange on projects, using BIM procedures and methods. This is expected to form part of a wider set of duties under an existing appointment and is likely to be performed either by the Design Lead or the Project Lead.
- 1.36 **Integrated Project Delivery* (IPD):** The owner's goal who's primary motive is to bring the teams together early on in the project. A full implementation of BIM also requires the project teams to collaborate from the inception stage and formulate model sharing and ownership contract documents. *NOTE: True IPD employs various constructs, many of which the County is precluded from using by state law. (such as the use of multi-party contracts, and profit sharing). The County's integrated delivery approach leverages many aspects of IPD that are allowed by law.

- 1.37 **Laser Scanning and Point Cloud Integration:** A process where the application is the controlled steering of laser beams followed by a distance measurement at every pointing direction. This is used to rapidly capture shapes of objects, buildings and landscapes. The point cloud generated is then interpreted by software to create a BIM of the existing conditions.
- 1.38 **Life Cycle Assessment** - Life-cycle assessment (LCA, also known as life-cycle analysis) is a cradle-to-grave environmental impact assessment for built assets, in terms of materials and energy. The energy and materials used, along with waste and pollutants produced as a consequence of a product or activity, are quantified over the whole life cycle; the result representing the environmental load of that asset. ISO 14040 defines LCA methodology.
- 1.39 **Lighting Analysis:** A process in which intelligent modeling software uses the BIM model to determine the most effective lighting method based on engineering and design specifications. These analysis tools and performance simulations can significantly improve the design of the facility and its energy consumption during its lifecycle in the future.
- 1.40 **LOD:** Level Of Development Specification for Building Information Models. See Section 3 – BIM/CADD Standards of Care and the current edition (2019 or later), of the BIMForum LOD Specification for additional information. <http://BIMForum.org/lof>
- 1.41 **Maintenance & Repair Information:** A function to allow the collection and storage of maintenance and repair information about objects brought into a BIM.
- 1.42 **Mechanical Analysis:** A process in which intelligent modeling software uses the BIM model to determine the most effective mechanical system design based on engineering and design specifications. These analysis tools and performance simulations can significantly improve the design of the facility and its energy consumption during its lifecycle in the future.
- 1.43 **Model Progression Schedule/Agent Responsible Matrix (MPS):** A worksheet that is a guide for the project team to define model creation scope of work, minimum model level of development and responsible agent. The LOD will aid in determining the level of involvement of the project stakeholders from planning through facility turnover. This worksheet is intended to guide the project team in achieving project goals, accommodate required BIM uses, meet schedule requirements for the project and identify the responsible agents at differing phases of the project.
- 1.44 **OmniClass:** OmniClass Construction Classification System (OCCS), is a means of organizing and retrieving information specifically designed for the construction industry. This agreement incorporates Table 23 establishing National Standards for the classification of construction products. Most recent release date May 16, 2012. OmniClass uses MasterFormat and UniFormat as the basis of its Tables wherever possible. <http://www.omniclass.org/about>
- 1.45 **Owner Approval:** A business process which takes advantage of information stored in a BIM to help validate progress as well as observing that the Owner's intent for the facility is being honored both conceptually and contractually.
- 1.46 **Phase Planning - 4D Modeling:** A process in which a 4D model (3D models with the added dimension of time) is utilized to effectively plan the phased occupancy in a renovation,

- retrofit, addition, allow construction scheduling or to show the construction sequence and space requirements on a building site.
- 1.47 **Programming:** A process in which a spatial program is utilized to efficiently and accurately assess design performance in regard to spatial requirements. Use of the BIM model allows the project team to critically analyze space and understand the complexity of space standards and regulations for discussion with the County and other stakeholders.
- 1.48 **PxP:** Abbreviated form of (BIM PxP). See definition for BIM Project Execution Plan.
- 1.49 **Quality Assurance/Quality Control - QA/QC:** QA/QC as a BIM Use refers to ensuring that the BIMs follow County requirements and all components of the approved BIM Execution Plan, and that the BIMs accurately represent the building geometry and data to meet the purposes for which they are developed.
- 1.50 **Quantity Take Off (QTO):** A model use representing how 3D models are used to calculate the quantity of Furniture, Fixtures and Equipment or building material to create a detailed measurement of materials and labor needed to complete a construction project. Estimators review drawings, specifications and BIMs to find these quantities.
- 1.51 **Record BIMs:** The updated BIMs generated by the Architecture/Engineering Team of record that includes the Contractors' As-Constructed BIMs.
- 1.52 **Security / Key Management:** A process to identify and evaluate the security zones in the facility using BIM. The process includes identifying the door keys required for openings through the security perimeters established to ensure that the level of security defined is maintained.
- 1.53 **Site Analysis:** A process in which BIM/GIS tools are used to evaluate properties in a given area to determine the most optimal site location for a future project. The site data collected is used to first select the site and then the position the building based on engineering criteria (e.g. solar path, utility availability, hazardous material).
- 1.54 **Site Utilization Planning:** A process in which a 4D model is used to graphically represent both permanent and temporary facilities on site, with the construction activity schedule. Additional information incorporated into the model can include labor resources, materials and associated deliveries, and equipment location.
- 1.55 **Space Management:** A process in which BIM is utilized to effectively allocate, manage, and track space types, workspaces, occupancy and resources within physical assets.
- 1.56 **Specification Production:** A data based three-part specification system linked to the objects selected in a BIM which responds to any changes or alternatives items added or subtracted from the model.
- 1.57 **Structural Analysis:** A process in which analytical modeling software utilizes the BIM design authoring model to determine the behavior of a given structural system. Based on this analysis further development and refinement of the structural design takes place to create effective, efficient, and constructible structural systems.
- 1.58 **Sustainability & LEED Evaluation:** A BIM process in which a project is evaluated based on LEED or other sustainability criteria. This can refer to materials, performance, or a process. Sustainability evaluations can be applied across all four phases of a construction project, Planning, Design, Construction, and Operation. Sustainability evaluation is most effective when it is done in planning and design stages and then applied in construction and operations phase.

- 1.59 **Tolerance:** Acceptable dimension or variation from precise material, fabrication, or assembled condition as a unit of measure to be specified allowable variations in strength, stability, dimension, the mix of a material, the performance of a system, temperature ranges and so on.
- 1.60 **Total Cost of Ownership / Service Life:** A financial estimate intended to help buyers and owners determine all direct and indirect costs of a product or system.
- 1.61 **Virtual Design and Construction (VDC):** The management of integrated multi-disciplinary performance models of design-construction projects, the work processes and organization of the teams to support business objectives.
- 1.62 **Virtual reality Simulation (VR):** A Model Use where 3D models are part of an Immersive Environment where users experience simulated places, objects and processes. As opposed to Augmented Reality Simulation, VR may require full 'immersion' within multi-projection rooms (CAVE) and/or through stereoscopic goggles and other specialized gear.
- 1.63 **Visualization:** Any technique for creating images, diagrams, or animations to communicate information. BIM can be used as a tool to show visual clarity of simple and complex systems and data to help understand project scope, design options, constructability, coordination and QA/ QC.

Section 2 Electronic Media

2.1 General Requirements:

2.1.1 All Work, including drawings, land surveying work, maps, details or other drawing information to be provided in electronic media by Consultant shall be accomplished and developed using Computer-Aided Design and Drafting (CADD), or Building Information Modeling (BIM), or a coordinated combination of both as determined by the Contract Administrator and may also include other software and procedures conforming to the following criteria.

2.2 BIM and CAD/CADD Graphic Formats:

2.2.1 Provide all CAD/CADD data in Autodesk, Inc.'s AutoCAD release 2019 or higher for Windows in native .dwg electronic digital format. CAD/CADD data required for Contract submittals shall be provided in native .dwg format. Provide copies of all drawing sheets or other CAD/CADD and/or PDF format produced documents intended for hardcopy plotting or printing in plot (.plt) and drawing web format (.dwf) versions of all sheets/documents.

2.2.2 Provide all BIM models and data in Autodesk Revit 2019 or higher. Provide all BIM and data in any of the following software formats:

- a. Autodesk, Inc. Revit 2019 or higher.
- b. Alternative compatible BIM software formats that conform to the requirements of Section 2.2 of this Attachment if accepted in writing by the County's Contract

Administrator.

2.2.3 BIM data required for Contract submittals shall be provided in their native (.rvt typical) format as well as .ifc format in conformance with IFC (Industry Foundation Classes) IFC2x4 or higher, as established by the buildingSMART International Alliance for Interoperability. Use of BIM vendor's or systems that incorporate the International Alliance for Interoperability IFC standard above are acknowledged but their use must be approved in writing in advance by the County's Contract Administrator and otherwise comply with this Attachment.

2.2.4 Building Positioning to be accomplished for the intended project site by using "Auto – by Shared Coordinates" process or similar. Obtain State Plane Coordinates from Project survey information and utilize this same positioning process for all BIM files.

2.2.5 CAD/CADD data required for Contract submittals shall be provided in native .dwg format or be contained within the structure of the BIM data required in Section 2.2.2.

- a. Ensure that all digital files and data (e.g., constructs, elements, base files, prototype drawings, reference files and images, blocks, attribute links, pen settings and all other files external to the drawing itself) are Compatible Data with the Contract Administrator's target BIM and/or CADD system (i.e., BIM and CADD software, platform, database software), and adhere to the standards and requirements specified herein.

2.2.6 Target platform: A personal computer with Windows 10 operating system that meets or exceeds the minimum manufacturer's requirements to operate the version of software utilized for the project.

2.2.7 Any non-graphical database delivered with prepared drawings must be provided in relational database format compatible with Microsoft Access 2016 or higher, or other compatible SQL format database. All database tables must conform to the structure and field-naming guidance provided upon request by the Contract Administrator.

- a. Maintain all linkages of non-graphical data with graphic elements, relationships between database tables, and report formats.

2.2.8 CAD/CADD Standards:

- a. Standard plotted drawing size: 24-inch x 36-inch sheets (Arch D-sized sheet)
- b. Coordinate with the Contract Administrator concerning the standard file naming protocol to be utilized.
- c. Drawing Set Organization and Sheet Identification per the United States National CAD Standard - V5. Provide dots in lieu of dashes at all uses.

2.2.9 CAD/CADD Layering:

- a. Conform to the guidelines defined by the American Institute of Architect's (AIA) standard document, U.S. National CAD standards version 5 (V5). "CAD Layer

Guidelines”, 2nd edition or later.

- b. Provide an explanatory list of which layers are used at which drawing and an explanatory list of all layers which do not conform to the standard AIA CAD Layer Guidelines including any user definable fields permitted by the guidelines.
- c. Layering: The Contract Administrator may, from time to time, supplement the AIA CAD Layer Guidelines with the Contract Administrator's specific requirements for Facilities or Construction Management and other related information. Obtain latest Contract Administrator specific layering from Contract Administrator prior to production of documents and incorporate into drawings.

2.2.10 Attribute Definitions:

- a. Obtain latest guidance from the Contract Administrator concerning attribute definition, database linking and other information embedding requirements prior to production of documents.

2.2.11 Federated Models: The following colors shall be utilized for all federated models including Design, Construction, Coordination, As-Constructed, and Record Models:

- a. Architectural Models
 - 1. Architectural - Default
 - 2. Envelope (Curtainwall, Precast, Other) - Default
 - 3. Masonry - Gray
- b. Civil & Site Improvement Model
 - 1. TBD
- c. Structural Models
 - 1. Steel – Rust
 - 2. Concrete - Gray
 - 3. Masonry - Gray
- d. MEP/FP Models
 - 1. Mechanical Ductwork Supply - Magenta
 - 2. Mechanical Ductwork Return - Plum
 - 3. Mechanical Ductwork Exhaust – Medium Orchid
 - 4. Mechanical Piping Supply – Hot Pink
 - 5. Mechanical Piping Return- Violet
 - 6. Electrical Conduit - Orange
 - 7. Cable Tray- Yellow
 - 8. Electrical Lighting – Light Golden Rod Yellow
 - 9. Plumbing Domestic Water - Lime
 - 10. Plumbing Storm / Roof Drain – Dark Green
 - 11. Plumbing Waste / Vent - Olive

12. Medical Gas – Light Green
13. Fire Protection - Red
14. Fire Alarm – Golden Rod
15. Data/IT / Controls - Aqua
16. Pneumatic Tubing – Dark Slate Gray

e. Miscellaneous Models

1. Framing – Sandy Brown
2. Equipment Models (by Equip. Planners) – Burly Wood
3. Clearances - Dark Red

2.2.12 Deviations from Standards:

- a. Submit a written request for approval of any deviations from the Contract Administrator's established electronic media standards. Pre-coordinate the development, use and submittal of 3-D modeling, Building Information Models (BIM), photo-realistic renderings, animations, presentations and other visualization/information tools utilized during the design and construction process to ensure compatibility of submittal with County's uses and information systems.
- b. No deviations from the Contract Administrator's established BIM/CADD standards will be permitted unless prior written approval of such deviation has been received from the Contract Administrator.
- c. County or its Owner's Designated Representative reserves the right to review, accept or reject AutoCAD files, BIMs and other Digital Deliverables. If the Digital Deliverables do not comply with the provisions of the agreement between County and the External Project Team member, the External Project Team member will be required to correct the work at no additional cost to County or delay to the Project Schedule.
- d. County or its Owner's Designated Representative also reserves the right to review, accept or reject Facility Data deliverables when required by contractual agreements. To ensure successful integration into County's computer aided facility management software, milestone reviews may be conducted by County to export or link BIM data into these designated programs to ensure compatibility and capability. During the development of the BIM PxP, the required BIM outputs allowing for this integration will be determined. If the Facility Data integration with the computer aided facility management software fails because of the BIMs non-compliance with the provisions of the agreement between County and the External Project Team member, or the data imported does not accurately reflect the current state of the Project, the External Project Team member will be required to correct the work at no additional cost to the owner or delay to the Project Schedule.

2.3 Non-BIM/CADD Graphic Format:

2.3.1 Provide digital photography files and other miscellaneous graphics in High Resolution JPEG, PDF in 600 dots per inch (dpi) or higher resolution or PNG format. Provide RAW files when available.

2.4 Non-Graphic Format:

2.4.1 Provide word processing files in Microsoft Word 2016 or higher compatible file formats including all fonts, typefaces, bitmap and vector graphics and other information necessary for remote printing.

2.4.2 Provide spreadsheet files in Microsoft Excel 2016 or higher for windows compatible file formats including all fonts, typefaces, bitmap and vector graphics and other information necessary for remote printing.

2.4.3 Provide database files in relational database format compatible with Microsoft Access 2016 or higher, PDF or other compatible SQL format database including all tables, form and report formats, fonts, typefaces, bitmap and vector graphics and other information necessary for remote printing. Ensure integrity of relational database structure.

2.5 Delivery Media and Format:

2.5.1 Submit copies of all BIM/CADD data and other electronic files developed under this contract on electronic digital media as required for project phase submittals to 400 dots per inch (dpi) resolution.

2.5.2 Provide electronic digital data and files on labeled ISO-9660 CD-ROM., DVD's, Flash drives or other acceptable alternatives if approved by the Contract Administrator. Each Device or Disc shall contain identifying County project information in their disk name.

2.5.3 The electronic digital media shall be in the format which can be read and processed by the Contract Administrator's target CADD or BIM system. See also Section 2.2.

2.5.4 The external label or archival case for each electronic digital media shall contain, as a minimum, the following information:

- a. The Project Number, Project Title and date.
- b. The Facility Name
- c. The format and version of operating system software.
- d. The name and version of utility software used for preparation (e.g., compression/decompression) and copying files to the media.
- e. A list of the filenames, (a separate sheet will be accepted).

