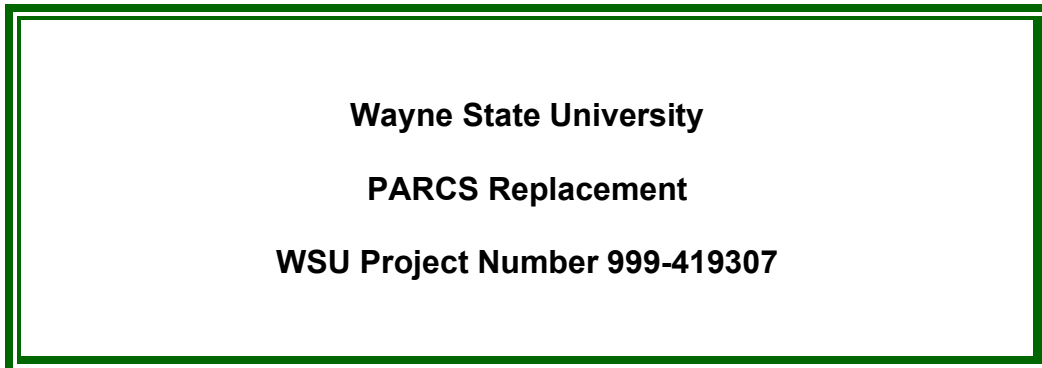




Division of Finance and Business Operations



FOR:

Board of Governors
Wayne State University
Detroit, Michigan

Owner's Representative:

Jon Frederick / Damon Wade, Project Manager
Facilities Planning & Management
Design & Construction Services
5454 Cass
Wayne State University
Detroit, Michigan 48202

Purchasing Agent:

Valerie Kreher, Senior Buyer
WSU – Procurement & Strategic Sourcing
5700 Cass, Suite 4200
Detroit, Michigan 48202
313-577-3720
rfpteam2@wayne.edu

Consultant:

Walker Consultants
525 Avis Drive, Suite 1
Ann Arbor, MI 48108

January 6, 2025

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Appendix A

Project Specific WSU Wage Schedule (posted separately)
<https://procurement.wayne.edu/vendors/wage-rates>

INFORMATION FOR BIDDERS

OWNER: Board of Governors
Wayne State University

PROJECT: **PARCS Replacement**
Project No. **999-419307**

LOCATION: Wayne State University
91 West Forest and multiple campus addresses
Detroit, Michigan 48202

PURCHASING AGENT: **Valerie Kreher, Senior Buyer**
WSU – Procurement & Strategic Sourcing
5700 Cass, Suite 4200
Detroit, Michigan 48202
313-577-3720
rfpteam2@wayne.edu

OWNER'S REPRESENTATIVE: **Jon Frederick / Damon Wade**, Project Manager
Facilities Planning & Management
Design & Construction Services
Wayne State University
5454 Cass Avenue
Detroit, Michigan 48202

Architect: **Walker Consultants**
525 Avis Drive, Suite 1
Ann Arbor, MI 48108

SPECIAL NOTE: Right to reject any and all proposals, either in whole or in part and to waive any irregularities therein is reserved by the Owner.

BIDS ADVERTISED: January 6, 2025

BIDDING: Bidding documents may be obtained by vendors from the University Purchasing Web Site at <http://go.wayne.edu/bids> beginning **January 6, 2025**. When visiting the Web Site, click on the "Construction" link in green. Copies of the RFP will not be available at the pre-proposal meeting.

Optional Pre-Bid Conference: To participate, it is **Optional** that you and/or responsible representatives of your organization attend our pre-bid conference, to be held on **January 15, 2025, 10:00 am (Eastern - Detroit Time)**.

Vendors who would like to participate in the pre-bid meeting via a TEAMS Video Conference or Conference Call, may do so via the information below:

Microsoft Teams Meeting
On-line or via Conference Call

[Join the meeting now](#)

Need to join from a mobile device but don't have TEAMS on it?
[Visit our website](#) for instruction on adding TEAMS to your device.

Attendance will be taken during the Prebid Meeting. When Pre-proposal Meetings are Optional, nominal scorecard points will be awarded for attendance.

OPTIONAL Site Visit (if needed): A Site visit may be scheduled at the conclusion of the pre-bid meeting, at the discretion of the project manager. The tentative date for Site Visit is **Open**. The parking structures are open to the public for viewing. Take care not to interfere with normal business.

DUE DATE FOR QUESTIONS: Due Date for questions shall be **January 24, 2025 at 12:00 Noon**. All questions must be reduced to writing and emailed to the attention of **Valerie Kreher, Senior Buyer** at **rfpteam2@wayne.edu**.

Bids Due: Proposals for lump-sum General Contract will be received by electronic submission on **February 21, 2025**, until 2:00 p.m. (local time). The link for bid submission will be posted with the bid details at <http://go.wayne.edu/bids> beginning **January 6, 2025**. Vendors are required to combine documents into one PDF to ensure no portion of your response is inadvertently omitted. This includes your bid, bid bond, and any other documents.

No public bid opening will be held.

Bid Qualification Meeting: Bidders must be available for a bid prequalification meeting, as soon as the day following the bid opening. The lowest qualified bidder will be contacted and requested to meet with Facilities Planning & Management at their office located at 5454 Cass Avenue, Detroit, MI 48202. During this meeting, the Vendor must provide information on the qualifications of management and supervisory personnel assigned to the project, a **Project Schedule** and a **Schedule of Values**, including a list of Contractor's suppliers, subcontractors, and other qualifications. This information should include information on the contractor's and any subcontractor's access to labor necessary for contract performance.

If all aspects of the bid are in order, an unsigned contract will be given to the successful Contractor as soon as it's available. The Contractor has 5 business days to return the contract to the Project Manager for University counter signature. The contractor must also submit a Performance Bond as outlined above, and a Certificate of Insurance in the same 5 business day period. In the event the Contractor fails to return the documents in this 5-day period, the University reserves the right to award the contract to the next lowest qualified bidder.

All available information pertaining to this project will be posted to the Purchasing web site at

<http://go.wayne.edu/bids>.

Information that is not posted to the website is not available/not known

INSTRUCTIONS TO BIDDERS

OWNER: Board of Governors
Wayne State University

PROJECT: **PARCS Replacement**
Project No. **999-419307**

LOCATION: Wayne State University
91 West Forest and multiple campus addresses,
Detroit, Michigan 48202

PURCHASING AGENT: **Valerie Kreher, Senior Buyer**
WSU – Procurement & Strategic Sourcing
5700 Cass, Suite 4200
Detroit, Michigan 48202
313-577-3720
rfpteam2@wayne.edu

1. PROPOSALS

- A. Procurement will receive Proposals for the work as herein set forth on **February 21, 2025**, until 2:00 p.m. (local time). The link for bid submission will be posted with the bid details at <http://go.wayne.edu/bids>. **No public bid opening will be held.**
- B. Proposals shall be for a **lump-sum General Contract for the entire work of the Project as provided in the Form of Proposal.**
- C. Proposals shall be submitted by electronic submission on forms furnished with the Bidding documents. The link for bid submission will be posted with the bid details at <http://go.wayne.edu/bids> beginning **January 6, 2025**. The forms must be completed in its entirety and must be signed, and the completed forms shall be without alterations, interlineations, or erasures. Forms shall contain no recapitulations of the work to be done.
- D. All base bids must be conforming to the detailed specifications and drawings provided by the University, including any Addenda issued. Voluntary Alternates will only be considered if the Contractor has also submitted a conforming base bid. Any stipulation of voluntary alternates or qualifications contrary to the Contract requirements made by the Bidder in or accompanying his proposal as a condition for the acceptance of the Contract will not be considered in the award of the Contract and will cause the rejection of the entire Proposal.
- E. The competency and responsibility of Bidders will be considered in making the award. The University is not obligated to accept the lowest or any other bids. **The University reserves the right to reject any and all bids and to waive any informalities in the Proposals.**

2. PROPOSAL GUARANTEE

- A. A satisfactory Bid Bond executed by the Bidder and Surety Company, in an amount equal to not less than five percent (5%) of the maximum proposal amount shall be submitted with each Proposal, which amount may be forfeited to the Board of Governors, Wayne State University, if the successful Bidder refuses to enter into a Contract within ninety (90) days from receipt of Proposals.
- B. Bond must be issued by a Surety Company with an A or A- rating as denoted in the AM Best Key Rating Guide.
- C. Bid bonds shall be accompanied by a Power of Attorney authorizing the signer of the bond to do so on behalf of the Surety Company.

- D. Withdrawal of Proposals is prohibited for a period of ninety (90) days after the actual date of opening thereof.

3. CONTRACT SECURITY

- A. The successful Bidder will be required to furnish a Performance Bond and Labor and Material Payment bond in an amount equal to 100% of the contract award amount, and include such cost in the Proposal, complying with University policy and the laws of the State of Michigan.
- B. Performance Bond and Labor and Material Payment Bond shall be from a surety company acceptable to the Owner and made payable as follows:
 - (1) A bond for 100% of the contract award amount to the Board of Governors of Wayne State University, and guaranteeing the payment of all subcontractors and all indebtedness incurred for labor, materials, or any cause whatsoever on account of the Contractor in accordance with University policy and the laws of the State of Michigan relating to such bonds.
 - (2) A bond for 100% of the contract award amount to the Board of Governors of Wayne State University to guarantee and insure the completion of work according to the Contract.
- C. The only acceptable Performance Bond shall be the AIA A312 – 2010.
- D. Bond must be issued by a Surety Company with an A or A- rating as denoted in the AM Best Key Rating Guide.

4. BOND CLARIFICATION

For bids below \$50,000.00,

- A. Bid bond will not be required.
- B. Performance and Material & Labor Payment bonds will not be required.

5. INSPECTION

- A. Before submitting its Proposal, each Bidder shall be held to have visited the site of the proposed work and to have familiarized themselves as to all existing conditions affecting the execution of the work in accordance with the Contract Documents. No allowance or extra consideration on behalf of the Contractor will subsequently be made by reason of its failure to observe the Conditions or on behalf of any subcontractor for the same reason.

6. EXPLANATION TO BIDDERS AND ADDENDA

- A. Neither the Owner nor Representative nor Purchasing Agent will give verbal answers to any inquiries regarding the meaning of drawings and specifications, and any verbal statement regarding same by any person, previous to the award, shall be unauthoritative.
- B. Any explanation desired by Bidders must be submitted in writing to the Purchasing Agent, and if explanation is necessary, a reply will be made in the form of an Addendum, a copy of which will be distributed via the appropriate Listserv maintained by Procurement & Strategic Sourcing, and will be posted to the website.
- B. All addenda issued prior to date of receipt of Proposals shall become a part of these Specifications, and all proposals are to include the work therein described.

7. INTERPRETATION OF CONTRACT DOCUMENTS

- A. If any person contemplating submitting a bid for the proposed Contract is in doubt as to the true meaning of any part of the drawings, specifications, or other Contract Documents, he may submit to the Purchasing Agent, a written request for an interpretation thereof. The person submitting the request will be responsible for its prompt delivery. Any interpretation of the Contract Documents will be made by an addendum duly issued. A copy of such addendum will be posted to the website and distributed via the listserv. Each proposal submitted shall list all addenda, by numbers, which have been published prior to the time scheduled for receipt of proposal.

8. SUBSTITUTION OF MATERIALS AND EQUIPMENT

- A. Whenever a material, article or piece of equipment is identified on the Drawings or in the Specifications by reference to manufacturers' or vendors' names, trade names, catalog numbers, or the like, it is so identified for the purpose of establishing a standard, and any material, article, or piece of equipment of other manufacturers or vendors which will perform adequately the duties imposed by the general design will be considered equally acceptable provided that the material, article, or piece of equipment so proposed is, in the opinion of the Architect, of equal substance, appearance and function. It shall not be purchased or installed by the Contractor without the Architect's written approval.

9. TAXES

- A. The Bidder shall include in his lump sum proposal and make payment of all Federal, State, County and Municipal taxes, including Michigan State Sales and Use Taxes, now in force or which may be enacted during the progress and completion of the work covered. Information regarding the State of Michigan sales and use tax laws can be found in [SOM Revenue Administrative Bulletin 2016-18](#).

10. REQUIREMENTS FOR SIGNING PROPOSALS AND CONTRACTS

- A. The following requirements must be observed in the signing of proposals that are submitted:
- (1) Proposals that are not signed by individuals making them shall have attached thereto a Power of Attorney, evidencing the authority to sign the Proposal in the name of the person for whom it is signed.
 - (2) Proposals that are signed for partnership shall be signed by all of the partners or by an Attorney-in-Fact. If signed by an Attorney-in-Fact, there must be attached to the Proposal a Power of Attorney evidencing authority to sign the Proposal, executed by the partners.
 - (3) Proposals that are signed for a corporation shall have the correct corporate name thereof and the signature of the President or other authorized officer of the corporation, manually written in the line of the Form of Proposal following the words "signed by". If such a proposal is signed by an official other than the President of the Corporation, a certified copy of resolution of the Board of Directors, evidencing the authority of such official to sign the bid, shall be attached to it. Such proposal shall also bear the attesting signature of the Secretary of the Corporation and the impression of the corporate seal.

11. QUALIFICATIONS OF BIDDERS

- A. The Owner may request each of the three (3) low bidders to submit information necessary to satisfy the Owner that the Bidder is adequately prepared to fulfill the Contract. Such information may include past performance records, list of available personnel, plant and equipment, description of work that will be done simultaneously with the Owner's Project, financial statement, or any other pertinent information. This information and such other information as may be requested will be used in determining whether a Bidder is qualified to perform the work required and is responsible and reliable.

12. **SPECIAL REQUIREMENTS**

- A. The attention of all Bidders is called to the General Conditions, Supplementary General Conditions, and Special Conditions, of which all are a part of the Specifications covering all work, including Subcontracts, materials, etc. Special attention is called to those portions dealing with Labor Standards, including wages, fringe benefits, Equal Employment Opportunities, and Liquidated Damages.
- B. Prior to award of the project, the apparent low bidder will be required to produce a **schedule of values** which will include the proposed subcontractors for each division of work and whether the subcontractor is signatory or non-signatory. A contract will not be issued to the apparent low bidder until this document is provided. A contractor will have 5 business days to produce this document. If the required document is not received within this time, the bidder will be disqualified.

13. **NOTICE OF AWARD/ACCEPTANCE OF BID PROPOSAL**

- A. The Proposal shall be deemed as having been accepted when a copy of the Contract (fully executed by both the vendor and the appropriate signatory authority for the University), with any/all Alternates, Addenda, and Pre-Contract Bulletins, as issued by the office or agent of the Owner has been duly received by the Contractor. After signing the Contracts, the Contractor shall then return all copies, plus any required bonds and certificates of insurance, to the office of the Owner's Representative, at 5454 Cass, Wayne State University, Detroit, MI 48202. Construction will begin when the fully-executed contract has been returned to the Contractor.

14. **TIME OF STARTING AND COMPLETION**

- A. It is understood that the work is to be carried through to substantial completion with the utmost speed consistent with good workmanship and to meet the established start and completion dates.
- B. The Contractor shall begin work under the Contract without delay, upon receipt of a fully-executed contract from the Owner, and shall substantially complete the project ready for unobstructed occupancy and use of the Owner for the purposes intended within the completion time stated in the Contract.
- C. The Contractor shall, immediately upon receipt of fully-executed contract, schedule his work and expedite deliveries of materials and performance of the subcontractors to maintain the necessary pace for start and completion on the aforementioned dates.

15. **CONTRACTOR'S PERFORMANCE EVALUATION**

In an effort to provide continuous process improvement regarding the construction of various university projects, Wayne State University is embarking upon a process of evaluating the contractor's overall performance following the completion of work. At the conclusion of the construction project a subjective evaluation of the Contractor's performance will be prepared by the Project Manager and the supervising Director of Construction. The evaluation instrument that will be used in this process is shown in Section **00440-01 - Contractor's Performance Evaluation**.

16. **BIDDING DOCUMENTS**

- A. Bid specifications are available online beginning **January 6, 2025** through Wayne State University Procurement & Strategic Sourcing's Website for Advertised Bids: <http://go.wayne.edu/bids>. The plans for this project can be viewed in advance and/or printed from the above website. Copies of the RFP will not be available at the pre-proposal meeting.

- B. **DOCUMENTS ON FILE**

- (1) *Wayne State University Procurement & Strategic Sourcing's Website.*
All available information pertaining to this project will be posted to the Purchasing web site at <http://go.wayne.edu/bids>.
Information that is not posted to the website is not available/not known.
- (2) Notification of this Bid Opportunity has been sent to those entities registered with our ListServ. Available ListServes can be found at
http://www.forms.procurement.wayne.edu/Adv_bid/Adv_Bid_Listserve.html
- (3) Please note: Bid notices will be sent only to those Vendors registered to receive them via our Bid Opportunities list serve. To register, to <http://go.wayne.edu/bids>, and click on the "Join our Listserve" link at the top of the page.

15. Smoke and Tobacco-Free Policies

On August 19, 2015, Wayne State joined hundreds of colleges and universities across the country that have adopted smoke- and tobacco-free policies for indoor and outdoor spaces. Contractors are responsible to ensure that all employees and all subcontractors' employees are in compliance anytime they are on WSU's main, medical, or extension center campuses. The complete policy can be found at <http://wayne.edu/smoke-free/policy/>.

Notice of **Optional** Pre-Bid Conference

PROJECT: **PARCS Replacement,**

PROJECT NOS.: **WSU PROJECT NO. 999-419307**

It is **Optional** that each Contractor proposing to bid on this work must attend a pre-bid conference as a condition for submitting a proposal.

Vendors who would like to participate in the pre-bid meeting via a TEAMS Video Conference or Conference Call, may do so via the information below:

**Microsoft Teams Meeting
On-line or via Conference Call**

[Join the meeting now](#)

Need to join from a mobile device but don't have TEAMS on it?

[Visit our website](#) for instruction on adding TEAMS to your device.

Attendance will be taken during the Prebid Meeting. When Pre-proposal Meetings are Optional, nominal scorecard points will be awarded for attendance.

The purpose of this conference is to clarify the procedures, scope of work, and to identify any omissions and/or inconsistencies that may impede preparation and submission of representative competitive bids.

In the event that less than 3 individual contractor firms attend the pre-bid conference, the University reserves the right, at its sole discretion, to either reschedule the pre-bid conference or proceed and offer a second pre-bid conference date. (Attendance at only one pre-bid conference will be required).

Minutes of the conference shall be posted to the Website at <http://go.wayne.edu/bids>.

Any clarifications or corrections that cannot be made at the conference will be by Addendum.

All available information pertaining to this project will be posted to the Purchasing web site at <http://go.wayne.edu/bids>.

Information that is not posted to the website is not available/not known.

AGENDA

- I. Welcome and Introductions
 - A. Wayne State University Representatives
 - B. Vendor Representatives
 - C. Sign in Sheet- be sure to include your company name and representative in attendance on the sign in sheet.

- II. Brief Overview of Wayne State University
 - A. Purpose and Intent of RFP.
 - B. Detailed review of the RFP and the requirements for a qualified response.
 - C. Review of all pertinent dates and forms that are REQUIRED for a qualified response.

- III. Vendor Questions/Concerns/Issues
 - A. Questions that can be answered directly by the appropriate person in this meeting will be answered and both question and answer will be recorded in the minutes of the meeting.
 - B. Questions that need to be researched will be answered and a nature of clarification will be emailed to the appropriate ListServ. See http://www.forms.purchasing.wayne.edu/Adv_bid/Adv_Bid_Listserve.html for a list of ListServ Bid Lists.
 - C. Minutes will be emailed to the appropriate ListServ.
 - D. Questions and concerns that come up after this meeting are to be addressed to **Valerie Kreher**, Procurement & Strategic Sourcing. Discussion with other University members is seriously discouraged and could lead to disqualification from further consideration. All questions and answers will be recorded and emailed to all participants of the RFP.
 - E. Due date for questions is **January 24, 2025**, 12:00 noon.

- IV. Minimum Participation
 - A. If less than 3 individual contractor firms attend the **Optional** pre-bid meeting, the University reserves the right, at its sole discretion, to either reschedule the pre-bid conference or proceed and offer a second pre-bid conference date. (Attendance at only one pre-bid conference will be required).
 - B. On the day of the bid opening, if less than 3 sealed bids are received, the University reserves the right, at its sole discretion, to rebid the project in an effort to obtain greater competition. If the specifications are unchanged during the rebid effort, any contractor who submitted a bid will be given the option of keeping its bid on file for opening after the second bid effort, or of having the bids returned to them unopened.

- V. Proposal Due Date: **February 21, 2025**, 2:00 p.m.

- VI. Final Comments

- VII. Adjourn

VENDOR NAME _____

GENERAL CONTRACT - PROPOSAL FORM

Sealed proposals for lump-sum General Contract will be received at the office of the Procurement & Strategic Sourcing **by electronic submission on February 21, 2025**, until 2:00 p.m. (local time). The link for bid submission will be posted with the bid details at <http://go.wayne.edu/bids> beginning **January 6, 2025**.

Please Note – Vendors must Pre-qualify themselves when responding to this bid opportunity. Our Prequalification questions can be found on page 4 of this section.

OWNER: Board of Governors
Wayne State University

PROJECT: **PARCS Replacement**

PROJECT NO.: WSU PROJECT NO. **999-419307**

PROJECT TYPE: **General Work**

PURCHASING AGENT: **Valerie Kreher, Senior Buyer**
WSU – Procurement & Strategic Sourcing
5700 Cass, Suite 4200
Detroit, Michigan 48202
313-577-3720
rfpteam2@wayne.edu

OWNER'S REPRESENTATIVE: **Jon Frederick / Damon Wade**, Project Manager
Design & Construction Services
Facilities Planning & Management
5454 Cass Avenue
Detroit, Michigan 48202

TO: Board of Governors
Wayne State University
Detroit, Michigan

PREBID MEETING: Did your company attend the **Optional** Pre-Bid Conference?
Yes _____ No _____

BASE PROPOSAL: The undersigned agrees to enter into an Agreement to complete the entire work of the **PARCS Replacement** project (WSU Project No. **999-419307**) in accordance with the Bidding Documents for the following amounts:

VENDORS MUST FILL OUT EXCEL SHEET FOR THIS PROJECT

WSU WAGES: Did your company quote based upon **Union or WSU Wage Rates** as required?
Yes _____ No _____

CONFLICT OF INTEREST:

Are you or any Officer, Owner or Partner in this company an employee of Wayne State University, or have you been an employee within the past 24 months? If Yes, explain below.

Yes _____ No _____

Are any immediate family members of any Officer, Owner or Partner in this company employees of Wayne State University? If Yes, explain below.

Yes _____ No _____

LAWN REPLACEMENT:

The undersigned agrees that, in the event of existing lawn or landscaping damage, due to the Contractor's work, that has not been properly addressed and repaired to the satisfaction of the University, the University may repair/replace the lawn and/or landscaping, and that the expense will be at a **unit cost of \$15.00 per square yard for lawn, and landscaping at a rate of 1.5 times the cost of said repairs**, the full cost of which shall be reimbursed by the contractor.

CONTRACT CHANGE ORDERS:

The undersigned agrees to the following pricing formula and rates for changes in the contract work:

Where changed Work is performed, the Contractor may add to the total estimated actual cost for such Work no more than ten (10%) for subcontractor mark-up and seven and one-half percent (7.5%) for self-performed trade work for profit, overhead, insurance, taxes, indirect supervision, bonds, and any other costs not allowed by section 4.02.01

Within 14 days of the project's contract execution Contractor shall provide to the Owner; Subcontractor's hourly labor rate breakdown details. This requirement shall extend to the lowest level of subcontractor participation.

* Job and general overhead includes supervision and executive expenses; use charges on small tools, scaffolding, blocking, shores, appliances, etc., and other miscellaneous job expenses.

** Net labor cost is the sum of the base wages, fringe benefits established by governing trade organizations, applicable payroll taxes, and increased expense for contractor's liability insurance (Workman's Compensation, P.L. and P.D.).

TIME OF COMPLETION:

The Contract is expected to be fully executed on or about 25 calendar days after successful bidder qualification and recommendation of award. The undersigned agrees to start construction **immediately after** receipt of a fully executed contract, and to complete the work as follows:

Substantial Completion will be completed no later than **November 2025**.

LIQUIDATED DAMAGES:

It is understood and agreed that, if project is not completed within the time specified in the contract plus any extension of time allowed pursuant thereto, the actual damages sustained by the Owner because of any such delay, will be uncertain and difficult to ascertain, and it is agreed that the reasonable foreseeable value of the use of said project by Owner would be the sum of **\$Damages No.00 per day**, and therefore the contractor shall pay as liquidated damages to the Owner the sum of **\$Damages No.00 per day** for each day's delay in substantially completing said project beyond the time specified in the Contract and any extensions of time allowed thereunder.

TAXES:

The undersigned acknowledges that prices stated above include all applicable taxes of whatever character or description. Michigan State Sales Tax is applicable to the work. Bidder understands that the Owner reserves the right to reject any or all bids and to waive informalities or irregularities therein.

ADDENDA:

The undersigned affirms that the cost of all work covered by the following Addenda are included in the lump sum price of this proposal.

Addendum No. _____ Date _____ Addendum No. _____ Date _____
 Addendum No. _____ Date _____ Addendum No. _____ Date _____
 Addendum No. _____ Date _____ Addendum No. _____ Date _____
 Addendum No. _____ Date _____ Addendum No. _____ Date _____
 Addendum No. _____ Date _____ Addendum No. _____ Date _____

CONTRACTOR'S PREQUALIFICATION STATEMENT & QUESTIONNAIRE:

Our Minimum Requirements for Construction Bids are:

WSU considers this project: General Work.

Criteria	Small Project bid less than \$50,000	Medium Project bid between \$50,001 and \$250,000	Large Project bid between \$250,001 and \$2 million	Very Large Project bid greater than \$2 million
EMR Rating (Experience Modification Rating)	1.0 or Less	1.0 or Less	1.0 or Less	1.0 or Less
Bondable Vendor	N.A.	Required	Required	Required
Length of Time in Construction Business	2 Years	3 Years	5 Years	5 Years
Demonstrated Experience in Projects Similar in Scope and Price in the last 3 years	1 or more	1 or more	2 or more	3 or more
Unsuccessful Projects on Campus in last 3 years	None Allowed	None Allowed	None Allowed	None Allowed
Failure to comply with WSU Wage and/or Project Labor requirements	None Allowed	None Allowed	None Allowed	None Allowed
Withdrawn University Bid (with or without Bond forfeiture) within the last 3 years **	1 or less	1 or less	1 or less	1 or less
Company currently not in Chapter 11 of the US Bankruptcy Code	1 Year	2 Years	3 Years	3 Years

** Withdrawal of a bid is subject to the University suspension policy, for a period up to one year.

Contractors must complete the following information to determine their eligibility to participate in this bid. This information is required with your Bid to the University

Failure to complete this form in its entirety will result in your bid being disqualified.

Check one of the following on the makeup of your company:

_____ Corporation

_____ Individual

_____ Partnership

_____ Joint Venture

_____ Other (Explain below):

Diversity Classification: Please indicate the appropriate diversity classification for your company. The University recognizes the following groups as diverse or disadvantaged:

- Majority Owned _____
- Minority Business Enterprises (MBE) _____
- Women Business Enterprises (WBE) _____
- Disabled Veteran Enterprises (DVBE) _____
- Disabled Person Enterprises (DBE) _____
- Veteran Owned Businesses (VBE) _____
- Small Businesses per the US Small Business Administration (SBE) _____
- Other (Please Explain): _____

1. How many years has your organization been in business as a contractor? _____

2. How many years has your organization been in business under its present business name? _____

3. List states in which your organization is legally qualified to do business. _____

4. Provide the Name and Address of your Liability Insurance Carrier. _____

5. What is your current EMR Rating? _____
The minimum requirement is an EMR Rating of 1.0 or less for all projects. Bidders with a rating higher than 1.0 understand that their bid may be disqualified, at the sole discretion of the University.

6. What percentage of work performed on projects are by company employees; excluding any hired subcontracting and outsourced relationships, for the bid submitted? _____ %

7. What percentage of work performed on your company's behalf are by subcontracted business relationships; disallowing 1099 contracting work forces, for the bid submitted? _____ %

8. Have you ever failed to complete any work awarded to you? If so, attach a separate sheet of explanation. Include the name of the Project, the customer, the dates of the work, and the amount of the contract?

9. Have you withdrawn a bid after a University bid opening and/or refused to enter into a contract with the University upon notification of award within the last 3 years? If so, state the Project Name and Number, and the date of bid submission below.

10. Has any officer or partner of your organization ever been an officer or partner of another organization that failed to complete a construction contract? If so, attach a separate sheet of explanation.

11. List the construction experience of the principals and superintendents of your company.

Name: _____ Title: _____

Name: _____ Title: _____

Name: _____ Title: _____

12. List the construction Projects, and approximate dates, when you performed work similar in Scope to this project.

Project: _____ Owner: _____

Contract Amount: _____ Date Completed: _____

Project: _____ Owner: _____

Contract Amount: _____ Date Completed: _____

Project: _____ Owner: _____

Contract Amount: _____ Date Completed: _____

13. List the construction Projects, and approximate dates, when you performed work similar in Dollar Amount to this project.

Project: _____ Owner: _____

Contract Amount: _____ Date Completed: _____

Project: _____ Owner: _____

Contract Amount: _____ Date Completed: _____

Project: _____ Owner: _____

Contract Amount: _____ Date Completed: _____

14. Is your Company "bondable"? Yes _____ No _____

15. What is your present bonding capacity? \$ _____

16. Who is your bonding agent?

NAME: _____

ADDRESS: _____

PHONE: (_____) _____

CONTACT: _____

17. Does your company agree to provide financial reports to the University upon request? Failure to agree may result in disqualification of your bid? (select one): Yes _____ No _____
18. Does your company agree that all of the Terms and Conditions of this RFP and Vendor's Response Proposal become part of any ensuing agreement? (select one): Yes _____ No _____
19. Does your company agree to execute a contract containing the clauses shown in Section 00500 "Agreement between Contractor and Owner for Construction"? (select one): Yes _____ No _____

If "No", clearly note any exceptions to any information contained in the contract documents and include with your proposal. Otherwise, a "No" response without documentation will be considered a non-responsive proposal. In addition, any proposed exceptions may or may not be accepted by the University.

20. Does your company agree to comply with the University **Smoke and Tobacco Free Policies**? Yes _____ No _____

Note: Contractors submitting proposals for this project may, at the discretion of the University, be required to submit references including contact information to be used to assist in the post bid evaluation process for the subject project

ACKNOWLEDGEMENT OF MINIMUM QUALIFICATIONS:

The undersigned has read and understands the minimum qualifications for University construction projects, and has completed the Prequalification section completely and accurately. The undersigned understands that a contractor, who fails to meet the minimum qualifications **in the category identified for this project, will be disqualified from consideration for the project.**

ACCEPTANCE OF PROPOSAL:

The undersigned agrees to execute a Contract, being the Wayne State University standard form titled "Agreement Between Contractor and Owner for Construction" (see section 00500 of the bid documents), provided that we are notified of the acceptance of our Proposal within ninety (90) days of the date set for the opening thereof.

The undersigned below understands that the bid will be disqualified if the Prequalification information above is not completed in its entirety.

NAME OF COMPANY: _____

OFFICE ADDRESS: _____

PHONE NUMBER: _____ DATE _____

SIGNED BY: _____
Signature

(Please print or type name here)

TITLE _____

EMAIL ADDRESS: _____ @ _____

RESPONSIBLE CONTRACTOR POLICY (revised 12-12-2023)

1.0 Purpose

- 1.1 Wayne State University is committed to having responsible and ethical contractors and subcontractors on all of its construction projects, to ensure that work is performed by responsible, qualified firms that maintain the capacity, expertise, highly trained personnel, and other qualifications and resources necessary to successfully perform University projects in a safe, timely, reliable, high quality and cost-effective manner.
- 1.2 To achieve that goal, the University will require contractors and subcontractors submitting a bid on a construction project to provide information relating to their qualifications. The purpose of this policy is to assist the University in awarding contracts on every construction project to the lowest priced responsible bidder, or in the case of a major construction project using a criteria-based award, the responsible bidder who provides the best value to the University.

2.0 Definitions

- 2.1 A "major construction project" is a construction or other real property improvement or maintenance project whose planning and implementation require Board of Governors approval under Board Statute 2.81.01.090, "Capital Outlay".
- 2.2 The term "contractor" includes general contractors, trade contractors, construction managers, and design builders, as well as any subcontractors.

3.0 Policy

3.1 Contractor Qualifications

The University will obtain information from and about the contractors on its major construction projects. Depending on the extent of the University's prior experience with a contractor, that information may include:

- The contractor's experience on projects of similar size and complexity.
- References from other owners.
- The contractor's creditworthiness/financial condition.
- The contractor's and any subcontractor's safety records and prior history of OSHA/MIOSHA, environmental, or other regulatory violations, discrimination claims, criminal convictions, liens, compliance with applicable laws, and litigation (including arbitrations) with owners, contractors, subcontractors, unions, or employees.
- Qualifications of management and supervisory personnel to be assigned by the contractor to the project.
- Access to labor necessary for contract performance.

3.2 Contract Specifications

Contracts for the University's major construction projects will include terms requiring:

- Compliance with all applicable health, safety and environmental laws and regulations during performance of the contract, and timely provision to the University of copies of any complaint or allegation of a violation of any such regulation, and of any accident report, relating to work performed under the contract.
- Contractors and subcontractors to maintain and make available to the University, upon request, documentation of compliance with the University's Wage Rate Requirements

(University Policy 18-2) and/or other applicable wage rate requirements, including certified payroll reports and complete payroll records.

- Training for all workers assigned to perform work under the project, including any required OSHA/MIOSHA training.
- Registration of apprentices in bona fide training programs.
- Contractors and subcontractors to implement and take steps to enforce a requirement that workers on the project be drug and alcohol free on the job site.
- Promotion of work force and contractor diversity to the fullest degree permitted by law, including prohibition of illegal discrimination and violation of any applicable University policy regarding discrimination.
- Promotion of competition through small business development, by encouraging opportunities for qualified new and small businesses, including those owned by women and minorities, to participate in work under the contract, as contractors, subcontractors, and suppliers.
- Contractors and subcontractors to carry appropriate liability insurance in amounts established by the University's Enterprise Risk Management & Insurance Programs office; to comply with Michigan law on worker's compensation; to provide bid, payment, and performance bonds for the completion of the contracted work; and to maintain these coverages through the period specified by the Enterprise Risk Management & Insurance Programs office.
- Compliance with licensing requirements applicable to those assigned to perform work under the contract.

3.3 **Work Force Management**

On its major construction projects, the University will seek evidence that each successful contractor is able to furnish skilled tradespersons and laborers (a) in numbers sufficient to complete the work under the contract on a timely and cost effective basis, and (b) who are able to work in harmony with the employees of other contractors or subcontractors performing work on that project in order to achieve its completion on a timely and cost effective basis.

In that regard, the University will not discourage a contractor from entering into a project labor agreement (PLA) for a construction project at the University when the contractor determines that a PLA is allowable under applicable laws and will enhance its ability to perform the work on the project. Further, the Senior Vice President, Chief Financial Officer and Treasurer is authorized to require the successful contractor to enter into a PLA when doing so would advance the University's project-specific interests in cost savings, efficiency, timeliness, or quality and would promote the University's goals set forth in this policy. The Senior Vice President, Chief Financial Officer and Treasurer should not require a contractor to enter into a PLA on any project or part of a project when doing so would violate applicable laws or would unreasonably restrict competition in the contracting or subcontracting process..

WAYNE STATE UNIVERSITY RATE SCHEDULE (revised 11-01-2018)

POLICY

Wayne State University requires all project contractors, including subcontractors, who provide labor on University projects to compensate at a rate no less than WSU wage rates.

The rates of wages and fringe benefits to be paid to each class of laborers and mechanics by each VENDOR and subcontractor(s) (if any) shall be not less than the wage and fringe benefit rates prevailing in Wayne County, Michigan, as determined by the United States Secretary of Labor. Individually contracted labor commonly referred to as "1099 Workers" and subcontractors using 1099 workers are not acceptable for work on any of Wayne State's properties. Rates for all counties are available at <https://wdolhome.sam.gov/>, and Procurement will post the schedules quarterly that pertain to Wayne County on its website at <http://procurement.wayne.edu/vendors/wage-rates.php>.

Certified Payroll must be provided for each of the contractor's or subcontractor's payroll periods for work performed on any University project. Certified Payroll must accompany Pay Applications, and be fully reconciled with the final Pay Application. Failure to provide certified payroll will constitute a material breach of contract, and pay applications will be returned unpaid, and remain unpaid until satisfactory supporting documents are provided.

Additional information can be found on the University Procurement & Strategic Sourcing's web site at the following URL address: <http://procurement.wayne.edu/vendors/wage-rates.php>

PROCEDURE

Construction Bids and other Bids or Proposals for work that includes construction shall contain a WSU Wage Rate clause outlining a contractor's responsibilities under University policy. Each bid solicitation shall include reference to the most current wage determination schedule that contractors can use when preparing their bids.

When compensation will be paid under WSU Wage Rate requirements, the University shall require the following:

- The contractor shall obtain and keep an accurate record showing the name and occupation of and the actual wages and benefits paid to each laborer and mechanic employed in connection with this contract.
- The contractor shall submit a completed certified payroll document [U.S. Department of Labor Form WH 347] verifying and confirming the WSU Wage and benefits rates for all employees and subcontractors for each payroll period for work performed on this project. The certified payroll form can be downloaded from the Department of Labor website at <http://www.dol.gov/whd/forms/wh347.pdf>.
- A properly executed sworn statement is required from all tiers of contractors, sub-contractors and suppliers which provide services or product of \$10,000.00 or greater. Sworn statements must accompany applications for payment. All listed parties on a sworn statement as a subcontractor must submit Partial or Full Conditional Waivers for the amounts invoiced on the payment application. A copy of the acceptable WSU Sworn Statement and Waiver will be provided to the awarded contractor.

If the VENDOR or subcontractor fails to pay the WSU rates of wages and fringe benefits and does not cure such failure within 10 days after notice to do so by the UNIVERSITY, the UNIVERSITY shall have the right, at its option, to do any or all of the following:

- Withhold a portion of payments due the VENDOR as may be considered necessary by the UNIVERSITY to pay laborers and mechanics the difference between the rates of wages and fringe benefits required by this contract and the actual wages and fringe benefits paid.
- Terminate the contract and proceed to complete the contract by separate agreement with another vendor or otherwise, in which case the VENDOR and its sureties shall be liable to the UNIVERSITY for any excess costs incurred by the UNIVERSITY.

**PARCS Replacement
WSU Project No. 999-419307**

- Propose to the Associate Vice President for Business Services / Procurement that the Vendor be considered for Debarment in accordance with the University's Debarment Policy, found on our website at <https://policies.wayne.edu/appm/2-8-debarment-policy-on-non-responsible-vendor-in-procurement-transactions>

Terms identical or substantially similar to this section of this RFP shall be included in any contract or subcontract pertaining to this project.

Prior to award of the project, the apparent low bidder will be required to produce a schedule of values which will include the proposed subcontractors for each division of work and whether the subcontractor is signatory or non-signatory. A letter of intent or contract will not be issued to the apparent low bidder until this document is provided. The apparent low bidder will have one week to produce this document. If the required document is not received within this time, the bidder will be disqualified, and the next low bidder will be required to provide this schedule of values.

**APPENDIX A FOR THE
WSU WAGE SCHEDULE FOR THIS PROJECT**

See web site:

<http://go.wayne.edu/bids>

Key Performance Indicator Tracking Sworn Statement Requirements

The University tracks its level of spend along a number of socio-economic categories. This includes its spend with Diverse organizations, its spend with Detroit based organizations, and its spend with Michigan based organizations. To assist with this, The University has the following requirements for submission of your bid and for Pay Applications submitted by the successful contractor.

Submission of Bid

1. **Diverse or disadvantaged prime contractor:** Please specify in your bid whether ownership of your company is a certified diverse or disadvantaged business, according to the categories listed previously in section 00300. In accordance with guidelines from the MMSDC and GL-WBC, the University considers a business to be diverse when it is at least 51% owned, operated, and controlled by one or more members of a diverse classification. Section 00300 has a place for this information on page 00300-3.
2. **Detroit based and Michigan Based contractor:** It is presumed that the contractor is headquartered at the location we submit our Purchase Orders to, and that it should be the same address as listed in Section 00300 at the signature line. If a supplier is headquartered elsewhere, please make note of this information, so we do not inaccurately include or exclude spend.

Pay Applications and Sworn Statements

1. **Applicability:** The University requires Sworn Statements with Pay Applications for all construction projects that use
 - Subcontractors greater than \$10,000.00
 - Significant suppliers (those with a purchase value of \$10,000 or more).
2. **Sworn Statements:** The Supplier must submit applicable monthly sworn statements to the Project Manager and the Buyer of Record, in the format shown on page 2 of Section 00420. Sworn Statements are “always required” for this project, and are to be submitted to (**Project Manager**), the project manager, and to **Valerie Kreher, Senior Buyer**
3. **Inclusion:** Sworn Statements are to detail the inclusion of recognized diverse and disadvantaged groups in the following 2 categories; Subcontracts or Suppliers. The University recognizes the following groups as diverse or disadvantaged:
 - Minority Business Enterprises (MBE)
 - Women Business Enterprises (WBE)
 - Disabled Veteran Enterprises (DVBE)
 - Disabled Person Enterprises (DBE)
 - Veteran Owned Businesses (VBE)
 - Small Businesses per the US Small Business Administration (SBE)
- 1.
4. A complete set of the University's Supplier Diversity Program, which includes complete definitions of each of the above, can be downloaded from our web site at <http://policies.wayne.edu/administrative/04-02-supplier-diversity.php>.

**PARCS Replacement
WSU Project No. 999-419307**

STATE OF MICHIGAN Sworn Statement

COUNTY OF _____ } §

_____, being duly sworn, deposes and says that (s)he makes the Sworn Statement on behalf of _____, who is the Contractor for an improvement to the following described real property situated in _____ County, Michigan, and described as follows:

That the following is a statement of each subcontractor and supplier and laborer, for which laborer the payment of wages or fringe benefits and withholdings is due but unpaid, with whom _____ has subcontracted for performance under the contract with the Owner or lessee thereof, and that the amounts due to the persons as of the date thereof are correctly and fully set forth opposite their names, as follows. (Subcontracts or suppliers of values of less than \$1,000 are omitted.)

NO.	SUBCONTRACTOR (Name, Address, Telephone Number) SUPPLIER OR LABORER	S=Supplier C=Contractor	Type of Entity *see below	TYPE OF IMPROVEMENT FURNISHED	TOTAL CONTRACT PRICE	CONTRACT CHANGE +/-	ADJUSTED CONTRACT AMOUNT	AMOUNT PAID TO DATE	AMOUNT CURRENTLY OWING	BALANCE TO COMPLETE
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
TOTALS										

* Type of Entity: MBE=Minority Business Enterprises; WBE=Women Business Enterprises; DVBE=Disabled Veteran Enterprises; DBE=Disabled Person Enterprises; VBE=Veteran Owned Businesses;
SBE=Small Businesses per the US Small Business Administration

Please attach additional sheets if the number of items exceeds the page limit.

**PARCS Replacement
WSU Project No. 999-419307**

That _____ has not procured material from, or subcontracted with, any person other than those set forth above and owes no money for the improvement.

Deponent further says that _____ makes the foregoing statement as a representative of _____, for the purpose of representing to the owner or lessee of the above-described premises and his or her agents that the above-described property is free from claims of construction liens, or the possibility of construction liens, except as specifically set forth above and except for claims of construction liens by laborers which may be provided pursuant to section 109 of the construction lien act, Act No. 497 of the Public Acts of 1980, as amended, being section 570.1109 of the Michigan Compiled Laws.

Deponent Signature

WARNING TO OWNER: AN OWNER OR LESSEE OF THE ABOVE-DESCRIBED PROPERTY MAY NOT RELY ON THIS SWORN STATEMENT TO AVOID THE CLAIM OF A SUBCONTRACTOR, SUPPLIER, OR LABORER WHO HAS PROVIDED A NOTICE OF FURNISHING OR A LABORER WHO MAY PROVIDE A NOTICE OF FURNISHING PURSUANT TO SECTION 109 OF THE CONSTRUCTION LIEN ACT TO THE DESIGNEE IS NOT NAMED OR HAS DIED.

ON RECEIPT OF THIS SWORN STATEMENT, THE OWNER OF LESSEE, OR THE OWNER'S OR LESSEE'S DESIGNEE, MUST GIVE NOTICE OF ITS RECEIPT, EITHER IN WRITING, BY TELEPHONE, OR PERSONALLY, TO EACH SUBCONTRACTOR, SUPPLIER AND LABORER WHO HAS PROVIDED A NOTICE OF FURNISHING UNDER SECTION 109 OR, IF A NOTICE OF FURNISHING IS EXCUSED UNDER SECTION 108 OR 108A, TO EACH SUBCONTRACTOR, SUPPLIER OR LABORER WHO HAS PROVIDED A NOTICE OF FURNISHING OR WHO IS NAMED IN THE SWORN STATEMENT MAKES A REQUEST, THE OWNER, LESSEE, OR DESIGNEE SHALL PROVIDE THE REQUESTER A COPY OF THE SWORN STATEMENT WITHIN 10 BUSINESS DAYS AFTER RECEIVING THE REQUEST.

WARNING TO DEPONENT: A PERSON, WHO WITH INTENT TO DEFRAUD, GIVES A FALSE STATEMENT IS SUBJECT TO CRIMINAL PENALTIES AS PROVIDED IN SECTION 110 OF THE CONSTRUCTION LIEN, ACT, ACT NO. 497 OF THE PUBLIC ACTS OF 1980, AS AMENDED, BEING SECTION 570.2220 IF THE MICHIGAN COMPILED LAWS.

(NOTARY STAMP BELOW)

Subscribed and sworn to before me this _____ day of _____

Notary Public

County, Michigan - My commission expires: _____

Rev.4 06.05.15

WAYNE STATE UNIVERSITY
PAYMENT PACKAGE DOCUMENT REQUIREMENTS (Revised 7-23-2015):

Review and comply with Section 410 of Bid Front End Documents.
Review and comply with Article 15 of the Supplemental General Conditions.

PAYMENT APPLICATION – PLEASE NOTE

- Each Pay Application is to be organized into the sections below; Payment Application, Sworn Statements, Certified Payroll, and Additional Supporting Documentation.
- These Documents are to be combined into a single PDF document, and is not to be combined with other Pay Applications.

PAYMENT APPLICATION - AIA document G702 & G703 (or equivalent) –Checklist:

- Correct Project Name – Found on your contract.
- Correct Project Number – Found on your contract.
- Purchase Order Number – Required prior to beginning work.
- Correct Application Number.
- Correct Period Reporting Dates – Applications support docs must be sequential and within application range.
- Approved & Executed Change Orders Listed. (Cannot invoice for unapproved Change Orders)
- Schedule of Values percentages and amounts match the approved Pencil Copy Review – Signed by the Architect, Contractor, and University Project Manager.
- Correct Dates – Back dating not accepted.
- Signed and Notarized.

SWORN STATEMENT – Checklist:

- List all contractors, sub-contractors, suppliers... \geq \$10,000.00
- A sworn statement is required from every Sub Contractor on the job with a material purchase or sub-contract of \$10,000 or more. (All tiers.)
- Purchase Order Number
- Dates – Back dating not accepted.
- Signed and Notarized.

CERTIFIED PAYROLL - Dept. of Labor Form WH-347 – Checklist: (Union and Non-Union)

- For every contractor & sub-contractors work, for each week within the application reporting period.
- Correct Project Number
- List ALL workers on-site.
- Make sure their addresses are listed.
- Social Security Numbers MUST be blackened out or listed in XXX-XX-1234 format.
- Work classifications based on the job specific WSU Wage Schedule descriptions.
- For any workers paid at the Apprenticeship rates - proof of enrolled program and current completion required.
- Rate of Pay verified against the WSU Wage Schedule with an hourly cost breakdown of fringes paid.
- Authorized signatures on affidavit.
- Dates – must represent the weeks within the application period.

APPLICATION PACKAGE SUPPORTING DOCUMENTATION –

- **Proof of Ownership** for any 'Owner Operator' contractors not wishing to claim their time on WSU Wage.
– (Must list their hours and dates worked on the WH-347 Form and enter EXEMPT on the income

brackets.) The Owner must provide copies of "DBA" registration form confirming status as exempt from WSU Wage requirements.

- **Proof of Stored Materials** – Bill of Lading, Delivery Receipts, Pictures, Certificate of Insurance or endorsement pate specifically insuring stored material at location, and pictures with materials clearly separated and labeled for WSU. The University reserves the right to on site verification of stored materials.
- **Partial Conditional Waivers** – The contractor shall provide covering the entire amount of the application. For non-bonded projects all sub-contractors must provide for all applications which they have a draw.
- **Partial Unconditional Waivers** – Must release amount paid for work and be delivered starting with application #2 and in no case after payment application #3, through all sequential applications for contractors, sub-contractors, and suppliers listed on the Sworn Statements.
- **Full Unconditional Waivers** – Must be delivered with final payment application, releasing all contractors, sub-contractors, suppliers listed on the sworn statements and any legitimate notice of furnishings reconciled.

FINAL PAYMENT APPLICATION – Checklist:

- Clear and concise As-Built drawings.
- Operation and Maintenance Manuals
- Process and training directions (if applicable).
- Warranty of work in accordance with project documents.
- Submittals log and samples installed on the job.
- Certificate of Substantial Completion
- Full Unconditional Waiver

○

The Project Manager may provide additional requirements as may apply to individual jobs

Revised 11-01-2018

Contractor Performance Evaluation

In an effort to provide continuous process improvement regarding the construction of various university projects, Wayne State University is embarking upon a process of evaluating the contractor's overall performance following the completion of work. At the conclusion of the construction project a subjective evaluation of the Contractor's performance will be prepared by the Project Manager and the supervising Director of Construction. The evaluation instrument that will be used in this process is presented below:

Contractor Evaluation Sheet													
Contractor Name : _____						Project Name: _____							
Contractor's PM: _____						PM Name: _____							
Superintendent: _____						Project Number: _____			PO#: _____				
Designer: _____													
EVALUATION SCORING: 1 = Unacceptable, 2 = Less than Satisfactory, 3 = Satisfactory or Neutral, 4 = Good, 5 = Excellent													
Note: Comments are REQUIRED if any score is less than 3. Write comments on the back of the evaluation.													
Field Management				Score				Weight		Total			
1)	Work Planning / Schedule:					1	2	3	4	5	8		
2)	Compliance with Construction Documents:					1	2	3	4	5	8		
3)	Safety Plan & Compliance:					1	2	3	4	5	5		
4)	Compliance with WSU procedures:					1	2	3	4	5	7		
5)	Effectiveness of Project Supervision:					1	2	3	4	5	8		
6)	Project Cleanliness:					1	2	3	4	5	3		
7)	Punch List Performance:					1	2	3	4	5	5		
8)	Contractor Coordination with WSU Vendors:					1	2	3	4	5	3		
9)	Construction Quality:					1	2	3	4	5	8		
Administrative Management													
10)	Responsiveness:					1	2	3	4	5	4		
11)	Contractor communication:					1	2	3	4	5	4		
12)	Contractor Professionalism:					1	2	3	4	5	3		
13)	Subcontractor Professionalism:					1	2	3	4	5	3		
14)	Compliance with Contract Requirements:					1	2	3	4	5	3		
15)	Submittal\RFI Process:					1	2	3	4	5	4		
16)	Close-out - Accuracy of Documents					1	2	3	4	5	7		
Invoice and Change Management													
17)	Change Management					1	2	3	4	5	7		
18)	Applications for Payment					1	2	3	4	5	6		
19)	Timely payment of Subs/Suppliers:					1	2	3	4	5	4		
											Total	Total	
											100		
20)	Level of Self-Performance:					Low				Med			High
21)	Would you work with this Contractor again?								Yes				No
22)	Would you work with this team again?								Yes				No
One year follow up													
23)	Warranty Support:					1	2	3	4	5			
Evaluator													
Signature _____						Date: _____							
Title: _____													
Name: _____													
Please Print						Rev. 2-17-2015 RGP							

We are providing the evaluation instrument at this time to allow the bidder's to review and understand the criterion that the University's project management team will use to evaluate the successful bidder's performance at the conclusion of the project. It is the intent of the university to utilize the results of this evaluation to determine if it will continue to conduct business with the Contractor in future bidding opportunities.

The scoring range is between 100 to 500 points, with 100 being low and 500 being high. Each question has an associated 'weight' factor, and the higher the weight; the greater the importance of satisfactory performance on the final score. At the conclusion of the project, and after the Project Manager and the supervising Director has prepared their independent evaluation, the University's project representative will meet with the Contractor to review the results. Acceptable contractor performance is essential to avoid having the University decline future work with the Contractor. An appeals process is available for Contractor disagreement with evaluation scores.

Contractors engaged in work are encouraged to maintain an open and regular dialog with the Design and Construction Department over the course of the construction project to ensure that the final evaluation is an accurate representation of the Contractor's performance.

CONSOLIDATED AGREEMENT FOR CONSTRUCTION GENERAL CONTRACTING

BOARD OF GOVERNORS OF WAYNE STATE UNIVERSITY
DETROIT, MICHIGAN

With

[GENERAL CONTRACTOR'S NAME]

For

[NAME PROJECT]

Wayne State University Contract Number [REDACTED]

This Agreement is entered into on [REDACTED], 20 [REDACTED], by and between the Board of Governors of Wayne State University, called "University" in this Agreement, and [CONTRACTOR NAME], called "Contractor" in this Agreement, to provide construction labor and materials as outlined in the Bid accepted [ENTER DATE HERE], attached to this Agreement as Exhibit A, for the Project described in this Agreement.

[ENTER A BRIEF DESCRIPTION OF THE PROJECT]

1.00 CONTRACT DOCUMENTS

The Contract Documents shall consist of this Agreement, the Contractor's Bid or Proposal attached to this Agreement as Exhibit A only insofar as consistent with the other Contract Documents, the General Conditions of Construction, the Supplementary General Conditions, the approved plans and specifications, and other documents listed in Article 11, Inclusion by Reference. In the case of conflicts between the Contractor's Bid and this Agreement or other Contract Documents, the language of this Agreement and the other Contract Documents shall prevail over the Contractor's Bid or Proposal.

2.00 DESIGN PROFESSIONAL

The Design Professional for this Project is:

[NAME]
[ADDRESS]

The University intends that the relationship between the Contractor, Design Professional and University will be one of mutual cooperation and respect in order to promote efficiency and quality in the Project work.

3.00 CONTRACTOR'S RESPONSIBILITIES

3.01 Scope of Work

The Contractor shall furnish all labor, materials, equipment, project management and construction superintendent services necessary to construct the Work in accordance with the approved Contract Documents and executed Change Orders, including requirements reasonably inferable therefrom.

3.02 Skill and Judgment

The Contractor covenants with the University to furnish its best skill and judgment in furthering the interests of the University as defined in the Contract Documents. The Contractor shall perform all obligations under the Contract Documents using efficient business administration, superintendence and best efforts to facilitate the expeditious and timely completion of the Project consistent with the interests of the University as expressed in the Contract Documents. The Contractor acknowledges that significant effort will be invested in complying with the Contractor's Construction Schedule, and in maintaining construction quality. Accordingly, the Contractor further acknowledges that the greatest degree of professionalism is expected from the Contractor and the Design Professional in accomplishing their respective contractual obligations and that when potential conflicts exists, each shall demonstrate appropriate respect, professionalism and cooperation with each other in resolving such conflicts.

3.03 Scheduling

The Contractor shall develop a Contractor's Construction Schedule that clearly indicates the interrelationship of activities and defines the critical path of the entire Project. The Contractor shall submit a preliminary Contractor's Construction Schedule, by the earlier of fifteen (15) days from either the Notice to Proceed or the execution of this Agreement. The Contractor shall provide iterative updates to the Contractor's Construction Schedule with each Application for Payment, but no less than monthly. Upon request by the University, the Contractor shall prepare and submit a resource-loaded Contractor's Construction Schedule to the University and Design Professional for approval.

3.04 Construction

3.04.1 Subcontracts and Purchase Agreements

The Subcontracts shall be solely between the Contractor and the Subcontractors. Nothing in any Subcontract shall establish any contractual relationship between the University and any Subcontractor. However, the University is an intended third-party beneficiary of all Subcontracts, purchase orders and other agreements; the Contractor shall incorporate the obligations of the Contract Documents into its respective Subcontracts, supply agreements and purchase orders.

The Contractor will screen and pre-qualify, utilizing appropriate industry standards, potential Subcontractors for the Work keeping in mind the requirement to recruit and encourage Minority/Women Business Enterprise participation. The University shall have the right to review and approve all Subcontractors qualified or rejected for qualification by the Contractor. The Contractor shall notify the University of all Subcontractors to be used, and the Contractor shall remove any Subcontractor to which the University has an objection.

The Contractor shall obtain appropriate guarantees and warranties acceptable to the University from the Subcontractors, which shall be for the direct benefit of the University.

3.04.2 Construction Supervision

- a) The Contractor shall establish sufficient on-site organization, staffing and support as well as clear lines of authority in order to expeditiously complete the Project in accordance with the Contract Documents, in every aspect, on a totally coordinated basis.
- b) The Contractor shall maintain a competent full-time staff available at the site while Work is being performed to supervise, schedule and coordinate the performance of the Work of all Subcontractors in accordance with the University's objectives including cost, time for completion and quality of the Work. Contractor's Staffing Plan is attached as Exhibit D to this Agreement. The Staffing Plan shall not be changed, except with the written consent of the University's Representative unless members of the Project Staff cease to be in the employ of the Contractor.
- c) The Contractor shall notify the University of the dates, times and locations of conferences with Subcontractors and schedule and conduct regular progress meetings to be attended by all parties in interest including the University to discuss such matters as procedures, progress, job problems, scheduling, coordination, changes, and related matters.
- d) The Contractor shall take, transcribe and promptly distribute to all parties, including the University, minutes of such progress meetings with the Subcontractors, weekly job meetings and monthly management meetings.
- e) The Contractor shall maintain an on-site daily log of construction progress, problems and items of special interest. The Contractor shall provide digital photographic files and digital recording showing Project status or progress. Such logs, records, photographs and videos shall be immediately available to the University upon request.
- f) The Contractor shall furnish monthly written progress reports on the Subcontractors' work in a form acceptable to the University and assist the Design Professional and the University with periodic and final inspections of the Work. At all inspections preceding the final inspection, the Contractor shall furnish a detailed report to the University of observed discrepancies, deficiencies, and omissions in the Work performed by any Subcontractor.

- g) The Contractor shall provide and maintain a correct layout of the structures and monitor the Work to verify that all lines and levels are adhered to by the Subcontractors. The Contractor shall immediately report in writing all discrepancies with respect to design details for prompt resolution by the Design Professional.
- h) The Contractor shall submit any Request for Information (RFI) to the Design Professional and University only after attempting to determine if the requested clarification is contained in the Contract Documents; any RFI shall contain sufficient detail to allow a response within seven (7) calendar days of when the RFI is submitted. In no event shall the response to an RFI be considered delayed unless more than fourteen days have passed since the RFI was submitted.
- i) The Contractor shall supervise and direct the Work using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract Documents or that which is reasonably inferable for the completion of the Project.
- j) The Contractor shall be responsible to the University for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons performing any portion of the Work related to a contract with the Contractor.
- k) The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities of the University, Design Professional, or by tests, inspections or approvals required or performed by persons other than the Contractor, except where such relief is authorized by the University in writing in accordance with this Agreement.
- l) The Contractor shall inspect portions of Work performed or portions of existing facilities being renovated in this Project to determine that such portions are in proper condition to receive subsequent Work. Further, the Contractor shall plan for and call for the review of the Work by the University's commissioning agents as required. The Contractor's Construction Schedule shall include activities that recognize this coordination responsibility.

3.04.2.1 Safety

The Contractor shall protect adjoining property and nearby buildings, roads, and other facilities and improvements from dust, dirt, debris and other nuisances arising out of Contractor's operations or storing practices. Dust shall be controlled by sprinkling, negative pressure exhausting or other effective methods acceptable to University. Fugitive dust from interior demolition shall be controlled by negative pressure exhausting. An erosion and sedimentation control program shall be initiated, which includes measures addressing erosion caused by wind and water and sediment in runoff from site. A regular watering program shall be initiated to adequately control the amount of fugitive dust.

The Contractor is knowledgeable of and understands that the University may intend to maintain occupancy of certain portions of the existing facility. The Contractor shall exercise precaution at all times for the protection of persons and their property. The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to: (1) employees on the Work and other persons who may be affected thereby; (2) the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's subcontractors or sub-subcontractors; and (3) other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction. The Contractor shall install adequate safety guards and protective devices for all equipment and machinery, whether used in the Work or permanently installed as part of the Project.

The Contractor shall also provide and adequately maintain all required means of egress, including but not limited to, proper temporary walks, roads, guards, railings, lights, and warning signs. The Contractor shall comply with all applicable laws relating to safety precautions. The Contractor shall establish, maintain and update a Project Specific Safety Program.

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

The Contractor shall require each and every one of its subcontractors and Trade subcontractors to comply with all of the provisions of this section.

The Contractor shall not load or permit any part of the construction or site to be loaded so as to endanger its safety.

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

3.04.2.2 Hazardous Condition

The University and/or the Design Professional may bring to the attention of the Contractor a possible hazardous situation in the field regarding the safety of personnel on the site. The Contractor shall be responsible for verifying that all local, state, and federal workplace safety guidelines are being observed. In no case shall this right to notify the Contractor absolve the Contractor of its responsibility for monitoring safety conditions. Such notification shall not imply that anyone other than the Contractor has assumed any responsibility for field safety operations.

Explosives shall not be used without first obtaining written permission from the University and then shall be used only with the utmost care and within the limitations set in the written permission and in accordance with prudence and safety standards required by law. Storage of explosives on the Project site or University is prohibited. Powder activated tools are not explosive for purposes of this Article; however, such tools shall only be used in conformance with State safety regulations.

The Contractor shall immediately make a report to the University's Police Department and report in writing to the University's Representative, within eight (8) hours, all accidents whatsoever arising out of, or in connection with, the performance of the Work, whether on or off the Site but on University property, which caused death, personal injury or property damage, giving full details and statements of witnesses. In addition, if death or serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger. If any claim is made by anyone against the Contractor or any subcontractor on account of any accident, the Contractor shall report promptly the facts in writing to the University's Representative, giving full details of the claim.

3.04.2.3 University's Right to Stop the Work

If the Contractor fails to correct work which is not in accordance with the requirements of the Contract Documents as required, or persistently fails to carry out work in accordance with the Contract Documents, the University Representative, by written order may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the University to stop the Work shall not give rise to a duty on the part of the University to exercise this right for the benefit of the Contractor or any other person or entity.

It is understood that while the Contractor is fully responsible for the safety of the Work, and for the methods of its execution, if the University deems that the Contractor is failing to provide safe conditions, the University may stop the Work under such conditions. However, this ability shall not create such duty on the University. Under no circumstance shall the Contractor be granted a time extension or Contract Sum increase for conditions resulting by a stop work order.

3.04.2.4 University's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a three (3) day period after receipt of written notice from the University to commence and continue correction of such default or neglect with diligence and promptness, the University may after such three (3) day period, without prejudice to other remedies the University may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for the Design Professional's additional services and expenses made necessary by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the University.

3.04.3 Document Management

The Contractor shall maintain at the job site, on a current basis, all Project documents including plans, specifications, shop drawings, samples, submittal, purchase orders, Subcontracts, material specifications, and any other related documents, and revisions thereto, which arise out of or relate to the Project, this Agreement or the Work. Prior to final payment, copies of all such records shall be provided to the University.

The Contractor shall be responsible for reviewing, processing and paying applications by Subcontractors for progress and final payment. The University will compensate the Contractor monthly based on the requirements of Article 4.04, Application For Payment.

The Contractor shall prepare and submit to the University every three months a report of the total M/WBE participation in the Project to demonstrate compliance with Paragraph 3.04.6 together with a projection of M/WBE participation through Final Completion.

3.04.3.1 Review of Contract Documents and Field Conditions by Contractor

Execution of the Contract by the Contractor is a representation that the Contractor shall have thoroughly and carefully examined the site of the of Work; investigated any and all conditions which can affect the Work or its cost, including but not limited to, availability of labor, materials, supplies, water, electrical power, roads, access to the site, University episodic and scheduled closures, uncertainties of weather, water tables, the character of equipment and facilities needed to perform the Work, and local conditions under which the Work is to be performed; and further, that the Contractor shall insure that the documents issued for bidding by Trade Contractors reflect the results of this investigation and are adequate to complete the Work. It is the responsibility of the Contractor to be familiar with the materials, equipment, or procedures to be used in the Work, or which in any other way could affect the completion of the Work. Any failure to properly familiarize themselves with the proposed Work shall not relieve the Contractor from the responsibility for completing the Work in accordance with the Contract Documents.

The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Project. Contract Documents are complementary, and what is required by one shall be as binding as if required by all. Performance by the Contractor shall be required to be consistent with the Contract Documents and the highest standard of care. In the case of an inconsistency between, or perceived omission or error in the Drawings, Specifications, or other Contract Documents which is not clarified by addendum or RFI, or should the Contractor be in doubt as to their exact meaning, the Contractor shall notify

the Design Professional and the University prior to performing any related Work. The University shall not be responsible for the Contractor's misinterpretations of Drawings and Specifications and/or other Contract Documents.

The Contractor shall have a continuing duty to read, carefully study and compare the Contract Documents and product data with each other and with information furnished by the University, and shall at once report to the Design Professional and the University errors, inconsistencies, ambiguities and omissions before proceeding with the affected Work. The Contractor shall be liable to the University for damage resulting from errors, inconsistencies or omissions in the Contract Documents, relating to constructability if the Contractor recognized or should have recognized such error, inconsistency, ambiguity or omission and failed to report it to the Design Professional and the University. If the Contractor performs any construction activity which involves such error, inconsistency, ambiguity or omission in the Contract Documents relating to constructability, without such notice to the Design Professional and the University, the Contractor shall assume responsibility for such performance and shall bear all costs attributable for correction. If the Contractor submits authorized substitutes that cost in excess of the Contract Sum which cause coordination conflicts, the Contractor shall bear all costs attributable to correction.

The Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing activities. Errors, inconsistencies or omissions discovered shall be reported to the Design Professional prior to performing any affected Work.

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

3.04.4 Cash Flow Estimates and Cost Control

At the University's request, the Contractor shall prepare a Cash Flow Estimate indicating the anticipated schedule of payment application amounts within fifteen (15) days after the Contractor's Bid has been accepted. The Cash Flow Estimate shall be revised periodically, at least every three months, unless significant deviations are expected or otherwise more frequently as requested by the University.

The Contractor shall review requests for changes with the University, and with the University's approval, obtain quotations from affected Subcontractors. Bulletins to Subcontractors shall define the scope of the change and require pricing using either lump sum, time and materials or cost of Work for all items of Work, including overhead and profit as may be defined in the Bid and this Agreement and shall include costs related to schedule delays, if applicable. Where both additions and deductions are involved, each should be calculated separately. Contractor shall be responsible for reviewing the pricing submitted by Subcontractors for accuracy, completeness, and reasonableness.

3.04.5 Minority/Women Business Enterprise Participation

The University makes a continuous effort to strongly encourage Minority Business Enterprise (MBE) and Women Business Enterprise (WBE) contractors and supplier to bid on and participate in University contracts. To the fullest extent permitted under federal and Michigan law, you are strongly encouraged to retain the services of WBE and MBE Subcontractors and suppliers of goods and services in connection with performance of this Contract. For purposes of this Contract, MBE is defined as a business entity in which 51% or minority individuals hold more of the voting shares and interest in the enterprise. The minority ownership of the enterprise shall have management and investment control of the company. WBE is defined as a business entity in which 51% or a woman or women hold more of the voting shares and interest in the enterprise. The female ownership of the enterprise shall have management and investment control of the company.

3.04.7 Time of Completion

The Contractor acknowledges that time is of the essence in performing and completing the Work on the Project. Accordingly, the Contractor shall comply with the activity and milestone completion dates as defined in the Contractor's Construction Schedule as mutually agreed by the Contractor, the University and the Design Professional. The Contractor shall provide, prepare and/or participate in developing schedules, submittals, shop drawings, construction schedules, close out documents, or other activities consistent with the conditions of the Contract Documents and as set forth below:

- A. Substantial Completion: [ENTER COMPLETION DATE]
- B. Punchlist Completion: [ENTER COMPLETION DATE]
- C. Final Completion: [ENTER COMPLETION DATE]

3.04.8 Timely Completion

Contractor acknowledges that the University has scheduled use of the Project immediately following the Dates of Substantial Completion. In scheduling that use, the University may have signed contracts and otherwise made financial commitments relating to the use of the Project no later than the date of Substantial Completion. In the event that the Contractor fails to complete on or before the date for Substantial Completion, the Contractor shall be responsible to reimburse the University for all direct, indirect and administrative costs and expenses incurred in locating, coordinating and securing alternate sites, refunding deposits, and taking any other reasonable action as a consequence of the Contractor's failure to achieve Substantial Completion by the date stated in this Agreement.

The University shall be entitled to retain from the Contractor those damages incurred upon the Contractor's default of Substantial Completion, as provided above.

The Contractor further agrees to complete 100% of all punchlist items, documented on the Substantial Completion certificate, within forty-five (45) days of the date of Substantial Completion. Nothing in this Article 3.04.08 shall be construed as a limitation or waiver on such other rights as the University may have.

3.04.8.1 Substantial Completion

"Substantial Completion" shall mean the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so the University can occupy or utilize the Work for its intended use. Substantial Completion shall only be determined as described in the Contract Documents.

3.04.8.2 Final Completion

"Final Completion" means the completion of all the Work in accordance with the Contract Documents and the acceptance thereof by the University. Completion of the Work includes (1) full performance of all Contract terms; (2) acceptance of the Work by University; (3) resolution of all outstanding Changes of Contract; (4) completion of all "punch-list" items; and (5) delivery of all Close-out Documents.

3.05 Contractor's Insurance

The Contractor shall not commence Work under this Contract until it has obtained all the insurance required by the Contract Documents and such insurance has been approved by the University; likewise, no subcontractor or subconsultant shall be allowed to commence Work until the insurance required has been

obtained. The Contractor shall, at its expense, purchase and maintain in full force and effect such insurance as will protect itself and the University from claims, such as for bodily injury, death, and property damage, which may arise out of or result from the Work required by the Contract Documents, whether such Work is done by the Contractor, by any subcontractor, by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. The types of such insurance and any additional insurance requirements are specified herein with the amounts and limits set forth in the Supplementary General Conditions.

3.05.1 Policies and Coverage

The following policies and coverages shall be furnished by the Contractor promptly upon request by the University:

(1) Comprehensive or Commercial Form General Liability Insurance covering all Work done by or on behalf of the Contractor and providing insurance for bodily injury, personal injury, property damage, and Contractual liability. Except with respect to bodily injury and property damage included within the products and completed operations hazards, the aggregate limit shall apply separately to work required of the Contractor by these Contract Documents. This insurance shall include the contractual obligations assumed under the Contract Documents and specifically section 4.06.

(2) Business Automobile Liability Insurance on an "Occurrence" form covering owned, hired, leased, and non-owned automobiles used by or on behalf of the Contractor and providing insurance for bodily injury, property damage, and Contractual liability.

(3) Worker's Compensation and Employer's Liability Insurance as required by Federal and Michigan law. The Contractor shall also require all of its Subcontractors to maintain this insurance coverage.

(4) The Umbrella Excess Liability insurance must be consistent with and follow the form of the primary policies, except that Umbrella Excess Liability insurance shall not be required for the Medical Expense Limit.

(5) Builder's Risk Insurance.

(6) Professional Liability Insurance (Errors and Omissions).

3.05.2 Proof of Coverage

Certificates of Insurance, or other evidence of the insurance required by these Contract Documents or requested by the University, shall be submitted by the Contractor to the University. The Certificates of Insurance shall state the scope of coverage and deductible, identify any endorsements to the policies and list the University as an additional named insured. Any deductible shall be the Contractor's liability. The Certificates of Insurance shall provide for no cancellation or modification of coverage without thirty (30) days prior written notice to the University. Acceptance of Certificates of Insurance by the University shall not in any way limit the Contractor's liabilities under the Contract Documents. In the event the Contractor does not comply with these insurance requirements, the University may, at its option, provide insurance coverage to protect the University; the cost of such insurance shall be deducted from the Contract Sum or otherwise paid by the Contractor. Renewal certifications shall be filed in a timely manner for all coverage until the Project is accepted as complete. Upon the University's request, the Contractor shall provide copies of the policies obtained from the insurers.

3.05.3 Subcontractor's Insurance

The Contractor shall either require subcontractors to carry the insurance or the Contractor shall insure the activities of the subcontractors in the amount, types and form of insurance required by the Contract

Documents. If the Contractor elects to have its subcontractors purchase individual insurance policies, the Contractor's subcontracts shall include a clause requiring that copies of any insurance policies which provide coverage to the Work shall be furnished to the University. The Contractor shall supply the University with a list of all subcontractors showing whether or not they have individual insurance policies and certifying that those subcontractors without individual insurance policies are insured by the Contractor.

3.05.4 Scope of Insurance Coverage

The Contractor's insurance as required by the Contract Documents (including subcontractors' insurance), by endorsement to the policies and the Certificates of Insurance, shall include the following and may be presented in the form of a rider attached to the Certificates of Insurance:

(1) The Board of Governors of Wayne State University, the University, their officers, employees, representatives and agents including the Design Professional, shall be included as additional named insureds for and relating to the Work to be performed by the Contractor and subcontractors. This shall apply to all claims, costs, injuries, or damages.

(2) A Severability of Interest Clause stating that, "The term 'insured' is hereby used severally and not collectively, but the inclusion herein of more than one insured shall not operate to increase the limits of the insurer's or insurers' liability."

(3) A Cross Liability Clause stating that, "In the event of claims being made under any of the coverages of the policy or policies referred to herein by one or more insured hereunder for which another or other insured hereunder may be liable, then the policy or policies shall cover such insured or insured against whom a claim is made or may be made in the same manner as if separate policies had been issued to each insured hereunder. Nothing contained herein, however, shall operate to increase the insurer's limits of liability as set forth in the insuring agreements."

(4) The Board of Governors of Wayne State University, the University, their officers, employees, representatives and agents, shall not by reason of their inclusion as insured incur liability to the insurance carriers for payment of premiums for such insurance. However, the Board of Governors of Wayne State University may, in their sole discretion after receiving a notice of cancellation for nonpayment, elect to pay the premium due and deduct such payment from any sums due to the Contractor or recover the amount paid from the Contractor if the sums remaining are insufficient.

(5) Coverage provided is primary and is not in excess of or contributing with any insurance or self-insurance maintained by the Board of Governors of Wayne State University, the University, their officers, employees, representatives and agents.

3.05.5 Miscellaneous Insurance Provisions

The form and substance of all insurance policies required to be obtained by the Contractor shall be subject to approval by the University. All such policies shall be issued by companies lawfully authorized to do business in Michigan and be acceptable to the University. All property insurance policies to be obtained by the Contractor shall name the University as loss payee as its interest, from time to time, may appear.

The Contractor shall, by mutual agreement with the University and at the University's cost, furnish any additional insurance as may be required by the University. The Contractor shall provide appropriate endorsements evidencing such additional insurance.

In the event that the scope of Work includes asbestos abatement, the Contractor or subcontractor, as appropriate, shall provide \$1,000,000 asbestos liability insurance.

The University is not required to provide or purchase any additional insurance with respect to this Project or the Work required of the Contractor for the Project.

3.05.6 Loss Adjustment

Any insured loss is to be adjusted with the University and made payable jointly to the University and the Contractor. The Contractor shall cooperate with the University in a determination of the actual cash value or replacement value of any insured loss. Any deductible amount shall be the responsibility of the Contractor to resolve.

3.05.7 Compensation Distribution

The University upon the occurrence of an insured loss shall account for any money so received and shall distribute it in accordance with such agreement as the interested parties may reach. Claim payments received shall be distributed proportionately according to the actual percentages of losses to both. If after such loss no other special agreement is made, replacement of damaged work shall be covered by an appropriate contract change order. Any dispute shall be resolved by the University.

3.05.8 No Waiver of Subrogation

The University does not waive any rights of Subrogation that it may possess on this Project.

3.06 Indemnification

3.06.1

To the fullest extent permitted by law, the Contractor shall hold harmless, defend, and indemnify the Board of Governors of Wayne State University, the University, and officers, employees, representatives and agents of each of them, from and against any and all claims or losses arising out of or are alleged to be resulting from, or relating to (1) the failure of the Contractor to perform its obligations under the Contract or the performance of its obligation in a willful or negligent manner; (2) the inaccuracy of any representation or warranty by the Contractor given in accordance with or contained in the Contract Documents; and (3) any claim of damage or loss by any subcontractor, or supplier, or laborer against the University arising out of any alleged act or omission of the Contractor or any other subcontractor, or anyone directly or indirectly employed by the Contractor or any subcontractor.

3.06.2

To the fullest extent permitted by law, the Contractor shall be liable for and hereby agrees to defend, discharge, fully indemnify and hold the University harmless from and against any and all claims, demands, damages, liability, actions, causes of action, losses, judgments, costs and expenses of every nature (including investigation costs and/or expenses, settlement costs, and attorney fees and expenses incident thereto) sustained by or asserted against the University arising out of, resulting from, or attributable to the performance or nonperformance of any Work and/or obligation covered by the Contract or to be undertaken in connection with the construction of the Project contemplated by the Contract (collectively, "Claim"), including, but not limited to, any Claim for: (a) any personal or bodily injury, illness or disease, including death at any time resulting therefrom of any person, (including, but not limited to, employees of the University, the Contractor, any subcontractor, and any materialman and the general public); (b) any loss, damage or destruction of any property; (c) any loss or damage to the University's operations, arising out of, resulting from, or attributable in whole or in part to (i) any negligence or other act or omission of the Contractor, and any subcontractor, any materialman and/or any other person or any of the directors, officers, employees or agents of any of them or (ii) any defects in material or equipment furnished hereunder; (d) any payments allegedly owed to subcontractors, sub-subcontractors or materialmen; (e) any acts or omissions relative to

conditions of safety and protection of persons on the Project site; and/or (f) any act or omission relative to the Contractor's breach of obligations and regarding non-discrimination as set forth in these General Conditions. The Contractor shall not be liable hereunder to indemnify the University against liability for damages arising out of bodily injury to persons or damage to property caused by or resulting from the sole negligence or willful misconduct of the University, its agents or employees. The Contractor, at its own cost and expense, shall take out and maintain at all times during the effective period of the Contract, contractual liability insurance insuring the performance by the Contractor of its contractual duties and obligations under this Article, which insurance shall name the University as additional insured and shall be in form and amount and from an insurance company satisfactory to the University. The Contractor's duty to fully indemnify the University shall not be limited in any way by the existence of this insurance coverage.

3.06.3

The Contractor shall also be liable for and hereby agrees to pay, reimburse, fully indemnify and hold the University harmless from and against all costs and expenses of every nature (including attorney fees and expenses incident thereto) incurred by the University in collecting the amounts due from the Contractor, or otherwise enforcing its rights, under the indemnifications described in this Article.

3.06.4

In claims against any person or entity indemnified under this Article made by an employee of the Contractor or a Subcontractor, supplier or indirectly employed by any of them, or anyone for whose acts is made liable, the indemnification obligation under this Article shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor, Subcontractor or supplier under workers compensation laws, disability benefit laws, or other laws providing employee benefits.

3.06.5

The indemnification obligations under this Article shall not be limited by any assertion or finding that the person or entity indemnified is liable by reason of a non-delegable duty.

3.06.6

The Contractor shall hold harmless, defend, and indemnify the University from and against losses resulting from any claim of damage made by any separate contractor of the University against the University arising out of any alleged acts or omissions of the Contractor, a subcontractor, anyone directly or indirectly employed by either the Contractor or subcontractor, or anyone for whose acts either the Contractor or subcontractor may be liable.

3.06.7

The Contractor shall hold harmless, defend, and indemnify the separate Contractors of the University from and against losses arising out of the negligent acts or omissions or willful misconduct of the Contractor, a subcontractor, anyone directly or indirectly employed by the Contractor or subcontractor, or anyone for whose acts the Contractor or subcontractor may be liable.

3.07 Guarantee

The Contractor unconditionally guarantees the Work under this Contract to be in conformance with the Contract Documents and to be and remain free of defects in workmanship and materials not inherent in the quality required or permitted. Contractor shall repair or replace any Work, together with any adjacent Work which may be displaced in so doing, which is not in accordance with the requirements of the Contract or which is defective in its workmanship or material, all without any expense whatsoever to the University for a

period of **one (1) year / two (2) years** from the date of Substantial Completion, unless a longer guarantee period is stipulated in the Contract Documents or otherwise available from the manufacturer ("Repair Period").to.

Special guarantees that are required by the Contract Documents shall be signed by the Contractor who is responsible for the entire work and countersigned by the subcontractor who performs the work.

The Contractor further agrees that within five calendar days after being notified in writing by the University of any Work not in accordance with the requirements of the Contract Documents or of any defects in the Work, it shall commence and prosecute with due diligence all Work necessary to fulfill the terms of this guarantee and to complete the Work in accordance with the requirements of the Contract with sufficient manpower and material to complete the repairs as expeditiously as possible. The Contractor, in the event of failure to so comply, does hereby authorize the University to proceed to have the Work done at the Contractor's expense, and it agrees to pay the cost thereof upon demand. The University shall be entitled to all costs necessarily incurred upon the Contractor's refusal to pay the above cost.

Notwithstanding the foregoing paragraph, in the event of an emergency constituting an immediate hazard to health, safety or damage of the University's employees, property, or licenses, the University may undertake at the Contractor's expense, without prior notice, all Work necessary to correct such hazardous conditions caused by the Work of the Contractor not being in accordance with the requirements of this Contract.

The Contractor shall require a similar guarantee in all subcontracts, including the requirement that the University be reimbursed for any damage or loss to the Work or to other Work resulting from such defects.

If required by the Contract Documents, the Maintenance and Guarantee Bond shall be in full force and effect during the entire Repair Period, unless a longer bond period is stipulated in the Contract Documents.

4.00 CONTRACTOR'S COMPENSATION

4.01 Basis of Compensation

In consideration of the full performance of this Agreement by the Contractor, the University shall compensate the Contractor as stated in **Exhibit B**.

4.02 Change Orders and Construction Change Directives

4.02.1 Generally

The University reserves the right to issue written orders whether through a formal Change Order or Construction Change Directive, directing changes in the Contract at any time prior to the acceptance of the Project without voiding the Contract, and Contractor shall promptly comply with such order. A Construction Change Directive may be issued in writing by the University directing the Contractor to perform changed Work in the absence of a final agreement on a Change Order and the costs will be calculated as provided in 6.01.4. The Contractor may request changes in the Work, but shall not act on the changes until approved in writing by the University. Any change made without authority in writing from the University shall be the responsibility of the Contractor.

Any such changes in the Work that have a cost impact shall only be authorized by Change Orders approved by the University. No action, conduct, omission, prior failure or course of dealing by the University shall act to waive, modify, change or alter the requirement that Change Orders must be in writing and signed by the University and Contractor and that such written Change Orders are the exclusive method for changing or altering the Contract Sum or Contract Time. The University and Contractor understand and agree that the Contract Sum and Contract Time cannot be changed by implication, oral agreements, actions, inaction, course of conduct or Construction Change Directive.

On the basis set forth herein, the Contract Sum may be adjusted for any Change Order requiring a different quantity or quality of labor, materials or equipment from that originally required, and the partial payments to the Contractor, set forth in section 8.01, may be adjusted to reflect the change. Whenever the necessity for a change arises, the Contractor shall take all necessary steps to mitigate the effect of the ultimate change on the other Work in the area of the change. Changed Work shall be performed in accordance with the original Contract requirements except as modified by the Change Order. Except as herein provided, the Contractor shall have no claim for any other compensation including lost productivity or increased overhead expenses due to changes in the Work. The amounts set forth in the Change Order constitute full compensation for both direct and indirect costs of the Work described in the Change Order. Payment by the University pursuant to the Change Order shall constitute full satisfaction of any and all claims for compensation and extension of time by the Contractor for the performance of the Work by the Contractor and all subcontractors.

4.02.2 Proposed Change Orders

The Design Professional, with approval of the University, shall issue to the Contractor a cost request Bulletin for a proposed change order describing the intended change and shall require the Contractor to indicate thereon a proposed amount to be added to or subtracted from the Contract Sum due to the change supported by a detailed estimate of cost. Upon request by the University, the Contractor shall permit inspection of the original Contract estimate, subcontract agreements, or purchase orders relating to the change. Any request for adjustment in Contract Time which is directly attributable to the changed Work shall be included with substantiating detailed explanation by the Contractor in its response to the cost request bulletin. Failure by Contractor to request adjustment of Contract Time in the response to the cost request Bulletin shall waive any right to subsequently claim an adjustment of the Contract Time based on the changed Work. The Contractor shall submit the response to the cost request Bulletin with detailed estimates and any time extension request thereon to the Design Professional and the University's Representative within ten (10) calendar days after issuance of the cost request bulletin. Upon its submission the Design Professional will review it and advise the University who will make the decision. If the Contractor fails to submit the response within the required ten (10) calendar days, and the Contractor has not obtained the Design Professional's and the University's permission for a delay in submission, the University may order the Contractor in writing to begin the Work immediately, and the Contract Sum shall be adjusted in accordance with the University's estimate of cost. In that event, the Contractor, within fifteen days following completion of the changed Work, may present information to the University that the University's estimate was in error; the University, in its sole discretion, may adjust the Contract Sum. The Contractor must keep and submit to the University time and materials records verified by the University to substantiate its costs. The University may require the Contractor to proceed immediately with the changed Work in accordance with section 4.02.4, "Failure to Agree as to Cost" or section 4.02.6 "Emergency Changes."

When the University and the Contractor agree on the amount to be added to or deducted from the Contract Sum and the time to be added to or deducted from the Contract Time and an Impact Report or a Contract Change Order is signed by the University and the Contractor, the Contractor shall proceed with the changed Work. If agreement is reached as to the adjustment in compensation for the performance of changed Work but agreement is not reached as to the time adjustment for such Work, the Contractor shall proceed with the Work at the agreed price, reserving the right to further pursue its Claim for a time adjustment. Any costs incurred to acquire information relative to a proposed Change Order shall not be borne by the University.

4.02.3 Allowable Costs Upon Change Orders

The only estimated or actual costs that will be allowed because of changed Work and the manner in which those costs shall be computed is described by this section.

4.02.3.1 Labor

Costs are allowed for the actual payroll cost to the Contractor for direct labor, engineering or technical services directly required for the performance of the changed Work, (but not site management such as field office estimating, clerical, project engineering, management or supervision) including payments, assessments, or benefits required by lawful labor union collective bargaining agreements, compensation insurance payments, contributions made to the State pursuant to the Unemployment Insurance Code, and for taxes paid to the federal government required by the Social Security Act of August 14, 1935, as amended, unless the time of completion adjustments affect the general condition inclusion of the Contract Sum.

No labor cost will be recognized at a rate in excess of the appropriate wage rates established for that portion of the Work, nor will the use of a classification which would increase the labor cost be permitted unless the Contractor established to the satisfaction of the University the necessity for payment at a higher rate.

4.02.3.2 Materials

Costs are allowed for the actual cost to the Contractor for the materials directly required for the performance of the changed Work. Such cost of materials may include the costs of transportation, sales tax, and delivery if necessarily incurred. However, overhead costs shall not be included. If a trade discount by the actual supplier is available to the Contractor, it shall be credited to the University. If the materials are obtained from a supply or source owned wholly or in part by the Contractor, payment therefor will not exceed the current wholesale price for such materials.

If, in the opinion of the University, the cost of materials is excessive, or if the Contractor fails to furnish satisfactory evidence of the cost from the actual suppliers thereof, then in either case the cost of the materials shall be deemed to be the lowest wholesale price at which similar materials are available in the quantities required at the time they were needed.

4.02.3.3 Equipment

Costs are allowed for the actual cost to the Contractor for the use of equipment directly required in the performance of the changed Work except that no payment will be made for time while equipment is inoperative due to breakdowns or for non-working days. The rental time shall include the time required to move the equipment to the Project site from the nearest available source for rental of such equipment, and to return it to the source. If such equipment is not moved by its own power, then loading and transportation costs will be paid. However, neither moving time nor loading and transportation costs will be paid if the equipment is used on the Project in any other way than upon the changed Work. Individual pieces of equipment having a replacement value of \$500.00 or less shall be considered to be tools or small equipment, and no payment therefor will be made.

For equipment owned or furnished by the Contractor, no cost therefor shall be recognized in excess of the rental rates established by distributors or equipment rental agencies in the locality where the Work is performed. Blue Book rates shall not be used for any purpose.

The amount to be paid to the Contractor for the use of equipment as set forth above shall constitute full compensation to the Contractor for the cost of fuel, power, oil, lubrication, supplies, small tools, small equipment, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, labor (except for equipment operators who shall be paid for as provided in Article 4.02.3.1) and any and all costs to the Contractor incidental to the use of such equipment.

4.02.3.4 Work by Subcontractors and Vendors

For any portion of the changed Work which is to be performed by a subcontractor, the Contractor shall furnish to the University a detailed estimate prepared and signed by subcontractor of the cost to subcontractor for performing the changed Work. At the sole discretion of the University, a lump sum estimate of such cost to

subcontractor may be accepted in lieu of the detailed estimate. The combined costs for subcontractor's overhead, profit, taxes, indirect supervision, insurance, bonds shall not exceed ten percent (10%). Estimates of the amount to be deleted from subcontractor's portion of the Work shall be gross cost of the deducted Work plus eight percent (8%). For changed Work to be furnished by a supplier, the Contractor shall furnish upon demand of the University, a lump sum estimate of the cost of the items including taxes and cartage to the Contractor prepared by the supplier. No supplier mark-up for overhead, profit, layout, supervision or bonds will be allowed for changed Work furnished by a supplier.

4.02.3.5 Contractor Mark-up for Added Work

Where changed Work is performed, the Contractor may add to the total estimated actual cost for such Work no more than ten (10%) for subcontractor mark-up and seven and one-half percent (7.5%) for self-performed trade work for profit, overhead, insurance, taxes, indirect supervision, bonds, and any other costs not allowed by section 4.02.01.

4.02.3.6 Credit for Deleted Work

The amount to be deducted from the Contract Sum shall be the total estimated actual cost of the deducted Work plus eight percent (8%).

Where an entire item or section of Work is deleted from the Contract, the entire subcontract cost or bid cost shall be considered the appropriate deduction less the value of Work performed. If the subcontract cost or bid cost is not identifiable, then estimates of the amount to be deducted from the Contract Sum shall be the gross cost of the deducted work plus six percent (6%) for saved overhead, bonds, insurance, and taxes.

For proposed change orders which involve both added and deleted Work, the Contractor shall separately estimate the cost of the added Work before mark-ups, and separately estimate the cost of the deleted Work before allowance of a credit. If the difference between the costs results in an increase to the Contract Sum, the mark-up for added Work shall be applied to the difference, and if the difference in the costs results in a decrease, then the mark-up for deleted Work shall be applied to the difference.

4.02.3.7 Market Values

Cost for added Work shall be no more than market values prevailing at the time of the change, unless the Contractor can establish to the satisfaction of the University that it investigated all possible means of obtaining Work at prevailing market values and that the excess cost could not be avoided.

When a change order deletes Work from the Contract, the computation of the cost thereof shall be the values which prevailed at the time bids for the Work were opened or the Contract Sum established.

4.02.4 Failure to Agree as to Cost

4.02.4.1 For Added Work

Notwithstanding the failure of the University and the Contractor to agree as to the cost of the proposed Change Order, the Contractor, upon written order from the University, shall proceed immediately with the changed Work. A Construction Change Directive or letter signed by the University shall be used for this written order. At the start of each day's Work on the change, the Contractor shall notify the University in writing as to the size of the labor force to be used for the changed Work and its location. Failure to so notify may result in the non-acceptance of the costs for that day. At the completion of each day's Work, the Contractor shall furnish to the University a detailed summary of all labor, materials, and equipment employed in the changed Work. The University will compare his/her records with Contractor's daily summary and may make any necessary adjustments to the summary. After the University and the Contractor agree upon and

sign the daily summary, the summary shall become the basis for determining costs for the additional Work. The sum of these costs when added to an appropriate mark-up will constitute the payment for the changed Work. Subsequent adjustments, however, may be made based on later audits by the University. When changed Work is performed at locations away from the job site, the Contractor shall furnish in lieu of the daily summary, a summary submitted at the completion of the Work containing a detailed statement of labor, material, and equipment used in the Work. This latter summary shall be signed by the Contractor who shall certify thereon that the information is true.

The Contractor shall maintain and furnish on demand of the University itemized statements of cost from all vendors and subcontractors who perform changed Work or furnish materials and equipment for such Work. All statements must be signed by the vendors and the subcontractors.

4.02.4.2 For Deleted Work

When a proposed Change Order contains a deletion of any Work, and the University and the Contractor are unable to agree upon the cost thereof, the University's estimate shall be deducted from the Contract Sum and may be withheld from any payment due the Contractor until the Contractor presents adequate substantial information to the University that the University's estimate was in error. The amount to be deducted shall be the actual costs to the Contractor for labor, materials, and equipment which would have been used on the deleted Work together with an amount for mark-up as defined in the Contract Documents.

4.02.5 Allowable Time Extensions

For any change in the Work, the Contractor shall only be entitled to such adjustments in Contract Time due solely to performance of the changed Work. The procedure for obtaining an extension of time is set forth in Section 4.08 of these General Conditions. No extension of time shall be granted for a change in the Work unless the Contractor demonstrates to the satisfaction of the University that the Work is on the critical path and submits an updated CPM schedule showing that an extension of time is required and that the Contractor is making, or has made, every reasonable effort to guarantee completion of the additional Work called for by the change within the time originally allotted for the Contract. Failure by the Contractor to make the required submission or showing constitutes a waiver of any possible adjustment in Contract Time.

Any adjustment in Contract time shall specify the exact calendar day.

4.02.6 Emergency Changes

Changes in the Work made necessary due to unforeseen site conditions, discovery of errors in plans or specifications requiring immediate clarification in order to avoid a serious Work stoppage, changes of a kind where the extent cannot be determined until completed, or under any circumstances whatsoever when deemed necessary by the University are kinds of emergency changes which may be authorized by the University in writing to the Contractor. The Contractor shall commence performance of the emergency change immediately upon receipt of written direction from the University.

If agreement is reached as to compensation adjustment for the purpose of any emergency change, then compensation will be as provided in this section relating to ordinary changes. If agreement is not reached as to compensation at the time of commencing the emergency change, then compensation will be as provided in section 4.02.4, that is, time and materials records and summaries shall be witnessed and maintained until either a lump sum payment is agreed upon, or the changed Work is completed.

4.03 Records and Audit

4.03.1

Contractor's records, which shall include but not be limited to accounting records (hard copy, as well as computer readable data if it can be made available), written policies and procedures; subcontract files (including proposals of successful and unsuccessful bidders, bid recaps, etc.); original estimates; estimating work sheets, correspondence; change order files (including documentation covering negotiated settlements); backcharge logs and supporting documentation; general ledger entries detailing cash and trade discounts earned, insurance rebates and dividends; and any other supporting evidence deemed necessary by the University to substantiate changes related to the Agreement (collectively referred to as "Records") shall be maintained in accordance with Generally Accepted Accounting Principles and open to inspection and subject to audit and/or reproduction by University's agent or its authorized representative to the extent necessary to adequately permit evaluation and verification of Cost of the Work, and any invoices, change order, payments or claims submitted by the Contractor or any of his payees pursuant to the execution of the contract.

4.03.2

Such audits may require inspection and copying from time to time and at reasonable times and places of any and all information, materials and data of every kind and character, including without limitation, records, books, papers, documents, subscriptions, recordings, agreements, purchase order, leases, contracts, commitments, arrangements, notes, daily diaries, superintendent reports, drawings, receipts, vouchers and memoranda, and any and all other agreements, sources of information and matters that may in University's judgment have any bearing on or pertain to any matters, rights, duties or obligations under or covered by any Contract Documents. Such records subject to audit shall also include, but not be limited to, those records necessary to evaluate and verify direct and indirect costs, (including overhead allocations) as they may apply to costs associated with this Agreement.

4.03.3

The University or its designee shall be afforded access to all of the Contractor's Records, and shall be allowed to interview any of the Contractor's employees, pursuant to the provisions of this article throughout the term of this contract and for a period of six (6) years after Final Payment or longer if required by law. To the extent University deems is allowed by law, the Contractor's records shall remain confidential. Contractor recognizes and agrees that University will disclose documents it deems is required or appropriate pursuant to law, defense against lawsuits or other claims, or other reason deemed necessary by University.

4.03.4

Contractor shall require all Subcontractors, insurance agents, and material suppliers (payees) to comply with the provisions of this article by insertion of the requirements hereof in a written contract agreement between Contractor and payee. Such requirements will also apply to Subcontractors and all lower tier Subcontractors. Contractor will cooperate fully and will cause all of Contractor's Subcontractors (including those entering into lump sum contracts, payees or lower tier Subcontractors) to cooperate fully by furnishing or making available to University from time to time whenever requested in an expeditious manner any and all such information, materials and data.

4.03.5

University's agent or its authorized representative shall have access to the Contractor's facilities, shall have access to all records deemed necessary by University; and shall be provided adequate and appropriate work space, in order to conduct review or audits in compliance with this article.

4.03.6

Contractor agrees that University's designee shall have the right to examine the Contractor's records (during the contract period and up to six(6) years after Final Payment is made on the contract) to verify the accuracy and appropriateness of the pricing data used to price change proposals or claims. Contractor agrees that if the University determines the cost and pricing data submitted (whether approved or not) was inaccurate, incomplete, not current or not in compliance with the terms of the contract regarding pricing of change orders, an appropriate contract price reduction shall be made. Such post-approval contract price adjustments will apply to all levels of Contractors and/or Subcontractors and to all types of change order proposals specifically including lump sum change orders, unit price change orders and cost-plus change orders.

4.03.7

If an audit, inspection or examination in accordance with this article, discloses overcharges (of any nature) by the Contractor to the University in excess of one percent (1%) of the total contract billings, the actual cost of the University's audit shall be reimbursed to the University by the Contractor. Any adjustments and/or payments which must be made as a result of any such audit or inspection of the Contractor's invoices and/or records shall be made within a reasonable amount of time (not to exceed 90 days) from presentation of University's findings to Contractor.

4.03.8

If this Agreement is determined to be subject to Section 1861(v)(1)(I) of the Social Security Act, as amended from time to time, the Contractor agrees that for a period of four (4) years following the expiration or earlier termination of this Agreement, the Contractor shall retain and make available to the Secretary of Health and Human Services, the Comptroller General of the United States, or any of their duly authorized representatives, this Agreement, and any books, documents, and records of the Contractor which are necessary to certify the nature and extent of amounts paid by the University pursuant to this Agreement. In the event access to books, documents, and records is requested by the Secretary, the Comptroller General, or any of their duly authorized representatives, the Contractor shall immediately notify the University and make such books, documents and records available to the University unless prohibited by law.

4.04 Applications for Payment

The Contractor shall prepare and deliver to the University monthly an itemized Application for Payment. The University shall pay the Contractor within thirty (30) days of receipt of a properly submitted, complete and correct Application for Payment. The Applications for Payment shall include a Schedule of Values describing the services included and Work completed in the Application for Payment. No interest shall accrue on any unpaid portion of the Applications for Payment or any other sums that the Contractor or any Subcontractor or supplier claim are or may be due under this Agreement.

The Application for Payment shall constitute a representation by the Contractor to the University that the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment. No progress payment, partial use or entire use of the Project by the University shall constitute acceptance of work not in strict conformity with the Contract Documents.

The Contractor shall keep records of cost and expense to support the Contractor's Applications for Payment, including without limitation records of staff time, material costs, and reimbursable expense items in connection with the Work. Financial records shall be kept on a generally recognized accounting basis, as approved by the University. Contractor shall make them readily available to the University or its representatives for inspection and audit for a period of six (6) years after the Project Close-out and Final Payment to the Contractor.

The Application for Payment shall be accompanied by a Sworn Statement completed by the Contractor, together with Certified Payrolls prepared in accordance with Section 5.02, as well as other documentation that may be required by the University, stating that all Subcontractors and suppliers have been paid in full for Work performed through the last or most recent progress payment.

4.05 Retainage

Payments to the Contractor shall be subject to retainage of ten percent (10%) of the Cost of Work for each Application for Payment until the Work is fifty percent (50%) complete; at that time, no further retainage will be deducted from the Applications for Payment. Draws on retainage may only be submitted after Substantial Completion and in the following quantities: (1) at the completion of all Punchlist items, the retainage may be reduced to two percent (2%); and (2) at delivery of all Closeout Documents and warranties, the remainder of the retainage may be paid to the Contractor. Any release of retainage shall be at the sole discretion of the University.

4.06 Final Payment

Issuance of Final Payment shall be expressly conditioned on certification of Substantial Completion, certification of Punchlist completion and written acceptance of closeout documents by the Design Professional and University.

5.00 WSU WAGES

5.01 Applicable Wage Rates

The Contractor acknowledges and shall abide by the University's prohibition on use of 1099 independent contractors and owner / operator business entities wherein such individuals or entities are not able to secure and maintain workers compensation insurance. The Contractor shall ensure that all classifications of laborers and construction mechanics performing Work on the Project job site are employees of the Contractor or any subcontractor for any tier thereof, and that each worker is covered by workers compensation insurance.

For this project, it is a University requirement that the Contractor and all Subcontractors and sub-subcontractors who provide labor on this project shall compensate each worker, regardless of their employment status, not less than the wage and fringe benefit rates prevailing in the locality in which the work is to be performed. At the time of advertising for bids on the project, the University shall provide the prevailing rates of wages and fringe benefits for all classes of construction mechanics called for in the Contract. A schedule of these rates shall be made a part of the specifications for the work to be performed and shall be printed on the bidding forms where the work is to be done by contract. Contractor shall also post on site, in a conspicuous place, a copy of all applicable wage and benefit rates, and shall provide the University with a copy of the applicable wage and benefit rates posted.

5.02 Certified Payroll Records and Supporting Documents

The Contractor and each Subcontractor shall keep an accurate record showing the name and occupation of and the actual benefits and wages paid to each laborer and mechanic working in connection with this contract and shall be submitted with each pay application in accordance with Section 4.04. Contractor shall be required to 1) collect all certified payroll records from Contractor and Subcontractors and sub-subcontractors; 2) provide and require Subcontractors and sub-subcontractors to provide the University access to supporting documentation, and 3) shall provide this information, records, and/or access to documentation to the University or its agent(s) or auditors for review or audit promptly on request. Contractor shall, and shall also require all subcontractors and sub-subcontractors to, promptly provide

information relating to payroll and job classification and work duties to University upon request. The University reserves the right to audit Contractor, Subcontractors, and sub-subcontractors for compliance with wage and hour requirements, WSU Wage, employee classifications and other applicable requirements.

5.02.1 Audit

In connection with the WSU Wage rate audit conducted by the University, the Contractor is required to maintain and/or promptly obtain the following information, records and documentation from Contractor, all Subcontractors, and all sub-subcontractors and to promptly provide them to the University upon request:

1. Canceled payroll checks
2. Pay stubs
3. Weekly time cards on time sheets
4. Payroll registers
5. Employee handbook
6. Fringe benefit plan documents
7. Minutes of Board of Directors meetings
8. Worksheets for calculation of non-cash fringe benefit amounts included in compensation
9. Apprentice certificates and other documents to verify registration of all apprentices in recognized apprentice program certified by the Bureau of Apprenticeship and Training (B.A.T.) of the U.S. Dept. of Labor or an acceptable equivalent
10. Other related documents as requested by the University.

5.02.2 Failure to Comply with Audit

If the requested information and/or records are not promptly provided pursuant to University's request, in addition to all other rights and remedies it has pursuant to law, equity and contract, the University, by written notice to Contractor and the sureties of the contractor known to the University may, but has no obligation or duty to, 1) terminate the contract with Contractor and University owe Contractor and be liable only for that prorated portion of satisfactorily completed work up to the date of termination; 2) withhold further payments owed until Contractor supplies the requested information and records and/or otherwise complies with the request for records and/or access to documentation; and 3) inform the Vice-President for Finance and Business Operations of what has been requested and what has not been provided by Contractor and/or subcontractor or sub-subcontractor. Contractor is hereby given express notice that failure to comply with University's requests for information and records may disqualify Contractor and/or non-complying Subcontractors/sub-subcontractors from bidding and/or receiving work on future University projects. The University may proceed to complete this contract by separate agreement with another contractor or otherwise and the original Contractor and its sureties shall be liable to the University for any excess cost occasioned thereby.

5.03 Classification of Workers

All apprentices utilized on this University project must be registered in a recognized apprentice program, i.e., one that is certified by the Bureau of Apprenticeship (B.A.T.), U.S. Department of Labor. The workers used on a University project by either Contractor or a Subcontractor must be employees of the Contractor or Subcontractor and not individuals claimed as subcontractors or independent contractors, such as individuals whose compensation is reflected on IRS form 1099. The use of individuals as independent contractors is prohibited without express written permission of the University.

5.04 Failure to Pay

If a Contractor or subcontractor fails to pay the prevailing rates of wages and fringe benefits and does not cure such failure within fourteen (14) days after notice to do so by the University, the University shall have the right, at its option, to do any or all of the following:

5.04.1

Withhold all or any portion of payments due the Contractor as may be considered necessary by the University to pay laborers and mechanics the difference between the rates of wages and fringe benefits required by this Agreement and the actual wage and fringe benefits paid.

5.04.2

Terminate part or all of this Agreement or any subcontract and proceed to complete the Agreement or subcontract by separate agreement with another contractor or otherwise, in which case the Contractor and its sureties shall be liable to the University for any excess costs incurred by the University.

5.04.3 University's Rights Cumulative

It is expressly understood by both parties that the above are in addition to University's other rights and remedies, and University retains all other rights and remedies it has pursuant to this Agreement, or otherwise, to enforce its rights to require that WSU Wages and fringe benefits be paid for the construction work on this Project, but the University shall have no duty or contractual obligation to enforce these provisions. Contractor agrees that it shall be solely responsible for ensuring that these requirements are met and shall handle and defend all complaints or claims regarding wage payments to construction mechanics without assistance or involvement of the University. Contractor shall permit its employees and workers, and its Subcontractors and sub-subcontractors and their employees and workers, to discuss payment and work duty information with University staff, but otherwise Contractor shall continually prohibit its employees and workers, and all subcontractors and sub-subcontractors and their employees and workers, from directing or making any claims or complaints regarding the payment of wages to any employee or official of the University, and shall indemnify and reimburse University for all expenses and fees, including attorney fees, which it incurs for defending or representing itself against such claims or complaints. The University shall not be asked to nor be responsible to address or resolve any disputes with or between Subcontractors on the Project.

5.05 Application to Subcontractors

The Contractor shall include terms identical or substantially similar to this section in all Subcontracts, Purchase Orders and other agreements pertaining to the Project.

6.00 OWNERSHIP OF ELECTRONIC OR HARD-COPY DOCUMENTS

All drawings and specifications and other data and materials prepared and furnished whether in electronic or hard-copy format by the University, the Design Professional and/or the Contractor shall become the property of the University. The Contractor shall have no claim for further employment or additional compensation as a result of exercise by the University of its full rights to ownership of such documents, information, data and materials. The Contractor shall not use or copy such documents, information, data or materials in any format for any purpose other than for the Project.

7.00 SUCCESSORS AND ASSIGNS

This Agreement shall be binding upon and inure to the benefit of the parties to this Agreement and their respective successors and assigns; provided, however, that none of the parties hereto shall assign this Agreement without the prior written consent of the other.

8.00 CLAIMS, DISPUTES AND GOVERNING LAW

8.00 CLAIMS AND DISPUTES

8.01 Claims Definition

A Claim is a demand or assertion by one of the parties seeking adjustment or interpretation of Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the parties arising out of or relating to the Contract. Claims must be made by written notice within a specified time period. The responsibility to substantiate Claims shall rest with the party making the Claim.

8.01.1 Policy of Cooperation

The parties shall endeavor to resolve all of their claims and disputes amicably and informally through open communication and discussion of all issues relating to the Project. To the greatest extent possible, the parties shall avoid invoking the formal dispute resolution procedures contained in the Contract Documents.

8.02 Recommendation of Design Professional

Claims must be referred initially to the Design Professional for action as provided in paragraph 8.10 as an express condition precedent to proceeding further in resolving any claim.

8.03 Time Limits on Claims

Claims must be made within 5 business days after occurrence of the event giving rise to such Claim or within 5 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. Claims must be made by written notice. An additional Claim made after the initial Claim has been resolved by Change Order will not be valid.

8.04 Continuing Contact Performance

Pending final resolution of a Claim, unless otherwise agreed in writing, the Contractor shall proceed diligently with performance of the Contract and the University shall continue to make payments in accordance with the Contract Documents subject to the University's rights relative to payments, withholding of payments, termination, or all other rights afforded it in the Contract Documents.

8.05 Claims for Concealed or Unknown Conditions

If conditions are encountered at the site which are (1) subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then written notice by the observing party shall be given to the other party promptly before conditions are disturbed and in no event later than 24 hours after first observance of the conditions. The Design Professional will promptly investigate such conditions and, if the conditions differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, the Design Professional will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Design Professional determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Design Professional shall so notify the University and Contractor in writing, stating the reasons. Claims by either party in opposition to such determination must be made within 5 days after the Design Professional has issued such determination. If the University and Contractor cannot agree on an adjustment in the Contract Sum or Contract Time, the

adjustment shall be referred to the Design Professional for initial determination, subject to further proceedings pursuant to Paragraph 8.09.

8.06 Claims for Additional Cost

Any Claim by the Contractor for an increase in the Contract Sum shall be submitted in writing as required by the Contract Documents before proceeding to execute the Work. If the Contractor believes additional cost is involved for reasons including but not limited to (1) a written interpretation from the Design Professional, (2) an order by the University to stop the Work where the Contractor was not at fault, (3) a written order for a minor change in the Work issued by the Design Professional, (4) failure of payment by the University, (5) termination of the Contract by the University, (6) University's suspension or (7) changes in the scope of Work, the Contractor's claim shall be filed in strict accordance with the procedure established herein.

8.07 Claims for Additional Time

Any Claim by Contractor for an increase in the Contract Time shall be submitted in writing as required by this provision and the Contract Documents. The Contractor's Claim shall include an estimate of the probable effect of delay on progress of the Work. In the case of a continuing delay only one Claim is necessary.

As a precondition for the Claim to be considered by the University, Contractor must identify the precise activities affected as located on the approved network Project Schedule. Contractor must also describe the efforts that it has made to mitigate the effects of any negative schedule impact.

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

8.08 Injury or Damage to Person or Property

If either party to the Contract suffers injury or damage to person or property because of an act or omission of the other party, of any of the other party's employees or agents, or of others for whose acts such party is legally liable, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 5 days after first observance. The notice shall provide sufficient detail to enable the other party to investigate the matter. If a Claim for additional cost or time related to this Claim is to be asserted, it shall be filed as provided in the Contract Documents.

8.09 Verification of Claims Submitted

With respect to any Claim asserted by Contractor for itself or on behalf of a Subcontractor for additional time or cost, the Contractor shall evaluate the claim and verify that any amounts claimed are valid, compiled in accordance with generally accepted accounting principles and are consistent with the terms of the existing contractual agreements regarding entitlement before presentation of the Claim to the Owner. Any Claim not verified in accordance with this requirement shall be denied without further recourse by the Contractor or Subcontractor.

8.10 Resolution of Claims and Disputes

8.10.1 Review by Design Professional

Design Professional will review all Claims and take one or more of the following preliminary actions within 10 days of receipt of a Claim: (1) request additional supporting data from the claimant, (2) submit a schedule to the parties indicating when the Design Professional expects to take action, (3) reject the Claim in whole or in

part, stating reasons for rejection, (4) recommend approval of the Claim by the other party or (5) suggest a compromise. The Design Professional may also, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim.

If a Claim has been resolved, the Design Professional will prepare or obtain appropriate documentation. If a Claim has not been resolved, the party making the Claim shall, within 10 days after the Design Professional's preliminary response, take one or more of the following actions: (1) submit additional supporting data requested by the Design Professional, (2) modify the initial Claim or (3) notify the Design Professional that the initial Claim stands.

If a Claim has not been resolved after consideration of the foregoing and of further evidence presented by the parties or requested by the Design Professional, the Design Professional will notify the parties in writing that the Design Professional's opinion will be rendered within 5 days. Upon expiration of such time period, the Design Professional will render to the parties the Design Professional's written opinion relative to the Claim, including any change in the Contract Sum or Contract Time or both. If there is a surety and there appears to be a possibility of a Contractor's default, the Design Professional may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy. The opinion of the Design Professional shall be subject to the review of the Vice-President for Finance and Business Operations Wayne State University (VPFBO).

8.10.2 Review by Vice-President for Finance and Business Operations

The Vice-President for Finance and Business Operations (VPFBO) shall review the Design Professional's opinion and the supporting information submitted by the parties for the purpose of upholding the Design Professional's opinion, modifying the Design Professional's opinion, or rejecting the Design Professional's opinion. The VPFBO shall render a decision within forty-five days of the completion of any submissions by the parties. The decision of the VPFBO is final unless it is challenged by either party by filing a lawsuit in the Court of Claims of the State of Michigan within one year of the issuance of the decision.

8.10.3 Jurisdiction

Jurisdiction over all claims, disputes, and other matters in question arising out of or relating to this Contract or the breach thereof, shall rest in the Court of Claims of the State of Michigan. No provision of this agreement may be construed as the University's consent to submit any claim, dispute or other matter in question for dispute resolution pursuant to any arbitration or mediation process, whether or not provisions for dispute resolution are included in a document which has been incorporated by reference into this agreement.

8.10.4 Condition Precedent

The process and procedures described in Section 8.10 are an express condition precedent to filing or pursuing any legal remedy including litigation. Pursuing litigation prior to exhaustion of the Dispute Resolution process set forth herein shall be premature and a material breach of this Agreement.

8.10.5 Governing Law

This Agreement shall be governed by and construed in accordance with the laws of the State of Michigan.

9.00 NON-DISCRIMINATION

9.01 General

The Contractor shall not discriminate against any job applicant, contractor, or employee because of race, color, religion, national origin, age, sex (including gender identity) height, weight, or familial, disability, or

veteran status, and shall include terms identical or substantially similar to this section in all Subcontracts, Purchase Orders and other agreements pertaining to the Project.

9.02 Solicitation/Advertisements

The Contractor shall in all solicitation or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, age, sex (including gender identity), height, weight, or familial, disability or veteran status.

9.03 Rules/Laws

The Contractor shall comply with all applicable federal and state laws, and current published rules, regulations, directives, and orders of the Michigan Civil Rights Commission and other governmental agencies/departments.

9.04 Reports

The Contractor shall furnish and file compliance reports within such time and upon such forms as provided by the Michigan Civil Rights Commission; these forms may also elicit information as to the practices, policies, program, and employment statistics of the Contractor and of each Subcontractor. The Contractor shall permit access to all books, records, and accounts by the Michigan Civil Rights Commission and/or its agents, for purposes of investigation to ascertain compliance with this contract and with rules, regulations, and orders of the Michigan Civil Rights commission.

9.05 Persons with Disabilities

The Contractor shall comply with the provisions of the Michigan Persons with Disabilities Civil Rights Act (M.C.L. 37.1101, et seq.).

9.06 Contract Provisions

The Contractor shall include, or incorporate by reference, the provisions of this Article in every Subcontract, Subcontract and purchase order unless exempted by the rules, regulations or orders of the Michigan Civil Rights Commission, and shall provide in every Subcontract, subcontract or purchase order that said provisions shall be binding upon each Subcontractor, subcontractor or seller.

10.00 ADDITIONAL PROVISIONS

10.01 Prohibited Contracts or Subcontracts due to Unfair Labor Practices

Public Act No. 278 of 1980 prohibits State of Michigan from awarding Contract or Subcontract to employer who has been found in contempt of court by a Federal court of appeals, on not less than three (3) occasions involving different violations during preceding seven (7) years, for failure to correct unfair labor practice as prohibited by Section 8 of Chapter 372 of National Labor Relations Act, 29 U.S.C. 158. Contractor may not in relation to that Contract subcontract with such employer. The University may rescind, or require Contractor to rescind a contract if the employer or Subcontractor, manufacturer, or supplier of employer subsequently appears in register of such employers which will be compiled by Michigan's Department of Licensing and Regulatory Affairs, pursuant to Section 2 of Public Act No. 278 of 1980.

10.02 Buy-American

University endeavors to buy products made in the United States of America whenever an American-made product is available that meets or exceeds the specifications requested and the price is equal to or lower than foreign-made product. Vendors and Contractors are instructed to bid American-made products and/or services whenever available. Vendors and Contractors may bid foreign-made products or services when:

1. those products or services are specified, or
2. as an alternate as long as the products or services are technically acceptable to the University and American-made goods or services that are competitively price and of comparable quality are not available.

A product or service shall be considered "American-made" if more than 50% of the product is manufactured or assembled in the United States or more than 50% of the services are performed in the United States.

10.03 Michigan Products

Contractor and its Subcontractors and suppliers shall utilize Michigan-made products whenever possible where price, quality and performance are equal to or better than non-Michigan products.

10.04 Drug and Alcohol Testing

The University is a "DRUG FREE WORKPLACE", and the University requires Contractors, Subcontractors and sub-subcontractors with access to the work site to abide by the University's policies on drugs, alcohol and tobacco, which can be found at http://bog.wayne.edu/code/2_20_04.php and <http://policies.wayne.edu/administrative/00-03-smoke-free-campus.php>. All costs for initial and periodic testing shall be borne by the Contractor.

1. The Contractor and University shall reserve the right to administer drug and alcohol tests to any and/or all site personnel at random periods and without notice.
 - a. The Contractor shall be responsible for all costs including wages for those individuals testing drug or alcohol-free at the Contractor's direction.
 - b. Subcontractors shall be responsible for all costs including wages for those individuals not testing drug or alcohol-free at the direction of the Contractor, and the Subcontractor shall immediately remove those individuals from the site.
4. Any individual not testing drug or alcohol-free shall not be allowed to return to the site under any circumstances.

10.05 Other University Policies

The University's policies related to Duty to Report Criminal Acts and Weapons on Campus shall apply to this Project and Contractor shall include this requirement in all Subcontracts, purchase orders and supply agreements.

10.06 University Representative

The University's Representative shall be the Associate Vice President of Facilities Planning and Management, the Senior Director of Design and Construction Services, the Director of Design and Construction Services and the Project Manager . Any project decision on behalf of the University may only be in accordance with the Authorization Matrix that is attached as Exhibit C and incorporated by reference.

11.00 INCLUSION BY REFERENCE

This Contract and Contract Documents hereby include and incorporate by reference the General Conditions of Construction and Supplementary General Conditions, the Request for Proposal by University, the approved plans and specifications, Contractor's Bid or Proposal insofar as it is not inconsistent with the other Contract Documents and other Project documents attached as Exhibits.

Exhibit A – Contractor's Bid or Proposal

Exhibit B – Basis of Compensation

Exhibit C - Authorization Matrix

Exhibit D – Staffing Plan

12.00 TERMINATION

12.01 Termination by the University for Cause

12.01.1

The University may terminate the Contract if the Contractor: (a) becomes insolvent; (b) files or has filed against it any Petition in Bankruptcy or makes a general assignment for the benefit of its creditors; (c) fails to pay, when due, for materials, supplies, labor, or other items purchased or used in connection with the Work; (d) refuses or fails to prosecute the Work, or any separable part thereof, with such diligence as will ensure the completion of the Work in accordance with the Master Project Schedule; (e) in the University's opinion, persistently fails, refuses or neglects to supply sufficient labor, material or supervision in the prosecution of the Work; (f) interferes with or disrupts, or threatens to interfere with or disrupt the operations of the University, or any other Contractor, supplier, subcontractor, or other person working on the Project, whether by reason of any labor dispute, picketing, boycotting or by any other reason; or (g) commits any other breach of this Contract.

When any of the above reasons exist, the University may, without prejudice to any other rights or remedies of the University and after giving the Contractor and the Contractor's surety, if any, three days written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety: (1) take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor; (2) accept assignment of subcontracts; and (3) finish the Work by whatever reasonable method the University may deem expedient.

When the University terminates the Contract for one of the stated reasons, the Contractor shall not be entitled to receive further payment until the Work is finished.

12.01.2

If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Design Professional's services and expenses made necessary thereby, the remaining balance shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the University. The amount to be paid to the Contractor or University, as the case may be, shall be certified by the Design Professional, upon application, and this obligation for payment shall survive termination of the Contract.

12.02 Suspension by the University for Convenience

12.02.1

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

12.02.2

An adjustment shall be made for increases in the cost and/or time of performance of the Contract, including profit on the increased cost of performance, caused by suspension, delay or interruption. No adjustment shall be made to the extent: (1) that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or (2) that an equitable adjustment is made or denied under another provision of this Contract.

Adjustments made in the cost of performance may have a mutually agreed fixed or percentage fee.

12.03 Termination By The University For Convenience

12.03.1

The University, with or without cause, may terminate all or any portion of the services by the Contractor under this Agreement, upon giving the Contractor 30 days written notice of such termination. In the event of termination, the Contractor shall deliver to the University all reports, estimates, schedules, subcontracts, Contract assignments, purchase order assignments, and other documents and data prepared by it, or for it, pursuant to this Agreement.

12.03.2

Unless the termination is for cause, the Contractor shall be entitled to receive only the payments provided for in Article 4, pro-rated to the date of termination (including payment for the period of the 30-day notice) plus reimbursement for approved and actual costs and expenses incurred by the Contractor to the date of termination. Prior to payment, the Contractor shall furnish the University with a release of all claims against the University.

12.04 Termination By The Contractor

12.04.1

The Contractor may terminate the Contract if the Work is stopped for a period of 60 days through no act or fault of the Contractor or a subcontractor, sub-subcontractor or their agents or employees or any other persons performing portions of the Work under Contract with the Contractor, for any of the following reasons: (1) issuance of an order of a court or other public authority having jurisdiction; (2) an act of government, such as a declaration of national emergency, making material unavailable; (3) because the Design Professional has not approved a Certificate for Payment and has not notified the Contractor of the reason for withholding approval, or because the University has not made payment of undisputed amounts on an approved Certificate for Payment within the time stated in the Contract Documents; (4) if repeated suspensions, delays or interruptions by the University constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

If one of the above reasons exists, the Contractor may, upon seven additional days' written notice to the University and Design Professional, terminate the Contract and recover from the University payment for Work executed and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery, including reasonable overhead and profit.

12.04.2

If the Work is stopped for a period of 60 days through no act or fault of the Contractor or a subcontractor or their agents or employees or any other persons performing portions of the Work under Contract with the Contractor because the University has persistently failed to fulfill the University's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' written notice to the University and the Design Professional, terminate the Contract and recover from the University as provided in Subparagraph 12.03.2

13.00 COMPLETE AGREEMENT

The Contract Documents constitute the entire agreement between the parties and supersede any prior discussions or negotiations. Any modification of these Contract Documents must be in writing and signed by the duly authorized representatives of the parties.

IN WITNESS WHEREOF, each of the parties has caused this Agreement to be executed by its duly authorized representative on the dates shown beside their respective signatures, with the contract to be effective upon the date set forth above.

CONTRACTOR

Wayne State University

By: _____

By: _____

Name: _____

Name: William R. Decatur

Title: _____

Title: VP Finance & Business Operations

Date: _____

Date: _____

Exhibit A – Contractor's Bid or Proposal

[GENERAL CONTRACTOR'S NAME] bid/proposal dated _____.

Exhibit B – Basis of Compensation

- a. The University shall pay the Contractor a not to exceed amount of \$\$\$\$\$\$ ("Amount in words 00"/100 dollars) based on unit pricing in the proposal which will be adjusted to reflect actual units used for the performance of all work associated with the Contractor's Base Bid "and Alternates (List)".
- b. List of Alternates. The University may, at its sole discretion, during the life of the contract, award the following alternates at the amounts indicated: (If this section is not used, delete all text and enter_ Deleted)

	<u>Description</u>	<u>Amount</u>
Alternate 1		
Alternate 2		
Alternate 3		

- c. List of unit prices. In the event additional work becomes necessary, the following unit prices will apply:
"(If section 3.3 is not used, delete all text and enter_Deleted"

<u>Work Item</u>	<u>Unit Price</u>
1.	
2.	
d. Liquidated Damages. It is understood and agreed that, if the project is not completed within the time specified in the Agreement plus any extension of time allowed pursuant thereto, the actual damages sustained by the University because of any such delay will be uncertain and difficult to to ascertain, and it is agreed that the reasonable foreseeable value of the use of said project by the University would be the sum of \$_____ (_____ Hundred 00/100 dollars) per day. Therefore, the Contractor shall pay as liquidated damages to the University the sum of \$_____ (_____ Hundred 00/100 dollars) per day for each day's delay in substantially completing said project beyond the time specified in this Agreement and any extensions of time allowed thereunder.	

Sample

WAYNE STATE UNIVERSITY
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GENERAL CONDITIONS OF CONSTRUCTION

1.00 DEFINITIONS

Bulletin - A bulletin is defined as a compilation of changes to the scope of the work issued by the Design Professional or University which requests the Contractor to submit a quote for the changes.

Change Order - A written agreement entered into after the award of the Contract which alters or amends the executed Contract.

Claim - A Claim is a demand or assertion by one of the parties seeking adjustment or interpretation of Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the parties arising out of or relating to the Contract. Claims must be made by written notice. The responsibility to substantiate Claims shall rest with the party making the Claim.

Close-out Documents - Close-out Documents shall include as-built record drawings and specifications, Operations and Maintenance Manuals, Requests for Information (RFIs), submittals, shop drawings, coordination drawings, warranties, unconditional lien waivers and governing approvals.

Cost of Work - The term Cost of Work, as used herein, is that portion of the Project Cost, that is the estimated or actual labor and material costs of that Work performed (or to be performed) on the Project by the Contractor and all subcontractors, and is inclusive of the cost of construction as described by divisions of the Construction Specifications Institute or other standard format, which constitutes the Direct Cost of Work. However, Cost of Work shall not include the Indirect Cost of Work as herein defined.

Contract - The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a duly executed written Change Order.

Contract Documents - The Contract Documents consist of the bonds, insurance certificates, plans, specifications, drawings, bulletins, addenda, Agreement, General Conditions of Construction, Supplementary General Conditions, Change Orders, Contractor's Bid, and to the extent not otherwise inconsistent with any other Contract Document.

The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Project. Contract Documents are complementary, and what is required by one shall be as binding as if required by all. Performance by the Contractor shall be required to be consistent with the Contract Documents and the highest standard of care. In the case of an inconsistency between, or perceived omission or error in the Drawings, Specifications, or other Contract Documents which is not clarified by addendum or Requests for Information (RFI), or should the Contractor be in doubt as to their exact meaning, the Contractor shall notify the Design Professional and the University at once. The University shall not be responsible for the Contractor's misinterpretations of Drawings and Specifications and/or other Contract Documents.

Nothing contained in the Contract Documents shall create a contractual relationship between University and any third party; however, the University is an intended third-party beneficiary of all contracts for design and engineering services, all subcontracts, purchase orders and other agreements between Contractor or Design

Professional and third parties. The Contractor and Design Professional shall incorporate the obligations of the Contract Documents into its respective subcontracts, agreements and purchase orders.

Contractor: The term "Contractor" as used in the General Conditions shall include the term "Construction Manager" as used in the Contract for Construction Management Services.

Contractor's Construction Schedule- The construction schedules required by the Contract Documents shall be a logic network prepared in the critical path method or other sequential network in use within the construction industry and shall depict: (1) a sequence of operations mutually agreeable to the University, Design Professional and Contractor; (2) the dates of commencement and completion of each task of the Work (including lead time activities, drawing and sample submissions, bidding, awarding Trade Contracts, manufacturing and shipping); (3) delivery dates for materials and equipment; and (4) at the University's request shall include all Finish Work to be performed by separate Contractors. The construction schedule includes a complete itemized breakdown of the Work.

Contract Sum- The Contract Sum shall be the total dollar value of the Agreement between the University and Contractor.

Delay – A delay shall be recognized as a time of completion impact on the performance of the Work by the Contractor that extends the overall duration of the Project beyond the substantial completion and final completion dates specified in the Agreement. A delay shall not be recognized if the time of completion impact on the performance of the Work occurs on a non-critical path activity, and does not extend the overall duration of the Project.

Day - "Days" means calendar days unless specifically provided to the contrary herein or in the Construction Agreement; provided, however, if any day falls on a weekend or a holiday, same shall refer to the next business day thereafter.

Design Professional - The Design Professional is the person lawfully licensed to practice architecture or engineering or an entity lawfully practicing architecture or engineering identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Design Professional" means the Design Professional or the Design Professional's authorized representative.

Final Completion - "Final Completion" means the completion of all the Work in accordance with the Contract Documents and the acceptance thereof by the University. Completion of the Work includes (1) full performance of all Contract terms; (2) acceptance of the Work by University; (3) resolution of all outstanding Changes of Contract; (4) completion of all "punch-list" items; and (5) delivery of all Close-out Documents.

Incomplete Construction List – The Incomplete Construction List is prepared by the Contractor for review by Design Professional and University identifying Work remaining to be completed at the time of Substantial Completion and the date by which Contractor shall complete the Work on the Incomplete Construction List.

Knowledge - The terms "knowledge," "recognize" or "discover," their respective derivatives and similar terms in the Contract Documents, as used in reference to the Contractor, shall be interpreted to mean that which the Contractor knows or should know, recognizes or should reasonably recognize and discovers or should reasonably discover in exercising the care, skill and diligence required by the Contract Documents.

Master Project Schedule - The Master Project Schedule shall show the sequence, duration in calendar days, interdependence for the complete performance of all Work. The Master Project Schedule shall begin with the date of issuance of the Notice to Proceed and conclude with the date of final completion.

Notice to Proceed - A "Notice to Proceed" means written notice given by the University to the Contractor fixing the date on which the Contract Time will commence to run and/or on which Contractor shall start to

perform Contractor's obligations under the Contract Documents. A Notice to Proceed by the University shall authorize all or a portion of the Work for the Costs so defined.

Persistently fails - The phrase "persistently fails" and other similar expressions, as used in reference to the Contractor, shall be interpreted to mean any combination of acts and omissions, which cause the University to reasonably conclude that the Contractor will not complete the Work within the Contract Time, or for the Contract Sum or in substantial compliance with the requirements of the Contract Documents.

Plans - The drawings prepared by the Design Professional and accepted by the University which include elevations, sections, details, schedules, diagrams, information, notes, or reproductions or any of these, and which show the location, character, dimension, or details of the Work. These include the graphic and pictorial portions of the Contract Documents as listed in the Agreement.

Preliminary Project Cost and Schedule Impact Report – The direction from the University to perform changed Work in the absence of agreement between the University and Contractor, which may result in a Change Order upon agreement of the cost or schedule impact.

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

Punchlist - Punchlist items shall include all Work remaining on the Contractor's Incomplete Construction List and additional items documented by the Design Professional, Contractor and University and issued to the Contractor and may be issued with a Certificate of Substantial Completion. It is understood and accepted that the Punchlist included with the Certificate of Substantial Completion may not represent all remaining Work for which the Contractor is obligated and that Punchlist may be expanded prior to Final Completion.

Reasonably inferable - The phrase "reasonably inferable" and similar terms in the Contract Documents shall be interpreted to mean reasonably inferable by a Contractor familiar with the Project and exercising the care, skill and diligence required by Contract Documents.

Site - The area specified in the Contract Documents and the area made available for the Contractor's operation.

Soft Costs - "Soft Costs" are those costs derived by the University and shall include, but not be limited to, items such as Environmental services, State administration fees, Design Professional fees, moving furniture, fixtures and equipment, and telecommunications, unless otherwise agreed to by the Parties.

Specifications - The term Specifications shall mean the written instructions and requirements prepared by the Design Professional which complement the plans and which describe the manner of executing the Work or the qualities and types of materials to be furnished.

Statement of Probable Cost - The Statement of Probable Cost, as developed by the Contractor, is essential to the budgetary and management processes of the University. The Statement of Probable Cost, once established and accepted by the University, is relied upon by the University for its subsequent budgetary planning and financial needs for the Project.

The Statement of Probable Cost, applicable to either an estimated or actual cost, is the sum of all costs for a completely constructed, functionally ready-for-use project, in accordance with the scope, scheme, concept, and statement, as developed, documented and accepted by the University, and as constructed by the accepted contracting method or methods. The Contractor shall provide Statements of Probable Cost as needed during the Project to aid the University and Design Professional in making scope of work selection decisions, especially during design phase and minimally at the end of each design phase of the Project and shall include all costs included in the Contract Sum. The University shall be responsible for the derivation and provision of all Soft Costs that comprise the Project scope and budget.

Subcontractor - The term "subcontractor" shall mean any business entity under contract to the Contractor for services on or regarding the Project. The term "Subcontractor" as used in the General Conditions shall be synonymous with the term "Trade Contractor" as used in the Contract for Construction Management Services. Nothing contained in this contract shall create any contractual relationship between the University and any subcontractor. However, the University is the intended third-party beneficiary of all contracts for design, engineering or consulting services, all Trade Contracts, subcontracts, purchase orders and other agreements between the Contractor and third parties. The Contractor shall incorporate the obligations of this Agreement into its respective Trade Contracts, subcontracts, supply agreements and purchase orders.