2.5.5 Before a BIM/CADD file is placed on the delivery electronic digital media, the following procedures shall be performed:

- a. Detach all BIM's from the Central File.
- b. Ensure the proper and updated completion of all information on the 'Start Screen' page for all Revit models.
- c. Scrub and remove all unused or alternative versions, elements and objects from the model.
- d. Ensure that drawing sheets, viewports, paper-space, line weights, fonts, and other drawing components are correctly configured for Contract Administrator's viewing and plotting.
- e. Make sure all reference files are attached using a "relative" path setting and without device or directory specifications.
- f. "Transmit a Model" function should be used in Revit or AutoCAD to assemble files for submittal. For each 2D drawing, provide one bound file containing drawing sheet with associated XREFs and one un-bound file containing the associated XREFs.
- g. Compress and reduce all design files using PKZIP, WINZIP or other compatible file compression/decompression software approved by the Contract Administrator. If the file compression/decompression software is different from that specified above, then an electronic digital media copy of the file compression/decompression software shall be purchased for the Contract Administrator and provided to the Contract Administrator with the delivery media.
- h. Include all files, both graphic and non-graphic, required for the project (i.e., color tables, pen tables, font libraries, block libraries, user command files, plot files, and other elements of drawing definition). All blocks not provided as Contract Administrator-furnished materials must be provided to the Contract Administrator as a part of the electronic digital deliverables.
- i. Make sure that all support files such as those listed above are in the same directory and that references to those files do not include device or directory specifications.
- j. Document any fonts, tables, or other similar customized drawing element developed by Consultant or not provided among Contract Administrator-furnished materials. Contractor shall obtain Contract Administrator approval before using anything other than Contract Administrator's standard fonts, line types, tables, blocks, or other drawing elements available from Contract Administrator.
- k. Include any standard sheets (i.e., abbreviation sheets, standard symbol sheets, or other listing) necessary for a complete project.
- h. Check completed files are free of any known viruses or unrequired attachments.

2.6 Drawing Development Documentation:

2.6.1 Provide the following information for each finished drawing in the nonplot layer X
****-NPLT:

- a. How the data were input (e.g., keyed in, downloaded from a survey total station instrument (include name and model), and other identification data).
- b. Brief drawing development history (e.g., date started, modification date(s) with brief description of item(s) modified, author's name, and other identifying data.).
- c. The names of the reference, blocks, symbols, details, tables, and schedule files required for the finished drawing.
- d. Layer assignments and lock settings.
- e. Text fonts, line styles/types used, and pen settings.

2.7 Submittal:

2.7.1 Document any fonts, tables, or other similar customized drawing element developed by Consultant or not provided among the Contract Administrator-furnished materials. The contractor shall obtain Contract Administrator approval before using anything other than the Contract Administrator's standard fonts, line-types, tables, blocks, or other drawing elements available from the Contract Administrator.

2.8 Submittals / Deliverables:

2.8.1 Submit as Project Record Documents specified above and as required for project phase submittals and project record documents.

2.8.2 Submit electronic media with a transmittal letter containing, as a minimum, the following information:

- a. The information included on the external label of each media unit (e.g., CD, DVD, flash drive, etc.), along with the total number being delivered, and a list of the names and issue dates of all files on the media.
- b. Brief instructions for transferring the files from the media.
- c. Confirm that all delivery media is free of known computer viruses. A statement including the name(s) and release date(s) of the virus-scanning software used to analyze the delivery media, the date the virus-scan was performed, and the operator's name shall also be included with the certification. The release or version date of the virus-scanning software shall be the current version that has detected the latest known viruses at the time of delivery of the digital media.
- d. The following "Plot File Development and Project Documentation Information" as an enclosure or attachment to the transmittal letter provided with each electronic digital media submittal:
 1. List of all new figures, symbols, tables, schedules, details, and other blocks created for the project, which were not provided to Consultant with the Contract Administrator-furnished materials, and any associated properties.
 2. List of all database files associated with each drawing, as well as a description and documentation of the database format and schema design.
 3. Recommended modifications which will be necessary to make the data available for GIS use.

2.8.3 Prime Contractors are responsible for ensuring that the Digital Deliverables prepared by their Subcontractors or Subconsultants comply with the standards and policies outlined in this document.

2.9 Ownership:

2.9.1 County has ownership and all rights to all finished or unfinished Digital Deliverables developed for this Project. Any Digital Deliverables generated under any County design and construction Contract, including those generated by the External Project Team Members' Subcontractors or Subconsultants, shall become the property of County. County will have unlimited use of the Digital Deliverables produced for the Project. County acknowledges that the Digital Deliverables are an Instrument of Service of the External Project Team member and that the author of the Digital Deliverable does not represent or guarantee that the Digital Deliverable will be useful to County for any purposes beyond those uses that they were authored.

2.9.2 County will have unlimited rights under the Agreement of which this document is a part to all information and materials developed under these and other contractual requirements and furnished to the Contract Administrator and documentation thereof, reports, and listings, and all other items pertaining to the work and services pursuant to this agreement including any copyright.

2.9.3 Unlimited rights under this contract are rights to use, duplicate, or disclose text, data, drawings, and information, in whole or in part in any manner and for any purpose whatsoever without compensation to or approval from author except where otherwise limited within the Contract.

2.9.4 The Contract Administrator will at all reasonable times have the right to inspect the work and will have access to and the right to make copies of the above-mentioned items.

2.9.5 All text, electronic digital files, data, and other products generated under this contract shall become the property of County except where otherwise limited within the Contract.

2.10 Contract Administrator-Furnished Materials to the Construction Contractor:

2.10.1 The Contract Administrator and Consultant may make various electronic information available to the Contractor during the Pre-Construction and Construction phases of the Project. To this end, Consultant shall make the following information available to the Contractor in electronic format:

- a. Work-files: Selected work product files, copies of BIM and/or CAD files, reports, spreadsheets, databases, specifications, drawings and other documentation of

Consultant's work in progress may be provided to the Contractor, Managing General Contractor, or other County consultant on an as required basis. Consultant shall cooperate and facilitate the secure exchange of these electronic media documents.

- b. Where electronic media submittals of final site surveys are required: Provide electronic copies of any existing site survey data already on electronic media conforming to Section 2.2 of this Attachment.
- c. Where Electronic Project Record Documents are required, Consultant will provide the Contractor one set of contract drawings in an electronic file format conforming to Section 2.2 of this Attachment, to be used for as-constructed drawing markups at the Contractor's option. Make electronic file drawings available on media in conformance with Section 2.5 of this Attachment.

2.11 Other Digital Information:

2.11.1 A variety of digital information may be generated by participants in the design process including the Contract Administrator, Consultant, Subconsultants, Contractor, subcontractors, the Contract Administrator's commissioning authority, local jurisdictional authorities and other project team members.

2.11.2 Consultant shall facilitate and participate in this digital exchange of information by conforming to the standards expressed above and as further described in attachments and Exhibit A Scope of Works.

Section 3 BIM/CADD Standards of Care

3.1 General Provisions:

3.1.1 The Model(s) shall be developed to include the systems described below as they would be built, the processes of installing them, and to reflect final As-Constructed construction conditions. The deliverable 3D Model at all phases shall be developed to include as many of the systems described below as are necessary and appropriate to the design/construction stage. The BIM shall be provided in an editable form and from its inception shall include automatic model positioning using a common reference point (Point of Origin), based on "Florida State Plane Coordinates" derived from the project survey.

3.1.2 The Model shall be developed using Building Information Modeling ("BIM") supplemented with Computer Aided Drafting and Design ("CADD") content as necessary to produce a complete set of Construction Documents.

3.1.3 Provide all Building Information Modeling (BIM) for Space Management and Program Validation in conformance to the General Service Administration's (GSA)

“Building Information Modeling Guide 02 -Spatial Program Validation,” dated May 21, 2015 or later. Provide space identification, charts and information in conformance with this Guide.

3.1.4 The parties shall utilize the appropriate Levels of Development (LOD) described below in completing the Model, which establishes the required LOD for each Model Element at each phase of the Project.

3.1.5 The following Level of Development (LOD) descriptions are summaries of Level Of Development Specification for Building Information Models as developed by BIMForum. (<http://bimforum.org/lof>), current edition (2017 or later). **Each subsequent LOD builds on the previous level and includes all the characteristics of previous levels.** See also “Section 5 BIM Model Progression Schedule” for examples and graphic descriptions of Levels of Development. The following list is a simplified summary of the adopted Levels of Development:

- **LOD 100** elements are not geometric presentations. They may be symbols or other generic representations of information that can be derived from other model elements. Any information derived from LOD 100 elements must be considered approximate.
- **LOD 200** elements are represented graphically but are generic placeholders, e.g., volume, quantity, location, or orientation. Any information derived from LOD 200 elements must be considered approximate.
- **LOD 300** elements are graphically represented as specific systems, objects, or assemblies from which quantity, shape, size, location, and orientation can be measured directly, without having to refer to non-modeled information such as notes or dimension callouts.
- **LOD 350** elements are enhanced beyond LOD 300 by the addition of information regarding interfaces with other building systems. For example, an LOD 350 masonry wall element would include jamb conditions, bond beams, grouted cells, dowel locations, and joints – information that enables the model user to coordinate the wall element with other systems in the structure.
- **LOD 400** elements are modeled at sufficient detail and accuracy for fabrication of the represented component.

NOTE - County and the LOD Specification do not address **LOD 500** since that LOD relates to field verification and is not an indication of progression to a higher level of geometry or information.

3.1.6 The parties shall utilize the appropriate Levels of Development (LOD) described below in completing the Model, which establishes the required LOD for each Model Element at each phase of the Project. LODs and Model Definition: There is no such thing as an “LOD ### model.” As previously noted, project models at any stage of delivery will invariably contain elements and assemblies at various levels of development. As an

example, it is not logical to require an “LOD 200 model” at the completion of the schematic design phase. Instead, the “100% SD Model” will contain modeled elements at LOD 100 as well as various other levels of development. Consultants will be required to submit a LOD Model Progression as part of the Project Execution Plan.

3.2 **Level of Development (LOD) – Expanded Descriptions**

3.2.1 **LOD 100:** (Predesign preferred) and Schematic Design (Basic Services)

- a. **Model Content Requirements:** Overall building massing indicative of area, height, volume, location, and orientation may be modeled in three dimensions or represented by other data.
- b. **Potential Uses:**
 1. **Analysis:** The Model may be analyzed based on volume, all spaces, area, solar orientation and configuration by application of generalized performance criteria assigned to the representative Model Elements.
 2. **Cost Estimating:** The Model may be used to develop a cost estimate based on current area, volume or similar conceptual estimating techniques (e.g., square feet of floor area, etc.), as opposed to components.
 3. **Schedule:** The Model may be used for project phasing and overall duration.

3.2.2 **LOD 200:** Design Development (Basic Service)

- b. **Model Content Requirements:** Model Elements are modeled as generalized systems or assemblies with approximate quantities, size, shape, location, and orientation. Non-geometric information may also be attached to Model Elements. Partitions and simple furniture models shall be included at this phase.
- c. **Potential Uses:**
 1. **Analysis.** The Model may be analyzed for performance of selected systems and orientation by application of generalized performance criteria assigned to the representative Model Elements.
 2. **Cost Estimating.** The Model may be used to develop cost estimates based on the approximate data provided and conceptual estimating techniques (e.g., volume and quantity of elements or type of system selected).
 3. **Schedule.** The Model may be used to show ordered, time-scaled appearance of major elements and selected systems.

3.2.3 **LOD 300:** Construction Documents (Basic Service)

- a. **Model Content Requirements:** Model Elements are modeled as specific assemblies accurate in terms of quantity, size, shape, location, and orientation. Non-geometric information may also be attached to Model Elements.
- b. **Facility Management information:** Consultant will be required to input all new products installed under the scope of work for this project in conformance with an agreed upon list in OmniClass Table 23 format per Table 1 herein. County and Consultant to meet to refine the scope of the COBie information following

issuance of the Schematic Phase NTP.

c. Potential Uses:

Suitable for the generation of traditional construction documents and shop drawings.

1. Analysis. The Model may be analyzed for performance of selected systems by application of specific performance criteria assigned to the representative Model Elements.
2. Cost Estimating. The Model may be used to develop cost estimates based on the specific data provided and industry estimating techniques.
3. Schedule. The Model may be used to show ordered, time-scaled appearance of detailed elements and systems.
4. Clash Detection. The Model may be used to identify architectural and engineering conflicts for primary systems and elements. Areas of study include HVAC ductwork and equipment, structural elements, above ground plumbing and drainage piping, fire sprinklers and risers.

3.2.4 **LOD 350:** Construction (Contractor to provide this LOD as part of its Scope of Work, using the Consultants model unless County elects Consultant to provide as Optional Service)

a. Model Content Requirements: Model Elements are modeled as constructed assemblies, actual and accurate in terms of size, shape, location, quantity, and orientation. Clearances and access requirements to be included in model elements where applicable, (e.g. VAV access, HVAC access panels, equipment door swings, maintenance panel access, etc.). Non-geometric information may also be attached to modeled elements.

b. Facilities Management information: Consultant to provide complete BIM model(s) to Contractor for its use containing Construction Operations Building Information Exchange (COBIE) standards in conformance with Table 1 herein.

c. Potential Uses:

1. Clash Detection. The model may be used to coordinate the configuration, installation and positioning of all building elements.
2. Facility Management. The Model may be utilized for maintaining, altering, and adding to the Project. Update and confirm As-Constructed COBIE data and Space Management information.
3. Analysis. The Model may be analyzed for performance of selected systems by application of specific performance criteria assigned to the representative Model Elements.
4. Cost Estimating. The Model may be used to develop cost estimates due to change in project scope based on the specific data provided and estimating techniques.
5. Schedule. The Model may be used to show ordered, time-scaled appearance of detailed elements and systems.

3.2.5 **Detailed BIM Delivery Breakdown for LOD 300 and 350:**

- a. **Architectural/Interior Design.** The Architectural systems Model may vary in level of detail for individual building elements, but at a minimum the model must include all features that would be included on a quarter inch (1/4" = 1'-0") scaled drawing. Where applicable and as required for construction documents, the model, or host platform will include additional scales as required to show necessary details. Additional minimum Model requirements include:
 1. **Spaces.** The Model shall include spaces defining actual net square footage, net volume and holding data to develop the room finish schedule including room names and numbers. Include program information to verify design space against programmed space, using this information to validate area quantities.
 2. **Walls and Curtain Walls.** Each wall shall be depicted to the exact height, length, width, materiality and ratings (thermal, acoustic, fire) to properly reflect wall types. The Model shall include all walls, both interior and exterior, and the necessary intelligence to produce accurate plans, sections and elevations depicting these design elements.
 3. **Doors, Windows and Louvers.** Doors, windows and louvers shall be depicted to represent their actual size, type and location. Doors and windows shall be modeled with the necessary intelligence to produce accurate window and door schedules.
 4. **Roof.** The Model shall include the roof configuration, drainage system, penetrations, specialties, and the necessary intelligence to produce accurate plans, building sections and wall sections where roof design elements are depicted.
 5. **Floors.** The floor slab(s) shall be developed in the Structural Model and then referenced by the Architectural Model.
 6. **Ceilings.** All heights and other dimensions of ceilings, including soffits, ceiling materials, or other special conditions shall be depicted in the Model with the necessary intelligence to produce accurate plans, building sections and wall sections where ceiling design elements are depicted.
 7. **Vertical Circulation.** All continuous vertical components (i.e., non-structural shafts, architectural stairs, ramps, conveying systems, handrails and guardrails) shall be accurately depicted and shall include the necessary intelligence to produce accurate plans, elevations and sections in which such design elements are referenced.
 8. **Architectural Specialties.** All architectural specialties (i.e., toilet room accessories, toilet partitions, grab bars, lockers, and display cases) and millwork (i.e., cabinetry and counters) shall be accurately depicted with the necessary intelligence to produce accurate plans, elevations, sections and schedules in which such design elements are referenced.
 9. **Signage.** The Model shall include all signage and the necessary intelligence to produce accurate plans and schedules.
 10. **Schedules.** Provide door, window, hardware sets using Builders Hardware Manufacturers Association (BHMA) designations, flooring, wall finish, and

signage schedules from the Model, indicating the type, materials and finishes used in the design.