Substantial Completion - "Substantial Completion" shall mean the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so the University can occupy or utilize the Work for its intended use. Substantial Completion shall only be determined as described in the Contract Documents.

Unsafe Persons – Unsafe persons shall be those individuals that present a safety hazard to themselves or others.

University - The University is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "University" means the University or the University's authorized representative. Any reference to "Board of Governors" shall be considered to mean "University."

University's Representative - The University's Representative shall include the Associate Vice President for Facilities Planning and Management, the Senior Director of Design and Construction Services, the Director of Design and Construction Services and the Project Manager. Any project decision on behalf of the University may only be in accordance with the Authorization Matrix.

Vice President of Finance and Business Operations - The Vice President of Finance and Business Operations shall be the level of review over the Associate Vice President of Facilities Planning & Management.

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

2.00 BIDDING

2.01 Duty to Carefully Examine These Instructions

Prospective bidders for this project shall carefully examine the instructions contained herein and be cognizant of and satisfied with the conditions which must be satisfied prior to submitting a proposal and to the conditions which affect the award of the Contract.

2.02 Disclosure of Bidders

The Contractor shall only accept proposals from Subcontractors who are acceptable to the University.

2.03 Clarification During Bidding

The Contractor shall examine the plans and specifications in preparing the bid and shall immediately report to the Design Professional any omissions, discrepancies, or apparent errors found in the plans and specifications. Prior to the date of bid opening, bidders shall submit a written request for clarification in accordance with the instruction contained in the request for bids. If time permits, such clarification shall be issued in the form of addenda to all bidders.

2.04 Bidding Documents

2.04.1 Bid Proposal Package

Each bidder will receive a bid proposal package containing a standard proposal form which shall be used for bidder's proposal. Each proposal shall give the prices proposed in the manner required by the proposal and shall be signed by the bidder or the bidder's duly authorized representative, with its address and telephone number. If the proposal is made by an individual, the individual's name, postal address, and telephone number must be shown. If made by a partnership, the proposal shall have the signature of all partners or an affidavit signed by all partners empowering one partner as an agent to act in their behalf and the address and telephone number of the partnership. A proposal submitted by a corporation shall show the name of the state in which the corporation is chartered, the name of the corporation, its address and telephone number, and the title of the person who signs on behalf of the corporation.

2.04.2 Listing of Proposed Subcontractors Acceptable to the University

The Contractor will require every subcontractor to provide the name and location of the place of business of each Subcontractor and subordinate Subcontractor which will perform work or labor or render services for the Project.

2.04.3 Bidder's Security

All bids shall be presented under sealed cover and have enclosed an amount as directed in the instructions to bidders as bid security. The bid security may be a cashier's check made payable to Wayne State University or as otherwise directed in the instructions to bidders.

2.05 Bid Proposals

2.05.1 Submission of Proposals

Proposals shall be submitted to the office indicated on the bid proposal. It is the responsibility of the bidder to see that its bid is received in the proper time. Delays in timely receipt of the bid caused by the United States or the University mail system, independent carriers, acts of God, or any other cause shall not excuse late

receipt of a bid. Any bid received after the scheduled closing time for receipt of bids shall not be considered and will be rejected by the University, opened, retained by the University or returned to the bidder unopened.

2.05.2 Withdrawal of Proposals

Any bid may be withdrawn at any time prior to the time fixed for receiving bids but only by a written request from the bidder or its authorized representative filed with the University. An oral, faxed, or telephonic request to withdraw a bid proposal is not acceptable. The withdrawal of a bid shall not prejudice the right of a bidder to file a new bid. This paragraph does not authorize the withdrawal of any bid after the time fixed for receiving bids.

2.05.3 Public Opening of Proposals – SECTION DELETED

2.05.4 Rejection of Irregular Proposals

Proposals may be rejected if they show any alterations of forms, additions not called for, conditional bids, incomplete bids, erasures, or irregularities of any kind. If the bid amount is changed after the amount has been once inserted, the change shall be initialed.

2.05.5 Power of Attorney or Agent

When proposals are signed by an agent, a power of attorney shall either be on file with the University prior to the opening of bids or be submitted with the proposal. Failure to submit a power of attorney may result in the rejection of the proposal as irregular and unauthorized. A power of attorney is not necessary in the case of a general partner of a partnership.

2.05.6 Waiver of Irregularities/University's Right to Reject Bids

The University reserves the right to waive any or all irregularities in proposals submitted. The University reserves the right to reject any or all of the bids submitted.

2.05.7 Exclusion from Contract Documents

Nothing in any of the bidding documents, including but not limited to Request for Proposal form, Notice to Contractors, Proposal by Contractor and Design Professional and bids including any attachments or exhibits by Contractor, shall be considered part of the Contract Documents unless specifically incorporated.

2.06 Mistake in Bid

A bidder shall not be relieved of a bid nor shall any change be made in a bid because of mistakes without consent of the University. Failure by the Contractor to honor its proposal following the opening of bids for any reason shall result in the forfeiture of the Bid Security and possible suspension from future work consideration by and with the University.

2.07 Non-Discrimination

Wayne State University is an affirmative action/equal opportunity employer. The University has a strong commitment to the principle of diversity in all areas.

The Contractor and all Subcontractors shall not discriminate against any employee or applicant for employment because of race, color, religion, national origin, age, sex (including gender identity), height, weight or familial, disability or veteran status. The Contractor will ensure that applicants are employed and that employees are treated during employment, without regard to their race, color, religion, national origin, age, sex (including gender identity), height, weight or familial, disability, or veteran status. Such action shall

include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor shall, in all solicitation or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, age, (including gender identity), height, weight or familial, disability or veteran status.

The Contractor shall comply with all requirements of the Elliott-Larsen Civil Rights Act being 1976 PA 453, as amended.

The Contractor shall also comply with the Persons with Disabilities Civil Rights Act being 1976 PA 220, as amended.

The Contractor shall include, or incorporate by reference, the provisions of this Article 2.07 in each and every subcontract or purchase order and shall provide in each and every subcontract or purchase order that said provisions will be binding upon each and every subcontractor and Supplier and Vendor.

Any breach of the requirements and covenants of this Article 2.07 shall constitute a material breach of the Contract Documents.

3.00 AWARD AND EXECUTION OF CONTRACT

3.01 Contract Bonds and Insurance

3.01.1 Payment and Performance

The Contractor shall forward to the University fully executed Payment & Performance Bonds in the amount of 100 percent of the Contract value on the AIA Form 312 or an equivalent form that is acceptable to the University and in compliance with MCL 129.201 et seq. within five (5) days after execution of the Agreement.

In the same five (5) day period the Contractor shall present to the University, in an acceptable form, evidence of the insurance as required by the Contract Documents. Actual Work shall not commence until the bond and insurance is received by the University. Failure to provide the bond and insurance in the time-frame allowed shall not be cause for an extension of Contract Time.

All alterations, extensions of time, extra and additional work, and other changes authorized by any part of the Contract, including determinations made under Article 7.00, Claims and Disputes, shall be made without securing the consent of the surety or sureties on the Contract bonds.

Whenever the University has cause to believe that the surety has become insufficient, the University may demand in writing that the Contractor provide such further bonds or additional surety, not exceeding that originally required, as in the University's opinion is necessary, considering the extent of the work remaining to be done. Thereafter no payment shall be made to the Contractor or any assignee of the Contractor until the further bonds or additional surety have been furnished.

Contract bonds shall remain in full force and effect during the repair and guarantee period required by the Contract Documents.

3.02 Execution of Contract

The Contract shall be signed by the Contractor in three (3) duplicate counterparts and returned to the University within five days of receipt from the University, not including Saturdays, Sundays, or legal holidays. No Contract shall be binding upon the University until it has been executed by the Contractor and a University official in accordance with the Authorization Matrix.

3.03 Failure or Refusal to Execute Contract

Failure or refusal by the Contractor to execute the Contract within the time set in Section 3.02 shall be just cause for the rescission of the award and the forfeiture of bidder's security. Failure or refusal to file acceptable bonds within the time set in Section 3.01 constitutes a failure or refusal to execute the Contract. If the Contractor fails or refuses to execute the Contract, the University may award the Contract to another contractor and the Contractor shall forfeit his Cashier's Check.

4.00 RESPONSIBILITIES OF THE PARTIES

4.01 University

4.01.1 Information and Services Required of the University

The University shall make available existing surveys describing physical characteristics, legal limitations and utility locations for the site of the Project. The University does not warrant or guarantee the accuracy of the information provided.

Unless otherwise agreed to, the University shall be responsible for the abatement of asbestos containing materials and/or site related environmental hazards. The University will provide documentation regarding the presence of asbestos containing materials or other possible environmental hazards to the Contractor. Second opinions on previously documented clean conditions shall be provided at the Contractor's expense. Positive results regarding environmental hazards shall become the University's obligation. If, during the execution of the Work, previously unknown environmental hazards are encountered, the University shall be allowed a reasonable amount of time to abate environmental hazards.

The University shall provide available information regarding requirements for the Project including plans and specifications for the buildings and a survey of the site where required. The Contractor shall review the plans and specifications and survey, if provided, for errors, inconsistencies, ambiguities or omissions as required by Article 4.02.2, Review of Contract Documents and Field Conditions by Contractor. In the event errors, inconsistencies, ambiguities or omissions in the plans, drawings, and specifications were not reasonably identifiable in the Contractor's review as specified in Article 4.02.2, Review of Contract Documents and Field Conditions by Contractor, and such errors, inconsistencies, ambiguities or omissions result in changes in time and cost, the University may make reasonable adjustment in the Contract Sum in accordance with Article 6.00, CHANGES IN THE WORK of the General Conditions.

Except for permits and fees, which are the responsibility of the Contractor under the Contract Documents, the University shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

Information or services under the University's control shall be furnished by the University with reasonable promptness to avoid delay in orderly progress of the Work.

All reproduction required for construction is the obligation of the Contractor.

4.01.2 University's Right to Stop the Work

If, in the University's determination, the Contractor fails to correct work which is not in accordance with the requirements of the Contract Documents as required, or persistently fails to carry out work in accordance with the Contract Documents, the University Representative, by written order may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the University to stop the Work shall not give rise to a duty on the part of the University to exercise this right for the benefit of the Contractor or any other person or entity.

It is understood that while the Contractor is fully responsible for the safety of the jobsite, and for the methods of its execution, if the University deems that the Contractor is failing to provide safe conditions, the University may stop or restrict the Work under such conditions. However, this right shall not create such duty on the University. Under no circumstance shall the Contractor be granted a time extension or Contract Sum increase for conditions resulting by a stop work order occurring as a consequence of the Contractor's failure to maintain safe working conditions.

4.01.3 University's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a three (3) day period after receipt of written notice from the University to commence and continue correction of such default or neglect with diligence and promptness, the University may after such three (3) day period, without prejudice to other remedies the University may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for the Design Professional's additional services and expenses made necessary by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the University.

4.01.4 University's Right to Audit

4.01.4.1

Contractor's records, which shall include but not be limited to accounting records (hard copy, as well as computer readable data if it can be made available), written policies and procedures; subcontract files (including proposals of successful and unsuccessful bidders, bid recaps, etc.); original estimates; estimating work sheets, correspondence; change order files (including documentation covering negotiated settlements); backcharge logs and supporting documentation; general ledger entries detailing cash and trade discounts earned, insurance rebates and dividends; and any other supporting evidence deemed necessary by the University to substantiate changes related to the Agreement (collectively referred to as "Records") shall be maintained in accordance with Generally Accepted Accounting Principles and open to inspection and subject to audit and/or reproduction by University's agent or its authorized representative to the extent necessary to adequately permit evaluation and verification of Cost of the Work, and any invoices, change order, payments or claims submitted by the Contractor or any of his payees pursuant to the execution of the contract that are or have been charged on a basis other than a lump sum approved in writing by the University.

4.01.4.2

Such audits may require inspection and copying from time to time and at reasonable times and places of any and all information, materials and data of every kind and character, including without limitation, records, books, papers, documents, subscriptions, recordings, agreements, purchase order, leases, contracts, commitments, arrangements, notes, daily diaries, superintendent reports, drawings, receipts, vouchers and memoranda, and any and all other agreements, sources of information and matters that may in University's judgment have any bearing on or pertain to any matters, rights, duties or obligations under or covered by any Contract Documents. Such records subject to audit shall also include, but not be limited to, those records necessary to evaluate and verify direct and indirect costs, (including overhead allocations) as they may apply to costs associated with this Agreement.

4.01.4.3

The University or its designee shall be afforded access to all of the Contractor's Records, and shall be allowed to interview any of the Contractor's employees, pursuant to the provisions of this article throughout the term of this contract and for a period of five (5) years after Final Payment or longer if required by law. To the extent feasible, the Construction Manager's records shall remain confidential, and the University's third party auditors will enter into a confidentiality agreement between and among the University, the third-party auditor and the Contractor prior to any audits being conducted.

4.01.4.4

Contractor shall require all Subcontractors and material suppliers (payees) to comply with the provisions of this article by insertion of the requirements hereof in a written agreement between Contractor and payee so as to allow the University to verify any amounts charged to the Project by a payee on a basis other than a lump sum approved in writing by the University. Such requirements will also apply to Subcontractors and all lower tier Subcontractors. Contractor shall cooperate fully and shall cause all of Contractor's Subcontractors to cooperate fully by furnishing or making available to University from time to time whenever requested in an expeditious manner any and all such information, materials and data.

4.01.4.5

University's agent or its authorized representative shall have access to the Contractor's facilities, shall have access to all necessary records; and shall be provided adequate and appropriate work space, in order to conduct audits in compliance with this article.

4.01.4.6

Contractor agrees that University's designee shall have the right to examine the Contractor's records (during the contract period and up to five (5) years after Final Payment is made on the contract) to verify the accuracy and appropriateness of the pricing data used to price change proposals or claims. Contractor agrees that if the University determines the cost and pricing data submitted (whether approved or not) was inaccurate, incomplete, not current or not in compliance with the terms of the contract regarding pricing of change orders, an appropriate contract price reduction will be made. Such post-approval contract price adjustments will apply to all levels of contractors and/or subcontractors and to all types of change order proposals specifically including lump sum change orders, unit price change orders and cost-plus change orders.

4.01.4.7

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

4.02 Contractor

The Contractor recognizes the relationship of trust and confidence established between the University and the Contractor by this Contract. The Contractor shall furnish the University with its best skill and judgment and fully cooperate with the University in furthering its best interests. All the Work is to be done in the best manner by persons skilled in the type of Work to be performed.

4.02.1 Contractor's Responsibility for the Work

The Contractor shall be responsible to the University for all Work performed under this Contract. For purposes of assessing responsibility to the Contractor by the University, all persons engaged in the Work shall be considered employees of the Contractor. The Contractor shall give its personal attention to the fulfillment of the Contract and keep all phases of the Work under its control.

4.02.2 Review of Contract Documents and Field Conditions by Contractor

The Contractor shall have a continuing duty to read, carefully study and compare the Contract Documents as defined in Article 1.00, DEFINITIONS, and product data with each other and with information furnished by the University. The Contractor shall perform construction coordination and constructability review of the Contract Documents and shall at once report to the Design Professional and the University, any errors, inconsistencies, ambiguities and omissions before proceeding with the affected Work. The Contractor shall be liable to the University for damage resulting from the Contractor's failure to properly perform such reviews or failure to promptly report any errors, inconsistencies, ambiguities or omissions identified in the Contract Documents to the Design Professional and the University. If the Contractor performs any construction activity that involves such error, inconsistency, ambiguity or omission in the Contract Documents without such notice to the Design Professional and the University, the Contractor shall assume responsibility for such performance and shall bear all costs attributable for correction. If the Contractor submits authorized substitutes that cost in excess of the Contract Sum or which cause coordination conflicts, the Contractor shall bear all costs attributable to correction.

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

The Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing activities. Errors, inconsistencies or omissions discovered shall be reported to the Design Professional and University at once.

4.02.3 Supervision and Construction Procedures

The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible to the University for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless Contract Documents give other specific instructions concerning these matters.

The Contractor shall be responsible to the University for acts and omissions of the Contractor's employees, subcontractors and their agents and employees, and other persons performing portions of the Work under a Contract with the Contractor.

The Contractor agrees to furnish efficient business administration, coordination, supervision and superintendence of the Work and to furnish at all times a competent and adequate administrative and supervisory staff and an adequate supply of workmen and materials to perform the Work in the best and most sound way in the most expeditious and economical manner consistent with the interests of the University. The Contractor agrees from time to time at the University's request to furnish estimates and technical advice as to construction methods and equipment to the University and Design Professional.

The Contractor agrees to cooperate with the Design Professional, University's Representative, commissioning agents, and all persons or entities retained by the University to provide consultation and advice, and to coordinate the Work with the Work of such parties so that the Project shall be completed in the most efficient and expeditious manner. In the event that Contractor's failure to efficiently sequence or coordinate the Work results in additional costs to the University, the Contractor shall promptly reimburse the University for the actual costs incurred. Contractor shall remain responsible for any delays resulting from its failure to efficiently coordinate and schedule the Work; any delays or extensions shall be addressed as provided in Sections 4.08, 4.09 and 4.10 of these General Conditions.

4.02.4 Quality Control

The Contractor shall be fully responsible for the quality of materials and workers' skill in the Project. The Contractor shall not rely upon the inspection and testing provided by the University or Design Professional other than those special inspections and tests performed at the University's direction for which there are written reports. Reports issued by the University's commissioning agent are to be considered complementary in nature and in no way relieve the Contractor of its responsibility to deliver Work in compliance with the Contract Documents.

The Contractor shall inspect the Work of the subcontractors on the Project, while the Work is being performed through final completion and acceptance of the Project by the University to assure that the Work performed and the materials furnished are in strict accordance with the drawings and specifications; the Contractor shall also inspect the Work to verify that Work on the Project is progressing on schedule.

The Contractor shall be responsible for inspection of portions of Work performed under this Contract to determine that such portions are in proper condition to receive subsequent Work. In the event that it becomes necessary to interpret the meaning and intent of the plans and specifications during construction and the meaning is not reasonably inferable, the Contractor shall submit as a Request for Information (RFI) to the Design Professional to make the interpretation in writing and transmit same to appropriate Subcontractors and the University in accordance with the procedures established in section 5.02 of these General Conditions.

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

4.02.5 Labor and Materials

The Contractor shall provide an analysis of the types and quantity of labor required for the Project and review the availability of the appropriate categories of labor required for all Work, and the Contractor shall be responsible to provide the necessary and adequate labor needed to complete the Project by the Contract Time. During the course of the Project, the Contractor shall endeavor to maintain harmonious labor relations on the Project.

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

Unless otherwise noted in the Information to Bidders, the Contractor shall provide and pay for water, heat, electric and other utilities.

The Contractor shall enforce strict discipline and good order among the Contractor's employees and Subcontractors and others carrying out the Work of the Contract. The Contractor shall not permit employment of unsafe persons or persons not skilled in tasks assigned to them.

4.02.6 Disputes with Subcontractors

Wherever any provision of any section of the Plans and Specifications conflicts with any agreement or regulation of any kind at any time in force among members of any Trade Associations, Unions or Councils which regulate or distinguish what Work shall or shall not be included in the Work of any particular trade, the Contractor shall make all necessary arrangements to reconcile any such conflict without delay, damage, increase to the Contract Sum or recourse to the University. The University will not arbitrate disputes among subcontractors nor between the Contractor and one or more subcontractors concerning responsibility for performing any part of the Project.

In case the progress of the Work is affected by any undue delay in furnishing or installing any items of material or equipment required under the Contract Documents because of conflict involving any agreement or regulation of the type described above, the University's Representative may require that other material or equipment of equal kind and quality be provided at no additional cost to the University.

4.02.7 Project Manager and Superintendent

The Contractor shall have at the Project site, during the full term of the Contract, an approved, competent project staff, which may include a Project Manager and Superintendent, and any necessary assistants, all satisfactory to the University's Representative and in accordance with the Contract Documents and the Contractor's Staffing Plan. The Project Manager or the Superintendent shall not be changed, except with the written consent of the University's Representative unless the Project Manager or the Superintendent ceases to be in the employ of the Contractor. The Project Manager or the Superintendent shall represent the Contractor and all directions given to either of them by the University or the University's Representative shall be as binding as if given to the Contractor. All directions and communications shall be confirmed in writing.

If a Project Manager or a Superintendent approved by the University's Representative ceases to be in the Contractor's employ, the Contractor shall immediately replace him with a person acceptable to the University's Representative. The University in its sole discretion shall have the right to require the removal of any agent or employee of the Contractor or any subcontractor without cause at any time.

4.02.8 Taxes

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

4.02.9 Permits and Notices

The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations, policies and lawful orders of public authorities and the University bearing on performance of the Work.

4.02.10 Allowances

The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such stated amounts including identified unit cost, but the Contractor shall not be required to employ persons or entities against which the Contractor makes reasonable objection. Unless otherwise provided in the Contract Documents:

1. materials and equipment under an allowance shall be selected promptly by the University to avoid delay in the Work;
2. allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
3. the Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the allowances;
4. if allowance assumptions prove inappropriate, the Contract Sum may be adjusted accordingly by Change Order. The amount of the Change Order shall reflect the difference between actual costs and the allowances.

4.02.11 Use of Site

The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits and the Contract Documents and shall not unreasonably encumber the site with materials or equipment. The site shall be safely maintained and kept clean, orderly and neat.

4.02.12 Safety

The Contractor shall protect adjoining property and nearby buildings, roads, and other facilities and improvements from dust, dirt, debris and other nuisances arising out of Contractor's operations or storing practices. Dust shall be controlled by sprinkling, misting or other effective methods acceptable to University and in accordance with legal requirements. An erosion and sedimentation control program shall be initiated, which includes measures addressing erosion caused by wind and water and sediment in runoff from site. A regular watering program shall be initiated to adequately control the amount of fugitive dust.

The Contractor is knowledgeable of and understands that the University may intend to maintain occupancy of certain portions of the existing facility. The Contractor shall exercise caution at all times for the protection of persons and their property. The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to: (1) employees on the Work site together with Subcontractors and other persons who may be affected thereby; (2) the Work and materials and equipment to be incorporated therein, whether in storage on or offsite, under care, custody or control of the Contractor or the Contractor's Subcontractors or sub-subcontractors; and (3) other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction. The Contractor shall install adequate safety guards and protective devices for all equipment and machinery, whether used in the Work or permanently installed as part of the Project.

The Contractor shall also provide and adequately maintain all proper temporary walks, roads, guards, railings, lights, and warning signs. The Contractor shall comply with all applicable laws relating to safety precautions. The Contractor shall establish and maintain and update as required a Project Specific Safety Program.

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

The Contractor shall require each and every one of its subcontractors and Trade Contractors to comply with all of the provisions of this section.

The Contractor shall not load or permit any part of the construction or site to be loaded so as to endanger its safety.

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

4.02.13 Hazardous Condition

The University and/or the Design Professional may bring to the attention of the Contractor a possible hazardous situation in the field regarding the safety of personnel on the site. The Contractor shall be responsible for verifying that all local, state, and federal workplace safety guidelines are being observed. In no case shall this right to notify the Contractor absolve the Contractor of its responsibility for monitoring safety conditions. Such notification shall not imply that anyone other than the Contractor has assumed any responsibility for field safety operations.

Explosives shall not be used without first obtaining written permission from the University and then shall be used only with the utmost care and within the limitations set in the written permission and in accordance with prudence and safety standards required by law. Storage of explosives on the Project site or University is prohibited. Powder activated tools are not explosive for purposes of this Article; however, such tools shall only be used in conformance with State safety regulations.

The Contractor shall report in writing to the University's Representative, within eight (8) hours, all accidents whatsoever arising out of, or in connection with, the performance of the Work, whether occurring on or off the Site, which caused death, personal injury or property damage, giving full details and statements of witnesses. In addition, if death or serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger to the University Representative and the University Police at (313) 577-2222. If any claim is made by anyone against the Contractor or any subcontractor on account of any accident, the Contractor shall report promptly the facts in writing to the University's Representative, giving full details of the claim.

4.02.14 Cutting, Patching and Sequencing

The Contractor shall be responsible for all cutting, fitting or patching required to complete the Work and to ensure the complete and effective coordination of the Work.

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

4.02.15 Access to Site

The Contractor shall at all times permit the University and the Design Professional to visit and observe the Work, and the shops where Work is in preparation, and shall maintain proper facilities and provide safe access for such observation. Work requiring testing, observation or verification shall not be covered up without such test, observation, or approval. Appropriate advance coordination of such testing, observation or verification is expected. University must provide prior written approval for any work to be performed on a Saturday, Sunday, or holiday. In the event that Contractor desires to perform Work on a weekend or holiday, Contractor shall provide a minimum of 48 hours written notice to the University of such desire prior to performing such Work. However, if the Work involves an actual or potential interruption to a utility or service, the Contractor shall provide no less than seven (7) days' written notice to the University.

The Contractor acknowledges that during the performance of the Work, the affected building and surrounding campus buildings will remain occupied and will require access by the public. The Contractor further acknowledges that other Contractors will be working on or near the Project site to accomplish the University's purposes and projects. To the greatest extent possible, the Contractor shall cooperate fully with the University and its guests, students, employees, invitees, and other Contractors in performing the Work required under the Contract. The Contract Sum includes any and all reasonably necessary costs expended to minimize interference with the University's activities as well as to coordinate schedules with other contractors' projects as required by the University.

4.02.16 Burden for Damage

From the issuance of the official Notice to Proceed until the formal acceptance of the Project by the University, the Contractor shall have the charge and care of and shall bear all risk of damage to the Project

and materials and equipment for the Project other than damage directly caused by the University or the University's other contractors.

4.02.17 Payments by Contractor

The Contractor agrees to promptly pay all subcontractors upon receipt of each progress payment, unless otherwise agreed in writing by the parties, the respective amounts allowed Contractor on account of the Work performed by its subcontractors to the extent of each such subcontractor's interest therein.

In the event the University becomes informed that the Contractor has not paid a subcontractor as herein provided, the University shall have the right, but not the duty, to issue future checks in payment to the Contractor of amounts otherwise due hereunder naming the Contractor and such subcontractor as joint payees. Such joint check procedure, if employed by the University, shall create no rights in favor of any person or entity beyond the right of the named payees to payment of the check and shall not be deemed to commit or obligate the University to repeat the procedure in the future. This provision shall not supersede the procedures set forth in Article 8.00 of these General Conditions.

4.02.18 Responsibility to Secure and Pay for Permits, Licenses, Utility Connections, Etc.

The Contractor shall secure all permits and licenses required for any operations required under this Contract and shall pay all costs relating thereto as well as all other fees and charges that are required by the United States, the State, the county, the city, a public utility, telephone company, special district, or quasi-governmental entity. It is the responsibility of the Contractor to ascertain the necessity of such permits and licenses in preparing its bid, Contract Sum and include in its bid, Contract Sum the cost thereof, as well as any time requirements for securing such permits and licenses.

4.02.19 Patented or Copyrighted Materials

The Contractor shall pay all royalties and license fees for the use of patented or copyrighted processes or materials. The Contractor shall defend suits or claims for infringement of patent rights and shall hold the University and Design Professional harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Design Professional and University in writing.

4.02.20 Property Rights in Materials and Equipment

Nothing in the Contract shall be construed as vesting in the Contractor any property right in the materials or equipment after the materials or equipment have been attached to or permanently placed in or upon the Work or the soil or after payment has been made for fifty percent or more of the value of the materials or equipment delivered to the site of the Work whether or not they have been so attached or placed. All such materials or equipment shall become the property of University upon being so attached or placed, or upon payment of fifty percent or more of the value of the materials or equipment delivered on the site but not yet installed and the Contractor warrants that all such property shall pass to the University free and clear of all liens, claims, security interests, or encumbrances.

4.02.21 Utilities

The Contractor shall refer to and abide by the policies included in the Supplementary General Conditions and shall provide the notices as required by University's Utility Disturbance and Interruption Request form.

The Contractor shall provide as-built drawings of all utilities encountered and constructed for the University, indicating the size, horizontal location, and vertical location based on the Project bench mark or a stable datum.

Unless otherwise specifically stated, the Contractor shall provide or otherwise make all arrangements for utilities required to deliver the Work. .

4.02.22 Asbestos and Hazardous Materials

The Contractor is prohibited from installing any asbestos containing materials or products, and other prohibited and hazardous materials in the Work. The Contractor shall be responsible for removal and replacement costs should it be determined this provision has been violated, regardless of whether the job has been completed.

4.02.23 Photographic Site Survey

Contractor shall perform a photographic survey of construction site and adjoining structures prior to commencing Work. The survey shall be provided to the University and shall include photographs of pathways, flat concrete paving, foundations, walls, landscaping.

4.02.24 Compliance with University Policies on Drugs, Alcohol and Tobacco.

The University requires Contractors, Subcontractors and sub-subcontractors with access to the work site to abide by the University's policies on drugs, alcohol and tobacco, which can be found at: http://bog.wayne.edu/2_20_04.php and <http://policies.wayne.edu/administrative/00-03-smoke-free-campus.php>. All costs for initial and period testing shall be borne by the Contractor

1. The Contractor and University shall reserve the right to test any and/or all site personnel at random periods and without notice.
 - a. The Contractor shall be responsible for all costs including wages for those individuals testing drug or alcohol-free at the Contractor's direction.
 - b. Subcontractors shall be responsible for all costs including wages for those individuals not testing drug or alcohol-free at the direction of the Contractor, and the Subcontractor shall immediately remove those individuals from the site.
2. Any individual not testing drug or alcohol-free shall not be allowed to return to the site under any circumstances.

4.03 Design Professional

4.03.1 Design Professional's Administration of Contract

The Design Professional will provide one or more Project Representatives to assist in the administration of the Contract as described in the Contract Documents, and to assist the University's Representative (1) during the construction, (2) until final payment is due and (3) with the University's concurrence, from time to time during the correction and warranty period. The Design Professional will advise and consult with the University on issues relating to contract performance and interpretation. The Design Professional will have no authority to act on behalf of the University except as provided in the Contract Documents, unless otherwise modified by written instrument in accordance with other provisions of the Contract.

The Design Professional will visit the site at intervals defined in the Design Professional's Proposal to become familiar with the progress and quality of the completed Work and to determine if the Work is being performed in a manner indicating that the Work, when completed, will be in accordance with the Contract Documents. On the basis of on-site observations, the Design Professional will keep the University and Contractor informed of progress of the Work by written field reports, and will endeavor to guard the University against defects and deficiencies in the Work.

The Design Professional will not have control over or charge of and will not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's responsibility. The Design Professional will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Design Professional will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, subcontractors, or their agents or employees, or of any other persons performing portions of the Work.

4.03.2 Communications Facilitating Contract Administration

The Design Professional and Contractor shall communicate directly concerning the Project and shall keep the University advised of their communications. Communications by and with the Design Professional's consultants shall be through the Design Professional. Communications by and with subcontractors and material suppliers shall be through the Contractor. Communications by and with separate Contractors shall be through the University.

4.03.3 Evaluation of Applications for Payment

Based on the Design Professional's observations and evaluations of the Contractor's Applications for Payment, the Design Professional must approve and sign any Contractor Applications for Payment as an express condition precedent to release of any progress or final payment. In the absence of Design Professional, the University will review and authorize applications for payment.

The Design Professional will have authority to reject Work which does not conform to the Contract Documents. Whenever the Design Professional considers it necessary or advisable for implementation of the intent of the Contract Documents, the Design Professional will have authority to require additional observation or testing of the Work in accordance with section 5.06, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Design Professional nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Design Professional to the Contractor, subcontractors, material and equipment suppliers, their agents or employees, or other persons performing portions of the Work.

4.03.4 Review of Shop Drawings, Product Data and Samples

The Design Professional shall review and approve or take other appropriate action upon the Contractor's submittal of Shop Drawings, Product Data and Samples. The Design Professional's action will be taken within 10 days from receipt so as not to cause delay in the Work or in the activities of the University, Contractor or separate Contractors, while allowing sufficient time in the Design Professional's professional judgment to permit adequate review. Review of such submittal is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Design Professional's review of the Contractor's submittal shall not relieve the Contractor of the obligations under Article 5.04. The Design Professional's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Design Professional, of any construction means, methods, techniques, sequences or procedures. The Design Professional's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

4.03.5 Site Observations to Determine Substantial and Final Completion

The Design Professional will conduct observations to determine the date or dates of Substantial Completion and the date of Final Completion, will receive and forward to the University for the University's review and retention all written warranties and related documents required by the Contract and assembled by the Contractor, and will issue an approval of final payment upon compliance with the requirements of the Contract Documents.

4.04 Delegation of Performance and Assignment of Money Earned

The performance of all or any part of this Contract may not be delegated by the Contractor or Design Professional without the written consent of the University. Consent will not be given to any proposed delegation which would relieve the Design Professional, the Contractor or its surety of their responsibilities under the Contract.

The Contractor may assign moneys due or to become due under the Contract, only upon written consent of the University. Assignments of moneys earned by the Contractor shall be subject to proper retention in favor of the University and to all deductions provided for in the Contract and such moneys shall be subject to being used by the University for the completion of the Work in the event the Contractor is in default. Any assignment attempted without the written consent of the University shall be void.

4.05 Contractor's Insurance

The Contractor shall not commence Work under this Contract until it has obtained all the insurance required by the Contract Documents and such insurance has been approved by the University; likewise, no subcontractor or subconsultant shall be allowed to commence Work until the insurance required has been obtained. The Contractor shall, at its expense, purchase and maintain in full force and effect such insurance as will protect itself and the University from claims, such as for bodily injury, death, and property damage, which may arise out of or result from the Work required by the Contract Documents, whether such Work is done by the Contractor, by any subcontractor, by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. The types of such insurance and any additional insurance requirements are specified herein with the amounts and limits set forth in the Supplementary General Conditions.

4.05.1 Policies and Coverage

The following policies and coverages shall be furnished by the Contractor:

- (1) Comprehensive or Commercial Form General Liability Insurance on an "Occurrence" form covering all Work done by or on behalf of the Contractor and providing insurance for bodily injury, personal injury, property damage, and Contractual liability. Except with respect to bodily injury and property damage included within the products and completed operations hazards, the aggregate limit shall apply separately to work required of the Contractor by these Contract Documents. This insurance shall include the contractual obligations assumed under the Contract Documents and specifically section 4.06.
- (2) Business Automobile Liability Insurance on an "Occurrence" form covering owned, hired, leased, and non-owned automobiles used by or on behalf of the Contractor and providing insurance for bodily injury, property damage, and Contractual liability.
- (3) Worker's Compensation and Employer's Liability Insurance as required by Federal and Michigan law. The Contractor shall also require all of its Subcontractors to maintain this insurance coverage. The Contractor acknowledges and shall abide by the University's prohibition on the use of 1099 independent contractors and owner/operator business entities wherein such individuals are not able

to secure and maintain such insurance. The Contractor shall ensure that all classifications of laborers and construction mechanics performing Work on the Project job site are traditional employees of the Contractor or any Trade Contractor for any tier thereof, and that each is covered by such insurance.

- (4) The Umbrella Excess Liability insurance must be consistent with and follow the form of the primary policies, except that Umbrella Excess Liability insurance shall not be required for the Medical Expense Limit.
- (5) Builder's Risk Insurance: The Contractor, at his sole expense, shall purchase and maintain property insurance upon the entire Project for the full replacement cost at the time of any loss. This insurance shall include "All Risk" coverage against physical loss or damage including the perils of Fire and Extended Coverage, Theft, Vandalism, and Malicious Mischief, Transit and Collapse. The Contractor will be responsible for any co-insurance penalties and/or deductibles.
- (6) Professional Liability (Errors and Omissions) including tail-coverage for claims made after final completion.

4.05.2 Proof of Coverage

Certificates of Insurance or Declarations pages as may be requested by the University, as evidence of the insurance required by these Contract Documents, shall be submitted by the Contractor to the University. The Certificates of Insurance and Declarations shall state the scope of coverage and deductible, and list the University as an additional insured as required by Section 4.05.04 below. Any deductible shall be the Contractor's liability. The Declarations shall provide for no cancellation or modification of coverage without thirty (30) days prior written notice to the University. Acceptance of Certificates of Insurance or Declarations pages by the University shall not in any way limit the Contractor's liabilities under the Contract Documents. The Contractor shall maintain required insurance for the entire duration of the Contract. In the event the Contractor does not comply with these insurance requirements, the University may, at its option, provide insurance coverage to protect the University; the cost of such insurance shall be deducted from the Contract Sum or otherwise paid by the Contractor. Renewal certifications shall be filed in a timely manner for all coverage until the Project is accepted as complete as requested by the University. Upon the University's request, the Contractor shall provide copies of the policies obtained from the insurers.

4.05.3 Subcontractor's Insurance

The Contractor shall either require Subcontractors to carry insurance as set forth in the CCIP Insurance Manual and the Subcontract, or the Contractor shall insure the activities of the Subcontractors in the amount, types and form of insurance required under by the Contract Documents. If the Contractor elects to have its Subcontractors purchase individual insurance policies, the Contractor shall cause its trade contracts and subcontracts to include a clause requiring that copies of any insurance policies which provide coverage to the Work shall be furnished to the University upon request. The Contractor shall supply the University with a list of all Subcontractors, including those enrolled in the CCIP coverage, and copies of the enrolled Subcontractors' certificates of insurance evidencing coverage, showing whether or not they have individual insurance policies and certifying that those subcontractors without individual insurance policies are insured by the Contractor.

4.05.4 Scope of Insurance Coverage

The Contractor's insurance as required by the Contract Documents (including subcontractors' insurance), by endorsement to the policies and the Certificates of Insurance, shall include the following and may be presented in the form of a rider attached to the Certificates of Insurance:

- (1) The Board of Governors of Wayne State University, the University, their officers, employees, representatives and agents including the Design Professional, shall be included as additional insured under the general liability, builder's risk and automobile liability policies for and relating to the Work to be performed by the Contractor and subcontractors. This shall apply to all claims, costs, injuries, or damages.
- (2) A Severability of Interest Clause stating that, "The term 'insured' is hereby used severally and not collectively, but the inclusion herein of more than one insured shall not operate to increase the limits of the insurer's or insurers' liability."
- (3) A Cross Liability Clause stating that, "In the event of claims being made under any of the coverages of the policy or policies referred to herein by one or more insured hereunder for which another or other insured hereunder may be liable, then the policy or policies shall cover such insured or insured against whom a claim is made or may be made in the same manner as if separate policies had been issued to each insured hereunder. Nothing contained herein, however, shall operate to increase the insurer's limits of liability as set forth in the insuring agreements."
- (4) The Board of Governors of Wayne State University, the University, their officers, employees, representatives and agents, shall not by reason of their inclusion as insured incur liability to the insurance carriers for payment of premiums for such insurance. However, the Board of Governors of Wayne State University may, in their sole discretion after receiving a notice of cancellation for nonpayment, elect to pay the premium due and deduct such payment from any sums due to the Contractor or recover the amount paid from the Contractor if the sums remaining are insufficient.
- (5) Coverage provided is primary and is not in excess of or contributing with any insurance or self-insurance maintained by the Board of Governors of Wayne State University, the University, their officers, employees, representatives and agents.

4.05.5 Miscellaneous Insurance Provisions

The form and substance of all insurance policies required to be obtained by the Contractor shall be subject to approval by the University. All such policies shall be issued by companies lawfully authorized to do business in Michigan and be acceptable to the University. All property insurance policies to be obtained by the Contractor shall name the University as loss payee as its interest, from time to time, may appear.

The Contractor shall, by mutual agreement with the University and at the University's cost, furnish any additional insurance as may be required by the University. The Contractor shall provide Certificates of Insurance evidencing such additional insurance.

Should the Project involve asbestos abatement, the Contractor or subcontractor, as appropriate, shall provide asbestos liability insurance.

The Contractor acknowledges that the University is self-insured and participates in the Michigan Universities Self-Insurance Corporation program and the Contractor agrees that the University is not required to provide or purchase any additional insurance with respect to this Project or the Work required by the Contractor for the Project.

4.05.6 Loss Adjustment

Any insured loss is to be adjusted with the Contractor and made payable jointly to the University and the Contractor. The Contractor shall cooperate with the University in a determination of the actual cash value or replacement value of any insured loss. Any deductible amount shall be the responsibility of the Contractor.

4.05.7 Compensation Distribution

The University upon the occurrence of an insured loss shall account for any money so received and shall distribute it in accordance with such agreement as the interested parties may reach. Claim payments received shall be distributed proportionately according to the actual percentages of losses to both. If after such loss no other special agreement is made, replacement of damaged work shall be covered by an appropriate contract change order. Any dispute shall be resolved by the University.

4.05.8 Waivers of Subrogation

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

4.06 Indemnification

4.06.1

To the fullest extent permitted by law, the Contractor shall hold harmless, defend, and indemnify the Board of Governors of Wayne State University, the University, and officers, employees, representatives and agents of each of them, from and against any and all claims or losses arising out of or are alleged to be resulting from, or relating to (1) the failure of the Contractor to perform its obligations under the Contract or the performance of its obligation in a willful or negligent manner; (2) the inaccuracy of any representation or warranty by the Contractor given in accordance with or contained in the Contract Documents; and (3) any claim of damage or loss by any subcontractor, or supplier, or laborer against the University arising out of any alleged act or omission of the Contractor or any other subcontractor, or anyone directly or indirectly employed by the Contractor or any subcontractor.

4.06.2

To the fullest extent permitted by law, the Contractor shall be liable for and hereby agrees to defend, discharge, fully indemnify and hold the University harmless from and against any and all claims, demands, damages, liability, actions, causes of action, losses, judgments, costs and expenses of every nature (including investigation costs and/or expenses, settlement costs, and attorney fees and expenses incident thereto) sustained by or asserted against the University arising out of, resulting from, or attributable to the performance or nonperformance of any Work and/or obligation covered by the Contract or to be undertaken in connection with the construction of the Project contemplated by the Contract (collectively, "Claim"), including, but not limited to, any Claim for: (a) any personal or bodily injury, illness or disease, including death at any time resulting therefrom of any person, (including, but not limited to, employees of the University, the Contractor, any subcontractor, and any materialman and the general public); (b) any loss, damage or destruction of any property; (c) any loss or damage to the University's operations, arising out of, resulting from, or attributable in whole or in part to (i) any negligence or other act or omission of the Contractor, and any subcontractor, any materialman and/or any other person or any of the directors, officers, employees or agents of any of them or (ii) any defects in material or equipment furnished hereunder; (d) any payments

allegedly owed to subcontractors, sub-subcontractors or materialmen; (e) any acts or omissions relative to conditions of safety and protection of persons on the Project site; and/or (f) any act or omission relative to the Contractor's breach of obligations and regarding non-discrimination as set forth in these General Conditions. The Contractor shall not be liable hereunder to indemnify the University against liability for damages arising out of bodily injury to persons or damage to property caused by or resulting from the sole negligence or willful misconduct of the University, its agents or employees. The Contractor, at its own cost and expense, shall take out and maintain at all times during the effective period of the Contract, contractual liability insurance insuring the performance by the Contractor of its contractual duties and obligations under this Article, which insurance shall name the University as additional insured and shall be in form and amount and from an insurance company satisfactory to the University. The Contractor's duty to fully indemnify the University shall not be limited in any way by the existence of this insurance coverage.

4.06.3

The Contractor shall also be liable for and hereby agrees to pay, reimburse, fully indemnify and hold the University harmless from and against all costs and expenses of every nature (including attorney fees and expenses incident thereto) incurred by the University in collecting the amounts due from the Contractor, or otherwise enforcing its rights, under the indemnifications described in this Article.

4.06.4

In claims against any person or entity indemnified under this Article made by an employee of the Contractor or a subcontractor, or indirectly employed by either of them, or anyone for whose acts either made by liable, the indemnification obligation under this Article shall not be limited by any limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a subcontractor under workers compensation laws, disability benefit laws, or other laws providing employee benefits.

4.06.5

The indemnification obligations under this Article shall not be limited by any assertion or finding that the person or entity indemnified is liable by reason of a non-delegable duty.

4.06.6

The Contractor shall hold harmless, defend, and indemnify the University from and against losses resulting from any claim of damage made by any separate Contractor of the University against the University arising out of any alleged acts or omissions of the Contractor, a subcontractor, anyone directly or indirectly employed by either the Contractor or subcontractor, or anyone for whose acts either the Contractor or subcontractor may be liable.

4.06.7

The Contractor shall hold harmless, defend and indemnify the Design Professional and the separate Contractors of the University from and against losses to the extent they arise from the negligent acts or omissions or willful misconduct of the Contractor, a subcontractor, anyone directly or indirectly employed by the Contractor or subcontractor, or anyone for whose acts the Contractor or subcontractor may be liable.

4.07 Occupancy by University Prior to Acceptance

The University may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the University and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage if any, security,

maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a description of the area substantially complete to the Design Professional. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the University and Contractor or, if no agreement is reached, by decision of the Design Professional.

Immediately prior to such partial occupancy or use, the University together with the Contractor and Design Professional shall jointly observe and/or inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents. Likewise, partial occupancy or use of a portion or portions of the Work shall not alter, change or modify the requirements for Substantial or Final Completion within Contract Time.

4.08 Contract Time

4.08.1 Time of the Essence

All time limits specified in this Contract are of the essence of the Contract.

4.08.2 Starting and Completion Date

The University shall designate in the Notice to Proceed the starting date of the Contract on which the Contractor shall immediately begin and thereafter diligently prosecute the Work to completion. The Contractor agrees to complete the Work on the date specified for completion of the Contractor's performance in the Contract unless such time is adjusted, in writing, by change order issued by the University. The Contractor may complete the Work before the completion date if it will not interfere with the University or their other Contractors engaged in related or adjacent Work. The date of Substantial Completion shall be used as the commencement date of the guarantee.

4.08.3 Delay

Within ten (10) days from the commencement of a delay, Contractor shall submit to the University's Representative a written notice of the delay. Such notice of delay shall describe the nature and cause of the delay, provide a preliminary estimate of the impact of said delay on the construction schedule and provide a recovery plan to mitigate the delay. The Contractor's failure to give such notice to the University shall constitute a waiver by the Contractor of its ability to request an extension of time. In the case of a continuing cause of delay, only one claim shall be necessary. The giving of such notice shall not of itself establish the validity of the cause of delay or of the extension of the time for completion. Submission of reports and/or updates required at regularly scheduled meetings or as a part of a regularly submitted report shall not constitute such required notice.

The Contractor expressly agrees that delays to construction activities which do not affect the overall time of completion of the Work shall not entitle the Contractor to an extension of the Contract Time or provide a basis for additional cost or damages. No delay, obstruction, interference, hindrance, or disruption, from whatever source or cause in the progress of the Contractor's Work shall be a basis for an extension of time unless the delay, obstruction, interference, hindrance, or disruption is without the fault and not the responsibility of the Contractor and directly affects the overall completion of the Work as reflected in the Contractor's updated and accepted Project schedule.

Within fifteen (15) days from the submittal to the University of the notice of delay detailed in the previous paragraphs, Contractor shall submit to the University's Representative a request for an extension of time which shall include all documentation supporting the request. Such submittal shall include a detailed description of all changes in activity duration, logic, sequence, or otherwise in the Project schedule. The filing of such a request for an extension of time shall not of itself establish the validity of the cause of delay or of the extension of time for completion. Submission of construction reports and/or updates required by these General and Supplementary Conditions shall not constitute such a request.

4.08.4 Adjustment of Contract Time and Cost

If the Contractor is delayed, obstructed or hindered at any time in the progress of the Work by any act or neglect of the University or by any contractor employed by the University, or by changes ordered in the scope of the Work, or by fire, adverse weather conditions not reasonably anticipated, or any other causes beyond the control of the Contractor with the exception of labor disputes or strikes of the Contractor's or a Subcontractor's own personnel, then the duration set forth in the Master Project Schedule, and established for Substantial and Final Completion may be extended as agreed to by the University, Contractor and Design Professional. When such delays result in an agreement to adjust the Time of Completion, then the Contractor may also request, and the University may make a reasonable adjustment to the Contract Sum for Project costs directly attributable to the delay pursuant to Article 6.00, CHANGES IN THE WORK. It will be the Contractor's obligation to demonstrate to the complete satisfaction of the University, that the direct Project costs associated with such delays are justified, fair, and reasonable.

The University will not recognize labor disputes, strikes, work stoppages, picketing or boycotting by employees of or under the control or direction of the Contractor or its subcontractors, to be cause for extending the Construction Project Schedule or the Contract Time or adjusting the Contract Sum. The University may recognize labor disputes, strikes, work stoppages, picketing or boycotting that are not within the Contractor's or its subcontractors' control as cause for extending the Construction Project Schedule or Contract Time. Pursuant to section 9.01.1 such labor disputes, strikes, work stoppages, picketing or boycotts may constitute grounds for termination of the Contractor.

4.08.5 Contractor to Fully Prosecute Work

No extension of time will be granted unless the Contractor demonstrates to the satisfaction of the University that the Contractor has made every reasonable effort to complete all Work under the Contract not later than the date prescribed.

4.08.6 University's Adjustment of Contract Time

Even though the Contractor has no right to an extension of time for completion, the University may in the exercise of its sole discretion extend the time at the request of the Contractor if it determines it to be in the best interest of the University.

4.08.7 Adjustment of Contract Time and Cost Due to Reasons Beyond University Control

Should the University be prevented or enjoined from proceeding with Work either before or after the start of construction by reason of any litigation or other reason beyond its control, the Contractor may request an adjustment in the Time of Completion and/or Contract Sum by reason of said delay. The University may make a reasonable adjustment in the Time of Completion and/or Contract Sum for time and costs directly attributable to the delay. It will be the Contractors obligation to demonstrate to the complete satisfaction of the University, that all Time of Completion and Contract Sum adjustments associated with such delays are justified, fair, and reasonable.

4.09 Progress Schedule

4.09.1

The Contractor shall prepare and submit to the University the Contractor's Construction Schedule utilizing the Critical Path Method within ten (10) days after starting date on the Notice to Proceed. It shall be the Contractor's responsibility to use its best efforts and to act with due diligence to maintain the progress of the Work in accordance with the schedule. The time for completion may be extended only by a written Change Order executed by the University and the Contractor. The work activities making up the schedule shall be of sufficient detail to assure that adequate planning has been done for proper execution of the Work and such that, in the sole judgment of the University, it provides an appropriate basis for monitoring and evaluating the progress of the Work. The Construction Schedule shall include the time periods required for utility and service interruptions, including compliance with the notice periods stated in the Utility Disturbance and Disruption Request. The Contractor shall also submit a separate progress schedule listing all submittals required under the Contract and the date by which each submittal will be submitted allowing 10 days for the Design Professional's review ("submittal schedule").

4.09.4

Float, slack time, or contingency within the schedule at the activity level and total float within the overall schedule, is not for the exclusive use of either the University or the Contractor, but is jointly owned by both and is a resource available to and shared by both parties as needed to meet Contract milestones and the Contract completion date.

4.09.5

The Contractor shall not sequester shared float through such strategies as extending activity duration estimates to consume available float, using preferential logic, or using extensive crew/resource sequencing, etc. Since float time within the construction schedule is jointly owned, it is acknowledged that University caused delays on the Project may be offset by University caused time savings (i.e., critical path submittals returned in less time than allowed by the Contract, approval of substitution requests which result in a savings of time to the Contractor, etc.). In such an event, the Contractor shall not be entitled to receive a time extension until all University caused time savings are exceeded and the Contract completion date is also exceeded.

4.09.6

Regardless of which schedule method the Contractor elects to use in formulating the Contractor's Construction Schedule, an updated construction schedule shall be submitted to the University five (5) days prior to the submittal of the Contractor's monthly payment request. The submission of the updated construction schedule satisfying the requirements of this Article, accurately reflects the status of the Work, and incorporates all changes into the schedule, including actual dates, shall be a condition precedent to the processing of monthly payment applications. Updated schedules shall also be submitted at such other times as the University may direct. Upon approval of a change order or issuance of a direction to proceed with a change, the approved change shall be reflected in the next schedule update submitted by the Contractor.

4.09.7

If completion of any part of the Work, the delivery of equipment or materials, or issuance of the Contractor submittals is behind the updated Construction Schedule and will cause the end date of the Work to be later than the Contract completion date, the Contractor shall submit in writing a plan acceptable to the University for completing the Work on or before the current Contract completion date.

4.09.8

No time extensions shall be granted unless the delay can be clearly demonstrated by the Contractor on the basis of the updated Construction Schedule current as of the month the change is issued or the delay occurred, and the delay cannot be mitigated, offset, or eliminated through such actions as revising the intended sequence of Work or other means.

4.09.9

As a condition precedent to the release of retained funds, the Contractor shall, after completion of the Work has been achieved, submit a final Construction Schedule which accurately reflects the manner in which the Project was constructed and includes actual start and completion dates for all Work activities on the Project schedule together with a full and unconditional waiver and release of claims for payment in a form acceptable to the University.

4.10 Coordination With Other Work

The University reserves the right to do other Work in connection with the Project or adjacent thereto and the Contractor shall at all times conduct the Work so as to impose no hardship on the University or others engaged in the University's Work nor to cause any unreasonable delay or hindrance thereto.

Where two or more Contractors are employed on related or adjacent work, each shall conduct their operation in such a manner as not to cause delay or additional expense to the other.

The Contractor shall be responsible to others engaged in the related or adjacent work for all damage to Work, to persons and to property, and for loss caused by failure to complete the Work within the specified time for completion. The Contractor shall coordinate its Work with the Work of others so that no discrepancies shall result in the Project.

4.11 As-built Drawings Reflecting Actual Construction

During the course of construction, the Contractor shall maintain drawings kept up each day to show the Project as it is actually constructed. Every sheet of the plans and specifications which differs from the actual construction shall be marked and sheets so changed shall be noted on the title sheets of the plans and specifications. All change orders shall be shown by reference to sketch drawings, and any supplementary drawings or change order drawings shall be included. The Contractor shall review the "As-built" drawings with the University at least once a month to demonstrate that all changes that have occurred are being fully and accurately recorded. The altered Contract drawings shall be sufficiently detailed so that future Work on the Project or in adjacent areas may be conducted with a minimum of difficulty. Prior to the completion of the Project, and prior to release of the final retention payments, the "As-built" drawings and specifications shall be transmitted in hard copy and electronic format as directed by the University to the University or the Design Professional for further review. A copy of the transmittal shall be sent to the University and included in the formal Close-out documents.

4.12 Cleanup of Project and Site

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

If the Contractor fails to clean up as provided in the Contract Documents, the University may do so and the cost thereof shall be charged to the Contractor. Any additional cleaning requirements are as stated in the Supplementary General Conditions.

Upon completion of the Work, the Contractor shall promptly remove from the premises construction equipment and any waste materials not previously disposed of, leaving the premises thoroughly clean and ready for occupancy.

When two or more Contractors are engaged in work at or near the site, each shall be responsible for cleanup and removal of its own rubbish, equipment, and any waste materials not previously disposed.

In the event the Contractor does not maintain the Project or the site clear of debris and rubbish in a manner acceptable to the Design Professional or University, the University may, at its option, cause the Project or site to be properly cleaned and may withhold the incurred expense from payments due the Contractor or otherwise receive reimbursement from the Contractor.

4.13 [Not used]

4.14 Project Sign, Advertising

If included as a requirement in the project documents, Contractor shall furnish and install a project sign as designed by the Design Professional and accepted by the University as part of the Work under the Contract. As a minimum, the sign shall be four feet by eight feet, made from three-quarter inch plywood. The sign shall identify the Project name, the University including the individual members of the Board of Governors, the Design Professional, and the Contractor. No advertising is permitted on the Project or site without written permission from the University. If the Project is funded by a State of Michigan capital appropriation, the Contractor shall also provide a project sign which satisfies the requirements of the State of Michigan as stipulated in the Department of Technology Management and Budget's Major Project Design Manual, current edition.

5.00 INTERPRETATION OF AND ADHERENCE TO CONTRACT REQUIREMENTS

5.01 Interpretation of Contract Requirements

5.01.1 Conflicts

In the event of conflict in the Contract Documents, the priorities stated below shall govern:

- (1) Addenda shall govern over all other Contract Documents and subsequent addenda shall govern over prior addenda only to the extent that they modify prior addenda. Such addenda shall only govern the scope of Work, Contract Sum, and Time of Completion, and shall not be deemed to amend the Contract, General Conditions of Construction, or Supplementary General Conditions of Construction.
- (2) In case of conflict between plans and specifications, the specifications take precedence over drawings for the specific type or quality of materials or the quality of installation; the drawings take precedence over the specifications with regard to quantities, locations or detail of installation.
- (3) Conflicts within the plans:
 - (a) Schedules, when identified as such, shall govern over all other portions of the plans.
 - (b) Specific notes shall govern over all other notes and all other portions of the plans except the schedules described in Article 5.01.1, above.
 - (c) Larger scale drawings shall govern over smaller scale drawings.
 - (d) Figured or numerical dimensions shall govern over dimensions obtained by scaling. Scaling the drawings is prohibited.
- (4) Conflicts within the specifications:

“General Conditions for Construction” shall govern over all sections of the specifications except for specific modifications thereto that may be stated in Supplementary General Conditions or addenda. No other section of the specifications shall modify the General Conditions for Construction.
- (5) In the event provisions of codes, safety orders, Contract Documents, referenced manufacturer's specifications or industry standards are in conflict, the more restrictive or higher quality shall govern.

5.01.2 Omissions

If the Contract Documents are not complete as to any minor detail of a required construction system or with regard to the manner of combining or installing of parts, materials, or equipment, but there exists an accepted trade standard for good and skillful construction, such detail shall be deemed to be an implied requirement of the Contract Documents in accordance with such standard. “Minor Detail” shall include the concept of substantially identical components, where the price of each such component is small even though the aggregate cost or importance is substantial, and shall include a single component which is incidental, even though its cost or importance may be substantial.

The quality and quantity of the parts or material so supplied shall conform to trade standards and be compatible with the type, composition, strength, size, and profile of the parts of materials otherwise set forth in the Contract Documents.

5.01.3 Miscellaneous

Portions of the Work which can be best illustrated by the Drawings may not be included in the Specifications and portions best described by the Specifications may not be depicted on the Drawings.

If an item or system is either shown or specified, all material and equipment normally furnished with such items and needed to make a complete operating installation shall be provided whether mentioned or not, even though such materials and equipment are not shown on the drawings or described in the specifications, omitting only such parts as are specifically excepted. Words and abbreviations which have well-known technical or trade meanings are used in the Contract Documents in accordance with such recognized meanings.

The General Conditions and Supplementary General Conditions are a part of each and every section of the Specifications.

All drawings, Project Plans and Specifications, renderings and models or other documentation, and copies thereof, furnished by the University or any agent, employee or consultant of the University, or Design Professional, are and shall remain the property of the University. They are to be used only with respect to this Project and are not to be used on any other project.

5.01.4 Interpreter of Documents

The University's Representative shall be the Interpreter, with the advice of the Design Professional, of the Contract Documents and shall be the judge of the performance of the Contractor and subcontractors. Subject to the provisions Article 7, claims, disputes and other matters of controversy relating to the Contract Documents or the Work shall be decided by the University's Representative. The decision of the University's Representative shall be final.

5.02 Issuance of Interpretations, Clarifications, Additional Instructions (Requests for Information)

Should the Contractor discover any conflicts, omissions, or errors in the Contract or have any question concerning interpretation or clarification of the Contract Documents, the Contractor shall request in writing an interpretation, clarification, or additional detailed instructions before proceeding with the Work affected. The written request shall be given to the Design Professional and University within 5 days of discovery.

The Design Professional, with review as required by the University, shall, within 10 days or other reasonable time, issue in writing the interpretation, clarification, or additional detailed instructions requested. In the event that the Contractor believes that the progress of the Work is being delayed by a Request for Information or a response to a Request for Information, Contractor shall comply with the procedures stated in section 4.08 of these General Conditions for an extension of time.

Should the Contractor proceed with the Work affected before receipt of the interpretation, clarification, or instructions from the Design Professional, the Contractor shall replace or adjust any Work not in conformance therewith and shall be responsible for any resultant damage or added cost.

Should any interpretation, clarification, or additional detailed instructions, in the opinion of the Contractor, constitute Work beyond the scope of the Contract, the Contractor must submit written notice thereof to the Design Professional and University within five (5) calendar days following receipt of such interpretation, clarification, or additional detailed instructions and in any event prior to commencement of Work thereon. The Contractor shall submit an explanation of how the interpretation, clarification, or additional detailed instruction constitutes work beyond the scope of the Contract, along with a detailed cost breakdown and an explanation of any delay impacts. The Design Professional shall consider such notice and make a recommendation to the University. If, in the judgment of the University, the notice is justified, the interpretation, clarification or additional detailed instructions shall either be revised or the extra work authorized by Contract change order or by field instruction with a change order to follow. If the University

decides that the request is not justified and the Contractor does not agree, the Contractor shall nevertheless perform such Work upon receipt from the University of written authorization to do so. In such case, the Contractor shall have the right to have the Claim later determined only pursuant to the requirements of this Contract. However, any such Claim for additional compensation because of such interpretation, clarification, or additional detailed instruction is waived, unless the Contractor gives written notice to the Design Professional and University within five (5) calendar days as specified above.

5.03 Product and Reference Standards

5.03.1 Product Designation

When descriptive catalog designations, including the manufacturer's name, product brand name, or model number are referred to in the Contract Documents, such designations shall be considered as being those found in industry publications of current issue at the date of Contract execution.

5.03.2 Reference Standards

When standards of the federal government, trade societies, or trade associations are referred to in the Contract Documents by specific date of issue, these shall be considered a part of this Contract. When such references do not bear a date of issue, the current and most recently published edition at the date of Contract execution shall be considered a part of this Contract.

5.04 Shop Drawings, Samples, Alternatives or Equals, Substitutions

5.04.1 Submittal Procedure

Shop drawings include drawings, diagrams, illustrations, schedules, performance charts, brochures and catalogs and other data prepared by the Contractor or any subcontractor, manufacturer, supplier or distributor, and which illustrate some portion of the Work. In accordance with the submittal schedule, the Contractor shall promptly review and approve all shop drawings and then submit the shop drawings to the Design Professional together with samples as required by the Contract Documents and shall also submit any offers of alternatives or substitutions. The Design Professional shall have 10 days to respond with an acknowledgement of approval, clearly defined exceptions, or rejections. Rejections shall be cause for re-submission and no contract time adjustments will be granted for such requirements. At least six copies of brochures, one copy of shop drawings and one PDF digital file of shop drawings shall be submitted as well as additional copies as required by Design Professional. All such submittals shall be sent to Design Professional at the address given in the instructions to the Contractor at the job start meeting. A letter shall accompany the submitted items which shall contain a list of all matters submitted and shall identify all deviations shown in the shop drawings and samples from the requirements of the Contract Documents. Failure by the Contractor to identify all deviations may render void any action taken by the Design Professional on the materials submitted. Whether to void such action shall be in the discretion of the Design Professional. The letter and all items accompanying it shall be fully identified as to project name and location, the Contractor's name, and the University's Project number. By submitting the approved shop drawings and samples, the Contractor warrants and represents that the data contained therein have been verified with conditions as they actually exist and that the shop drawings and samples have been checked and coordinated with the Contract Documents.

5.04.2 Samples

Samples are physical examples furnished by the Contractor to illustrate materials, equipment, color, texture, or worker ship, and to establish standards by which the Work will be judged. Unless otherwise approved, at least two samples will be submitted for each item requiring samples to be submitted.

The Work shall be in accordance with the samples and reviewed by Design Professional. Samples shall be removed by the Contractor from the site when directed. Samples not removed by the Contractor, will become the property of the University and will be removed or disposed of by the University at the Contractor's expense.

5.04.2.1 Mock-ups as may be required by the Contract Documents

Mock-ups, models or temporary construction as may be required by the University shall be removed and disposed of by the Contractor at Contractor's sole cost and expense from the site when directed.

5.04.3

5.04.3 Substitutions

For convenience in designation on the plans or in the specifications, certain materials or equipment may be designated by a brand or trade name or the name of the manufacturer together with catalog designation or other identifying information, hereinafter referred to generically as "designated by brand name." Alternative material or equipment which is of equal quality and of the required characteristics for the purpose intended may be proposed for use provided the Contractor complies with the requirements stated in this section. If the Contractor proposes a product that is of lesser or greater quality or performance than the specified material or equipment, Contractor must both comply with the provisions of section 5.04 and submit any cost impact. The Contractor shall submit its proposal to University and the Design Professional for an alternative in writing within the time limit designated in the Contract, or if not so designated, then within a period which will cause no delay in the Work. By submitting a substitute, the Contractor waives any rights to claim a delay due to the processing of this substitution.

The Contractor may offer a substitution of a specified or indicated item if it presents complete information concerning the substitution and the benefits thereof to the University by reason of lower cost or improved performance, or both, over the specified or indicated item. However, such submission of a proposed substitution does not relieve the Contractor from its obligations under the Contract. In proposing a substitution, the Contractor warrants that the substitution is, at a minimum, equivalent in performance to the specified or indicated item. A substitution shall not be effective unless accepted in writing by the University.

Any additional costs and changes to the Work (including, but not limited to the Work of other Contractors and additional design costs which may be affected thereby) which may result from the proposed substitution shall be disclosed at the time the substitution is proposed to the University. Changes to the Work and any additional costs therefrom shall be the sole responsibility of the Contractor and shall not increase the Contract Sum.

The Contractor's substitution proposals shall include written descriptions of the items to be substituted (including drawings and/or specifications) and referenced information of the proposed substitution. The Design Professional and University's Representative's signature on this proposal is required for acceptance. Shop Drawings will not be considered a substitution proposal pursuant to this section. Verbal approvals or approved Shop Drawings will not be considered as acceptance of proposed substitutions.

5.05 Quality of Materials, Articles and Equipment

Materials, articles and equipment furnished by the Contractor for incorporation into the Work shall be new unless otherwise specified in the Contract Documents. When the Contract requires that materials, articles or equipment be furnished, but the quality or kind thereof is not specified, the Contractor shall furnish materials, articles or equipment at least equal to the kind or quality or both of materials, articles or equipment which are specified.

5.06 Testing Materials, Articles, Equipment and Work

Materials, articles, equipment or other Work requiring tests are specified in the Contract Documents. Materials, articles and equipment requiring tests shall be delivered to the site in ample time before intended use to allow for testing and shall not be used prior to testing and receipt of written approval. The Contractor shall be solely responsible for notifying the University where and when materials, articles, equipment and Work are ready for testing. Should any such materials, articles, equipment or Work be covered without testing and approval, if required, they shall be uncovered at the Contractor's expense. The University has the right to order the testing of any other materials, articles, equipment or Work at any time during the progress of the Work. Unless otherwise directed, all samples for testing shall be taken by the University from materials, articles or equipment to be used on the project or from Work performed. All tests will be under the supervision of, and at locations convenient to, the University. The University shall select the laboratories for all tests. Decisions regarding the adequacy of materials, articles, equipment or Work shall be issued to the University in writing. The University may decide to take further samples and tests, and if the results show that the Work was not defective, the University shall bear the costs of such samples and tests. In the event the results of such additional samples and tests show that the Work was defective, the Contractor shall bear the cost of such samples and tests. Samples that are of value after testing shall remain the property of the Contractor. All retesting and reinspection costs may be back charged to the Contractor by the University.

5.07 Rejection

Should any portion of the Work or any materials, articles or equipment delivered to the Project fail to comply with the requirements of the Contract Documents, such Work, materials, articles or equipment shall be rejected in writing and the Contractor shall immediately correct the deficiency to the satisfaction of the Design Professional and the University at no additional expense to the University. Any Work, materials, articles or equipment which is rejected shall immediately be removed from the premises at the expense of the Contractor. The University may retain one and one-fourth times the cost of the rejected materials, articles, equipment, and Work from any payments due the Contractor until such time as the deficiency is made acceptable to the Design Professional and University.

5.08 Responsibility for Quality

The testing and inspection provided by the University shall not relieve the Contractor of its responsibility for the quality of materials and workmanship provided by the Contractor, and the Contractor shall make good all defective Work discovered during or after completion of the Project.

6.00 CHANGES IN THE WORK

6.01 Change Orders

6.01.1 Generally

The University reserves the right to issue written orders whether through a formal Change Order or Preliminary Project Cost and Schedule Impact Report, directing changes in the Contract at any time prior to the acceptance of the Project without voiding the Contract, and Contractor shall promptly comply with such order or direction. The Contractor may request changes in the Work, but shall not act on the changes until approved in writing by the University. Any change made without authority in writing from the University shall be the responsibility of the Contractor.

Any such changes in the Work that have a cost impact shall only be authorized by Change Orders approved by the University. No action, conduct, omission, prior failure or course of dealing by the University shall act to waive, modify, change or alter the requirement that Change Orders must be in writing and signed by the University and Contractor and that such written Change Orders are the exclusive method for changing or altering the Contract Sum or Contract Time. The University and Contractor understand and agree that the Contract Sum and Contract Time cannot be changed by implication, oral agreements, actions, inactions, course of conduct or Preliminary Project Cost and Schedule Impact Report.

On the basis set forth herein, the Contract Sum may be adjusted for any Change Order requiring a different quantity or quality of labor, materials or equipment from that originally required, and the partial payments to the Contractor, set forth in section 8.01, may be adjusted to reflect the change. Whenever the necessity for a change arises, and when so ordered by the University in writing, the Contractor shall take all necessary steps to mitigate the effect of the ultimate change on the other Work in the area of the change. Changed Work shall be performed in accordance with the original Contract requirements except as modified by the Change Order. Except as herein provided, the Contractor shall have no claim for any other compensation including lost productivity or increased overhead expenses due to changes in the Work.

6.01.2 Proposed Change Orders

The Design Professional, with approval of the University, shall issue to the Contractor a cost request Bulletin for a proposed change order describing the intended change and shall require the Contractor to indicate thereon a proposed amount to be added to or subtracted from the Contract Sum due to the change supported by a detailed estimate of cost. Upon request by the University, the Contractor shall permit inspection of the original Contract estimate, Trade Contract agreements, or purchase orders relating to the change. Any request for adjustment in Contract Time which is directly attributable to the changed Work shall be included with substantiating detailed explanation by the Contractor in its response to the cost request bulletin. Failure by Contractor to request adjustment of Contract Time on the response to the cost request Bulletin shall waive any right to subsequently claim an adjustment of the Contract Time based on the changed Work. The Contractor shall submit the response to the cost request Bulletin with detailed estimates and any time extension request thereon to the Design Professional within ten (10) days after issuance of the cost request Bulletin. Upon its submission, the Design Professional will review it and advise the University who will make the decision regarding the request. The University retains sole discretion to accept, reject, or modify the proposed change. If the Contractor fails to submit the response within the required ten (10) days, and the Contractor has not obtained the Design Professional's and the University's permission for a delay in submission, the University may order the Contractor in writing to begin the Work immediately, and the Contract Sum shall be adjusted in accordance with the University's estimate of cost. In that event, the Contractor, within fifteen days following completion of the changed Work, may present information to the University that the University's estimate was in error; the University, in its sole discretion, may adjust the Contract Sum. The Contractor must keep and submit to the University time and materials records verified by the University to substantiate its costs. The University may require the Contractor to proceed immediately

with the changed Work in accordance with section 6.01.4, "Failure to Agree as to Cost" or section 6.02 "Emergency Changes."

When the University and the Contractor agree on the amount to be added to or deducted from the Contract Sum and the time to be added to or deducted from the Contract Time and a Contract Change Order is signed by the University and the Contractor, the Contractor shall proceed with the changed Work. If agreement is reached as to the adjustment in compensation for the performance of changed Work but agreement is not reached as to the time adjustment for such Work, the Contractor shall proceed with the Work at the agreed price, reserving the right to further pursue its Claim for a time adjustment. Any costs incurred to acquire information relative to a proposed Change Order shall not be borne by the University.

6.01.3 Allowable Costs Upon Change Orders

The identification of and manner in which costs will be allowed because of changed Work shall be computed as described by this section.

6.01.3.1 Labor

Costs are allowed for the actual payroll cost to the Contractor for direct labor, engineering or technical services directly required for the performance of the changed Work, (but not site management such as field office estimating, clerical, project engineering, management or supervision) including payments, assessments, or benefits required by lawful labor union collective bargaining agreements, compensation insurance payments, contributions made to the State pursuant to the Unemployment Insurance Code, and for taxes paid to the federal government required by the Social Security Act of 1935, as amended, unless the time of completion adjustments affect the general condition inclusion of the Contract Sum.

No labor cost will be recognized at a rate that deviates from the WSU Wages in the locality of Wayne County, Michigan as provided by the University at the time the Work is performed, or of wage and benefit rates associated with trade union collective bargaining agreements prevailing at the time of the change, and the use of a classification which would increase the labor cost may not be permitted unless the Contractor established to the satisfaction of the University the necessity for payment at a higher rate.

6.01.3.2 Materials

Costs are allowed for the actual cost to the Contractor for the materials directly required for the performance of the changed Work. Such cost of materials may include the costs of transportation, sales tax, and delivery if necessarily incurred. However, overhead costs shall not be included. If a trade discount by the actual supplier is available to the Contractor, it shall be credited to the University. If the materials are obtained from a supply or source owned wholly or in part by the Contractor, payment therefor will not exceed the current wholesale price for such materials.

If, in the opinion of the University, the cost of materials is excessive, or if the Contractor fails to furnish satisfactory evidence of the cost from the actual suppliers thereof, then in either case the cost of the materials shall be deemed to be the lowest wholesale price at which similar materials are available in the quantities required at the time they were needed.

6.01.3.3 Equipment

Costs are allowed for the actual cost to the Contractor for the use of equipment directly required in the performance of the changed Work except that no payment will be made for time while equipment is inoperative due to breakdowns or for non-working days. The total rental cost shall not exceed seventy-five percent (75%) of the market value of the rented equipment. The rental time shall include the time required to move the equipment to the Project site from the nearest available source for rental of such equipment, and to return it to the source. If such equipment is not moved by its own power, then loading and transportation

costs will be paid. However, neither moving time nor loading and transportation costs will be paid if the equipment is used on the Project in any other way than upon the changed Work. Individual pieces of equipment having a replacement value of \$500.00 or less shall be considered to be tools or small equipment, and no payment therefor will be made.

For equipment owned or furnished by the Contractor, no cost therefor shall be recognized in excess of the rental rates established by distributors or equipment rental agencies in the locality where the Work is performed. Blue Book rates shall not be used for any purpose.

The amount to be paid to the Contractor for the use of equipment as set forth above shall constitute full compensation to the Contractor for the cost of fuel, power, oil, lubrication, supplies, small tools, small equipment, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, labor (except for equipment operators who shall be paid for as provided in Article 6.01.3.1) and any and all costs to the Contractor incidental to the use of such equipment.

6.01.3.4 Change Order Mark-up Allowance

For Change Order scope whose cost is derived according to the Cost of Work plus a Fee as defined in 6.01.3.1 through 6.01.3.3, the mark-up allowance shall be as defined in the Contract. Lump-sum conditions shall include the mark-up allowance. When agreement as to cost cannot be reached, the Contractor shall execute the Work according to time and materials with the Contractor and University acknowledging such costs by signature on a daily basis, and as set forth below.

6.01.3.5 Credit for Deleted Work

For proposed change orders which involve both added and deleted Work, the Contractor shall separately estimate the cost of the added Work before mark-ups, and separately estimate the cost of the deleted Work before allowance of a credit. If the difference between the costs results in an increase to the Contract Sum, the mark-up for added Work shall be applied to the difference, and if the difference in the costs results in a decrease, then the mark-up for deleted Work shall be applied to the difference.

6.01.3.6 Market Values

Cost for added Work shall be no more than market values prevailing at the time of the change, unless the Contractor can establish to the satisfaction of the University that it investigated all possible means of obtaining Work at prevailing market values and that the excess cost could not be avoided.

When a change order deletes Work from the Contract, the computation of the cost thereof shall be the values which prevailed at the time bids for the Work were opened or the Contract Sum established.

6.01.4 Failure to Agree as to Cost

6.01.4.1 For Added Work

Notwithstanding the failure of the University and the Contractor to agree as to the cost of the proposed Change Order, the Contractor, upon written order from the University, shall proceed immediately with the changed Work. A Preliminary Project Cost and Schedule Impact Report or letter signed by the University shall be used for this written order. At the start of each day's Work on the change, the Contractor shall notify the University in writing as to the size of the labor force to be used for the changed Work and its location. Failure to so notify may result in the non-acceptance of the costs for that day. At the completion of each day's Work, the Contractor shall furnish to the University a detailed summary of all labor, materials, and equipment employed in the changed Work. The University will compare his/her records with Contractor's daily summary and may make any necessary adjustments to the summary. After the University and the Contractor agree upon and sign the daily summary, the summary shall become the basis for determining

costs for the additional Work. The sum of these costs when added to an appropriate mark-up will constitute the payment for the changed Work. Subsequent adjustments, however, may be made based on later audits by the University. When changed Work is performed at locations away from the job site, the Contractor shall furnish in lieu of the daily summary, a summary submitted at the completion of the Work containing a detailed statement of labor, material, and equipment used in the Work. This latter summary shall be signed by the Contractor who shall certify thereon that the information is true.

The Contractor shall maintain and furnish on demand of the University itemized statements of cost from all vendors and subcontractors who perform changed Work or furnish materials and equipment for such Work. All statements must be signed by the vendors and the subcontractors.

6.01.4.2 For Deleted Work

When a proposed Change Order contains a deletion of any Work, and the University and the Contractor are unable to agree upon the cost thereof, the University's estimate shall be deducted from the Contract Sum and may be withheld from any payment due the Contractor until the Contractor presents adequate substantial information to the University that the University's estimate was in error. The amount to be deducted shall be the actual costs to the Contractor for labor, materials, and equipment which would have been used on the deleted Work together with an amount for mark-up as defined in the Contract Documents.

6.01.5 Allowable Time Extensions

For any change in the Work, the Contractor shall only be entitled to such adjustments in Contract Time due solely to performance of the changed Work. The procedure for obtaining an extension of time is set forth in Section 4.08 of these General Conditions. No extension of time shall be granted for a change in the Work unless the Contractor demonstrates to the satisfaction of the University that the Work is on the critical path and submits an updated Critical Path Method schedule showing that an extension of time is required and that the Contractor is making, or has made, every reasonable effort to guarantee completion of the additional Work called for by the change within the time originally allotted for the Contract. Failure by the Contractor to make the required submission or showing constitutes a waiver of any possible adjustment in Contract Time.

Any adjustment in Contract time shall specify the exact impact on the date of Substantial Completion and Final Completion.

6.02 Emergency Changes

Changes in the Work made necessary due to unforeseen site conditions, discovery of errors in plans or specifications requiring immediate clarification in order to avoid a serious Work stoppage, changes of a kind where the extent cannot be determined until completed, or under any circumstances whatsoever when deemed necessary by the University are kinds of emergency changes which may be authorized by the University in writing to the Contractor. The Contractor shall commence performance of the emergency change immediately upon receipt of Preliminary Project Cost and Schedule Impact Report issued by the University.

If agreement is reached as to compensation adjustment for the purpose of any emergency change, then compensation will be as provided in this section relating to ordinary changes. If agreement is not reached as to compensation at the time of commencing the emergency change, then compensation will be as provided in section 6.01.4, that is, time and materials records and summaries shall be witnessed and maintained until either a lump sum payment is agreed upon, or the changed Work is completed.

6.03 Preliminary Project Cost and Schedule Impact Report

The Contractor shall perform Work as directed by the University through a Preliminary Project Cost and Schedule Impact Report. The cost of the changed Work is to be determined as stated in the Preliminary Project Cost and Schedule Impact Report or pursuant to section 6.01.4.

7.00 CLAIMS AND DISPUTES

7.01 Policy of Cooperation

The parties shall endeavor to resolve all of their claims and disputes amicably and informally through open communication and discussion of all issues relating to the Project. To the greatest extent possible, the parties shall avoid invoking the formal dispute resolution procedures contained in the Contract Documents.

7.02 Recommendation of Design Professional

Claims, including those alleging an error or omission by the Design Professional, must be referred initially to the Design Professional for action as provided in paragraph 7.09 as an express condition precedent to proceeding further in resolving any claim.

7.03 Time Limits on Claims

Claims must be made within 5 days after occurrence of the event giving rise to such Claim or within 5 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. Claims must be made by written notice. An additional Claim made after the initial Claim has been resolved by Change Order will not be valid.

7.04 Continuing Contract Performance

Pending final resolution of a Claim, unless otherwise agreed in writing, the Contractor shall proceed diligently with performance of the Contract and the University shall continue to make payments in accordance with the Contract Documents subject to the University's rights relative to payments, withholding of payments, termination, or all other rights afforded it in the Contract Documents.

7.05 Claims for Concealed or Unknown Conditions

If conditions are encountered at the site which are (1) subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then written notice by the observing party shall be given to the other party promptly before conditions are disturbed and in no event later than 48 hours after first observance of the conditions. The Design Professional will promptly investigate such conditions and, if the conditions differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, the Design Professional will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Design Professional determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Design Professional shall so notify the University and Contractor in writing, stating the reasons. Claims by either party in opposition to such determination must be made within 10 days after the Design Professional has issued such determination. If the University and Contractor cannot agree on an adjustment in the Contract Sum or Contract Time, the adjustment shall be referred to the Design Professional for initial determination, subject to further proceedings pursuant to Paragraph 7.09.

7.06 Claims for Additional Cost

Any Claim by the Contractor for an increase in the Contract Sum shall be submitted in writing as required by the Contract Documents before proceeding to execute the Work. If the Contractor believes additional cost is involved for reasons including but not limited to (1) a written interpretation from the Design Professional, (2) an order by the University to stop the Work where the Contractor was not at fault, (3) a

written order for a minor change in the Work issued by the Design Professional, (4) failure of payment by the University, (5) termination of the Contract by the University, (6) University's suspension or (7) changes in the scope of Work, the Contractor's claim shall be filed in strict accordance with the procedure established herein.

7.07 Claims for Additional Time

Any Claim by Contractor for an increase in the Contract Time shall be submitted in writing as required by the Contract Documents. The Contractor's Claim shall include an estimate of the probable effect of delay on progress of the Work. In the case of a continuing delay only one Claim is necessary.

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

7.08 Injury or Damage to Person or Property

If either party to the Contract suffers injury or damage to person or property because of an act or omission of the other party, of any of the other party's employees or agents, or of others for whose acts such party is legally liable, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 5 days after first observance. The notice shall provide sufficient detail to enable the other party to investigate the matter. If a Claim for additional cost or time related to this Claim is to be asserted, it shall be filed as provided in the Contract Documents.

7.09 Resolution of Claims and Disputes

7.09.1 Review by Design Professional

Design Professional will review all Claims and take one or more of the following preliminary actions within 10 days of receipt of a Claim: (1) request additional supporting data from the Claimant, (2) submit a schedule to the parties indicating when the Design Professional expects take action, (3) reject the Claim in whole or in part, stating reasons for rejection, (4) recommend approval of the Claim by the other party or (5) suggest a compromise. The Design Professional may also, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim.

If a Claim has been resolved, the Design Professional will prepare or obtain appropriate documentation. If a Claim has not been resolved, the party making the Claim shall, within 10 days after the Design Professional's preliminary response, take one or more of the following actions: (1) submit additional supporting data requested by the Design Professional, (2) modify the initial Claim or (3) notify the Design Professional that the initial Claim stands.

If a Claim has not been resolved after consideration of the foregoing and of further evidence presented by the parties or requested by the Design Professional, the Design Professional will notify the parties in writing that the Design Professional's opinion will be rendered within 5 days. Upon expiration of such time period, the Design Professional will render to the parties the Design Professional's determination relative to the Claim, including any change in the Contract Sum or Contract Time or both. If there is a surety and there appears to be a possibility of a Contractor's default, the Design Professional may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy. The determination by the Design Professional shall be subject to the review and approval of the Associate Vice President of Facilities Planning and Management at Wayne State University.

7.09.2 Review by Associate Vice President of Facilities Planning and Management

The determination by the Design Professional shall be subject to the review and approval of the Associate Vice President of Facilities Planning and Management at Wayne State University who may request additional information from the Claimant for review and consideration. The Associate Vice President of Facilities Planning and Management may issue a schedule for further discussions, review or decision. Upon decision by the Associate Vice President of Facilities Planning and Management, if the Claimant seeks further review, the matter shall be submitted to the Vice-President of Finance and Business Operations.

7.09.3 Review Vice-President of Finance and Business Operations

If the determination by the Design Professional and the decision of the Associate Vice President does not resolve the Claim, the Claimant may appeal to the Vice President of Finance and Business Operations who shall review such determination and the supporting information submitted by the parties for the purpose of upholding, modifying, or rejecting the determination. The Vice President of Finance and Business Operations shall render a decision within forty-five days of the completion of any submissions by the parties. The decision of the Vice President of Finance and Business Operations is final unless it is challenged by either party by filing a lawsuit in the Court of Claims of the State of Michigan within one year of the issuance of the decision.

7.09.4 Jurisdiction

Sole and exclusive jurisdiction over all claims, disputes, and other matters in question arising out of or relating to this Contract or the breach thereof, shall rest in the Court of Claims of the State of Michigan. No provision of this agreement may be construed as the University's consent to submit any claim, dispute or other matter in question for dispute resolution pursuant to any arbitration or mediation process, whether or not provisions for dispute resolution are included in a document which has been incorporated by reference into this agreement.

7.09.5 Condition Precedent

The process and procedures described in Article 7.09 are an express condition precedent to the Contractor filing or pursuing any legal remedy, including litigation. Pursuing litigation by the Contractor prior to exhaustion of the procedures set forth herein shall be premature and a material breach of this Agreement.

8.00 PAYMENT AND COMPLETION

8.01 Progress Payments

To assist in computing partial payments, the Contractor shall submit to the Design Professional and University a detailed "Schedule of Values" for review and approval by the University. The cost breakdowns shall be in sufficient detail for use in estimating the Work to be completed each month and shall be submitted within 10 days after the date of commencement of Work given in the Notice to Proceed.

Once each month during the progress of the Work, the Contractor shall submit to the Design Professional a partial payment request for review and approval. The partial payment request shall be based on the cost of the Work completed plus the acceptable materials delivered to or stored on the site under the control of the Contractor and not yet installed. The Design Professional and University shall review and certify by signature as to the validity of the request, and approving payment. Partial payments shall not be construed as acceptance of any Work which is not in accordance with the requirements of the Contract. Once the partial payment request has been certified by the Design Professional, it shall be submitted to the University for approval and processing.

The Contractor warrants that title to the Work, materials and equipment covered by an Application for Payment shall pass to the University upon the earlier of either incorporation in construction or receipt of payment by Contractor; that Work, materials and equipment covered by previous Applications for Payment are free and clear of liens, claims, security interests or encumbrances; and that no Work, materials or equipment covered by an Application for Payment will have been acquired by Contractor or by any other person performing Work at the Project or furnishing materials or equipment for the Project subject to an agreement under which an interest or encumbrance is retained by the seller or otherwise imposed on the Contractor or buyer.

All Applications for Payment shall be accompanied by sworn statements and waivers executed by Contractor, Subcontractors and suppliers whose work is included in the Application for Payment, as well as other documentation that may be required by the University, stating that all have been paid in full for Work performed through the last or most recent progress payment: The Contractor and each subcontractor shall also provide properly completed certified payroll form WH-347 to the University's with each application for payment request.

8.02 Format of Application for Payment

In addition to a schedule of values or detailed outline for the Cost of Work that is acceptable to the Contractor and University, other specific requirements for Application for Payment format and calculations include.

- Applications for Payment shall first present the itemized Cost of Work.
 - For any portion of the Work being performed according to unit pricing or time and materials pricing, invoicing and Applications for Payment must be accompanied by acceptable supporting documentation to evidence accurate quantities of actual labor, materials and equipment. Any allowed mark-ups to the actual cost of Work performed will be added to these costs separately and not included in the actual cost.
 - Change Orders executed between the Contractor and University shall be reported as separate line items within the Application for Payment and directly under applicable Subcontractor Cost of Work items. Change Orders affecting multiple Subcontractors' Cost of Work items shall be similarly numbered to permit ease of tracking. These requirements shall run through Subcontractor Applications for Payment to the Contractor to permit ease of tracking. Change Orders within a Subcontractor Application for Payment shall be appropriately labeled as being initiated by the Contractor or University to permit ease of tracking.

- The Contractor's General Conditions, Overhead and Profit shall next be calculated as the balance of the Application for Payment.

8.03 Substantial Completion, Incomplete Construction List and Punchlist

When the Contractor considers that the Work, or a portion thereof which the University agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Design Professional a comprehensive Incomplete Construction List of items to be completed or corrected, in a form agreed by the University and the Design Professional. The Contractor shall proceed promptly to complete and correct items on the Incomplete Construction List. Failure to include an item on such Incomplete Construction List does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. Upon receipt of the Contractor's Incomplete Construction List, the Design Professional, with the University's Representative, will make an observation to determine whether the Work or designated portion thereof is substantially complete and will identify observable items inconsistent with the Contract Documents to be included in the Punchlist. If the Design Professional's or University Representative's observation discloses any item, whether or not included on the Contractor's Incomplete Construction List, which is not in accordance with the requirements of the Contract Documents, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item, upon notification by the Design Professional.

The Contractor shall then submit a request for another observation by the Design Professional to determine Substantial Completion. When the Work or designated portion thereof is substantially complete, the Design Professional will prepare a Certificate of Substantial Completion which shall establish the date of Substantial Completion, shall establish responsibilities of the University and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time, generally 45 days, within which the Contractor shall finish all remaining Incomplete Construction List and Punchlist items accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion. The Certificate of Substantial Completion shall be submitted to the University and Contractor for their written acceptance of responsibilities assigned to them in such Certificate.

8.03.1 Partial Completion

From time to time, as portions of the Work are completed by the Contractor, the University shall have the right, upon giving the Contractor prior written notice, to accept any portion of the Work that the University desires to use and occupy. Such partial acceptance shall be made in writing and thereafter the Contractor shall have no further obligation with respect to the Work accepted, except to correct the Work subsequently found to have been improperly done, to replace defective materials or equipment, or as defined by Substantial Completion, Incomplete Construction List and Punchlist requirements.

8.04 Completion and Final Payment

Upon the Final Completion of the Work by the Contractor, the acceptance of the Work by the University, and the release of all claims against the University and the Work by the Contractor and its subcontractors and suppliers (which releases shall be evidenced by final waivers and releases or other documents acceptable to the University), the Contractor shall file a request for Final Payment.

8.04.1 Final Application for Payment

Upon the receipt of the Contractor's Final Application for Payment, including any and all waivers required by the University and the Contractor's provision of all Close-out Documents, and training requirements, the University shall promptly make a final inspection, and if the University finds the Work acceptable and complete in strict accordance with the Contract Documents, the University shall issue Final Payment. Final

Payment shall be made upon Completion of the Work and shall indicate the University's Final Acceptance of the Work and its acknowledgment that the Work (excluding any further warranty and guaranty obligations) has been completed and is accepted under the terms and conditions of the Contract Documents. If prior to the making of Final Payment the University finds deficiencies in the Work, the University shall promptly notify the Contractor thereof in writing, describing such deficiencies in detail. After the Contractor has remedied any deficiencies noted by the University, the Contractor shall request a final inspection and the University shall make such inspection and follow the procedure set forth in this Paragraph.

8.04.2 Final Payment by the University

The making of Final Payment shall constitute a waiver of all claims by the University except those arising from: (1) unsettled liens; (2) faulty or defective work appearing after completion; (3) failure of the work to comply with the requirements of the Contract Documents; (4) terms of any special or extended warranties required by the Contract Documents; or (5) the obligations of the Contractor under the indemnification provisions of Paragraph 4.06 hereof.

The acceptance of Final Payment shall constitute a waiver of all claims by the Contractor.

8.05 Guarantee

The Contractor unconditionally guarantees the Work under this Contract to be in conformance with the Contract Documents and to be and remain free of defects in workmanship and materials not inherent in the quality required or permitted for a period required by the contract documents beginning from the date of Substantial Completion. The Subcontractors unconditionally guaranty the Work under the subcontracts to be in conformance with the Contract Documents and to be and remain free of defects in workmanship and materials for the same period from the date of Substantial Completion, unless a longer guarantee period is stipulated in the Contract Documents. By this guarantee the Contractor and Subcontractors agree, within their respective guarantee periods, to repair or replace any Work, together with any adjacent Work which may be displaced in so doing which is not in accordance with the requirements of the Contract or which is defective in its workmanship or material, all without any expense whatsoever to the University. The Contractor shall be responsible for the coordination of all such guarantee work performance or repairs.

Special guarantees that are required by the Contract Documents shall be signed by the Contractor or Subcontractor who performs the work.

Within their respective guaranty periods, the Contractor and Subcontractors further agree that within five calendar days after being notified in writing by the University of any Work not in accordance with the requirements of the Contract Documents or of any defects in the Work, it shall commence and prosecute with due diligence all Work necessary to fulfill the terms of this guarantee and to complete the Work in accordance with the requirements of the Contract with sufficient manpower and material to complete the repairs as expeditiously as possible. The Contractor, in the event of failure to so comply, does hereby authorize the University to proceed to have the Work done at the Contractor's expense, and it agrees to pay the cost thereof upon demand. The University shall be entitled to reimbursement of all costs necessarily incurred upon the Contractor's or Subcontractor's refusal to pay the above cost.

Notwithstanding the foregoing paragraph, in the event of an emergency constituting an immediate hazard to health, safety or damage of the University's employees, property, or licenses, the University may undertake at the Contractor's or Subcontractor's respective expense, without prior notice, all Work necessary to correct such hazardous conditions caused by the Work of the Contractor not being in accordance with the requirements of this Contract.

The Contractor and Subcontractor shall require a similar guarantee in all subcontracts, including the requirement that the University be reimbursed for any damage or loss to the Work or to other Work resulting from such defects.

9.00 TERMINATION

9.01 Termination by the University for Cause

9.01.1

The University may terminate the Contract if the Contractor: (a) becomes insolvent; (b) files or has filed against it any Petition in Bankruptcy or makes a general assignment for the benefit of its creditors; (c) fails to pay, when due, for materials, supplies, labor, or other items purchased or used in connection with the Work; (d) refuses or fails to prosecute the Work, or any separable part thereof, with such diligence as will ensure the completion of the Work in accordance with the Master Project Schedule; (e) in the University's opinion, fails, refuses or neglects to supply sufficient labor, material or supervision in the prosecution of the Work; (f) interferes with or disrupts, or threatens to interfere with or disrupt the operations of the University, or any other Contractor, supplier, subcontractor, or other person working on the Project, whether by reason of any labor dispute, picketing, boycotting or by any other reason; or (g) commits any other breach of the Contract Documents.

When any of the above reasons exist, the University may, without prejudice to any other rights or remedies of the University and after giving the Contractor and the Contractor's surety, if any, three days written notice and a reasonable opportunity to cure, terminate employment of the Contractor and may, subject to any prior rights of the surety: (1) take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor; (2) accept assignment of subcontracts; and (3) finish the Work by whatever reasonable method the University may deem expedient.

9.01.2

If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Design Professional's services and expenses made necessary thereby, the remaining balance shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the University. The amount to be paid to the Contractor or University, as the case may be, shall be certified by the Design Professional, upon application, and this obligation for payment shall survive termination of the Contract. The Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss or consequential damages arising out of or resulting from such termination. However, the University shall be entitled to retain whatever amount is remaining unpaid to the Contractor in order to correct the cause for termination; such action is in addition to any other right or remedy which the University may have.

9.02 Suspension by the University for Convenience

9.02.1

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

9.02.2

An adjustment shall be made for increases in the Contract Sum and/or Time of Completion of the Contract, including profit on the increased cost of performance, caused by suspension, delay or interruption. No adjustment shall be made to the extent: (1) that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or (2) that an equitable

adjustment is made or denied under another provision of this Contract. The Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss or consequential damages arising out of or resulting from such termination.

Adjustments made in the cost of performance may have a mutually agreed fixed or percentage fee.

9.03 Termination By The University For Convenience

9.03.1

The University, with or without cause, may terminate all or any portion of the services by the Contractor under this Agreement, upon giving the Contractor 30 days written notice of such termination. In the event of termination, the Contractor shall deliver to the University all reports, estimates, schedules, subcontracts, Contract assignments, purchase order assignments, and other documents and data prepared by it, or for it, pursuant to this Agreement.

9.03.2

Unless the termination is for cause, the Contractor shall be entitled to receive only the payments provided for in Article 8, pro-rated to the date of termination (including payment for the period of the 30 day notice) plus reimbursement for approved and actual costs and expenses incurred by the Contractor to the date of termination. Prior to payment, the Contractor shall furnish the University with a release of all claims against the University. The Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss or consequential damages arising out of or resulting from such termination.

9.04 Termination By The Contractor

9.04.1

The Contractor may terminate the Contract if the Work is stopped for a period of 60 days through no act or fault of the Contractor or a subcontractor, sub-subcontractor or their agents or employees or any other persons performing portions of the Work under Contract with the Contractor, for any of the following reasons: (1) issuance of an order of a court or other public authority having jurisdiction; (2) an act of government, such as a declaration of national emergency, making material unavailable; (3) because the Design Professional has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification, or because the University has not made payment on a Certificate for Payment within forty-five (45) days of the time stated in the Contract Documents; (4) if repeated suspensions, delays or interruptions by the University constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

If one of the above reasons exists, the Contractor may, upon fourteen (14) additional days' written notice to the University and Design Professional, terminate the Contract and recover from the University payment for Work executed and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery, including reasonable overhead and profit.

9.04.2

If the Work is stopped for a period of 60 days through no act or fault of the Contractor or a subcontractor or their agents or employees or any other persons performing portions of the Work under Contract with the Contractor due to University actions or inaction, the Contractor may, upon fourteen additional days' written notice to the University and the Design Professional, terminate the Contract and recover from the University as provided in Subparagraph 9.03.2

10.00 MISCELLANEOUS

10.01

These Contract Documents supersede all previous agreements between the University and the Contractor concerning this Work.

10.02

No action or failure to act by the University shall constitute a waiver of a right afforded it under these General Conditions, nor shall such action or failure to act constitute approval or acquiescence of a breach of these General Conditions, except as may be specifically agreed in writing.

10.03

The invalidity or unenforceability of any provision of these General Conditions shall not affect the validity or enforceability of any other provision.

-End of General Conditions for Construction-

-End of General Conditions for Construction-

SUPPLEMENTARY GENERAL CONDITIONS
OF
CONSTRUCTION

Facilities Planning & Management - Design & Construction Services
Wayne State University

Complete Documents can be downloaded at

http://www.forms.procurement.wayne.edu/RFPs/Supplementary_General_Conditions_General_Contractor_1-3-2017.docx

SUPPLEMENTARY GENERAL CONDITIONS OF CONSTRUCTION (REVISED 7-2018)

Where any article of the General Conditions of the Contract for Construction is supplemented in these Supplementary General Conditions, the original article shall remain in full force and effect and all supplementary provisions shall be considered as added thereto. Where any such article is modified, superseded or deleted here, provisions of such article not so specifically modified, superseded or deleted shall remain in full force and effect.

4.00 RESPONSIBILITIES OF THE PARTIES

Add the following to 4.02.3

.1 Temporary Facilities

.a The Contractor shall be responsible for arranging and providing general services and temporary facilities as specified herein and as required for the Design Professional, the University, all Subcontractors, Separate Contractors and Contractor's staff for the proper and expeditious prosecution of the Work, including, but not limited to, temporary offices and toilets; temporary storage; temporary electrical lighting and power; temporary voice and data communications, temporary water; temporary enclosures; temporary heating and ventilation; temporary openings; material hoists; temporary ladders, ramps and runways; temporary fire protection, protective coverings; temporary fire protection, protective coverings; and construction sign(s). The Contractor shall, at its own expense but included within the Cost of the Work, make all temporary connections to utilities and services in locations acceptable to the University, Design Professional and local authorities having jurisdiction thereof; furnish all necessary labor and materials, and make all installations in a manner subject to the acceptance of such authorities and the Design Professional; maintain such connections; remove the temporary installation and connections when no longer required; and restore the services and sources of supply to proper operating conditions.

.b The Contractor shall make all arrangements with the University and/or the local electrical utility company for temporary electrical service to the Site, shall provide all equipment necessary for temporary power and lighting, and shall pay all charges for this equipment and installation thereof. The electrical service shall be of adequate capacity for all construction tools and equipment without overloading the temporary facilities and shall be made available to all trades. The Contractor shall furnish, install and maintain a temporary lighting system to satisfy minimum requirements of safety and security.

.c Temporary weathertight enclosures and temporary heating shall be provided by the Contractor as required pursuant to the Construction Schedule or Master Project Schedule to complete the Work on or before the Completion Date, to make the building weathertight and suitable working conditions for the construction operations of all trades. Under no circumstances shall the temperature be allowed to reach a level which will cause damage to any portion of the Work which may be subject to damage by low temperatures. Unless otherwise indicated in the Construction Documents, the Contractor shall pay for all fuel, maintenance and attendance required in connection with the portable unit heaters without additional cost or expense to University. Any surface, interior or exterior, damaged by the use of these space heaters shall be replaced by new materials or be refinished to the satisfaction of the Design Professional and University without additional cost to the University.

.d All temporary equipment and conduits for same shall be in accordance with the applicable provisions of the governing codes. All temporary wiring and power conduits shall be maintained in a safe manner and utilized so as not to constitute a hazard to persons or property. All temporary equipment, wiring and conduits shall be completely removed after they are no longer necessary and prior to completion. At the conclusion of use or at the conclusion of the project, any materials or products purchased for the temporary facilities and temporary utilities and paid for, either

directly or indirectly, by the University shall become the property of the University and shall, at the option of the University, be delivered to the University's designated location.

.e Where temporary facilities and associated utilities, and for utilities used in performance of this Agreement can be reasonably provided from existing University services, the University shall bear the cost of such utility consumption. However, for conditions that require the Contractor to use electrical generators or equipment fueled by an independent fuel source, the Contractor shall bear all such costs.

Add the following to 4.02.12

.1 Safety and Protection

.a Contractor shall provide fences, pedestrian walks, barriers, etc. to ensure safety of the general public and Contractor's personnel or as directed by University.

.b Contractor will provide perimeter protection at wall and floor openings, elevator shafts, stairwells, and floor perimeters in accordance with MIOSHA requirements.

.c Combustible rubbish shall be removed daily and shall not be disposed of by burning on site. The entire premises and area adjoining and around the operation shall be kept in a safe and sanitary condition and free of accumulation of trash, rubbish, nuts, bolts, small tools, and other equipment not in use. Contractor is responsible to provide trash containers and fund the removal/disposal of construction debris and general trash.

.d Contractor will regularly ensure that 1) excess material/trash are removed from work sites; 2) passageways (e.g., sidewalks, hallways) are cleared of obstructions; 3) equipment is shut down and secured; and 4) lighted barricades are erected where necessary.

.e All existing means of egress, including stairways, egress doors, panic hardware, aisles, corridors, passageways, and similar means of egress shall, at all times, be maintained in a safe condition and shall be available for immediate use and free of all obstructions.

.f The space under the temporary trailer shall not be used for the storage or placement therein of flammable gases, liquids, or gas and liquid fuel powered equipment. This area shall be kept free of accumulations of any rubbish or trash.

.g In temporary trailers, all exit doors shall be open for egress whenever the unit is occupied. Draw bolts, hooks and other similar locking devices shall be prohibited on all egress doors.

.h On site storage of combustible or flammable liquids shall be limited to one day supply. Indoor storage of propane containers is prohibited.

.i Prior to working in confined spaces on campus, the Contractor must have its written Confined Spaces Program and Permit System reviewed by the University and the documents must meet minimum acceptable standards under the current MIOSHA regulation(s). The Contractor must provide its own atmospheric testing, personal protection, ventilating and rescue equipment as required. The Contractor should seek information from University on any known hazards of the confined spaces to be entered. All manholes and utility tunnels are considered confined spaces.

.j Compressed gas cylinders belonging to Contractor must be properly segregated and secured (with chains or similarly reliable restraining devices) to wall or floor mounted support systems, cylinder storage racks etc., when not in transit. Protective caps must be in place during transit or when not in use.

.k Contractor must follow all of OSHA's lockout/tagout requirements of 29 CFR 1910.147, provide its own lockout/tagout supplies, and be able to demonstrate that its employees have received formal instruction in "lock-tag-try" procedures. Copies of Contractor's written Lockout/Tagout Program shall be made available to the University upon request.

.l Contractor may not use any University sinks, drains or catch basins for the washing of any equipment, tools or supplies, or the disposal of any liquids, (excluding consumable products and hand-soap/water) without the express permission of University. This restriction applies to all sinks (including water fountains) in laboratories, offices and maintenance areas. Additionally, no polluting or hazardous liquids (such as motor oils, cleaners, solvents, paints, diesel fuels, antifreeze, etc.) may be drained onto roads, parking lots, ditches, wetlands, dirt piles or other soil, or into storm or sanitary sewers.

.m Contractor transporting hazardous materials (e.g. reclaimed materials, chemicals, fuels, oils, concrete) to and from campus must follow all applicable Department of Transportation [State or Federal] regulations. This includes proper shipping papers, placarding, material segregation and weight limits.

.n Contractor is also responsible for the proper collection, labeling, transporting, manifesting and disposal of polluting or hazardous wastes such as solvents, paints, oil or antifreeze (and rags contaminated with any of these materials) which are the result of Contractor's activities, as required by State and Federal laws and regulations. Copies of all manifests should remain available for University review upon request. Under no circumstances may hazardous wastes be disposed of in University-owned dumpsters, waste containers, drains or sewers, or drained onto roads, parking lots, ditches, wetlands, dirt piles or other soil.

.o Neither the University nor the Design Professional is responsible for conducting safety inspections or observations, but may make recommendations concerning safety to the Contractor.

.p Fire Protection

(1) All reasonable precautions shall be taken against fire throughout all the Contractor's and Trade Contractors' operations. Flammable material shall be kept at an absolute minimum. Any such materials shall be properly handled and stored.

(2) Construction practices, including cutting, welding and grinding, and protection during construction shall be in accordance with the applicable published standards. During such operations the Contractor shall provide a fire watch person. The University requires a "Hot Work" permit for such activities. The Contractor shall provide a sufficient number of approved portable fire extinguishers, distributed about the Project and in cold weather, non-freeze type portable fire extinguishers shall be used.

(3) Gasoline and other flammable liquids shall be stored in and dispensed from Underwriter's Laboratories listed safety containers in conformance with the National Board of Fire Underwriters recommendations and applicable State laws. Storage, however, shall not be within or immediately adjacent to the building. Storage shall be in a lockable, non-combustible, suitably rated cabinet or structure no less than 25 feet distant from any University building.

(4) The Contractor shall schedule the Work so that the permanent standpipe system shall be installed and made operable at the earliest possible date.

4) All tarpaulins that may be used for any purpose during construction of the Work shall be made of material which is water and weather resistant and fire retardant treated. All tarpaulins shall be Underwriters' Laboratories labeled with flame spread rating of fifteen (15) or less and shall be approved by the University's Representative prior to use.

Add the following to 4.02.13

Hazard Communication: University requires the Contractor to be in full compliance with all applicable Federal and State of Michigan regulations regarding Material Safety Data Sheets ("MSDS"). Upon request, copies of these MSDS must also be provided to the University no less than two weeks prior to the onset of activities. Failure to submit MSDS may result in suspension of Work activities until the MSDS are obtained. If Contractor is to work with hazardous products, it shall notify and update the Project Manager of a) proposed work schedules, b) what to expect in terms of noises/odors, and c) how to access MSDS. The Contractor must also be able to demonstrate that its employees have received "Haz Com" (i.e. Michigan Right-to-Know), and thereby possess a broad understanding of MSDS language. Contractor-owned chemical containers must be labeled with the product name and hazards.

Hazardous Materials: In addition to complying with the Michigan Right-to-Know Law, the Contractor must use and store hazardous materials in accordance with all local, state and federal regulations. Special attention must be paid to the segregation of incompatible materials and the handling/storage of flammable and/or volatile materials. At the end of each work day, hazardous materials must be properly secured, stored in MIOSHA approved containers, and placed in locations authorized by the University or removed from University's property.

Add the following to 4.02.21

.1 Excavation Policy

The policy prescribed herein shall be adhered to for all earth excavation, manual or power, on the University campus that penetrates the surface of the soil by a depth of 6 inches or greater.

.a Non-emergency Situation

- (1) In non-emergency situations (i.e., scheduled maintenance or construction) the Contractor shall contact the University a minimum of seven days in advance of the scheduled excavation.
- (2) The Contractor shall contact Miss Dig, as defined by Public Act 174 of 2013, being MCL 460.721 – MCL 460.733, at least three full business days prior to the scheduled excavation, to ascertain and stake the actual location for all utilities within 50 feet of the limits of the proposed excavation. Actual staking shall be performed not more than three (3) days prior to the excavation.
- (3) Excavation shall commence only with the approval of the University Representative after a complete examination of the site utility drawings and a field observation of the staked site.

.b Emergency Situation

1. In an emergency situation (i.e., loss of services on campus or to a building), the Contractor shall immediately contact the University Representative, examine the site utility drawings to determine the potential interferences, and contact Miss Dig and private stakers, if appropriate, to ascertain and stake the actual location of all utilities within 50 feet of the limits of the proposed excavation. The Contractor shall also immediately contact the local natural gas supplier in addition to Miss Dig, upon a natural gas line failure.
2. Contact the University's Police Department at the emergency number: (313) 577-2222.
3. Excavation shall recommence only with the approval of the University's Representative who will grant approval only after a complete examination of the site utility drawings and a field observation of the staked site and clearance from the utility and University Police Department.

.c Pumping and Draining

The Contractor shall provide and maintain a temporary drainage system and pumping equipment as required to keep all excavation areas within the Site free from water from any source. As the Work progresses, all water shall be removed from basement areas, tunnels, pits, trenches and similar areas as required for proper performance of the Work and to prevent damage to any part of the construction utility. Permanent sump pumps shall not be used for this purpose; however, the Contractor may install temporary pumps in the sump pits until the permanent pumps are installed, providing that it cleans sump pits and drain lines satisfactorily after temporary use. The Contractor shall provide and maintain all pumping and draining equipment as required for the installation of all underground piping and utility conduit systems. Pumping and draining shall be performed in a manner to avoid endangering concrete footings or any adjacent construction or property. Such methods shall be subject to the review of the Design Professional.

.d Post-Excavation

- (1) Provide appropriate pipe protection (wraps, and/or cathodic protection) as originally installed.
- (2) Provide backfill material and compaction in 12-inch lifts to a minimum 95% Maximum Dry Density or higher as required by the Specifications.
- (3) Backfill material shall be as specified; or engineered fill free of all deleterious materials and rubbish of any type. Reuse of excavated material, unless otherwise specifically noted on the drawings, is unacceptable.
- (4) Provide plastic tape trace 24" (12" for shallow trenches) above all utilities indicating utility type by Miss Dig color code and name defined as follows:

<u>Utility</u>	<u>Color</u>	<u>Lettering</u>
Electric	Red	Elect
Oil/Natural Gas	Yellow	Gas
Telephone & Fiber Optic	Orange	Tele
Cable TV	Brown	TV
Water	Blue	Water
Steam	Yellow	Steam
Sewer	Green	Sewer

- (5) Return grade to pre-excavation condition.

Add the following to 4.05.1

The insurance furnished by the Contractor under this Article 4.05.1 shall provide coverage not less than the following:

.1 Workers' Compensation with Employers' Liability & Alternate Employers Endorsement:

(a) Statutory Limits & Employer's Liability \$1,000,000

- .2 Commercial General Liability
 - (a) \$1,000,000 per occurrence and \$2,000,000 aggregate
 - (b) University added as additionally insured on
- .3 Contractors' Pollution Liability:
 - (a) \$1,000,000 per claim
- .4 Professional Liability:
 - (a) \$2,000,000 per claim and \$4,000,000 aggregate
- .5 Auto Liability with Pollution & Legal Liability

- (a) \$1,000,000
- (b) University added as additionally insured on

.6 Excess Liability (Umbrella):
(a) \$2,000,000

.7 Builder's Risk Insurance in the amount equal to the Contract Sum.

Any deductible or self-insured reserve shall not be refunded to the Contractor from project contingency or other project funds.

Add the following to 4.12

Elevator shafts, electrical closets, pipe and duct shafts, chases, furred spaces and similar spaces which are generally unfinished, shall be cleaned by the Contractor and left free from rubbish, loose plaster, mortar drippings, extraneous construction materials, dirt and dust before preliminary inspection of the Work.

All areas of the Project in which painting and finishing work is to be performed shall be cleaned throughout just prior to the start of this work, and these areas shall be maintained in satisfactory condition for painting and finishing. This cleaning shall include the removal of trash and rubbish from these areas; broom cleaning of floors; the removal of any plaster, mortar, dust and other extraneous materials from all finished surfaces, including but not limited to, all exposed structural steel, miscellaneous metal, woodwork, plaster, masonry, concrete, mechanical and electrical equipment, piping, duct work, conduit, and also all surfaces visible after all permanent fixtures, induction unit covers, convactor covers, covers for finned tube radiation, grilles, registers, and other such fixtures or devices are in place.

In addition to all cleaning specified above and the more specific cleaning which may be required, the Project shall be prepared for occupancy by a thorough final cleaning throughout including washing or cleaning of all surfaces on which dirt or dust has collected. Glass and curtain wall shall be washed and cleaned on both sides by a window cleaning subcontractor specializing in such work. Contractor shall, at University's request, delay such washing of exterior surfaces to such time as requested by University. Recleaning will not be required after the Work has been inspected and accepted unless later operations of the Contractor, in the opinion of the University, make re-cleaning of certain portions necessary.

5.00 INTERPRETATION OF AND ADHERENCE TO CONTRACT REQUIREMENTS

Add the following to 5.04.1

.1 Contractor Requirements

- .a Signature: Each item submitted shall be thoroughly reviewed by the Contractor and have a stamp or note describing the Contractor's action, signed by the person authorized by the Contractor to do the checking with that person's name clearly printed.
- .b Contractor Responsibility: Contractor shall review each submittal for completeness, conformance to the Contract Documents and coordination with other parts of the Work and the Construction Schedule. By providing and submitting to the Design Professional shop drawings, product data, warranties and samples, the Contractor is representing that he or his Subcontractor, has determined and verified (a) the availability of all materials, and (b) field measurements and field construction criteria related thereto, and (c) that he has checked and coordinated the information contained within such submittals with the requirements of the Work, the Contract Documents and

the Construction Schedule and that such shop drawings, samples, warranties and data conform to the Contract Documents.

- .c Limited Acceptance by University and Design Professional: Acceptance is for general design only. Quantities, size, field dimensions and locations are some of the required characteristics which are not part of the acceptance and will not be checked. Accordingly, the limited acceptance shall in no way relieve the Contractor from his obligation to conform his work to required characteristics and to the requirements of the Contract Documents.
- .d Delays: The Design Professional may return incomplete submittals with no action taken. The Contractor shall have no claim for any damages or for an extension of time due to delay in the Work resulting from the rejection of materials or from the rejection, correction, and resubmittal of Shop Drawings, samples and other data, or from the untimely submission thereof.

.2 Approvals

The Design Professional's approval shall not indicate approval of dimensions, quantities or fabrication processes unless specific notations are made by the Design Professional regarding same. The Design Professional will check one of the following notations on the Shop Drawing and Sample Review Stamp:

- .a "REVIEWED-NO EXCEPTIONS NOTED", indicating final action by the Design Professional. When reviewing resubmitted shop drawings the Design Professional assumes that there are no revisions from the previous submittal, except as provided by 5.04.1 and his review of resubmittals is only for the corrections requested with the approval of the balance of the shop drawing being based on the original submission. Where the Contractor directs specific action to revisions, as provided by 5.04.1 the approval includes these also.
- .b "REVIEWED WITH CORRECTIONS NOTED", indicating final action by the Design Professional with the same conditions as "REVIEWED-NO EXCEPTIONS NOTED". Unless he takes exception to the corrections noted, the Contractor may begin that portion of the Work for which the shop drawing was required.
- .c "REVISE AND SEND RECORD COPY", requiring that the Design Professional be sent a copy of the revised shop drawing in accordance with the noted corrections, at the same time it is issued for the Work.
- .d "NOT APPROVED-RESUBMIT", indicating that the Contractor shall not begin that portion of the Work until the reason indicated for disapproval has been corrected and the revised shop drawing submitted, reviewed and approved by the Design Professional.
- .e "NO ACTION REQUIRED", indicating that Contract Documents do not require the Design Professional to review or take any action with this submittal.
- .f Where more than one action has been checked, each shall apply to that portion of the shop drawing for which the action is indicated.

8.00 PAYMENT AND COMPLETION

Add the following to 8.01

8.01.1 Monthly Payment Applications

At a meeting mutually agreed upon between the University's Representative and the Contractor, but no less than monthly, the Contractor shall distribute, in triplicate, draft copies of the proposed Payment Application for review and comment. The review, comment and mutual concurrence will be

an agenda item at that meeting. The Contractor will prepare the formal Application for submission from the comments made on the Draft and will present the formal application as provided for herein, including all required back-up materials, such as waivers of claim, release of claim on bond, sworn statement, documentation for stored materials, certified payroll reports and other documents required by the University Representative.

8.01.2 Offsite Materials

If an Application for Payment is made for materials not installed in the Work, but suitably stored off-site at a location acceptable to the University's Representative, such application shall be accompanied by legally acceptable paid invoices or conditional bills of sale and copies of delivery tickets, signed by the Contractor, indicating the Contractor verified that the materials shown on the delivery tickets are at the location accepted by the University and are adequately insured. Failure of the Contractor to furnish paid invoices, conditional bills of sale and proof of insurance shall be cause for withholding such amounts from payment until such paid invoices or bills of sale have been received by the University. The University reserves the right to examine the stored items prior to payment.

Add the following to subparagraph 8.03

The following submittals shall be bound in three (3) sets, plus one electronic file of all materials:

.1 Project Closeout Documents

- .a The Contractor shall submit to the Design Professional, a written guarantee, which shall be in accordance with Section 8.04 and such additional guarantees, in writing, as are required by the Specifications.
- .b The Contractor shall submit complete instruction for the care and maintenance of all finish materials under the contract, including, but not limited to floor finishes and coverings, wainscot and wall finishes, acoustical treatment, metal finishes, painted surfaces, flooring, hardware, and finishes on mechanical and electrical equipment. Instructions shall contain the manufacturer's or supplier's recommendations with respect to cleaning agents, preservative treatment and such other instructions as may be beneficial to the maintenance, usage, appearance and durability of the product. The recommendations shall further contain cautions on the use of certain cleaners and coatings which may be detrimental to the product.
- .c The Contractor shall prepare and submit operating and maintenance instructions, coordination drawings, and shop drawings for all mechanical and electrical equipment, and other special items, as called for in the specifications.
- .d All of the above described documents shall be checked by Contractor for conformance with the specifications and shall be submitted in uniform size, bound and indexed for cross-reference.
- .e The Contractor shall also submit "As-Built" drawings as specified in Section 4.11.
- .f Copies of all "Attic Stock" transmittals signed by appropriate University personnel accepting the attic stock material.

.2 Project Closeout Training

- a. The University and the Contractor will coordinate, schedule and present formal training for University personnel for all equipment, systems, devices, and building features.
- b. Training shall be scripted to include all important aspects of the equipment and its installation and maintenance. Trainers shall be suitably prepared and experienced in the features of the

equipment and the equipment's installation within the project.

- c. The Contractor, all product vendors, subcontractors, suppliers and materialmen shall consent to and participate in the recording of the training as determined by the University and the Contractor.
- d. The University may supplement training with outside providers to meet the training requirements of the project should a vendor, subcontractor, or supplier fail to provide the required training. The University shall be reimbursed by the Contractor for any such costs for supplemental training.

DRAWINGS

The Technical Specifications dated **January 6, 2025** and the following List of Drawings represent the scope of work as defined in the Contract Documents from Article 4.

DRAWINGS

Drawing No.:	Description
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GENERAL REQUIREMENTS

GENERAL

A. **CONTRACTOR'S RESPONSIBILITY**

It is not the responsibility of the Architect/Engineer or Owner's Representative to notify the Contractor or subcontractors when to commence, to cease, or to resume work; nor in any way to superintend so as to relieve the Contractor of responsibility or of any consequences of neglect or carelessness by him or his subordinates. All material and labor shall be furnished at times best suited for all Contractors and subcontractors concerned, so that the combined work of all shall be properly and fully completed on the date fixed by the Contract.

The Contractor shall be responsible for all items contained in both the specifications and on the drawings for all trades. He shall be responsible for the proper division of labor according to current labor union agreements regardless of the division of responsibility implied in the contract documents.

B. **CODES AND STANDARDS**

Reference to standard specifications for workmanship, apparatus, equipment and materials shall conform to the requirements of latest specifications of the organization referenced, i.e., American Society for Testing Materials (ASTM), Underwriters Laboratories, Inc. (UL), American National Standards Institute, Inc. (ANSI), and others so listed in the Technical Specifications.

C. **PERMITS, FEES AND NOTICES**

See General Conditions, Article 4.02.18

D. **MEASUREMENTS**

Before proceeding with each Work Item, Contractor shall locate, mark and measure any quantity or each item and report quantities to Engineer. If measured quantities exceed Engineer's estimate, Contractor shall obtain written authorization to proceed from Owner before executing Work required for that Work Item.

Measurement of quantities for individual Work Items will be performed by Contractor and reviewed by Engineer. Coordinate measurements with inspection as required in Section "Coordination."

Cost of Work included in Work Item for quantities as indicated in Contract Documents shall be included in Base Bid.

1. Additions to or deductions from lump sum price for quantities of each Work Item added to or deducted from Work respectively shall be at unit prices indicated in Bid Form and shall constitute payment or deductions in full for all material, equipment, labor, supervision and incidentals necessary to complete Work.

E. **CONTRACTOR'S MEASUREMENTS**

Before ordering material, preparing Shop Drawings, or doing any work, each Contractor shall verify, at the building, all dimensions which may affect his work. He assumes full responsibility for the accuracy of his figures. No allowance for additional compensation will be considered for minor discrepancies between dimensions on the drawings and actual field dimensions.

F. **CONTINUITY OF SERVICE**

Continuity of all existing services in the building shall be maintained throughout the construction period. Where it is necessary to tie into the existing electrical service, water or waste systems, it shall be done as directed by the Architect/Engineer. This Contract shall also provide temporary lines or bypasses that may be required to maintain continuous service in the building. All utility shutdowns must be approved by the Owners Representative / Project Manager, not less than **7 business days** prior to the event, so that proper notification can be posted.

G. **SUBMITTALS**

All submittals (except Shop Drawings) and samples required by the Specifications shall be submitted in triplicate unless otherwise specified for a particular item under an individual Specification Section.

Each sample shall be clearly identified on a tag attached, showing the name of the Project Consultant, the project number and title, the names of the Contractor, manufacturer (and supplier if same is not the manufacturer), the brand name or number identification, pattern, color, or finish designation and the location in the work.

Each submittal shall be covered by a transmittal letter, properly identified with the project title and number and a brief description of the item being submitted.

Contractor shall be responsible for all costs of packing, shipping and incidental expenses connected with delivery of the samples to the Project Consultant or other designated address.

If the initial sample is not approved, prepare and submit additional sets until approval is obtained.

Materials supplied or installed which do not conform to the appearance, quality, profile, texture or other determinant of the approval samples will be rejected, and shall be replaced with satisfactory materials at the Contractor's expense.

H. GENERAL/STANDARD ELECTRONIC EQUIPMENT AND INFRASTRUCTURE REQUIREMENTS

1. Compliance with WSU Standards for Communications Infrastructure

- A. All applicable work, products, materials and methods shall comply with the latest version of the "WSU Standards for Communications Infrastructure" except as where noted.
- B. This document is available at the following website/URL: **<https://computing.wayne.edu/docs/wsu-communications-standards.pdf>**

2. Automation System Program Code

- A. All automation system uncompiled and compiled program codes, source codes, custom modules, graphical user interface screen shots and any other automation system programming data and material (Program Code) shall be provided to the UNIVERSITY in hard copy and on CD Rom in an unencrypted format acceptable to the UNIVERSITY.
- B. Copyright for the Program Code shall be assigned to the UNIVERSITY for the purpose of system maintenance.

PROTECTION OF OCCUPANCY

A. FIRE PRECAUTIONS

Take necessary actions to eliminate possible fire hazards and to prevent damage to construction work, building materials, equipment, temporary field offices, storage sheds, and other property.

During the construction, provide the type and quantity of fire extinguishers and fire hose to meet safety and fire prevention practices by National Fire Protection Association (NFPA) Codes and Standards (available at <http://www.nfpa.org/>)

In the event that construction includes "hot work", the contractor shall provide the Owner's Representative with a copy of their hot work policy, procedures, or permit program. No hot work activity (temporary maintenance, renovation, or construction by operation of a gas or electrically powered equipment which produces flames, sparks or heat that is sufficient to start a fire or ignite combustible materials) shall be performed until such documents are provided. During such operations, all highly combustible or flammable materials shall be removed from the immediate working area, and if removal is impossible, same shall be protected with flame retardant shield.

Not more than one-half day's supply of flammable liquids such as gasoline, spray paint and paint solvent shall be brought into the building at any one time. Flammable liquids having a flash point of 100 degrees F. or below which must be brought into the building shall be confined in an Underwriters Laboratories (UL) labeled safety cans. The bulk supply of flammables shall be stored at least 75 feet from the building and other combustible materials. Spigots on drums containing flammable liquids are prohibited on the project site. Drums shall be equipped with approved vented pumps, and be grounded and bonded.

Only a reasonable working supply of combustible building materials shall be located inside the building.

All oil-soaked rags, papers, and other similar combustible materials shall be removed from the building at the close of each day's work, or more often if necessary, and placed in metal containers, with self-closing lids.

Materials and equipment stored in cardboard cartons, wood crates or other combustible containers shall be stored in an orderly manner and accessibly located, fire-fighting equipment of approved types shall be placed in the immediate vicinity of any materials or equipment stored in this type of crate or carton.

No gasoline, benzene, or like flammable materials shall be poured into sewers, manholes, or traps.

All rubbish shall be removed from the site and legally disposed of. Burning of rubbish, waste materials or trash on the site shall not be permitted.

The contractor shall be responsible for the conduct of employees relative to smoking and all smoking shall be in the area designated by the Architect/Engineer.

B. GENERAL SAFETY AND BUILDING PRECAUTIONS

Provide and maintain in good repair barricades, railings, etc., as required by law for the protection of the Public. All exposed material shall be smoothly dressed.

At dangerous points throughout the work environment provide and maintain colored lights or flags in addition to above guardrails.

Isolate Owner's occupied areas from areas where demolition and alteration work will be done, with temporary, dustproof, weatherproof, and fireproof enclosures as conditions may require and as directed by the Architect/Engineer.

Cover and protect furniture, equipment and fixtures to remain from soiling, dust, dirt, or damage when demolition work is performed in rooms or areas from which such items have not been removed.

Protect openings made in the existing roofs, floors, and other construction with weatherproof coverings, barricades, and temporary fire rated partitions to prevent accidents.

Repair any damage done to existing work caused by the construction and removal of temporary partitions, coverings, and barricades.

The Contractor will be held responsible for all breakage or other damage to glass up to the time the work is completed.

Provide protection for existing buildings, interior and exterior, finishes, walls, drives, landscaping, lawns (see below), etc. All damages shall be restored to match existing conditions to the satisfaction of the Architect/Engineer.

The Contractor and Owner will define the anticipated area of lawn damage at the project Pre-Construction Meeting. Whether the lawn is sparse or fully developed, any lawn damaged due to the Contractor's work will be replaced with sod by the University. The University's unit cost of \$10.00 per square yard and landscaping at a rate of 1.5 times the cost of the sod repairs, the full cost of which will be assessed against the Contractor. At the completion of the project, a deductive Change Order reflecting this cost will be issued.

The Contractor is to include an allowance in his bid for this corrective work.

C. INTERFERENCE WITH OWNER'S OPERATIONS

The Owner will be utilizing the Building Facilities to carry on his normal business operation during construction. The Contractor shall schedule performance of the work necessary to complete the project in such a way as to interfere as little as possible with the operation during construction. The Contractor shall schedule performance of the work necessary to complete the project in such a way as to interfere as little as possible with the operation of the Owner.

Work which will interfere with the Owner's occupancy, including interruptions to the Owner's mechanical and electrical services, and essentially noisy operations (such as jackhammering) shall be scheduled in advance. The schedule of alterations shall be approved by the Architect/Engineer and the work shall be done in accordance with the approved schedule.

It is understood that the work is to be carried through to completion with the utmost speed consistent with good workmanship and to meet the construction schedule.

The Contractor shall begin work under the Contract without delay upon receipt of the fully-executed contract and shall substantially complete the project ready for unobstructed occupancy and use of the Owner for the purposes intended within the completion time stated in the contract.

The Contractor shall, immediately upon award of contract, schedule his work and expedite deliveries of materials and performance of subcontractors to maintain the necessary pace to meet the construction schedule.

CONTRACTOR'S REPRESENTATION AND COORDINATION

A. FIELD SUPERINTENDENT

Contractor shall assign a full time project manager/superintendent for the duration of the project. This person shall be experienced and qualified in all phases of the work and shall be present at the site during Contractor's working hours. The project manager shall have Contractor's full authority to represent Contractor in all routine operations including payment, changes to the work, and scheduling. Contractor shall not re-assign this individual without prior written permission of the Owner.

B. MEETINGS

When directed by the Architect/Engineer, meetings shall be held for the purpose of coordinating and expediting the work. The invited contractors or subcontractors will be required to have qualified representatives at these meetings, empowered to act in their behalf.

C. COORDINATION

The Contractor shall also provide a staff adequate to coordinate and expedite the work properly and shall at all times maintain competent supervision of its own work and that of its subcontractors to insure compliance with contract requirements.

The Contractor shall be solely responsible for all construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the work under the Contractor.

D. CONSTRUCTION SCHEDULE

The Construction Schedule shall be prepared after the award of contract. Soon after, a pre-construction meeting is held with the Owner and the Architect/Engineer to determine the areas to which the Contractor will be allowed access at any one time.

The Contractor is alerted to the fact that areas in which he will be working will be occupied by students and employees of the University as well as the general public. The Contractor's access, to and from the project site, will be confined to limited areas so as not to unduly disrupt the normal activities of the University.

TEMPORARY FACILITIES

A. GENERAL

The following temporary facilities descriptions represent standard conditions. Verify accuracy with Architect/Engineer at time of bids.

B. CONTRACTOR'S OFFICE

Provide field offices as required. Locate temporary field offices on site where directed by Architect/Engineer.

Appearance and location of field offices shall be approved by the Architect/Engineer.

Provide for all other administrative facilities and storage off the Owner's property.

C. STORAGE OF MATERIALS

All materials shall be stored in areas designated by the Architect/Engineer. All stored materials shall be arranged for the minimum disruption to occupants and to allow full access to and throughout the building. Materials stored outdoors shall be neat and orderly and covered to prevent damage or vandalism.

D. PARKING

1. GENERAL

University parking regulations will be strictly enforced.

Maintain Owner's parking areas free of dirt and debris resulting from operations under the contract.

2. STANDING AND UNLOADING/LOADING VEHICLES

All Contractors are to call Wayne State University Public Safety at 313-577-2222, and give at least 24 hours advance notice that they have vehicles that must be at the job site.

Vehicles will be permitted at the project site only as long as the vehicles are needed for loading/unloading, and must be immediately moved upon completion.

All unauthorized and/or unattended standing vehicles will be subject to ticketing and removal by University Police. Towed vehicles may be reclaimed by calling 313-577-2222, and paying any assessed charges.

3. COMPLIMENTARY PARKING

There is no complimentary parking for Contractor's employee vehicles.

4. WAYNE STATE UNIVERSITY PUBLIC/STUDENT PARKING AREAS

Public Parking, on a first-come first-served basis is available. Contact the office of the One Card System, at 313-577-9513 for information on availability of parking on a contractual basis.

E. TOILET FACILITIES

The Owner's designated existing toilet facilities may be used by workers on the project. Contractor shall maintain such facilities in a neat and sanitary condition.

F. TELEPHONE USE

No use of the Owner's telephones will be permitted.

G. ACCESS DEVICES

The Contractor shall furnish and maintain temporary hoists, ladders, railings, scaffolds, runways, and the like as required for safe, normal access to the permanent construction until the permanent facilities are complete. Each trade shall furnish such additional means of access as may be required for the progress and completion of the work. Such temporary access devices shall meet all applicable local, state, and federal codes and regulations.

H. HEAT AND VENTILATION

Provide cold weather protection and temporary heat and ventilation as required during construction to protect the work from freezing and frost damage.

Provide adequate ventilation as required to maintain reasonable interior building air conditions and temperatures, to prevent accumulation of excess moisture, and to remove construction fumes.

Tarpaulins and other materials used for temporary enclosures. Coverings and protection shall be flameproofed.

I. WATER SERVICE

Sources of water are available at the site. The Owner will pay for reasonable amounts of water used for construction purposes.

The Contractor shall provide, at the earliest possible date, temporary connections to the water supply sources and maintain adequate distribution for all construction requirements. The Contractor shall protect sources against damage.

Methods of conveying this water shall be approved by the Architect/Engineer and shall not interfere with the Owner's operations.

J. **ELECTRICAL SERVICES**

All charges for reasonable amounts of electrical power energy used for temporary lighting and power required for this work will be paid by the Owner.

The Contractor shall provide and maintain any temporary electrical lighting and power required for this work. At the completion of the work, all such temporary electrical facilities shall be removed and disposed of by the Contractor.

Temporary lighting and power shall comply with the regulations and requirements of the National Electrical Code

INSPECTIONS AND TESTS

The Architect/Engineer shall at all times have access to the work wherever it is in preparation or in progress and the Contractor shall provide proper facilities for such access and for observation.