- b. **Furniture.** The furniture Model may vary in level of detail for individual elements, but at a minimum must include all features that would be included on a quarter inch (1/4" = 1'-0") scaled drawing and have necessary intelligence to produce accurate plans. Where applicable and as required for construction documents, the model, or host platform will include additional scales as required to show necessary details. Representation of furniture elements is to be 3D. 3D Examples of furniture include, but are not limited to, desks, furniture systems, seating, tables, and office storage. Additional minimum Model requirements include:
 - 1. **Furniture Coordination.** Furniture that makes use of electrical, data or other features shall include the necessary intelligence to produce coordinated documents and data. Models shall be sufficient to enable their use to demonstrate complete furniture mounted electrical and data installation locations.
- c. **Equipment.** The Model may vary in level of detail for individual elements. Equipment shall be depicted to meet layout and clearance requirements with the necessary intelligence to produce accurate plans and schedules, indicating the configuration, materials, finishes, mechanical, electrical requirements and all other related utilities. Examples of equipment include but are not limited to copiers, printers, refrigerators, ice machines, microwaves, and equipment specifically related to the operations and functions of the facility.
 - 1. **Schedules.** Provide furniture and equipment schedules from the model indicating the materials, finishes, mechanical, and electrical requirements.
- d. **Structural** The Structural systems Model may vary in level of detail for individual elements, but at a minimum must include all features that would be included on a quarter inch (1/4" = 1'-0") scaled drawing. Where applicable and as required for construction documents, the model, or host platform will include additional scales as required to show necessary details. Additional minimum Model requirements include:
 - 1. **Foundations.** All necessary foundation and/or footing elements, with necessary intelligence to produce accurate plans and elevations.
 - 2. **Floor Slabs.** Structural floor slabs shall be depicted with all necessary recesses, curbs, pads, closure pours, and major penetrations accurately depicted. Major penetrations shall include A/C duct chases and pipes larger than 6" dia. only.
 - 3. **Structural Steel.** All steel columns, primary and secondary framing members, and steel bracing for the roof and floor systems (including decks), including all necessary intelligence to produce accurate structural steel framing plans, related building/wall sections, and schedules.
 - 4. **Cast-in-Place Concrete.** All walls, columns, beams, including necessary

- intelligence to produce accurate plans and building/wall sections, depicting cast-in-place concrete elements.
5. Precast/Tilt-up/CMU. All walls, columns, beams, including necessary intelligence to produce accurate plans and building/wall sections, depicting such elements.
 6. Expansion Joints. Joints shall be accurately depicted.
 7. Stairs. All framing members for stair systems, including necessary intelligence to produce accurate plans and building/wall sections depicting stair design elements.
 8. Shafts and Pits. All shafts and pits, including necessary intelligence to produce accurate plans and building/wall sections depicting these design elements.
 9. Openings and Penetrations. All major openings and penetrations.
- e. **Mechanical**. The Mechanical systems Model may vary in level of detail for individual elements, but at a minimum must include all features that would be included on a quarter inch (1/4" = 1'-0") scaled drawing. Where applicable and as required for construction documents, the model, or host platform will include additional scales as required to show necessary details. Small diameter (less than 1-1/2" NPS) field-routed piping is not required to be depicted in the Model. Additional minimum Model requirements include:
1. HVAC. All necessary heating, ventilating, air-conditioning and specialty equipment, including air distribution for supply, return, ventilation and exhaust ducts, control systems, chillers, registers, diffusers, grills, and hydronic baseboards with necessary intelligence to produce accurate plans, elevations, building/wall sections and schedules.
 2. Mechanical Piping. All necessary piping and fixture layouts, and related equipment, including necessary intelligence to produce accurate plans, elevations, building/wall sections, and schedules.
 3. Equipment Clearances. All Mechanical equipment clearances shall be modeled for use in interference management and maintenance access requirements.
- f. **Plumbing**. All necessary plumbing piping and fixture layouts, floor and area drains, and related equipment, including necessary intelligence to produce accurate plans, elevations, building/wall sections, riser diagrams, and schedules. Piping shall include slope requirements.
1. Equipment Clearances. All equipment clearances shall be modeled for use in interference management and maintenance access requirements.
 2. Elevator Equipment. All necessary equipment and control systems, including necessary intelligence to produce accurate plans, sections and elevations depicting these design elements.
- g. **Electrical/Telecommunications/Data**. The Electrical and Telecommunications systems Model may vary in level of detail for individual elements, but at a

minimum must include all features that would be included on a quarter inch (1/4" = 1'-0") scaled drawing. Where applicable and as required for construction documents, the model, or host platform will include additional scales as required to show necessary details. Small diameter (less than 1-1/2" Ø) field-routed conduit is not required to be depicted in the Model unless banks of 3 or more conduits are run on racks. Additional *minimum* Model requirements include:

1. Interior Electrical Power and Lighting. All necessary interior electrical components (i.e., lighting, receptacles, special and general-purpose power receptacles, lighting fixtures, panel boards, cable trays and control systems), including necessary intelligence to produce accurate plans, details and schedules. Lighting and power built into furniture/equipment shall be modeled. Whips servicing lighting fixtures are required to be modeled.
 2. Special Electrical. All necessary special electrical components (i.e., security, mass notification, public address, nurse call and other special electrical occupancy sensors, and control systems), including necessary intelligence to produce accurate plans, details and schedules.
 3. Grounding. All necessary grounding components (i.e., lightning protection systems, static grounding systems, communications grounding systems, and bonding), including necessary intelligence to produce accurate plans, details and schedules.
 4. Telecommunications/Data. All existing and new telecommunications service controls and connections, both above ground and underground, with necessary intelligence to produce accurate plans, details and schedules. Cable tray routing shall be modeled without detail of cable contents.
 5. Exterior Building Lighting. All necessary exterior lighting including all lighting fixtures, relevant existing and proposed support utility lines and equipment with necessary intelligence to produce accurate plans, details and schedules.
 6. Equipment Clearances. All Electrical equipment clearances shall be modeled for use in interference management and maintenance access requirements.
- h. Fire Protection. The fire protection system Model may vary in level of detail for individual elements, but at a minimum must include all features that would be included on a quarter inch (1/4" = 1'-0") scaled drawing. Where applicable and as required for construction documents, the model, or host platform will include additional scales as required to show necessary details. All Fire Protection piping should be modeled. Additional minimum Model requirements include:
1. Fire Alarms. Fire alarm/mass notification devices and detection systems, audible and visual, shall be indicated with necessary intelligence to produce accurate plans depicting them.
 2. Fire Protection System. All relevant fire protection components (i.e., branch piping, sprinkler heads, fittings, drains, pumps, tanks, sensors, control panels) with necessary intelligence to produce accurate plans, elevations, building/wall sections, riser diagrams, and schedules. All fire protection piping shall be modeled.

- i. **Security.** Both facilities require a level of security to ensure record and evidence integrity. The security system Model may vary in level of detail for individual elements, but at a minimum must include all devices and components that would be included on a quarter inch (1/4" = 1'-0") scaled drawing. Where applicable and as required for construction documents, the model, or host platform will include additional scales as required to show necessary details. Additional minimum Model requirements include, but not limited to:
1. **Closed Circuit Television (CCTV).** Security Cameras, devices, components, and detection systems shall be indicated with necessary intelligence to produce accurate plans depicting them on drawings.
 2. **Emergency Notification Systems.** All relevant security protection components (i.e. panic buttons, card readers, door controls, monitoring stations, security computer room, room/ corridor sensors, audible/visible annunciators, and security control panels) with necessary intelligence to produce accurate plans depicting the system(s).
 3. **Burglar Alarm Systems.** Building security including motion detectors, glass-break sensors, audible devices, and other intrusion detection devices as well control system for above shall be indicated on plans.
 4. **Public address system –** Speakers, zone control reflected on plan.
 5. **Low-voltage systems –** Various systems for communication, or customer services including Wi-Fi, FIBS/BIDS boards, phone chargers, lighting, Public Art, induction systems, wayfinding, solar PV, wind, and other systems.
 6. **Bi-Directional Antenna systems (BDA)** – Antennas, trunk lines, branch line, control boxes, repeaters, emergency or redundant power sources, primary interface components, & home run room.
- j. **Conveying Systems.** The conveying systems models should indicate primary equipment, all necessary plumbing piping, electrical panels, fixture layouts and other related equipment, that would appear on a quarter inch (1/4" = 1'-0") scaled drawing. Clearly indicate equipment clearances.
1. **Elevator Equipment.** All necessary equipment and control systems, including necessary intelligence to produce accurate plans, sections and elevations depicting these design elements. Provide indicators and call buttons.
 2. **Escalator and other Conveyance Equipment.** All relevant components of the escalator/conveyance system including accurate modeling of stair tread, size and placement. Indicate areas where 6'-8" clear headroom exists below the finished escalator if applicable.
- k. **Landscape.** The Landscape Model may vary in level of detail for individual elements, but at a minimum must include all features that would be included on a quarter inch (1/4" = 1'-0") scaled drawing and have necessary intelligence to produce accurate plans. Representation of Landscape elements is to be diagrammatic. Examples of landscape material include but are not limited to trees

and shrubs.

- I. **Civil.** The Civil Model may vary in level of detail for individual elements, but at a minimum must include all features that would be included on a one inch (1" = 100' to 1" = 20') scaled drawing. Additional *minimum* Model requirements include:
 1. **Terrain (DTM).** All relevant site conditions and proposed grading, including necessary intelligence to produce accurate Project site topographical plans and cross sections.
 2. **Drainage.** All existing and new drainage piping, including upgrades thereto, including necessary intelligence to produce accurate plans and profiles for the Project site.
 3. **Storm Water and Sanitary Sewers.** All existing and new sewer structures and piping, including upgrades thereto, with necessary connections to mains or other distribution points as appropriate, including necessary intelligence to produce accurate plans and profiles.
 4. **Utilities.** All necessary new utilities connections from the Project building(s) to the existing or newly created utilities, and all existing above ground and underground utility conduits, including necessary intelligence to produce accurate plans and site-sections.
 5. **Roads and Parking.** All necessary roadways, parking lots, and parking structures, including necessary intelligence to produce accurate plans, profiles and cross-sections.

m. **Potential Uses:**

- a. Suitable for the generation of traditional construction documents and shop drawings.
- b. Analysis. The Model may be analyzed for performance of selected systems by application of specific performance criteria assigned to the representative Model Elements.
- c. Cost Estimating. The Model may be used to develop cost estimates based on the specific data provided and conceptual estimating techniques.
- d. Schedule. The Model may be used to show ordered, time-scaled appearance of detailed elements and systems.

3.2.6 **LOD 400:** BIM for Fabrication. (Optional Service).

- a. Model Content Requirements. Model Elements are modeled as specific assemblies that are accurate in terms of size, shape, location, quantity, and orientation with complete fabrication, assembly, and detailing information. Non-geometric information may also be attached to Model Elements.
- b. Potential Uses:
 1. Construction. Model Elements are virtual representations of the proposed element and are suitable for construction.
 2. Analysis. The Model may be analyzed for performance of approved selected systems based on specific Model Elements.

3. Cost Estimating. Costs are based on the actual cost of specific elements at buyout.
4. Schedule. The Model may be used to show ordered, time-scaled appearance of detailed specific elements and systems including construction means and methods.

3.3 **BIM for Facility Management**

3.3.1 BIMs shall be provided by Contractor or Managing General Contractor (MGC). Contractor or MGC shall submit an As Constructed BIM to the A/E Consultant demonstrating the successful extraction and validation of COBie in Excel format for building operations, maintenance and management.

3.4 **As-Constructed Model Content Requirements**

- a. Model Content Requirements. Contractor shall model Elements as constructed assemblies, actual and accurate in terms of size, shape, location, quantity, and orientation. Provide Non-geometric information may also be attached to modeled elements. Facilities Management information completed with all requested information developed to County required Construction Operations Building Information Exchange (COBIE) standards. A model that accurately depicts rooms, names, uses, final room numbering, sizes and identifiers for on-going Space Management of the completed facility.
- b. Potential Uses:
 1. Facility & Construction Management. The Model may be utilized for maintaining, altering, and adding to the Project and generating reports.
 2. Project Record Documents. As-Constructed data accurately portrayed in the BIM model for future reference and reuse.

3.5 **COBie Data**

- a. **Within 30 days from the issuance of the Notice To Proceed (NTP) for Schematic Design**, the County and Consultant shall finalize and select items from the following OmniClass 23 table to establish the basis of COBie elements to be tracked and delivered in the completed model.

23-11	Products
23-13	Structural and Exterior Enclosure Products
23-15	Interior and Finish Products
23-17	Openings, Passages, and Protection Products
23-21	Furnishings, Fixtures and Equipment Products
23-23	Conveying Systems and Material Handling Products
23-27	General Facilities Service Products
23-29	Facility and Occupant Protection Products
23-31	Plumbing Specific Products and Equipment
23-33	HVAC Specific Products and Equipment

23-35	Electrical and Lighting Specific Products and Equipment
23-37	Information and Communication Specific Products and Equipment

Table 1.0 – Selected Excerpt from OmniClass Table 23

3.6 **BIM Project Execution Plan (BIM PxP or PxP)**

3.6.1 The BIM PxP template is included in this Attachment 2, as “Section 4 - Project Execution Plan (BIM PxP). The Consultants BIM PxP Coordinator for the Project has the responsibility of documenting the Project Execution Plan (PxP), gathering the required information from the External Project Team, scheduling and leading the PxP meetings and establishing and implementing protocols for revisions and sharing the PxP

3.6.2 The development of the PxP is a collaborative effort by all members of the Project team and will be reviewed and updated in meetings specifically scheduled for this purpose. All members of the Project team are required to submit initial information for their scope to the designated PxP Coordinator within 15 calendar days of commencing work. At a minimum PxP meetings shall be conducted at the end of each project phase and a revised PxP shall be issued to County and the External Project Team. A record PxP shall be provided to the owner at handover including all updated requirements.

3.6.3 The PxP is subject to review and approval by County at each project phase.

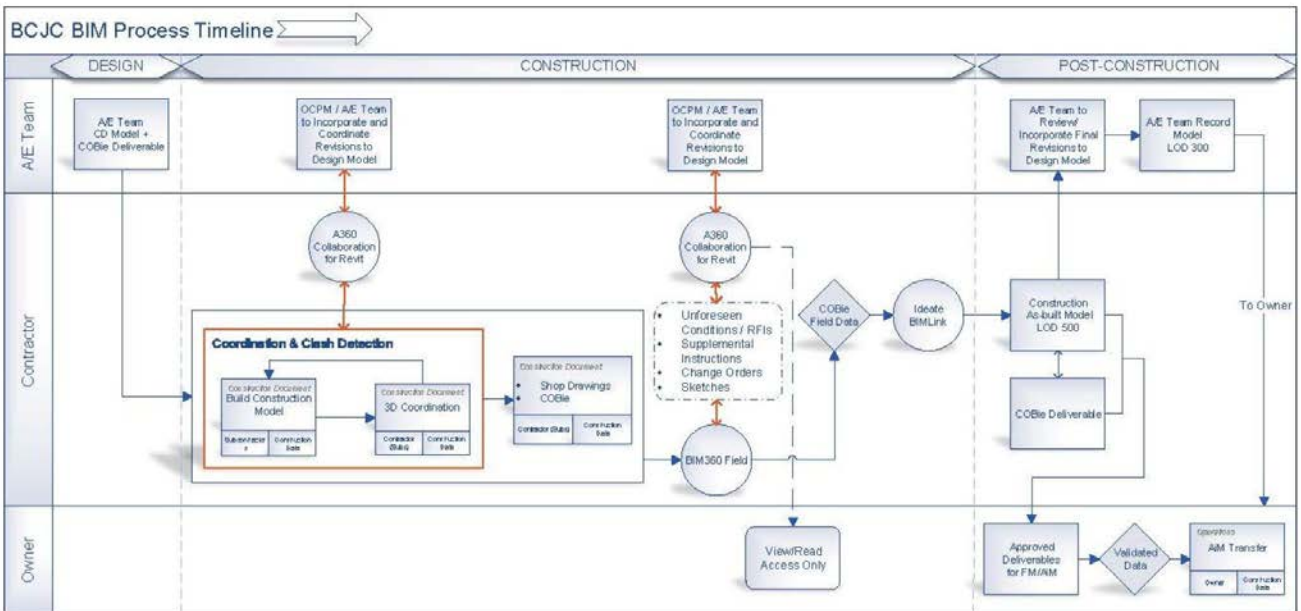
3.6.4 The design & construction teams shall submit a written BIM PxP subject to review and written approval by County prior to proceeding with the process. The BIM PxP will outline all methods and procedures for collaboration between the design and construction teams as well as coordination of VDC/BIM efforts of the subcontractors. The Contract Administrator, Design Team and all sub-consultants engaged in the BIM process will sign agreement to adhere to the BIM Project Execution Plan.

3.6.5 The BIM Project Execution Plan shall include as a minimum:

- a. Project Information
- b. Key Project Contacts
- c. Project VDC / BIM Uses
- d. Organizational Roles and Staffing
- e. VDC / BIM Process for preconstruction, construction and handover
- f. BIM Information Exchanges
- g. BIM and Facility Data Requirements
- h. Collaboration and coordination procedures
- i. Quality Control
- j. Technological Infrastructure Needs
- k. A Model Progression Schedule identifying LODs and Authors for each category of model (built) element.
- l. Clash detection approach
- m. Cost estimating level

n. BIM Deliverables

3.6.6 A BIM Process Flow Chart provides a graphic visualization of the processes and approval points to be used during the life of the project. The County encourages the development of this chart as an effective practice and communication tool. An example BIM Flow Chart is provided below:



3.6.7 To promote efficiency and continuity, the 2D construction documents must be extracted directly from the Design Model and both the BIMs and the 2D Deliverables will be integral parts of the contract documents. Two dimensional (2D) details, enlargements, General Notes, externally generated Schedules, and specifications will take precedence over the Design Models.

3.7 BIM Use Agent Responsibility Matrix

3.7.1 County has identified the Required, Preferred and Optional BIM uses as it relates to this project. The County acknowledges that Design and Construction Consultants will work together to achieve these Uses. Implementation of these uses should be explained by the Consultant in the BIM PxP, Section F. Roles, responsibilities and timing are to be documented.

3.7.2 The County's typical BIM Uses for New Construction Projects are as follows:

County Typical BIM Use New Construction

BIM Use	County Intent
3D Coordination / Conflict Analysis	Required
As Constructed Model	Required
Asset Management	Required
CIM / Subsurface	Required
Constructability/Peer Review	Required
Design 4 Maintenance (D4M)	Required
Design Authoring	Required
Design Reviews	Required
Existing Conditions Modeling	Required
Facility Data Exchange	Required
Owner Approvals	Required
QA/QC	Required
Record Modeling	Required
Site Utilization Planning	Required
Spatial Analysis	Required
Visualization	Required
Commissioning	Preferred
Cost Estimation	Preferred
Energy / Mechanical Analysis	Preferred
Programming	Preferred
Program / Code Validation	Preferred
Quantity Take-Off	Preferred
Site Analysis	Preferred
Space Management / Tracking	Preferred
Structural Analysis	Preferred
Sustainability / LEED	Preferred
Total Cost Of Ownership	Preferred
BIM2field - Digital Layout	Optional
Building Maintenance Scheduling	Optional
Building System Analysis	Optional
Code Analysis	Optional
Construction System Design	Optional
Digital Fabrication	Optional
Disaster Planning	Optional
Electrical Analysis	Optional
Field and Material Tracking	Optional
Laser Scanning	Optional
Lighting Analysis	Optional

BIM Use	County Intent
Pay Applications	Optional
Phase Planning 4D	Optional
Security / Key Management	Optional
Specification Production	Optional

3.8 **3D Coordination and Conflict Analysis**

3.8.1 The Design Team shall use BIM to employ a managed approach to advanced collaborative reviews, including automated element collision detection using software such as Autodesk Navisworks and model checkers such as Solibri by Nemetschek. By coordinating BIM data during the design phases, this can reduce the number of potential major conflicts that might arise during the construction phase.

3.8.2 This approach is not meant to replace the traditional quality control process, or the early airspace zone MEP strategy approach used by the project team and participating consultants but will enhance the ability of the project team to visualize the design and detect interferences between discipline components.

3.8.3 Design Team Coordination

- a. The Design Team shall produce a design in which all MEP/FP systems fit within the intended spaces provided, including necessary and required clearances, egress zones, and access zones. To help achieve this goal, the Design Team shall have a formal 3D spatial analysis and clash resolution process that forms the backbone of the QA/QC process. The spatial analysis and clash resolution process shall include regularly scheduled clash review meetings and the use of software tools to analyze and resolve clashes.
- b. County does not expect a “clash-free” design, however County expects a design that has been spatially analyzed and validated such that all systems are constructible within the space designed.
- c. Clash reports will be required at project milestone deliverables for both Design and Construction.
- d. Cost estimating – Level 1 thru 4
- e. Construction Schedule & Duration
- f. Utilities coordination & invert elevations

3.8.4 Contractor Team Coordination

- a. Contractor shall carry out clash detection analysis and complete preliminary virtual design and construction (VDC) activities as part of the Constructability Reviews.
- b. Weekly, the CM shall conduct coordination meetings with each Contractor, Subcontractor, PM, County and Design Team as needed.

- c. The CM shall prepare clash detection reports and distribute minutes/ reports to all attendees.

3.9 **Model Content Requirements**

3.9.1 A Model Progression Schedule/Agent Responsibility Matrix (MPS) shall be used as a tool to help Model Contributors throughout the Design, Construction and Operation phases understand what should be included in the BIMs when at each project milestone.

- a. The Construction Models should reflect the exact geometric properties of the materials and/or systems being submitted. These models should reflect the exact material properties and performance data.
- b. It is the responsibility of the Design and Construction Team to use the MPS as part of the BIM PxP or JBIM PxP to establish how they progressively reach the County's expectations.
- c. See also Section 4 - BIM Project Execution Plan and Section 5 - Model Progression Schedule/Agent Responsibility Matrix templates for additional required information.

3.10 **Shop Drawings, Sleeve Drawings and Fabrication**

3.10.1 Shop Drawings shall be produced directly from the construction BIMs. No parallel 2D process will be accepted

- a. Sleeve Drawings -Sleeve drawings for cast-in-place or precast systems shall be produced after BIM Coordination is completed for the area of construction requiring the sleeve drawings.
- b. Fabrication & Preassembly -Whenever possible the Construction Team shall use the Construction BIMs to fabricate or preassemble their systems.

3.11 **BIM in the field for Installation**

3.11.1 The Contractor shall take measures to assure that what is being installed at the field is what was agreed upon on the Coordinated Federated Construction BIM. Any deviations must be documented as updates to the BIMs and the party responsible for resulting conflicts will be liable for costs associated with such deviations.

3.12 **Submittals**

3.12.1 Upon Substantial Completion, BIM files shall be submitted to County, and shall be cleaned of extraneous "scrap" or "working space", stories, abandoned designs, object creation and testing places, and other content which is typically produced in or during BIM construction coordination.

- a. The Contractor shall be responsible for providing the County a Federated, As-Constructed Model that includes all building systems. The Model shall be coordinated and "clash free" except as noted.

- b. Contractor shall provide a native file of the final Federated As-Constructed Model for building systems used in the multi-discipline coordination process (version as agreed in BIM PxP)
- c. Contractor shall identify native file formats used in the final Federated As-Constructed Model for building systems for the multi-discipline coordination process (version as agreed in BIM PxP)
- d. Contractor shall provide IFC files (ISO 16739) of As-Constructed models (version as agreed in BIM PxP)
- e. Contractor shall provide COBie / data compliant file containing room and product data information (version as agreed in BIM PxP)

3.12.2 County will not accept BIM files that have become un-useable, or too heavy for normal use. Proper care shall be taken to strip all BIMs of any and all miscellaneous files that are not directly part of the BIMs. The BIM Compliance Checklist, shown below, is required to be submitted with each BIM Deliverable as part of the QA/QC process and to show compliance.

BIM Compliance Checklist	
Description	Y / N
Model content is representative of their discipline developments according to the MPS.	
Model file name and folder structure conforms to County Standards.	
All annotations and title blocks are per the County standards.	
All floor plans types have been created for each floor or mezzanine in the project model.	
All schedules are populated with all the required data for the project.	
The model is correctly assembled as per visual inspection.	
The color code for Federated BIMs conforms to County Standards.	
All the model contents are correctly placed per their element categorization in the correct work set and conform to standards.	
All non-transmittal linked-in files (CAD/Revit) have been removed from the model.	
All non-required views / legends / schedules / sheets / images have been removed from the model.	
Unwanted Design Options have been removed from the model (applicable for Contract Document Phase through Project completion and handover).	
All unnecessary groups have been removed from the model. All groups used to model the building have been ungrouped and purged from the deliverables to reduce the file size of the model.	
As a last step, the model has been purged (repeat the process three times -- materials are only removed after the parent object has been removed). This will reduce the file size.	
3D Solids Check – No wireframe or lines are accepted. Surface modeling shall be reserved for Topography modeling only. Other use of surface modeling shall require prior approval by County.	

BIM Compliance Checklist

Errors or Warnings - check that there are not any generated within the BIM Authoring software. It is the Design & Construction Teams' responsibility to ensure BIM quality and data integrity.	
Model Elements are not duplicated. i.e. Columns in both Architectural and Structural models.	
Objects are correctly defined under the proper Revit Family Category and sub-category.	

3.13 **Responsibilities Related to the Final Record BIM**

3.13.1 Design Team Responsibilities

- a. The Design Team will update the Architectural and Structural Design Models as changes occur throughout the construction phase, incorporating all updates and/or revisions to the models as necessary to reflect design changes initiated by Architectural Supplemental Instructions (ASI), Request for Information (RFI), Conformed Documents, Owner Changes, coordination with existing conditions or other changes to the work.

3.13.2 Construction Team Responsibilities

- a. During the construction phase, and while the work is still visible, the Construction Team will maintain "red-line" As-Constructed drawings or demonstrate regular updates to the BIM models during the progress of the work.
- b. In preparation for Substantial Completion, the Construction Team will:
 1. Make all necessary final updates and/or revisions to the models to reflect the As-Constructed information to the tolerance specified in the Standard or agreed upon in the BIM PxP. It is the responsibility of each subcontractor to keep accurate "red-line" markups and records from the field in order to produce accurate As-Constructed models and drawings.
 2. Final updates to material/equipment data and properties where installations differ from the "basis of design" included in the Design Team Models.
 3. Incorporation or linking of certain close-out documents to the Federated Model (as agreed in BIM PXP).
- c. All model updates by the Construction Team shall be complete one (1) week prior to Final Completion at which time all the required close out BIM deliverables shall be transmitted to the Consultant for review and to be incorporated with the updated Design Models to create the Record Model deliverable. (as agreed in BIM PXP).

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**BIM PROJECT EXECUTION PLAN
(BIM PxP)**

FOR

Insert Project Name Here in Black Font

DEVELOPED BY

**Broward County - Construction Management Division
(County)**

This template is a required tool that is provided to assist in the development of a BIM Project Execution Plan (BIM PxP) as required by Contract.

Consultants are required to “Track” changes when editing this document so BROWARD COUNTY - CONSTRUCTION MANAGEMENT DIVISION (County) can review and accept any additions and modifications as part of the review process.

BIM PROJECT EXECUTION PLAN

FOR

Insert Project Name Here in Black font

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Introduction

This template exists to document the decisions made by the Design and Construction Teams working through the BIM process. To successfully implement BIM on both the project and organizational levels, Broward County Construction Management Division has developed this BIM Project Execution Plan (BIM PxP) to improve accuracy and consistency of BIM deliverables. This plan will delineate roles and responsibilities while detailing BIM scope of information to be shared that is relevant to the BIM project process. The document is intended to cover both model creation and data integration.

Instructions

Submission Schedule

The Design and Construction Teams are required to submit a completed BIM PxP within 30 days of contract execution. This plan shall identify the entire project team including consulting engineers, specialty consultants and contractors. The BIM PxP should be considered a living document and maintained and updated throughout the project.

Please note: Instructions and examples to assist with the completion of this guide are displayed in italicized blue font. The text can and should be modified to suit the needs of the organization filling out the template. If modified, the format of the text should be changed to match the rest of the document (non- italicized and in black, 12-point, Calibri font typical) and “tracked changes” shall be submitted in electronic form for Broward County Construction Management Division review and approval.

The overall section headings of this template shall remain, but the BIM PxP Coordinator may propose any other changes or additions to this template including expansion of the content of the sections and additional sections and attachments. Changes & additions shall be agreed to by the project team and submitted to Broward County Construction Management Division for approval.

This BIM PxP document is based on the National BIM Standard-United States™ Version 3 and the Pennsylvania State University BIM Project Execution Plan Version 2.0 and customized for Broward County Construction Management Division.

Section A: BIM Project Execution Plan Overview

The Broward County Construction Management Division requires the use of Building Information Modeling (BIM) as a tool in the planning, design, construction and operation of our facilities worldwide. A well-executed BIM project facilitates the collaboration and communication between the owner, the design team and the construction team in order to best meet the project's goals.

The purpose of this process change is to ensure maximum benefit from our assets by improving the building's design and construction, reduce the total cost and time of delivery and improve operations and management after handover. BIM allows for a more complete, efficient, iterative design and construction process. The clearest benefits are the enhanced visualization of the project at all stages of development, the creation of higher quality design and construction deliverables and the reduction of construction coordination conflicts in the field. At the end of construction, the Building Information Models serve as rich databases of digital data captured during design and construction about the building's assets. This single centralized source of information is invaluable to the Facilities Department for the on-going operations and management of the building to ensure our facilities are sustainable and resilient.

To successfully implement Building Information Modeling (BIM) on a project, the project team has developed this detailed template BIM Project Execution Plan.

INSERT ADDITIONAL INFORMATION HERE IF APPLICABLE.

With the help of the project team, develop a brief mission statement here that will give an overview of BIM objectives that are specific to this project. This can be developed at a collaborative brainstorming session at the first BIM PxP meeting. Extensive additional information can be included as an attachment to this document.