No failure of the Architect/Engineer, during the progress of the work, to discover or reject materials or work not in accordance with the Contract Specifications and Drawings shall be deemed an acceptance thereof nor a waiver of defects therein. Likewise, no acceptance or waiver shall be inferred or implied due to payments made to contractor or by partial or entire occupancy of the work, or installation of materials that are not strictly in accordance with the Contract Specifications and Drawings.

Where tests are specifically called for in the Specifications, the Owner shall pay all costs of such tests and engineering services unless otherwise stated in the contract.

Where tests are not specifically called for in the Specifications, but are required by the Architect/Engineer or Consultant, the Owner shall pay all costs of such tests and engineering services unless the tests reveal that the workmanship or materials used by the Contractor are not in conformity with the Drawings, Specifications, and/or approved shop drawings. In such event, the Contractor shall pay for the tests, shall remove all work and materials so failing to conform and replace with work and materials that are in full conformity.

CLEAN-UP

The Contractor shall at all times keep the Owner's premises and the adjoining premises, driveways and streets clean of rubbish caused by the Contractor's operations and at the completion of the work shall remove all the rubbish, all of his tools, equipment, temporary work and surplus materials, from and about the premises, and shall leave the work clean and ready for use. If the contractor does not attend to such cleaning immediately upon request, the Architect/Engineer may cause such cleaning to be done by others and charge the cost of same to the Contractor.

The Contractor will be responsible for all damage from fire that originates in, or is propagated by, accumulations of rubbish or debris.

All rubbish and debris shall be disposed of off the Owner's property in an approved sanitary landfill site. No open burning of debris or rubbish will be permitted. Job site shall be left neat and clean at the completion of each day's operation.

PROJECT CLOSE-OUT

A. **RECORD DRAWINGS**

At beginning of job, provide one copy of Working Drawings, and record changes, between Working Drawings and "As Built", including changes made by Addenda, Change Orders, Shop Drawings, etc. These shall be kept up to date. Update to indicate make of all mechanical and electrical equipment and fixtures installed. Keep these Record Prints in good condition and available for inspection by the Architect/Engineer.

Upon completion of the job, turn over to the Architect/Engineer Record Prints of Working Drawings showing all job changes.

B. OPERATING AND MAINTENANCE DATA

Prepare and furnish to the Architect/Engineer three (3) bound copies of "Operating and Maintenance Manual" on all equipment installed under this Contract.

Manual shall include copies of all Manufacturers' "Operating and Service Instructions", including Parts List, Control Diagrams, Description of Control Systems, Operating, Electrical Wiring, and any other information needed to understand, operate and maintain the equipment. The names and addresses of all subcontractors shall be included. These instructions shall be custom-prepared for this job -- catalog cuts will **not** be accepted. Equipment shall be cross-referenced to Section of Specifications and to location shown and scheduled on drawings.

Include Test-Adjust-Balance Report in the Manual.

C. FINAL INSPECTION

Secure final inspections from the State of Michigan as soon as the work is completed and immediately submit such Certificates to the Architect/Engineer.

D. GUARANTEES (See Sections 00510 and 01781)

Guarantees on material and labor from the General Contractor and his subcontractors shall be as required in Sections 00510 and 01781.

E. SWORN STATEMENT AND WAIVER OF LIENS

Prior to final payment, the General Contractor shall provide a Contractor's Sworn Statement and Full Unconditional Waivers of Liens from all subcontractors for material and labor and from all suppliers who provide materials exceeding \$10,000. Sworn Statements and signed waivers from all Subcontractors must accompany Pay Applications or they will be returned for such documentation prior to approval.

ASBESTOS HAZARD

The contractor shall not start any work in any area that has not been inspected for asbestos by the Owner's Industrial Hygiene Department, or a qualified representative of the Owner and approval is given for work to be done. If asbestos is found, safety measures as recommended by the Owner's Industrial Hygiene Department, or a qualified representative of the Owner, shall be completed, or approval given for work to be done before work is started. The contractor shall not perform any asbestos removal or containment work under the contract.

KEYS

The Owner shall provide the contractor keys on loan to have access to the various spaces in order to complete the contract. Contractor will sign for and be responsible for each key on loan, returnable to Owner upon completion of the contract. In case of any lost keys, the Owner will back-charge the contract \$250.00 for each core change. In the event that a Contractor wants access to a secured area, he shall give the Owner a minimum 48-hour notice.

SUMMARY OF WORK

SUMMARY OF WORK

PROJECT: PARCS Replacement

WSU PROJECT NO.: 999-419307

PROJECT MANAGER: Jon Frederick / Damon Wade

1. EXAMINATION

The Contractor shall visit the site and become familiar with conditions under which he will be working. Also meet with the project manager and review site access, storage areas, etc.

2. Description of Work – Project includes **Replacement of the Parking Access and Revenue Control Equipment and software throughout WSU's parking facilities including necessary purchase and install, wiring and any civil work necessary.**

3. The building is located at

Wayne State University
91 West Forest and multiple campus addresses
Detroit, Michigan 48202

Prepared for WSU

WSU PARCS Replacement Project Documents

November 2024)



WALKER
CONSULTANTS

Contents

Location Map

Specification 111226 – PARCS

Specification 111248 – VPMS

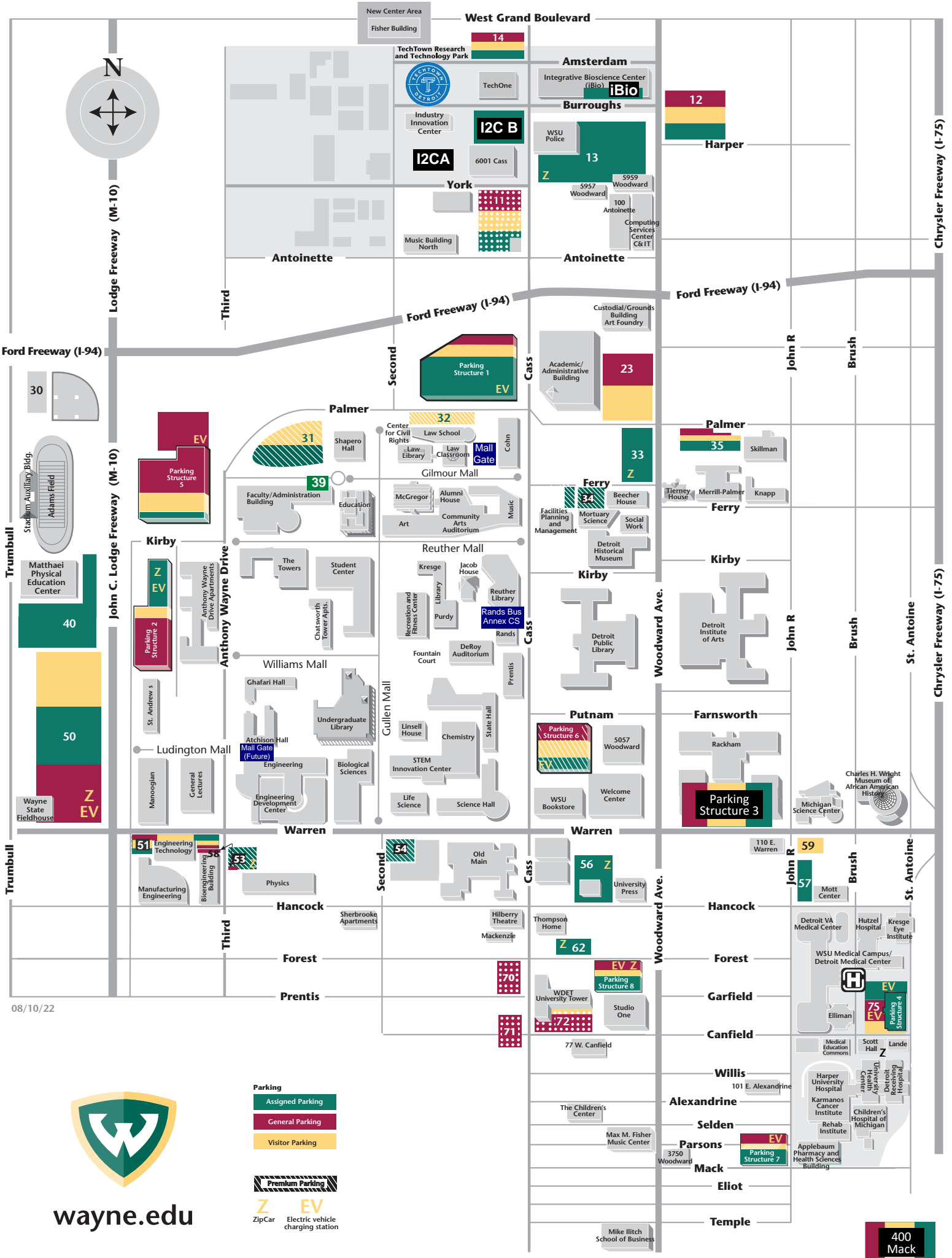
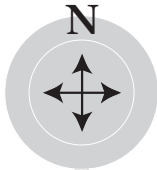
Specification 111224.14 – MSM

Exhibit A – Entry / Exit Modifications

Exhibit B – Photo Guide



WALKER
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Trumbull
Stadium Auxiliary Bldg
Adams Field
Matthaei Physical Education Center
Wayne State Fieldhouse

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Z EV

51 Engineering Technology
52 Manufacturing Engineering
53 Bioengineering Building
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wayne.edu

Parking
Assigned Parking
General Parking
Visitor Parking
Premium Parking
Z ZipCar
EV Electric vehicle charging station

400 Mack

SECTION 111226 - PARKING ACCESS AND REVENUE CONTROL SYSTEM (PARCS)

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PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B. WSU C&IT Communications Standards:
 - 1. <https://tech.wayne.edu/docs/wsu-communications-standards.pdf>

- C. Related to this Section, Project Front End Documents, Exhibit A – New Locations and Modified Locations, Exhibit B – WSU Photo Log, Exhibit C – Proposal Price Form.
- D. For reference: <https://parking.wayne.edu/>
- E. Codes and Regulations:
 - 1. Comply with all applicable Federal, State and local laws, ordinances, rules and regulations pertaining to the performance of the work specified herein and compliant with the Owner internal policies.
 - 2. Obtain all permits, licenses and certificates, or any such approvals of plans or specifications as may be required by Federal, State and local laws, ordinances, rules and regulations.
 - 3. Compliant with Owner's internal policies for the proper execution of the work specified herein.
 - 4. Comply with Federal and State right-to-know laws if hazardous materials are used. The Materials and Safety Data Sheets (MSDS) shall be made available to all workers and Owner representatives. PARCS Vendor shall report immediately to the Owner any spillage or dumping of hazardous materials on Owner property. The PARCS Vendor shall also be responsible for the cleanup and any costs incurred for all such incidents.
 - 5. Keep current copies of all licenses, registrations or permits required by applicable governing agencies on the job site while performing the contract work and provide copies to Owner as requested during the performance of this contract.
 - 6. Payment Card Industry (PCI) compliance is required.
 - 7. Comply with the requirements of the American with Disabilities Act (ADA) including the 2010 ADA Standards for Accessible Design and any state or local jurisdiction requirements for accessibility, communication and use by individuals with disabilities and compliant with any Owner internal policies. Contractor is responsible for determining which parts of the PARCS must be ADA compliant.
 - 8. The following is a list of standards referenced in the contract documents. The latest revision in effect for each standard at the time of Notice-To-Proceed (NTP) shall be used in conjunction with the contract documents.
 - a. ADA
 - b. Code of Federal Regulations (CFR)
 - c. ANSI X9.24, Financial Services Retail Key Management
 - d. Federal Communications Commission emission limits
 - e. FIPS 140-2
 - f. International Electrotechnical Commission (IEC) 529
 - g. ISO 9001
 - h. ISO/IEC 7816 parts 1 through 3
 - i. ISO/IEC 14443
 - j. ISO/IEC 18092/ECMA-340, Near Field Communication Interface and Protocol-1
 - k. ISO/IEC 21481/ECMA-352, Near Field Communication Interface and Protocol-2
 - l. NFPA 70
 - m. NFPA 130
 - n. National Electrical Code

- o. Payment Card Industry Data Security Standard (PCI DSS)
 - p. Payment Card Industry Payment Application Data Security Standard (PA DSS)
 - q. Payment Card Industry Point to Point Encryption (PCI P2PE)
 - r. UL Standard 60950, "Information Technology Equipment – Safety"
 - s. UL 325 Gate Operators and Systems
9. The PARCS Vendor shall identify and notify the Owner of any changes to the standards that are instituted between the time of NTP and PARCS implementation and certify that their software meets these requirements.

1.2 DEFINITIONS

A. List of abbreviations:

- | | | |
|-----|----------|---|
| 1. | ADA | Americans with Disabilities Act |
| 2. | ANSI | American National Standards Institute |
| 3. | API | Application Programming Interface |
| 4. | AVI | Automated Vehicle Identification |
| 5. | BG | Barrier Gate |
| 6. | BLE | Bluetooth Low Energy |
| 7. | CDMS | Central Data Management System |
| 8. | EMV | Europay, MasterCard, and Visa |
| 9. | ENS | Entry Station |
| 10. | EXS | Exit Station |
| 11. | FACTA | Fair and Accurate Credit Transactions Act |
| 12. | FAT | Factory Acceptance Test |
| 13. | GPR | Ground Penetrating Radar |
| 14. | GUI | Graphical User Interface |
| 15. | IP | Intrusion Protection |
| 16. | ISO | International Organization for Standardization |
| 17. | LAT | Lane Acceptance Test |
| 18. | LED | Light Emitting Diode |
| 19. | LPR | License Plate Recognition |
| 20. | NEMA | National Electrical Manufacturers Association |
| 21. | NEC | National Electrical Code |
| 22. | NFC | Near Field Communication |
| 23. | ODBC | Open Database Connectivity |
| 24. | ODT | Operational Demonstration Test |
| 25. | PARCS | Parking Access and Revenue Control System |
| 26. | PCI | Payment Card Industry |
| 27. | PCI P2PE | PCI Council Certified Point to Point Encryption |
| 28. | PCI DSS | PCI Data Security Standard |
| 29. | SDR | System Design Review |
| 30. | SQL | Structured Query Language |
| 31. | UL | Underwriters Laboratories, Inc. |
| 32. | UPS | Uninterruptible Power Supply |
| 33. | VMS | Variable Message Sign |
| 34. | VoIP | Voice over IP (internet Protocol) |
| 35. | VPMS | Virtual Permit Management System |

1.3 SUMMARY

- A. Furnish and install an on-line, real-time Parking Access and Revenue Control System (PARCS) functioning in the manner described herein.
- B. Project is for the Wayne State University (“Owner”), located in Detroit, Michigan.
- C. References in this section to “Contractor” include any Subcontractor performing Work related to the PARCS.
- D. Identify any clarifications, deficiencies, exceptions or errors in the Specifications or Drawings in Contractor proposal. Deficiencies or discrepancies in the Specifications or Drawings do not relieve the Contractor of the responsibility to provide a fully functional, reliable PARCS as intended by the design. Clarifications and exceptions to the design taken by the Contractor must be clearly stated in the proposal and are subject to Owner approval.
- E. At the discretion of the Owner, the work in one or more of the parking lots may be eliminated from the project or modified.
- F. Where equipment is removed and conduit and or anchor bolts remain and are exposed or not covered by the new equipment, cut/grind flush with surface or 1 ½ inch below surface and coat with rust inhibited paint and patch remaining hole. Remove abandoned wire from unused conduit.
- G. Summary of Parking Lane and Supplementary Equipment:
 - 1. Type A – Contract and Visitor Parking ENS/EXS with:
 - a. Credit Card Reader with NFC Tap and Go (entry and exit)
 - b. Proximity Reader
 - c. QR/Barcode Reader
 - d. Intercom
 - e. Ticket dispenser/acceptor (limited use)
 - f. Barrier Gate
 - g. Re-use AVI Reader
 - h. Lot Full Sign
 - i. Bollards as needed
 - 2. Type B – Contract Only
 - a. Proximity Reader
 - b. QR/Barcode Reader
 - c. Intercom
 - d. Barrier Gate
 - e. Re-use AVI Reader
 - f. Lot Full Sign
 - g. Bollards as needed

Table of Locations

Note	Lot #	Address	Existing Lanes	Entry Lanes	Exit Lanes	Reversible Lanes (included)	Nested Area	Type
	PS-1	450 W. Palmer	Y	5	4			A
	PS-2	5150 Lodge Service Dr.	Y	3	4	2		A
TBD	PS-3	45 E. Warren / Rackham Garage UM	Y	1	1			A
	PS-4	555 E. Canfield (Medical School)	Y	4	4	2	1	B
	PS-5	5501 Anthony Wayne Dr.	Y	4	2	2		A
	PS-6	61 Putnam	Y	3	3			A
	PS-8	91 W. Forest	Y	4	4	2		A
	12	6050 Woodward	Y	1	1			A
	13	Cass & Boroughs	Y	2	2			B
	13 B	iBio building 6135 Woodward Ave	Y	1	1			B
	14	6241 Cass Ave.	Y	1	1			A
	23	38 W. Palmer	Y	1	1			A
Exhibit A	30	1411 I-94 Service Dr.	none	1	1			A
	31	630 W. Ferry	Y	1	1			A
	32	475 W. Palmer	Y	1	1			A
	33	5521 Woodward	Y	2	2	1		B
Exhibit A	34	35 W. Ferry	Y	1	1			B
	35	5555 John R	Y	1	1			A
	39	656 Reuther Mall	Y	1				B
	40	5095 Lodge Service Dr.	Y	2	1			B
Exhibit A	50	1200 W. Warren (Athletic Lot)	Y	4	4	4		A
	51	4865 Fourth St.	Y	2	2			A
	53	4820 Anthony Wayne Dr.	Y	1	1			A
	54	4840 Second	Y	1	1			A
	56	50 W. Hancock	Y	1	1			A
	57	237 E. Hancock	Y	1	1			A
	59	John R.	Y	1	1			A
	62	80 W. Forest	Y	1				B
	70	4441 Cass Ave.	Y	1	1			A
	71	410 W. Canfield	Y	1	1			A
	72	4510 Cass Ave.	Y	1	1			A
	75	545 E. Canfield	Y	2	2			A
Exhibit A	400 Mack	400 Mack Lot	none	3	2			A
Exhibit A	I2C	Innovation and Integration Center	none	2	2			A
	Mall Gate	Gilmore Mall Access	Y	1	-			B
	Load Dock	Rands Business Annex CS Gold	Y	1	-			B

Totals: 64 56 13 1

- H. Estimated average annual transaction volumes:
1. 1.7 million Transient entry and exit transactions
 2. 1.4 million Monthly or similarly credentialed entry and exit transactions
- I. As an Alternate, an LPR enabled system with VPMS will be considered. This option will include gated parking facilities with LPR and Multi-space meters. Normal operation will be gates up or automatic gates to monitor plates as they enter and exit the facilities. Mixed facilities (permits and public) will be monitored for public use and automatically close to public parking once the programmed threshold has been reached to ensure permit holder parking remains available. LPR must be configured as pre-capture at these locations to allow permit access when the public parking is full. Other facilities will active the gates to remain down once capacity is reached.
- J. Work Included:
1. Review Specifications, location map, and sketches to be certain that all functional requirements, as described, can be achieved with equipment to be supplied.
 2. Provide Submittals as specified.
 3. Coordinate and confirm final and precise layout of PARCS equipment, mounting structures, conduits, stubs, and anchor bolts with Owner prior to installation.
 4. Attend construction meetings, provide schedules as requested, and schedule fieldwork to be coordinated with Owner.
 5. Provide and install all PARCS equipment as described and specified.
 6. Provide and install mounting structures necessary for the PARCS equipment.
 7. Provide and install all software, ancillary components, and materials to provide a complete and functioning PARCS and the interconnection with any Owner supplied equipment.
 8. Provide, install, terminate, and connect all necessary communications wiring and conduit required for the PARCS.
 9. Provide, install, terminate, and connect any power conditioning that is required for the operation of the system.
 10. Comply with all applicable codes and standards.
 11. Authorize and accept responsibility for application of power to equipment and initiation of operation.
 12. Run all initial diagnostics and system testing necessary to provide a complete working system.
 13. Participate in system commissioning as required herein.
 14. Test equipment a specified.
 15. Provide as-built drawings, operating manuals, maintenance manuals, as specified.
 16. Provide training as specified.
 17. Remove existing PARCS. WSU to assess and determine which items it may want to retain. Contractor to dispose of any items not being retained in accordance with applicable laws and codes after WSU provides direction.
 18. For any PARCS components or equipment being removed that are within scope of the PCI-DSS as defined in the most-current version of the standard, securely dispose of such components or equipment using techniques described in the standard (PCI-DSS Section 9.8 and its subsections, or as revised).
 19. Provide warranty services as required.

20. Accept parking payments through Park Detroit app for public parking using QR/barcode reader.

K. PARCS Future System Expansion:

1. Readily upgradable, scalable, and modular in design to accommodate additional equipment, parking facilities, features and functionalities including the following:
 - a. Additional PARCS field devices.
 - b. Additional parking facilities.
 - c. Additional integrations (LPR, loyalty programs, Bluetooth, etc.).
 - d. Interface with open API's for adding third party applications.
 - e. Firmware or software upgrades without the need to replace field devices.

1.4 REQUIRED MEETINGS

- A. System Design Review (SDR) meeting: Conduct initial SDR meeting at the campus within forty-five (45) days of contract award (after final contract negotiations) and follow-up as needed. Purpose of SDR is to review the Contractor's System Design Documents (SDD), which include the following Proposal Submittals and Informational Submittals:

1. Product Data Submittals
2. Typical Lane Layouts
3. Project Schedule
4. Phasing Plan
5. Transition Plan
6. Samples
7. Training Plan
8. Testing Plan

- B. Pre-Installation Meeting: Conduct meeting at project site thirty (30) days in advance of time scheduled for work to proceed to review requirements and conditions that could interfere with successful PARCS implementation. All parties concerned with PARCS installation including electrical, communications, concrete/asphalt work, or others who are required to coordinate work should attend. Include the Owner or their representatives. At a minimum, cover:

1. Required preparatory work
2. Site safety and security requirements
3. Required work areas and laydown requirements
4. Review installation and implementation schedule
5. Review testing and acceptance procedures

1.5 SUBMITTALS

- A. Proposal Submittals

1. Company Information

- a. Provide the following company information:
 - 1) Name of company submitting proposal.
 - 2) Brief company overview including a description of the company culture, company structure, and a statement on whether the company is a private or public entity.
 - 3) Years in business.
 - 4) Number of employees.
 - 5) Names and titles of key personnel. Identify the primary point of contact and authorized individual to submit the proposal on behalf of your company.
 - b. Provide a list of any subcontractors, their business address, and a brief summary of their role in the project.
 - c. Description of the Contractor's presence in the local area.
 - 1) Physical location of the nearest service center for PARCS maintenance and repairs.
 - 2) Number of staff at this location.
 - 3) Number of contractor-owned service vehicle at this location.
 - d. Provide sample shop drawings depicting the dimensional requirements, data conduit, power conduit for rear plate LPR capture, including vehicle loops for triggering, arming, and closing for:
 - 1) LPR-enabled lane in pre-capture
 - 2) LPR-enabled post-capture operation
 - e. Provide vendor add-on products / features recommended for consideration but not specified.
2. Manufacturer's Qualifications: Verify the following, in writing:
- a. In continuous operations for previous five years.
 - b. Primary components installed and operating in three or more facilities of similar size and complexity. Provide the following for each installation.
 - 1) Name of project
 - 2) Location
 - 3) Contact name, telephone number and email address
 - 4) Date of installation
 - 5) Number of lanes
 - 6) Description of equipment and quantities
 - 7) Payments accepted
 - 8) Credential types used
 - 9) Photos of installed PARCS
3. Installer Qualifications:
- a. In continuous operations for previous five years.
 - b. Proven ability to install equipment and provide appropriate and required service and support after installation.

- 1) Approved in writing by PARCS manufacturer(s).
 - 2) State number of years installing for manufacturer.
 - 3) Three comparable installations in parking facilities of similar size and complexity in past three years.
 - 4) Provide the following for each installation.
 - a) Name of project
 - b) Location
 - c) Contact name, telephone number and email address
 - d) Date of installation
 - e) Number of lanes
 - f) Description of equipment and quantities
 - g) Payments accepted
 - h) Credential types used
 - i) Photos of installed PARCS
 - c. Nearest service center, including driving distance of site.
 - d. Organizational Chart - include names, title, and roles of individuals who will be assigned to this project including any subcontractors.
 - e. Include resumes for key personnel.
4. Project Approach – Submit the following:
- a. Executive summary of your team’s proposed PARCS solution for completing the scope of work, as described, including any unique PARCS features and functionalities that will enhance customer service and facilitate greater operational efficiencies.
 - b. Detail the plan for design, installation, implementation, training, and testing.
 - c. Description of the Contractor’s approach for post-installation customer service.
5. Project Schedule based on the anticipated project milestone dates outlined herein:
- a. Milestone dates clearly identified
 - b. Task and subtask start and completion dates
 - c. Narrative description of phasing for each area of work including installation of field devices and performance of acceptance testing
 - d. Training schedule relative to system activation
6. Product Data Submittals:
- a. List of each primary component of system and the manufacturer.
 - b. Cut sheets including equipment dimensions; power and load requirements; communication requirements; operating temperature range; buffering limits for all PARCS devices; and IP rating for field devices for all PARCS equipment listed in Section 1.3.D, as well as:
 - 1) Communication Network Components
 - 2) UPS
 - 3) Traffic Control Signage

- 4) Any servers
 - 5) Switches
 - 6) Workstation
 - 7) Software Application
7. If cellular communication technology is proposed to be provided by the contractor, provide the following submittals with the proposal:
 - a. Underlying technology proposed, i.e. 4G LTE, 5G, 5G UWB, etc.
 - b. Cut sheet(s) of the cellular components.
 - c. Monthly service cost per line of service and in total.
 - d. Expected end-of-service date of the cellular components based on known carrier sunset dates for the proposed technology. If no sunset dates are known, include a statement indicating such.
 - e. A complete list of carriers compatible with the proposed cellular technology
 - f. Contractor's detailed plan to provide a cellular site survey and carrier selection or recommendation. Cellular site survey will be required after contract award.
 8. List all manufacturer-recommended spare parts (name, part number, quantity, and unit price) to be maintained on site.
 - a. The Owner reserves the right to order additional parts and manage the PARCS spare parts inventory as required to maintain the system.
 - b. The proposed spare parts list is subject to the approval of the Owner, and the Owner reserves the right to modify the spare parts inventory throughout the term of the Contract.
 - c. Owner to provide a storage location of the spare parts.
 - d. Provide a software/database monitoring tool for tracking the inventory and usage of spare parts.
 9. Description of offsite or cloud-based components of the system and the methods by which the on-site equipment and software communicates with the offsite/cloud-based components. This must include a description of the communications and networking methods required to integrate the onsite and offsite components, who provides the associated communications network (Owner, Contractor, or a combination), and any costs associated with this communications network.
 10. Software application and version(s).
 11. Provide a narrative and graphic description of the PCI P2PE solution including:
 - a. Any entities (gateways or service providers) that will stand between the PARCS and the intended processor.
 - b. Any one-time, recurring, or transaction-based costs associated with the use of those gateway or service providers.
 - c. Network diagrams and data flow charts describing the solution.
 12. PARCS standard reports including screenshots and sample reports.
 13. List of any Contractor needed equipment that the Contractor expects the Owner to provide.

14. Price Proposal Form with total PARCS cost and unit cost of each component along with add/alternate items and any reoccurring costs (on an annual basis) not already provided.
15. Exceptions and Substitutions:
 - a. Substitutions: Where functional performance features or quality of system varies materially from that specified, identify substitution being proposed. Include catalog sheets, brochures, and/or technical specifications of the proposed substitution.
 - b. Exceptions: Provide an all-inclusive list of all exceptions taken to any part or parts of these Specifications (including substitutions).
16. System fault tolerance description, including narrative of fail-over and fail-back for components affecting the system-as-a-whole, such as server hardware or database application.
17. Warranty: Submit copy of warranty and explanation of any instances which may impact warranty coverage.

B. Informational Submittals – After Project Award, prior to SDR meeting.

1. All submittal approvals, comments and rejections will be returned to the Contractor by the Owner's designated representative. Required Submittals must be resubmitted until accepted. Provide cover letter indicating the submittal purpose with area for comments and stamp by Owner's representative. Responses will be returned indicating one of the following with additional notes as needed:
 - a. "No Exception Taken" – accepted submittal.
 - b. "Rejected" – resubmittal required.
 - c. "Submittal Not Required No Review Performed" – no further action needed.
 - d. "Make Corrections Noted Resubmittal Not Required" - accepted but take corrective action.
 - e. "Revise and Resubmit" – resubmittal required.
2. Detailed Project Schedule for implementation, training, and testing including:
 - a. Project plan in Gantt chart format generated using currently supported Microsoft Project or similar program approved by Owner.
 - b. Milestone dates clearly identified, including staff training and testing
 - c. Task start and completion dates.
 - d. Phasing for installation of field devices, performance of acceptance testing, and activation for public use.
3. Shop Drawings
 - a. Mounting details for PARCS equipment, per manufacturer recommendations.
 - b. Wiring diagrams detailing wiring requirements for power, signal, and control systems.
 - c. Locations for electrical and communications connection points and pathways including conduit runs, network access points, power panels and circuits, and server location.

- d. Clearly indicate work that is not in contract.
 4. Samples: submit samples of tickets, reports, and other items requiring selection as part of the SDR meeting.
 5. Schematic diagram showing communication between head end equipment and field devices.
 6. If the system requires a connection to the public internet via a fixed or cellular connection, provide a cellular site survey along with methodology for selection or recommendation of carrier. Contractor is expected to do all required cellular signal strength measurements and determine ideal modem and/or antenna placement. Owner has no responsibility to ensure adequate cellular signal strength.
- C. Other Submittals – After Project Award, prior to SDR meeting. Submit in accordance with contract requirements.
1. Training Plan and Schedule (to be submitted as part of the SDR meeting):
 - a. Owner to tentatively approve or suggest changes to the training schedule.
 - b. Fourteen calendar days prior to each instruction session, submit an outline of the instruction material and approximate duration of the session. Allow ample time within each session for the Contractor to fully describe and demonstrate all aspects of the PARCS and allow Owner personnel to have hands-on experience with the PARCS.
 2. Testing Plan (to be submitted as part of the SDR meeting):
 - a. Plan for testing all system functionalities described herein as well as any other functionalities proposed by the Contractor.
 - b. Owner to return review comments to the Contractor. Contractor to incorporate review comments into the Test Plan and resubmit for verification that all comments have been incorporated. Approved document will be termed the Test Procedures Document.
 - c. Approval of finalized Test Procedures Document is required prior to commencement of any test.
 - d. Develop test procedures for:
 - 1) Factory Acceptance Test (FAT).
 - 2) Lane Acceptance Test (LAT).
 - 3) Operational Demonstration Test (ODT).
 - e. Revised schedule in Gantt format with milestone dates clearly identified, task start and completion dates, lane-by-lane installation dates, training dates, and testing dates.
 - f. Description of phasing to decommission each lane, install new field devices, perform LAT, and activate for public use.
 - g. Description for parking operational impacts during the transition from the old PARCS to the new PARCS.
 3. Submit the following manuals in both hardcopy and electronic (PDF) format 30-days prior to commencement of testing:

- a. PARCS user's manuals.
 - b. PARCS subsystem manuals.
 - c. Accessory and 3rd party equipment manuals.
 - d. PARCS maintenance procedures manual.
 - e. Training manuals.
4. Provide a Certificate of Destruction or Certificate of Sanitization or equivalent, for all removed components or equipment that are within scope of the PCI-DSS as defined in the most-current version of the PCI-DSS Standard (Section 9.8 and its subsections, or as revised).
5. Disaster Recovery Plan submitted 30 days prior to commencement of testing. This includes major failures causing more than one lane to go down, system failure of network, server, or internet outage. The plan shall provide step-by-step procedures for disaster recovery for each point of failure. These procedures provide detailed steps for staff to follow to resolve the issue, including:
- a. Diagnostics – Initial steps to determine point of failure.
 - b. Action Steps – Actions staff may take to resolve failure.
 - c. Initiate Live Help – Directions for requesting live assistance via phone or on-line.
 - d. In-Person Support – Directions for requesting in-person support.
 - e. Should disaster occur immediately following or as a result of installing a patch or software update, the disaster recovery plan must include steps to return the system to the software version in effect prior to the patch or update being applied.
 - f. Points of failure include each component and sub-components, including servers, switches, and networks.
 - g. The disaster recovery plan shall include requirements for and location of spares as applicable.
6. Spare Parts
- a. Deliver spare parts per the approved spare parts list, complete and ready to use, prior to commencement of testing.
 - b. A minimum of 20 spare gate arms to be provided in the spare parts, including four sets of breakaway bolts per gate arm that are subject to breaking when the gate arm is struck instead of the gate arm itself breaking.
 - c. Maintain inventory of spare components at this level as components are used during warranty period.
7. Stock Items: Furnish the following supply of operating stock items prior to commencement of testing.
- a. Six (6) month supply of Owner approved parking tickets.
 - b. Six (6) month supply of Owner approved receipt tickets per exit device unless provided below.
8. Equipment Keys
- a. Provide two (2) sets of keys for each unit of equipment with locks.

- b. All equipment and enclosures of the same type (ENS, EXS, Gates, etc.) have the same key and equipment of different types have different keys.
- c. Keys are unique to this project; other equipment supplied by the same manufacturer in the region cannot use the key provided for this project site.
- d. If a special tool is required to perform any function on the PARCS during the normal course of business and/or maintenance, provide three of these tools.

D. Closeout Submittals

- 1. Copies of all licenses, registrations, documentation, disks and other media (as may have been included with commercially available software packages) to be submitted prior to commencement of testing. In addition, ensure that all licenses, registrations and warranties have been transferred to Owner prior to final software turnover.
- 2. As-Built Documentation: Submit as-built documentation of all systems and components installed as part of the PARCS. Include drawings of the actual installed conditions of all equipment and cabling components and configuration settings upon the completion of any acceptance test.
 - a. Update the most recent as-built documentation as further changes occur in the field or as a result of a patch or upgrade to an installed system throughout the warranty period.
 - b. Provide a list of all TCP/IP devices with each device's IP address, MAC address, and general description of the installation location.

1.6 QUALITY ASSURANCE

- A. Comply with all laws, ordinances, codes, rules, and regulations of public authorities. It is the responsibility of the Contractor to meet these and all other current technical, performance, and safety standards that are applicable to all components and to the entire system, even when not specifically referenced.
- B. Obtain all required permits.
- C. All equipment and parts to be newly manufactured and never installed in any other operational system other than for factory test purposes.
- D. UL standards where test standards have been established.
 - 1. Equipment and materials which are not covered by UL Standards may be considered provided equipment and material is listed, labeled, certified or otherwise determined to meet safety requirements of a nationally recognized testing laboratory.
 - 2. Equipment of a class for which no nationally recognized testing laboratory accepts, certifies, lists, labels, or determines to be safe, will be considered if inspected or tested in accordance with national industrial standards, such as NEMA, or ANSI. Evidence of compliance shall include certified test reports and definitive product data.

- E. Equipment housings, conduits, and junction boxes exposed to weather (any location not in a conditioned environment) shall meet or exceed IP65 standards. Components that do not meet IP65 standards or better may be considered if implemented with supplemental environmental controls such as air conditioners and dehumidifiers.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Contractor must receive all equipment on-site. Owner will not receive, unload, or participate in the delivery of equipment to the site.
- B. Contractor is responsible for replacing any items damaged during shipping, by expedited means, at no additional cost to the Owner if required to maintain installation schedule.
- C. Coordinate designated storage/staging area(s) for PARCS equipment that has not been installed prior to shipping to site to ensure area is sufficient and available. Owner may provide temporary secured storage.
- D. It is the Contractor's responsibility to protect the equipment from theft and damage until final acceptance. This may include installation of fencing, locks, and any other security provision deemed necessary by Contractor. Should the stored equipment be stolen or damaged prior to final acceptance, replace the equipment at no additional cost to the Owner.
- E. Deliver equipment to site in manufacturer's original containers to prevent damage and marked for easy identification.

1.8 PROJECT/SITE CONDITIONS

- A. Environmental Conditions: Entire system and components warrantied to be unaffected by weather conditions typical to the local area (Detroit, MI) as well as the conditions listed below:
 - 1. Ambient Temperatures: -10°F to 120°F (with addition of solar loading)
 - 2. Humidity: 0% to 99% (non-condensing)
 - 3. Rain: Blowing rain with 80 mph gusts
 - 4. Dust: Accumulating and blowing dust and fine sand
- B. Entire system and components warrantied to be unaffected by non-direct lightning strikes, or similar types of power interference.
 - 1. Present solution for preventing power interference for Owner approval prior to implementation.
 - 2. Provide lightning protection through surge arrestors or earthen ground rods or a combination thereof for the PARCS.
 - 3. Determine, based upon the PARCS manufacturer's system requirements, the appropriate lightning protection method to use for the location where the equipment is installed.
 - 4. Provide equipment that is UL-approved for use as part of a labeled lightning protection system and marked in accordance with UL procedures.

- C. Any new islands or pads containing PARCS equipment must not be poured until stub ups and any necessary anchor bolts are properly placed and verified by the Contractor. Any conflicts with installation at a particular location must be resolved prior to pouring lanes and pads for PARCS equipment.

1.9 WARRANTY, SERVICE AND SUPPORT (INITIAL PERIOD)

- A. Warranty period on the PARCS starts upon notification from the Owner of Final System Acceptance.
- B. Warranty all parts, materials, and workmanship following Final System Acceptance for a period of 24 months (2 years). Inclusive of ALL costs (parts, labor, maintenance, software support, warranty repairs, Contractor travel time, Contractor expenses, etc.) incurred during the warranty period to be provided without additional cost to the Owner.
- C. Costs (time and material) for repair or parts replacement, components, etc., damaged or rendered unserviceable due to apparent and provable misuse, abuse, vandalism or negligence by Owner or the using public are excluded as a warranty requirement. Also excluded from the warranty are damages due to Acts of God. Contractor costs related to these non-warranty repairs can be invoiced to the Owner on a time and materials basis.
- D. Maintain all systems that are operating prior to starting the warranty period. Maintenance services to be defined within the Manufacturer's recommended maintenance procedures manual submitted as accepted by the Owner.
- E. Respond to service/maintenance requests during the Warranty Period:
 - 1. Respond to service/maintenance requests within thirty (30) minutes of the initial service request by the Owner within normal business hours. The intent is to acknowledge the request and begin the process of addressing the reported issue.
 - 2. Maintain a log of the request and actions to resolve the issue.
 - 3. Resolution of the situation within 24-hours after notification is required in all situations. A temporary solution is acceptable in the event replacement parts are not available in inventory.
 - 4. Factors beyond the control of the Contractor, such as unexpected delays in parts, accidents, severe weather, and unusual traffic, require thorough documentation to be submitted to the Owner the next business day. The Owner may grant relief for the service hour requirement after reviewing these factors.
- F. Emergency Maintenance Service during the Warranty Period: Conditions requiring emergency maintenance services by the Contractor are conditions in which a lane, PARCS device, or group of devices become unusable due to malfunction, failure, or damage and the condition cannot be remedied by Owner personnel.
 - 1. Provide three (3) methods of notification to be used for emergency contact information (ex: telephone, email, SMS text message).
 - 2. Acknowledge receipt of emergency service request within 60 minutes of notification.

3. Begin emergency repair service within four (4) hours of the emergency service request.
4. Resolution of the situation within 24-hours after notification. A temporary solution is acceptable in the event replacement parts are not available in inventory.
5. Factors beyond the control of the Contractor, such as unexpected delays in parts, accidents, severe weather, and unusual traffic, require thorough documentation to be submitted to the Owner the next business day. The Owner may grant relief for the service hour requirement after reviewing these factors.

G. Software Support during the Warranty Period:

1. Provide on-site and remote software support for PARCS and all 3rd party software applications.
2. Provide 24/7 hotline telephone software support.
3. Make available to the Owner normal PARCS software improvement releases (updates) when they become available at no additional cost to the Owner.
4. Provide all PARCS and operating system software patches and updates free of charge during the warranty period; however, the Owner reserves the option of implementing the updates or not. Provide documentation seven calendar days prior to all PARCS and operating system software modifications, patches, updates, and upgrades, that describes:
 - a. Patch/update release designation
 - b. Proposed date and time of implementation
 - c. Detailed description of what the patch/update accomplishes
 - d. Full disaster recovery procedures that return the system to its pre-patch/update condition
5. Coordinate the testing and implementation of all patches and updates with the Owner. PARCS Database and PARCS application software maintenance to be performed remotely or on-site as approved by the Owner.
6. Support upgrades to the PARCS application based on operating system patch and upgrade requirements. (For example, if the PARCS runs on a Microsoft operating system, patch the PARCS software according to the Microsoft patch and upgrade schedule without breaking any application. If Microsoft decommissions an operating system, the Contractor must be capable of releasing code compatible with next operating system upgrade prior to Microsoft ending support for current operating system.)
7. Provide corrective patches and upgrades in the event security vulnerability or system availability issues are discovered.

H. Preventive Maintenance Service during the Warranty Period:

1. Provide preventive maintenance services for all systems throughout the warranty period. Preventive maintenance procedures and frequencies to be defined within the Manufacturer's recommended maintenance procedures manual submitted with the Proposal as modified and accepted by the Owner.
2. Preventive maintenance services include but are not limited to inspection, testing, necessary adjustment, alignments, calibration, parts cleaning, battery

- replacement, communication system maintenance, server administration and database administration of the PARCS provided by the Contractor.
3. Perform all preventive maintenance at non-peak periods during regular business hours.

1.10 ADD ALTERNATES

- A. Owner has the right to accept or not accept any Add Alternate item.
- B. Post Warranty Maintenance Services and Support
 1. Include proposed add/alternate costs in the proposal to provide post-warranty maintenance services for the PARCS on an annual basis for eight (8) years following expiration of the warranty period with pricing valid for the Owner to purchase the Post-Warranty Maintenance Services through a service agreement between the Owner and Contractor.
 2. Modification/replacement of the single equipment island at Lot 34 – Ferry Street Lot. Work includes providing design modification drawings to replace the existing one lane island with a new island that allows for separate entry and exit lanes (dual lane control). Current operation is credential in with free out using one lane. New lanes will allow for all access and payment options.
 3. Modification of one entry/exit plaza at Lot 50 Athletic Lot. Work includes providing design modification drawings to improve turning movements into the lot. There are two lanes at this plaza, both reversible.
 4. Design, construct, and add new PARCS, including adding power and data at the following locations (see Exhibit A):
 - a. 400 Mack Avenue
 - b. Industry Innovative Center (I2C)
 - c. Lot 30 – Ball Field
 5. Addition of LPR cameras to parking lanes. Review each lane for potential location with minimal island modification. Preference for pre-capture to use the plate as the credential to activate the gate or post-capture. This will include developing layouts, design, modifying or adding islands, and equipment to add this functionality. Price to be provided by location. Use exiting islands to maximum extent possible.
 6. VPMS in conjunction with Alternate 5 (LPR), with gates, to allow the plate to act as the credential in-lieu of the AVI. Locations with Permit and Public parking will include the ability to limit parking to permit holders with a valid plate or WSU ID credential as a back-up.
 7. Provide VMS, including hardware, software, installation, data, and power. These will be used to provide facility status and use at gated locations, replacing the exiting status signs.

PART 2 - PRODUCTS

2.1 PAYMENT CARDS

- A. All aspects of the PARCS, including but not limited to, hardware, software, configuration settings, processes (both manual and automated), policies, procedures, reports, network architecture, data storage schemes and other products for the PARCS must be compliant with all applicable Payment Card Industry (PCI) Security Standards Council standards, Information Supplements and Guidelines (www.pcisecuritystandards.org) published or in force at the time of installation, so that the Owner can certify the system as PCI Compliant. As part of demonstrating compliance with the PCI security standards, the requirement or use of a compensating control (as defined by the PCI Security Standards Council) shall only be permitted with written approval of the Owner.
- B. Coordinate with Owner on clearinghouse and/or gateways to be used for authorization.
- C. Provide authorization for the following brands/types of payment cards:
 - 1. Visa
 - 2. MasterCard
 - 3. American Express
 - 4. Discover
 - 5. Bank-Issued Debit Cards with any of the above card brand affiliations, accepted as a credit card.
- D. Provide a PCI-P2PE validated system for handling card-present transactions.
- E. Support EMV Chip and Contactless reading of payment cards for card-present transactions.
- F. Support NFC payments including Apple Pay, Google Pay, and Samsung Pay mobile device-based payments.
- G. Support PCI-compliant storage of up to 1,000 transactions in an offline state.
- H. Provide a system using tokenization by a current validated PCI Level 1 Service Provider for handling card-not-present transactions.
- I. Provide, test and install quarterly security updates for system components in the cardholder data environment, such as operating system, application software, firmware, etc. related to payment cards during Warranty Period and any optional Extended Service Coverage selected by Owner.
- J. Payment card processing time of no greater than ten (10) seconds.
- K. Support Payment Card as an Access Credential
 - 1. Ability to activate/deactivate via server.
 - 2. Perform all functions without compromising PCI-DSS compliance.

3. Provide a PCI compliant method to search for entry date/time for lost or unreadable payment cards used to enter the facility. The payment card in/out functionality shall provide a PCI compliant method to find and reset a payment card status in the event of passback sequencing.
4. Provide the operational sequences as specified elsewhere in this document.

2.2 SOFTWARE

- A. Provide all software and software licensing required by the system to achieve total system performance.
- B. Use proven, off-the-shelf software (i.e., software already manufactured and available for delivery) to the greatest extent possible.
- C. Provide open APIs for dissemination to third party websites and applications. Such API's must be open, documented and non-proprietary using industry-standard approaches such as REST or Websocket. Data access via the API is to be available to Owner at no additional charge.
- D. Unless specified elsewhere, provide the latest available software version at the time of system implementation for all third-party software, including operating systems and database software.
- E. Make any necessary modifications, and provide documentation of such modifications, to existing third party software programs that the Contractor adopts for the system. Should the Contractor and the software manufacturer be separate entities, the software modifications will not preclude the purchase of a standard maintenance and service contract from the manufacturer.
- F. Purchase software maintenance for all third-party software naming the Owner as the software Owner and contact. Provide maintenance agreements throughout the duration of the warranty period.
- G. Provide any necessary perpetual licenses and/or authorization for all PARCS related software including, but not limited to, operating systems, application software, development language, peripheral software, and PARCS hardware diagnostic software. If available, provide a site license to the Owner, meaning usage of the license is unrestricted, regardless of the physical locations where the software may be used.
- H. If any of the software is cloud-based and provided on a Software as a Service (SaaS) basis, Contractor is to document in the Proposal their SaaS licensing terms and conditions, and the options and costs for a multi-year license for terms ranging from 2 (two) up to 10 (ten) years in length. Furthermore, if any component of the system is cloud-based and provided on a SaaS basis, Contractor is to describe in their Proposal what occurs in terms of system and feature functionality if Owner chooses not to renew SaaS-based licensing.
- I. Provide licenses that cover future updates as required by these specifications.

- J. Deliver original ISO, USB Stick, DVDs/software or product keys and software license documentation with Owner listed prior to commencing system testing.
- K. Database Management System
 - 1. Use a specified commercial off-the-shelf ODBC-compliant relational database software program to provide complete operation of the PARCS. This database software is required to be one of the following, as these products are known to support appropriate database integrity, resiliency and API features: Oracle Database, Oracle MySQL, Microsoft SQL server, IBM DB2, or PostgreSQL.
 - 2. Provide database schema to Owner.
 - 3. Provide database access credentials to Owner.
- L. Operating System Platform
 - 1. Use a commercial off-the-shelf operating system to provide complete operation of the PARCS.
 - 2. Operating system software consisting of software to support system setup, system operation, routine hard drive backups, diagnostics, and other maintenance routines.
 - 3. Upgrade the PARCS application to operate on the most current operating system upon commercial release of a new operating system version. Upon completion of successful Contractor testing, recommend implementation of the patch. Implementation subject to the Owner's approval.
- M. PARCS Application Software:
 - 1. Install and configure all application software and firmware required by the PARCS with all software licenses registered to the Owner.
 - 2. Provides complete operation of the PARCS and includes the database management system.
 - 3. Allows for future upgrade and expansion of the PARCS.
 - 4. Browser-based and web-browser enabled such that the PARCS is accessible from any Owner workstation connected to their network.
 - 5. Operates across dedicated PARCS Local Area Network (LAN), accessible with proper user ID and password, on all workstations authorized to access the PARCS software modules.
 - 6. Allow multiple groups and roles that govern individual access to the system. The assignment of a group/role will control access to the various modules of the PARCS, and if the access is update or view only.
 - 7. Access rights to the system for the various groups and roles will be defined during implementation.
 - 8. PARCS application software to provide the following:
 - a. Manage, display, and report all PARCS-related activity as outlined in this functional specification.
 - b. GUI that is intuitive and user friendly.
 - c. Automatic detection and reporting of fault conditions and equipment failures. Categorize fault condition by severity and display alarm notification on the system GUI as well as notify designated Owner personnel via email and/or

- text message for any individual fault condition, category of fault, or Owner-selected group of faults.
- d. Reporting as outlined in the Reporting section.
 - e. Real-time monitoring of all PARCS field devices
 - f. Central access and control of field devices for users with the appropriate authorization to issue remote commands from system workstations to the field devices such as raising and lowering the BG; rebooting field devices; putting field devices in or out of service; remote transaction processing; etc.
 - g. Audit logging for the use of central controls within the PARCS database by user ID, time, device controlled, and action taken. Audit logging to include all creation, deletion and modification of the following items:
 - 1) Rates and rate tables
 - 2) Validations
 - 3) Contract parker configuration
 - 4) User access to system
 - 5) Field device configuration
 - 6) Field device actions, such as manual gate raise
 - 7) Parking facility definition within the system
 - 8) Parking facility occupancy and capacity
 - 9) End-user messaging
 - 10) Credit card acceptance configuration
 - 11) Custom reports
 - 12) Audit log
 - h. Configurable parking rates, grace periods, and time increment changes from system workstations. Configuration access to be restricted to Owner designated users with proper authorization.
 - i. Remote communication with all devices in real-time for a general broadcast of information (e.g. rate changes or time increment changes) or software update and an ability to communicate to a single device to upload information or software. It shall be possible to remotely shutdown a field device's operating system, upload updates and remotely restart the field device.
 - j. Correct calculation and processing of parking fees during a transition:
 - 1) from daylight savings time to standard time, and vice versa
 - 2) at the beginning of March during leap years (e.g., when there is a February 29th).
 - 3) from one rate to another (e.g., rate has an effective date so that Customers are charged a parking fee based upon the parking fee that was current at the entry date and time, not the exit date and time, allow the new rate to be either less than or greater than the new rate).
 - k. Programmable rate structure to establish variable rates based upon the time of day, day of week, and special events.
 - l. Programmable rate structure to establish daily/weekly/monthly maximum fees, grace times, and complimentary periods.
 - m. Programmable rate structure to allow configuration of the tax rate applied to parking fees.

- n. Create system generated alarms – generation of alarms for user selectable event type. Alarm Hierarchy shall be completely configurable so the Owner can adjust priority of alarms, audible tones, where the alarms are sent, etc. Initial Alarm Hierarchy shall be coordinated with the Owner during implementation.
- o. Ability to export all query results and reports to multiple formats including Portable Document Format (PDF), comma-separated-value, and Microsoft Excel®.

N. Reporting

1. Available online and on demand for Owner personnel who have proper password access.
2. Viewable, printable, and exportable from the GUI.
3. Data compiled in an ODBC compliant database with the ability to prepare custom reports using the PARCS data including Microsoft Excel, at a minimum, via a comma-separated-value file format.
4. Provide the Contractor's PARCS standard reports including report descriptions, selectable data fields, and report layouts for all standard reports.
5. Coordinate with the Owner as required during the system design to address specific reporting needs of the Owner. At a minimum, reports provided shall include:
 - a. Detailed Revenue and Non-Revenue Transactions Reports – Reports of transactions processed through the PARCS by user selectable parameters including user type (ticketed customer, validation, pre-paid, parking integrator, Access Credential, etc.), date/time range, and by PARCS device.
 - b. Detailed and Summary Revenue Reports for daily, weekly, and monthly PARCS activity.
 - c. Payment Card Reports – Reports of payment card transactions by user selectable parameters including date/time range, payment card type, transactions type (valid online transaction, declined transactions, offline transactions, etc.)
 - d. Outstanding Ticket Reports – Report of parking tickets that have been issued but have not been processed or exited from the system.
 - e. Validation Report – Report of validations issued, amount of validations, and when the validation was used, by user selectable parameters.
 - f. System Event Reports – Reports for system generated events by user selectable parameters including PARCS device and date/time range.
 - g. Occupancy Reports
 - h. ACS reports:
 - 1) Activity Usage Reports – Provide a chronological list of ACS usage, including date, time, credential, and location of entries and exits; capable of being sorted by any field.
 - 2) Count Reports – Monitor and report counts of ACS vehicles present on an hourly basis by group, access level.
 - 3) Percentage of Occupancy – For selectable times during 24-hour period for all categories of ACS parkers.

- 4) In/Out Status Report: Shows status of all ACS cards at any given time, sortable by name/card #/status.
 - 5) Active User Report – A listing of all active users that have access to the facility.
 - 6) Activity Exceptions Report – A field-sortable listing of all activity exceptions to include at a minimum hard-passback, soft-passback, shared account, debit card, hotel quest pass and nesting violations.
 - 7) User Changes Report – Provide report of changes to user accounts to include at a minimum debit card rate changes and status changes (e.g. card placed in neutral with no charges applied at exit).
6. Provide ten (10) custom reports with the system to be defined with the Owner. These reports will be available for development at any time after award of the project through the first two years of installation after final acceptance of the system.

2.3 ACCESS CONTROL SYSTEM (ACS)

- A. Integrate with the existing campus CBORD access control system. The current ACS is CBORD, CS Gold, which is undergoing a systemwide strategic upgrade. This system allows access to authorized persons using the campus One Card as either a Permit to access the parking or as a pay per use access with charges billed back to the users account.
1. The parking solution provided must also be capable of migrating to the new campus access control system to be selected under a separate project. The new system will be an enterprise grade platform.
 - a. The parking solution shall be directly integrated with the new platform without the need for custom integrations or additional licensing. The direct integration shall leverage the use of a single database of users and payment accounts.
 - b. The new campus access control system will utilize high frequency prox, BLE, and NFC reader technology. The parking solutions shall be capable of supporting the same technologies, including the future use of mobile credentials.
 - c. The Basis of Design of the new access control system under consideration is Genetec Security Center or similar enterprise grade platform.
- B. Provide an on-line, computer-based access control system for those authorized by Owner to have access to parking facility without being processed through ticket system, for example; a permit parker with authorization using the new ACS.
1. For pre-authorized users (such as permit parkers, students, faculty, or registered visitors) the parking system shall communicate directly with the access control system to request confirmation of authorization to access the parking facility. The ACS server shall make the decision of whether or not to allow access, sending a signal to the parking system to open the entry barrier or deny access. The parking system is not required to make any decisions except to respond to an input from the access control system to either open or deny entry.

2. For non-pre-authorized users (such as same-day general public users) the parking system shall communicate directly with the payment system and upon completion of transaction (approved or rejected access), log the activity (attempted entry or successful entry with location and timestamp) in the access control system. No payment information is to be transferred to the access control system.
- C. Distributive, networked or centralized processing may be employed, so long as required multi-lane control features such as anti-passback, occupancy and activity tracking are maintained.
1. Authorized vehicles requiring free and fast ingress and egress to parking facilities.
 2. Permit parkers who have a contractual agreement and/or will prepay or prearrange billing for parking on a monthly basis.
 3. Less frequent parkers, who are charged per use using the One Card with fees charged to their account.
- D. Individually recognize and process a minimum of twenty thousand (20,000) ACS users at all reader locations based on current enrollment. Users may have more than one credential.
- E. Provide anti-pass back control. With this feature, users enter and exit in proper sequence (i.e., entry, exit, entry, exit, etc.).
1. Selectable option to allow either "hard" (out of sequence user is rejected and an alarm is generated) or "soft" mode (out of sequence user is allowed access but reported.) Alarms shall also be sent to the access control system.
 2. In both hard and soft modes, each out of sequence event is reported as an exception transaction in daily ACS access log.
 3. Password protected "resynchronization" of all users to one access before return to anti-passback control.
- F. Link users to each other to allow one entity to be identified with and/or pay for a group of users. Provide up to one hundred (100) such user groups.
- G. Ability to group ACS credentials and limit access to a preset maximum number of vehicles in facility at any given time, and/or allow and track overages to be invoiced separately.
- H. Credential Technology
1. Parking system shall be compatible with the credential technology currently being used at WSU and with that being planned as part of their ACS upgrade plan.
 - a. The current credential technology utilized includes low frequency proximity cards and barcode stickers.
 - b. The new planned credential technology includes high frequency proximity and BLE/NFC for mobile credentials.
 - c. Additional long range credential technologies may be required.
 2. Parking system shall be capable of integrating with License Plate Recognition camera technology using the license plate as a credential.

I. Access Control Reader Technology:

1. Parking system shall utilize a single card reader to support both the existing and future planned credential technologies.

J. Nesting feature:

1. Ability to require parkers that are assigned to park in a specific level or area (nest area) to use ACS credential to enter and exit nest area in order to exit facility.
2. Required sequence: In facility, in nest, out of nest, out of facility.

K. Programming requirements:

1. Issue and reprogram ID devices.
2. Allow authorized supervisor to create, store, send and receive user programming from ACS readers. Password protected access to programming, with multiple levels of access, to any and all information regarding specific blocks and/or suites of cards.
 - a. Provide at least twenty (20) programmable record fields for each person issued an ACS credential and at least twelve (12) programmable record fields for each user's vehicle(s).
 - b. Allow specific parker record files to be retrieved, displayed and/or printed based on selectable criteria, such as current ACS status, access group, access level, and/or ID numbers (except data that is password protected).
 - c. Allow searching, sorting and printing of database by any field for routine and special forms such as invoices or mass-mailings.
 - d. Consolidating and retaining data to allow for report generation (see "reports"). Capable of reporting the collection of fees from parkers on monthly prepayment, decrementing, end of month billing, and/or credit card basis.
3. Provide for posting of payments and automatic lockout of ACS users within programmable grace period after expiration of a prepaid account.

L. Invoicing Package

1. Provide invoicing for ACS, validation accounts, events, and other parking related items.
2. Include ACS ID device number(s), validations, events, or other related parking and transportation activities, including account number(s), fee's, and monthly rate associated for each ACS ID device, validation account, event, or other parking related activity being invoiced.
3. Provide a monthly report listing total number invoiced charges, including validations, events, or other parking and transportation activity, including ACS ID device numbers invoiced and total dollar amount invoiced.
4. Provide an "on-file" credit card or ACH billing interface to allow automated credit card billing option.
5. Provide a password protected customer interface for customer registration, editing personal information, making payments and viewing payment history.

6. Provide password protected credit card file in compliance with credit card data security requirements of Payment Card Industry (PCI).
7. Include an Accounts Receivable package for all normal accounting functions associated with ACS revenue:
 - a. Invoice report.
 - b. Cash receipts electronic journal.
 - c. Accounts receivable ledger with supporting subsidiary ledgers for each account.
 - d. Accounts receivable aging report for selectable time periods.
 - e. Account history reports, indicating invoices and payments by customer.
 - f. General ledger, adjustment ledgers, general ledger interface for Owner or Owner Representative's mainframe and all invoicing features included in invoicing package.
 - g. Provide automatic on-line real-time monitoring of ACS usage with DVD/CD-ROM storage of transaction data for audit and analytic purposes.
 - h. Monitor and report all alarm conditions.
 - i. Password protection and Daily Log reports for all administrative actions.

2.4 POWER

- A. Examine and accept existing power to the field locations. Should the proposed system require additional power infrastructure, the Contractor must identify location(s) in their proposal and provide cost for installing the required power infrastructure.
- B. Furnish and install all additional power conduits, pull cords, junction boxes, and cabling necessary to support the PARCS, per the PARCS manufacturer's requirements.
- C. Provide and install any power grounding and power conditioning that is required for the operation of the system.
- D. The Contractor is responsible for furnishing, installing, terminating and testing any cable necessary to provide power from the local power source to the field devices.

2.5 COMMUNICATIONS

- A. Unless specified elsewhere, contractor to provide and install all required communication cabling from network connection cabinets to equipment. All such cabling is to be CAT6 or fiber optic, in accordance with applicable IEEE/ANSI industry standards and distances to be spanned.
- B. Follow WSU C&IT Communications Standards, located:
<https://tech.wayne.edu/docs/wsucommunicationsstandards.pdf>
- C. Data connection provided at various locations near each equipment island or plaza.

- D. Provide and install all additional communication equipment, conduits, pull cords, junction boxes, and cabling necessary to support the PARCS, per the PARCS manufacturer's specifications.
- E. The Contractor is responsible for furnishing, installing, polishing, terminating and testing any cable necessary to provide communication from the field devices to fiber termination points in the vicinity of each PARCS plaza to gain access to the PARCS servers.
- F. Provide and install all other communication switches, communication enclosures, and cabling at each lane to provide full PARCS system functionality.
- G. Configure all field component communication such that no single point of failure of a device shall cause an operational failure of surrounding devices.
- H. Every PARCS device and system component must operate independently in the event of a network communications failure or interruption. Each device requires buffering of data for a minimum of 2,000 transactions. System will continue to operate in the off-line mode and store the buffered data until the data connection is restored. Upon restoration of the data connection, all stored data will automatically be uploaded to the server or cloud. In the event some transactions are not successfully uploaded, send an alert, and continue to store the transactions locally until successful uploading has occurred.

2.6 EQUIPMENT AND SUBSYSTEMS

- A. Provide newly manufactured equipment and associated materials for the PARCS.
- B. All equipment performing a like function and of the same part number are to be fully interchangeable without the requirement for physical modifications.
- C. Any network switch included in the project must be WSU C&IT's standard of Aruba Network switches. Specific models must be approved by WSU C&IT Edge Network Group.
- D. Computer System, Application, and Data Servers:
 - 1. Identify, document, and gain Owner's approval on a mechanism to ensure that Owner has secure, complete, unrestricted access to the cloud-based servers. There are to be no restrictions on Owner's capability to establish or change passwords or access levels.
 - 2. All on-site servers to reside within the C&IT data center and be rack mountable. Tower computers or other non-mounted equipment will not be acceptable in the server rack.
 - 3. Contractor to provide all servers, storage, and core switching, and workstations with UPS protection required to operate the PARCS, subject to approval by Owner.
 - 4. All equipment to have sufficient processing power, memory capacity, and communication bandwidth to meet functional performance demands of PARCS software without loss of responsiveness to user input or slowing of any end node device or workstation.

5. Ensure UPS protection and battery back-up for on-site components for a minimum of one-hour.
 6. Owner reserves the right to procure and provide servers, storage, core switching, and workstations required to operate the PARCS. Contractor to provide minimum requirements.
 7. Ability to operate in a virtual environment.
 8. Use TCP/IP for data communication.
 9. Provide centralized management of the PARCS.
 10. PARCS servers to contain all PARCS application and database software that is associated with PARCS operation, data storage, and reports.
 11. Install and configure all necessary software on the servers with all required system software licenses registered to the Owner.
 12. Configure such that the following features and functionalities are attainable:
 - a. Maintain on-line data of all PARCS data. All data shall be readily accessible without any delay in processing.
 - b. Provide fault tolerance such that no server-level single point of failure causes disruption to the PARCS or corruption of PARCS data.
 - c. Long Term Storage Media – Ability to archive all summary data with simple retrieval capability.
 13. All PARCS data is considered to be the sole intellectual property of the Owner. Usage of this data by Contractor or by the PARCS vendor for any purpose other than to support, test or repair Owner's system requires prior written authorization from Owner. If such data is stored offsite or in the cloud under a term-based SaaS mechanism and Owner decides not to renew the SaaS agreement, Contractor is to send all PARCS data gathered over the lifetime of the system (i.e. from system activation date through the SaaS agreement termination date) to the Owner in an Excel format and is to subsequently delete such data from any offsite servers or cloud instances.
- E. Entry Station (ENS) (Type A)
1. Provide and install ENS) at the public entry lanes, equipped with the following components and capabilities:
 - a. Access door with appropriate tamper-resistant locking system.
 - b. Push button ticket dispenser (TD) for locations that issue tickets. For locations that do not issue tickets, remove this functionality.
 - c. Payment card capabilities, including NFC reader as specified in Payment Cards section.
 - d. Credit card in capable.
 - e. Proximity Card Reader capable of reading WSU One Card for both access and bill back parking.
 - f. Barcode reader integrated into the face of the ENS capable of reading 1D and 2D barcodes including pre-printed coupons/validations and electronic barcodes displayed on mobile devices.
 - g. Push button intercom integrated into the face of the ENS.
 - h. Issues one time and date stamped barcode parking ticket for each ticketed entry transaction where applicable.

- i. Unique ENS identifier encoded and printed on each ticket
 - j. Machine readable ticket encoding that is compatible with all other PARCS components.
 - k. Minimum ticket stock capacity of 5,000 tickets.
 - l. Retraction bin for retaining retracted tickets.
 - m. Color display with minimum 5" display.
 - n. Provide instructional and directional language in English as a default, with options to select alternate languages. Detail what languages are available to be added as secondary options.
 - o. Use visual instructions for customers to understand the sequence of events to complete a transaction.
 - p. Stand-alone functionality that allows the ENS to operate independently when there is a temporary network communication failure, regardless of where the communication interruption occurs. Alarm for ENS offline condition to be displayed on the PARCS GUI.
 - q. Ticket stock low alarm generated on the PARCS GUI.
 - r. Ticket stock out alarm generated on the PARCS GUI.
 - s. Interfaces with barrier gate and vehicle detectors in the respective lanes.
2. Entry Procedures:
- a. Normal Entry – Ticket Issuing (for future use)
 - 1) Upon activation of the vehicle detector, ENS is armed and displays instructions to “push button for ticket”, “scan credit card” or another Owner approved message.
 - 2) After button is pushed, the parking ticket is issued within 3 seconds
 - 3) After customer removes the ticket the ENS sends a signal to the barrier gate and the barrier gate rises.
 - 4) After vehicle crosses over the closing vehicle detection loop the gate closes, and the transaction data is sent to the PARCS server.
 - b. Normal Entry – Payment Card In
 - 1) Upon activation of the vehicle detector, ENS is armed and displays instructions to “push button for ticket”, or another Owner approved message.
 - 2) Customer inserts/swipes/contacts their payment card using the payment card reader and the ENS verifies that it is a valid card.
 - 3) After payment card is verified the ENS sends a signal to the barrier gate and the barrier gate rises.
 - 4) After vehicle crosses over the closing vehicle detection loop the gate closes, and the transaction data is sent to the PARCS server.
 - c. Normal Entry – Barcode In
 - 1) Upon activation of the vehicle detector, ENS is armed and displays instructions to “push button for ticket”, or another Owner approved message.