Section B: Project Information

This section defines basic project reference information and determined project milestones

1. Client Name: Broward County Construction Management Division
2. Project Name:
3. Project Location and Address:
4. Contract Type / Delivery Method: Managing General Contractor (MGC)
5. Brief Project Description: Refer to Exhibit A, Scope of Work
6. Additional Project Information: none
7. Project Identification Numbers: *Please complete table below*

Team Member	Project Number
Broward County Construction Management Division	
Architect	
MEP Engineers	
Structural Engineer	
Contractor	

Section C: Delivery Strategy

Delivery and Contracting Strategy for the project:

This section is useful primarily when design delivery methods are being utilized that involve early collaboration of the design and construction teams (IPD, Design Assist, etc.). List the Project Delivery strategy for the project below (Design-Bid-Build, CM at Risk, IPD, Design Assist, etc.).

Please note what additional measures need to be taken to successfully use BIM with the selected delivery method and contract type?

Section C.1 - Project Schedule / Phases / Milestones:

In coordination with the project schedule, include BIM milestones, pre-design activities, major design reviews, stakeholder reviews and any other major events which occur during the project lifecycle.

Project Phase / Milestone	Estimated Start Date	Estimated Completion Date	Project Stakeholders Involved
Notice to Proceed			
BIM PxP Kick-off			
Programming			
County Review & Comments			
Design Team Review & Resubmit			
Schematic Design			
County Review & Comments			
Design Team Review & Resubmit			
Design Development			
County Review & Comments			
Design Team Review & Resubmit			
50% CD's			
County Review & Comments			
Design Team Review & Resubmit			
___% CD's			
County Review & Comments			
Design Team Review & Resubmit			
100% CD's			
County Review & Comments			

Project Phase / Milestone	Estimated Start Date	Estimated Completion Date	Project Stakeholders Involved
Design Team Review & Resubmit			
Award / Permit			
Pre-Construction			
Project Coordination Kickoff			
Underground Coordination			
Site Coordination			
Building Exterior Coordination			
Building Interior Coordination (First Floor)			
Building Roof Coordination			
Coordination Sign-Off			

Section C.2 - Project Deliverables

In this section, please check off the BIM Deliverables from Consultant and Contractor on the appropriate tables below that are relevant for this project. Note any and all deviations to these required deliverables below.

Schedule of Deliverables to Broward County Construction Management Division				
CONSULTING ARCHITECTURE AND ENGINEERING TEAM				
Phase	Deliverable	Include Y/N	Due	File Type
Contract Award	BIM PxP		30 days of ATP	Native & PDF
Programming / Feasibility Models	Massing models & Narrative Space & Program Validation Report		Per BIM PxP	Native & IFC & PDF Native & PDF
Planning	Design Models -		Per BIM PxP	Native & IFC (2x3) files
Schematic Design	Design Models -		Per BIM PxP	Native & IFC (2x3) files
Design	Existing Conditions Model		Per BIM PxP	Native & IFC (2x3) files

Development	Design & Analysis Models - Updated BIM PxP Coordination Reports BIM Compliance Checklist			Native & IFC Native & PDF PDF PDF
Construction Documents	Design & Analysis Models 2D documents & Clash Report Updated BIM PxP Coordination Reports BIM Compliance Checklist COBie Data Set - Del 1		Per BIM PxP	Native & IFC (2x3) files PDF Native & PDF PDF PDF COBie2 2.40
Permitting / Conformance	Federated Design Model 2D Documents		Per BIM PxP	Native files PDF
Construction - Approved Submittals	COBie Data Set - Del 2		Per BIM PxP	Native & IFC (2x3) files
Construction- Close-Out Close-Out Close-Out Close-Out Close-Out Close-Out	COBie Data Set - Del 3 COBie Data Set – Final Record Floor Plans Record BIMs Federated Record BIM Coordination Report Record Model Instruction Rpt. Final BIM PxP		Per BIM PxP	COBie2 2.40 COBie2 2.40 DWG Native & IFC (2x3) Native Native & PDF Native & PDF Native & PDF

Schedule of Deliverables to Broward County Construction Management Division				
CONSTRUCTION TEAM				
Phase	Deliverable	Include Y/N	Due	File Type
Contract Award	BIM PxP		Within 30 days	Native & PDF
Pre-Construction	Coordination BIMs BIM Compliance Checklist		Per BIM PxP	
Project Close out	COBie Data Set – Del 3 As-Constructed BIMs BIM Compliance Checklist Coordination Report Federated As-Constructed BIM Final BIM PxP		Per BIM PxP	COBie2 2.40 Native & IFC (2x3) PDF PDF .NWD Native & PDF

Section D: Key Project Contacts

ROLE	CONTACT NAME	ORGANIZATION	EMAIL	PHONE
Owner PM		Broward County CMD		
Owners BIM Manager		Broward County CMD		
BIM PxP Coordinator				
Design Professional's Principal in Charge				
Design Professional's Project Manager				
Design Professional's BIM Manager				
Design Professional's BIM Project Lead				
Consultant's Principal in Charge				
Consultant's Project Manager				
Consultant's BIM Manager				
Consultant's BIM Project Lead (per discipline)				
Contractors PM				
Contractors BIM Manager				
Others				

Section E: Organizational Roles / Staffing

This section should be filled in at the choice of the BIM PxP Coordinator and extended team

BIM Roles and Responsibilities:

Broward County Construction Management Division (CMD): Broward County's Construction Management Division is responsible for BIM, CAD support, coordination and integration. It is also their responsibility to ensure design and construction document/model compliance with Broward County Construction Management Division Standards while maintaining and facilitating access to record drawings and models.

Describe BIM roles and responsibilities such as BIM Managers, Project Managers, Draftspersons, etc.

Titles	Roles in Design	Roles in Construction
Broward County Construction Management Division	<ul style="list-style-type: none">• BIM Oversight and Compliance Reviews	<ul style="list-style-type: none">• BIM Oversight and Compliance Reviews
Project Manager		
Model Manager		
BIM Coordinator		
Modeler		
COBie Coordinator		

Section F: BIM Uses

Broward County Construction Management Division has developed a BIM Use/Consultant Responsible Matrix for use in the planning and procurement of BIM projects. This matrix defines Broward County Construction Management Division's priorities for the application of BIM Uses, the responsibilities of the External Team Members, and the phases to which the BIM Uses apply. BIM Uses should only be employed if they offer significant benefit to the Project without compromising cost or schedule.

Insert additional information as needed for this specific project. Items in RED are minimal required by Broward County Construction Management Division.

			P	D	C	O
Visualization	A & C.	Required	X	X	X	X
Programming						
Site Analysis						
Design Authoring	A, Trades	Required	X	X	X	
Design Reviews	A	Required	X	X		
3D Coordination	A & C.	Required	X	X	X	
Constructability Review	C	Required	X	X		
Structural Analysis						
Lighting Analysis						
Energy Analysis						
Mechanical Analysis						
Other Eng. Analysis						
Sustainability Evaluation						
Design4Maintenance Review	A & C.	Required		X	X	
3D Coordination and Conflict Analysis	A & C.	Required	X	X	X	
Facility Data Exchange	A & C.	Required		X	X	X
Quality Assurance / Quality Control						
Owner Approvals	A	Required	X	X		
Code Validation						
Commissioning						
Site Utilization Planning	A or C.	Required		X	X	
Construction System Design						
Digital Fabrication						
3D Control and Planning						
4D Phase Planning						
5D Cost Estimation						
Quantity Take Off						
BIM2Field						

Laser Scanning						
Point Cloud integration						
Security Key Management						
Building Maintenance Scheduling						
Record Modeling	A	Required		X		
Way finding						
Virtual / Mixed Reality						
As-Constructed Modeling	C	Required			X	
Building System Analysis						
Asset Management	A & C	Required		X	X	X
Space Management / Tracking	A	Required		X	X	X
Disaster Planning						
Existing Conditions Model						

Section G: BIM Process Design

Define the BIM Process and Workflows that the External Project Team will be implementing on this project as it relates to the BIM Uses that have been selected and contracted for this project. Define a detailed plan for implementing each BIM Use, define the specific exchanges of information and/or BIMs for each activity, the party responsible for each activity, and when in the schedule of the project it should occur. Process maps like those in the Penn State BIM Execution Plan may be included but are optional.

Section H: Model Progression Schedule / LOD

A template Model Progression Schedule/Agent Responsibility Matrix (MPS) template defining minimum requirements for model handover will be provided by the Project Manager and examples are included and referenced in Section 5 of this Attachment 2. The LOD levels and tolerances in the Handover section of the sample MPS define Broward County Construction Management Division's requirements for the Existing Conditions, As-Constructed and Record BIMs. The External Project Team is to complete and submit a project specific MPS for this project for all project phases as applicable. The columns pertaining to Existing Conditions, As-Constructed Modeling and Record Modeling along with requirements for tolerances and allowable deviations are to be included in the MPS.

The Model Element Rows in Broward County Construction Management Division's template MPS are high level. The rows in the final project MPS may have a higher level of granularity to be used as required to address the needs of the project and the best practices of the External Project Team.

The executed MPS shall be attached to this BIM PxP.

Section I: BIM and Facility Data Requirements

Shown In	BCAD Preliminary Asset Type List	OmniClass- Products Classification - Table 23
ARCH Model	AUTOMATIC EXTERNAL DEFIBULATOR (AED)	23-25 21 13
	BAGGAGE HANDLING CONVEYOR	23-23 17 15
	ELEVATOR	23-23 11 11
	ESCALATOR	23-23 11 13
	FIRE DOOR	23-17 11 32
	ICE MACHINE	23-21 21 29
	MOVING WALKWAY	23-23 15 11
	SLIDING DOOR	23-17 11 23
	TICKET COUNTER	23-21 19 15
	WATER COOLER	23-31 31 00
ELECT Model	FIELD CONTROL PANEL	23-35 31 15
	GENERATOR	23-35 11 15
	LINE CONTROL PANEL	23-35 31 15
	MOTOR CONTROL CENTER	23-35 31 23
	MOTOR CONTROL PANEL	23-35 31 15
	VARIABLE FREQUENCY DRIVE	23-35 17 15
MECH Model	VARIABLE SPEED DRIVE	23-35 17 00
	AC UNIT	23-33 39 11
	AIR HANDLER	23-33 25 00
	CHILLER	23-33 21 00
	CONDENSER WATER PUMP	23-27 17 00
	CONDENSING UNIT	23-33 43 00
	COOLING TOWER	23-33 23 00
	EXHAUST FAN	23-33 31 19
	FAN COIL UNITS	23-33 33 11
	FAN POWERED BOX	23-33 41 11
	FAN TERMINAL BOX	23-33 41 11
	FAN VARIABLE VOLUME BOX	23-33 41 11
	OUTSIDE AIR HANDLER UNIT	23-33 25 13
	PACKAGE AIR CONDITIONING UNIT	23-33 39 17
	PRIMARY CHILLED WATER PUMP	23-27 17 00
	ROOF TOP UNIT	23-33 25 17
	SECONDARY CHILLED WATER PUMP	23-27 17 00
	SPLIT SYS CONDENSING UNIT	23-33 43 00
PLUM Model	SUPPLY FAN	23-33 31 19
	VARIABLE AIR VOLUME BOX	23-33 41 17
	AIR COMPRESSOR	23-27 21 00
	CHEMICAL STATION	23-27 55 31
	ELECTRIC HOT WATER BOILER	23-33 11 22
	HEAT EXCHANGER	23-27 23 00
	HEAT PUMPS	23-33 17 00
	HOT WATER PUMP REHEAT	23-27 17 00
	SUMP PUMP	23-27 17 00
	TRASH PUMP	23-27 17 00
CIVIL	WATER CIRCULATING PUMP	23-27 17 00
	information embedded. The information required on these asset types would be manual entered into the COBie deliverable worksheets.	
	AIR FIELD LIGHTING RUNWAY	N/A
	AIRFIELD BEACON	N/A
	CRASH GATE	23-11 25 15
	CRASH PERIMETER GATE	23-11 25 15
	ENGINEERED MATERIAL ARRESTING SYSTEM - EMAS	N/A
	PEDESTRIAN GATE	23-11 25 15
	PERIMETER GATE	23-11 25 15
CONSULTANT	ABOVE GROUND STORAGE TANK	23-27 29 19
	BAG MEASUREMENT EQUIPMENT	23-23 17 15
	BAGGAGE DIMENSIONER	23-23 17 15
	BAGGAGE HANDLING CAROUSEL	23-23 17 15
	DIESEL FUEL STORAGE TANK	23-27 29 19
	HIGH SPEED DIVERTER	23-23 17 15
	JETWAY	23-23 15 15
	OVER SIZE BAG DOOR	23-23 17 15
	SCALE	N/A

BCF-202

MEO-BSO Crime Laboratory Combined Facility & RFP # S2115731P1 BIM and Electronic Media Submittal Requirements
(09/25/2019)

At a minimum and not limited to, Broward County Construction Management Division will require COBie data sets for all components on the Equipment List per the Construction Documents that require any of the following:

- ✓ Scheduled preventative maintenance i.e. Mechanical, Electrical,
- ✓ Routine maintenance/inspections: i.e. Plumbing
- ✓ Regulatory inspections i.e. life safety related: fire extinguisher, fire dampers, backflow preventers

The list to the right shows a sample Preliminary Asset Type List for Broward County Construction Management Division Projects. This list should be used and further detailed in the BIM PxP Template.

Section J: Collaboration Procedures

Collaboration Strategy:

Provide a brief, general description of how the project team will collaborate. Include items such as communication methods, document management and transfer, and record storage, etc.

FILE LOCATION	FILE STRUCTURE/ NAME	FILE TYPE	PASSWORD PROTECT	FILE OWNER	UPDATED
Collaboration SITE: SITE	Root Project Folder	FOLDER	YES	PT Project Mgr.	ONCE
Provide Further Information on Structure of Collaboration Site	Root Project Folder	FOLDER	YES	PMG Project Mgr.	ONCE
Provide Further Information on Structure of Collaboration Site	TBD	RVT	YES	PMG Project Mgr.	WEEKLY

Section J.1 - BIM Meeting Procedures:

There will be several types of collaboration and model review meetings needed for the project, including general progress meetings, design coordination meetings, etc. The following table includes, but is not limited to, some of the types of potential meetings necessary for the project, meeting host(s), required attendees, and required technology. Broward County Construction Management Division understands that these meetings may be in-person, virtual and/ or a combination of both. The following table describes the schedule for coordination meetings, clash detection meetings, and model walkthroughs. Items marked in Red will be REQUIRED.

The meetings listed below reflect typical Broward County Construction Management Division expectations for a project and should be customized for the needs of a project.

MEETING TYPE	DESIGN INTENT MODELS			
	STAGE	FREQUENCY	LOCATION	COMMENTS / PARTICIPANTS
Design Phase BIM Kick-off		1X within 15 days of start of project	On-site	General discussion to make sure all parties are aligned on BIM Requirements

BIM Project Execution Plan Presentation		1X within 30 days of start of project	On-site	BIM PxP Coordinator presents completed BIM PxP to entire team for final sign-off
Design Authoring Coordination Meetings		Weekly	In-Cloud	Coordination and Federation of Design Team Models.
Design Presentations/ Model Walk-throughs		As Needed	On-site	BIM presentations to Project Team for approval and reviews. Geared towards Owner and User Groups.
Design4Maintenance		DD / CD Phases 1X	On-site	BIMs to review equipment maintainability and “soft clash” for clearances.
Data Meeting		DD / CD Phases 1X	In-Cloud / On-site	Review BIMs for data compliance and test import.
Model Handover Meeting		1X	On-site	Meeting to discuss and test interoperability and file exchange.
Design Close-out		2X	On-site	Meeting to finalize Record BIMs and As-Constructed BIMs for close-out.
Construction Phase BIM Kick off Meeting	STAGE	FREQUENCY	LOCATION	COMMENTS / PARTICIPANTS
Clash / Cord Meetings			On-site	General Guidelines for model laying, area, trade sequencing and reserved zones.
Design4Maintenance			In-Cloud / On-site	
Contractor Handover/ Close-out			On-site	BIMs to review equipment maintainability and “soft clash” for clearances.
Contractor Handover/ Close-out			TBD	Meeting to finalize Record BIMs and As-Constructed BIMs for close-out.

Section J.2 - Model Delivery Schedule of Information Exchange for Submission and Approval:

Document the information exchanges and file transfers that will occur on the project. Modify the DISCIPLINE column to match the way that content is segregated into different models on a project.

DISCIPLINE	FILE TYPE	UPLOAD FREQUENCY	DOWNLOAD FREQUENCY
Architectural (Exterior)			
Architectural (Interior)			
Specialty Equipment			
Furniture			
Structural			
Mechanical			
Electrical			
Plumbing			
Civil			
Landscape			

Section J.3 - Electronic Communication Procedures:

The following document management issues should be resolved, and a procedure should be defined for each: Permissions / access, File Locations, FTP Site Location(s), File Transfer Protocol, File / Folder Maintenance, etc.

Section K: Quality Control

Overall Strategy for Quality Control:

Describe the strategy to control the quality of the model.

Quality Control Checks: The following checks should be performed to assure quality:

CHECKS	DEFINITION	RESPONSIBLE PARTY	SOFTWARE PROGRAM(S)	FREQUENCY
VISUAL CHECK	Ensure there are no unintended model components and that the design intent has been followed	A/E/C	REVIT / NAVIS	Ongoing

INTERFERENCE CHECK	Detect problems in the model where two building components are clashing including soft and hard	A/E/C	NAVIS	Bi-weekly
STANDARDS CHECK	Ensure that the BIM and County Standards have been followed (fonts, dimensions, line styles, family naming, shared coordinates, etc.)	A/E/C	REVIT / DATA NORMALIZATION	Weekly
MODEL INTEGRITY CHECKS	Describe the QC validation process used to ensure that the Project Facility Data set has no undefined, incorrectly defined or duplicated elements and the reporting process on non-compliant elements and corrective action plans	A/E/C	REVIT	Ongoing
DATA CONTENT CHECK	Conform to County BIM Requirements	A/E/C	DATA NORMALIZATION / MAXIMO	Weekly then monthly
ERROR / WARNING CHECK	Conform to County BIM Requirements	A/E/C	REVIT	Weekly

Section K.1 - Model Maintenance

The following table describes the recommended process for model maintenance. Each discipline shall be responsible for the maintenance of their models. Broward County Construction Management Division requires that all the below be conducted before submitting model at the completion of each phase of the development of the project. All the below except for removing unused design options shall be conducted before uploading models for exchange with other team members.

PROCESS	FREQUENCY (MINIMUM)
Auditing Central Files	
Compacting	
Removal of Unused Design Options	
Correcting Warning Messages where applicable	On-going (Warnings that have significance shall be resolved. Warnings shall be kept to a reasonable number. An export of warnings in the model shall accompany major milestone deliverables.)
Purging unused objects	
Purging DWG links/imports	

Deletion of unused Sheets & Views	
Resolve duplicate elements	

Section K.2 - Document Revisions

Revisions to documents will be tracked as follows:

DESCRIPTION	DESIGN/ RECORD	AS CONSTRUCTED MODEL	DESCRIPTION
RFI's			
Revit Model			
Navisworks			
CCD's			
ASI's			
CO's			

Section K.3 - Model Accuracy and Tolerances:

Models should include all appropriate dimensioning as needed for design intent, analysis, and construction.

PHASE	DISCIPLINE	TOLERANCE
EXISTING CONDITIONS MODEL	CIVIL (UNDERGROUND)	ACCURATE TO +/- (6") OF ACTUAL SIZE ACCURATE TO +/- (12") OF ACTUAL LOCATION
EXISTING CONDITIONS MODEL (ACCESSIBLE ITEMS)	ARCHITECTURAL STRUCTURAL MEPFP	ACCURATE TO +/- (1/8") OF DESIGN INTENT SIZE ACCURATE TO +/- (2") OF DESIGN INTENT LOCATION
DESIGN DOCUMENT MODELS	CIVIL ARCHITECTURAL STRUCTURAL MEP FP	ACCURATE TO +/- (1/8") OF DESIGN INTENT SIZE ACCURATE TO +/- (2") OF DESIGN INTENT LOCATION

PHASE	DISCIPLINE	TOLERANCE
SHOP DRAWINGS MODELS	CIVIL INTERIORS ENVELOPE STRUCTURAL MEPFP	ACCURATE TO +/- (1/16") OF ACTUAL SIZE ACCURATE TO +/- (1") OF ACTUAL LOCATION
AS-CONSTRUCTED MODELS	INTERIORS NOT RELATED TO CODE	ACCURATE TO +/- (1/8") OF ACTUAL SIZE ACCURATE TO +/- (2") OF ACTUAL LOCATION
AS-CONSTRUCTED MODELS	INTERIORS RELATED TO CODE	ACCURATE TO +/- (1/8") OF ACTUAL SIZE ACCURATE TO +/- (1/4") OF ACTUAL LOCATION
AS-CONSTRUCTED MODELS	CIVIL INTERIORS ENVELOPE STRUCTURAL MEP FP	ACCURATE TO +/- (1/16") OF ACTUAL SIZE ACCURATE TO +/- (1") OF ACTUAL LOCATION

Section K.4 - BIM Folder Structure for Deliverables:

The following folder structure is the standard folder structure for BIM-related files that will be used on Broward County Construction Management Division projects. No deviations from this folder structure will be permitted without a Proposed Variance Request. However, if desired, each project team may add subfolders where necessary, as defined in the BIM PxP and approved by Broward County Construction Management Division.

Project Documents for Design BIMs

- Design BIM Execution Plan (Owner, AE)
- Design BIM Analysis Reports (Owner, AE)
- Coordination Logs and Reports
- Design Model Deliverables (Public)
 - Models Used to Produce Schematic Design
 - Models Used to Produce Design Development
 - Models Used to Produce Construction Documents
 - Models Used to Produce Agency Submittals
 - Models for Permitting/ Conformance
 - Models for Construction Manager
- COBie Data Deliverables
- BIM Project Close-out
 - Record Floor Plans
 - Record BIMs
 - Federated Record BIM
 - COBie Data Final Deliverable

- Other

Project Documents for Construction BIMs

- Owner BIM Execution Plan (Owner, CM, BIM Subs)
- Construction BIM Analysis Reports (Owner, GC)
- Coordination Logs and Reports
- Coordination Models
- Trade Models
 - Models Used to Produce Final Shop Drawings
 - Models Used to Produce 4D
 - Schedule Data Used to Produce 4D
 - Models Used to Produce 5D
 - Model Quantities Used to Produce 5D
- COBie Data Deliverables
- BIM Project Close-Out
 - As-Constructed Models
 - Federated As-Constructed Models
 - Record Models
 - Federated Record Models
 - COBie Data Final Deliverable
- Other

Section L: Technological Infrastructure Needs

1. Software:

Broward County Construction Management Division uses Autodesk Revit for projects. Use of other IFC Compatible software than what is listed in the Broward County Construction Management Division BIM Standard requires approval by Broward County Construction Management Division.

List software used to deliver BIM. List any add-on software that is required to open, read or manipulate files as well. Indicate the 2D export deliverable file format for each software. The lines listed below are a sample and shall be modified for a project.

BIM USE	DISCIPLINE(S)	SOFTWARE	VERSION / BUILD	2D FILE FORMAT DELIVERABLE
Authoring				
Authoring				
Authoring				
Authoring				
Authoring				
Clash Detection				
Energy Analysis				

Cost Analysis				

Section M: Model Structure

Section M.1 - File Naming Structure:

Determine and list the structure for model file names. Design Team CAD File names shall be listed in the Drawing List with Authoring Company and File Names attachment.

Architectural Model	
Civil Model	
Mechanical Model	
Plumbing Model	
Electrical Model	
Structural Model	
Energy Model	
Coordination Model	

Steel Model	
Mechanical Model	
Plumbing Model	
Electrical Model	
Construction Model	
Coordination Model	

Section M.2 - Model Structure:

Describe how the Model is separated, e.g., by building, by floors, by zone, by areas, and/or discipline. Indicate the connections and hierarchy of linked files, including CAD files. Broward County Construction Management Division requires that all paths in Revit files be relative and that files be overlaid instead of attached unless the project team makes a strong case for alternate strategies.

1. DESIGN PHASE MODEL STRUCTURE:

2. CONSTRUCTION PHASE MODEL STRUCTURE:

Section M.3 - Measurement and Coordinate Systems:

Broward County Construction Management Division requires use of State Plane Coordinates to place the Building on its site to act as the Site origin Point and to provide for future GIS integration. See Section 2.2.4 of this Attachment 2. Broward County Construction Management Division will also provide 2D and 3D AutoCAD blocks and a 3D generic model family to be placed at the origin of ALL Design Intent BIMs, Construction BIMs and CAD files to confirm that files are aligned.

All Revit files shall have their project base point at the Revit project startup location. All CAD and Revit files that are to be linked to the Revit file using the “Origin to Origin” option. All plan-based CAD files shall use the Broward County Construction Management Division Site Origin Point as well as their 0,0 WCS origin. The 0 level in the “Z” coordinate shall match the survey datum of “0” used by the Civil Engineer in their surveys. This will ensure that all files for all buildings across the Broward County Construction Management Division campus will align to a single origin and that Revit level tags will report the true elevations of the floors.

Civil AutoCAD 2D and Civil 3D files will need to be modified prior to linking because they use an origin point that is different than the Broward County Construction Management Division Site Origin Point. It is typically outside the distance allowed by Revit. Broward County Construction Management Division’s CAD-BIM Manager can provide instructions on this.

Units shall be Imperial units. Civil 2D AutoCAD or Civil 3D files may be set with 1 unit equals 1 foot. Revit files will be set with 1 unit equals 1 foot. All other AutoCAD files including Revit exports shall be set with 1 unit equals 1 inch.

Section M.4 - Worksets:

Each discipline shall be responsible for the naming of the worksets within their files. The only required worksets are LinkCAD-Description and LinkBIM-Description. Any linked CAD files or BIM files shall be placed on these worksets so that Revit files can be opened without loading these worksets for ease of upgrading the files.

List Worksets used by discipline below:

DISCIPLINE	WORKSET	
Arch, M, E, P, Struct	LinkCAD-All	Workset for all CAD links
M, E, P, Struct	LinkBIM-Arch	Workset for Architectural Revit file
Arch, E, P, Struct	LinkBIM-Mech	Workset for Mechanical Revit file
Arch, M, P, Struct	LinkBIM-Elec	Workset for Electrical Revit file
Arch, M, E, Struct	LinkBIM-Plumb	Workset for Plumbing Revit file
Arch, M, E, P	LinkBIM-Struct	Workset for Structural Revit file
Arch, M, E, P, Struct	Levels and Grids	Levels, Grids
Arch	Shell	Building Shell
Arch	Core	Elevators, Stairs
Arch	Interior-B	Basement Interior Fit-out
Arch	Interior-1	1 st floor Interior Fit-out

Section M.5 - Color Coding:

Federated models shall adhere to Exhibit "A" – Scope of Work Attachment 2, Section 2.2.12. If approved by the Contract Administrator, a modified color coding may be revised to follow the agreed upon trade colors listed below:

(insert any modified, Contract Administrator approved, color coding selections for this project below)

- a. Architecture: White
- b. Structural Steel: Maroon
- c. Concrete and Masonry: Gray
- d. HVAC Equipment: Gold
- e. HVAC Supply Duct/Diffuser: Blue
- f. HVAC Return Duct/Diffuser: Magenta
- g. HVAC Exhaust Ventilation Ductwork: Medium Orchid

- h. HVAC Piping Supply: Gold
- i. HVAC Piping Return: Violet
- j. Electrical Equipment: Dark Yellow
- k. Electrical Conduits: Light Yellow
- l. Communication Conduit: Light Blue
- m. Electrical Cable Tray: Dark Orange
- n. Electrical Lighting: Light Golden Rod Yellow
- o. Plumbing Domestic Water: Lime
- p. Plumbing Sewer Waste / Vent: Olive
- q. Plumbing Storm/Roof Drain: Dark Green
- r. Fire Protection: Red
- s. Fire Alarm: Golden Rod
- t. Pneumatic Tube: Dark Slate Gray
- u. Equipment: Burly Wood
- v. Specialty Gas: Light Green
- w. Steel: Rust
- x. Security Systems: Orange

Section N: Attachments

1. *List any project specific BIM PxP Attachments here*
- 2.

(REMAINDER OF PAGE IS INTENTIONALLY LEFT BLANK)

Approvals:

By signing below, this BIM Project Execution Plan is adopted and agreed upon between the signed companies.

DISCIPLINE	NAME	SIGNATURE	DATE
Broward County Construction Management Division			
Architect			
Mechanical Engineer			
Electrical Engineer			
Plumbing Engineer			
Fire Protection Engineer			
Structural Engineer			
Civil Engineer			
Surveyor			
Geotech/ Soil borings			
BIM Consultant			
Construction Manager			
Construction Consultants			
Other			

End of Section 4 BIM Execution Plan

Section 5 BIM Model Progression Schedule/Agent Responsible Matrix (MPS) (Example of "Overview" Tab)

The MPS will be distributed by the Project Manager in an electronic format for use



Model Progression Schedule (MPS) Agent Responsible Matrix (ARM)

Overview and Intent of this Document.

Broward County Public Works Department and the Construction Management Division have created this Model Progression Schedule (MPS) and Agent Responsible Matrix (ARM) for use in the planning and procurement of BIM projects. This Matrix is based upon BIMForum's 2017 LOD (Level of Development) Specification and serves as a reference document. The BIMForum Specification reference enables practitioners to specify and articulate with a high level of clarity the content and reliability of BIMs at various stages in the design and construction process.

The County has prescribed minimum LOD's that are required at project milestones, but does not dictate workflow to achieve these requirements leaving the completion of the Model Progressions to the users in consultation with the County and project team.

This matrix defines Broward County's priorities for the development of project BIMs, the responsibilities of the External Team Members, and the phases to which the BIMs will be delivered and the LOD expected. The "Model Element Table" Tab includes the BIM Elements that are to be defined and the "LOD Definitions" tab includes example Level of Development definitions. This chart will be included in RFP's that require BIM and is a tool to be used for contract negotiation upon project award.

Instructions for completing this Document.

- 1 This MPS/ ARM will be included in the RFP for all BIM Projects. Upon Contract award, your team shall complete the MPS as part of the contract negotiation process, and be prepared to discuss "hand-off" & coordination of the BIM's.
- 2 Click on the "Model Element Table" Tab below to complete the MPS as is applicable to your project.
- 3 Insert the Level of Development (LOD) and the Agent Responsible and contracted to deliver that element.
- 4

- 5 Once agreed upon, this document will become a contract document and will be attached to the teams BIMxP.
- When completing the MPS, Please check the box on the top of the MPS to show the stage of the MPS submittal i.e. RFP, Proposed, Approved as described below:

RFP: Required for this Project by Broward County, the initial stage of review.