- 2) Customer presents valid barcode (either on smart phone or printed) allowing pre-authorized entry to parking and the ENS verifies that it is a valid barcode.
- 3) After barcode is verified the ENS sends a signal to the barrier gate and the barrier gate rises.
- 4) After vehicle crosses over the closing vehicle detection loop the gate closes, and the transaction data is sent to the PARCS server.

d. Back-out Ticket Taken

- 1) After ticket is taken by the customer and gate raises, the customer backs out of the entrance without entering the facility.
- 2) Alarm is sent to the PARCS GUI and recorded in the PARCS database.
- 3) Ticket is invalidated in the system.
- 4) Gate automatically closes after a user configurable timeout.

e. Back-out Ticket Not Taken

- 1) After ticket is issued but before it is taken by the customer, the customer backs out of the entry lane.
- 2) Ticket is retracted by the ENS, invalidated in the PARCS, and placed in the ENS retraction bin.

f. Normal Entry – ACS

- 1) Upon activation of the vehicle detector, ACS reader is armed.
- 2) ACS reader identifies ACS credential device in lane and searches for authorization through ACS Controller. If authorized, a signal is sent to open the gate.
- 3) After facility is closed, the ACS reader shall be capable of operating roll down gates, provided by others, in addition to the lane gate.
- 4) After vehicle crosses over the closing vehicle detection loop the gate closes, and the transaction data is sent to the PARCS server.

F. Exit Station (EXS) (Type A)

1. Access door with appropriate tamper-resistant locking system.
2. Payment card capabilities as defined in the Payment Card section, including NFC card reader.
3. Capable of credit card out payment.
4. Ticket verifier for locations that issue tickets.
5. Barcode reader integrated into the face of the EXS capable of reading 1D and 2D barcodes including reading pre-printed coupons/validations and electronic barcodes displayed on mobile devices.
6. Push button intercom integrated into the face of the EXS.
7. Machine readable ticket encoding that is compatible with all other PARCS components.

8. Reads and verifies pre-paid tickets.
9. Reads and verifies validated tickets.
10. Retraction bin for retaining retracted tickets.
11. Color display with minimum 5" display.
12. Provide instructional and directional language in English as a default, with options to select alternate languages. Detail what languages are available to be added as secondary options.
13. Use visual instructions for customers to understand the sequence of events to complete a transaction.
14. Stand-alone functionality that allows the EXS to operate independently when there is a temporary network communication failure, regardless of where the communication interruption occurs. Alarm for EXS offline condition to be displayed on the PARCS GUI.
15. Receipt printer that is capable of producing receipts for transactions.
 - a. Upon successful payment, print a receipt that includes:
 - 1) Owner approved header
 - 2) Transaction number
 - 3) Lane or equipment number
 - 4) Entry date/time and Exit date/time
 - 5) Parking fee
 - 6) Amount of tax for the parking fee (if applicable)
 - 7) Other fees as applicable
 - 8) Total fee paid
 - 9) Payment type
 - 10) Payment card type
 - 11) Last four digits of payment card number
 - b. User configurable for receipts to be auto issue or by request.
 - c. Receipts to be FACTA-compliant.
 - d. Receipt stock low alarm generated on the PARCS GUI.
 - e. Receipt stock out alarm generated on the PARCS GUI.
16. Interfaces with barrier gates and vehicle detectors in the respective lanes.
17. Electronic journal tape record of transactional information for each transaction processed at device. Journal record to be printable from any system workstation. Transactional information on the electronic journal includes:
 - a. Date and time of transaction
 - b. PARCS device number
 - c. Sequential transaction number
 - d. Ticket number
 - e. Entry date/time and exit date/time
 - f. Transaction fee
 - g. Tax amount
 - h. Total fee
 - i. For payment card transactions, include:
 - 1) Payment card type

- 2) Last 4 digits of the payment card
- 3) Payment card authorization code

18. EXS Exit Procedures:

a. Normal Exit – Pre-paid Ticket. (for future use)

- 1) Upon activation of the EXS vehicle detector, EXS is armed and displays instructions to “please insert ticket”, or another Owner approved message.
- 2) After the pre-paid ticket is inserted, the ticket information is verified and the ticket is retracted into the retraction bin.
- 3) After the ticket is retracted the EXS sends a signal to the barrier gate and the barrier gate rises.
- 4) After vehicle crosses over the closing vehicle detection loop the gate closes and the transaction data is sent to the PARCS server.

b. Normal Exit – Validated Ticket

- 1) Upon activation of the EXS vehicle detector, EXS is armed and displays instructions to “please insert ticket”, or another Owner approved message.
- 2) After the validated ticket is inserted or scanned, the validation is verified and the ticket is retracted into the retraction bin.
- 3) EXS sends a signal to the barrier gate and the barrier gate rises.
- 4) After vehicle crosses over the closing vehicle detection loop the gate closes and the transaction data is sent to the PARCS server.

c. Normal Exit – Unpaid Ticket

- 1) Upon activation of the EXS vehicle detector, EXS is armed and displays instructions to “please insert ticket”, or another Owner approved message.
- 2) After unpaid ticket is inserted, EXS calculates the appropriate parking fee and displays the fee due with instructions to insert payment card.
- 3) After the payment card is presented, the PARCS performs payment card authorization and the EXS display shows the message “Processing”, or another Owner approved message.
- 4) Once payment is obtained, and if payment card reader is an insert-style reader, the EXS displays instructions to remove payment card.
- 5) Card is removed and the EXS produces a receipt.
- 6) EXS displays instructions to remove receipt.
- 7) After customer removes the receipt the EXS sends a signal to the barrier gate and the barrier gate rises.
- 8) After vehicle crosses over the closing vehicle detection loop the gate closes and the transaction data is sent to the PARCS server.

d. Normal Exit – Payment Card Out

- 1) Upon activation of the EXS vehicle detector, EXS is armed and displays instructions to “please insert ticket”, or another Owner approved message.
 - 2) After payment card used at entry is inserted/swiped/contacted, EXS calculates the appropriate parking fee, the PARCS performs payment card authorization, and the EXS display shows the message “Processing”, or other Owner approved message.
 - 3) Once payment is obtained, and if payment card reader is insert-style, the EXS displays instructions to remove payment card.
 - 4) If inserted, payment card is removed
 - 5) EXS produces a receipt and displays instructions to remove receipt.
 - 6) After customer removes the receipt the EXS sends a signal to the barrier gate and the barrier gate rises.
 - 7) After vehicle crosses over the closing vehicle detection loop the gate closes and the transaction data is sent to the PARCS server.
- e. Normal Exit – Barcode Out
- 1) Upon activation of the vehicle detector, EXS is armed and displays instructions to “please insert ticket”, or another Owner approved message.
 - 2) Customer presents valid barcode (either on smart phone or printed) allowing pre-authorized exit to parking and the EXS verifies that it is a valid barcode.
 - 3) After barcode is verified the EXS sends a signal to the barrier gate and the barrier gate rises.
 - 4) After vehicle crosses over the closing vehicle detection loop the gate closes, and the transaction data is sent to the PARCS server.
- f. Invalid Payment Card Presented for Payment
- 1) After the parking fee is displayed, an invalid payment card is presented and the display shows the fee due and the appropriate message while processing.
 - 2) Once authorization is declined, the payment card is returned and the message “Card Not Accepted”, or other Owner approved message, is displayed along with the fee due.
 - 3) Once the customer presents a valid payment card for payment, the transaction continues as a normal exit transaction.
- g. Lost Ticket Transaction
- 1) The customer pushes the intercom button and informs the operator that they have lost their ticket.
 - 2) The operator activates a lost ticket transaction from the workstation. The correct fee is calculated and displayed on the EXS and the transaction continues as a normal exit transaction.
 - 3) An exception ticket is generated for the lost ticket and retained for audit purposes.

h. Unreadable Ticket Transaction

- 1) Ticket is inserted into the ticket verifier and the ticket cannot be read and is returned through the ticket slot. The message "Ticket Unreadable", or other Owner approved message, is displayed.
- 2) The customer pushes the intercom button and informs the operator that they have an issue with their ticket.
- 3) The operator activates a lost ticket transaction from the workstation. The correct fee is calculated and displayed on the EXS and the transaction continues as a normal exit transaction.
- 4) An exception ticket is generated for the lost ticket and retained for audit purposes.

i. Normal Exit – ACS

- 1) Upon activation of the vehicle detector, ACS reader is armed.
- 2) ACS reader identifies ACS credential device in lane and searches for authorization through ACS Controller. If authorized, a signal is sent to open the gate.
- 3) After facility is closed, the ACS reader shall be capable of operating roll down gates, provided by others, in addition to the lane gate.
- 4) After vehicle crosses over the closing vehicle detection loop the gate closes, and the transaction data is sent to the PARCS server.

G. Intercom Subsystem

1. Provide and install a video enabled intercom system for two-way communication between the PARCS field devices at all entry and exit lanes, to a centralized location designated by the Owner.
2. Fully digital, microprocessor based, modular design using VoIP (Voice over Internet Protocol).
3. Programming server for all intercom features performed through networked workstation or from staff intercom station.
4. Programmed configuration of intercom stations and system features stored in non-volatile memory.
5. System includes all software and hardware required for programming system, including:
 - a. Individually programmable volume control for each intercom station.
 - b. Substations programmed to call staff intercom station.
 - c. Call forwarding feature for individual stations or all stations to re-direct calls to another designated staff intercom station or designated phone number, including mobile phone.
6. Staff intercom station desktop model with full color LED display and noise cancelling microphone designed for high-noise environment. Required features:

- a. Provide full-duplex hands-free conversation with any other selected individual station or combination of stations in system.
 - b. Integrated amplifier and loudspeaker.
 - c. Firmware/feature upgrades available via download through intercom server with no local modification on station required.
 - d. High sensitive microphone to provide clear conversation from a minimum range of 5 ft.
 - e. Intercom station directory panel with direct access, pre-programmable function menus, selectable language, and adjustable display contrast.
 - f. "Handset function" enabling user to switch from loud-speaking microphone operation to handset mode.
7. PARCS field device intercom substation requirements:
- a. Integrated pinhole camera activated when intercom engaged. Video feed available to staff intercom station(s).
 - b. Microphone, loudspeaker, and in-use LED all housed in one unit with configurable front pushbutton control.
 - c. DSP technology to provide full speaker/microphone supervision and fully adjustable (volume/timing threshold programmable via intercom server) audio monitoring.

H. Barrier Gate (BG)

1. Provide and install Barrier Gates (BG) at all entry and exit lanes, and nested areas.
2. All gates referenced in this specification section shall contain the following:
 - a. Bottom of arm padded.
 - b. Electronically controlled rebound feature.
 - c. Typical gate arm and length of 10 feet, determined by lane.
 - d. LED light strip for gates with variable colors based on gate action/position.
 - e. Single piece gate arm or articulated as required by height limitations
3. BG shall have enough power/resistance to ensure they cannot manually be forced open.
4. Gate controllers with the following features and functionalities:
 - a. Microprocessor controlled and communication of gate status and functions to the PARCS workstations.
 - b. Directional logic with electronic outputs to alarms, counters and to report atypical lane activity to PARCS.
 - c. Ability to test gate operability and controller programming on-site without use of special diagnostic equipment.
 - d. "AUTO-MANUAL" switch, and "ON-OFF" switch for gate.
 - e. Contains power supplies, dust-proof relays, and other circuit components to control gate.
 - f. Receive inputs from the ENS, EXS, or other lane devices and open after receiving the appropriate signal and close after the vehicle passes over the closing loop.

- g. Receive commands from the PARCS workstations for remote opening and closing of the BG.
- 5. Gates installed at all lanes shall fail to either the closed or open position in an event there is a power failure and the UPS is no longer able to provide sufficient power to operate the lane based Owners preference.
- I. Control Gate Restrictions:
 - 1. Provide signage warning and prohibiting pedestrians and motorcycles from utilizing control gate as a means of ingress or egress to the facility.
 - 2. Locate along approach route of the automated gate and/or affix to both sides of the control gate arm.
 - 3. Incorporate both text and graphics to convey the hazards of ignoring.
- J. Vehicle Detection Device
 - 1. Detect vehicular presence, legal entry, legal exit, illegal exit, illegal entry, and back-out.
 - 2. Each public entry and exit lane contains two or three vehicle detection loops.
 - 3. Loop detectors shall be dual channel detectors.
 - 4. Provide two channel pulse and presence outputs.
 - 5. Provide separate, momentary contact closures upon detection of a vehicle, along with continuous contact closures during the period that the vehicle is detected.
 - 6. Loop detectors shall contain two fully separate, self-tuning, vehicle loop detectors and directional logic circuitry.
 - 7. Incorporate a sensitive tailgate recognition system capable of resolving two automobiles within six inches of each other on a standard sized loop.
 - 8. Loop detectors shall each have adjustable sensitivity modes.
 - 9. Different sensitivity settings shall allow vehicles of varying height and size to be properly detected.
 - 10. Loop detectors shall be fully microprocessor-based.
 - 11. Loop detectors shall generate two loop frequencies. No two frequencies shall be the same to minimize the possibility of detector crosstalk or interference between two detector loops mounted within close proximity. Detectors generating an identical frequency are unacceptable.
- K. Inductive Loops
 - 1. Either test and agree to warrant existing detection loops or replace with pre-formed vehicle detection loops at all entry and exit lanes for a complete functioning system.
 - 2. If testing and re-using, warrant and address any areas that may need additional sealant.
 - 3. When installing new loops, cut-into paving surface and filled with manufacturer's approved sealant.
 - 4. Be formed by three to four turns of 20-gauge/16-gauge XLPE single-conductor wire.
 - 5. No splices are permitted.
 - 6. Contain loop leads:

- a. Limited to a length of 30 feet
 - b. Have a four-twist minimum per foot and located at a minimum of 18 inches from electrical power lines
 - c. Be contained in separate conduit to prevent interference from electrical signals
 - d. Light in color (White, Red, or Orange) for presence loop
 - e. Dark in color (Black, Blue, or Green) for safety loop
 - f. Light in color (White, Red, or Orange) for secondary presence loop (if applicable)
 - g. Dark in color (Black, Blue, or Green) for down-stream loop (if applicable)
7. 20-gauge XLPE single conductor wire:
- a. #20 AWG multi-strand copper wire
 - b. 0.040" Nominal XLPE (cross-linked polyethylene) Insulation
 - c. 0.120 Nominal O.D. for use in 1/8" saw cuts
 - d. Only used in Concrete drive lanes
8. 16-gauge XLPE single conductor wire:
- a. #16 AWG multi-strand copper wire
 - b. .080" Nominal XLPE (cross-linked polyethylene) Insulation
 - c. 0.220" Nominal O.D. for use in 1/4" saw cuts
 - d. Used in Concrete or Asphalt drive lanes
9. Backer Rod:
- a. Closed cell polyethylene foam
 - b. Installed prior to sealing saw cuts
 - c. Holds loop wires and lead-in wire securely in saw cuts
 - d. Prevents wires from floating to surface when sealant is applied
 - e. Use 2" piece in at least every 2' of saw cut
 - f. Used in concrete or asphalt
 - g. 0.375" Nominal O.D. for use in 1/8" saw cut
 - h. 0.500" Nominal O.D. for use in 1/4" saw cut
- L. Reversible Lane Function: (if applicable)
1. Reversible Lane shall be in either entry mode or exit mode
 2. Entry/Exit mode to be controlled automatically via FMS
 - a. Mode change is programmable at certain times to operate automatically
 - b. Programmable times can be updated/changed via FMS by user – no service technician needed
 - c. Mode can be over-ridden by FMS control center via simple drop-down menu
 - 1) If lane is in entry mode, the lane can be reversed to exit mode by FMS control center
 - 2) Mode of reversing lane will go back to automatic control at next pre-programmed time

- 3) No manual intervention will be required to return to fully automatic reversing lane control
3. Entry/Exit mode will not change until the lane is clear of vehicle presence
 - a. If mode is changed automatically by FMS or manually over-ridden by control center and a vehicle is present on any of that lane's presence or safety loop, the lane controller will not change mode.
 - b. Once that lane's inductive loops are cleared of vehicles the entry/exit mode will automatically update.
 - c. No line of sight will be required for safe operation of automatic reversal of lane.
- M. Roving Cashier Function
1. Proximity card with pre-loaded cash value to allow roving cashier to assist patron in payment card only lane with only cash.
 2. Upon payment of cash for parking, proximity card will activate the gate with the parking fee deducted from the pre-loaded proximity card.
 3. System to track Pre-loaded card and produce an activity report to balance out the cashier at the end of the shift.
 4. Remaining value plus the collected cash equals the original pre-loaded value.
- N. Mobile Cashier Unit
1. Handheld device with portable belt printer for use by roving cashier when patron requests assistance in a non-cashier booth lane or for pre-paid events.
 2. Process payment card payments as outlined in Payment Cards section.
 3. Ability to scan barcode tickets and enter barcodes manually.
 4. Ability to process validations.
 5. Rugged heavy duty hand-held for outdoor use, drop resistant at a minimum of five feet.
- O. Uninterruptible Power Supply (UPS)
1. Provide in-lane UPS back-up power sufficient to support the ENS and EXS systems to avoid issues with power spikes or power outages. Power does not have to activate the gate.
 2. Provided conditioned/emergency power through TCP/IP-enabled UPS units for the following components to protect components from loss of power, power spikes, and power sags:
 - a. PARCS Entry Lane Equipment
 - b. PARCS Exit Lane Equipment
 - c. Workstations
 - d. Servers
 3. UPS battery back-up sized to last twenty-five (25) minutes.
 4. Facilitate a 30% expanded load with an 80% continuous load factor.

5. Determine the UPS backup requirements for each of the locations where UPS backup is required, based upon the equipment that is being supplied by the Contractor. Owner to review and approve the UPS units to be provided by the Contractor.
6. Test all UPS system components during the LATs for each PARCS device.

P. Validation System

1. Web-Based Validation System Post Ticket

- a. Authorized issuer logs into a password protected account via computer, smartphone, or another web-enabled device.
- b. Customer's ticket number is entered or ticket is scanned via handheld, desktop, and/or wall-mount scanner (hardware included with system).
- c. Validation is selected as a cash value, time value, or a rate change.
- d. Multiple validations can be applied to the same ticket.
- e. Software tracks and stores user ID, ticket number and validation amount for billing purposes.
- f. Validation billing software can calculate and prepare monthly invoices.

2. Web-Based Chaser Ticket (Follow-up Validation)

- a. Authorized issuer logs into a password protected account via computer, smartphone, or another web-enabled device.
 - 1) Printable on authorized user's workstation printer.
 - 2) Ability to send an electronic barcode via mail, email, or text.
 - 3) Single ticket or bulk volume for events.
- b. Customer inserts or scans entry ticket into EXS.
- c. After fee is displayed, user inserts or scans validation.
- d. Software tracks and stores User ID, ticket number, date/time of entry and exit, and validation amount for billing purposes.
- e. Validation billing software can calculate and prepare monthly invoices.

3. Advance Creation Entry/Exit Validation Passes

- a. Authorized user logs into the system to create custom validation pass.
- b. Type of pass can be single day, multi day, single use, or multi use.
- c. Valid entry and/or exit date and time can be selected.
- d. Ability to print on paper or send an electronic barcode via mail, email, or text.
- e. Pass can be scanned at entry and exit device; no ticket is needed.
- f. Software tracks and stores validation pass data for reporting purposes.
- g. Validation billing software can calculate and prepare monthly invoices.

Q. One Card Dual Card Reader Proximity Card Access

1. Accept read from One Card to authorize use through C-Board.
2. Read and process credential within one second of presentation to reader when using as a proximity card.

3. Secondary method is as a magnetic card swipe.
4. Checking protocol that identifies multiple reads of same card within a few seconds (due to users "waving" card in front of reader), correcting false anti-passback reads.
5. Owner designated individuals shall be able to use the system for ingress and egress to/from the parking facilities at designated locations.
6. Anti-passback capabilities that can be turned on or off at the Owner's discretion for individual users, groups of users, or entire system.
7. Report the occupancy of proximity card customers in real-time.
8. Provide configurable user group parameters and rules that are accessible and changeable by the Owner on any of the PARCS workstations. Software code changes shall not be required to edit user group parameters and rules.
9. User groups and individuals within the user groups will each have the capability of being assigned access privileges based upon, date, day of week, time of day, or any combination thereof.
10. Upon reading the proximity card the display window will provide a welcoming or thank you message to include the users name and company (programmable message).

R. AVI System

1. Re-use existing Transcore readers and AVI cards.
2. Identify any readers that require replacement during field verifications.
3. Ensure the following features and functionalities:
 - a. Reading and accurately identifying no less than 99.9% of properly mounted tags that pass through the read zone.
 - b. System consisting of antennas, readers and local controllers (as required by Contractor's system architecture) that automatically reads vehicle's AVI transponder as the vehicle approaches the entrance or exit and transmits a signal to AVI controller. AVI controller confirms or denies authorization and activates gate for authorized users.
 - c. Use existing AVI transponders currently in use.
 - d. Ability to issue and register AVI transponders through the PARCS.
 - e. Authorized PARCS users can view and program AVI privileges and access rules.
 - f. Provide the Owner with the appropriate tools to issue and register AVI transponders from any PARCS workstations.
 - g. Anti-passback capabilities that can be turned on or off at the Owner's discretion for individual users, groups of users, or entire system.
 - h. Report the occupancy of AVI users in each facility, in real-time.
 - i. Record the following minimum information for each transaction:
 - 1) Date of transaction
 - 2) Time of transaction
 - 3) Lane ID
 - 4) Transponder ID
 - 5) Account Number

- j. Provide configurable user group parameters and rules that are accessible and changeable by the Owner on any of the PARCS workstations. Software code changes shall not be required to edit user group parameters and rules.
 - k. User groups and individuals within the user groups will each have the capability of being assigned access privileges based upon, date, day of week, time of day, or any combination thereof.
 - l. In-lane buffering a minimum of 2,000 transactions or a minimum of 30 days, whichever is less, if there is a failure in communication with the system server.
 - m. Upon restoration of communications, the reader system shall automatically transmit previously un-transmitted, buffered data to the system server.
4. AVI Reader and Antenna Housings
- a. Housed in waterproof, and vandal-proof harsh environment NEMA 3R (minimum) enclosures and fully operable in any temperature and humidity range at the installed site.
 - b. Externally mounted antennas housed in a highly durable, UV- and corrosion-resistant case.
- S. Bluetooth System Ready
- 1. Utilize Bluetooth Low Energy (BLE) beacons to detect and authorize valid parkers in and out of the facility.
 - 2. Directed to the vehicle in the lane to identify and manage multiple signals so that the drivers signal be the prominent signal processed in the event of multiple reads.
 - 3. Focus read area to one lane, directed to avoid reading adjacent signals.
 - 4. Allow monthly parkers to establish service and access to the parking using their Bluetooth enabled device as their credential.
 - 5. Provide the operator the ability to turn-off Bluetooth access at any time or to limit access to certain hours.
- T. Integrated Signage:
- 1. Traffic Control Sign
 - a. Provide LED signage such as "OPEN"/"CLOSED"/"FULL" or red "X"/Green Arrow at each entrance to indicate the status of the lane.
 - b. Dual LEDs in red and green to indicate lane status when using red "X"/Green Arrow signs.
 - 2. Lot Full Sign
 - a. Signs will be direct view LED type.
 - b. Dual message LED signs display "OPEN" or "FULL" at garage entrance.
 - c. Dual LED in Red and Green to indicate garage parking availability.
 - d. Controlled automatically by PARCS software or via manual override.
 - e. Minimum 7"x18" overall, with minimum character height of 3.5".
 - f. Mounted as indicated on drawings.

3. Pedestrian Warning Sign (if needed identify locations)
 - a. Signs will be direct view LED type.
 - b. Sign will be dual-sided and pendant mounted, or single-sided and wall mounted.
 - c. Sign to include adjustable volume level audible horn device.
 - d. Sign will activate when any loop detector in an exit lane detects a vehicle exiting.
 - e. Sign will deactivate after all loop detectors in exit lane no longer detect a vehicle.
2. Variable Message Sign (Alternate)
 - a. Full matrix LED sign.
 - b. Minimum 6 mm.
 - c. Software to program sign messages, graphics or both.

2.7 SOURCE QUALITY CONTROL

A. Internal Contractor Tests

1. All equipment to have successfully passed formal manufacturing tests and quality assurance inspections to validate compliance with these functional specifications prior to the start of installation. Records for formal internal Contractor testing and inspection for performance, materials quality and/or workmanship to be maintained by the Contractor and made available if requested by the Owner prior to the start of installation or at any point during the execution of the Contract.
2. Have readily available proof of product reliability analysis and testing should reliability become a problem at any time from the beginning of installation testing through the final operational test period.

B. Factory Acceptance Test (FAT)

1. Conduct a FAT to verify the functional performance of all systems, subsystems, and components of the PARCS to ensure adherence to these functional specifications, prior to installing any equipment at the Site.
2. Demonstrate the performance of the PARCS at a location mutually agreed upon by the Owner and the Contractor. Generally, the FAT takes place at the Contractor's manufacturing facility or central distribution center. Owner will consider alternative location or completing remotely. Configure a lane of each type with all applicable components, or stand-alone device if the particular device is not part of an entry/exit lane (e.g. server, workstations, etc.), to simulate the configuration as installed at the Site.
3. Provide all ancillary items necessary to complete the FAT including setting up a payment card test bed for testing purposes; supply payment cards of all types for testing; provide all ticket and ticketless media needed for each transaction type; and provide all keys to access equipment housings.
4. All systems, subsystems, and components of the PARCS must successfully complete the FAT prior to the shipment of any equipment to the project site.
5. Installation of any PARCS equipment at the Site that has failed the FAT is prohibited.

6. Successful completion of the FAT is accomplished when all systems, subsystems, and components have passed their respective test procedures and all test documents have been signed by the Owner and the Contractor. Minor deviations are not to be considered grounds for failure of the FAT. Major deviations found during the FAT result in the retest of the respective equipment, software, or subsystem before the FAT is considered successfully complete.
7. Provide the Owner a plan for the FAT in accordance with the submittal guidelines. Provide test procedures for each lane type or device type and test procedures to include:
 - a. Narrative describing the general procedures to be followed;
 - b. Definition of all minor and major deviation types;
 - c. Checklist of all items necessary to conduct the test (e.g. unpaid tickets, exception tickets, payment cards, access credentials, equipment keys, etc.);
 - d. Checklist for the components of each lane or device;
 - e. Signature page for all FAT participants' signatures;
 - f. Step by step instructions for testing each functionality;
 - g. Tests for verifying reports;
 - h. Area within each test section to denote "pass" or "fail"; and
 - i. Section for listing and describing test deviations.
8. Owner will have designated representatives participate in the FAT, including a minimum of Parking, IT, and consultant.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Meetings: Meet with Electrical Contractor, before any rough-in work begins to:
 1. Review building plans as related to PARCS equipment.
 2. Discuss details and/or precautions to assure that all PARCS equipment functions properly.
 3. Determine that all required conduits and wiring are properly laid out.
- B. Site Verification of Conditions: Verify all existing conditions in the field prior to implementation. In the event that conditions in the field are different from the conditions described and shown in the Drawings, the Contractor shall notify the Owner in writing of the exact differences and shall inform the Owner in writing of any implications the differences have on the project.
- C. Examine location of all equipment and office equipment to determine if there are any constraints of conflicts before office equipment installation.
- D. Examine roughing-in for electrical systems to verify actual locations of connections before parking control equipment installation.

- E. Additional Wiring: Provide all additional conduit and wiring which is needed for total system performance but which was not noted on Contract Documents at no additional cost to Owner.
- F. Verify that all required PARCS conduits and wiring is properly located and installed prior to installing PARCS equipment.
- G. Verify equipment layout in accordance with manufacturer's recommendation to allow proper movement of air through and around equipment.
- H. Test, adjust and interface circuits prior to installation of PARCS equipment.
- I. Coordinate with Owner or Owner's Representative location and type of internet connection required for all external communications, i.e. payment card authorization/settlement, remote access, etc. within 30-days after award of contract.
- J. Examine substrates, areas, and conditions for compliance with requirements for installation tolerances, including equipment bases; accurate placement, pattern, and orientation of anchor bolts; critical dimensions; and other conditions affecting performance of the Work.
- K. Investigate adequacy and quality of electrical power to all existing lanes, determine grounding requirements and notify Owner in writing prior to submission of shop drawings of any requirements for new power service, conduit, wiring or grounding.
- L. Investigate existing communications conduit to all existing lanes and notify Owner in writing prior to submission of shop drawings of any requirements for replacement, relocation or extension of existing conduit not already identified for replacement or relation.
- M. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Coordinate installation, staging, and power connections with various trades to ensure a coordinated effort.
- B. Attend regularly scheduled project meetings.

3.3 INSTALLATION

- A. Verify that the installation locations are prepared and ready to have the equipment installation completed. The Contractor to notify the Owner, in writing, if the Contractor finds that the installation location is not prepared for installation due to unfinished work outside of the Contractor's scope of work. The written notification to provide detail of the elements that are in need of modification in order to prepare the location for equipment installation.
- B. Proceed with installation only after unsatisfactory conditions have been remedied.

- C. Install all PARCS equipment per equipment manufacturer recommendations.
- D. Any patches, upgrades, updates, or modifications to the PARCS software during the installation period require appropriate documentation and approval before the modification is made.
- E. During installation and the warranty period, the Owner will attempt to make available to the Contractor an area to serve as an office/work area for the technicians that support the system. It is the responsibility of the on-site technicians to keep the office/work area clean and free of all hazards.

3.4 FIELD QUALITY CONTROL/ACCEPTANCE TESTING

- A. Lane Acceptance Test (LAT)
 - 1. Conduct LATs as a demonstration to the Owner or its representatives that the installed equipment complies with the Contract, the Contractor's product data, and to other documentation, such as user manuals.
 - 2. When a PARCS equipment location installation has been completed, the Contractor shall conduct its internal testing of the installed equipment. Internal testing shall follow the identical LAT test procedures that shall be used during LATs observed by the Owner.
 - 3. Upon successful completion of the Contractor's test, the Contractor and the Owner will perform the LAT to verify performance. The LAT shall only be observed by the Owner after a fully completed and signed test script verifying successful completion of the Contractor's internal lane testing is submitted. Signed internal test scripts shall be submitted at least one calendar day prior to the scheduled test with the Owner.
 - 4. LATs shall be conducted for each PARCS entry lane, exit lane and shall include tests of PARCS equipment and software. The Contractor shall not activate the system for service until all LATs have been successfully completed for each lane or device and the Owner has notified the Contractor that it is ready to put the equipment into operation.
 - 5. The Contractor shall provide test procedure documents for LATs as part of the Test Plan in accordance to the submittal guidelines. LAT Test Procedures Documents shall be provided for each count location type and test procedures shall include the following sections:
 - a. Narrative describing the general procedures to be followed;
 - b. Definition of all minor and major deviation types;
 - c. Checklist of all items necessary to conduct the test (e.g. PARCS devices included in the test, consumables, validations, payment cards for payments, vehicles, etc.);
 - d. Checklist for the components of each PARCS equipment location;
 - e. Signature page for all LAT participants' signatures;
 - f. Step by step instructions for testing each functionality;
 - g. Tests for verifying the reporting requirements;
 - h. Area within each test section to denote "pass" or "fail"; and
 - i. Section for listing and describing test deviations.

6. The Contractor shall provide all ancillary items necessary to complete the LATs for testing purposes. In addition, the Contractor shall make available sufficient personnel to perform the LAT in an efficient and timely manner.
7. The LAT shall be considered successfully completed when all components have passed their respective test procedures and all test documents have been signed by the Owner and Contractor. Minor deviations resulting in the creation of punch list items shall not be considered grounds for failure of the overall LAT. Major deviations found during the LAT shall result in the retest of the lane or device. The Contractor shall agree to credit the Owner from its total contract value for any travel and/or labor costs incurred by the Owner or its representatives as a result of additional effort required to retest failed devices.
8. Minor deviations are any failure that does not affect system functionality, fee calculation accuracy, transaction count accuracy, exception count accuracy, active ticket inventory accuracy (system vs. actual), transaction processing, payment card processing, calculations, or report accuracy.
9. Major deviations are any failures that affect system functionality, fee calculation accuracy, transaction count accuracy, exception count accuracy, active ticket inventory accuracy (system vs. actual), transaction processing, payment card processing, calculations, or report accuracy.

B. Operational Demonstration Test (ODT)

1. The ODT shall be comprised of all equipment, systems, and subsystems performing under actual conditions, e.g., Customer use, normal activity recording, and reporting procedures. This ODT shall demonstrate, over a period of 30 consecutive calendar days, the successful performance of all aspects of the PARCS.
2. During the ODT only routine maintenance procedures, as defined by the preventative maintenance procedures manual and according to industry standards, shall be permitted. All other maintenance procedures shall be approved in writing by the Owner before they are performed; otherwise, they shall constitute a failure of the ODT and a mandatory restart.
3. The Owner reserves the right to be present for all maintenance services during the ODT.
4. For purposes of the ODT, a subsystem is defined to be any one of the following:
 - a. PARCS Application Software
 - b. Data Communication System
 - c. PARCS Servers
 - d. PARCS Entry Lanes
 - e. PARCS Exit Lane
 - f. Proximity Card Access System
 - g. AVI System
 - h. Intercom System
 - i. PARCS Reporting System
5. The ODT shall begin after successful completion of all LATs on a date mutually selected and agreed to in writing by the Owner and the Contractor at a time designated by the Owner. The ODT monitors system performance of the entire system operating as a single unit. The Contractor shall submit an ODT test

document as part of their Test Plan in accordance with the submittal requirements. ODT test documents are intended to outline procedures for monitoring the overall performance of the PARCS and shall not include test procedures for individual components. The ODT test documents shall include:

- a. Narrative describing the general procedures to be followed
 - b. Methodology for calculation of downtime and accuracy for the various PARCS components
 - c. Electronic tracking document to be used during the ODT period for documenting failures and downtime
6. The ODT shall continue for 30 consecutive 24-hour periods during which all the performance criteria, stated below, shall have been met. If during the 30-day period the system fails to meet any one of the following specified performance criteria, the test shall begin anew on a day agreed upon by the Owner and the Contractor. The Contractor shall agree to credit the Owner from its total contract value for any travel and/or labor costs incurred by the Owner as a result of retesting the system.
7. The performance criteria for successful completion of the ODT shall include:
- a. No individual subsystem shall be operationally unavailable for four or more hours cumulative during the 30-day test period.
 - b. No individual subsystem shall be operationally unavailable for more than two consecutive hours.
 - c. If any single component fails more than once during the 30-day period for the same reason, it shall be replaced upon the second failure with a newly manufactured component of the same type and the test shall continue.
 - d. No component of a given type shall fail more than three times during the 30-day test period for the same reason. Upon the fourth failure all components of that type shall be replaced or modified to correct the common deficiency, and the test shall be restarted from the beginning.
8. In addition to the PARCS reports generated during the ODT, the Contractor shall provide to the Owner a one-page summary report that clearly provides the overall percentage of system downtime and causes of that down time.
9. The Contractor shall provide to the Owner a corrective action report that provides a detailed description of each failure that occurs during the ODT. The corrective action report shall include the type of failure, why the failure occurred, what was done to remedy the failure, and whether or not the failure resulted in a restart of the ODT.
10. A subsystem shall be considered unavailable as long as any major component of the subsystem is not functioning.
11. An inoperative subsystem shall not be deemed unavailable if it has become inoperative because of:
- a. Outage of line power beyond required duration of UPS power backup
 - b. Malicious damage or vandalism to a component(s) by employees, customers or others
 - c. Network connectivity issues beyond the PARCS

- d. PARCS failures due to issues and/or failures outside of the Contractor's control
 - e. Failures caused by a 3rd party
 - f. Act of God
12. Should a failure occur in the system that is caused by normal hardware failure, it shall be repaired and the test resumed with downtime accrued. Where the failure causes inadequate test data to be collected or a loss of test data, then the test shall be restarted from a point where it can be successfully completed with data to verify compliance with the Contract and the test procedures document.
 13. If the system "crashes" during a test, then the test shall be stopped. "Crash" is defined as a failure in which the PARCS cannot properly process vehicles or record transactions. The Contractor shall analyze the cause of the system "crash," document the cause in a system problem report, responsively repair the flaw, and document the repair in a corrective action report.
 14. Where corrective action impacts delivered documentation, the documentation shall be corrected prior to Final System Acceptance.
 15. Upon formal written approval of the corrective action report by the Owner, testing may continue if a problem has been encountered as long as the Contractor can clearly demonstrate that the failure is associated only with one function of the system, corrective action has been taken to remedy the failure, and the corrective action shall not impact other areas of the system.
 16. Where the system does not perform a function or incorrectly performs the function but the system does not crash, testing may continue, as long as the function is corrected and all of the following conditions are met:
 - a. the functionality of processing vehicles and recording transactions works properly according to the Contract
 - b. no personnel, vehicle or driver safety issues exist
 - c. PARCS applications continue to function normally
 - d. failure does not cause loss or contamination of data
 - e. all reports are 100% accurate.
 17. Where the above criteria are not met, the test shall be stopped and corrective action taken and verified prior to testing restart.
 18. During the test, the continued availability of the system shall be demonstrated. Where a failure occurs that causes data loss, system instability (crash), and/or contamination of the data and the database, the Contractor shall immediately correct the problem. Testing shall continue until a consecutive 30-day period of stable operation is achieved. Stability is defined as the proper functioning of the PARCS with a failure having no impact on the continued system operation or on the integrity of data.

C. Punch List

1. Starting with the beginning of installation through Final System Acceptance, the Contractor shall submit a document on a weekly basis showing the status of all outstanding system issues, regardless of severity, including the plan for resolution and estimated completion date.
2. All deviations noted during acceptance testing shall be recorded on the Punch List.

D. Final System Acceptance

1. Final System Acceptance will be submitted by the Owner, in writing to the Contractor, upon successful completion of all acceptance tests, and upon verification by the Owner of complete resolution of all outstanding items on the Punch List.

3.5 INSTRUCTION AND TRAINING

- A. By means of instructional classes augmented by individual instruction as necessary, the Contractor shall fully instruct the Owner's designated staff in the operation, adjustment, and maintenance of all products, equipment, and systems.
- B. Coordinate scheduling of instruction and training classes with Owner to avoid conflicts and peak-period personnel demands. Submit a proposed instruction schedule at a joint meeting conducted prior to equipment installation. Owner will tentatively approve or suggest changes to the training schedule at that time.
- C. Submit an outline of the instruction material and approximate duration of the session. Ample time shall be allotted within each session for the Contractor to fully describe and demonstrate all aspects of the PARCS, and allow Owner personnel to have hands-on experience with the PARCS.
- D. All instruction courses to consist of classroom instruction and actual "hands-on" experience. Classes to be set up in a room designated by the Owner. Provide one instructor for the duration of each program.
- E. The instructor shall speak fluent English in a clear and precise manner.
- F. The class material shall include schematics, as well as an overview and descriptions of the equipment.
- G. The Contractor shall provide all documentation required for instructing Owner personnel. The Owner retains the right to copy training materials as frequently as required for ongoing internal use only.
- H. An instructional notebook or user's manual shall accompany every instruction course. The Contractor shall submit a hard copy of the user's manual per the submittal guidelines. In addition, all manuals (instruction and maintenance) shall be submitted in electronic format (.PDF) on a memory stick or other agreeable medium. The user's manuals shall be written in common English with appropriate photos, diagrams, and schematics to supplement the text.
- I. Training classes to be provided for the following groups:
 1. Attendants
 2. Supervisors
 3. System Administrators
 4. Accounting/Audit
 5. Maintenance Staff

3.6 EQUIPMENT PROTECTION

- A. All above ground equipment components installed near drive isles shall be protected from damage by vehicular movements by protective bollards or other barriers as recommended by the Contractor. Contractor is responsible for final bollard location to ensure installed bollard does not prevent access to the PARCS devices or interfere with the travel path of PARCS access doors.

- B. Each above ground island-mounted device shall be protected by one or more bollards.

END OF SECTION 111226

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SECTION 111248 – VIRTUAL PERMIT MANAGEMENT SYSTEM WITH MOBILE LPR ENFORCEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Instructions to Vendors
- B. PARCS RFP Documents, with Exhibits
- C. MSM Specification
- D. VPMS Specification Compliance Form
- E. VPMS Price Proposal Form

1.2 REFERENCES

A. List of Abbreviations:

1.	BOLO	Be on the Lookout (License Plate)
2.	CC	Credit Card
3.	CMS	Central Management System
4.	CSV	Comma Separated Value
5.	GUI	Graphical User Interface
6.	ID	Identification
7.	IP	Ingress Protection
8.	LPR	License Plate Recognition
9.	MOR	Merchant of Record
10.	MSM	Multi-Space Meter
11.	NEMA	National Electrical Manufacturing Association
12.	OCR	Optical Character Recognition
13.	ODBC	Open Database Connectivity
14.	PC	Personal Computer
15.	PCI	Payment Card Industry
16.	PCI DSS	Payment Card Industry Security Standard
17.	PA DSS	Payment Card Industry Payment Application Data Security Standard
18.	PCI P2PE	Payment Card Industry Point to Point Encryption
19.	PbC	Pay by Cell
20.	PbP	Pay-by-Plate
21.	PDF	Portable Document Format
22.	PEO	Parking Enforcement Officer
23.	RH	Relative Humidity
24.	RAM	Random Access Memory
25.	RMA	Return Merchandise Authorization
26.	SaaS	Software-as-a-Service

- 27. SAT System Acceptance Test
- 28. VPMS Virtual Permit Management System

1.3 SUMMARY

- A. Provide all material, labor, equipment, services and training necessary to design, furnish and install on a turnkey basis a fully integrated on-line, real-time Virtual Permit Management System (VPMS) with integrations with mobile License Plate Recognition (LPR), parking enforcement and citation management, Mobile Payment App, and Multi-Space Meter with pay-by-plate, functioning as described herein for Wayne State University (“Owner”) located at the Detroit, Michigan.
- B. This is an Alternate item for consideration to the PARCS replacement RFP for the gated system currently in place.
- C. The target timeframes for VPMS/Mobile LPR project completion are as follows. These timeframes are subject to change by Owner but should be assumed to be correct for the purpose of proposal responses.
 - 1. Select and award VPMS/Mobile LPR vendor: First Quarter 2025
 - 2. Complete initial system implementation and data loading: Third Quarter 2025
 - 3. Pilot system ready for limited initial user and administrator testing: Third Quarter 2025
 - 4. Complete system in production: Fourth Quarter 2025
- D. References in this section to “Contractor” include the Prime Contractor and any Subcontractor performing work.
- E. Identify any clarifications, deficiencies, exceptions or errors in the Specifications or Contract Documents in response. Deviancies or discrepancies in the Specifications or Contract Documents do not relieve the Contractor of the responsibility to provide a fully functional, reliable system as intended by the design. Clarifications and exceptions to the design must be clearly stated in the response and are subject to Owner approval. Exceptions may be considered grounds for proposal disqualification by Owner.
- F. System Description
 - 1. The Virtual Permit Management System includes:
 - a. Features, functions, performance, and capacity as described below.
 - b. Major functions include:
 - 1) Permit management with permits being “virtual” and connected to parkers’ license plate(s)
 - 2) Enforcement management
 - 3) Citation issuance, processing and management
 - 4) Multi-Space meters in a pay-by-plate operation
 - 5) Mobile Payment App
 - 6) Integration with selected Owner IT applications, and back-office and financial functions in support of all the above.

2. The mobile LPR system includes:
 - a. LPR cameras for five (5) vehicles (2 camera sets per vehicle - left and right view)
 - b. In-vehicle computer/tablet to run LPR software and control cameras for five (5) vehicles
 - c. In-vehicle computer/tablet must have cellular modem or external mobile hotspot device must be provided.
 - d. Installed on Owner provided vehicles.
 - e. Citation Management System
 - f. Handheld smart phone/tablet devices – five (5) devices, capable of being used on-foot to scan license plates and provide same functions as the vehicle-mounted LPR cameras.
 - g. PbC System integration
 - h. Multi-Space meter integration
 - i. Integration with the VPMS
 - j. All necessary components and materials for a complete and functioning turnkey LPR and citation management system (except the enforcement vehicles) as identified in this Specification.
3. Multi-Space Meters include:
 - a. Payment by plate
 - b. Solar powered
 - c. Credit card with chip and tap and go
 - d. Receipt printer
 - e. Back-end CMS
 - f. Integration with citation management system
 - g. Integration with Mobile LPR to check for payments
4. Pay by Cell (PbC) to include:
 - a. Integration with citation management system
 - b. Integration with Mobile LPR system to check for payments
5. Contractor is to provide all products and services specified herein as part of a single, turnkey solution, even if certain portions of Contractor's offering are from other than one vendor.
6. Integrations to all systems and third-party software listed in this Specification are to be provided.
7. Owner reserves the right to add additional requirements during the course of the procurement process and before contract award as amendments to this Specification.
8. Locations requiring MSM kiosks to allow public payment of parking are those that currently offer payment with ticket or credit card in/out. These are identified as "Type A" on the table located on the following page, referenced in item #9. Locations within parking structures require hard wired power. Outdoor locations require solar power. The number of MSMs per facility is one per exit lane.
9. Table of locations (following page)

Table of locations

Note	Lot #	Address	Existing Lanes	Entry Lanes	Exit Lanes	Reversible Lanes (included)	Nested Area	Type
	PS-1	450 W. Palmer	Y	5	4			A
	PS-2	5150 Lodge Service Dr.	Y	3	4	2		A
TBD	PS-3	45 E. Warren / Rackham Garage UM	Y	1	1			A
	PS-4	555 E. Canfield (Medical School)	Y	4	4	2	1	B
	PS-5	5501 Anthony Wayne Dr.	Y	4	2	2		A
	PS-6	61 Putnam	Y	3	3			A
	PS-8	91 W. Forest	Y	4	4	2		A
	12	6050 Woodward	Y	1	1			A
	13	Cass & Boroughs	Y	2	2			B
	13 B	iBio building 6135 Woodward Ave	Y	1	1			B
	14	6241 Cass Ave.	Y	1	1			A
	23	38 W. Palmer	Y	1	1			A
Exhibit A	30	1411 I-94 Service Dr.	none	1	1			A
	31	630 W. Ferry	Y	1	1			A
	32	475 W. Palmer	Y	1	1			A
	33	5521 Woodward	Y	2	2	1		B
Exhibit A	34	35 W. Ferry	Y	1	1			B
	35	5555 John R	Y	1	1			A
	39	656 Reuther Mall	Y	1				B
	40	5095 Lodge Service Dr.	Y	2	1			B
Exhibit A	50	1200 W. Warren (Athletic Lot)	Y	4	4	4		A
	51	4865 Fourth St.	Y	2	2			A
	53	4820 Anthony Wayne Dr.	Y	1	1			A
	54	4840 Second	Y	1	1			A
	56	50 W. Hancock	Y	1	1			A
	57	237 E. Hancock	Y	1	1			A
	59	John R.	Y	1	1			A
	62	80 W. Forest	Y	1				B
	70	4441 Cass Ave.	Y	1	1			A
	71	410 W. Canfield	Y	1	1			A
	72	4510 Cass Ave.	Y	1	1			A
	75	545 E. Canfield	Y	2	2			A
Exhibit A	400 Mack	400 Mack Lot	none	3	2			A
Exhibit A	I2C	Innovation and Integration Center	none	2	2			A
	Mall Gate	Gilmore Mall Access	Y	1	-			B
	Load Dock	Rands Business Annex CS Gold	Y	1	-			B

Totals: 64 56 13 1

1.4 DESIGN CRITERIA

- A. Virtual Permit Management System (VPMS)
1. Replace the current gated system with a gateless system that includes payment options for daily parking, including by multi-space meter, payment app, and on-line payment and validation via plate.
 2. VPMS and associated system pricing is to support the capacity to issue and manage Owner's current inventory of 20,000 permits and support expansion up to at least 30,000 permits.
 3. Provide a smooth and efficient migration path from the existing gated system to the new VPMS that can be completed by December 2025.
- B. Mobile LPR System Performance
1. Provide new mobile LPR system with new, current generation LPR camera technology and system features, as described below, installed on Owner's enforcement vehicles.
 2. Achieve a capture rate of 98% for all non-exception vehicles, as defined in this section, meaning that 98% of all license plates within range of being read by the LPR cameras are identified as license plates for the sake of reading and recording each plate's characters.
 3. Achieve an N Factor rating of 92%, meaning that the LPR system reads all captured license plate characters, exclusive of stacked characters, correctly, 92 percent (92%) of the time for all non-exception vehicles as defined within this section. Missing, misread, out of sequence, or additional characters as determined by the LPR system, are counted against the read accuracy (i.e., if a license plate contains six standard characters "ABC123", then N=6. Therefore, in order for the system to achieve an N read, the system reads the LPN "ABC123" exactly). Additional characters added before or after the license plate characters count against the read rate. (i.e., "1ABC123" does not constitute an N read).
 4. Achieve an N-1 Factor rating of 96%, meaning that the LPR system reads all but one license plate character, exclusive of stacked characters, correctly, 96 percent (96%) of the time for all non-exception vehicles as defined within this section.
 5. Achieve an N-2 Factor rating of 98%, meaning that the LPR system reads all but two license plate character, exclusive of stacked characters, correctly, 96 percent (98%) of the time for all non-exception vehicles as defined within this section.
 6. Exception vehicles do not count against the accuracy of the LPR system. For the purposes of the LPR performance requirements an exception vehicle is defined as:
 - a. Any vehicle whose license plate is obstructed, obscured, or encroached upon by a foreign object.
 - b. Vehicles that contain excessive graphics and advertising such that it is impossible for the LPR system to determine which graphics belong to the license plate and which graphics do not.
 - c. Vehicles with no license plate.
 - d. Vehicles with temporary cardboard (non-reflective) "Dealer Plates."
 - e. Motorcycles.
 7. Provide a means, subject to approval by the Owner, to remotely score the LPR system to ensure it meets the performance requirements. Provide all software

- needed to test the LPR system's performance, downloadable to a standalone PC used for testing.
8. LPR system must continue to operate when "offline", that is, when communication from the Mobile LPR units to the LPR Central Management System is not available. The system must operate normally and with full functionality based on the most recently downloaded permit and parking session data as provided by the VPMS.
- C. Parking Citation Management System (PCMS)
 1. Integrate PCMS with VPMS, including, PbC, and multi-space meters, for enforcement, appeals, and financial reporting.
 - D. Fully operational regardless of extreme weather such as heat, sun, rain, ice, snow, freezing rain, etc.
 - E. Operating temperature range of -25 to +130 Fahrenheit and to 95% RH.
 - F. Utilize an identified 5G/LTE cellular carrier for device communications. Contractor will furnish and install all cellular devices and SIMMs and provision and pay for cellular data service as needed for all cellular devices that are part of the system.
 1. Cellular modems or similar devices are to offer the ability for installation of two different SIMMs to provide an alternate "fallback" cellular carrier in areas where the primary carriers signal may be weak.
 2. As an Add-Alternate, Owner reserves the right to provide all SIMMs and cellular modems required to operate the Mobile LPR system.
 3. As an Add-Alternate, provide the capability for the cellular modems to support fallback to connect to Owner's WIFI network if cellular coverage is not available.
 - G. MSM Requirements: Operating in a Pay by Plate configuration at locations that allow payment for public parking. See Separate Specification for requirements.
 - H. Mobile Payment App/s: Provide alternatives for selection by WSU. Allow payment via app and/or smartphone via QR for parking using license plate. Must include:
 1. Available to download for iOS and Android at no cost.
 2. Proven system with widespread use, preferably at Universities and Colleges.
 3. Store multiple vehicles in a pay by plate configuration.
 4. Ability to extend parking sessions via text.
 5. Include signage package for each location accepting payments for parking, including payment via QR Code.

1.5 PRICE REQUIREMENTS:

- A. All pricing to be submitted only on Owner-provided Price Proposal Form.
- B. Base Price includes the provision of all material, labor, equipment, and services necessary to furnish and install fully integrated VPMS, mobile LPR system, multi-space meter, and app based payment solution as outlined herein and any annual or other recurring fees for Year 1 after system acceptance.
- C. Provide pricing for post-processing citation issuance and billing.

- D. Constraints
 - 1. Identify in writing any constraints or conflicts regarding system implementation.
 - 2. Include cost, in writing, of rectifying such constraints or conflicts in response.
- E. Add Alternates:
 - 1. Provide annual or other recurring fees (including but not limited to annual support, SaaS fees, etc.) for Years 2-5 after system acceptance for VPMS, MSM, and payment app. Fees on a “per permit” or “per citation” basis are not permitted.
 - 2. Provide pricing for annual maintenance, service, and Parts Contract after one-year warranty for LPR cameras and other LPR-related hardware.
 - 3. Provide a separate contract awarded for Maintenance, Service and parts warranty for MSM units that would commence with expiration of one-year warranty period.
 - 4. Provide unit cost (per report) to develop new custom reports in VPMS, assuming 10 new reports per year.
 - 5. Provide pricing difference if Owner provides all SIMMs and cellular modems required to operate the Mobile LPR system.
 - 6. Provide pricing for cellular modems to support fallback to Owner’s WiFi network.
- F. Add LED Variable Message Signage for communication of messages, graphics, or mix of both, including available parking. Price provided to include installation, software, and hardware.
- G. Substantial Completion: A certificate of substantial completion will be provided when the following requirements have been satisfied:
 - 1. All systems, features and communications, have passed the SAT per Section 3.2 of this document.
 - 2. All spare parts, stock material and manuals are on site and have been approved.
 - 3. All test checklists, documentation and training has been completed.
- H. Final Acceptance: Final acceptance will occur upon satisfactory completion of all work, tests, demonstrations and training specified herein as well as successful completion of sixty-day operational test per Section 3.2 of this document.

1.6 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Distribute to the appropriate parties any installation diagrams, details, and templates for positioning, anchoring and/or mounting mobile LPR cameras on Owner’s enforcement vehicles.
 - 2. Coordinate interfaces with any other systems by others, including but not limited to Local Area Network, MSM/PbC vendors, etc.

1.7 PROPOSAL SUBMITTALS - TO BE INCLUDED WITH RESPONSE

- A. Price Proposal Form – Submit all pricing using Owner-provided Excel pricing form. **No other form of pricing submittal will be accepted.**
 - 1. Cost of system components and services (design, manufacture, shipping, installation, training, commissioning, etc.).
 - 2. Include per unit cost of each component.

3. Include any and all recurring fees.
 4. Include recommended spare parts to be kept on-site.
- B. Project Approach – Submit the following:
1. Executive summary including any unique features and functionalities that will enhance customer service and facilitate greater operational efficiencies.
 2. Description of the Contractor's approach for client customer service.
 3. Detailed project plan and schedule based on the anticipated project milestones. Detail the plan for design, implementation, phasing and migration from current system, training, and testing.
- C. Virtual Permit Management System – Submit the following:
1. Software application and version(s).
 2. Standard report samples including screenshots.
 3. Contractor's workstation requirements for Owner provided workstations.
- D. Parking Citation Management Product Data - Submit the following:
1. Software application and version(s).
 2. Standard report samples including screenshots.
 3. Contractor's workstation requirements for Owner provided workstations.
- E. Mobile LPR Product Data:
1. Product description for each component including the following:
 - a. Detail of user interface.
 - b. Operating temperature and humidity ranges.
 - c. Camera housing materials.
 - d. Photos of installed system, including and identifying base products and options.
 - e. Installation and mounting requirements.
 - f. List of modular components that may be replaced by hand.
 - g. List of components that require tools for replacement, and identify which tools are required.
 2. RMA process and procedures.
 3. Description of the CMS software, including the following:
 - a. Configuration diagram.
 - b. Software platforms and programming language.
 - c. Communication protocol, polling procedures and transaction message flow from peripheral devices to and through CMS.
 - d. Describe how data and license plate images are transferred in real time.
 - e. Describe the minimum, maximum, and average amount of time in seconds the system will take to transmit and receive images and data, including what parameters or conditions will affect transmission times and what percentage of each type of transmission can be expected to be transmitted within the average transmission time.
 - f. Describe any file limitations in downloading, sending and storing license plate images.

- g. Describe how the LPR system operates in an “offline” mode, that is, when communications between the Mobile LPR units and the CMS is not available. Describe how features and functions continue to work and any limitations caused by being offline.
 - h. Communication failure/error identification and recovery.
 - i. Fault tolerance.
 - j. Back-up procedures.
 - k. Data storage and retrieval procedures.
 4. Description of LPR paid parking and time-limit enforcement sequence.
 5. Description of non-license plate time-limit sequence.
 6. Sample screenshots, databases, and reports:
 - a. Parking enforcement policy checklist.
 - b. Screenshots of dashboards.
 - c. License plate images.
 - d. Databases.
 - e. Enforcement reports.
 - f. Statistical reports.
- F. Submit complete technical data sheets for all above hardware and software products.
- G. Owner may require product demonstration for firms advancing to interview phase.
- H. Spare Parts
1. Provide a list of recommended spare parts and associated pricing.
 2. Provide a list of all spare parts including:
 - a. Part name.
 - b. Part number.
 - c. Unit price.
 - d. RMA process and procedures.
 - e. Recommended quantities to maintain on hand for each part.
- I. Exceptions and Substitutions:
1. Complete and submit an all-inclusive Specification Compliance List (including substitutions), identifying any substantive non-compliance with specification requirements, using the forms provided as Appendix 1 and Appendix 2.
 2. Substitutions: It is recognized that there are variations in equipment between manufacturers. Where functional performance, features or quality of system varies materially from that specified, submit a Request for Substitution identifying substitution being proposed. This submittal may be accompanied by catalog sheets, brochures, and technical specifications of the proposed system.
- J. Installation Schedule: Sample schedule of project requirements including milestones for delivery, installation, training, and testing. Milestones include special project requirements related to coordination with work by others and phasing.
- K. List manufacturer of each primary component of system.

L. Contractor Information

1. Provide the following information:
 - a. Name of company.
 - b. Brief company overview including a description of the company structure, and a statement on whether the company is a private or public entity
 - c. Years in business.
 - d. Number of employees.
 - e. Annual sales volume.
 - f. Name and contact information (address, email, and phone number) of Principals and/or Local Contacts.
 - g. Description of the Contractor's presence in the United States and in Ohio, including the location of the nearest service center for maintenance and repairs.
2. Provide a list of any subcontractors, their business address, and a brief summary of their role in the project, as well as your 3-year history of teaming together on meeting the scope of services described herein.
3. Provide the name, location, and contact information of the nearest authorized service center for maintenance and repairs.
4. Proven ability to provide installation and/or service and support after installation, meeting minimum requirements as specified herein.
5. Continuously worked with equipment manufacturer, including providing installations and/or service, for minimum of three (3) years.
6. Approved in writing by manufacturer.
7. Documentation of manufacturer's installation and/or service training within previous two (2) years.
8. Similar system installed in three (3) or more universities of similar size and complexity. Provide the following for each installation:
 - a. Name of project.
 - b. Location.
 - c. Contact name, telephone number and email address.
 - d. Date of installation.
 - e. Description of equipment and quantities.

M. Manufacturer's Qualifications (if not the Contractor): Provide documentation:

1. In continuous operations for previous five (5) years.
2. Description of the manufacturer's presence in the region.
3. Similar system and system integration installed in three (3) or more universities of similar size and complexity. Provide the following for each installation:
 - a. Name of project.
 - b. Location.
 - c. Contact name, telephone number and email address.
 - d. Date of installation.
 - e. Description of equipment and quantities.

N. Warranty:

1. Submit copy of warranty (per Section 1.10 of this document) and explanation of any instances which may impact warranty coverage. Note that a two-year warranty is required.
 2. Submit RMA procedures.
- O. Detail server infrastructure solution and components, including an on premise or cloud-based solution. Description of any offsite or cloud-based components of the system and the methods by which the on-site equipment and software communicates with the offsite/cloud-based components. This must include a description of the communications and networking methods required to integrate the onsite and offsite components, who provides the associated communications network (Owner, Contractor, or a combination), and any costs associated with this communications network. Refer to Sections 2.1.A and 2.1.B below for further related requirements.
- P. Specify all software application and version(s) that are proposed to be installed.
- Q. Provide a narrative and graphic description of the PCI P2PE solution including:
1. Any entities (gateways or service providers) that will stand between the PARCS and the intended processor.
 2. Any one-time, recurring, or transaction-based costs associated with the use of those gateway or service providers.
 3. Network diagrams and data flow charts describing the solution.
- R. For any cellular communication technology proposed to be provided by the Contractor, provide the following submittals with the proposal:
1. Underlying technology proposed, i.e. 4G LTE, 5G, 5G UWB, etc.
 2. Cut sheet(s) of the cellular components.
 3. Monthly service cost per line of service and in total.
 4. Expected end-of-service date of the cellular components based on known carrier sunset dates for the proposed technology. If no sunset dates are known, include a statement indicating such.
 5. A complete list of carriers compatible with the proposed cellular technology.
 6. Contractor's detailed plan to provide a cellular site survey and carrier selection or recommendation. Explain how the pricing and system functionality, features or support changes if the Owner chooses to provide all SIMMs and cellular modems required to operate the Mobile LPR system. Indicate which of the three major cellular carriers (AT&T, Verizon, or T-Mobile) that the proposer recommends if this option is chosen by Owner.
- S. Explain if and how the Mobile LPR system functions when using a secondary cellular carrier or Owner's WiFi network as fallback communications when the primary cellular network fails.

1.8 INFORMATIONAL AND CLOSEOUT SUBMITTALS

- A. All submittal approvals, comments and rejections will be returned to the Contractor by the Owner's designated representative with requests for resubmittal as appropriate. Resubmit as required until submittal is approved by the Owner's designated representative.

- B. Operating Documentation: Prior to initiation of field test and training, deliver two hard copies and one electronic copy of operations manuals, maintenance, and administration manuals.
- C. Copies of all licenses, registrations, documentation, disks and other media as may have been included with those commercially available software packages provided with system. In addition, ensure that all licenses, registrations and warranties have been transferred to Owner prior to final software turnover.
- D. At least 30 days prior to scheduled training sessions, deliver a Training Plan. Include at a minimum, a description of all training courses including identification of instructional outcome, duration of course, and type of presentations.
- E. Testing Plan and Documentation: Provide a test plan for review and approval by Owner or Owner's authorized representative 60 days prior to start of first test. Include demonstrations of compliance with specifications, contractual compliance, disaster recovery testing and documentation, definitions of all test objectives, participant responsibilities, documentation for tests, and procedures for dealing with failures during test.
- F. Contractor is responsible for all permits and licenses and compliance with all codes and regulations.

1.9 QUALITY ASSURANCE

- A. All components and installation to comply with all laws, ordinances, codes, rules, and regulations of public authorities having jurisdiction over this part of the work. It is the responsibility of the Contractor to meet these and all other current technical, performance, and safety standards that are applicable to all components and to the entire system, even when not specifically referenced.
- B. Open-architecture system where all interfaces (hardware and software) conform to national and International Organization for Standardization (ISO) standards.
- C. All materials and equipment listed, labeled, or certified by a nationally recognized testing laboratory to meet Underwriters Laboratories, Inc. (UL) standards, where test standards have been established.
 - 1. Equipment and materials which are not covered by UL Standards may be considered, provided equipment and material is listed, labeled, certified, or otherwise determined to meet safety requirements of a nationally recognized testing laboratory.
 - 2. Equipment of a class for which no nationally recognized testing laboratory accepts, certifies, lists, labels, or determines to be safe, will be considered if inspected or tested in accordance with national industrial standards, such as NEMA, or ANSI. Evidence of compliance includes certified test reports and definitive product data.
- D. Equipment housings, conduits, and junction boxes exposed to weather (any location not in a conditioned environment) will meet or exceed NEMA 4X or IP65 standards to be

moisture-proof and provide sufficient protection so that the components continue to function without moisture, dust, particle, heat, or cold-related interruption.

1.10 WARRANTY

- A. General: Equipment and installation (100% parts and labor) for one (1) year from date of final acceptance by Owner. System maintained and serviced against any and all malfunctions due to manufacturing or installation defects at no cost to Owner during warranty period, including preventive maintenance per manufacturer's recommendations or as necessary to keep equipment in good working order. Software support provided during warranty period to include all software upgrades at no additional cost to Owner.
 - 1. Warranty period commences after Contractor has demonstrated satisfactory performance of system as specified in the Acceptance Testing Plan.
 - 2. Maintain a log of all maintenance, preventive maintenance and repair work performed under warranty and provide to Owner or Owner's Representative at end of warranty period.
- B. Warranty response period:
 - 1. Immediate telephone support available from 8:00 am – 5:00 pm, local time, Monday-Friday.
 - 2. Emergency support telephone and/or email address to be available 24 hours a day, 7 days a week for high priority, revenue-impacting issues.
 - 3. On-site response by qualified service technician within 48 hours, excluding weekends and holiday.
- C. If Contractor is not available for above response, Owner or Owner's Representative may affect repairs with no impact on warranty. Pre-qualify appropriate Owner or Owner's Representative to perform repairs and identify types of repair each trained individual is qualified to perform after training of Owner personnel.
- D. Replace items taken from spare parts inventory during warranty period at no additional cost to Owner.
- E. Preventative Maintenance Service during the Warranty Period:
 - 1. Provide preventative maintenance services for all systems throughout the warranty period. Preventative maintenance procedures and frequencies are defined within the Manufacturer's recommended maintenance procedures manual.
 - 2. Preventative maintenance services include but are not limited to inspection, testing, necessary adjustment, alignments, calibration, parts cleaning, communication system maintenance, server administration and database administration of the hardware provided as part of this project by the Contractor.
 - 3. Perform all preventative maintenance at non-peak periods during regular business hours.
- F. Software Support during the Warranty Period:

1. Make available to the Owner normal software improvement releases (updates) as they become available at no additional cost to the Owner.
2. Provide all software patches and updates free of charge during the warranty period; however, the Owner has right of refusal.
3. Seven (7) calendar days prior to all software modifications, patches, updates, and upgrades, provide accurate and complete documentation that describes:
 - a. Patch/update release designation.
 - b. Proposed date and time of implementation.
 - c. Detailed description of what the patch/update accomplishes.
 - d. Test plan that shows the change has been successfully tested and has passed internal unit, end-to-end testing.
 - e. Full disaster recovery procedures that return the system to its pre-patch/update condition
4. Provide operating system support and database administration services including adherence to the recommended operating system patches and updates as they are made commercially available by the operating system developer.
5. Coordinate the testing and implementation of all patches and updates with the Owner.
6. Support upgrades to the application based on operating system patch and upgrade requirements. For example, if run on a Microsoft operating system, the software can be patched according to the Microsoft patch and upgrade schedule without breaking any application. If Microsoft decommissions an operating system, the Contractor must be capable of releasing code compatible with next operating system upgrade prior to Microsoft ending support for current operating system.
7. If at any time the Contractor ceases to do business or ceases to make the software product commercially available, the Owner will assume full ownership of the software. Thirty days prior to ceasing to do business, the Contractor will provide the most current version of the software source code to the Owner.
8. Provide corrective patches and upgrades in the event security vulnerability or system availability issues are discovered.