Proposed: The Design or Construction Professional changes the status to "Proposed" for all elements that are to be included in the project models.

Approved: The Model Elements and Progression Schedule that is contracted by the Design Consultants and Contractors to be included in their Team's scope of work.

Please Note:

Questions, suggestions or concerns with completing this document during the RFP selection process should be directed to the BC-PurchasingAgent listed on the RFP. The Broward County Project Manager will serve as the primary contact and address all discussions or concerns during negotiations and subsequent Project Phases.

Model Progression Schedule/Agent Responsible Matrix
(“Model Element Table” Tab - Partial Example)

[illegible]

("LOD Definitions" Tab - Example)

Fundamental LOD Definitions		
LOD 100 - Massing / Planning Level		
The Model Element may be graphically represented in the Model with a symbol or other generic representation, but does not satisfy the requirements for LOD 200. Information related to the Model Element (i.e. cost per square foot, tonnage of HVAC, etc.) can be derived from other Model Elements.		
BIMForum Interpretation: LOD 100 elements are not geometric representations. Examples are information attached to other model elements or symbols showing the existence of a component but not its shape, size, or precise location. Any information derived from LOD 100 elements must be considered approximate.		
LOD 200 - Generic Design Level		
The Model Element is graphically represented within the Model as a generic system, object, or assembly with approximate quantities, size, shape, location, and orientation. Non-graphic information may also be attached to the Model Element.		
BIMForum interpretation: At this LOD elements are generic placeholders. They may be recognizable as the components they represent, or they may be volumes for space reservation. Any information derived from LOD 200 elements must be considered		
LOD 300 - Design Coordination Level		
The Model Element is graphically represented within the Model as a specific system, object or assembly in terms of quantity, size, shape, location, and orientation. Non-graphic information may also be attached to the Model Element.		
BIMForum interpretation: The quantity, size, shape, location, and orientation of the element as designed can be measured directly from the model without referring to non-modeled information such as notes or dimension call-outs. The project origin is defined and the element is located accurately with respect to the project origin.		
LOD 350 - Construction Coordination Level		
The Model Element is graphically represented within the Model as a specific system, object, or assembly in terms of quantity, size, shape, location, orientation, and interfaces with other building systems. Non-graphic information may also be attached to the Model Element.		
BIMForum interpretation: Parts necessary for coordination of the element with nearby or attached elements are modeled. These parts will include such items as supports and connections. The quantity, size, shape, location, and orientation of the element as designed can be measured directly from the model without referring to non-modeled information such as notes or dimension call-outs.		
LOD 400 - Fabrication Level		
The Model Element is graphically represented within the Model as a specific system, object or assembly in terms of size, shape, location, quantity, and orientation with detailing, fabrication, assembly, and installation information. Non-graphic information may also be attached to the Model Element.		
BIMForum interpretation: An LOD 400 element is modeled at sufficient detail and accuracy for fabrication of the represented component. The quantity, size, shape, location, and orientation of the element as designed can be measured directly from the model without referring to non-modeled information such as notes or dimension call-outs.		

* Definition from the "Level of Development Specification Part 1. November 2017 BIMFORUM.

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End of Attachment 2: BIM and Electronic Media Submittal Requirements

**Restated Exhibit A, Scope Of Services
Attachment 3:
Preliminary Project Budget**

Project No.: 104134

RFP No.: S2115731P1

Project Title: Broward County's Medical Examiner's Office and BSO's Crime Lab Combined Facility

Facility Name: Broward County's Medical Examiner's Office and BSO's Crime Lab Combined Facility (Forensic Science Center)

Consultant's use of this budget is described within this Agreement and its Restated Exhibit A, Scope of Services, for this Project. This Preliminary Project Budget is subject to change at the Contract Administrator's discretion.

Broward County's Medical Examiner's Office and BSO's Crime Lab Combined Facility - Estimated Guaranteed Maximum Price	
	Value
Estimated Direct Costs	\$163,940,000
Estimated General Conditions	\$24,402,469
Total Estimated GMP	\$ 188,342,469

**Restated Exhibit B
Maximum Billing Rates**

RFP No: S2115731P1
Project Title: Forensic Science Center
Subconsultant: LEO A. DALY LLC

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Managing Principal	\$139.52		2.99		\$417.16
Market Sector Leader	\$138.01		2.99		\$412.65
Project Executive	\$102.83		2.99		\$307.46
QA/QC Lead	\$79.96		2.99		\$239.08
Design Lead	\$107.88		2.99		\$322.56
Senior Project Manager	\$73.95		2.99		\$221.11
Project Manager	\$59.46		2.99		\$177.79
Senior Architect	\$49.32		2.99		\$147.47
Senior Interior	\$64.31		2.99		\$192.29
Visualization	\$57.65		2.99		\$172.37
Job Captain	\$51.24		2.99		\$153.21
Junior Designer	\$41.90		2.99		\$125.28
BIM Manager	\$67.80		2.99		\$202.72
Senior Technician	\$53.00		2.99		\$158.47
Administrative Assistant	\$39.98		2.99		\$119.54

Multiplier of 2.99 is calculated as follows:

OVERHEAD = HOURLY RATE x OVERHEAD (113.00%)

FRINGE = HOURLY RATE x FRINGE (59.08%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) x OPERATING MARGIN (10%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING
MARGIN) / HOURLY RATE

2.99

**Restated Exhibit B
Maximum Billing Rates**

RFP No: S2115731P1
Project Title: Forensic Science Center
Subconsultant: Bliss & Nyitray, Inc.

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Sr. Principal	\$98.18		2.31		\$226.80
Principal	\$85.05		2.31		\$196.47
Associate	\$59.85		2.31		\$138.25
Sr. Project Engineer	\$54.60		2.31		\$126.13
Project Engineer	\$46.20		2.31		\$106.72
Engineer	\$39.90		2.31		\$92.17
Sr. CAD/BIM	\$55.13		2.31		\$127.35
CAD/BIM	\$40.95		2.31		\$94.59
Inspector	\$35.70		2.31		\$82.47
Administrative	\$37.80		2.31		\$87.32

Multiplier of 2.31 is calculated as follows:

OVERHEAD = HOURLY RATE x OVERHEAD (100%)

FRINGE = HOURLY RATE x FRINGE (10%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) x OPERATING MARGIN (10%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING
MARGIN) / HOURLY RATE

2.31

Notes:

Consultant has elected to use "Safe Harbor" combined fringe benefit and overhead rate of 110% in accordance with Section 5.2.5.

RFP Number S2115731P1
 Project Title: Forensic Science Center
 Subconsultant: Bufford Goff & Associates, Inc.

**Restated Exhibit B
Maximum Billing Rates**

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Principal	\$88.64		2.31		\$204.76
Project Manager	\$75.00		2.31		\$173.25

Multiplier of 2.31 is calculated as follows:

OVERHEAD = HOURLY RATE x OVERHEAD (100%)

FRINGE = HOURLY RATE x FRINGE (10%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) x OPERATING MARGIN (10%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING
MARGIN) / HOURLY RATE

2.31

Notes:

Consultant has elected to use "Safe Harbor" combined fringe benefit and overhead rate of 110% in accordance with Section 5.2.5.

**Restated Exhibit B
Maximum Billing Rates**

RFP No: S2115731P1
Project Title: Forensic Science Center
Subconsultant: C.M.S.-Construction Management Services, Inc.

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Principal	\$62.74		2.31		\$144.93
Senior Estimator	\$63.00		2.31		\$145.53
Chief Estimator	\$59.76		2.31		\$138.05

Multiplier of 2.31 is calculated as follows:

OVERHEAD = HOURLY RATE x OVERHEAD (100%)

FRINGE = HOURLY RATE x FRINGE (10%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) x OPERATING MARGIN (10%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING
MARGIN) / HOURLY RATE

2.31

Notes:

Consultant has elected to use "Safe Harbor" combined fringe benefit and overhead rate of 110% in accordance with Section 5.2.5.

**Restated Exhibit B
Maximum Billing Rates**

RFP No: S2115731P1
 Project Title: Forensic Science Center
 Subconsultant: Edward, Dugger + Associates, P.A.

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Principal	\$61.69		2.31		\$142.50
Acoustical Consultant	\$36.75		2.31		\$84.89
Administration & Bookkeeper	\$27.30		2.31		\$63.06

Multiplier of 2.31 is calculated as follows:

OVERHEAD = HOURLY RATE x OVERHEAD (100%)

FRINGE = HOURLY RATE x FRINGE (10%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) x OPERATING MARGIN (10%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING
MARGIN) / HOURLY RATE

2.31

Notes:

Consultant has elected to use "Safe Harbor" combined fringe benefit and overhead rate of 110% in accordance with Section 5.2.5.

**Restated Exhibit B
Maximum Billing Rates**

RFP No: S2115731P1
 Project Title: Forensic Science Center
 Subconsultant: Gartek Engineering Corporation

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Vice-President	\$121.36		2.99		\$362.87
Registered Engineer	\$80.75		2.99		\$241.44
Senior Engineer	\$68.25		2.99		\$204.07
Engineer	\$42.06		2.99		\$125.76
Mechanical	\$39.26		2.99		\$117.39
Senior Technician	\$42.00		2.99		\$125.58
Drafter	\$30.29		2.99		\$90.57
Clerical/Admin	\$36.75		2.99		\$109.88

Multiplier of 2.99 is calculated as follows:

OVERHEAD = HOURLY RATE x OVERHEAD (89.00%)

FRINGE = HOURLY RATE x FRINGE (82.92%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) x OPERATING MARGIN (10%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING
MARGIN) / HOURLY RATE

2.99

**Restated Exhibit B
Maximum Billing Rates**

RFP No: S2115731P1
Project Title: Forensic Science Center
Subconsultant: Garth Solutions, Inc.

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Principal	\$63.09		2.31		\$145.74
Public Outreach Manager	\$35.33		2.31		\$81.61
Media/Municipal Outreach Specialist	\$47.95		2.31		\$110.76
Community Relations Specialist	\$32.81		2.31		\$75.79
Content Strategist	\$58.04		2.31		\$134.07
Content Developer	\$32.81		2.31		\$75.79
Multimedia Specialist	\$35.33		2.31		\$81.61
Graphic Designer	\$32.81		2.31		\$75.79
Social Media / Copywriter	\$35.33		2.31		\$81.61

Multiplier of 2.31 is calculated as follows:

OVERHEAD = HOURLY RATE x OVERHEAD (100%)

FRINGE = HOURLY RATE x FRINGE (10%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) x OPERATING MARGIN (10%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING
MARGIN) / HOURLY RATE

2.31

Notes:

Consultant has elected to use "Safe Harbor" combined fringe benefit and overhead rate of 110% in accordance with Section 5.2.5.

**Restated Exhibit B
Maximum Billing Rates**

RFP No: S2115731P1
Project Title: Forensic Science Center
Subconsultant: James Santiago, LLC

	MAXIMUM HOURLY RATE (\$/HR)		MULTIPLIER		MAXIMUM BILLING RATE (\$/HR)
TITLE		X		=	
Principal	\$102.26		2.31		\$236.22

Multiplier of 2.31 is calculated as follows:

OVERHEAD = HOURLY RATE x OVERHEAD (100%)

FRINGE = HOURLY RATE x FRINGE (10%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) x OPERATING MARGIN (10%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING
MARGIN) / HOURLY RATE

2.31

Notes:

Consultant has elected to use "Safe Harbor" combined fringe benefit and overhead rate of 110% in accordance with Section 5.2.5.

**Restated Exhibit B
Maximum Billing Rates**

RFP No: S2115731P1
 Project Title: Forensic Science Center
 Subconsultant: McClaren, Wilson & Lawrie, Inc.

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Sr. Principal	\$131.25		2.31		\$303.19
Sr. Lab Planner	\$55.44		2.31		\$128.07
Administrative	\$37.86		2.31		\$87.46

Multiplier of 2.31 is calculated as follows:

OVERHEAD = HOURLY RATE x OVERHEAD (100%)

FRINGE = HOURLY RATE x FRINGE (10%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) x OPERATING MARGIN (10%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING
MARGIN) / HOURLY RATE

2.31

Notes:

Consultant has elected to use "Safe Harbor" combined fringe benefit and overhead rate of 110% in accordance with Section 5.2.5.

**Restated Exhibit B
Maximum Billing Rates**

RFP No: S2115731P1
Project Title: Forensic Science Center
Subconsultant: Miller, Legg & Associates, Inc.

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Principal	\$99.34		3.00		\$298.02
Senior Engineer	\$68.91		3.00		\$206.73
Project Engineer	\$43.67		3.00		\$131.01
Design/Construction Specialist	\$48.03		3.00		\$144.09
Senior Surveyor	\$58.05		3.00		\$174.15
Sr. Designer/CADD Technician	\$49.47		3.00		\$148.41
Administrative	\$21.00		3.00		\$63.00
Survey Crew (3 Person)	\$89.25		3.00		\$267.75
Sr. Environmental Scientist	\$56.67		3.00		\$170.01

Multiplier of 3.00 is calculated as follows:

OVERHEAD = HOURLY RATE x OVERHEAD (121.00%)

FRINGE = HOURLY RATE x FRINGE (51.33%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) x OPERATING MARGIN (10%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING
MARGIN) / HOURLY RATE

3.00

**Restated Exhibit B
Maximum Billing Rates**

RFP No: S2115731P1
Project Title: Forensic Science Center
Subconsultant: RADISE International, L.C.

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Principal Engineer	\$68.15		3.00		\$204.45
Senior Engineer	\$55.52		3.00		\$166.56
Principal Geologist	\$43.76		3.00		\$131.28
Project Engineer	\$29.81		3.00		\$89.43
CEI Inspector	\$22.71		3.00		\$68.13

Multiplier of 3.00 is calculated as follows:

OVERHEAD = HOURLY RATE x OVERHEAD (132.80%)

FRINGE = HOURLY RATE x FRINGE (40.21%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) x OPERATING MARGIN (10%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING
MARGIN) / HOURLY RATE

3.00

**Restated Exhibit B
Maximum Billing Rates**

RFP No: S2115731P1
Project Title: Forensic Science Center
Subconsultant: TLC Engineering Solutions, Inc.

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Principal	\$89.88		2.93		\$263.35
Project Manager	\$66.97		2.93		\$196.22
Sr. Energy Modeler	\$65.91		2.93		\$193.12
Energy Modeler	\$49.68		2.93		\$145.56
Jr. Energy Modeler	\$38.83		2.93		\$113.77
Sr. LEED Admin	\$43.66		2.93		\$127.92
Jr. Technician	\$35.02		2.93		\$102.61
Project Engineer	\$46.45		2.93		\$136.10
Junior Engineer	\$43.91		2.93		\$128.66
Project Admin	\$26.76		2.93		\$78.41

Multiplier of 2.93 is calculated as follows:

OVERHEAD = HOURLY RATE x OVERHEAD (116%)

FRINGE = HOURLY RATE x FRINGE (50.08%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) x OPERATING MARGIN (10%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING
MARGIN) / HOURLY RATE

2.93

**Restated Exhibit B
Maximum Billing Rates**

RFP No: S2115731P1
 Project Title: Forensic Science Center
 Subconsultant: Traf Tech Engineering, Inc.

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Senior Transportation Engineer	\$78.75		2.31		\$181.91

Multiplier of 2.31 is calculated as follows:

OVERHEAD = HOURLY RATE x OVERHEAD (100%)

FRINGE = HOURLY RATE x FRINGE (10%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) x OPERATING MARGIN (10%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING
MARGIN) / HOURLY RATE

2.31

Notes:

Consultant has elected to use "Safe Harbor" combined fringe benefit and overhead rate of 110% in accordance with Section 5.2.5.