1.11 DELIVERY, STORAGE, AND HANDLING REQUIREMENTS

- A. Contractor is responsible for insuring all shipped items. Any items damaged during shipping will be replaced and shipped to the project site, by expedited means if requested, at no additional cost to the Owner.
- B. Owner will provide a designated storage/staging area for equipment that has not been installed. Location to be determined after contract award.
- C. It is the Contractor's responsibility to protect the equipment from theft and damage until final acceptance. Contractor will replace the equipment at no additional cost to the Owner.
- D. Deliver equipment to site in manufacturer's original containers to prevent damage and marked for easy identification.

PART 2 - PRODUCTS

2.1 FOR ALL SYSTEM SOFTWARE COMPONENTS:

- A. All aspects of the systems provided, including but not limited to, hardware, software, configuration settings, processes (both manual and automated), policies, procedures, reports, network architecture, data storage schemes and other products must be compliant with all applicable Payment Card Industry (PCI) Security Standards Council standards, Information Supplements and Guidelines (www.pcisecuritystandards.org) published or in force at the time of installation, so that the Owner can certify the system as PCI Compliant. As part of demonstrating compliance with the PCI security standards, the requirement or use of a compensating control (as defined by the PCI Security Standards Council) shall only be permitted with written approval of the Owner.
- B. Provide details in proposal of server infrastructure solution and components, including an on premise or cloud-based solution. Description of any offsite or cloud-based components of the system and the methods by which the on-site equipment and software communicates with the offsite/cloud-based components. This must include a description of the communications and networking methods required to integrate the onsite and offsite components, who provides the associated communications network (Owner, Contractor, or a combination), and any costs associated with this communications network. If the solution is cloud-based, provide in the proposal a comprehensive description of the SaaS/cloud solution architecture, including what cloud hosting platform is being utilized (e.g., AWS, Azure, Google Cloud, or similar), what specific types of cloud services are utilized, whether the cloud implementation is single-tenant or multi-tenant, and what geographic cloud hosting centers will be utilized. Also provide information as to whether support for GovCloud is offered. **A cloud-based VPMS is preferred.**
- C. If any of the software is cloud-based and provided on a Software as a Service (SaaS) basis, Contractor is to document in the Proposal their SaaS licensing terms and conditions, and the options and costs for a multi-year license for terms ranging from 2 (two) up to 10 (ten) years in length. Furthermore, if any component of the system is cloud-based and provided on a SaaS basis, Contractor is to describe in their Proposal what occurs in terms of system and feature functionality if Owner chooses not to renew SaaS-based licensing.
- D. All VPMS, CMS, PCMS, and Mobile LPR data is considered to be the sole intellectual property of the Owner. Usage of this data by Contractor or Contractor's subcontractors or product vendors for any purpose other than to support, test or repair Owner's system requires prior written authorization from Owner. If such data is stored offsite or in the cloud under a term-based SaaS mechanism and Owner decides not to renew the SaaS agreement, Contractor is to send all data gathered over the lifetime of the system (i.e., from system activation date through the SaaS agreement termination date) to the Owner in an Excel format and is to subsequently delete such data from any offsite servers or cloud instances.
- E. Provide unlimited users or a quantifiable number of concurrent users for front-end customers, back-office users, administrative users, and mobile LPR units.

2.2 VIRTUAL PERMIT MANAGEMENT SYSTEM

- A. Support the following VPMS functions and features.
1. Ability to manage eligibility restrictions, waitlists, online and in-office sales, billing, tracking, temporary holds, renewal, and expiration of multiple types of parking permits. Support a minimum of 50 Admin users preferably with no limit to the number of Admin users with access rights.
 2. Provide a customer-facing, web-based portal with full access to products and services offered by Owner's parking department -- including permits, event requests, email preferences, add/edit/or remove vehicles (minimum of 5 with LPR), add to waiting lists, and other customer options allowed within the system.
 3. Ability for customers to modify parking options in real-time, with the system capable of determining eligibility based on Owner's established criteria and Single Sign-On (SSO) sign-in credentials.
 4. Ability for Owner to add credentials to accommodate similar plate reads to address the case where a license plate is commonly read differently, such as ABC456 or ABC4S6 or as a unique custom vanity plate for the front of the vehicle.
 5. Support the following permit options:
 - a. Permit eligibility and cost are based on the customer relationship to the Owner's organization.
 - b. Guest/Visitor at the ½ hour, daily, weekly, and monthly intervals.
 - c. Ability for self-print and display of digital pass on phone for guest pass or access codes, where applicable.
 - d. Employee and Student permits - Annual, monthly, and daily options.
 - e. Special space permits - Service vehicles, business vehicles, contractors, event permits, and other current and potential future unique permit types. Annual, monthly, daily, and fixed number of use permits
 - f. Permit types for motorcycles and mopeds.
 - g. Ability to assign permit validation times (e.g., permits only valid 6 pm - 6 am).
 - h. Assign license plate as permit number.
 6. Provides a customer option to be informed via text, email, or app notification prior to the expiration of their parking session and confirmations of transactions or user changes performed online such as permit purchase, permit renewal, permit change type, license plate change, etc.
 7. Does not allow purchase when desired time includes restricted parking periods on campus (i.e., holidays or major event days).
 8. Allows codes to validate or offer free parking to departmental guests/visitors, and a website where departments on campus can purchase guest parking for university visitors.
 9. Allows rates and schedules to be programmed and reprogrammed in a flexible manner, in real time and without any system downtime.
 10. Allows for multiple zones within parking lots/structures where LPR recognizes permit space types as LPR mobile enforcement vehicle drives through the lots/structures based on plan-view layout or equivalent of each site.
 11. Allows for the public to use certain lots/structures after a set time (11 a.m., 5 p.m., etc.) for a fee. This would be defined based on day and lot/structure.
 12. Special event permit management and reservation system.
 13. Payments for permit parking will require integrations with Owner's Employee Payroll system and Student Management System.

14. The latency for all stated integrations needs to be minimized, especially for integration between VPMS, PARCS, and Parking Citation Management System (CMS). For example:
 - a. If a transient parker uses a mobile app to pay for parking, Owner requires that payment record to show up as a valid transient parking permit in the VPMS/Mobile LPR and PARCS within no more than 5 (five) minutes from the time of purchase.
 - b. If an employee uses the VPMS' user portal to update, renew, or purchase a permit, the updated or new permit information should be reflected immediately in the VPMS/Mobile LPR system and within no more than 15 minutes in the PARCS.
- B. Provide a system that is fully integrated with the Enforcement, Citation and Mobile LPR subsystems.

2.3 CENTRAL MANAGEMENT SYSTEM FOR MOBILE LPR

- A. Microprocessor controlled, in on-line, virtual real-time communication. In event of failure during communication, an error-checking and recovery routine is employed to prevent corruption of data.
- B. Cloud-based system, capable of operating with proper user ID and password, to all authorized users.
 1. Provide continual software updates at no additional fees for the life of the contract.
 2. Maintain a secure connection while active, and automatically log-off after programmable period of inactivity.
 3. Remote access to CMS over standard TCP/IP connection (may use web browser-based applications).
 4. Browser-based user-interface modules utilize client/server technology or equivalent. The following general requirements apply to all components or modules:
 - a. Windows-based graphical user interface.
 - b. Allow for both standard and custom report formats.
 - c. Adequate security to allow for different classifications of users.
 5. System back-up in less than three hours.
 6. Provide any and all updates to the CMS at no additional cost to the Owner for the life of any contract.
- C. Accurately enforce/match scanned vehicle license plates to data files such as:
 1. PbC parking payments.
 2. Permit vehicles.
 3. No parking zones.
 4. Tow, boot or seizure eligible registrations.
 5. Previously scanned vehicles for time limit violations.
 6. BOLO vehicle license plates.

- D. Identify moved and re-parked vehicles or time limit parking via “electronic chalking”.
- E. Upload photos from citation issuance.
- F. Transition existing physical residential parking permit districts to virtual permits.
- G. Manage multitude residential virtual permit districts with various rules and regulations.
- H. Provide security features so that a vehicle identified as a scofflaw cannot be bypassed without corrective action or supervisory authorization. Note: This is not required presently but should be available in the future at no additional cost.
- I. Capable of duration of stay and turnover analysis.
- J. Schedule updates (i.e., hot lists).
- K. Provide mapping functions with zones for location identification and rules.
- L. Maximum response time for data retrieval (i.e., query against “hit” file on hand-held): Four (4) seconds.
- M. Trunk mounted processor, only if required.
- N. Intelligent Power Supply Unit for ignition start-up and shut down.
- O. Color touch screen
 - 1. Display license plates scanned
 - 2. Audible and visual alerts of license plates which are in violation or otherwise identified as scofflaws.
- P. Provide the capability for supervisors to perform field audits.
- Q. Provide for remote access to the management features of the system from designated workstations for authorized supervisors.
 - 1. Capable of automatic storage and wireless transmission of all data and digital images.
 - 2. Unlimited storage capacity.
 - 3. Ability to store and catalogue images for open tickets for indefinitely and for closed tickets for a period or at least 2 years and as long as 5 years and recall them on demand by field-sortable search. Retention period is to be settable by Owner.
- R. Storage
 - 1. Capable of automatic storage and wireless transmission of all data and digital images.
 - 2. Unlimited storage capacity.
 - 3. Ability to store and catalogue images for up to sixty (60) days and recall them on demand by field-sortable search.

- S. Automatically capture, interpret, process, display and store license plate images
- T. Incorporate fuzzy logic for identifying misreads.
- U. Provide real-time displays of:
 - 1. License plate image.
 - 2. License plate.
 - 3. Image of vehicle.
 - 4. Date and time.
 - 5. GPS coordinates.
- V. Manual Features
 - 1. Ability to manually identify misread plates.
 - 2. Ability to add notes to images.
 - 3. Ability to manually enter plate reads.
- W. Queries:
 - 1. Ability to manually enter plates for querying purposes.
 - 2. Ability to cross-link, query and input data from external sources.
 - 3. Ability to audit all queries by date, time and user password.
 - 4. Ability to save frequent query requests.
- X. Data format in either .csv or text file.
- Y. Ability to export and print all data.
- Z. Data download by flash drive or wireless.
- AA. Include updatable mapping system and license.
- BB. Security
 - 1. Utilize protocols and passwords that prevent unauthorized access to software and hardware and manipulation of data and reports, including individual transactions.
 - 2. Include multiple levels of access authorization to all operational, administrative and reporting functions and provide the following security features:
 - a. Define individual user and group-based security.
 - b. Ability to assign a unique user ID and password for each person authorized to use system.
 - c. Ability to establish an expiration period for passwords and periodically change that password for each authorized user ID.
 - d. Ability to disable a user ID following successive log-on failures exceeding a specific limit.
 - e. Ability to view and report user and group level security rights and create user-defined fields.
 - f. Ability to de-activate codes for former users and internal and external customers.

3. Provide Owner with a complete list of initial installation administrator usernames and passwords for all authorized users.
4. Monitor the transmission of repeated messages that may indicate possible problems with the system.
5. Display abnormal status conditions as a visual alarm on the workstation screen, accompanied by an audible alarm.
 - a. The display continues to flash until the abnormal condition is corrected. The audible alarm continues until turned off by operator.
 - b. Record the abnormal status condition and the acknowledgement of the alarm, including time, workstation and operator.

2.4 MOBILE LPR CAMERAS

- A. Ability to capture plate images for parallel and diagonally parked vehicles and moving vehicles.
- B. Ability to read reflective and non-reflective license plates.
- C. Ability to take still pictures.
- D. Ambient lighting conditions have no effect on the accuracy of the LPR system regardless of the time of the day and night. Provide any necessary shading or lighting elements required to mitigate the effect of the ambient lighting conditions on the LPR system performance.
- E. Perform all optical character recognition.
- F. RF shielded camera cables.
- G. Internal heating elements.
- H. Rated at 30 frames per second.
- I. Anti-theft mounting /removal brackets.
- J. Equipped with IR lens for license plate and color image for verification.
- K. Capable of multiple images with multiple flash and shutter settings.
- L. Target range of 9' to 30'.
- M. In-camera GPS.
- N. Pulsed LED illumination.

2.5 CITATION MANAGEMENT SYSTEM

- A. Administrative

1. Provide Owner with virtual permit transition, including integration with PbC, MSM payments, and LPR systems for citation management and financial reporting.
2. Hosted or cloud-based environment must have an off-site secure backup location.
3. Log and track all user activity within the system and generate audit reports on user activity.
4. Owner will have complete ability to add to delete from or revise the passwords that are established by the network administrator. The password system to include the provision of logging the event and user's name each time a password is used to gain access to or within the system.
5. Security functions provided by the system to include but is not limited to:
 - a. All changes/updates to the server system require prior authorization from Owner.
 - b. Where the change and/or update is authorized, an audit trail and report are created including the following:
 - 1) Date/time of change.
 - 2) Record of change made.
 - 3) Username of individual making the change.
 - 4) Record of data modified or changed (prior to change).
 - 5) File identities and record count.
6. Ability to query database by name, vehicle, license plate, citation number, appeal number, facility, or event.
7. DMV Interface for Registered Owner Information and Holds
 - a. Contractor must have ability to retrieve registered owner data from the BMV of Michigan.
 - b. Review DMV "No Hit" list to confirm vehicle make and registered owner information.
8. Allow for automatic scheduling of tasks (e.g., updating customer information from data imports).
9. Allow for customizable screen views for different user's job tasks.
10. Email management
 - a. Ability to schedule auto-generated emails.
 - b. Ability to monitor and audit outgoing email batches, bounce backs, etc.
 - c. HTML and TEXT email capabilities, with unlimited characters within body of email.
 - d. Ability to incorporate graphics or images within email body.
 - e. Ability to attach PDF to email, or another file type.
 - f. Ability to send email directly from customer account page.
11. Letter and statement management
 - a. Custom letters and statements that can be mailed emailed or uploaded to customers.
 - b. Citation and hearing letters with responsible customer, fee, citation and hearing information.

- c. Auto-generate letters based on pre-programmed rules (i.e., number of days for outstanding citation, number of citations, amount owed, etc.).
12. Ability to create and issue citations (virtual/soft-copy only) via handheld device.
13. Ability to create unique citation types with violation description.
14. Ability to set and adjust citation violation fines.
15. Ability to create custom fields on citation, including dropdown menu for public comments, private comments, etc.
16. Ability to attach an image to the citation.
17. Citation images must be available for the customer to view when logged into their account.
18. Issued citations automatically stored in sortable, searchable database.
19. Ability to transfer unpaid citations to a third party (i.e., collections agency).
20. Ability for customers to appeal citations online or via email:
 - a. Ability to attach up to three supporting documents (jpeg, pdf, etc.).
 - b. Throughout the adjudication process the citation can be upheld, fine reduced, overturned, or reduced to a warning.
21. Ability to save, edit, download and schedule queries
22. Reports:
 - a. Available online and on demand for Owner personnel who have proper password access.
 - b. Viewable, printable, and exportable from the GUI.
 - c. Ability to pre-program reports to run, print, and be emailed to desired recipients.
 - d. Data compiled in an ODBC compliant database with the ability to prepare custom reports using the PARCS data including Microsoft Excel, at a minimum, via a comma-separated-value file format.
 - e. Sortable by all fields.
 - f. Provide the Contractor's standard reports including report descriptions, selectable data fields, and report layouts for all standard reports.
 - g. Coordinate with the Owner as required during the system design to address specific reporting needs of the Owner. At a minimum, reports provided shall include:
 - 1) Citations by date, time, location, issuer, violation type, license plate,
 - 2) Paid and unpaid citations.
 - 3) Citation status.
 - 4) Cash drawer activity.
 - 5) Transaction reports by cashier.
 - 6) Cashier reconciliation reports.
 - 7) Credit card transactions.
 - 8) Accounts receivable.
 - 9) Photo uploads from citation issuance
 - h. Ability to retain up to 5 (five) years of citation and associated LPR records, with a user-settable option to adjust the retention period to any lower value in monthly increments, down to a minimum of one month.

- i. Transition existing custom reports to new system as defined by Owner requirements. Owner and Contractor to coordinate report design and finalize custom reports prior to the expiration of the warranty period.

23. Customer Accounts:

- a. Unique account number per customer.
- b. Unlimited number of user-defined fields.
- c. Ability for customer to prioritize data (multiple addresses, vehicles, phone numbers, etc.).
- d. Ability to flag customer accounts or fields (VIP, no checks, contact supervisor, etc.).
- e. Ability to archive inactive customers.
- f. Ability to merge customer accounts when duplications occur.
- g. Ability to create group accounts.
- h. Ability to identify and monitor scofflaw or BOLO accounts.

24. Credit Card Processing:

- a. All applications and software that provide the ability to process Card Not Present transactions as defined by the PCI Council must be listed on the Visa Level-1 Service Provider Registry.
- b. Real-time payment processing.
- c. Ability to identify all CC payments by type of CC.
- d. Accept the following cards:
 - 1) Visa
 - 2) MasterCard
 - 3) American Express
 - 4) Discover
 - 5) Bank-Issued Debit Cards with any of the above card brand affiliations, accepted as a credit card.
 - 6) Ability to create and print receipts.

B. Support:

1. Support tickets can be submitted by phone, email, or web portal.
2. Same-day response required on weekdays if submitted by 3:00 pm EST.
3. Next-weekday response no later than 10:00 am EST if submitted after 3:00 pm EST or on weekend/holiday.

2.6 ENFORCEMENT HANDHELD TICKET WRITING DEVICES

- A. Electronic ticket writing devices with printer.
- B. Ability to take Digital photographs for proof of violation, reduced adjudication, and improved compliance.
- C. Application shall provide for easy back up and restoration of data based on user-defined parameters.

- D. Citation design and language to be approved by Owner.
- E. Minimal Fields:
 - 1. Unique ticket number (automatic entry)
 - 2. Issue date (automatic entry)
 - 3. Issue time (automatic entry)
 - 4. Vehicle information:
 - a. Registration number and/or VIN#
 - b. Vehicle Make
 - c. Vehicle Color
 - d. Vehicle Type
 - e. Plate number
 - f. City
 - g. State
 - h. Location
 - i. Zone
 - j. Time Limit
 - k. Route
 - l. Issuing PEO Name
 - m. Issuing PEO Badge Number
 - n. Violation Identification Code
 - o. Fine Amount
 - p. PEO Notes
 - q. Public and private comments
- F. Clearly readable screen in direct sunlight and after exposure to direct sunlight.
- G. Display and/or display keys must have adjustable lighting to facilitate use after dark or whenever low lighting conditions exist.
- H. Provide date and time stamps for all operational functions.
- I. Internal clock synchronizes on a daily basis with the host software.
- J. Daylight savings / standard time changes shall be automatically reflected.
- K. Provide group mode function for automated repetition of data for multiple violations in the same location or for the same violation – to hasten the issuance process.
- L. Accommodate incident and trouble reporting in the field, such as broken parking meters, missing signs, etc.
- M. Provide printable End of Shift summary.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. At least sixty days prior to go-live date, meet with Owner to review implementation, phasing, and migration plan.
- B. Install LPR System in accordance with manufacturer's recommendations.
- C. Installation and Start-Up: Contractor is responsible for installation of all Contractor supplied equipment and its interfacing and interconnection with Owner supplied equipment.
- D. Contractor is responsible for all software and communications by all computers and peripheral devices.
- E. Owner or Owner's Representative may observe installation process and stop the work at any time throughout the process.

3.2 FIELD QUALITY CONTROL

- A. Provide an Acceptance Testing Plan to demonstrate the functionality of the system.
 - 1. Include demonstrations of compliance with all specifications, contractual compliance, definitions of all test objectives, participant responsibilities, documentation of tests and procedures for dealing with failures during test.
 - 2. Detail tests for every functional requirement of the system, including PbC integration.
 - a. Include checklist for specified supplies, spare parts, training operation and training manuals.
 - b. Provide space for acceptance by Contractor and Owner or Owner's representative.
 - 3. Confirm that all specified features are provided and fully operational before scheduling Acceptance Testing with Owner and/or Owner's Agent.
 - 4. Notify Owner or Owner's Representative in writing at least one week prior to test session. If a test is not successful, correct noted deficiencies and advise Owner or Owner's Representative, at least two days in advance, that test session is ready to resume.
 - 5. Owner or Owner's Representative may witness tests.
- B. Passing Acceptance testing, even if performed in the presence of the Owner or Owner's Representative, does not relieve the Contractor of the responsibility to provide a system in accordance with the Specifications.
- C. Promptly correct all problems encountered at no cost to the Owner.
- D. Sixty-Day Operational Test and Final Acceptance
 - 1. After go-live date, the Owner will conduct an operational test for sixty (60) days.
 - 2. Performance Standards:

- a. System is fully operational without downtime or programming problems for the complete monthly reporting cycle. For each down time period of between one hour and eight hours, or programming problems that delay the report cycle, two days will be added to the test duration.
 - b. All reports correlate 100% with CMS and PbC data.
3. Maintain detailed records and a logbook of all tests, events and issues to be provided to the Owner upon completion of the tests.

3.3 INSTRUCTION AND TRAINING

- A. Fully instruct the Owner's designated personnel in the operation, adjustment, and maintenance of all products, equipment, and systems.
- B. Coordinate scheduling of on-site and in-person instructional classes with Owner's designated personnel to avoid conflicts and peak-period personnel demands.
- C. Submit a proposed instruction schedule prior to equipment installation. Owner will tentatively approve or suggest changes to the training schedule.
- D. Ample time should be allotted within each session for the instructor to fully describe and demonstrate all aspects of the VPMS and Mobile LPR systems and allow Owner personnel to have hands-on experience with the meters.
- E. All instruction courses will consist of classroom instruction and actual "hands-on" experience. Classes will be set up in a room designated by the Owner.
- F. Provide experienced instructors that speak fluent English in a clear precise manner.
- G. Provide all documentation required for instructing Owner personnel. The Owner retains the right to copy training materials as frequently as required for ongoing internal use only.
- H. Provide an instructional notebook or user's manual to accompany every instruction course. Submit a hard copy and electronic version of all manuals (operation and maintenance) written in common English with appropriate photos, diagrams, and schematics to supplement the text.
- I. Training categories:
 1. Maintenance.
 2. Enforcement.
 3. Administration.
 4. Departmental.
 5. Events.
 6. Front-end Users (i.e., parkers).
- J. Provide hard copies and electronic operation and maintenance manuals for all components.

APPENDIX 1 SPECIFICATION COMPLIANCE FORM

This Appendix 1 shows the format of the Specification Compliance Form that is to be completed by Contractor and submitted along with Contractor's proposal. Owner will provide a version of the below form in Word which Contractor is to complete, sign, and return along with their other proposal materials.

Vendor Name: _____

Name of Person Completing Form: _____

Signature: _____ Date: _____

List all exceptions and substitutions as per the requirements contained in 111248 VIRTUAL PERMIT MANAGEMENT SYSTEM WITH MOBILE LPR ENFORCEMENT. List any Clarifications, Comments, or Value Engineering Options following the exceptions and substitutions section. If you have no exceptions or substitutions, please write "NO EXCEPTIONS OR SUBSTITUTIONS" below, and sign the form and submit it as directed.

Specification Section	Exception to Specification	Proposed Solution/Substitution

END OF SECTION 111248

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SECTION 111224.14 – PAY-BY-PLATE MULTI-SPACE PARKING METER (MSM)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Instructions to Vendors
- B. PARCS RFP Documents, with Exhibits
- C. PARCS Specification, 111226.01
- D. VPMS Specification, 111248
- E. Price Form

1.2 REFERENCES

A. List of Abbreviations:

- | | | |
|-----|-------|---|
| 1. | CC | Credit Card |
| 2. | CMS | Central Management System |
| 3. | EMV | Europay, MasterCard and Visa |
| 4. | ID | Identification |
| 5. | NEMA | National Electrical Manufacturing Association |
| 6. | IP | Ingress Protection |
| 7. | LCD | Liquid Crystal Display |
| 8. | LPR | License Plate Recognition |
| 9. | PARCS | Parking Access Revenue Control System |
| 10. | PCI | Payment Card Industry |
| 11. | P&D | Pay & Display |
| 12. | PbC | Pay by Cell |
| 13. | PbP | Pay-by-Plate |
| 14. | PbS | Pay-by-Space |
| 15. | RH | Relative Humidity |
| 16. | RAM | Random Access Memory |
| 17. | RMA | Return Merchandise Authorization |
| 18. | MSM | Multi-Space Meter |
| 19. | VPMS | Virtual Permit Management System |
| 20. | WSU | Wayne State University |

1.3 SUMMARY

- A. This section includes provision of all material, labor, equipment, services, and training necessary to furnish and install a fully integrated, online, real-time, multi-space parking meter system functioning as described herein.

B. System Description

1. The system includes:
 - a. MSM
 - b. CMS
 - c. LPR System integration
 - d. Operating in a PbP configuration
 - e. PbC System integration
 - f. Citation Management System integration
 - g. All necessary components and materials for a complete and functioning turnkey MSM system as identified in this specification.
 - h. Full installation, including mounting pads as needed, signage, and integrations with mobile LPR and payment applications.
2. Includes two signs per MSM as described herein.
3. Includes installation, including concrete bases as needed.
4. Locations requiring MSM kiosks to allow public parking payment currently offer payment with a ticket or credit card in/out. These are identified as "Type A" on the table located on the following page, referenced in item #3. Locations within parking structures require hard-wired power and hard-wired data if cellular is not available. Outdoor locations require solar power and cellular modem data. The number of MSM per facility is one per exit lane, with parking structures requiring a minimum of two (2). A unit price will be used if additional units are added.
5. Table of Locations (following page)

Table of Locations

Note	Lot #	Address	Existing Lanes	Entry Lanes	Exit Lanes	Reversible Lanes (included)	Nested Area	Type
	PS-1	450 W. Palmer	Y	5	4			A
	PS-2	5150 Lodge Service Dr.	Y	3	4	2		A
TBD	PS-3	45 E. Warren / Rackham Garage UM	Y	1	1			A
	PS-4	555 E. Canfield (Medical School)	Y	4	4	2	1	B
	PS-5	5501 Anthony Wayne Dr.	Y	4	2	2		A
	PS-6	61 Putnam	Y	3	3			A
	PS-8	91 W. Forest	Y	4	4	2		A
	12	6050 Woodward	Y	1	1			A
	13	Cass & Boroughs	Y	2	2			B
	13 B	iBio building 6135 Woodward Ave	Y	1	1			B
	14	6241 Cass Ave.	Y	1	1			A
	23	38 W. Palmer	Y	1	1			A
Exhibit A	30	1411 I-94 Service Dr.	none	1	1			A
	31	630 W. Ferry	Y	1	1			A
	32	475 W. Palmer	Y	1	1			A
	33	5521 Woodward	Y	2	2	1		B
Exhibit A	34	35 W. Ferry	Y	1	1			B
	35	5555 John R	Y	1	1			A
	39	656 Reuther Mall	Y	1				B
	40	5095 Lodge Service Dr.	Y	2	1			B
Exhibit A	50	1200 W. Warren (Athletic Lot)	Y	4	4	4		A
	51	4865 Fourth St.	Y	2	2			A
	53	4820 Anthony Wayne Dr.	Y	1	1			A
	54	4840 Second	Y	1	1			A
	56	50 W. Hancock	Y	1	1			A
	57	237 E. Hancock	Y	1	1			A
	59	John R.	Y	1	1			A
	62	80 W. Forest	Y	1				B
	70	4441 Cass Ave.	Y	1	1			A
	71	410 W. Canfield	Y	1	1			A
	72	4510 Cass Ave.	Y	1	1			A
	75	545 E. Canfield	Y	2	2			A
Exhibit A	400 Mack	400 Mack Lot	none	3	2			A
Exhibit A	I2C	Innovation and Integration Center	none	2	2			A
	Mall Gate	Gilmore Mall Access	Y	1	-			B
	Load Dock	Rands Business Annex CS Gold	Y	1	-			B

Totals: 64 56 13 1

1.4 DESIGN CRITERIA

- A. Accuracy: Provide the following minimum accuracy levels. Calculate accuracy by dividing the accurate counts/calculations by all counts/calculation.
1. Fee calculation: 100%
 2. Revenue amounts: 100%
 3. Data received and accepted by computer system as valid: 100%
 4. Data transmission: Less than one message re-transmission per hour.
- B. Equipment Construction: Design and construct all components and equipment with the following:
1. Durable vandal and weather resistant cabinets, which maintain finish, look, integrity and functionality in the environment in which installed for a period of ten years.
 - a. Mounting holes accessible only from inside of cabinets.
 - b. Hinged cabinet doors that swing clear of bollards, walls, columns, and any other obstructions.
 - c. Modular internal components, to extent practical, for easy maintenance and replacement.
 - d. Able to be relocated without damaging aesthetics or performance of equipment.
 - e. Preference for solar powered units to the extent possible.
 2. Control logic and communication capability as necessary and required herein.
 3. Compatible communication ports for all communications and connections.
 4. Crystal controlled time clock/calendar that is updated at least once daily by CMS and accurate to one minute per ninety days for all primary components.
- C. User Interface: Design and construct the user interface with the following:
1. Ergonomically designed devices and user interface for ease of use by patrons.
 2. Meet the latest ADA requirements, and any local accessibility requirements, including but not limited to reach ranges, visibility of display screens, clear floor or ground space, and operable parts.
- D. Communication:
1. All applicable components are microprocessor controlled, in on-line, virtual real-time communication with CMS.
 2. All transaction data sent to CMS immediately, with communications hierarchy appropriate to need for action or response from another component, feature or subsystem.
 3. All transaction data is available to CMS workstations within 30 seconds of completing transaction at any device. Delays or functional degradation resulting from data communication between devices over CMS network is not acceptable.
 4. Integrate with LPR enforcement system for enforcement purposes.
- E. Future System Expansion:

1. Add or remove MSMs to system.
 2. Change payment mode to either PbS or PbP.
- F. Fully operational regardless of extreme weather such as heat, sun, rain, ice, snow, freezing rain, etc.
- G. Operating temperature range of 0 F to +120 F and to 95% RH.

1.5 PRICE REQUIREMENTS:

- A. Price includes the provision of all material, labor, equipment, and services necessary to furnish and install fully integrated MSM system as outlined herein.
1. Examine site
 - a. Identify in writing any constraints or conflicts regarding MSM installation.
 - b. Include cost, in writing, of rectifying such constraints or conflicts in Price Proposal.
- B. Add Alternates:
1. Provide annual pricing for Maintenance, Service, and Parts Contract after one-year warranty:
 - a. A separate contract awarded for Maintenance, Service and parts that would commence with expiration of one-year warranty period, with annual pricing for five (5) years after the initial one-year warranty period.

1.6 SIGNAGE

- A. Provide and install sign poles and MSM signage to advise customers to pay at the meter or by phone, and to locate the meters. Two advisory signs per kiosk at each MSM. Final sign quantity, color, and design to be approved by Owner.
- B. Provide sign poles and install PbC signs and meter stickers provided by PbC vendor.
- C. Utilize rust-resistant 8-foot U-channel signposts.
- D. Utilize 18" by 24" reflective, rigid aluminum signs.
- E. Substantial Completion: A certificate of substantial completion will be provided when the following requirements have been satisfied:
1. All systems, features, and communications have passed the final acceptance testing per Section 3.2 of this document.
 2. Certification of PCI compliance.
 3. All spare parts, stock material and manuals are on site and have been approved.
 4. All test checklists, documentation and training has been completed.

- F. Final Acceptance: Final acceptance will occur upon satisfactory completion of all work, tests, demonstrations, and training specified herein as well as successful completion of thirty-day operational test per Section 3.2 of this document.

1.7 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

- 1. Distribute to the appropriate parties any installation diagrams, details, and templates for setting, anchoring and/or mounting meters.
- 2. Coordinate interfaces with any other systems by others, including but not limited to Local Area Network, PbC vendor, etc.

- B. Pre-Installation Meeting: Conduct meeting at project site thirty (30) days in advance of time scheduled for work to proceed to review requirements and conditions that could interfere with successful performance. All parties concerned with installation, including communications, concrete work, or others who are required to coordinate work are required to attend. Include Owner or Owner's Representative. At a minimum, cover:

- 1. Concrete and Masonry work.
- 2. Review schedule.
- 3. Review testing and acceptance procedures.

- C. Coordinate data communication, internet connectivity, and network requirements with Owner or Owner's IT Representative.

- D. Coordinate PA-DSS compliant installation of system with Owner or Owner's designated representative for PCI Compliance.

1.8 PROPOSAL SUBMITTALS - TO BE INCLUDED WITH RESPONSE

A. Price Form:

- 1. Total system cost and per unit cost of each component.
- 2. Include a separate cost sheet to identify the recommended spare parts to be kept on-site.

B. Product Data:

- 1. Product description for each component including the following:
 - a. Detail of user interface, including description of display screen.
 - b. Operating temperature and humidity ranges.
 - c. Housing material and access panel location.
 - d. Installation and mounting requirements.
 - e. Solar-panel performance and requirements.
 - f. Description of vault locking system.
 - g. List of modular components that may be replaced by hand.

- h. List of components that require tools for replacement, and identify which tools are required.
 2. Description of the CMS software, including the following:
 - a. Configuration diagram.
 - b. Software platforms and programming language.
 - c. Communication protocol, polling procedures, and transaction message flow from peripheral devices to and through CMS.
 - d. Communication failure/error identification and recovery.
 - e. Fault tolerance.
 - f. Back-up procedures.
 - g. Data storage and retrieval procedures.
 3. Sample Screenshots and Reports:
 - a. Screenshots of dashboards.
 - b. Screenshots of payment process.
 - c. Sample revenue and transaction reports.
 - d. Sample maintenance reports.
- B. If cellular communication technology is proposed to be provided by the contractor, provide the following submittals with the proposal:
 1. Underlying technology proposed, i.e. 4G LTE, 5G, 5G UWB, etc.
 2. Cut sheet(s) of the cellular components.
 3. Monthly service cost per line of service and in total.
 4. Expected end-of-service date of the cellular components based on known carrier sunset dates for the proposed technology. If no sunset dates are known, include a statement indicating such.
 5. A complete list of carriers compatible with the proposed cellular technology
 6. Contractor's detailed plan to provide a cellular site survey and carrier selection or recommendation. Cellular site survey will be required after contract award.
- C. Spare Parts
 1. List all spare parts, and a separate list of recommended spare parts and quantities to be provided, including:
 - a. Part name.
 - b. Part number.
 - c. Unit price.
- D. Exceptions and Substitutions:
 1. Complete and submit an all-inclusive Specification Exception List (including substitutions), identifying any substantive non-compliance with specification requirements.
 2. Substitutions: It is recognized that there are variations in equipment between manufacturers. Where functional performance, features or quality of system varies materially from that specified, submit a Request for Substitution identifying

substitution being proposed. This submittal may be accompanied by catalog sheets, brochures, and technical specifications of the proposed system.

- E. Installation Schedule: Detailed schedule of project requirements including milestones for fabrication, delivery, installation, training, and testing.
- F. List manufacturer of each primary component of system.
- G. Contractor Information
 - 1. Provide the following information:
 - a. Name of company.
 - b. Brief company overview including a description of the company structure, and a statement on whether the company is a private or public entity.
 - c. Years in business.
 - d. Number of employees.
 - e. Annual sales volume.
 - f. List of key accounts.
 - g. Name and contact information (address, email, and phone number) of Principals and/or Local Contacts.
 - 2. Provide a list of any subcontractors, their business address, and a summary of their role in the project.
 - 3. Description of the Contractor's presence in the United States and in the state of Pennsylvania, and the location of the nearest service center for maintenance and repairs.
- H. Manufacturer's Qualifications: Provide documentation:
 - 1. In continuous operations for previous five (5) years.
 - 2. Similar system and system integration installed in three (3) or more garages of similar size and complexity. Provide the following for each installation:
 - a. Name of project.
 - b. Location.
 - c. Contact name, telephone number and email address.
 - d. Date of installation.
 - e. Description of equipment and quantities.
- I. Installer and/or Service Provider Qualifications: If different than Manufacturer, provide documentation:
 - 1. Proven ability to provide installation and/or service and support after installation, meeting minimum requirements as specified herein.
 - 2. Continuously worked with equipment manufacturer, including providing installations and/or service, for minimum of three (3) years.
 - 3. Approved in writing by manufacturer.
 - 4. Documentation of manufacturer's installation and/or service training within previous two (2) years.

5. Similar system installed and/or maintained in three (3) or more garages of similar size and complexity. Provide the following for each installation:
 - a. Name of project.
 - b. Location.
 - c. Contact name, telephone number and email address.
 - d. Date of installation.
 - e. Description of equipment, quantities, and vendor responsibility.
 6. Manufacturer approved service center located within four hour's drive of installation.
- J. List of sub-contractors, identifying nature of work performed.
- K. Warranty:
1. Submit copy of warranty (per Section 1.12 of this document) and explanation of any instances which may impact warranty coverage.
 2. Submit RMA procedures.
 3. Submit regular service hours and hourly rates, as well as other hours of availability and corresponding rates.
 4. Submit maximum remote and on-site service response times from time of service request.

1.9 INFORMATIONAL AND CLOSEOUT SUBMITTALS

- A. All submittal approvals, comments and rejections will be returned to the Contractor by the Owner's designated representative with requests for resubmittal as appropriate. Resubmit as required until submittal is approved by the Owner's designated representative.
- B. Operating Documentation: Prior to initiation of field test and training, deliver two hard copies and one electronic copy of operations manuals, maintenance, and administration manuals.
- C. Copies of all licenses, registrations, documentation, disks and other media as may have been included with those commercially available software packages provided with system. In addition, ensure that all licenses, registrations and warranties have been transferred to Owner prior to final software turnover.
- D. At least 30 days prior to scheduled training sessions, deliver a Training Plan. Include at a minimum, a description of all training courses including identification of instructional outcome, duration of course, and type of presentations.
- E. Testing Plan and Documentation: Provide a test plan for review and approval by Owner or Owner's authorized representative 30 days prior to start of first test. Include demonstrations of compliance with specifications, contractual compliance, disaster recovery testing and documentation, definitions of all test objectives, participant responsibilities, documentation for tests, and procedures for dealing with failures during test.

- F. If the system requires a connection to the public internet via a fixed or cellular connection, provide a cellular site survey along with methodology for selection or recommendation of carrier. Contractor is expected to do all required cellular signal strength measurements and determine ideal modem and/or antenna placement. Owner has no responsibility to ensure adequate cellular signal strength.
- G. Contractor is responsible for all permits and licenses and compliance with all codes and regulations.
- H. Samples: Submit samples of reports, receipts, and other items to be selected by Owner within 30 days of contract.

1.10 MAINTENANCE MATERIAL SUBMITTALS

- A. Stock: Furnish the following operating stock items prior to commencement of operational testing.
 - 1. Ten rolls of receipt paper per MSM. Owner must approve color and artwork of receipts.
 - 2. One spare coin vault for every two MSMs.
- B. Lock and Key Requirements:
 - 1. Identical locks and keys for all like equipment but unique to this project so that keys from other projects will not provide access.
 - 2. Provide Owner with three (3) sets of maintenance keys, three (3) sets of vault area keys, three (3) sets of vault keys.
 - 3. If a special tool is required to perform any function or maintenance, provide three (3) of these tools.

1.11 QUALITY ASSURANCE

- A. All components and installation to comply with all laws, ordinances, codes, rules, and regulations of public authorities having jurisdiction over this part of the work. It is the responsibility of the Contractor to meet these and all other current technical, performance, and safety standards that are applicable to all components and to the entire system, even when not specifically referenced.
- B. Open-architecture system where all interfaces (hardware and software) conform to national and International Organization for Standardization (ISO) standards.
- C. All materials and equipment listed, labeled, or certified by a nationally recognized testing laboratory to meet Underwriters Laboratories, Inc. (UL) standards, where test standards have been established.
 - 1. Equipment and materials which are not covered by UL Standards may be considered, provided equipment and material is listed, labeled, certified or otherwise determined to meet safety requirements of a nationally recognized testing laboratory.

2. Equipment of a class for which no nationally recognized testing laboratory accepts, certifies, lists, labels, or determines to be safe, will be considered if inspected or tested in accordance with national industrial standards, such as NEMA, IP, or ANSI. Evidence of compliance includes certified test reports and definitive product data.
- D. Equipment housings, conduits, and junction boxes exposed to weather (any location not in a conditioned environment) will meet or exceed NEMA 3SX or IP54 standards to be moisture-proof and provide sufficient protection so that the components continue to function without moisture, dust, particle, heat, or cold-related interruption. Components that do not meet NEMA 3SX or IP54 standards or better may be considered if implemented with supplemental environmental controls to sufficiently protect equipment.

1.12 DELIVERY, STORAGE AND HANDLING REQUIREMENTS

- A. Contractor is responsible for insuring all shipped items. Any items damaged during shipping will be replaced and shipped to the project site, by expedited means if requested, at no additional cost to the Owner.
- B. Owner will provide a designated storage/staging area for MSM equipment that has not been installed. Location to be determined after contract award.
- C. It is the Contractor's responsibility to protect the equipment from theft and damage until final acceptance. Contractor will replace the equipment at no additional cost to the Owner.
- D. Deliver equipment to site in manufacturer's original containers to prevent damage and marked for easy identification.

1.13 WARRANTY

- A. General: Equipment and installation (100% parts and labor) for one (1) year from date of final acceptance by Owner or Owner's Representative. System maintained and serviced against all malfunctions due to manufacturing or installation defects at no cost to Owner during warranty period, including preventive maintenance per manufacturer's recommendations or as necessary to keep equipment in good working order. Software support provided during warranty period to include all software upgrades at no additional cost to Owner.
 1. Warranty period commences after Contractor has demonstrated satisfactory performance of a functioning MSM system and after the 30-day Operational Test.
 2. Maintain a log of all maintenance, preventive maintenance and repair work performed under warranty and provide to Owner or Owner's Representative at end of warranty period.
- B. Warranty response period:
 1. Monday through Friday, 8:00 am to 5:00 pm excluding holidays.

2. Response time from initiation of trouble call, to on-site response by qualified service technician
 - a. Immediate telephone support available from 8:00 am – 5:00 pm Monday-Friday.
 - b. Next-day on-site technical support no-later than 12 noon the following weekday.
- C. If Contractor is not available for above response, Owner or Owner's Representative may affect repairs with no impact on warranty. Pre-qualify appropriate Owner or Owner's Representative to perform repairs and identify types of repair each trained individual is qualified to perform after training of Owner personnel.
- D. Replace items taken from spare parts inventory during warranty period at no additional cost to Owner.
- E. Preventative Maintenance Service during the Warranty Period:
 1. Provide preventative maintenance services for all systems throughout the warranty period. Preventative maintenance procedures and frequencies are defined within the Manufacturer's recommended maintenance procedures manual.
 2. Preventative maintenance services include but are not limited to inspection, testing, necessary adjustment, lubrication, calibration, parts cleaning, communication system maintenance, server administration and database administration of the hardware provided as part of this project by the Contractor.
 3. Perform all preventative maintenance at non-peak periods during regular business hours.
- F. Software Support during the Warranty Period:
 1. Make available to the Owner normal software improvement releases (updates) as they become available at no additional cost to the Owner.
 2. Provide all software patches and updates free of charge during the warranty period; however, the Owner has right of refusal.
 3. Seven (7) calendar days prior to all software modifications, patches, updates, and upgrades, provide accurate and complete documentation that describes:
 - a. Patch/update release designation.
 - b. Proposed date and time of implementation.
 - c. Detailed description of what the patch/update accomplishes.
 - d. Test plan that shows the change has been successfully tested and has passed internal unit, end-to-end testing.
 - e. Full disaster recovery procedures that return the system to its pre-patch/update condition
 4. Provide operating system support and database administration services including adherence to the recommended operating system patches and updates as they are made commercially available by the operating system developer.
 5. Coordinate the testing and implementation of all patches and updates with the Owner.

6. Support upgrades to the application based on operating system patch and upgrade requirements. For example, if run on a Microsoft operating system, the software can be patched according to the Microsoft patch and upgrade schedule without breaking any application. If Microsoft decommissions an operating system, the Contractor must be capable of releasing code compatible with next operating system upgrade prior to Microsoft ending support for current operating system.
7. If at any time the Contractor ceases to do business or ceases to make the software product commercially available, the Owner will assume full ownership of the software. Thirty days prior to ceasing to do business, the Contractor will provide the most current version of the software source code to the Owner.
8. Provide corrective patches and upgrades in the event security vulnerability or system availability issues are discovered.

PART 2 - PRODUCTS

2.1 MSM CENTRAL MANAGEMENT SYSTEM

- A. Microprocessor controlled, in on-line, virtual real-time communication.
 1. MSM wirelessly communicates complete transaction log to CMS. In event of communication failure, MSMs continue to operate in off-line mode and store a minimum of 1,000 transactions, or have sufficient system redundancy, to insure availability of transaction data upon restoration of CMS. In event of failure during communication, an error-checking and recovery routine is employed to prevent corruption of data.
 2. Describe the minimum, maximum, and average amount of time in seconds the meter will take to transmit transactions to the CMS, including what parameters or conditions will affect transmission times.
 3. Provide validation options to allow WSU departments to provide a validation code in advance of parking.
- B. Hosted system, capable of operating with proper user ID and password, to all authorized users.
 1. Provide continual software updates at no additional fees for the life of the contract.
 2. Provide field programmable functions of each meter from CMS (password protected), including rate structures (from CMS only), with all programming changes reported in daily log.
 3. Maintain a secure connection while active, and automatically log-off after programmable period of inactivity.
 4. Remote access to CMS over standard TCP/IP connection (may use web browser-based applications).
 5. Browser-based user-interface modules utilize client/server technology or equivalent. The following general requirements apply to all components or modules:
 - a. Windows-based graphical user interface.
 - b. Allow for both standard and custom report formats.
 - c. Adequate security to allow for different classifications of users.

6. System back-up in less than three hours.
7. Provide all updates to the CMS, to ensure full compatibility with the meters and the system, at no additional cost to the Owner for the life of any contract relating to the meters.
8. Integrate with Mobile LPR enforcement system.
9. Integrate with Owner's PbC provider for combined payment and financial reporting.

C. Security

1. Utilize protocols and passwords that prevent unauthorized access to software and hardware and manipulation of data and reports, including individual transactions.
2. Include multiple levels of access authorization to all operational, administrative and reporting functions and provide the following security features:
 - a. Define individual user and group-based security.
 - b. Ability to assign a unique user ID and password for each person authorized to use system.
 - c. Ability to establish an expiration period for passwords and periodically change that password for each authorized user ID.
 - d. Ability to disable a user ID following successive log-on failures exceeding a specific limit.
 - e. Ability to view and report user and group level security rights and create user-defined fields.
 - f. Ability to de-activate codes for former users and internal and external customers.
3. Provide Owner with a complete list of initial installation administrator usernames and passwords for all authorized users.
4. Password protected MSM subsystems to restrict access to individual functions of each subsystem:
 - a. Revenue Monitoring, Control, and Reporting.
 - b. Maintenance Monitoring, Control, and Reporting.
5. Utilize credit and debit card acceptance hardware, software, and other system components that are PCI DSS and EMV compliant.

D. MSM Equipment Monitoring.

1. Capable of performing and wirelessly reporting the results of a self-diagnostic routine at programmable times or intervals. Self-diagnostic routines verify that MSM functions are working properly. Functions to be checked include accuracy of fee calculation, clock, and card acceptance. MSM will require database communications machine to machine.
2. Warning alarms tracked, displayed, and communicated in real time to workstations and cell phones for the following conditions:
 - a. Machine failure.
 - b. Low battery.
 - c. Dead battery.
 - d. Component trouble and/or failure.

- e. Receipt jam.
 - f. Card jam.
 - g. Tampering.
 - h. Vault near capacity.
 - i. Vault full.
 - j. Door Open.
 - k. Receipt paper low.
 - l. Receipt paper empty.
 - m. No transactions for a defined period.
3. Monitor electrical circuits and frequency of operational errors in components to identify maintenance actions to prevent failure of a component.
 4. Monitor the transmission of repeated messages that may indicate possible problems with the system.
 5. Display abnormal status conditions as a visual alarm on the workstation screen, accompanied by an audible alarm.
 - a. The display continues to flash until the abnormal condition is corrected. The audible alarm continues until turned off by operator.
 - b. Record the abnormal status condition and the acknowledgement of the alarm, including time, workstation, and operator.
 6. Record and store all meter alarms and repair activity.
- E. PbP Enforcement Integration:
1. During enforcement sessions, all transaction data is available to CMS workstations and mobile enforcement devices within thirty seconds of completing transaction at any device. Delays or functional degradation resulting from data communication between devices over CMS network is not acceptable.
 2. Provide web-based, viewable and printable reports of all meter and mobile payments for enforcement purposes, including time purchased, purchase amount and time of expiration.
 3. Ability to integrate MSM data with mobile and/or handheld units for enforcement purposes, providing street or lot #, machine #, plate #, time purchased, purchase amount and time of expiration.
- F. MSM Reports: Provide the following ASCII file reports which can be displayed on a monitor or printed on a printer:
1. Daily Event Log - A listing of any changes to the system and users who made the changes, system alarms and system log on/log offs.
 2. Meter alarms and repair activity sortable by time, date, meter, operator, and/or type of alarm.
 3. Maintenance history report of each meter.
 4. Transaction Report - A listing of each transaction processed by the MSM, including and sortable by:
 - a. Time/date/day of week.
 - b. Duration.
 - c. Payment amount.

- d. Card type.
 - e. Plate number.
5. Daily Summary Report - A daily summary of all MSM activity, including daily grand totals of Transaction Report data.
 6. Monthly Summary Report – A monthly summary of all MSM activity, including monthly grand totals of Transaction Report data.
 7. Parking Value/Type Report - Stratification based upon the value of transactions processed by payment type, provided for each rate structure. This report is used for revenue analysis, rate analysis, management planning, and statistical information.
 8. Revenue Report – Total revenue for a selected timeframe, including and field sortable by:
 - a. Time of day.
 - b. Plate number.
 - c. Card type.
 - d. Duration.
 9. MSM Usage Reports sortable by:
 - a. Time of day.
 - b. MSM
 - c. Plate number.
 - d. Card type.
 - e. Duration of time.
 10. Add-time report – Provide a list of transactions conducted by same customer, to add time at the meter, using ID code.
 11. Pre-payment report – Provide a list of transactions conducted in advance of the session start time.
 12. Rejected credit cards per meter, broken out by reason for rejection.
 13. Number of meters and % of inventory out-of-order over a specified time period.
 14. Either periodically or on demand, CMS downloads and sends electronically, revenue reports for integration into Owner's financial department via TCP/IP connection to designated computer network in Microsoft Excel or approved equivalent.

G. Rate Structure:

1. Remote programming of MSM parking rates, with rate tables in a windows format and easily changed by the Owner.
2. Day, evening, night, weekend, and event rates.
3. Weekly and monthly permit rates.
4. Grace periods (i.e., 15 minutes free).
5. Flat rates for events.
6. Holiday rates.
7. Residential rates.
8. Allow for initial payment and/or adding time at any MSM in system.
9. Provide a unique ID code to enable customers to add time to their transaction.
10. Programmable time slots as small as ten minutes.

11. User defined maximums (2-hour, 4-hour, 12-hour, 24-hour, etc.)
12. Submit the minimum number of programmable time slots per day and per week.
13. Ability to program any subset of meters using any combination of standard and user-defined filters and an effective date.
14. Automatic adjustment for daylight saving time and leap year in fee calculations.

2.2 MULTI-SPACE METER (MSM)

- A. Operational Modes: PbP with ability to convert to PbS or P&D modes if so desired at a future date.

1. PbP sample operating sequence:
 - a. MSM prompts customer to enter plate number.
 - b. MSM prompts customer to make payment.
 - c. MSM processes payment and offers receipt.

- B. Housing

1. Cabinets and component brackets fabricated from 100% high grade stainless or cold rolled steel.
2. Durable, vandal, graffiti, corrosion, and weather resistant, and able to maintain finish, look, integrity and functionality in the environment in which installed for a period of ten years.
3. Mounting holes are only accessible from the inside of the cabinet.
4. Internal door hinges.
5. External lighting to assist patrons at night.

- C. Internal Components

1. Modular in nature and easily removed/replaced by hand.
2. Corrosion resistant connections and connection boxes with unique installations so that a component or connector cannot be connected incorrectly.
3. Provide heating source for extreme cold temperature.

- D. Informational/Instructional Displays

1. Liquid Crystal Display (LCD) Color Display Screen
 - a. Display current time of day (HH:MM).
 - b. Acknowledgement of payment, buttons, numbers, letters, and/or symbols pressed by customer.
 - c. Easily readable alpha-numeric display to communicate messages to user.
 - d. Instructional prompts guide customer through payment process such as: "Please enter plate number", "Please enter desired time to park", "Please insert credit card", "Authorizing" and "Thank you".
 - e. Capable of recognizing user errors and providing corrective guidance.
 - f. Remotely programmable via the CMS.
 - g. Backlit, automatically adjusting to external light conditions, with the contrast adjustable by the Owner.

- h. UV resistant (non-yellowing) Lexan-like material to protect the LCD.
 - i. Display (scroll) rates and regulations for every time slot programmed for the day.
 - j. Ability to display logos and graphics.
 - k. Provide on-screen menu or display for technicians to analyze problems on-site, and provide, at minimum, the following information regarding the meter's current operating status:
 - 1) View the current assigned meter configuration and software version.
 - 2) View the battery levels and the solar panel charge level (if solar).
 - 3) Test the operating condition of the card reader.
 - 4) Test the integrated wireless communications.
2. Fixed graphics containing customer instructions for user-friendly operation.
- a. Operating procedure progresses from left to right and top to bottom.
 - b. Numbered corresponding instructions are pictorially illustrated.
 - c. Customizable by Owner.
3. User Interface
- a. Weatherproof keypad or and/or user buttons unaffected by temperature, sun, rain, ice, snow, freezing rain, etc.
 - b. Capable of operating in up to three different languages at the push of a button.
- E. Card Reader
1. Accept the following cards:
- a. VISA
 - b. Master Card
 - c. American Express
 - d. Discover
 - e. Bank Debit Cards with Credit Card Logo
2. Credit Card Approval System:
- a. Credit card readers wirelessly connected to a server dedicated to credit card approval and payment processing system.
 - b. Configure system such that information from each credit card transaction is wirelessly transmitted to a server in direct communication with authorizing clearinghouse via secure connection to provide on-line real time approvals for each transaction.
 - c. Contact chip card read and mag stripe reader, and contactless reader capable of accepting at a minimum Apple Pay and Google Pay.
 - d. Credit Card gateway to be part of PCI P2PE as listed on the PCI-SSC web site and VISA Level-1 Service Provider as listed on the VISA web site.
 - e. Encryption performed at the card reader and utilizes P2PE.
 - f. Credit card authorization in real time.

- g. Maximum average authorization time for credit card transactions: Ten (10) seconds.
 - h. Provide “store and forward” feature only when the communication network is down, or not available and credit card payments cannot be authorized in on-line mode.
 - i. Confirm and provide record formats required by Owner’s financial institution.
 - j. Identify all required additional services necessary for processing and the associated costs.
3. Provide the user the ability to confirm purchase prior to processing card.

F. Power Supply

1. Solar-powered battery life of 36 months.
2. Commercially available battery without voiding warranty.
3. Ability to replace battery in less than two minutes with no tools required.
4. Programmable low battery alerts.
5. Separate backup battery to sustain clock, calendar, audit information and RAM in the event of a system failure or during battery replacement.

G. Communication

1. Offeror must perform independent site evaluation.
2. It is the responsibility of the vendor to test and confirm reliable power and communication from all MSM locations.

H. Printer

1. Capable of printing standard and variable length receipts and reports.
2. Receipt offered and issued upon completion of transaction, if selected by payee.
3. Minimum information provided on receipt:
 - a. Amount of transaction.
 - b. Unique identification number for adding time, adjudication, and audit control.
 - c. Plate number.
 - d. Time and date purchased.
 - e. Expiration time and date.
 - f. Meter number.
4. Ability to replace ticket roll in less than one minute with no tools.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install MSM in accordance with manufacturer's recommendations.

- B. Installation and Start-Up: Contractor is responsible for installation of all Contractor supplied equipment and its interfacing and interconnection with Owner supplied equipment.
- C. Contractor is responsible for all software and communications by all computers and peripheral devices.
- D. Provide dust and noise protection in strict accordance with equipment manufacturer's recommendations.
- E. Owner or Owner's Representative may observe installation process and stop the work at any time throughout the process.
- F. All equipment components installed near drive isles shall be protected from damage by vehicular movements by protective bollards.

3.2 FIELD QUALITY CONTROL

- A. Provide an Acceptance Testing Plan to demonstrate the functionality of the system.
 - 1. Include demonstrations of compliance with all specifications, contractual compliance, definitions of all test objectives, participant responsibilities, documentation of tests and procedures for dealing with failures during test.
 - 2. Detail tests for every functional requirement of the MSM system, including PbC integration.
 - a. Include checklist for specified supplies, spare parts, training operation and training manuals.
 - b. Provide space for acceptance by Contractor and Owner or Owner's representative.
 - 3. Confirm that all specified features are provided and fully operational before Acceptance Testing.
 - 4. Notify Owner or Owner's Representative in writing at least one week prior to each official test session. If a test is not successful, correct noted deficiencies and advise Owner or Owner's Representative, at least two days in advance, that test session is ready to resume.
 - 5. Owner or Owner's Representative may witness tests.
- B. Passing Acceptance testing, even if performed in the presence of the Owner or Owner's Representative, does not relieve the Contractor of the responsibility to provide a system in accordance with the Specifications.
- C. Promptly correct all problems encountered at no cost to the Owner.
- D. Thirty (30) Day Operational Test and Final Acceptance
 - 1. After go-live date, the Owner will conduct an operational test for thirty (30) days.
 - 2. Performance Standards:

- a. System is fully operational without downtime or programming problems for the complete monthly reporting cycle. For each down-time period of between one hour and eight hours, or programming problems that delay the report cycle, two days will be added to the test duration.
 - b. All reports correlate 100% with coin and credit card reconciliation.
3. Maintain detailed records and a logbook of all tests, events, and issues to be provided to the Owner upon completion of the tests.

3.3 INSTRUCTION AND TRAINING

- A. Fully instruct the Owner's designated personnel in the operation, adjustment, and maintenance of all MSM products, equipment, and systems.
- B. Coordinate scheduling of on-site and in-person instructional classes with Owner's designated personnel to avoid conflicts and peak-period personnel demands.
- C. Submit a proposed instruction schedule prior to equipment installation. Owner will tentatively approve or suggest changes to the training schedule.
- D. Ample time should be allotted within each session for the instructor to fully describe and demonstrate all aspects of the MSM system and allow Owner personnel to have hands-on experience with the MSMs.
- E. All instruction courses will consist of classroom instruction and actual "hands-on" experience. Classes will be set up in a room designated by the Owner.
- F. Provide experienced instructors that speak fluent English in a clear precise manner.
- G. Provide all documentation required for instructing Owner personnel. The Owner retains the right to copy training materials as frequently as required for ongoing internal use only.
- H. Provide an instructional notebook or user's manual to accompany every instruction course. Submit a hard copy and electronic version of all manuals (operation and maintenance) written in common English with appropriate photos, diagrams, and schematics to supplement the text.
- I. Training categories:
 1. Maintenance.
 2. Enforcement.
 3. Finance/Administration.
- J. Provide hard copies and electronic operation and maintenance manuals for all components.

END OF SECTION

EXHIBIT A – Entry/Exit Modifications

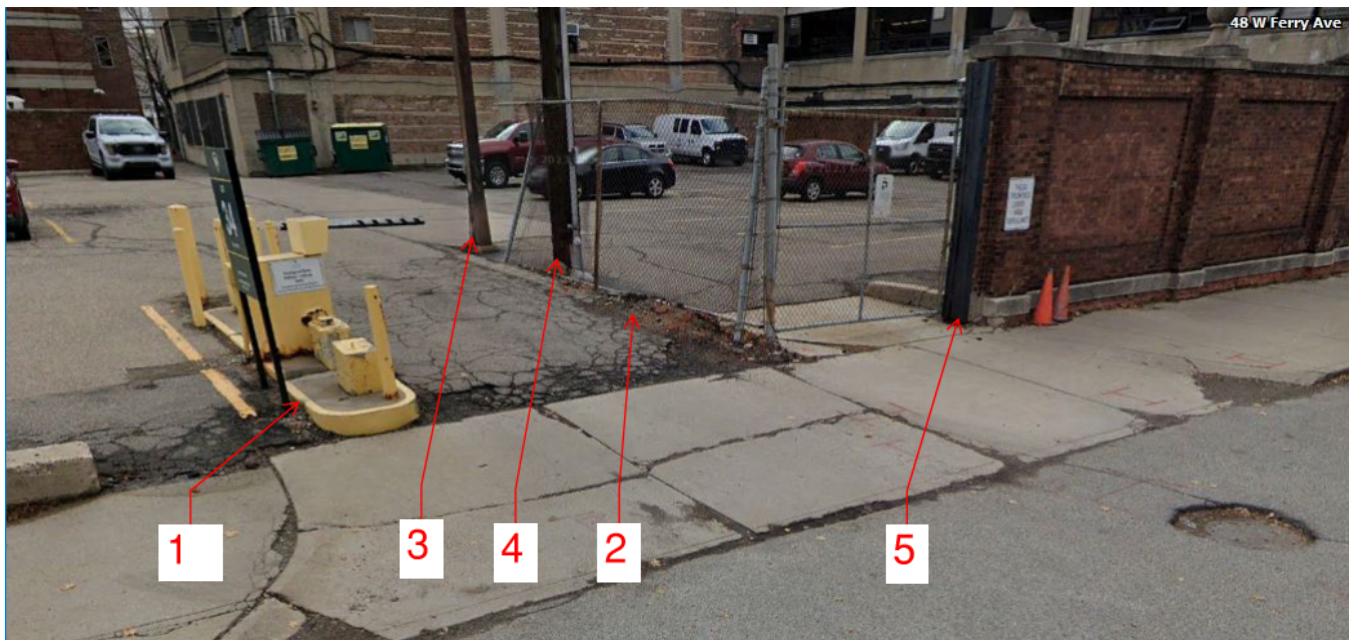
Lot 34 - (Reconfigure entry/exit plaza)

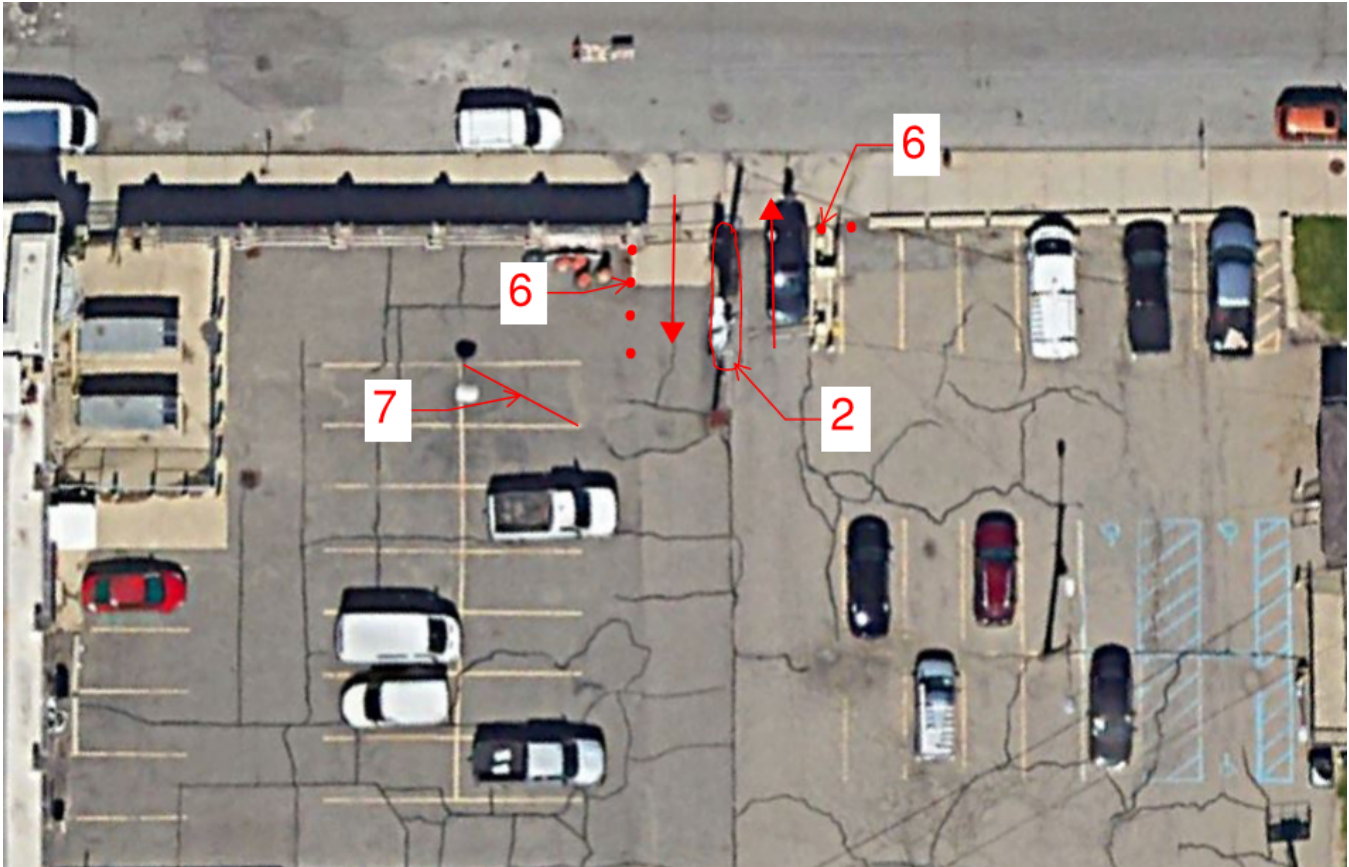
Lot 34 - Current Conditions to be Improved by this Project: There is only one lane that is used for both entering and exiting and the equipment island is in poor condition. The contractor shall submit a proposal/price for removing/replacing the island and equipment and providing dedicated entry and exit lanes as further defined below.

Lot 34 Work Summary (Ferry Avenue): Work includes all design, labor, materials, supervision and incidentals necessary to design, construct, and add new PARCS, including adding concrete islands, bollards, power and data to provide fully functional vehicle access lanes as further described below:

- Convert the existing single-lane entry/exit to an to exit-only lane
- Add an entry lane to the west of the existing lane.
- Note: Current operation is credential in with free out using one lane. New lanes shall allow for all access and payment options.

1.





Lot 34 - Performance Requirements for Improving Current Conditions:

1. Remove concrete equipment island / parking equipment/ bollards, remove gate/fencing at new entry lane. Extend power and data to new island and route conduit underground to new equipment. Remove all asphalt in existing single entry/lane and in the proposed new entry lane. Patch all removal area with asphalt or concrete.
2. Provide new concrete equipment island (or individual islands at each piece of equipment) with entry station, exit station and 2 gates. Height of curb above finish grade shall be 6" nominal but may vary depending on existing grade. (Submit existing and proposed grades with shop drawing submittal). Provide as-built drawings of underground conduit routing.
3. Remove former transformer pole. Coordinate with WSU/DTE for review and approval.
4. Provide fully connected/operational new parking equipment on island. Coordinate layout with WSU/DTE for review and approval. Provide bollards to protect equipment.
5. At the new entry lane, remove the metal edge and masonry projection to face of pier and patch in-kind cover with 1/4" thick galvanized plate and paint to match brick wall.
6. Provide hot-dipped galvanized bollards with PVC covers to keep vehicles from by-passing gates.
7. Eliminate parking stripe(s) and restripe as required.
8. See General Performance Requirements on Page 3 of this Exhibit A for further requirements.

General Performance Requirements (applies to all Lots listed in Exhibit A):

Proposed lane modifications and new lanes are to include all related incidentals to provide a fully operational PARCS system in accordance with the specifications. Further requirements include:

- a. Proposed solutions shall have appearance and function acceptable to the WSU.
- b. Hire licensed engineer(s) for all related design work. Submit proposed material and design drawings for review and approval prior to proceeding with any material orders or work.
- c. Where shown, provide fully connected/operational new parking equipment (entry/exit stations and automatic gates (Provide Type A equipment per specs). Coordinate layout with WSU/DTE for review and approval. Provide bollards to protect equipment.
- d. Reroute all conduit/wiring/fiber for electrical power and data as needed to align with new equipment layout. All conduit rerouting to be underground.
- e. Provide hot-dipped galvanized bollards with PVC covers to protect equipment and to prevent vehicles from by-passing the gates.
- f. Contractor responsible for obtaining all necessary permits from City if curb-cut widening is proposed.
- g. Replace all paving materials in-kind to provide a durable solution and maintain existing aesthetics. Asphalt pavement shall be minimum 4 inches thick (2 lifts). Concrete entry/exit lanes shall be minimum 8" thick with reinforcing mesh(6x6 W4xW4)at mid depth.
- h. All materials, equipment, and work execution shall comply with the project specifications, or with applicable industry standards and regulations where the specifications do not provide direction.
- i. Provide minimum 6-inch-deep compacted stone base below all new pavement per industry standards.
- j. Comply with all applicable building codes, ordinances and laws.
- k. Provide temporary signage as needed to keep public out of work area and direct vehicles to open entry/exit. Coordinate scheduling and phasing of work with WSU.
- l. Entry and Exit lanes shall be 10- foot wide unless existing features do not allow. In that case the minimum lane width is 9 feet.
- m. Minimum Island width is 3 feet unless existing features do not allow. In that case, 2.5-foot width will be considered pending WSU approval.
- n. Provide as-built drawings of underground conduit routing.
- o.

Lot 50 – Athletics Lot (reconfigure entry/exit plaza)

Lot 50 - Current Conditions to be Improved by this Project: The turn from Warren Avenue into the right entry lane and the left entry lane(reversible lane) is difficult for large vehicles such as RV's.

Lot 50 Work Summary: Modification of one entry/exit plaza at Lot 50 Athletic Lot. Work includes all design, labor, materials, supervision and incidentals necessary to improve turning movements into the lot. This may include widening the lanes and relocating the parking equipment to allow improved movement of vehicles into the lot while not interfering with exiting. There are two lanes at this plaza, both are reversible.

Lot 50 - Performance Requirements:

1. Revise equipment and lane layout to make turning maneuvers into and through the lanes convenient and comfortable for patrons and acceptable to WSU. Both lanes shall be reversible same as existing function.
2. Submit proposed design drawings demonstrating how this is to be accomplished.
3. Proposed solutions may include a combination of the following:
 - a. Make the drive lanes wider by eliminating the pedestrian walkways along each side of the entry/exit lanes.
 - b. Make curb-cut wider
 - c. Move equipment into the lot slightly without hindering internal traffic maneuverability.
4. See General Performance Requirements on Page 3 of this Exhibit A for further requirements.



400 Mack Avenue Lot

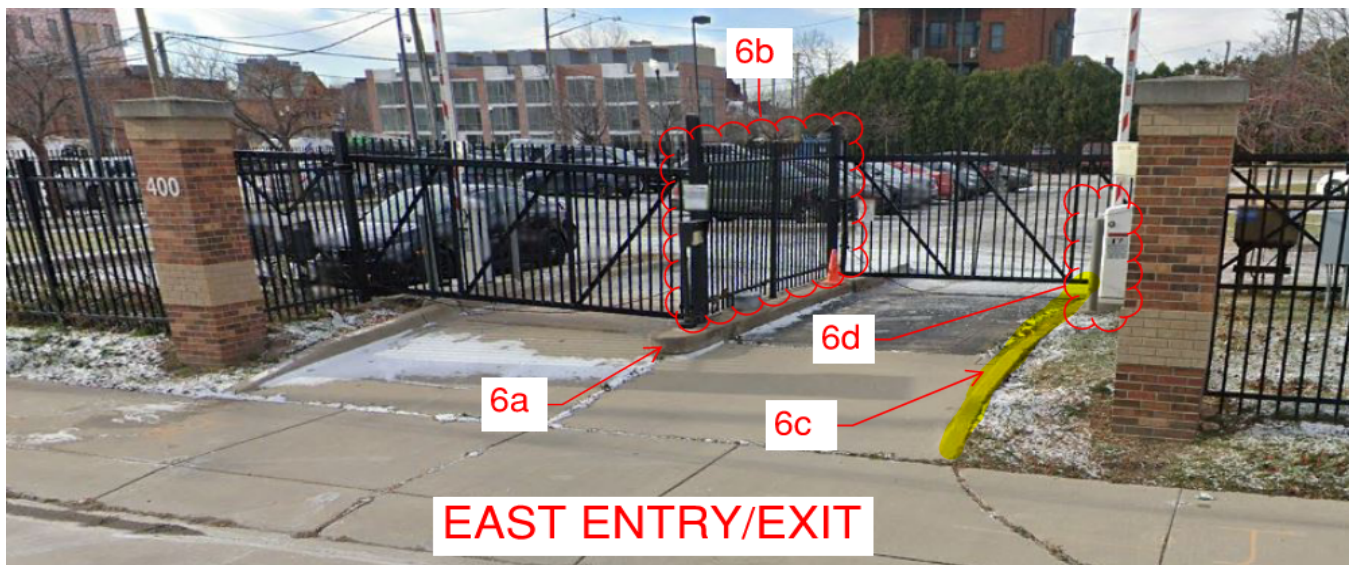
400 Mack Avenue lot - Current Conditions to be Improved by this Project: Not all the entry/exit plazas have parking access and revenue controls (PARCS). This work will add PARCS and provide related infrastructure.

400 Mack Avenue Lot Work Summary: Work includes all design, labor, materials, supervision and incidentals necessary to design, construct, and add new PARCS, including adding concrete islands, bollards, power and data to provide fully functional vehicle access lanes as further described below:

- West Entry Plaza:
 - Provide one entry lane
 - Provide all necessary infrastructure for one future exit lane
- North Entry/Exit Plaza:
 - Provide One entry lane
 - Provide One exit lane
- East Entry/Exit Plaza:
 - Provide One entry lane
 - Provide One exit lane
 - Note: Lanes contain existing parking equipment installed in recent years. WSU has first right of refusal.

Each lane to include the specified parking equipment consisting of an entry/exit station and automatic gate utilizing a standard layout as approved by WSU/Walker





400 Mack Avenue Lot - Performance Requirements (The numerical designations on the images directly above correspond to the notes below):

1. Provide new concrete equipment island (6 inch high) and parking equipment/gates
 - a. At each entry lane provide an entry station (Type A) and an automatic gate
 - b. At each exit lane provide an exit station (Type A) and an automatic gates).
2. Existing power and data room in basement of building.
3. Extend power and data from existing room (see note 2 above) to new equipment islands. In general route conduit along ceiling in basement, penetrate building perimeter wall (provide watertight penetration), and extend underground to new islands. Install conduit in trench (~2 feet deep), backfill and compact, patch pavements/sidewalks curbs, and restore landscaping. Locate all underground utilities in coordination with WSU and MissDig.
4. At East entry/exit, remove and salvage existing parking equipment. Owner has first right of refusal. Existing rolling gates to remain. Maintain existing gate power equipment and electrical/data connections.
5. At East entry/exit, utilize existing power and data, reroute conduit as required to connect to new equipment.
6. At East entry lane:
 - a. widen the center concrete island to ~30 inches to receive new equipment. Extend widened curb into the north entry lane.
 - b. Remove and reset existing fencing on new concrete island to facilitate construction of wider center curb.
 - c. Shift curb and extend lane north to maintain existing drive-lane width. Remove and replace curb and pavement accordingly.
 - d. Replace gate pad and extend conduit/wiring accordingly to facilitate drive shifting northward.
7. At West entry, provide power and data for future exit lane.
8. At West entry, provide bollards as shown.
9. See General Performance Requirements on Page 3 of Exhibit A for further requirements.

Lot I2C

Lot I2C - Current Conditions to be Improved by this Project: Not all the entry/exit plazas have parking access and revenue controls (PARCS). This work will add PARCS and provide related infrastructure.

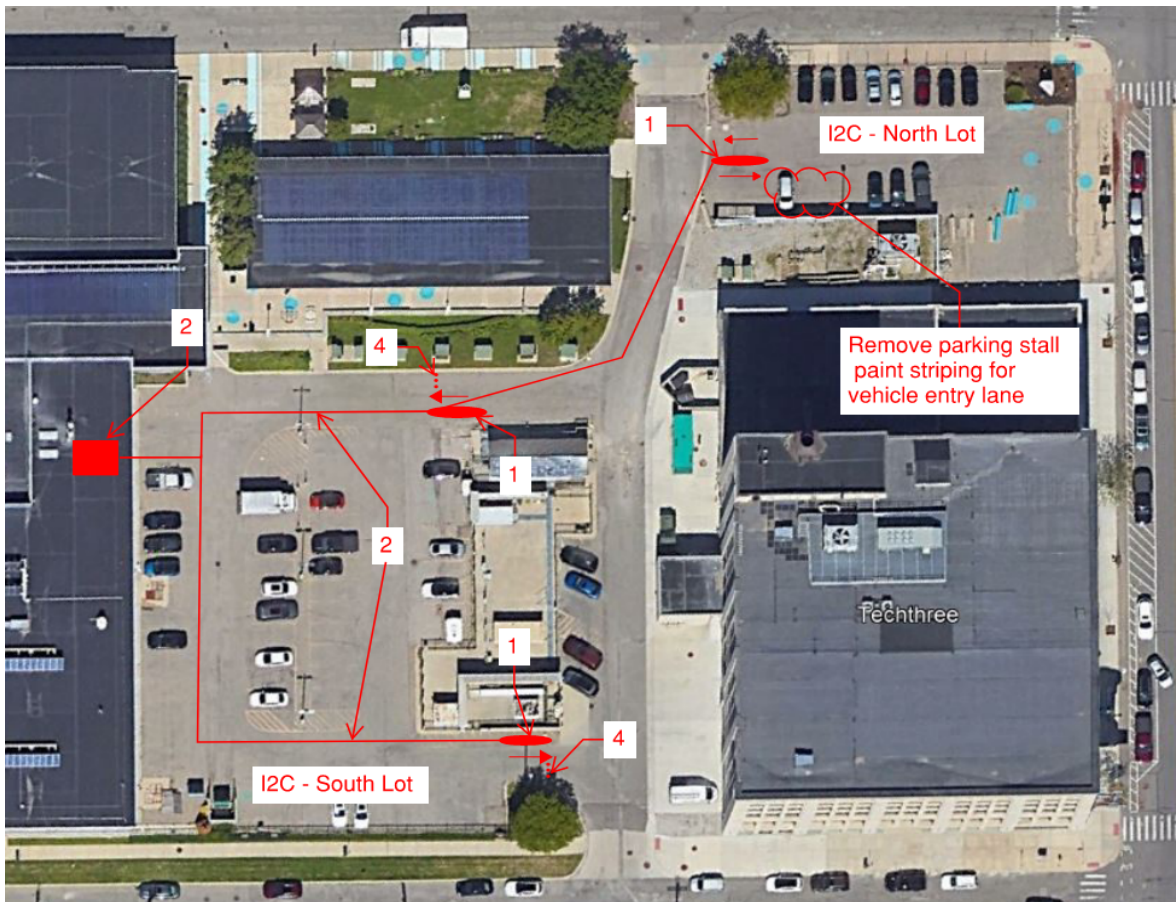
Lot I2C Work Summary (Industry Innovation Center (I2C) 461 Burroughs Street, Detroit, MI): Work includes all design, labor, materials, supervision and incidentals necessary to design, construct, and add new PARCS, including adding concrete islands, bollards, power and data to provide fully functional vehicle access lanes as further described below:

North Lot:

- Entry/Exit Plaza:
 - Provide One entry lane
 - Provide One exit lane

South Lot:

- North Entry Plaza
 - Provide one entry lane
- South Exit Plaza with:
 - Provide One exit lane





I2C Lot - Performance Requirements (The numerical designations on the images directly above correspond to the notes below):

1. Provide new concrete equipment island (6 inch high) and parking equipment/gates
 - a. At each entry lane provide an entry station (Type A) and an automatic gate
 - b. At each exit lane provide an exit station (Type A) and an automatic gates).
2. Existing power and data rooms at first floor.
3. Extend power and data from existing room (see note 2 above) to new equipment islands. In general route conduit along ceiling, penetrate building perimeter wall (provide watertight penetration), and extend underground to new islands. Install conduit in trench (~2 feet deep), backfill and compact, patch pavements/sidewalks curbs, and restore landscaping. Locate all underground utilities in coordination with WSU and MissDig.
4. Provide bollards as shown.
5. See General Performance Requirements on Page 3 of Exhibit A for further requirements.

Lot 30

Lot - Current Conditions to be Improved by this Project: The existing entry/exit lanes do not have parking access and revenue controls (PARCS). This work will add PARCS and provide related infrastructure.

Lot 30 Work Summary (Edsel Ford Service Drive, North side of WSU football stadium): Work includes all design, labor, materials, supervision and incidentals necessary to design, construct, and add new PARCS, including adding concrete islands, bollards, power and data to provide fully functional vehicle access lanes as further described below:

- Entry/Exit Plaza:
 - Provide One entry lane
 - Provide One exit lane

Lot 30 - Performance

Requirements (The numerical designations on the images directly above correspond to the notes below):

1. Provide new concrete equipment island (6 inch high) and parking equipment/gates
 - a. At each entry lane provide an entry station (Type A) and an automatic gate
 - b. At each exit lane provide an exit station (Type A) and an automatic gates).
2. Existing electrical power room first floor.
3. Existing data room first floor.
4. Extend power and data from existing rooms (see note 2 above) to new equipment island. In general route conduit along ceiling, penetrate building perimeter wall (provide watertight penetration), and extend underground to new islands. Install conduit in trench (~2 feet deep), backfill and compact, patch pavements/sidewalks curbs, and restore landscaping. Locate all underground utilities in coordination with WSU and MissDig.
5. Provide bollards as shown.
6. See General Performance Requirements on Page 3 of Exhibit A for further requirements.



ALTERNATE BID ITEM: PROVIDE LPR CAMERAS AT ALL ENTRY AND EXIT LANES

Provide LPR cameras to parking lanes. Review each lane for potential location with minimal island modification. Pre-capture to use the plate as the credential to activate the gate is preferred. This will include developing layouts, design, modifying existing or adding islands, equipment and infrastructure to add this functionality. Price to be provided by location. Use existing islands to maximum extent possible.

ALTERNATE BID ITEM: VPMS IN CONJUNCTION WITH LPR

VPMS to use the license plate as the permit. Facilities will remain gated, operated with gates up or set to automatic activation with LPR to check for permit. The permit check will inform operations of potential non-permitted users parking. For public parking with payment, MSMs will be provided (separate Alternate) in-lieu of credit card readers to activate the gate. Facilities with pre-capture will close the gates and display “FULL” or “FULL Permit Only Parking” when the public parking capacity is reached. This alternate requires coordination between PARCS and VPMS.

EXHIBIT B: Quick Reference Photo Guide of Facilities

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Photo 71: Mall Gate at Atchison Hall (Not in Initial Procurement)..... 40

Photo 1: Lot 12



Photo 2: Lot 13 – Burroughs



Photo 3: Lot 13 – Cass Avenue



Photo 4: iBio Lot (across from Lot 13)



Photo 5: Lot 14

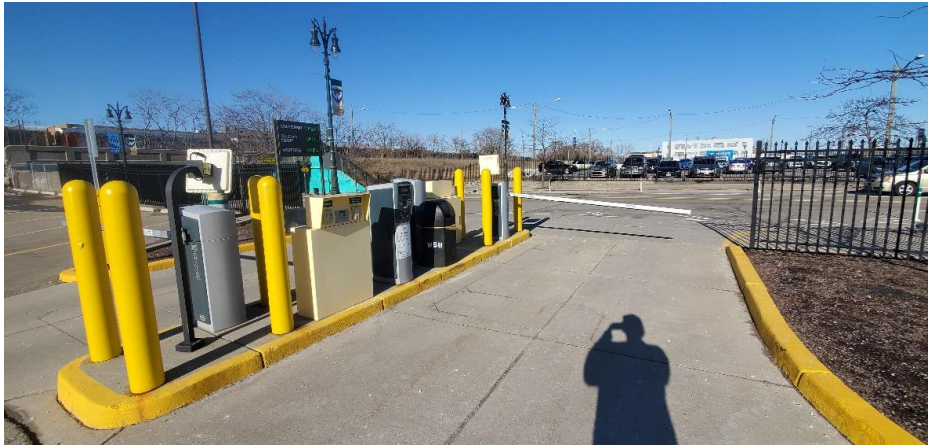


Photo 6: Lot 23



Photo 7: Lot 30 (See Exhibit A for new Equipment)



Photo 8: Lot 31



Photo 9: Lot 32



Photo 10: Lot 32



Photo 11: Lot 33



Photo 12: Lot 33



Photo 13: Lot 33



Photo 14: Lot 34 (See Exhibit A for requested changes at this location)



Photo 15: Lot 35



Photo 16: Lot 35



Photo 17: Lot 40



Photo 18: Lot 40



Photo 19: Lot 50



Photo 20: Lot 50 – Warren Ave. (See Exhibit A – for requested changes at this location)



Photo 21: Lot 51



Photo 22: Lot 51



Photo 23: Lot 53



Photo 24: Lot 54



Photo 25: Lot 56

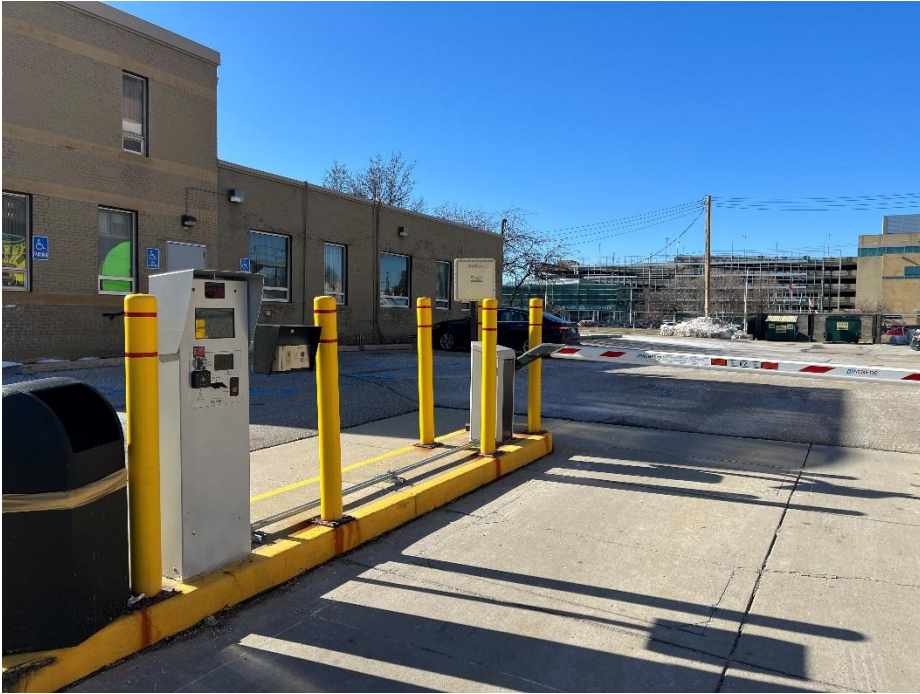


Photo 26: Lot 57



Photo 27: Lot 59 (Lot is currently blocked off from traffic)



Photo 28: Lot 62 (one lane in/out)



Photo 29: Lot 70 (note wireless connectivity on this lot)



Photo 30: Lot 71 (note wireless connectivity on this lot)



Photo 31: Lot 72 (this lane is not used now or planned for the future)



Photo 32: Lot 72 (actual lot)



Photo 33: Lot 75



Photo 34: Lot 75

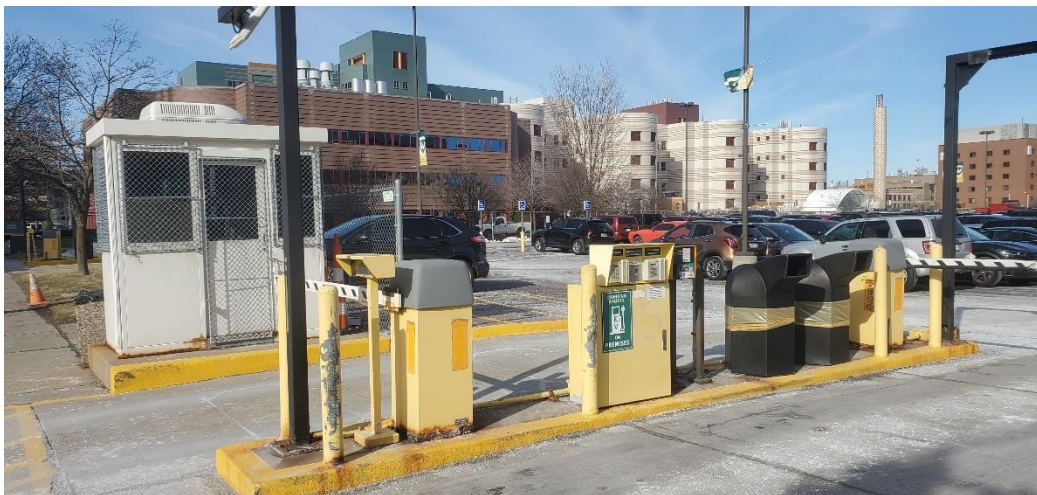


Photo 35: Parking Structure 1 – Gate 1



Photo 36: Parking Structure 1 – Gate 2



Photo 37: Parking Structure 1 – Gate 3



Photo 38: Parking Structure 1 – Gate 4

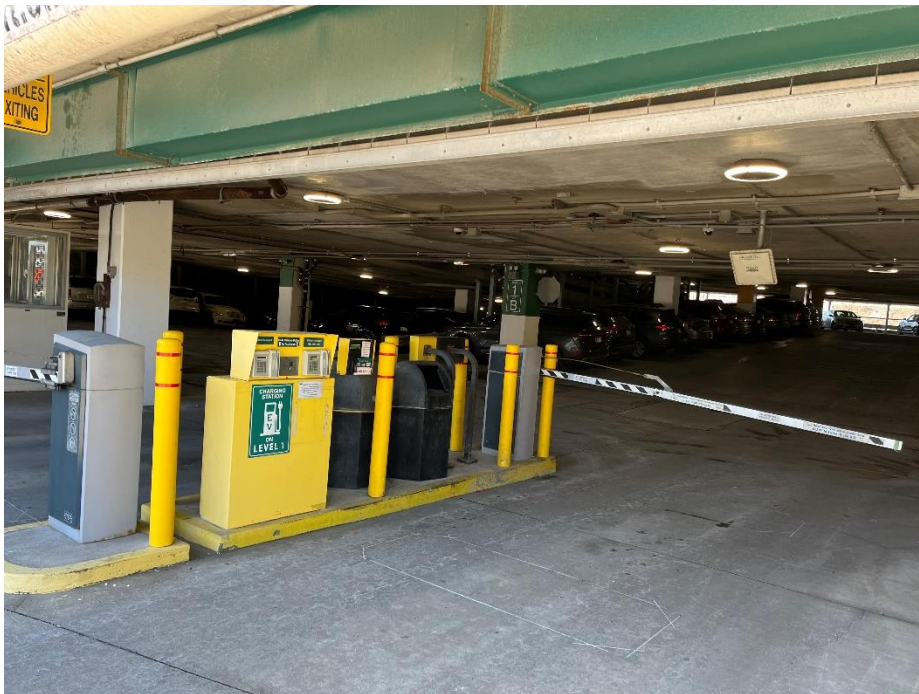


Photo 39: Parking Structure 1 – Gate 5



Photo 40: Parking Structure 1 – South (not planned for future use)



Photo 41: Parking Structure 2 – Gate 1



Photo 42: Parking Structure 2 – Gate 3



Photo 43: Parking Structure 2 – Gate 4



Photo 44: Parking Structure 2 – Gate 5

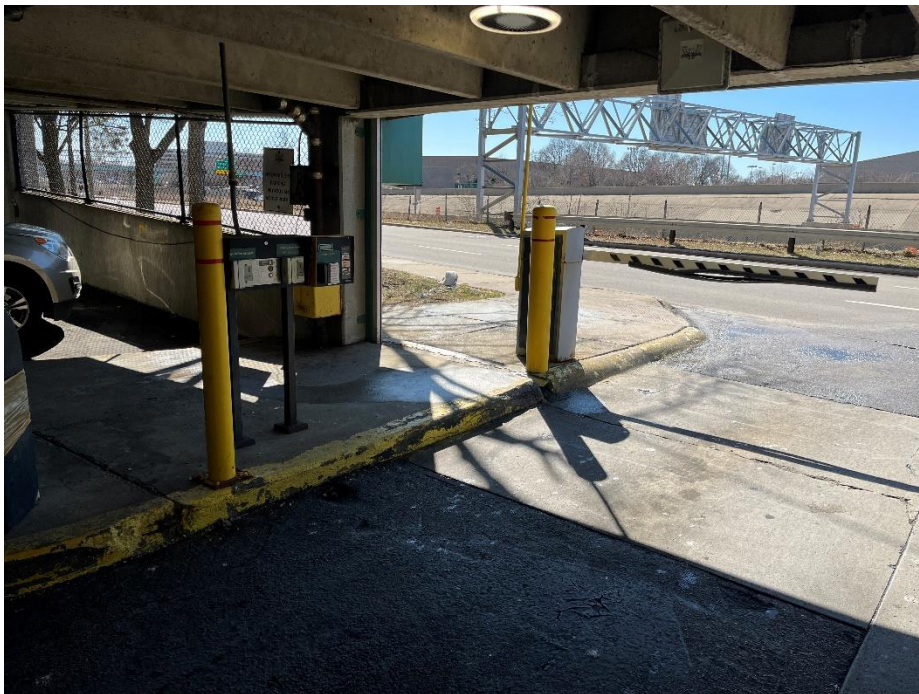


Photo 45: Parking Structure 2 – Gate 6



Photo 46: Parking Structure 2 (Lanes no longer in use – removal only)

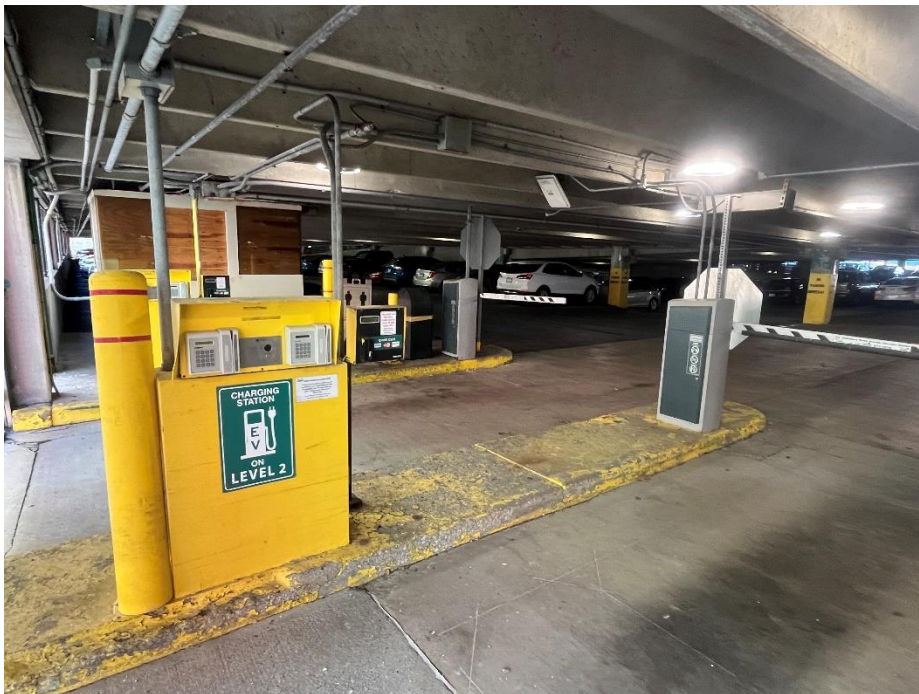


Photo 47: Parking Structure 3 (not planned for future use)



Photo 48: Parking Structure 3

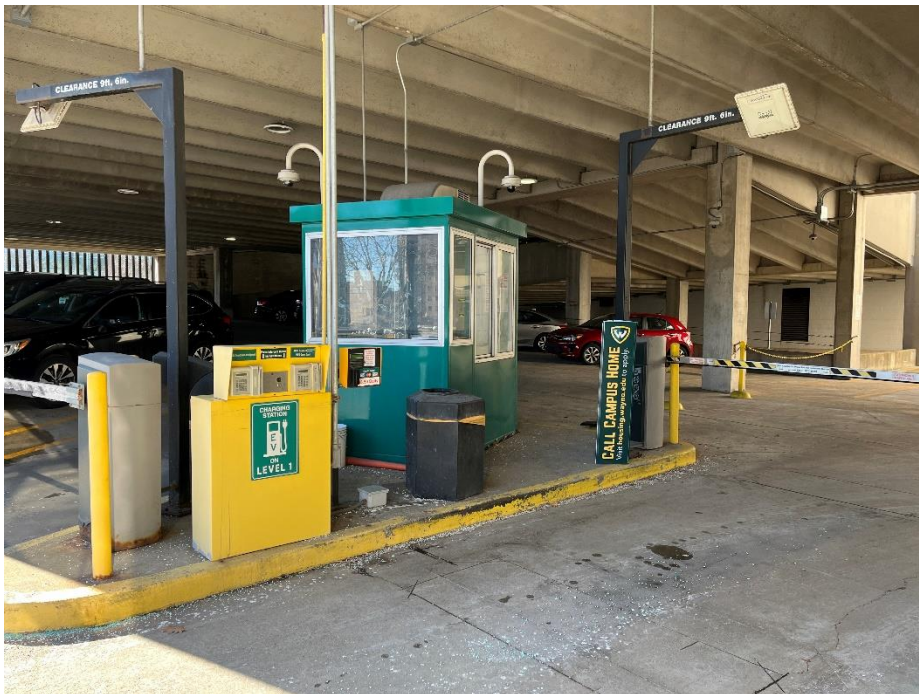


Photo 49: Parking Structure 4 – Gate 2



Photo 50: Parking Structure 4



Photo 51: Parking Structure 4 – St. Antoine



Photo 52: Parking Structure 5



Photo 53: Parking Structure 5



Photo 54: Parking Structure 6

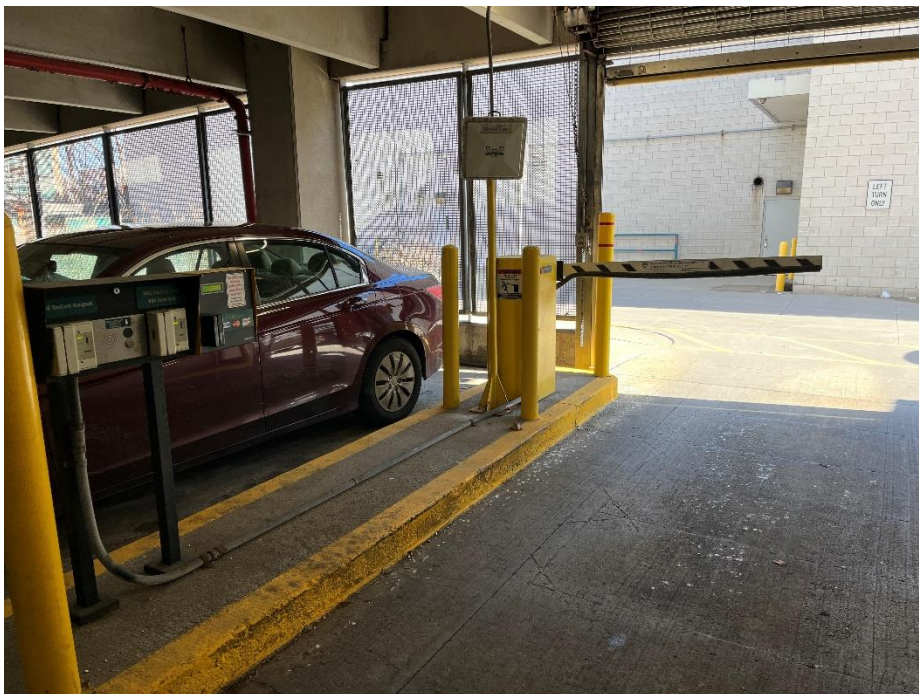


Photo 55: Parking Structure 6



Photo 56: Parking Structure 6

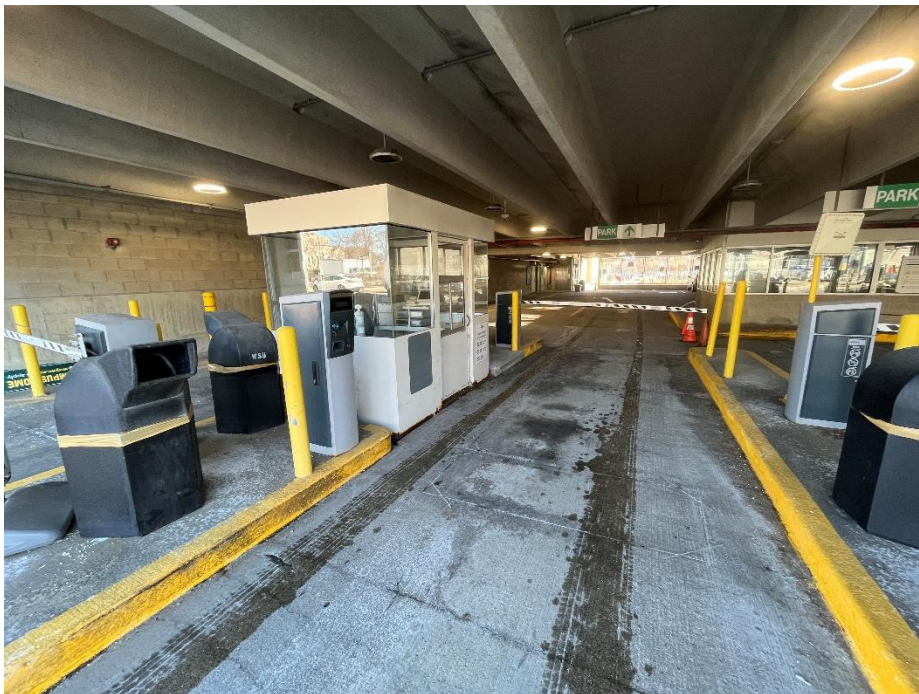


Photo 57: Parking Structure 6



Photo 58: Parking Structure 8



Photo 59: Parking Structure 8



Photo 60: Parking Structure 8



Photo 61: Parking Lot 39 – President’s Lot



Photo 62: Mall Gate (Gilmour Mall Access)



Photo 63: Lot 400 Mack



Photo 64: Lot 400 Mack

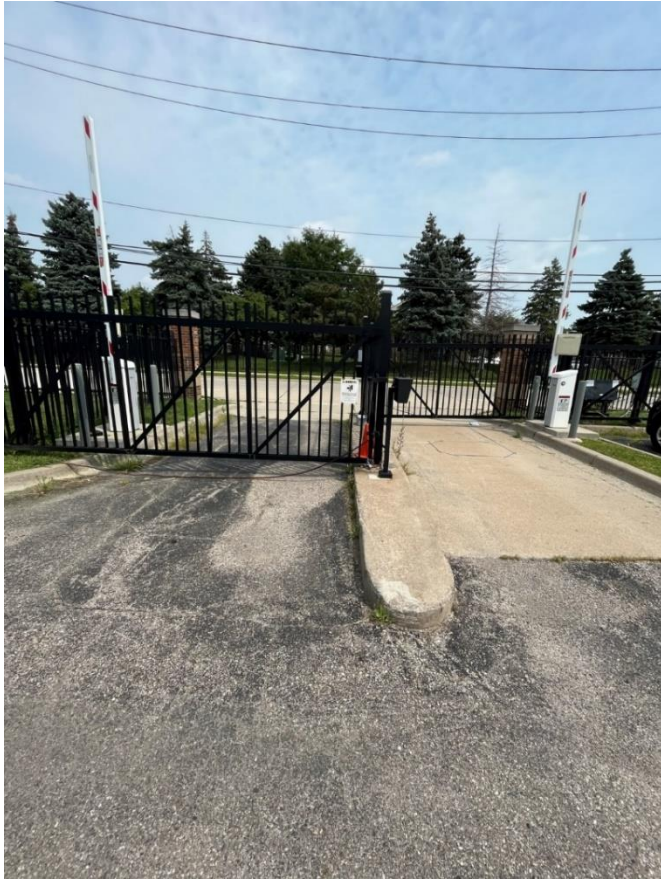


Photo 65: Lot 400 Mack



Photo 66: Lot I2C



Photo 67: Lot I2C

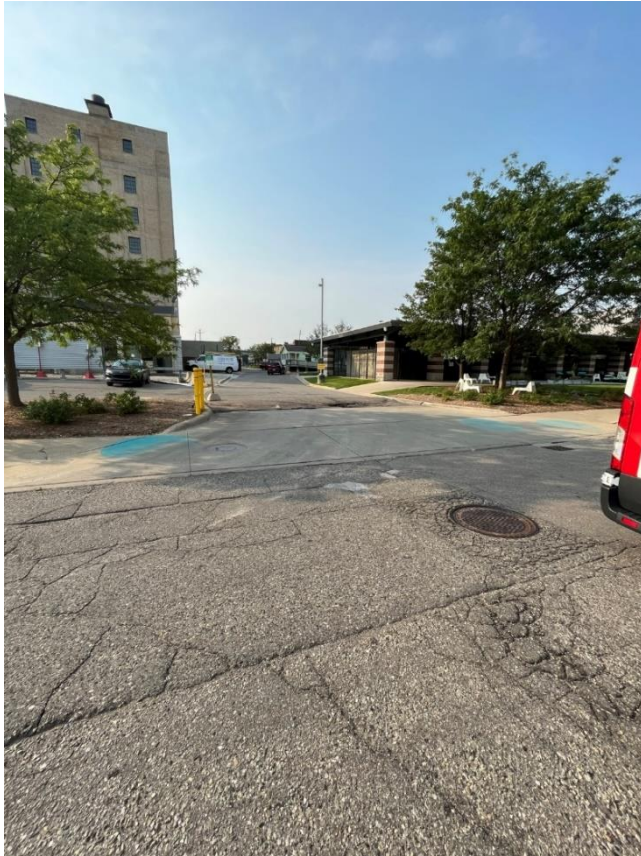


Photo 68: Lot I2C



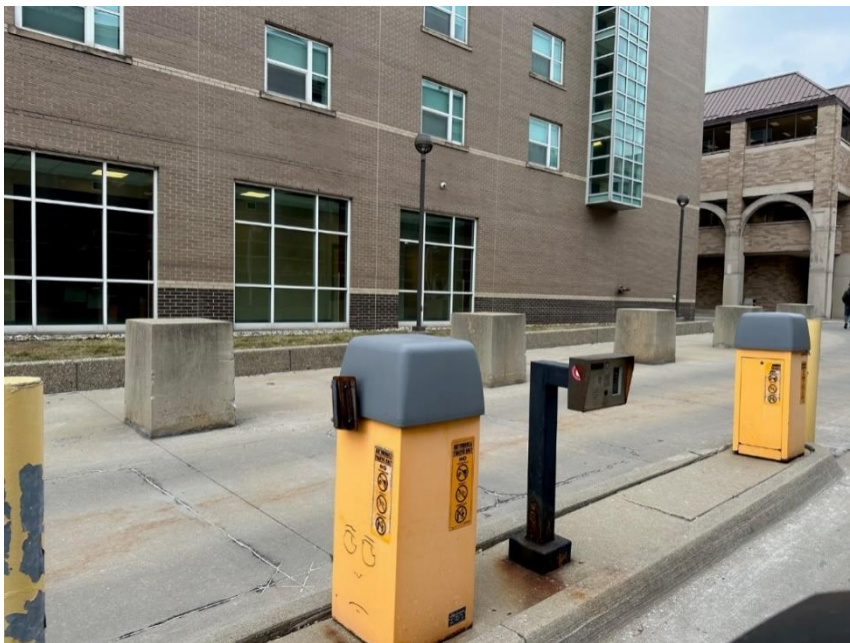
Photo 69: Rands/Purdy Library Loading Dock



Photo 70: Rands/Purdy Library Loading Dock



Photo 71: Mall Gate at Atchison Hall (Not in Initial Procurement)





WALKER
CONSULTANTS

Wayne State University PARCS Replacement Project

November 2024



Building Envelope

Forensics & Restoration

Operations & Technology

Parking Design

Planning & Mobility

Project Goals

Base Project

Alternative:
Physical
Modifications

Alternative:
New
Locations &
Equipment

Alternative:
License Plate
Recognition
(LPR)

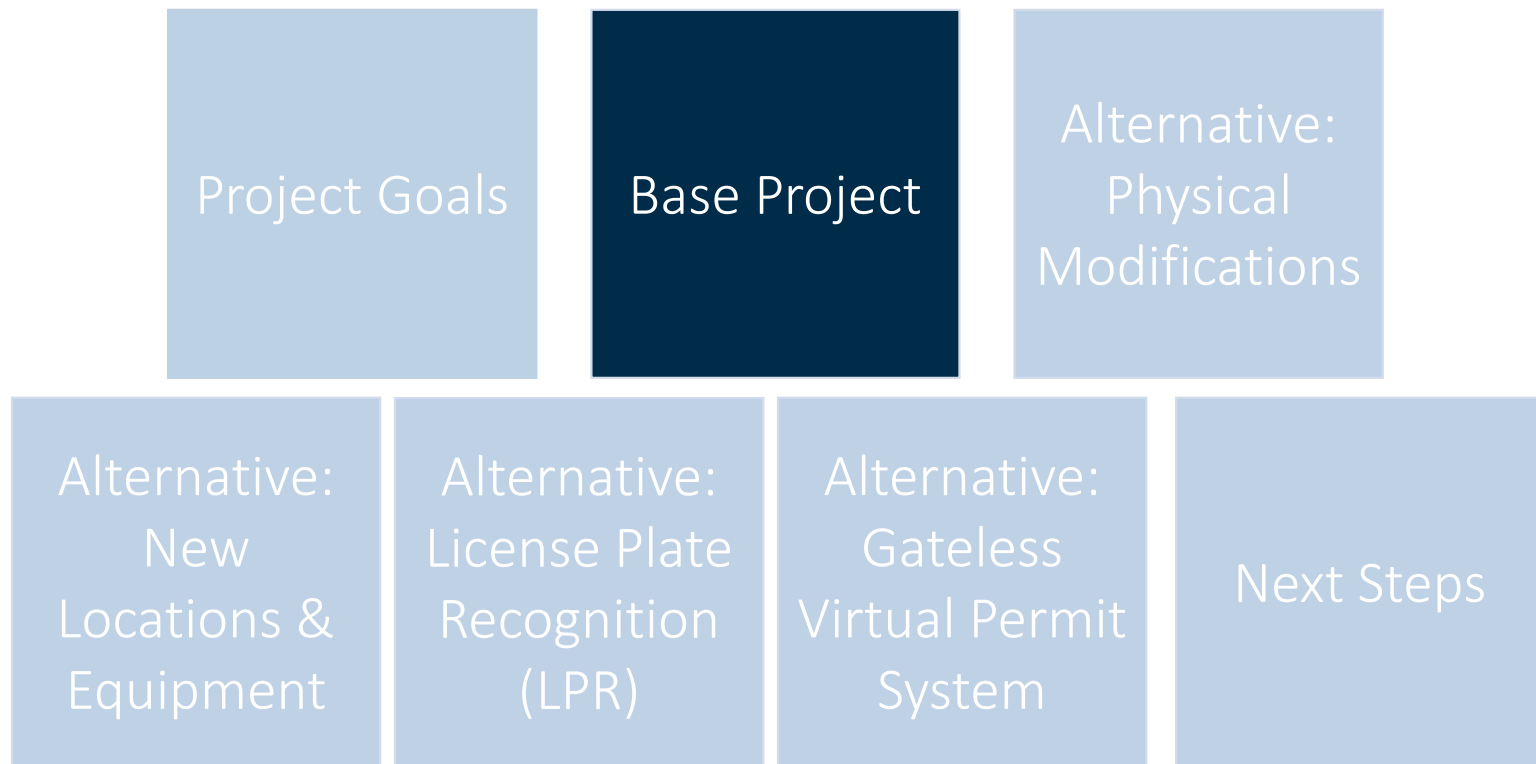
Alternative:
Gateless
Virtual Permit
System

Next Steps

Project Goals

Replace existing Parking Access and Revenue Control System (PARCS) with State-of-the-Art equipment.

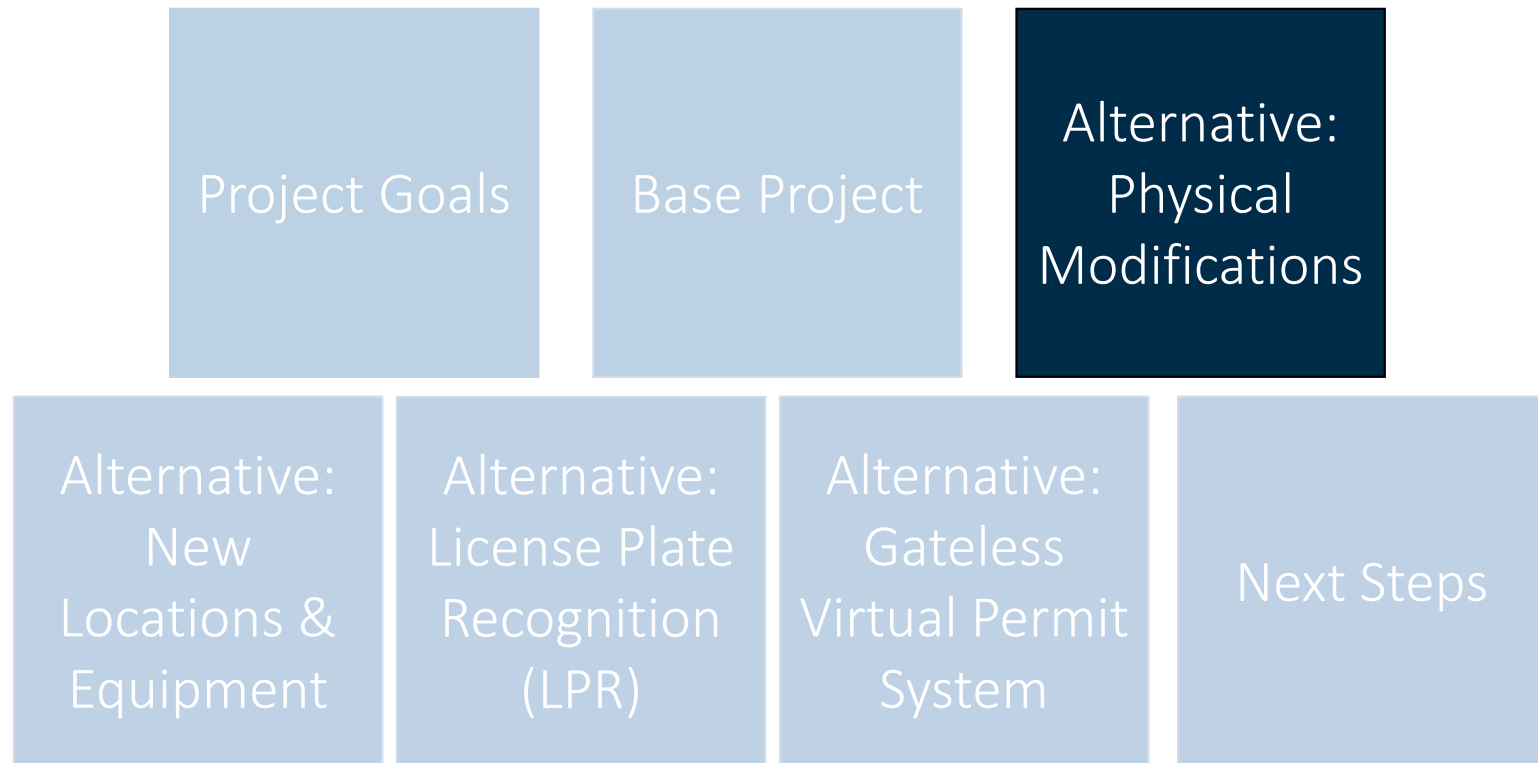
Evaluate alternatives to determine new features to be included.



Base Project – Replace Existing Gated – Added functionality

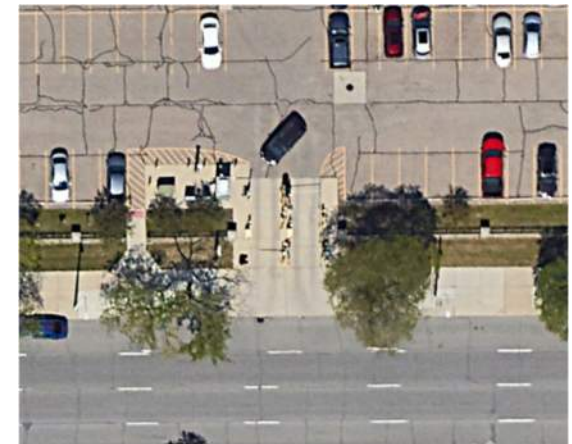
- Parking Lane Equipment:
 - Credit Card Reader with NFC Tap and Go (entry and exit)
 - Proximity Reader
 - QR/Barcode Reader
 - Intercom
 - Ticket dispenser/acceptor (limited use)
 - Barrier Gate
 - Reuse AVI Reader
 - Lot Full Sign
 - Bollards as needed

Talking points

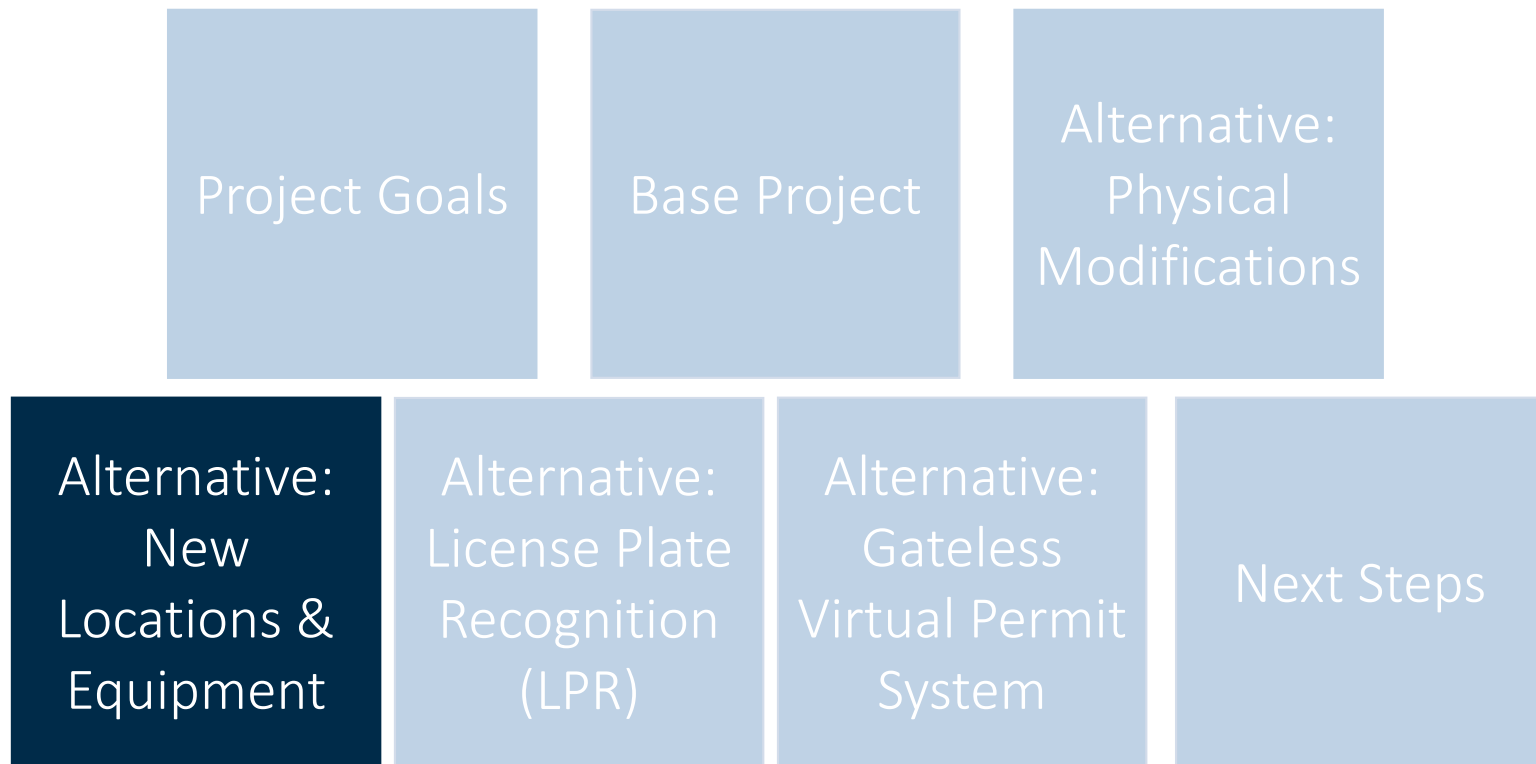


Alternatives: Physical Modifications / Improvements

- Lot 34 – Ferry Street Lot
 - Provide design modification drawings to replace the existing one-lane island with a new island that allows for separate entry and exit lanes (dual lane control). New lanes will allow for all access & payment options.
- Lot 50 – Athletic Lot
 - Design modification drawings to improve the turning movements into the lot. Currently, there are two reversible lanes.



Talking points



Alternative: Add Gated Access

- Design, construct, & add new PARCS (including adding power and data)



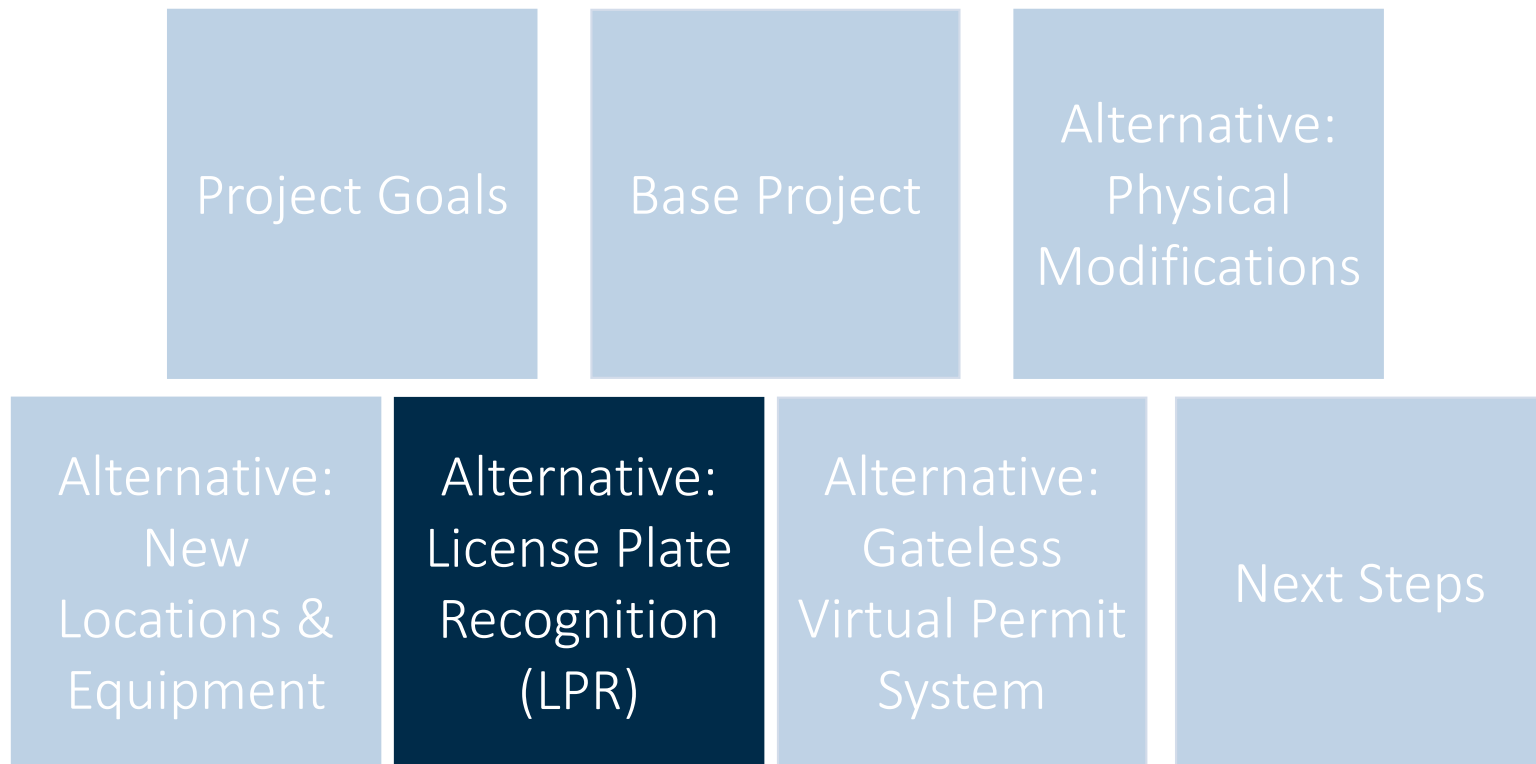
400 Mack Ave



Industry Innovative
Center (12C)



Lot 30 – Ball Field



Alternative: License Plate Recognition (LPR)



Addition of LPR cameras to parking lanes



Vendor to review each lane for potential locations with minimal island modification



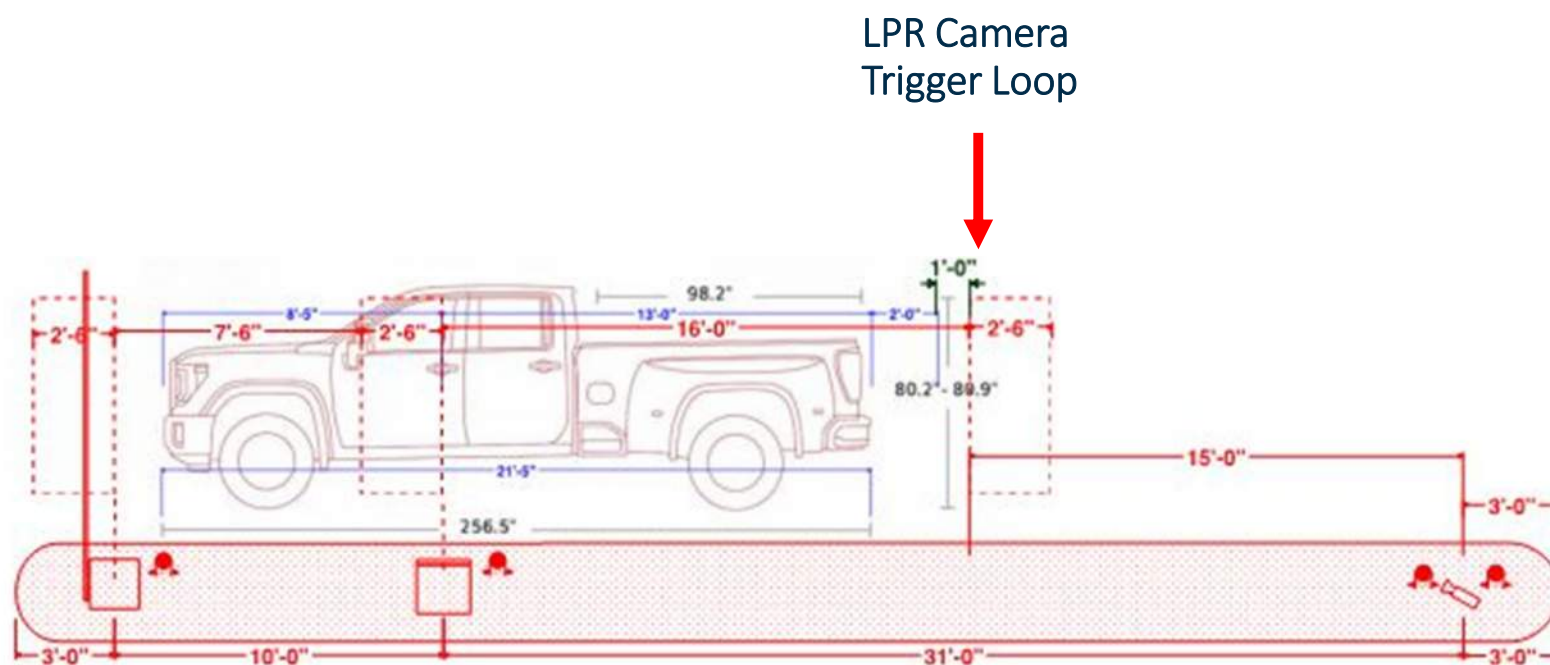
Preference for pre-capture to utilize plate as the credential (depending on location)



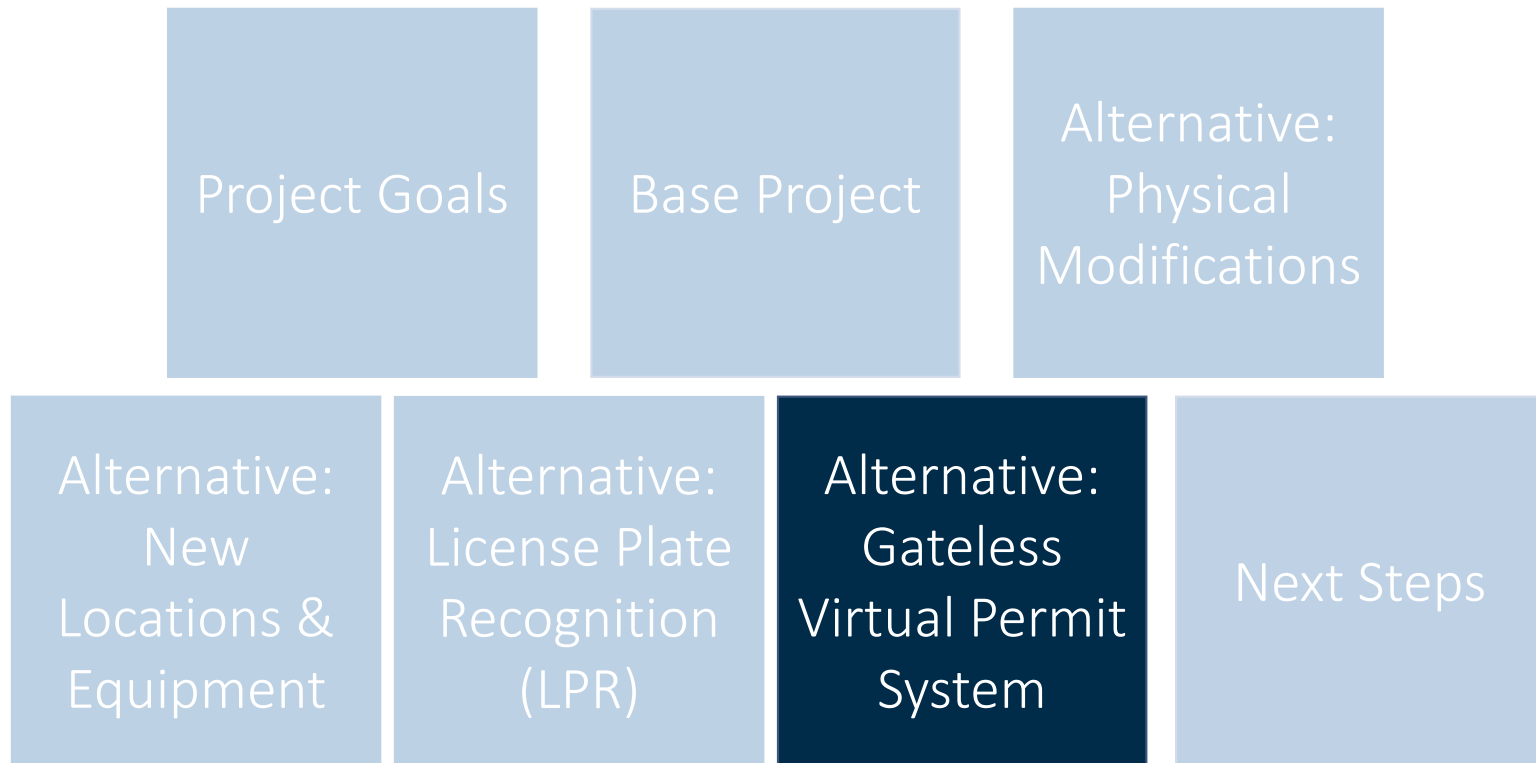
This includes developing layouts, designing, modifying, or adding islands & equipment to include this functionality. Price should be provided on a per-lane basis. Existing islands should be used to the maximum extent possible.

Alternative: License Plate Recognition (LPR)

- Pre-capture requires extending the island distance to read the plate prior to getting to the gate



Talking points



Alternative: Gateless Virtual Permit System

- The license plate would act as the permit (no AVI)
 - Each user to register their vehicle plate to their account
- Gates are optional – recommended for key locations
- Multi-space Meters and phone applications would be added to allow non-permit holders the ability to pay for parking (using plate)
- Includes five (5) Mobile LPR equipped vehicles for enforcement/citations
- Requires operational shift to enforcement
- Citation issued with limited non-WSU teeth



Project Goals

Base Project

Alternative:
Physical
Modifications

Alternative:
New
Locations &
Equipment

Alternative:
License Plate
Recognition
(LPR)

Alternative:
Gateless
Virtual Permit
System

Next Steps

Next Steps

To move forward:

Confirm documents are ready for the
Procurement Department

Solicit proposals from vendors



Timeline for proposals: 4 – 6 weeks after issuing