**Restated Exhibit B
Maximum Billing Rates**

RFP No: S2115731P1
Project Title: Forensic Science Center
Subconsultant: Whitney Veigas - MN, LLC (DBA Visual Communications/ A Whitney Veigas Studio)

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Principal	\$66.15		2.31		\$152.81
Project Manager	\$61.95		2.31		\$143.10
Senior Designer	\$51.45		2.31		\$118.85
Designer	\$46.20		2.31		\$106.72

Multiplier of 2.31 is calculated as follows:

OVERHEAD = HOURLY RATE x OVERHEAD (100%)

FRINGE = HOURLY RATE x FRINGE (10%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) x OPERATING MARGIN (10%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING
MARGIN) / HOURLY RATE

2.31

Notes:

Consultant has elected to use "Safe Harbor" combined fringe benefit and overhead rate of 110% in accordance with Section 5.2.5.

**Restated Exhibit B-1
Reimbursables for Direct Non-Salary Expenses**

NOT USED

**Restated Exhibit C
Schedule of Subconsultants**

Project No: 104134
Project Title: Forensic Science Center

No.	Firm Name	Discipline
1.	Leo A. Daly LLC	Architectural
2.	Leo A. Daly LLC	Interior Design
3.	Gartek Engineering Corporation	Mechanical, Electrical, Plumbing & Fire Protection Engineering
4.	Bliss & Nyitray, Inc.	Structural Engineering
5.	McClaren, Wilson & Lawrie, Inc.	Lab Planning & Design
6.	Miller Legg & Associates, Inc.	Civil Engineering & Land Planning
7.	James Santiago Landscape Architecture & Design	Landscape Architecture
8.	Buford Goff & Associates, Inc.	Security
9.	Whitney Vegas – MN, LLC dba Visual Communications	Signage & Wayfinding
10.	TLC Engineering Solutions, Inc.	Voice, Data, AV, LEED & WELL
11.	Construction Management Services, Inc.	Cost Estimating
12.	Traf Tech Engineering, Inc.	Transportation Engineering
13.	Radise International, Inc.	Geotechnical Engineering
14.	Ed Dugger + Associates, P.A.	Acoustical Engineering

**Restated Exhibit D
Schedule of CBE Participation**

Project No: 104134
Project Title: Forensic Science Center

CBE/Firm	CBE Category	Description	Fees	Percentage %
Gartek Engineering Corporation	CBE	MEP Engineering	\$2,832,646.36	19.24%
RADISE International, LC	CBE	Geotechnical Engineering	\$23,427.48	0.16%
CMS - Construction Management Services, Inc.	CBE	Cost Estimating	\$183,047.84	1.24%
James Santiago Landscape Architects (JSLA)	CBE	Landscape Architecture	\$69,740.98	0.47%
Total CBE Participation			\$ 3,276,133.28	21%

**Restated Exhibit D-1
Letters of Intent**

Consultant represents that the CBE participants referenced in the attached Letters of Intent have agreed by written subcontract to perform the percentage of work amounts set forth and that the following information regarding participating Subconsultants is true and correct to the best of his/her knowledge.

SEE NEXT PAGE FOR EXECUTED LETTERS OF INTENT



LETTER OF INTENT
BETWEEN BIDDER/OFFEROR AND
SMALL BUSINESS ENTERPRISE (SBE) FIRM/SUPPLIER
(for Broward County-certified SBE firms meeting local SBE Reserve goals)

This form is to be completed and signed for each SBE firm. If the PRIME is a Broward County-certified SBE firm, please indicate the percentage being performed with your own forces.

Solicitation No.: No. S2115731P1

Project Title: Broward County's Medical Examiner's Office and Broward Sheriff's Office Crime Laboratory Facility

SBE Bidder/Offeror Name: LEO A DALY

Address: 1400 Centrepark Blvd Suite 500 City: West Palm Beach State: FL Zip: 33401

Authorized Representative: William A. Hanser Phone: 561.688.2111

SBE Firm/Supplier Name: Gartek

Address: 2700 N. 29th Avenue Suite 303 City: Hollywood State: FL Zip: 33441

Authorized Representative: Ben De Zayas Phone: 954.357.6400

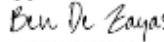
- A. This is a letter of intent between the bidder/offeror on this project and an SBE firm for the SBE to perform work on this project.
- B. By signing below, the bidder/offeror is committing to utilize the above-named SBE to perform the work described below.
- C. By signing below, the above-named SBE is committing to perform the work described below.
- D. By signing below, the bidder/offeror and SBE affirm that if the SBE subcontracts any of the work described below, it may only subcontract that work to another SBE.

Work to be performed by SBE Firm


Description	NAICS ¹	SBE Contract Amount ²	SBE Percentage of Total Project Value
Mechanical Electrical Plumbing Engineering	541330	\$ 2,832,646.36	19.24 %
			%
			%

AFFIRMATION: I hereby affirm that the information above is true and correct.

SBE Firm/Supplier Authorized Representative

Signature:  Title: Vice President Date: 04/18/2025

Bidder/Offeror Authorized Representative

Signature:  Title: Vice President, Managing Principal Date: 04/18/2025

¹ Visit [Census.gov](https://www.census.gov) and select [NAICS](#) to search and identify the correct codes. Match type of work with NAICS code as closely as possible.

² To be provided only when the solicitation requires that bidder/offeror include a dollar amount in its bid/offer.

In the event the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.

January 2025

Compliance Form No. 009



LETTER OF INTENT
BETWEEN BIDDER/OFFEROR AND
SMALL BUSINESS ENTERPRISE (SBE) FIRM/SUPPLIER
(for Broward County-certified SBE firms meeting local SBE Reserve goals)

This form is to be completed and signed for each SBE firm. If the PRIME is a Broward County-certified SBE firm, please indicate the percentage being performed with your own forces.

Solicitation No.: No. S2115731P1

Project Title: Broward County's Medical Examiner's Office and Broward Sheriff's Office Crime Laboratory Facility

SBE Bidder/Offeror Name: LEO A DALY

Address: 1400 Centrepark Blvd Suite 500 City: West Palm Beach State: FL Zip: 33401

Authorized Representative: William A. Hanser Phone: 561.688.2111

SBE Firm/Supplier Name: Radise International, LC

Address: 3296 NW 9th Avenue City: Oakland Park State: FL Zip: 33309

Authorized Representative: Panneer Shanmugam Phone: 954.881.3473

- A. This is a letter of intent between the bidder/offeror on this project and an SBE firm for the SBE to perform work on this project.
- B. By signing below, the bidder/offeror is committing to utilize the above-named SBE to perform the work described below.
- C. By signing below, the above-named SBE is committing to perform the work described below.
- D. By signing below, the bidder/offeror and SBE affirm that if the SBE subcontracts any of the work described below, it may only subcontract that work to another SBE.

Work to be performed by SBE Firm

Description	NAICS ¹	SBE Contract Amount ²	SBE Percentage of Total Project Value
Geotechnical Engineering	541330	\$ 23,427.48	0.16 %
			%
			%

AFFIRMATION: I hereby affirm that the information above is true and correct.

SBE Firm/Supplier Authorized Representative

Signature: Panneer Shanmugam Title: President Date: 04/18/2025

Bidder/Offeror Authorized Representative

Signature: [Signature] Title: Vice President, Managing Principal Date: 04/18/2025

¹ Visit [Census.gov](https://www.census.gov) and select [NAICS](https://www.census.gov/naics/) to search and identify the correct codes. Match type of work with NAICS code as closely as possible.

² To be provided only when the solicitation requires that bidder/offeror include a dollar amount in its bid/offer.

In the event the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.

January 2025

Compliance Form No. 009



LETTER OF INTENT
BETWEEN BIDDER/OFFEROR AND
SMALL BUSINESS ENTERPRISE (SBE) FIRM/SUPPLIER
(for Broward County-certified SBE firms meeting local SBE Reserve goals)

This form is to be completed and signed for each SBE firm. If the PRIME is a Broward County-certified SBE firm, please indicate the percentage being performed with your own forces.

Solicitation No.: No. S2115731P1

Project Title: Broward County's Medical Examiner's Office and Broward Sheriff's Office Crime Laboratory Facility

SBE Bidder/Offeror Name: LEO A DALY

Address: 1400 Centrepark Blvd Suite 500 City: West Palm Beach State: FL Zip: 33401

Authorized Representative: William A. Hanser Phone: 561.688.2111

SBE Firm/Supplier Name: Construction Management Services (CMS)

Address: 11555 Heron Bay Blvd, Suite 204 City: Coral Springs State: FL Zip: 33076

Authorized Representative: Wayne Birch Phone: 954.481.1611

- A. This is a letter of intent between the bidder/offeror on this project and an SBE firm for the SBE to perform work on this project.
- B. By signing below, the bidder/offeror is committing to utilize the above-named SBE to perform the work described below.
- C. By signing below, the above-named SBE is committing to perform the work described below.
- D. By signing below, the bidder/offeror and SBE affirm that if the SBE subcontracts any of the work described below, it may only subcontract that work to another SBE.

Work to be performed by SBE Firm

Description	NAICS ¹	SBE Contract Amount ²	SBE Percentage of Total Project Value
Cost Estimator	236220	\$ 183,047.84	1.24 %
			%
			%

AFFIRMATION: I hereby affirm that the information above is true and correct.

Signed by:
SBE Firm/Supplier Authorized Representative

Signature: [Signature] Title: President Date: 04/18/2025

Signed by:
Bidder/Offeror Authorized Representative

Signature: [Signature] Title: Vice President, Managing Principal Date: 04/18/2025

¹ Visit [Census.gov](https://www.census.gov) and select [NAICS](#) to search and identify the correct codes. Match type of work with NAICS code as closely as possible.

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January 2025

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LETTER OF INTENT
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This form is to be completed and signed for each SBE firm. If the PRIME is a Broward County-certified SBE firm, please indicate the percentage being performed with your own forces.

Solicitation No.: No. S2115731P1

Project Title: Broward County's Medical Examiner's Office and Broward Sheriff's Office Crime Laboratory Facility

SBEBidder/Offeror Name: LEO A DALY

Address: 1400 Centrepark Blvd Suite 500 **City:** West Palm Beach **State:** FL **Zip:** 33401

Authorized Representative: William A. Hanser **Phone:** 561.688.2111

SBE Firm/Supplier Name: James Santiago Landscape Architect (JSLA)

Address: 612 NE 14th Ave. **City:** Fort Lauderdale **State:** FL **Zip:** 33304

Authorized Representative: James Santiago **Phone:** 954.560.1895

- A. This is a letter of intent between the bidder/offeror on this project and an SBE firm for the SBE to perform work on this project.
- B. By signing below, the bidder/offeror is committing to utilize the above-named SBE to perform the work described below.
- C. By signing below, the above-named SBE is committing to perform the work described below.
- D. By signing below, the bidder/offeror and SBE affirm that if the SBE subcontracts any of the work described below, it may only subcontract that work to another SBE.

Work to be performed by SBE Firm

Description	NAICS ¹	SBE Contract Amount ²	SBE Percentage of Total Project Value
Landscape Architecture	541320	\$ 69,740.98	0.47 %
			%
			%

AFFIRMATION: I hereby affirm that the information above is true and correct.

SBE Firm/Supplier Authorized Representative

Signature: [Signature] **Title:** President **Date:** 04/18/2025

Bidder/Offeror Authorized Representative

Signature: [Signature] **Title:** Vice President, Managing Principal **Date:** 04/18/2025

¹ Visit [Census.gov](https://www.census.gov) and select [NAICS](#) to search and identify the correct codes. Match type of work with NAICS code as closely as possible.

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January 2025

Compliance Form No. 009

Restated Exhibit D-1 - Letters of Intent

Broward County's Medical Examiner's Office and BSO's Crime Lab Combined Facility

RFP# S2115731P1

May 6th, 2025

Page 6 of 6

Restated Exhibit E Minimum Insurance Requirements

MINIMUM INSURANCE REQUIREMENTS

Project: Design Services for Forensic Science Center
Agency: Construction Management Division

TYPE OF INSURANCE	ADDL INSD	SUBR WYD	MINIMUM LIABILITY LIMITS		
				Each Occurrence	Aggregate
GENERAL LIABILITY - Broad form <input checked="" type="checkbox"/> Commercial General Liability <input checked="" type="checkbox"/> Premises-Operations <input type="checkbox"/> XCU Explosion/Collapse/Underground <input checked="" type="checkbox"/> Products/Completed Operations Hazard <input checked="" type="checkbox"/> Contractual Insurance <input checked="" type="checkbox"/> Broad Form Property Damage <input checked="" type="checkbox"/> Independent Contractors <input checked="" type="checkbox"/> Personal Injury Per Occurrence or Claims-Made: <input checked="" type="checkbox"/> Per Occurrence <input type="checkbox"/> Claims-Made Gen'l Aggregate Limit Applies per: <input type="checkbox"/> Project <input type="checkbox"/> Policy <input type="checkbox"/> Loc. <input type="checkbox"/> Other _____	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Bodily Injury		
			Property Damage		
			Combined Bodily Injury and Property Damage	\$1,000,000	\$2,000,000
			Personal Injury		
			Products & Completed Operations		
AUTO LIABILITY <input checked="" type="checkbox"/> Comprehensive Form <input checked="" type="checkbox"/> Owned <input checked="" type="checkbox"/> Hired <input checked="" type="checkbox"/> Non-owned <input checked="" type="checkbox"/> Any Auto, If applicable <i>Note: May be waived if no driving will be done in performance of services/project.</i>			Bodily Injury (each person)		
			Bodily Injury (each accident)		
			Property Damage		
			Combined Bodily Injury and Property Damage	\$500,000	
<input type="checkbox"/> EXCESS LIABILITY / UMBRELLA Per Occurrence or Claims-Made: <input type="checkbox"/> Per Occurrence <input type="checkbox"/> Claims-Made <i>Note: May be used to supplement minimum liability coverage requirements.</i>					
<input checked="" type="checkbox"/> WORKER'S COMPENSATION <i>Note: U.S. Longshoremen & Harbor Workers' Act & Jones Act is required for any activities on or about navigable water.</i>	N/A	<input checked="" type="checkbox"/>	Each Accident	STATUTORY LIMITS	
<input checked="" type="checkbox"/> EMPLOYER'S LIABILITY			Each Accident	\$500,000	
<input checked="" type="checkbox"/> PROFESSIONAL LIABILITY (ERRORS & OMISSIONS) All consulting, engineering, surveying, and design professionals.	N/A		Each Claim:	\$5,000,000	
<input type="checkbox"/> POLLUTION/ENVIRONMENTAL LIABILITY			Each Claim:		
			*Maximum Deductible:		
Description of Operations: Broward County is additional insured for liability. Insured's insurance shall provide primary coverage and shall not require contribution from the County, self-insurance or otherwise. Waiver of subrogation applies in favor of Broward County. For Claims-Made policies insurance must be maintained and evidence of insurance must be provided for at least five (5) years after completion of the contract or work.					

CERTIFICATE HOLDER:

Broward County
115 South Andrews Avenue
Fort Lauderdale, Florida 33301

 Digitally signed by
COLLEEN POUNALL
Date: 2025.03.19
15:38:01 -04'00'

 Risk Management Division

Table 1 - Minimum Insurance Requirements for Amendment 03 by Broward County Risk

Restated Exhibit E - Minimum Insurance Requirements
Broward County's Medical Examiner's Office and BSO's Crime Lab Combined Facility
RFP# S2115731P1

May 6th, 2025